

CI 1871
Computer Literacy
and Problem Solving

Study Guide

Fall 2016

*To protect the equipment, please do not
bring food or drink into any computer room.*

Table of Contents

Course Details.....	1
Instructor Contact Information	1
Prerequisites	1
Course Grade.....	2
Student Learning Outcomes (SLOs).....	3
Introduction.....	5
Project 1.....	9
Getting Started.....	9
Project 2 Excel Chapter 1: Creating Worksheets and Charts	33
Project 3 Excel Chapter 2: Functions, Tables, and Large Workbooks	43
Project 4 Excel Chapter 3: Analyzing Data with Charts and What-If Tools	57
Project 5 Excel: Customize Charts, Make Decisions, and Sort	79
Project 6 Sample Exam Questions for Excel.....	121
Information on the Excel Exam	129
Project 7 Word Chapter 1: Creating Documents	131
Project 8 Word Chapter 2: Creating Tables and Letters.....	153
Project 9 Word Chapter 3: Research Papers, Newsletters, and Mail Merge	179
Project 10 Word: Styles, Cross-References, TOC, Indexes	201
Information on the Word Exam	249
Sample Exam Questions for Word.....	249
Project 11 PowerPoint Chapter 1: Getting Started.....	261
Project 12 PowerPoint Chapter 2: Formatting Presentations.....	271
Project 13 PowerPoint Chapter 3: Animation, Tables & Charts	281
Sample Exam Questions for PowerPoint.....	301
Project 14 Access Chapter 1: Getting Started with Databases	307
Project 15 Access Chapter 2: Sort and Query a Database.....	315
Sample Exam Questions for Access	321
Information on the Final Exam	327
Keys for Homework Exercises	329
Index	360

Course Details

Instructor Contact Information

Douglas F. Robertson
Professor, Developmental Mathematics and Computing
Department of Curriculum and Instruction
College of Education and Human Development
University of Minnesota

Office: 270D Peik Hall, 612-625-1075
Postal Mail: 125 Peik Hall, 159 Pillsbury Drive SE, Minneapolis, MN 55455-0208
Campus Mail: 125 Peik (delivery code 4301)

Email: droberts@umn.edu
Fax: 612-624-8277
Web Site: <http://www.z.umn.edu/robertson>

Prerequisites

You should have some familiarity with Microsoft Windows, which is the operating system most PCs run on. The textbook is written to Microsoft Windows 8 but Microsoft Windows 7 or 10 will work fine.

If you have never used Windows you will find it useful to work through the textbook activities on pages 1 through 51. These activities contain basic information that will make the rest of the course go more smoothly for you.

If you have never used any Microsoft Office programs (Excel, Word, PowerPoint or Access) you will find it useful to work through the textbook activities on pages 71 through 113.

Textbook

Gaskin, Shelley, Alicia Vargas, and Carolyn McLellan. *Go! with Microsoft Office 2013 Volume 1, First Edition*. New York: Prentice Hall, 2014. ISBN: 978-0-13-314266-2
We **do not** use the CD or access code that comes with new books so a used copy is fine.

Computer access

You may use any Windows computer that has the 2013 or 2016 versions of Microsoft Excel, Word, PowerPoint, and Access. The bookstore has good prices for Office. The Macintosh versions of the software are quite different from the Windows versions so using a Mac for this course would be difficult unless you have set up a Windows partition on your Mac. See the link on my web site for more information. Contact the U of M computer help service Tech Stop at 101 Coffman Union, 612-301-4357, help@umn.edu if you need help.

Using your own computer will be the most convenient and efficient way to do the course work. If you don't have a computer with the proper software you may use the computers in the University Microcomputer Labs on campus. On my web site there is a link that shows a complete list and schedule of when the labs are open.

Honesty

You may get help and work with others on the projects but you must turn in your own work. That is, someone can help you figure out what to do but you must, in the end, do it yourself. Copying the work of someone else is academic misconduct and may result in your receiving a 0 on a project, failing the entire course, or being expelled from the University.

Credits and Workload Expectations

For undergraduate courses, one credit is defined as equivalent to an average of three hours of learning effort per week necessary for an average student to achieve an average grade in the course. Because this is a four-credit course, you should expect to spend $3 \times 4 = 12$ hours per week attending class, working on projects, and studying for exams.

Course Grade

The course grade will be determined by your scores on the homework projects and the exams. See the syllabus handed out in class for details.

The letter grades will be determined according to the following chart.

Letter Grade	Points Needed	Definition
A = 4.00	100 – 95	Represents achievement that is outstanding relative to the level necessary to meet course requirements
A- = 3.67	94 – 90	
B+ = 3.33	89 – 86	Represents achievement that is significantly above the level necessary to meet course requirements
B = 3.00	85 – 82	
B- = 2.67	81 – 80	
C+ = 2.33	79 – 76	Represents achievement that meets the course requirements in every respect
C = 2.00	75 – 73	
C- = 1.67	72 – 70	
D+ = 1.33	69 – 68	Represents achievement that is worthy of credit even though it fails to meet fully the course requirements
D = 1.00	67 – 65	
S none	100 – 73	Represents achievement that is satisfactory, i.e., is equivalent to a 2.00
F = 0.0	under 65	Represents a failure to meet course requirements
N = 0.0	under 73	Represents a failure to meet course requirements

There are no opportunities for earning extra credit in this course.

Student Learning Outcomes (SLOs)

CI 1871 addresses the following SLOs:

1. **Identify, define, and solve problems** You will gain experience identifying, defining, and solving problems by creating mathematical models that will help you make predictions to see how a situation will evolve over time. For example, in one Project you will use Excel to find the future value of an investment given certain initial conditions. The assessment will be based on the computer output you produce.
3. **Master a body of knowledge and a mode of inquiry** You will increase your technological knowledge base, especially in the area of data analysis, and you will gain insights into how computers can be used to collect, analyze, display, and present data and information. For example, in one Project you will use Access to query (ask questions of) a database that contains information on athletic scholarships awarded by a college. The assessment will be based on the computer output you produce and also your performance on exam questions.
5. **Communicate effectively** You will use presentation software to communicate ideas, data, and charts from a wide variety of disciplines including business, economics, social science, and geophysics. For example, you will create a presentation that includes text, tables, charts, audio, animation, and video to inform people about the benefits of computer-mediated instruction. You will also modify a thirty-five page book chapter by including a Table of Contents, charts, cross references, mathematical equations, styles, and an index.
7. **Effective citizenship and life-long learning** The skills, concepts, and knowledge you acquire in this course will help you to be an effective citizen in that you will be better able to understand how yourself and others can use computers to help store and retrieve data, make decisions, predict future events, and communicate with others.

Introduction

In this course, you will learn concepts and develop competencies in the computer technologies that are most often used in the social sciences and in business to help solve problems.

Textbook

Now would be a good time to become familiar with your textbook.

The front material is 31 pages long! It contains all sorts of information about the book and the specific features it contains to help you learn. Feel free to page through this material but reading it in detail will not be all that useful.

Turn to page 123. The numbers outlined in green indicate keystrokes or mouse clicks that you should do on your computer as you go through the material. As you do each step, look at your computer monitor to see the result, and compare your result with the screen shots. The explanations are quite good so carefully reading them will enhance your learning.

Step 2 begins “Type **Internships Available** and then press **Enter** two times.” The authors use the word **press** when they want you to **tap** one of the keys. So, when you see “press **Enter**” don’t hold down the key but quickly tap it. If you hold down the key it will be like hitting the key multiple times.

Turn to page 131. When you are to hold down one key and then tap another, the two keys will be shown connected with the + sign. For example, **Step 6** begins “Press **Ctrl + Home** to move to the top...” **Ctrl + Home** means to hold down the **Ctrl** key and, while holding down that key, tap the **Home** key. The first key, **CTRL**, is called a **modifier** key because it modifies the action of the second key. The + in **Ctrl + Home** is there to tell you to hold down the first key while you tap the second key; you do NOT touch the + key on the keyboard.

Turn to page 137. Step 6 discusses printing the document you just created. To save paper and time, when the textbook instructs you to print something **DO NOT PRINT IT**. When you complete all the work for a chapter, return to this Study Guide to find out exactly what to print and turn in for grading. When you finally do print something you **DO NOT HAVE TO PRINT IN COLOR**.

Look at the very back of the book, just after page 912. There is a **Glossary** that you can use to look up the definitions of many words that have particular meanings when used in relation to computing.

Look at the **Index**, which is located right after the thirteen-page **Glossary**. You can use the **Index** to find places in the text that contain instruction on specific topics. If you forget how to do something, look it up in the **Index**.

Companion Web Site for CI 1871

This course does not have a Moodle site. However, on my faculty web site you will find links that will allow you to download the syllabus, study guide, and exam instructions. The URL is <http://www.z.umn.edu/robertson>

Study Guide

This Study Guide has three parts.

Introductory material: You are reading that part right now.

Lessons: There are 15 projects for you to complete, all of which contain several parts. The projects tell you what to read in the textbook and which hands-on activities to complete. The projects also contain additional instruction on how to do some things that are not covered in the textbook but which I think are important. Finally, the projects contain the details of what to turn in for grading.

Homework keys: Starting on page **SG329** of this Study Guide is a section that contains the keys for the assigned problems. When you complete an assignment, look at the key to see if your computer output matches the one in the key. If so, great. If not, figure out what you did wrong and fix it. Note that since all computers and printers are set up a bit differently, some of your output may not look *exactly* like the output shown. This is especially true for line breaks, which are the points where the text on one line stops and continues on the next line, and page breaks, which are the points where the text on one page stops and continues on the next page. Don't worry about this. When I grade the assignments I will look to see if you have correctly followed the directions. In most cases, your output and my key will match pretty well but, in some cases, they might not be exactly the same.

The Five Steps of Each Lesson

To learn the material in the most efficient way, follow the steps given below:

Step 1 Read

Before turning on the computer, read the introductory material that is located at the beginning of each textbook chapter. This will help you get the overall picture of what you are going to do when you work at the computer. This should only take a couple of minutes but it is time well spent.

Step 2 Activities

The hands-on step-by-step exercises in the textbook are called *Activities*. Be sure to carefully read and follow the directions for each activity, and read and understand the explanations. Don't just punch the keys! Note that if the resolution of your monitor is not 1024 x 768 things may look a bit different from the screen shots in the book. Don't worry if you need to make minor adjustments, especially to spacing, when working on your computer.

It is important that you do every step, except for printing, of every activity assigned. You will need some of the workbooks, documents, presentations, and databases you create for later lessons and homework problems. If you skip something you will eventually have to go back and do it later, and this will be very confusing.

Step 3 Homework

When you finish all the assigned activities for a chapter, return to this Study Guide and begin work on the homework problems. The problems are designed to get you to think about what you have learned in the chapter and to show that you have mastered the concepts and skills described in the textbook and this Study Guide. If you get stuck, refer back to those pages in the textbook that cover relevant material. The index at the end of the textbook will be a big help here. You may have to go back through a chapter to see how to do something if you did not learn it well enough through your reading and doing the activities.

When you complete an assigned problem, compare your output with the key at the end of this Study Guide and make changes as needed. Be sure your printed output is correct before you hand it in for grading because once an assignment has been graded you may not resubmit it or add to it.

Step 4 Submit

When you complete all the assigned problems for a project, arrange the papers in numerical order by homework number, put the appropriate **Submission Form** at the front, and staple the papers. You may turn in homework projects during class, or drop them off at my office, or campus mail them, or USPS mail them.

Due to problems with formatting, do not email your projects to me—you must submit the paper output.

Step 5 Backup

It is good practice to back up your files every so often, especially if they are stored on a USB drive (also known as Thumb drive, Memory stick, Flash drive)¹, which can be lost or broken. To back up, drag your CI 1871 folder from one device to the other, e.g., from your USB drive to your computer's hard drive or to Google Drive (a cloud storage facility described on page **SG22**).



The more important the file the more often you should back it up. For example, if you are writing a paper saving drafts with different names every hour is a good idea. Use names like **SocPaper-1**, **SocPaper-2**, **SocPaper-3**, etc. as you progress. That way you can always go back to a previous draft if you need to. When you have completed the paper you can delete all drafts but the final one, and then copy that one to another device as a backup.

Be sure to read footnotes



¹ **USB** stands for **Universal Serial Bus**. It is a specification to establish communication between devices, such as a USB flash drive, mouse, keyboard, or printer and a host controller, usually a personal computer. USB connectors also supply electric power, so many devices connected by USB do not need a power source of their own.

What If Something Doesn't Work?

The textbook gives step-by-step instructions on how to do many spreadsheet, word processing, presentation, and database operations. If you follow the directions as described your results will be as shown. Sounds simple, doesn't it? However, sometimes what you think you are doing may not be what you are really doing. I often see students get into trouble because they try to rush through the material or because they simply miss a step. Students will tell me "I did what the book said but it didn't work!" My usual response is "OK, do it again while I watch." Usually, the second attempt works because when I watch students are more careful about what keys they are tapping and they actually do what the textbook tells them to do.

So, pay attention to what you are doing. If it doesn't work, carefully read the directions and try it again.

Schedule Your Time

For the textbook chapters, you should set aside a two- to three-hour block of time to go through all the activities and complete the reading for a single project (there are two guided projects for each chapter). Then, when you begin the homework projects, set aside another few hours. The projects vary quite a bit in time needed to complete them so be prepared to be flexible. Don't be afraid to go back to the textbook to redo some of the activities—there is a lot to learn and sometimes you need to do it more than once before it sinks in.

Now, let's get started with the coursework.

Project 1

Getting Started

Step 1 Read For this project, there are no pages to read in your textbook. However, if you have never used Windows or any Microsoft Office programs (Excel, Word, PowerPoint or Access) you will find it useful to work through the textbook activities on pages 1 through 51 and 71 through 113. These activities contain basic information that will make the rest of the course go more smoothly for you.

Step 2 Activities For this project, there are no textbook activities. Do the following:

Set Up Your Computer Filing System

To reduce the amount of typing you will have to do, the textbook authors and I have created a set of files for you to get started on for most of the assignments. The files are located on **Google Drive**. This is a cloud storage service that allows you to store files online. Since the U of M is a Google campus we all have access to unlimited free storage. Google Drive has lots of features that you might find useful. You can get more information at <https://it.umn.edu/using-google-drive>

- a. To download the files, follow the steps given below. Note that the screen shots are from my office computer, which is running Windows 7. If you are using Windows 8 or Windows 10 things will look a bit different but you should be able to follow the instructions without too much trouble.

1. Open a web browser such as **Internet Explorer**.
2. Type the following in the address bar near the top of the screen.

<http://z.umn.edu/1871f16>

This is a “shortened” URL that actually points to

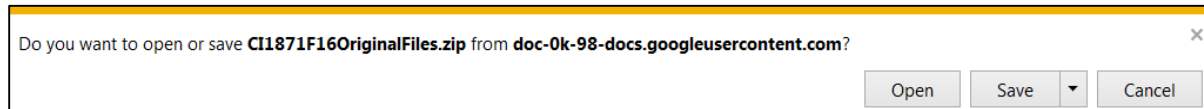
<https://drive.google.com/open?id=0B8pJaniUoE8SOHFjVmZLVVIFblU>

Shortened URL’s all have the same first part, **z.umn.edu/** which is easy to remember, and a unique second part, in our case **1871f16**, which is easy to remember within the context of this course. There is a short introduction to this service, which anyone can use, at <http://z.umn.edu/>

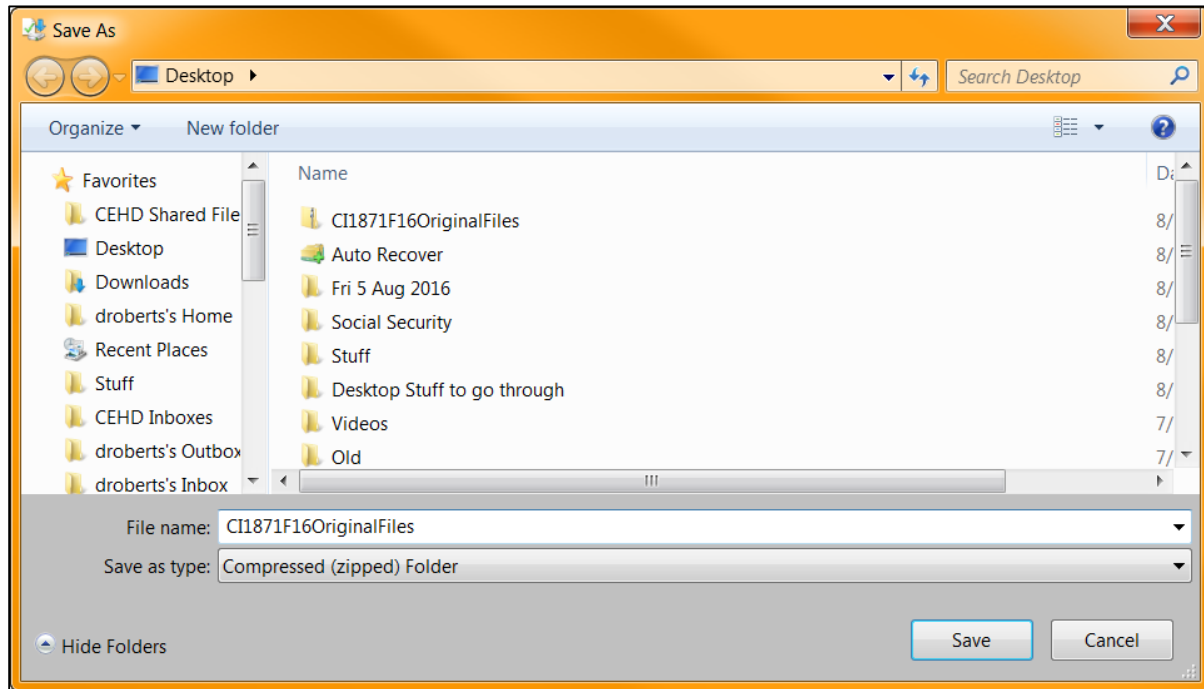
3. Tap the **Enter** key. Google Drive will open and show the file. Move the cursor to the spot just above the file name to see the download arrow.



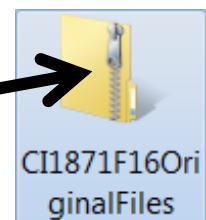
4. Click the arrow and Google Drive will give you a warning that the file is too large to scan for viruses. Click **Download anyway**. Depending on how your browser is set up, the **CI1871F16OriginalFiles** file may automatically go to your computer's Downloads folder or you might get a message like this:



If you get the above message, click the down arrow next to **Save**, select **Save As**, and navigate to the **Desktop**.



5. Click **Save**.
6. Close **Internet Explorer** by clicking the **X** in the upper right corner of its window. You should see the folder you just downloaded on your desktop. Notice the little zipper on the icon. To save download time and server space, the folder you just downloaded is compressed in **ZIP²** format.

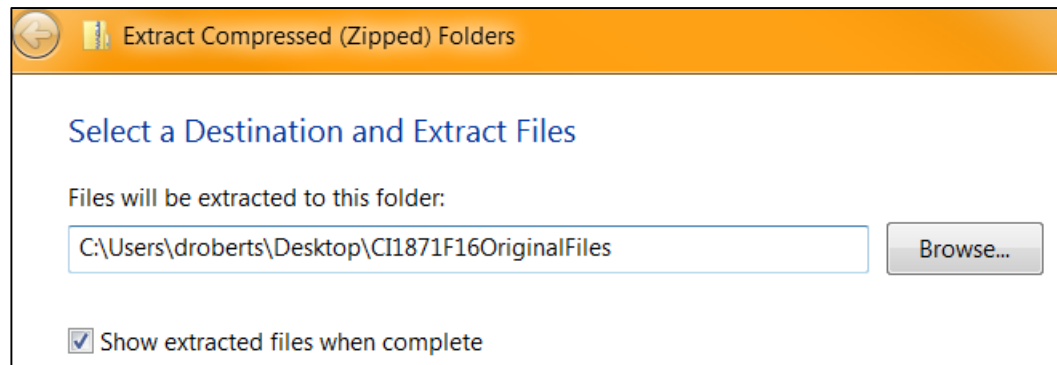


² **ZIP** is an archive file format that may contain one or more files or folders that have been compressed. ZIP was created in 1989 by Phil Katz, who named it ZIP as in "move at high speed".

b. **UNZIP** the folder by doing the following:

1. Point to the folder, right-click, and click **Extract All** or **7-ZIP** (depending on your system).

The **Extract** dialog box will appear.



The box shows the location where the folder will be saved. Here is the location as it looks like on my computer:

C:\Users\droberts\Desktop\CI1871F16OriginalFiles

C: represents the hard drive of my computer.

**** is a subdirectory (folder) delimiter.

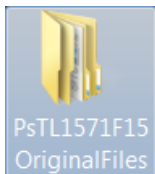
Users means my computer is set up for multiple users.

droberts is the part of the computer's hard drive I am using.

Desktop means the folder will be put on my desktop.

CI1871F16OriginalFiles is the name of the folder.

If the shown location is not what you want, click **Browse** and then navigate to your preferred location.

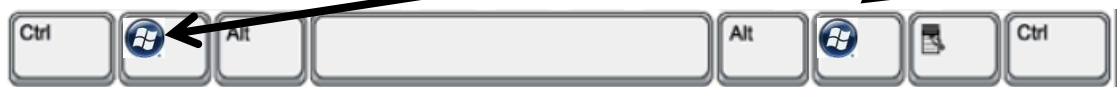


2. Once you have the proper location displayed, click **Extract**. In about 30 seconds you will see a new folder called **CI1871F16OriginalFiles**. The new folder contains folders for each section of the course (Excel, Word, PowerPoint, and Access). Each folder contains the UNZIPPED files you will need.
3. Right-click the **CI1871F16OriginalFiles** folder, select **Rename**, type **CI 1871**, and tap **Enter**.
4. You will not need the ZIPPED folder any more so drag it to the Recycle bin.
5. If you will be using your own computer, you can drag the **CI 1871** folder to any location you wish, including the desktop or a USB drive.

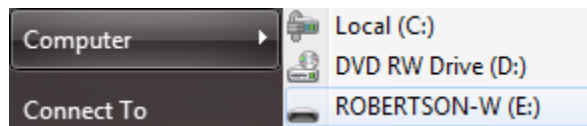
If you will be storing your work on a USB drive then insert it into one of the computer's USB ports. It should go in easily. There is a **right side up** so if it does not fit one way turn it over and try again, but gently.

Very useful {

6. To see the contents of your USB drive, hold down the Windows key  and tap the letter **e** on the keyboard.



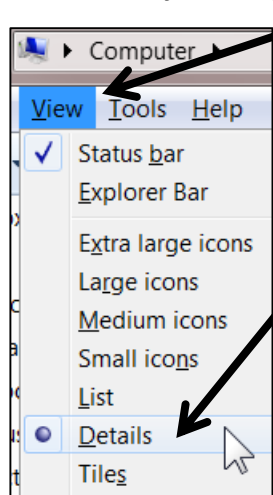
You can also see the contents of your USB drive by tapping the Windows key, pointing to **Computer**, and selecting your USB drive. It probably will have a drive designator of **E:**:



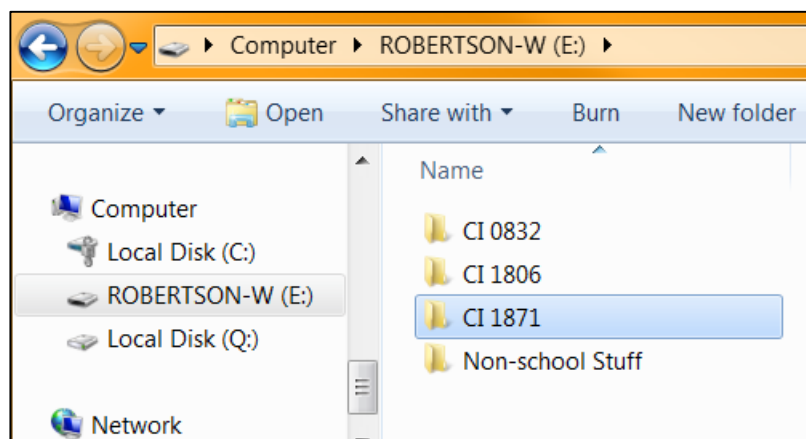
The name of the USB drive shown is **ROBERTSON-W**; the name on your drive will be different. Several drive designators may also be shown:

- A:** is for a floppy diskette drive (no longer used).
- B:** is for a second floppy diskette drive (no longer used).
- C:** is for the hard drive.
- D:** is for the DVD/CD drive.
- E:** is for the USB drive.
- F:** is for another USB drive.

7. If necessary, change the **View** to **Details**.



8. Drag the **CI 1871** folder to the USB drive window. This will copy the folder. Here is how it looks on my USB drive:



9. Close all open windows by clicking **X** in the upper right corner of each.

- c. When the textbook or this Study Guide asks you to save a file, save it to one of the folders in the **CI 1871** folder. To see how this works, do the following (this is part of your first homework project that you will turn in for grading). Note that

Word files are called **documents**

Excel files are called **workbooks**

PowerPoint files are called **presentations**

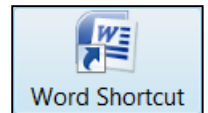
Access files are called **databases**.

1. Start Word by doing one of the following:

Option 1 If your computer has a tiny Word icon on the taskbar, click it **once**.

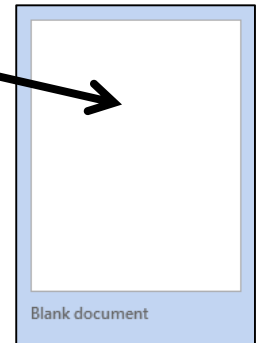


Option 2 If your computer has a Word icon on the desktop, click it **twice**.

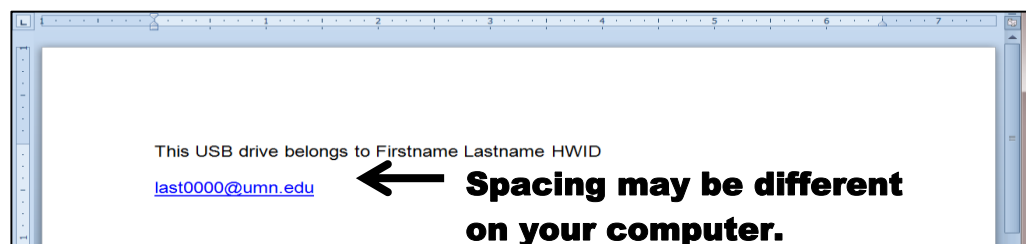


Option 3 Click the **Start Button**  click **All Programs**, click **Microsoft Office 2013**, and click **Microsoft Word 2013**.

2. After Word starts, click **Blank document**.
3. Type the following: **This USB drive belongs to Firstname Lastname HWID** where **Firstname** is your first name, **Lastname** is your last name, and **HWID** is your three-digit homework ID number from your syllabus.

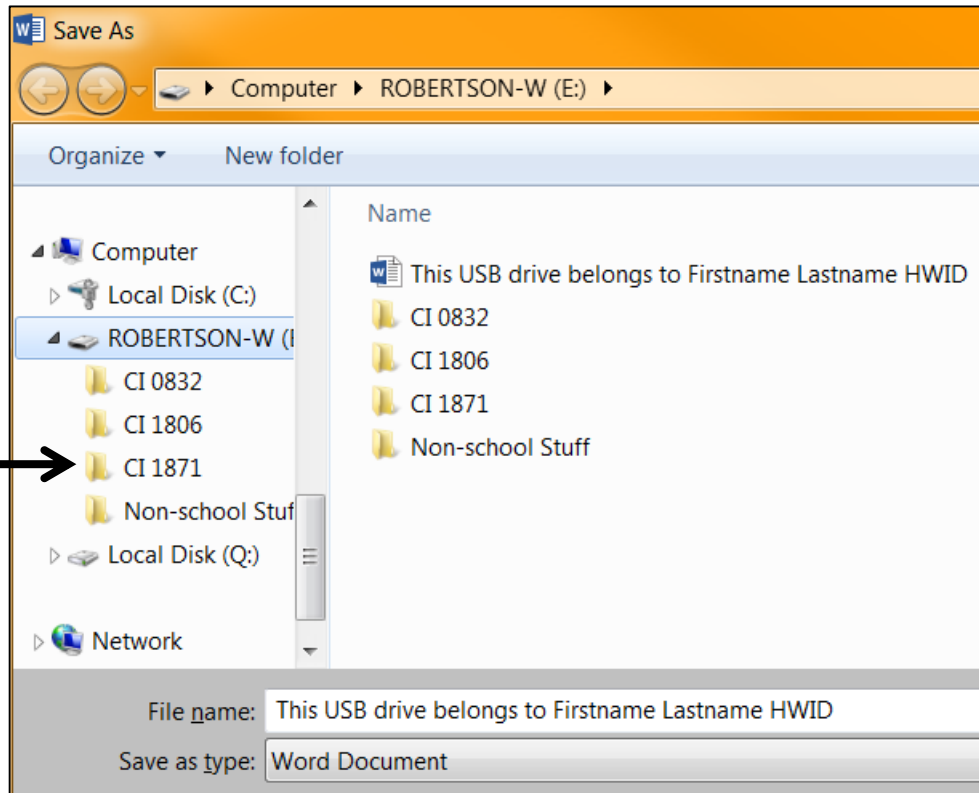


4. Tap the **Enter** key. Depending on how your version of Word is set up, the spacing between lines may be wide or narrow. Either way is fine.
5. Type your **U of M email address**. You are going to save this file. If you lose your drive or computer the person who finds it can email you and let you know where it is.
6. Tap the **Enter** key. Word may automatically underline the text, change its color to blue, and attach a hyperlink to it. Word does this because it recognizes the text as an email address and so applies its hyperlink style. If this happens, leave it as is. You will learn about inserting hyperlinks on page **SG98** and more on page **SG165**.



7. Tap **Ctrl + s** (that is, hold down the **Ctrl** key and, while keeping that key held down, tap the **s** key). This will open the **Save As** dialog box. This allows you to specify where you want your file saved and what name you would like to give it. You can also get here by tapping the **F12** key.

8. On the left side of the **Save As** window, navigate until you can see the **CI 1871** folder. If you are using a USB drive, to see a list of drives you may have to click  **Computer**



Notice that Word is suggesting the first line of text in the file for a name. That is the name you want.

9. Click **Save**. Word will save the file as **This USB drive belongs to Firstname Lastname HWID.docx**. The **.docx** is called a file name extension. It tells the computer what program to use when opening the file. Depending on how your computer is set up, it may or may not display the file name extension (mine does not).

For Word, the extension is **.docx**; for PowerPoint it is **.pptx**; for Excel it is **.xlsx**; and for Access it is **.accdb**.

Now, you are going to save the document using a different name.

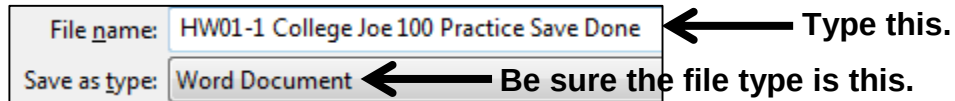
10. Tap **F12** (on the top row of keys). This will open the **Save As** dialog box. This allows you to save another copy of the file using a different name and/or in a different location.
11. Double-click the **CI 1871** folder to open it.
12. Double-click the **Word Files** folder to open it. You will see a list of all the Word files in that folder. If you do not see any files listed, check to see if the **Save as type:** box is set to  **Word 97-2003 Document**

If it is, click the box and set it to  **Word Document**

13. In the **File name:** box, delete the suggested file name and type:

HW01-1 Lastname Firstname HWID Practice Save Done

where **Lastname** is your last name, **Firstname** is your first name, and **HWID** is your three-digit homework ID number from your syllabus. If you are **Joe College** and your **HWID** is **100**, you would type this:



14. Click **Save**. The file will be saved in the **Word Files** folder with the name **HW01-1 Lastname Firstname HWID Practice Save Done**.
15. Exit Word by clicking the close box **X** in the upper right corner of the window.

Finding Files

Windows has a powerful search engine that will help you find and open files without having to locate them by sifting through layers of folders. You can search for files with particular names, contents, modification dates, or many other characteristics.

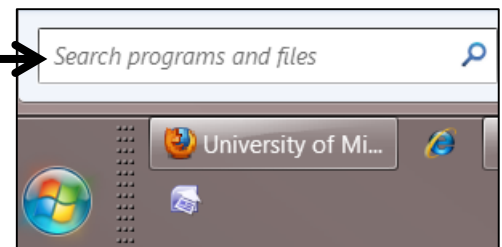
Here are two techniques you can use to find files using Windows 7 (Windows 10 is not installed on the classroom computers but it can do similar searches):

Technique 1 Click the **Start Button**  or tap the **Windows Key**  on the keyboard.



In the **search box**, type text that is in the name **or** contents of the file you are looking for.

Windows will search the hard drive of the entire computer. Because Windows automatically and continuously indexes your hard drive, the search is fast.



Technique 2 If you want to search the contents of one particular window or your USB drive, type what you are looking for in that window's search box. For example, if your **CI 1871** folder is open, the search box will look like this:

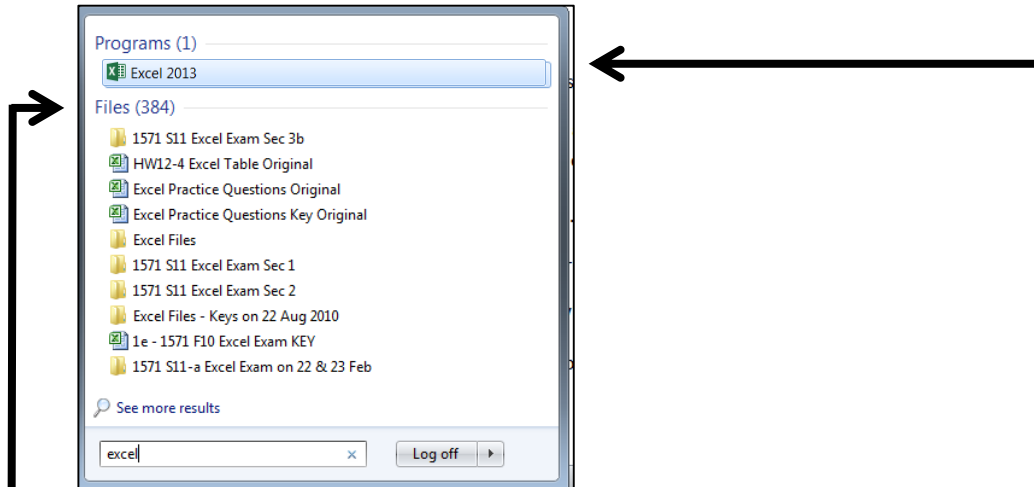


Capitalization of words does not matter. So typing **HW01-1 Lastname** and **hw01-1 lastname** will yield the same result.

As you start to type a word or phrase, Windows will flag every file, folder, program, photo, song, and email message that matches what you type. Windows will display the first 15 hits. To see more, click **See more results** (just above the search box).

a. To see how this works, do the following (your results will be different from mine):

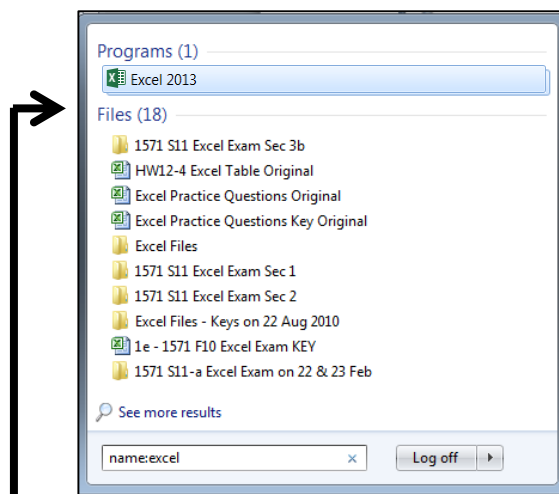
1. Click the **Start Button**  or tap the **Windows Key**  to open the **Start Menu**.
2. Type the word **excel** You will get a list something like the following:



Programs with the word **excel** in their names are listed first (there is one).

Then, files and folders are listed (there are 384). These include files and folders that have the word **excel** (or **Excel**, or **EXCEL**) in their names as well as files that don't but do have the word **excel** (or **Excel**, or **EXCEL**) inside them somewhere. That is, Windows searches both the **file names** and the **contents** of the files.

3. To list files whose **names** have the word **excel** in them type **name:excel**



Notice that now only 18 files are listed.

To list files that contain a phrase, put the phrase inside quotation marks. For example, typing **"google drive"** will list items that have that phrase while typing **google drive** (no quotes) will list items that have either or both words.

PROJECT 1: GETTING STARTED

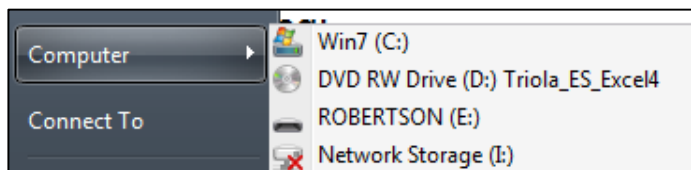
4. To list only files you modified **today** type **modified:today**. This shows that I have modified 21 files and folders so far today.

5. To see the files modified on Friday, July 6, 2012, type **modified:7/6/2012**

This shows that on July 6, 2012, I modified 1 program and 43 other files and folders.

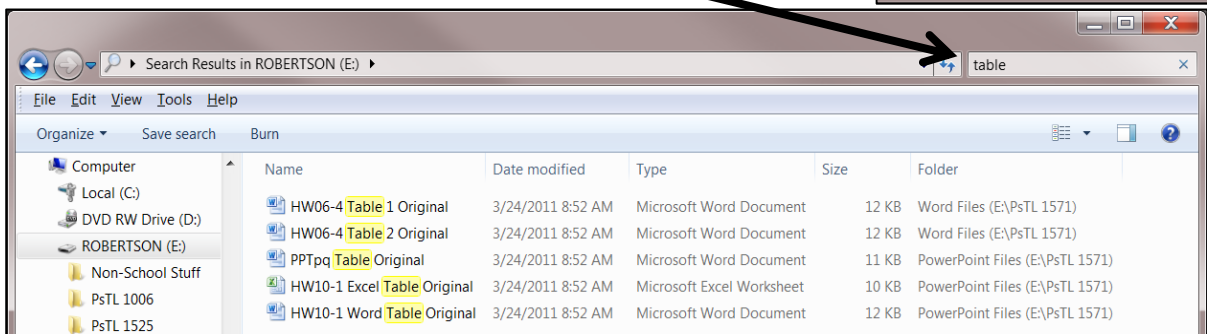
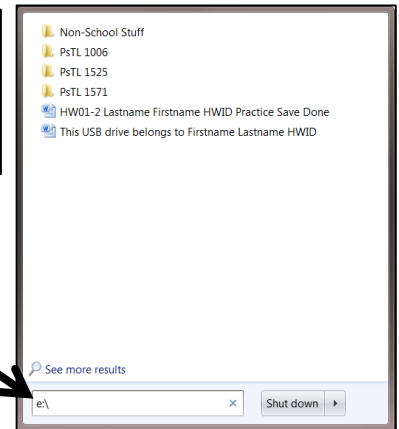
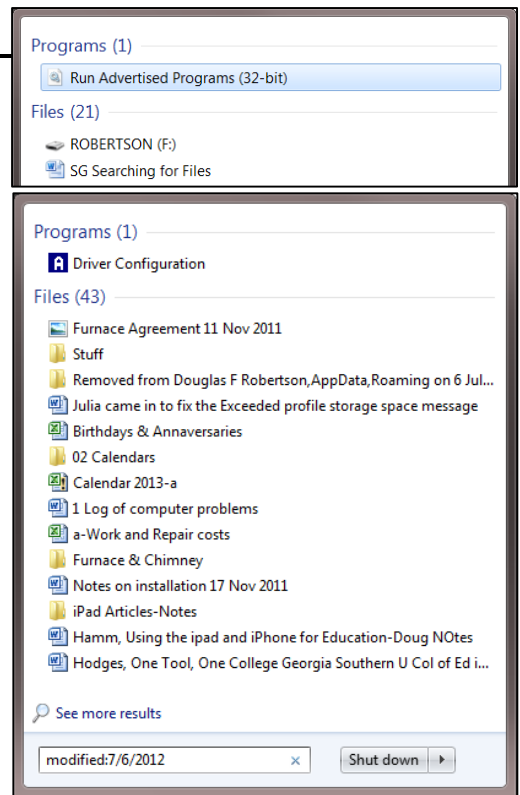
b. You can use the same process to find files within a window or on your USB drive. Here is an example of how that might work with a USB drive. ***There is nothing for you to do here; just read and experiment on your own computer.***

1. Here, I opened my USB drive by clicking the **Start Button** selecting **Computer**, and finally selecting drive (E:).

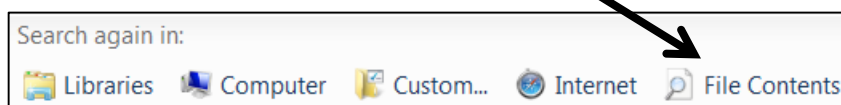


Or, I could have simply typed **e:** in the search box and taped **Enter**. The **e:** refers to the USB drive and the **** refers to its root (main) directory.

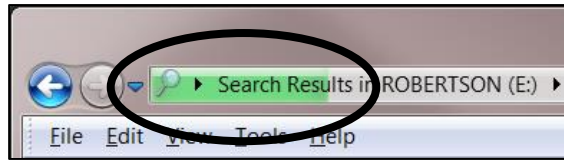
2. I typed **table** in the search box.



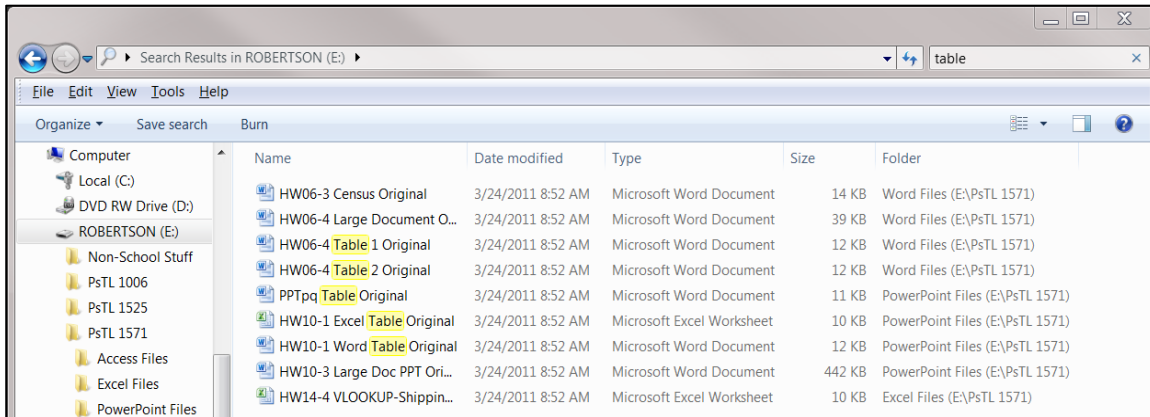
Windows displayed all the file names on the USB drive that contain the word **table** (or **Table** or **TABLE**). Because the USB drive is an external drive, Windows did not have a chance to completely index the contents of each file. So, when I did this search, Windows only searched **file names** and not their contents. If I had wanted Windows to search the *contents* of the files, I could have clicked **File Contents** under **Search again in:** (near the bottom of the screen).



This would cause Windows to index the USB drive right away and then search its contents. Depending on the size of your drive, this will take a few seconds or minutes. You will see a green background color move across the address box as the indexing progresses.

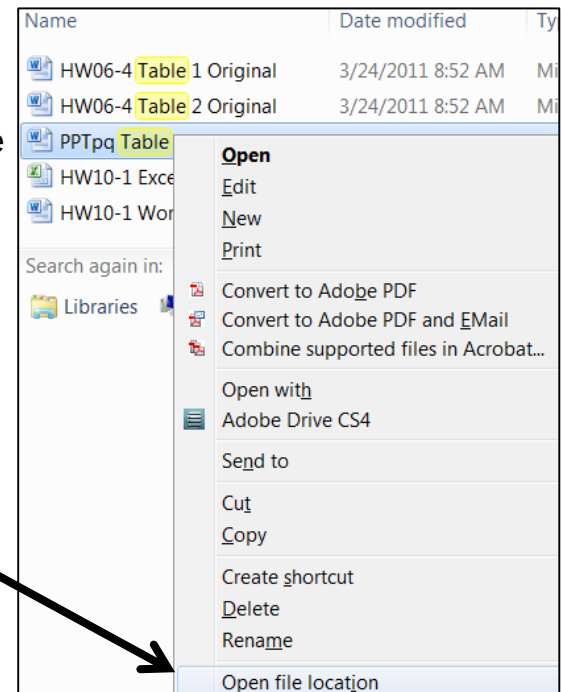


The green color will go away when the indexing is done and the final search results will be displayed.



Four additional files are listed even though they do not have **table** in their names. For example, **HW06-3 Census Original** does not have **table** in its name but **table** does appear somewhere in its contents.

To open a file, double-click its name.



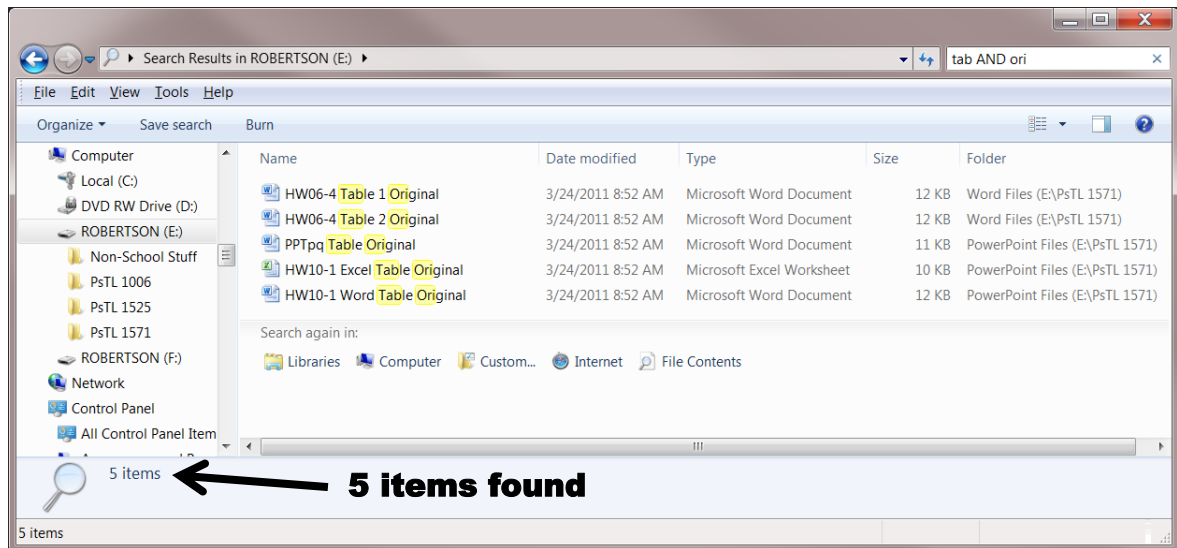
Very useful

To open the folder that contains the file, right-click the file name and then select **Open file location**.

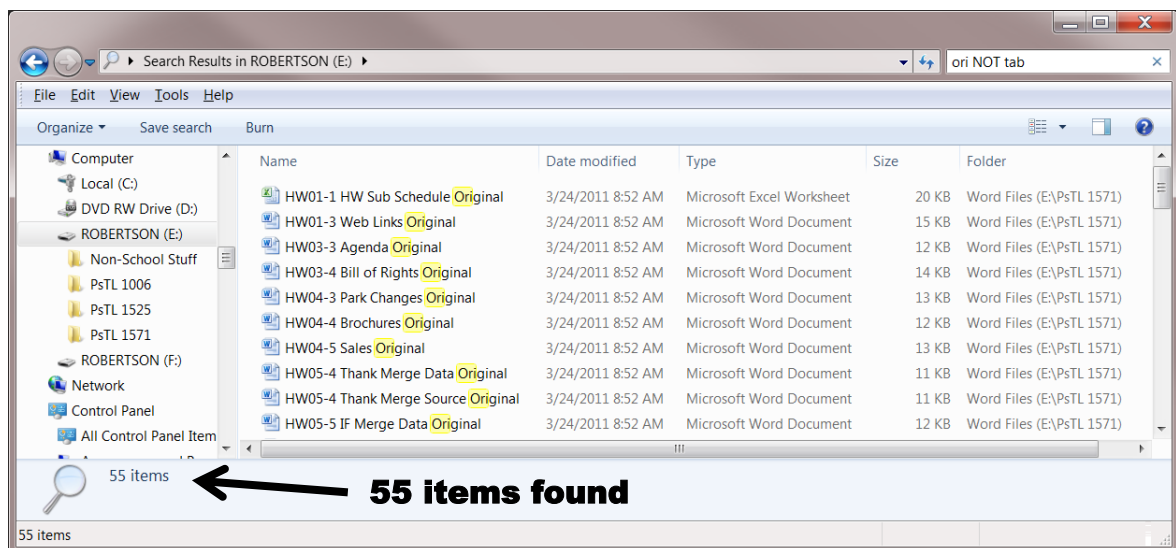
- c. You can use Boolean operators³ such as **AND**, **OR**, and **NOT**. For example, typing **table OR original** shows all file names that contain either word. Typing **tab OR ori** yields the same file names plus others that start with the letters **ori** (e.g., **origami**). You must use **CAPITAL LETTERS** for the **operators**.

³ Named after the 19th century English mathematician, philosopher, and logician George Boole, who is considered one of the founders of the field of computer science.

Typing **tab AND ori** shows file names that contain **both** words.



Typing **ori NOT tab** shows file names that contain **ori** but which do not contain **tab**.



Keyboard Shortcuts in Windows 7

Here are some keyboard short cuts that may save you time. The  symbol refers to the **Windows Key**, which is in the bottom row of the keyboard, second from the left and also to the right of the **Spacebar** and **Alt** key.

Very useful }		Open the Start Menu .
	 + d	Minimize all windows and show the desktop. Pressing this again restores all the minimized windows.
	 + e	Open the Computer window (to show drives C: , D: , E: , etc.).
	Ctrl + 	Close a Window.
	Ctrl + y	Redo the last action.
	Ctrl + d	Move the selected item to the Recycle bin.
	Esc	Cancel the current task.

Shutting Down the Computer

Before you shut down or remove a USB drive from a computer, be sure to **close all open the windows** (don't just minimize them with this button , but click the close box  to close them). If you shut down or remove your USB drive with windows open you may lose some data.

Pull out your USB drive. ***Don't wiggle the USB drive, just pull it straight out.***

You now can safely shut down the computer. Note that if you are using a classroom computer anything you save to the hard drive will be deleted when the computer restarts so be sure you are saving all your work to your USB drive.

Step 3 Homework

Do the following homework projects and turn them in for grading. Each begins with a statement of a **Problem**: and the project provides the solution.

HW means
HomeWork

01 means
Project 1

1 means
Problem #1

HW01-1 Practice Save

Problem: How can you open and save Word documents?

- a. This first project is a quick one to be sure you know how and where to save your files and to remind you of the glossary and index at the back of the text.
 1. Navigate to the **CI 1871** folder and double-click it.
 2. Double-click the folder **Word Files**.
 3. Double-click the file name **HW01-1 Lastname Firstname HWID Practice Save Done**, which you created while following the directions on page **SG15** of this Study Guide. This will open the file.
 4. Move the insertion point to the end of the document by pressing **Ctrl + End**.
 5. Tap **Enter** twice to insert a blank line.
 6. Type the words **Glossary Entries** and tap **Enter**. Then, look up in the back of your **textbook** the glossary entry for each of the following words. On separate lines, type the words and the Glossary entries as follows:

Font: TYPE TEXTBOOK GLOSSARY ENTRY HERE

Pt: TYPE TEXTBOOK GLOSSARY ENTRY HERE

7. Place the insertion point at the end of the line with your last glossary entry, tap **Enter** twice (to insert a blank line), type the words **Index Entries**, tap **Enter**, and then type the following items. After each item, type the **page number** where the Index says that item is discussed.

Drives: TYPE TEXTBOOK PAGE NUMBER HERE

Flash Fill: TYPE TEXTBOOK PAGE NUMBER HERE

8. Tap **Enter** two times to insert a blank line.

9. Type the following on separate lines but replace **DATE** and **TIME** with the proper date and time for each exam (if an exam is not yet scheduled, type your best guess for the date and time):

1871 Excel exam is on DATE at TIME.

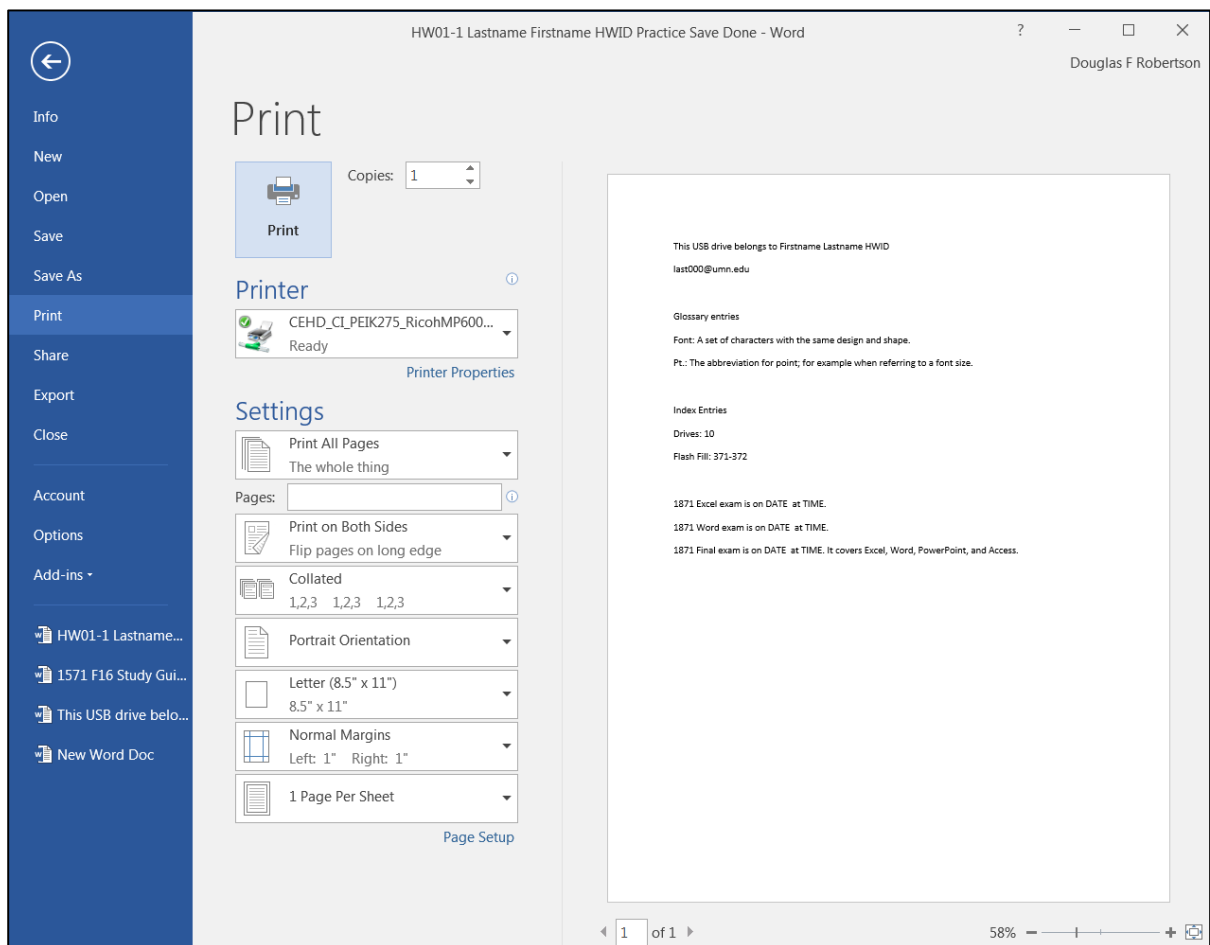
1871 Word exam is on DATE at TIME.

1871 Final exam is on DATE at TIME. It covers Excel, Word, PowerPoint, and Access.

10. Mark on your calendar, organizer, Blackberry, iPhone, whatever, the dates, times, and locations for the Excel exam, the Word exam, and the Final exam. All exams will be done on the computers in 302 Appleby.

b. Print the document by doing the following:

1. Tap **Ctrl + p** to display the **Print** dialog box.



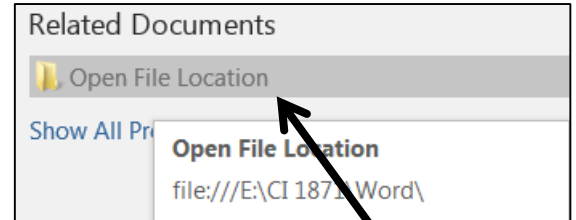
2. Compare the preview with the key on page **SG329** of this Study Guide. If you need to make corrections, tap the **Esc** key (upper left corner of the keyboard) to get back to edit mode and then make your changes. When you are sure your document matches the key, print the file by pressing **Ctrl + p** (if needed) and then clicking the **Print** button.

Keep the printed output to hand in with the other parts of your first assignment.

- c. Open the location of the file **HW01-1 Lastname Firstname HWID Practice Save Done** by doing the following:

Very useful

1. Click the **File** tab to open **Backstage** view. This provides information about the file and allows you to set options for Word. In the lower right corner, point to **Open File Location**. This shows where the file is saved.
2. Click **Open File Location** to open the folder that contains the file. This is useful when you are working with lots of files and drives. Check to be sure your file is in the correct place (if you are on a public computer, it should show the file on your USB drive, in the **Word** folder of the **CI 1871** folder).
3. Close the folder you just opened.
4. Tap the **Esc** key to close **Backstage** view and return to normal view.



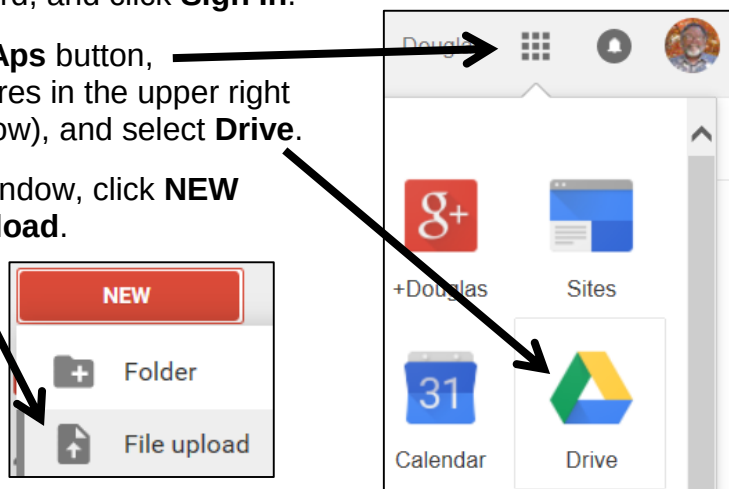
- d. Save the document and then close it by clicking **X** in the upper right corner of the window.

HW01-2 Saving Files to Google Drive

Problem: How can you save files so they can be accessed from any computer that has an internet connection?

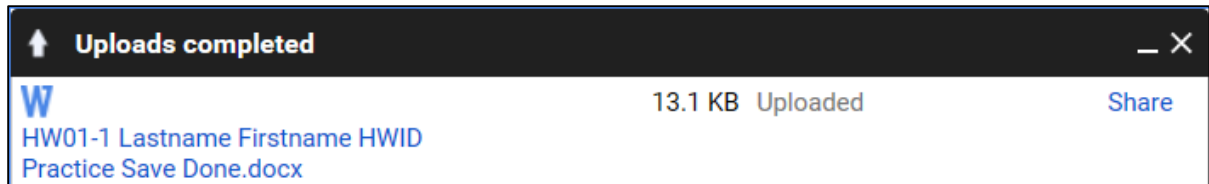
When you set up your computer filing system on page **SG9** you accessed files that I had put up on **Google Drive**. In this project, you will experience uploading your own file to **Google Drive**.

- a. You can access **Google Drive** by entering **drive.google.com** in the address bar of your internet browser or by selecting **Google Drive** from the **Google Apps** button if your U of M email is open. You will do the latter. Do the following:
1. Start **Internet Explorer**, type **mail.umn.edu** in the address bar, and tap **Enter**.
 2. Type your Internet ID (this is your **x.500** identifier, which consists of the characters in your U of M email address to the left of the **@** symbol), type your email password, and click **Sign In**.
 3. Click the **Google Apps** button, (the nine tiny squares in the upper right corner of the window), and select **Drive**.
 4. At the left of the window, click **NEW** and select **File upload**.



5. Navigate to your file **HW01-1 Lastname Firstname HWID Practice Save Done** and double click.

When the upload is complete, you will see an **Uploads completed** window.



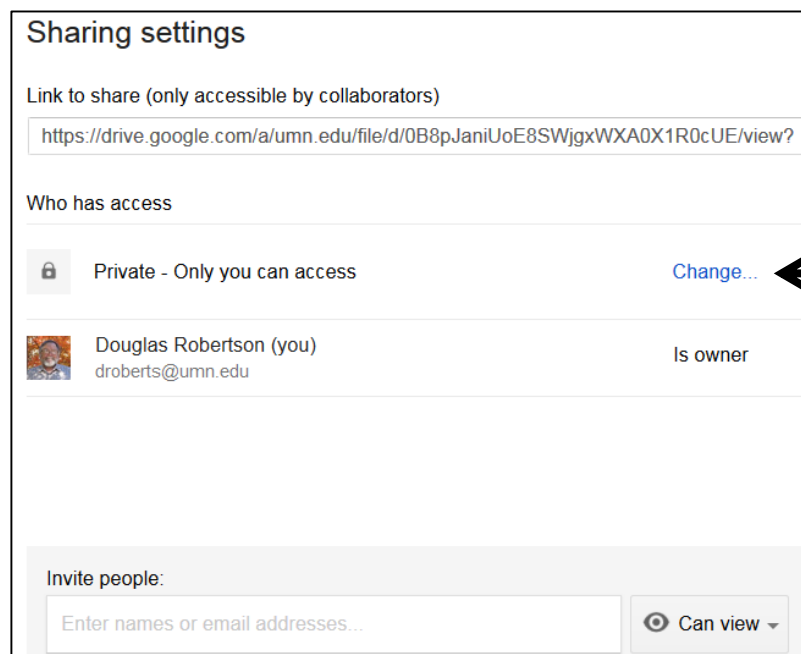
6. Click the **X** to close the upload window. The file name will be listed.

Now, you need to specify who can access your uploaded file.

7. Right-click the file name and select **Share**.



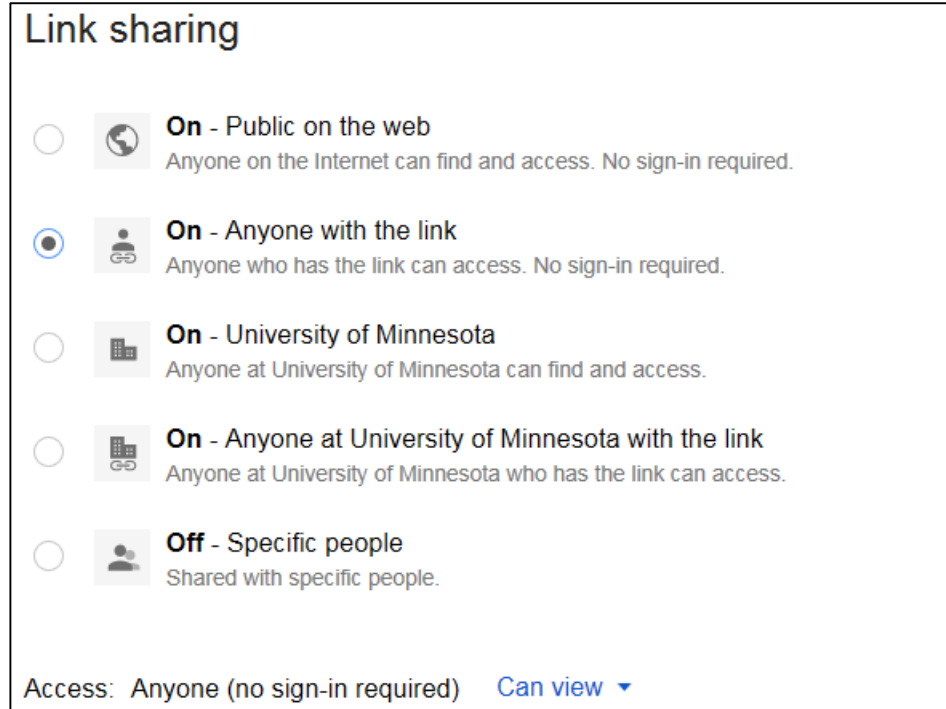
8. Click **Advanced** to show the **Sharing settings**.
9. To **not** allow others to change the file, click the down arrow next to **Can edit** and select **Can view**. If you want to share the file only with specific people, type their email addresses in the box. For this project, leave it blank.



This shows me as the owner and that the file is initially set to **Private** so that only I can access it.

10. Click **Change** to see the other sharing options.

11. Click **Anyone with the link**. That is what I selected for the folder I had you download so that it was not viewable to the world but only students in CI 1871 (unless a student gives the link to someone else).

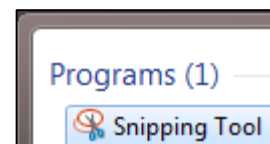


12. Click **Save**.

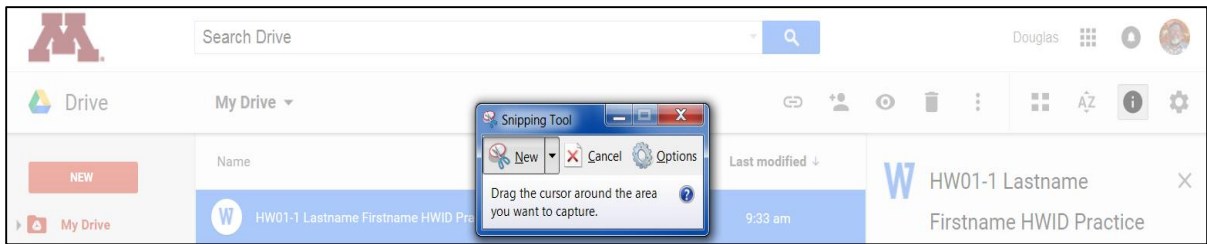
13. Click **Done**.

Note that for Internet Explorer and Firefox in order to upload a folder rather than a file you first must compress the folder into a single file. To do that, right-click the folder name, select **Send to** and then **Compressed (zipped) folder**. The person downloading the compressed folder will then have to **UNZIP** the files as you did on page **SG11**. If you use Chrome you can simply drag and drop the folder into Google Drive.

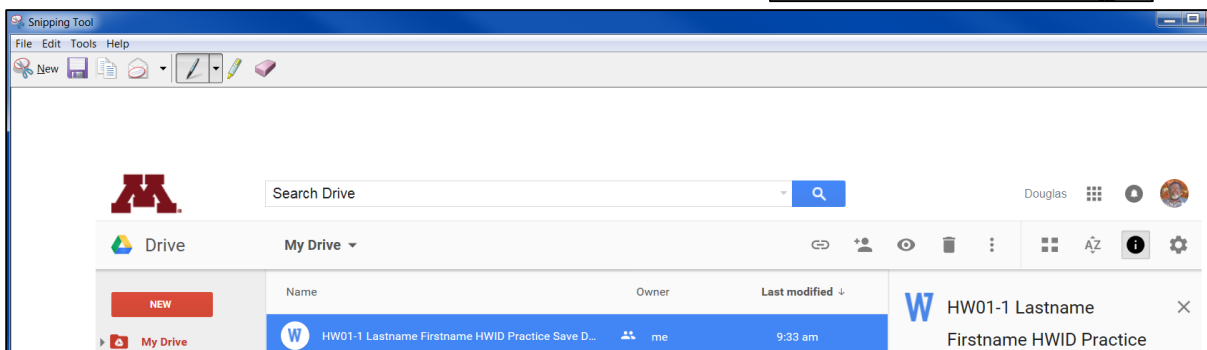
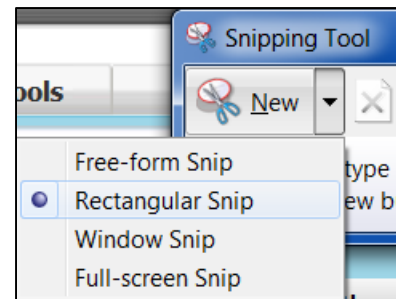
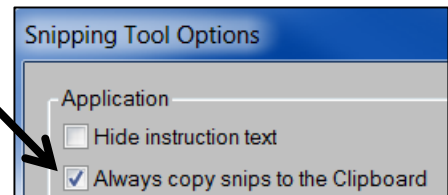
- c. Do the following to take a screenshot of your **Google Drive** homepage:
 1. Start Word and open a blank document.
 2. All on one line, type **HW01-2 Lastname Firstname HWID**, where **Lastname** is your last name, **Firstname** is your first name, and **HWID** is your three-digit homework ID number from your syllabus.
 3. Tap **Enter** two times.
 4. Click the **Google Drive** window to make it active
 5. On the lower left side of the keyboard, tap the **Windows** key (between **Ctrl** and **Alt**) to open the **Start** menu.
 6. Type **snip** and Windows will list files on your computer that contain the word **snip**. Windows puts the names of programs at the top of the list.



7. Click  **Snipping Tool** to open the program. It will make the screen look washed out, like this:



8. Click **Options** and be sure **Always copy snips to the Clipboard** is checked.
9. Click **OK**.
10. Click the down arrow next to **New** and select **Rectangular Snip**.
11. Drag the cursor around the Google Drive window to select it. When you let up on the mouse button a picture of the **Google Drive** window will be placed on the clipboard and a sample of what you have just captured will be shown.



12. Click the **X** to close the **Snipping Tool**. If asked to save the changes, click **No**.
 13. Click at the end of the new Word document and then tap **Ctrl + v** to paste the screen shot into the document.
- d. Print the document, save it using the name **HW01-2 Lastname Firstname HWID Google Drive Done**, and close it.
 - e. Close Internet Explorer.

You can also get free “cloud” storage from many non-U of M vendors and directly from Microsoft through SkyDrive. For more information see <http://www.bestfreecloudstorageproviders.com/>

HW01-3 Web-Based Training

Problem: How can you get training videos on technology issues?

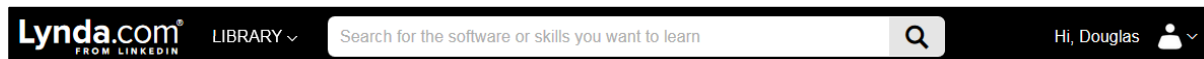
To make extensive online technology training available to all students, staff, and faculty, the University provides free access to **Lynda.com**, a learning platform that teaches technology skills in a video format. The company was founded in 1995 by Lynda Weinman and Bruce Heavin. Users may watch videos on software and technology courses in areas such as animation, audio, video, business, development, computing, photography, and web design. It has videos that cover some of the content of this course. In this project, you will have an opportunity to explore the Lynda site and watch a brief video of your choosing.

a. Create a new Word document.

1. Start Word and open a new blank document.
2. All on one line, type **HW01-3 Lastname Firstname HWID Lynda**, where **Lastname** is your last name, **Firstname** is your first name, and **HWID** is your three-digit homework ID number from your syllabus.
3. Tap **Enter** two times.
4. Tap the **F12** key and save the document using the name **HW01-3 Lastname Firstname HWID Lynda Done**.

b. Log in to Lynda.com

1. Start Internet Explorer and go to <http://www.lynda.com>
2. Log in using your U of M Internet ID and password. A screen like this will appear:



Lynda has lots of options that you can explore at your leisure.

3. In the search box, type anything you are interested in and tap **Enter**. I typed **ipad training** and got 919 results:

The screenshot shows the Lynda.com website with a search bar at the top containing 'ipad training'. Below the search bar, the results are displayed under the heading 'Search results'. On the left side, there are filters for 'Filter by' (All, Playlists, Learning Paths, Courses, Videos, Site pages) and 'Skill level' (Beginner (654), Intermediate (470), Advanced (246), Appropriate for all (228)). Below these are 'Subject' filters including Business (287), Design (158), Web (119), Education + Elearning (115), Video (114), Home + Small Office (110), iPhone, iPod, iPad (108), Photography (106), Productivity (98), Developer (93), Teacher Tools (78), Web Design (74), Operating Systems (66), Computer Skills (Mac) (55), and IT (54). The main results area shows '919 Results' and lists three items: a video titled 'Welcome (1m 6s)' from the course 'iOS 7: iPhone and iPad Essential Training', and two courses: 'iWork for iPad Essential Training' with Richard Harrington (4h 48m, Appropriate for all, Aug 19, 2014) and 'Office for iPad and iPhone Essential Training' with Jess Stratton (1h 34m, Beginner, Mar 28, 2016). The bottom item is 'iOS 9: iPhone and iPad Essential Training' with Garrick Chow (9h 5m, Beginner, Mar 24, 2016). Each course entry includes a 'See Related Courses' button.

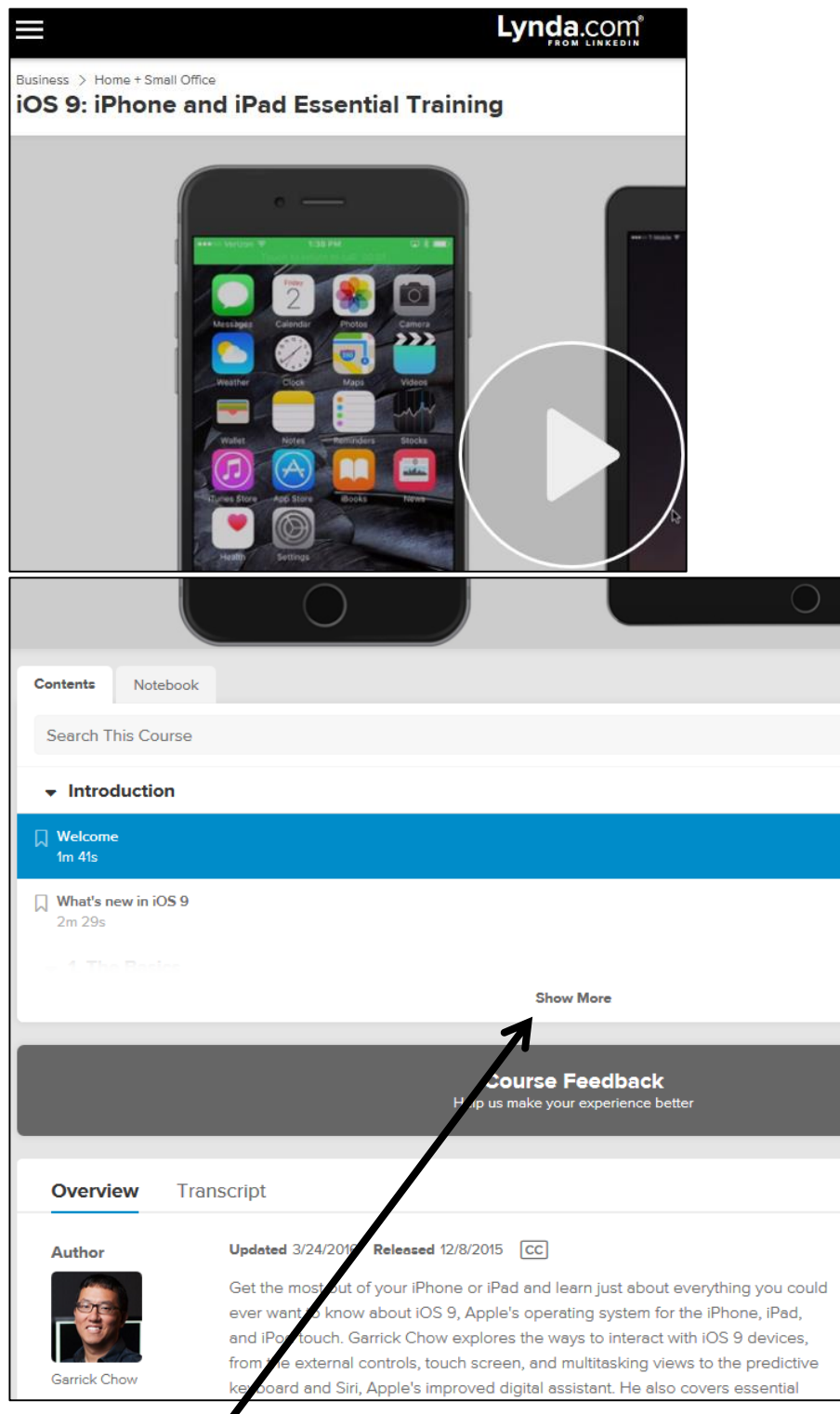
You can use the **Filter by** options to narrow the type of information you want, as well as the **Skill level**.

4. I was interested in the course **iOS 9: iPhone and iPad Essential Training**.

The screenshot shows the details for the course 'iOS 9: iPhone and iPad Essential Training' by Garrick Chow. It includes a course icon, the course title, a description: 'Get the most out of your iPhone or iPad. Learn everything you could ever want to know about iOS 9, Apple's operating system for the iPhone, iPad, and iPod touch.', and the course duration (9h 5m), skill level (Beginner), and update date (Mar 24, 2016). A 'See Related Courses' button is also visible.

You can see that the entire course is 9 hours and 5 minutes long, is for Beginners, and was updated on Mar 24, 2016.

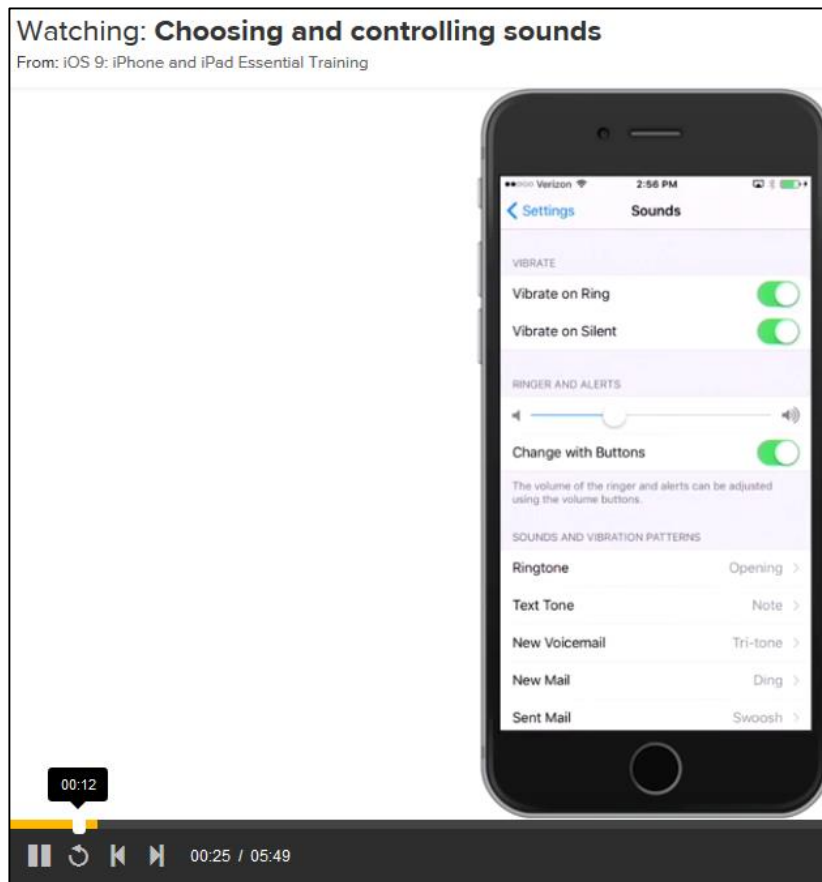
You can click that or any other video that interests you. Here is what I got:



Clicking **Show More** will display links to each section of the course.

6. Click any part you wish to start its video. I clicked **Choosing and controlling sounds**.

7. Use the **Snipping** tool as you did on page **SG24** to take a screen shot of the video at any point. Here is what I captured:



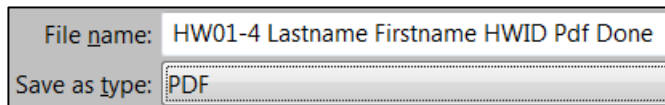
8. Switch to Word and paste the screenshot at the bottom of the document.
- c. Tap **Ctrl + P** and compare the preview with the key. Obviously, your screen shot will be different from mine but that is fine. Make needed corrections, print, save the document, and close it. Close your web browser.

HW01-4 PDF Files

Problem: How can you send files to others so that they will be able to view them as they would appear on your own computer?

If you want someone else to have access to one of your files you could put it up on Google Drive or email it as an attachment. Emailing files to yourself or others may require special handling. Email clients, like Gmail, usually have a size limitation so that very large files have to be compressed or broken up into several smaller files before they can be emailed. The file size limit for Gmail is 25 megabytes. Also, because different printers require different setup parameters, if you email a file to a friend the formatting on your friend's computer may not look exactly like it did on your computer. Or, your friend may not have Word or Excel or PowerPoint and so could not open the file. You can get around some of these limitations by saving files in **Portable Document Format** (pdf) format. Pdf was developed in 1991 by Adobe Systems. It is designed to represent documents in a manner independent of application software, hardware, and operating systems. Let's see how this works.

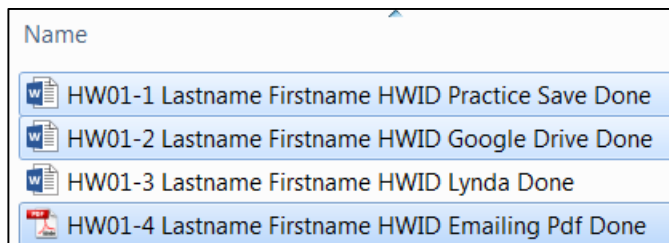
- a. Convert a Word file to a pdf file by doing the following:
 1. Navigate to your **Word Files** folder and open the document **HW10-1 Character Styles and Declaration Original**, which is one of the files you copied at the start of the term. You will use this file again in Project 10.
 2. Tap the **F12** key to open the **Save As** dialog. In the **File name** box type **HW01-4 Lastname Firstname HWID Pdf Done**.
 3. Click the **Save as type** down arrow and select **PDF**.



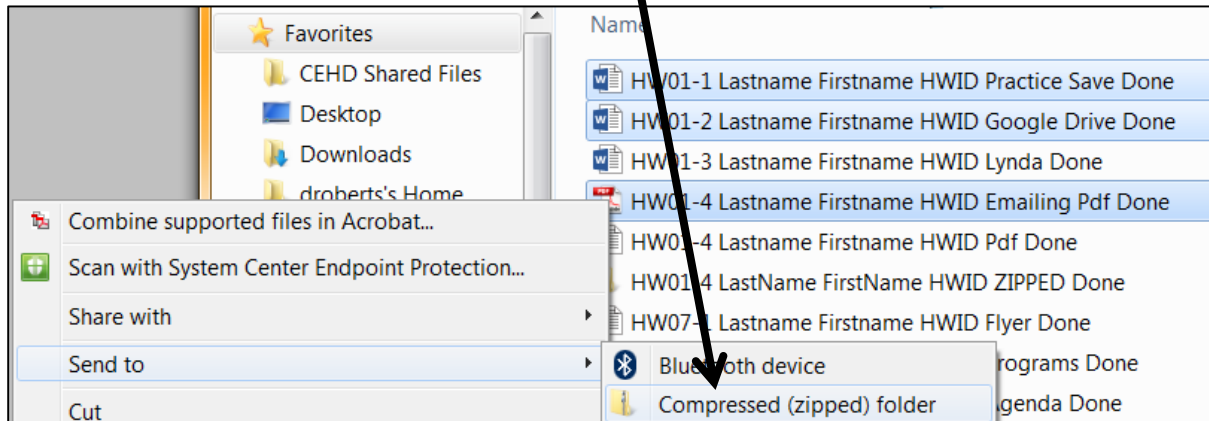
4. Click **Save**. An accurate copy of this file now can be opened by just about any computer with the aid of **Adobe Reader**, a program that is available free from <http://get.adobe.com/reader/?promoid=JZEUFU>

If this had been a file too large to email, for example this Study Guide, you could have saved it using two copies, say, **SG-Part-1** and **SG-Part-2**, deleted the last half of the material in **SG-Part-1** and the first half of the material in **SG-Part-2**, and then saved each as a pdf.

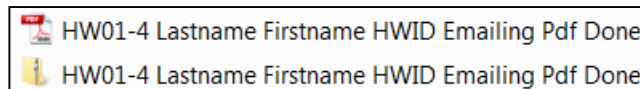
5. If necessary, close the newly created pdf file. Also, close **HW10-1 Character Styles and Declaration Original** without saving changes to it.
- b. Email a compressed folder that contains files to **yourself** (NOT me!) by doing the following:
 1. Navigate to the **Word Files** folder.
 2. Click **ONCE** the icon  just to the left of file name **HW01-1 Lastname Firstname HWID Practice Save Done**.
 3. Hold down the **Ctrl** key and click the icons next to the file names **HW01-2 Lastname Firstname HWID Google Drive Done** and **HW01-4 Lastname Firstname HWID Pdf Done**.



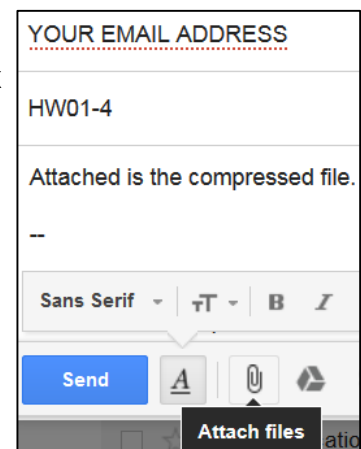
4. With the arrow pointing at the icon next to file **HW01-4**, right-click, select **Send to**, and then select **Compressed (zipped)** folder.



A new **zipped** file is created. Its icon is a folder with a zipper on it and it has the same name as the last file in the list that you zipped.



5. Change the name of the new zipped file to **HW01-4 LastName FirstName HWID ZIPPED Done**
6. Open your email program and compose an email with the message: **Attached is the compressed file.**
7. Type **your own** email address in the **To** box and **HW01-4** in the **Subject** box.
8. If you are using Gmail, click the paperclip icon near the bottom of the window to attach the file to the email. If you are using a different email program it will look a bit different. Navigate to your Word folder, and double-click **HW01-4 LastName FirstName HWID ZIPPED Done**. The file will be attached to the email.



HW01-4 LastName FirstName HWID ZIPPED Don... (335K)

9. Send the email **to yourself** (NOT to me).
- c. Do the following to create your homework file:
1. Start Word and open a new blank document.
 2. All on one line, type **HW01-4 Lastname Firstname HWID** and then tap **Enter** two times.
 3. Open your email program, and open the email you just sent to yourself.

4. Use the **Snipping Tool** to take a screen shot of the email.



5. Click at the end of the new Word document and then tap **Ctrl + v** to paste the screen shot into the document.
- d. Tap **Ctrl + P** and compare the preview with the key. Make needed corrections, print, save the document using the name **HW01-4 Lastname Firstname HWID Email Done** and close it.

Step 4 Submit You now are ready to submit your homework for grading.

- Put your 4 homework papers in the following order:
HW01-1 Practice Save
HW01-2 Google Drive
HW01-3 Lynda
HW01-4 Email
- Cut out Submission Form 1 (from your syllabus) and put it on top of papers.

	<i>Getting Started</i>	Due DDD D MMM
1	Lastname, Firstname	
	HWID 100	Final Score: ____/40
00-H1	CI 1871 sec 1 Professor Robertson, 270D Peik Hall, droberts@umn.edu, 612-625-1075	

- Staple the papers in the upper left corner.
- Turn in the packet by the due date.

Step 5 Backup Now would be a good time to backup your files. It will take only a minute or two to copy your files from your USB drive to your computer's hard drive, or to another USB drive, or to upload them to Google Drive.

Project 2

Excel Chapter 1: Creating Worksheets and Charts

Step 1 Read Before turning on the computer, read page 303-306 in the textbook.

Step 2 Activities Turn on the computer and open your textbook to page 307.

Do all the steps of all the activities for Project 1A (pages 307 through 330) and Project 1B (pages 333 through 346). When you finish on page 346 return to this page in the Study Guide and start work on **Step 3 Homework**.

For this chapter and all the other textbook chapters, do **NOT** do **Go! with Office Web Apps** that follow Projects A and B or **Go! with Microsoft Office 365** that follow Project B.

Note that if the resolution of your monitor is not 1024 x 768 *things may look a bit different from the screen shots in the book*. Don't worry if you need to increase or decrease the width of cells to make thing look right on your computer.

To save paper, do NOT print when the textbook instructs you to. For example, skip steps 3, 4, and 5 on page 328.

You will be told what to print when you do the homework listed in this Study Guide. YOU DO NOT HAVE TO PRINT IN COLOR.

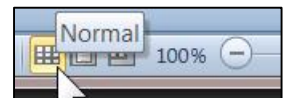
Step 3 Homework After you have completed the activities for this Chapter, return to this Study Guide, do the problems listed below, and turn them in for grading.

HW02-1 Quarterly Sales

Problem: How can you organize, summarize and change the way data and formulas are displayed?

- a. Open the workbook [Lastname_Firstname_1A_Quarterly_Sales](#), which you created while following the directions in the textbook and saved on page 329.

If necessary, switch to normal view by clicking the **Normal** button on the lower right corner of the window.



Remember, if you see a bunch of pound symbols, #####, it means the column is too narrow. To fix, click between two column heading letters to get a double arrow and drag right.

	A	B	C	D	E
1	Pro Fit Marietta				
2	Second Quarter Cardio Sales				
3		April	May	June	Total
4	Exercise Bi	#####	#####	####	####

- b. Tap **F12** to open the **Save As** dialog.

Save the workbook in the **Excel Files** folder using the name

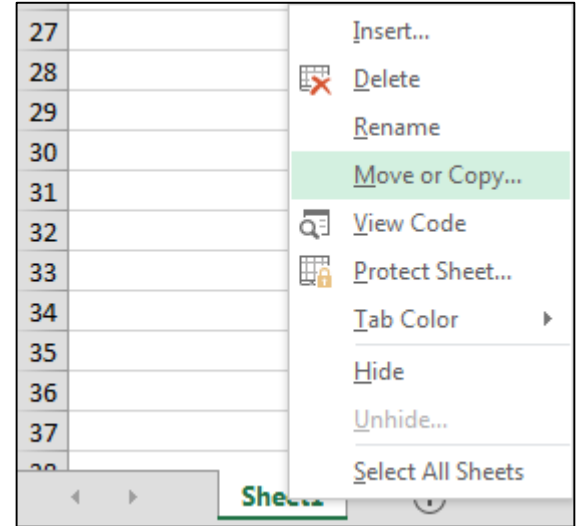
HW02-1 Lastname Firstname HWID 1A Quarterly Sales Done

where **Lastname** is your last name, **Firstname** is your first name, and **HWID** is your three-digit homework ID number from your syllabus.

- c. Tap **Ctrl + F2**. Compare the preview with the key. Make needed corrections, print the worksheet, and save it but **do not** close it.

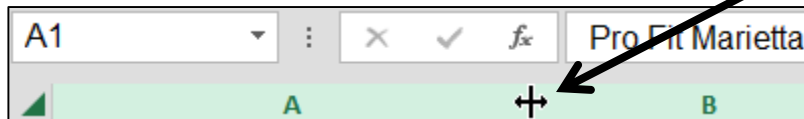
- d. Copy the worksheet by doing the following:

1. Near the bottom left of the screen, right-click the **Sheet1** tab and then select **Move or Copy** from the pop-up menu.
2. Click the **Create a copy** check box.
3. Click **OK**. This makes a duplicate of the worksheet but without the graph. The new worksheet is named **Sheet1 (2)**.
4. Double-click the tab name, **Sheet1 (2)**. This selects the name. Type the new name, **Formulas**, and tap **Enter**.



- e. Do the following to print a copy of the **Formulas** worksheet with the formulas displayed. This will enable me to see if you have the correct formulas. The directions given below are similar to those given in **Activity 1.17** on page 329 but they are quicker to execute.

1. Tap **Ctrl + `** to display the formulas. The **`** key is located at the upper left corner of the keyboard. You can also display the formulas by clicking **Show Formulas** on the **FORMULAS** tab.
2. Click the **Select All** box in the upper left corner of the worksheet. This selects all the cells of the worksheet.
3. Move the pointer to the column heading boundary between any two of the columns until the pointer becomes a double-headed arrow.

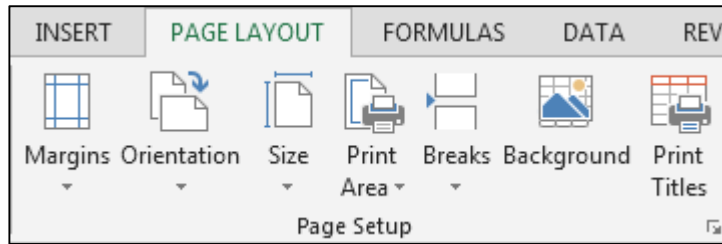


4. Double-click. This process, called **AutoFit**, will adjust the column widths to fit the formulas displayed. Don't worry if the formatting looks different because displaying the formulas sometimes messes it up.

	A	B	C	D	E	F
1	Pro Fit Marietta					
2	Second Quarter Cardio Sales					
3		April	May	June	Total	Trend
4	Exercise Bikes	68991.12	86894.82	99650.58	=SUM(B4:D4)	
5	Elliptical Machines	28836	22634.23	22828.78	=SUM(B5:D5)	
6	Treadmills	59519.78	82337.98	99823.87	=SUM(B6:D6)	
7	Rowing Machines	81267.17	87867.5	91669.98	=SUM(B7:D7)	
8	Total	=B4+B5+B6+B7	=C4+C5+C6+C7	=SUM(D4:D7)	=SUM(B8:D8)	

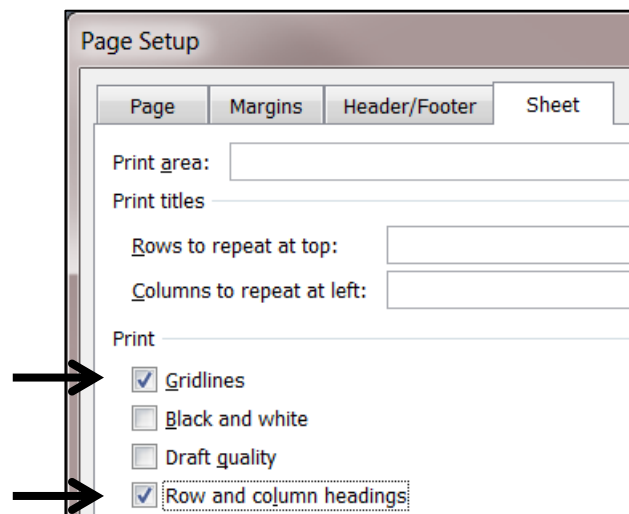
f. Now, print the workbook by doing the following:

1. On the **PAGE LAYOUT** tab, in the **Page Setup** group, click the **Dialog Box Launcher**.



This will open the **Page Setup** dialog box.

2. On the **Page** tab, in the **Scaling** section, click the button to the left of **Fit to:**. With this checked you are guaranteed the entire worksheet will print on one page. Be sure **Portrait** is checked.
3. Click the **Sheet** tab. In the **Print** section, check the boxes next to **Gridlines** and **Row and column headings**. Printing these makes it easier to see if the formulas are correct.



4. Click **OK**.
5. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the worksheet, save the workbook, and then close it.

HW02-2 Inventory Valuation

Problem: How can you construct and format graphs so that they are informative, visually appealing, and clearly display relationships between data?

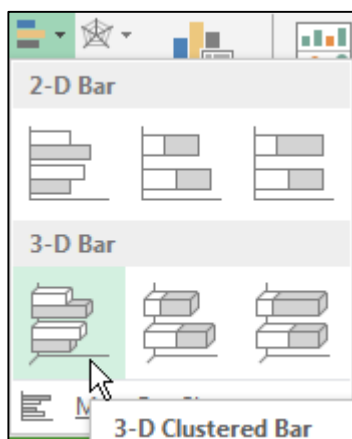
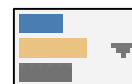
- a. Open the workbook **Lastname_Firstname_1B_Plyo_Products**, which you created while following the directions in the textbook and saved on page 346.

- b. Tap **F12** to open the **Save As** dialog.

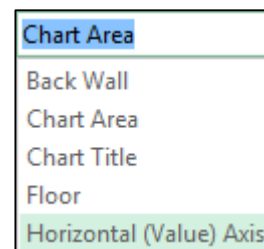
Save the workbook in the **Excel Files** folder using the name **HW02-2 Lastname Firstname HWID 1B Inventory Valuation Done** where **Lastname** is your last name, **Firstname** is your first name, and **HWID** is your three-digit homework ID number from your syllabus.

- c. Do the following to insert a bar chart that displays the **Percent of Total Retail Value** for each Item.

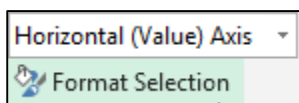
1. Select **A4:A10**. Then, hold down the **Ctrl** key and select **F4:F10**.
2. On the **INSERT** tab, in the **Charts** group, click the bar chart icon and select **3-D Clustered Bar**.



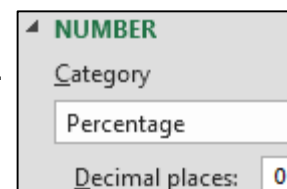
3. With the chart selected, on the **CHART TOOLS FORMAT** tab, in the **Current Selection** group (on the left), select **Horizontal (Values) Axis**.



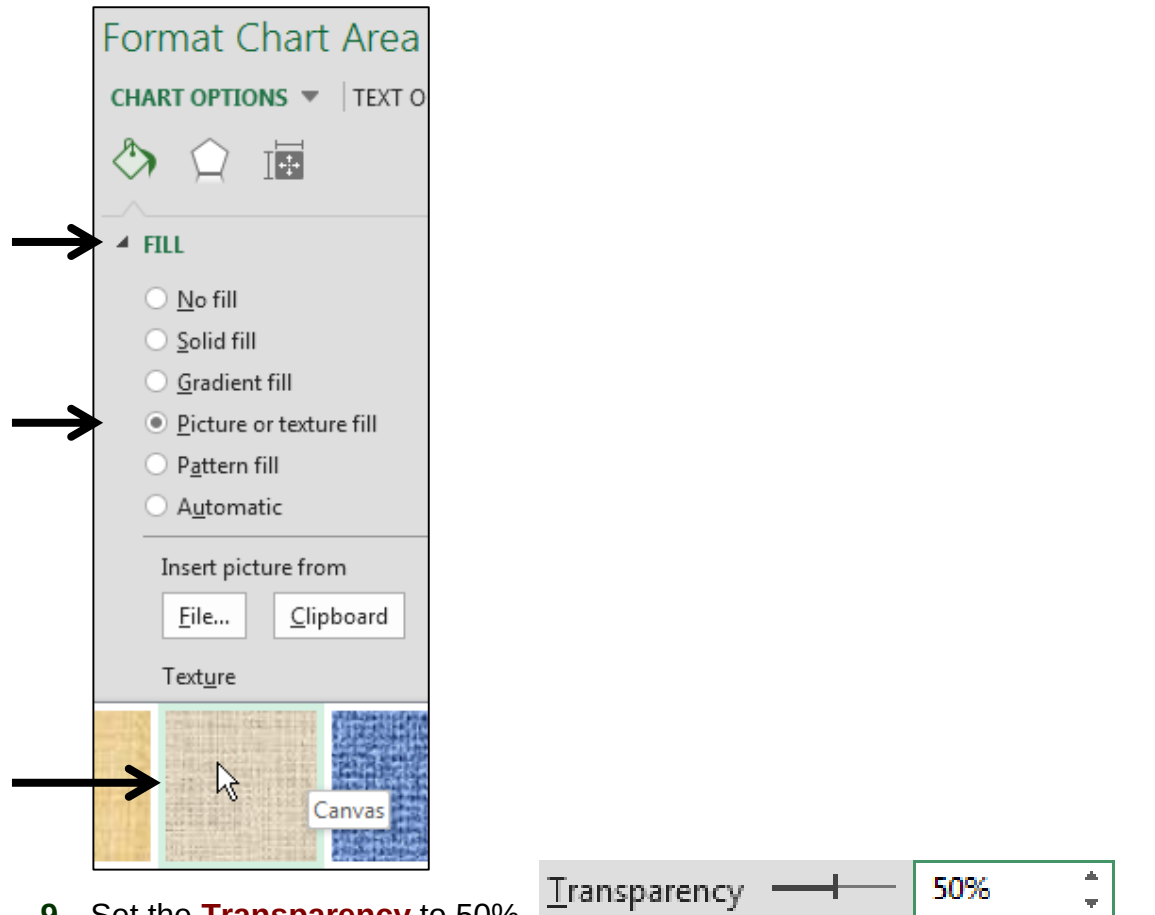
4. Click **Format Selection**. This will open the **Format Axis** pane.



5. Click **NUMBER**, **Percentage** and set the **Decimal places** to 0.
6. With the chart selected, on the **CHART TOOLS FORMAT** tab, in the **Current Selection** group (on the left), select **Chart Area**.
7. Click **Format Selection**.

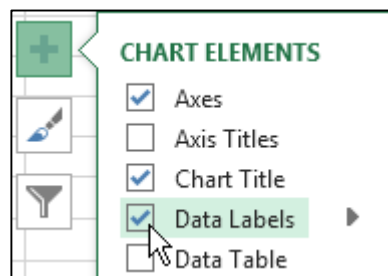


8. Click **FILL** and confirm that Picture or texture fill is checked. Then click the down arrow next to **Texture** and click **Canvas**.



9. Set the **Transparency** to 50%.

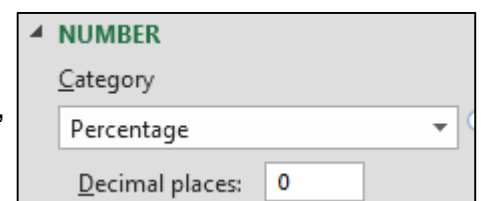
10. Click the **Chart Elements** button, the green cross  in the upper right corner of the chart, to open the **CHART ELEMENTS** menu and put a check next to **Data Labels**.



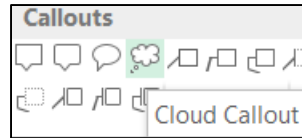
11. With the chart selected, on the **CHART TOOLS FORMAT** tab, in the **Current Selection** group (on the left), select **Series "Percent of total Retail Value" Data Labels**.

12. Click **Format Selection**.

13. In the format **Data Labels** pane, click **Number**, set the **Category** to **Percentage**, and the **Decimal places** to 0.



14. Click **Close**.
15. With the **Data Labels** still selected, click the **HOME** tab, in the **Font** group, select Arial Black from the drop down menu.
16. Move and resize the chart so that the upper left corner is just inside **A12** and the lower right corner is just inside **F27**.
17. Click **A1** to deselect the chart.
18. On the **INSERT** tab, in the **Illustrations** group, click **Shapes**, and click **Cloud Callout** (way down at the bottom of the menu).
A small cross will appear. +



19. Move the cross to about the middle of **A4**, hold down the left mouse button, and drag down and to the right to insert a cloud.
20. Right-click the cloud and select **Edit Text**.
21. Type **Need to reduce this inventory**.
22. Drag the cloud to the position shown below.
23. Drag the little yellow box so that the cloud points to the **Stackable Steps** bar.

3	
4	
5	Power Hurdle
6	Speed Hurdle



- d. Tap **Ctrl + F2** and compare the preview with the key. Be sure everything fits on one page. Make needed corrections, print the worksheet, save the workbook and then close it.

HW02-3 Vehicle Sales Charts

Problem: How can you create detailed line and three-D column graphs to visually display relationships between data?

- a. Open the workbook **HW02-3 Vehicle Sales Original**, which is one of the files you copied at the start of the term.
- b. Save the workbook to the **Excel Files** folder using the name **HW02-3 Lastname Firstname HWID Vehicle Sales Done**
- c. Merge and center **A1:E1** and also **A2:E2**.
- d. In row **7**, enter formulas that will calculate the sum for cars for each year. Do the same for row **12** for Vans, for row **16** for SUVs, and for row **17**.

- e. In **F17**, enter a formula that will calculate the average of the values in **B17:E17**.
- f. Format **F17** so that it displays **Average is 84.25**. To do that, type the following between the equal sign and **AVERAGE**: "**Average is "&**
The ampersand, **&**, allows you to display more than one item in a cell. It has the effect of concatenating (sticking together) the items. So, your formula should look like **= "Average is "&AVERAGE(B17:E17)**
- g. Insert Sparklines as follows:
 - 1. In **F5**, insert a line **Sparkline** for the **Sedans** data. Use the options in the **SPARKLINE TOOLS DESIGN** tab to make the color red and mark the **High Point** and **Low Point** in dark blue.
 - 2. Do the same for the **Coupes**.
 - 3. For the **Vans**, insert column **Sparklines**. Make the **Sparkline** for **Full Sized** red, for **Mini** green, and for **Four Wheel Drive** orange.
- h. Tap **Ctrl + F2** and click **Page Setup**.

Center the worksheet horizontally (**Margins** tab).

Add a footer that displays the following (**Header/Footer** tab):

Click in the left section and click this button  to display file name **HW02-3 Lastname Firstname HWID Vehicle Sales Done**

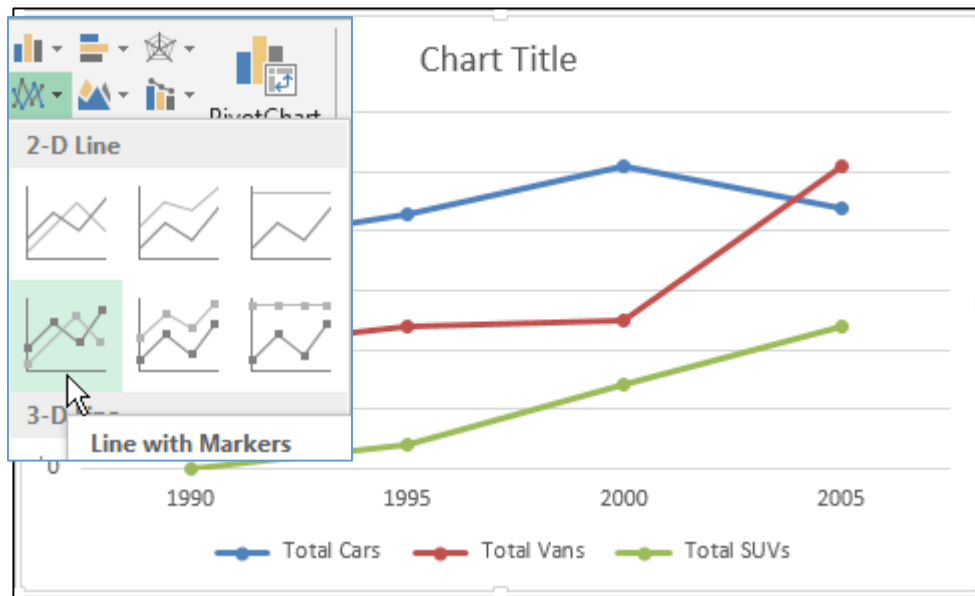
Click in the right section and click this button  to display the worksheet name, **Data**.

Click **OK**.

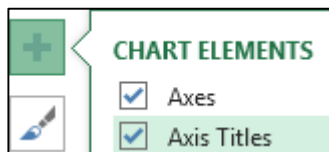
- i. Compare the preview with the key. Make needed corrections, print the **Data** worksheet, save the workbook but do **NOT** close it.
- j. Create a line chart of the **Total Cars** and **Total Vans** and **Total SUVs** for the years **1990** through **2005** by doing the following:
 - 1. Click **A3** and drag across to **E3**. This will set the scale at the bottom of the line chart. Note that even though **A3** is empty you still need to select it so that there is consistency in the selection of the rest of the data.

Be careful when you select the data or your chart will not display correctly. When you make your selection, start at **A3** and sweep across to **E3 without** holding down the **Ctrl** key. Then, let up on the mouse button, point to **A7**, hold down the **Ctrl** key and then press and hold the mouse button and sweep across to **E7**. Now, both **A3:E3** and **A7:E7** are selected.
 - 2. Hold down the **Ctrl** key and select **A12:E12**.
 - 3. Hold down the **Ctrl** key and select **A16:E16**.

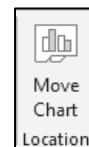
4. On the **INSERT** tab, in the **Charts** group, click **Line**, and select **Line with Markers**.



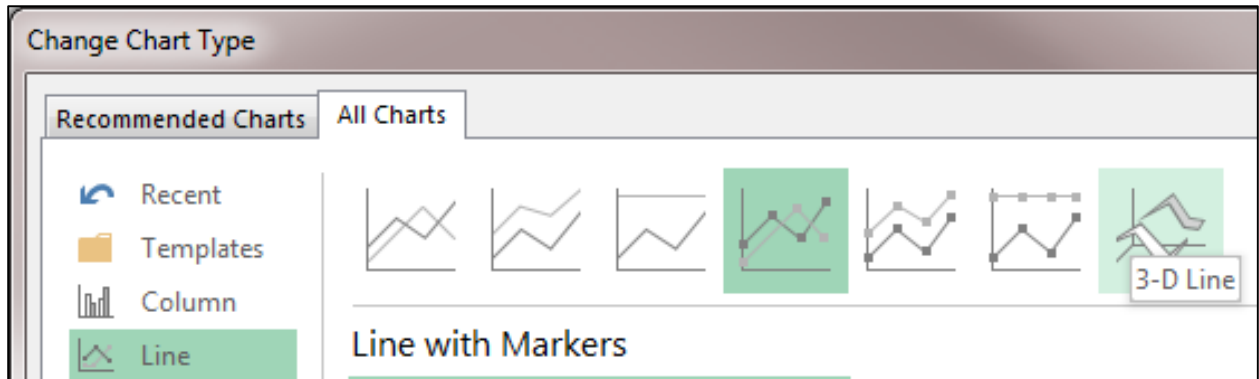
5. On the graph, click **Chart Title**, type **Vehicle Sales**, and tap **Enter**.
6. Click the **Chart Elements** button, the green cross  in the upper right corner of the chart, to open the **CHART ELEMENTS** menu and put a check next to **Axis Titles**.



7. Click the horizontal **Axis Title**, type **Year**, and tap **Enter**.
8. Click the vertical **Axis Title**, type **Hundreds of Vehicles**, and tap **Enter**.
9. Change the font of the **Title** and the two **Axis Titles** to Arial Black. A quick way to do it is to click on the title, select Arial Black from the **Font** group on the **HOME** tab. Then, click the vertical axis and tap **Ctrl + y**, and then do the same for the horizontal axis. **Ctrl + y** repeats your last action.
10. On the **CHART TOOLS DESIGN** tab, in the **Location** group, click **Move Chart** to open the **Move Chart** dialog box.
11. Click the **New sheet:** button and replace **Chart1** with **Line Chart**.
12. Click **OK**. The chart now is in its own chartsheet. Note that this is called a **chartsheet** rather than a **worksheet** because it contains nothing but a chart. If a chart is embedded with data on a sheet then that sheet is called a worksheet.

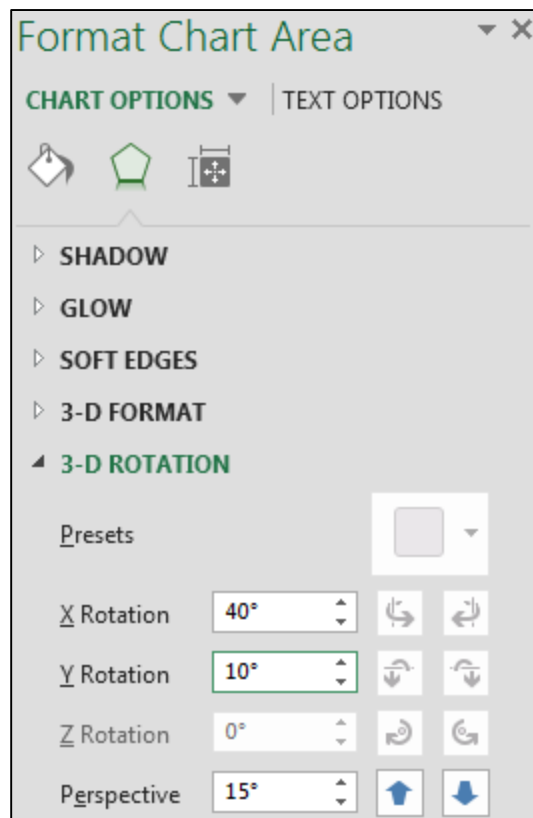


- k. Make a copy of the **Line Chart** chartsheet by clicking the **Line Chart** tab, holding down the **Ctrl** key, pressing the left mouse button, dragging to the right, and finally letting up on the button. A copy of the chartsheet will be created. Double-click the name of the new chartsheet, **Line Chart (2)**, type **3-D Line Chart** and tap **Enter**.
- l. Click anywhere in the chart to show the **CHART TOOLS** tab. On the **CHART TOOLS DESIGN** tab, in the **Type** group, click **Change Chart Type** to open its dialog box. In the **Line** group, click the **3-D Line** button.



Click **OK**. The chart changes from two-dimensions to three-dimensions.

- m. On the **CHART TOOLS FORMAT** tab, in the **Current Selection** group, select **Chart Area** and then click **Format Selection**. In the **Format Chart Area** pane, click the **Effects** button (the pentagon), and then click **3-D ROTATION**. Play with the settings a bit to see how you can rotate the chart. Finally, make the settings match those shown below.

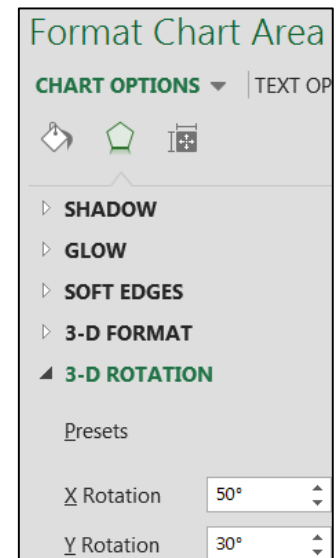
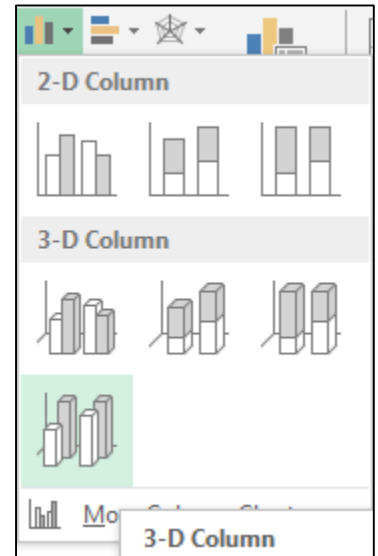


- n. Click the **Data** worksheet tab. Create a **3-D Column** chart for 1990, 2000, and 2005 using the data for **Sedans, Coupes, Full Sized, Mini, and Regular**.

When you select the data for the chart be sure to start the selection by clicking in the upper left corner of the data range, **A3**, even though it is blank. Then, hold down the **Ctrl** key and **click** (do **NOT** drag) **B3**, then click **D3**, then click **E3**. Then, move to the next row and, with the **Ctrl** key still held down, click the cells you want, working left to right. Continue in this left to right and top to bottom manner, as if you were reading a book.

The chart should have the following characteristics:

- Type: **3-D Column**
 - Location: As a new chartsheet called **3-D Column Chart**
 - Chart title (above chart): **Selected Vehicle Sales for 1990, 2000, 2005**
 - Horizontal axis title: **Type of Vehicle**
 - Vertical axis title (rotated): **Hundreds of Vehicles**
 - Depth axis title: **Year**
 - Make the font of the **Title** and **Axis Titles** 14 pt Arial Black.
 - Legend: **None**
 - Set the **X Rotation** to **50°** and the **Y Rotation** to **30°**
- o. Add a footer to the **3-D Column Chart** chartsheet that displays the file name **HW02-3 Lastname Firstname HWID Vehicle Sales Done** in the left section and the chartsheet name **3-D Column Chart** in the right section.
- p. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the **3-D Column Chart only**, save the workbook, and then close it.



Step 4 Submit You now are ready to submit your homework for grading.

1. Put your 5 homework papers in the following order:

HW02-1 Quarterly Sales
HW02-1 Quarterly Sales Formulas
HW02-2 Inventory Valuation
HW02-3 Vehicle Sales Data Worksheet
HW02-3 Vehicle Sales 3-D Column Chart

2. Cut out Submission Form 2 and put it on the top of the papers.
3. Staple the papers in the upper left corner.
4. Turn in the packet by the due date.

Step 5 Backup Now would be a good time to backup your files. It will take only a minute or two to copy your files from your USB drive to your computer's hard drive, or to another USB drive, or to upload it to Google Drive.

Project 3

Excel Chapter 2: Functions, Tables, and Large Workbooks

Step 1 Read Before turning on the computer, read the introductory material on pages 369-370.

Step 2 Activities Turn on the computer and open your textbook to page 371. Do all the steps of all the activities for this Chapter.

To save paper, do NOT print when the textbook instructs you to. You will be told what to print when you do the homework listed in this Study Guide. YOU DO NOT HAVE TO PRINT IN COLOR.

Step 3 Homework After you have completed the activities for this Chapter, return to this Study Guide, do the problems listed below, and turn them in for grading.

HW03-1 Inventory Status Report

Problem: How can you use sophisticated statistics to analyze data?

- a. Open the workbook [Lastname_Firstname_2A_Tree_Inventory](#), which you created while following the directions in the textbook and saved on page 389.
- b. Save the workbook to the Excel Files folder using the name
[HW03-1 Lastname Firstname HWID Inventory Status Report Done](#)
- c. When there are many rows or columns it is sometimes convenient to be able to see non-adjacent parts of the worksheet at the same time. The textbook showed you how to
 - **freeze** parts of the screen so specific rows or columns are always in view (textbook page 383)
 - **split** the screen horizontally so you can scroll the upper and lower parts independently or split the screen vertically so you can scroll the left and right parts independently (textbook page 387)

A third way is to **hide** rows or columns (briefly mentioned on page 344). To see how this works, do the following:

1. Select rows **17:42**.

2. Right-click and select **Hide** from the menu. Now it appears that row **16** is followed by row **43**. The other rows are still there but they are hidden from view. Notice that the count in **B10** has not changed. Even though you cannot see the hidden rows the values are taken into account in the formulas. However, when you print, those hidden rows will not print. Tap **Ctrl + F2** and you can see the effect. Tap **Esc** to get back to edit mode.

13	Quantity in Stock	Item #
14	78	13129
15	35	13358
16	60	15688
43	Edited by Maria Acuna	
44	6/21/2013 15:31	

3. To unhide the rows, select rows **16** to **43**, right-click, and select **Unhide**.

d. Hide rows **21** to **41**. Set to print row and column headings and in Landscape. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, save the workbook, print it, and then close it.

HW03-2 Weekly Sales Summary

Problem: How can you organize and summarize data from different sources?

- Open the workbook **Lastname_Firstname_2B_Weekly_Sales**, which you created while following the directions in the textbook and saved on page 406.
- Save the workbook to the Excel Files folder using the name **HW03-2 Lastname Firstname HWID 2B Weekly Sales Done**
- Add the worksheet name in the right section of the Summary worksheet. Then, tap **Ctrl + F2** and compare the preview with the key. Make needed corrections. Print the **Summary worksheet only**, save the workbook, and then close it.

HW03-3 Inventory

Problem: How can you summarize data based on certain conditions?

- Follow the directions for steps **1 through 17 only** for **Project 2G Inventory** on pages 424-426.
- After you complete step 17, save your file to the **Excel Files** folder using the name **HW03-3 Lastname Firstname HWID 2G Inventory Done**
- In step 8, the book showed you one way of determining the quantity in stock of **Tulips** on the **Bulbs** worksheet. Here is an easier way of doing that, and one that will automatically update as the data change.
 - Click the **Bulbs** worksheet tab to make it active.

2. In **C11**, type the following **=SUMIF(F15:F42,"Tulips",A15:A42)** and then click the **Enter** button  to keep **C11** active. Notice the number, 433, is the same as the one you typed in **B11**. When the **Quantity in Stock** in column **A** changes this value will automatically be updated.

The **SUMIF** function works just like the **COUNTIF** function you learned about in Project 2A, except **SUMIF** finds the **sum** of selected values rather than counts how many there are. Here is the form of the function:

where to look what to look for what to sum
=SUMIF(criteria range **,** criteria **,** sum range **)**
range that has category Tulips Quan in Stock

range: What range of cells do you want to examine?

You are looking for **Tulips** in the **Category** range so use **F15:F42**.

criteria: What are you looking for in the above range?

The word "**Tulips**" The quotation marks are required.

sum range: When Excel finds **Tulips** in the above range, what should it sum?

You want to sum the **Quantity in Stock** so use **A15:A42**.

where to look what to look for what to sum
=SUMIF(F15:F42 **,** "Tulips" **,** A15:A42 **)**
range that has category Tulips Quan in Stock

- d. You can do the same sort of thing with averages. For example, do the following to find the average price for the tulips:

1. In **A12** type **Tulip Average Price**

2. In **B12** type **=AVERAGEIF(F15:F42,"Tulips",D15:D42)** The price is in column **D** so the sum range is **D15:D42**.

- e. Use the **COUNTIF**, **SUMIF**, and **AVERAGEIF** functions to collect summary data on the **Bulbs** and **Trees**. Do the following:

1. Click the **Summary** worksheet tab.

2. Starting in **A11** type the labels shown. Adjust the column widths, cell alignments, wrap text, and bold the column headings as indicated.

	A	B	C	D
11	Bulbs Category	Number in Stock	Number of Categories	Average Price
12	Begonias			
13	Callas			
14	Daffodils			
15	Dahlias			
16	Gladiolus			
17	Tulips			
18				
19	Trees Category	Number in Stock	Number of Categories	Average Price
20	Evergreens			
21	Flowering Trees			
22	Fruit Trees			
23	Nut Trees			
24	Shade Trees			

3. In **B12**, display the sum of the quantities of the different types of begonias in stock on the **Bulbs** worksheet. To do that, click **B12** and type **=sumif(**

=sumif(


Notice how a screen tip appears showing you the structure of the **SUMIF** formula. That is:

range, which means “Where are you going to look?” (in the **Category range** on the **Bulbs** sheet)

criteria, which means “What are you looking for?” (the word **Begonias**)

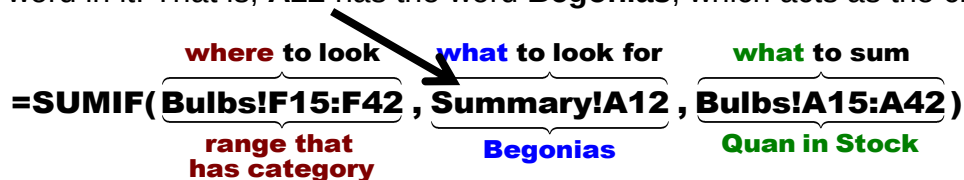
[sum_range], which means “What will you sum when you find it?” (**Quantity** in stock).

Now, click the **Bulbs** worksheet, select **F15:F42**, and then type a **comma** then click the **Summary** worksheet, click **A12**, and then type a **comma** then click the **Bulbs** worksheet and select **A15:A42** then click the **Enter** button  to keep **B12** active.

B12 should display **314**.

The formula bar will show **=SUMIF(Bulbs!F15:F42,Summary!A12,Bulbs!A15:A42)**

This is pretty much the same as the previous **SUMIF**. The only difference is that the first and last cell ranges are on the **Bulbs** worksheet and the criteria is not a word in quotes (“**Tulips**”) but a cell reference that has the criteria word in it. That is, **A12** has the word **Begonias**, which acts as the criteria.


=SUMIF(Bulbs!F15:F42 , Summary!A12 , Bulbs!A15:A42)
 where to look what to look for what to sum
 range that has category Begonias Quan in Stock

Before using the fill handle to copy the formula to **B13:B17**, you need to convert the ranges on the **Bulbs** worksheet to absolute references so when you do the fill they will not change (see page 338 of the textbook). To do that quickly, in the formula

click **F15** and then tap the **F4** key
 click **F42** and then tap the **F4** key
 click **A15** and then tap the **F4** key
 click **A42** and then tap the **F4** key

The **F4** key adds **\$** to make each cell reference absolute. Now the formula looks like this: **=SUMIF(Bulbs!\$F\$15:\$F\$42,Summary!A12,Bulbs!\$A\$15:\$A\$42)**

Note that you want the reference to the criteria, **A12**, to change to **A13** and then **A14** and so on so there are no **\$** on **A12**.

4. Point to the fill handle in the lower right corner of **B12**, click, drag down to **B17**, and let up the mouse button.

B12		=SUMIF(Bulbs!\$F\$15:\$F\$42,Summary!A12,Bulbs!\$A\$15:\$A\$42)						
	A	B	C	D	E	F	G	H
	Bulbs Category	Number in Stock	Number of Categories	Average Price				
11								
12	Begonias	314						
13	Callas	101						
14	Daffodils	755						
15	Dahlias	473						
16	Gladiolus	771						
17	Tulips	433						

5. Enter similar formulas in cells **B20:C24**. A quick way to do that is to copy the formula in **B12** and paste it into **B20**. Then, in **B20** change **Bulbs!** to **Trees!** and **A20** to **B20**. So, the formula in **B20** should be

where to look what to look for what to sum
=SUMIF(Trees!\$F\$15 : \$F\$42 , Summary!A20 , Trees!\$A\$15 : \$A\$42)
range that has category Evergreens Quan in Stock

6. Fill the formula in **B20** down to **B24**.
- f. In **C12:C17**, enter formulas that display the **Number of Categories** (that is, the number of different types of **Begonias**, **Callas**, etc.). Here, you are counting the different types of bulbs so you will use the **COUNTIF** function.
- g. In **C20:C24** do the same for **Trees**.
- h. In **D12:D17**, enter formulas that display the **Average Price** for the bulbs. Here, you are finding an average so you will use the **AVERAGEIF** function.
- i. In **D20:D24** do the same for **Trees**.
- j. Display the formulas on a new worksheet by doing the following:
1. Make a copy of the **Summary** worksheet and rename it **Summary Formulas**.
 2. Display the formulas and **Autofit** the columns (see page **SG34**).
 3. Open the **Page Setup** dialog box and click the button next to **Fit to:** so that the entire worksheet will print on one page.
 4. Click the **Landscape** button to print the worksheet sideways.
 5. Click the **Sheet** tab and in the **Print** section check the boxes next to **Gridlines** and **Row and column headings** so these appear on the printout.
 6. Add the worksheet name in the right section of the print out.
- k. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections. Print the **Summary Formulas worksheet only**, save the workbook, and then close it.

HW03-4 Payroll IF

Problem: How can you set up a payroll worksheet that automatically calculates regular, overtime, and total pay and summary statistics?

Excel's **IF** function that you learned about in this chapter is useful because it enables the computer to carry out alternative actions based on conditions you specify. The function uses an **IF/THEN/ELSE** structure similar to one you use every day. For example, you might say

IF it is raining **THEN** take umbrella **ELSE** leave umbrella home.

Excel uses this structure: **IF(logical test, value if true, value if false)**

logical test is a condition that is either true or false. In the umbrella example, the **logical test** is **raining = yes**. This is either true or false.

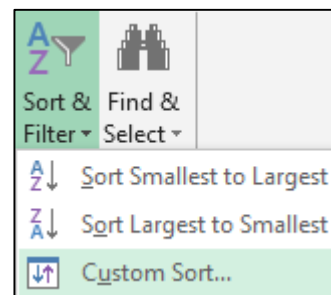
value if true is what will be displayed if the logical test is true. In the umbrella example, **value if true** is **take umbrella**.

value if false is what will be displayed if the logical test is not true. In the umbrella example, **value if false** is **leave umbrella home**.

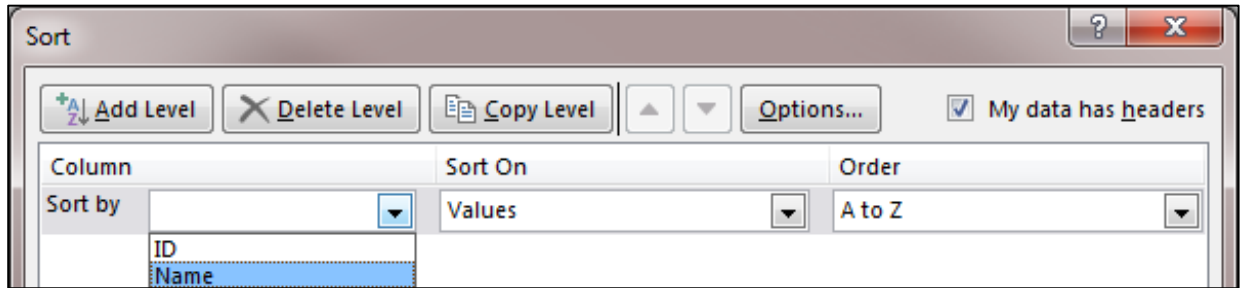
So, the **IF** function allows you to choose between two alternatives. The first alternative is displayed if the logical test is true; otherwise the second alternative is displayed.

In this homework exercise you will calculate the regular and overtime pay for workers. In Project 5 you will gain experience with more complicated **IF** formulations.

- Open the workbook **HW03-4 Payroll IF Original**, which is one of the files you copied at the start of the term.
- Save the workbook to your **Excel Files** folder using the name **HW03-4 Lastname Firstname HWID Payroll IF Done**
- Sort the data alphabetically by name by doing the following:
 - Select rows **8** through **36**. Be sure to select the entire row and not just the **Name** column or else the data will be scrambled. To do this, click the row **8** number and drag down to row **36**.
 - On the **HOME** tab, in the **Editing** group, click **Sort & Filter** and select **Custom Sort** from the menu.
 - Be sure there is a check next to **My data has headers** so the titles in row **8** will not be sorted with the rest of the data.



4. Select **Name** from the **Column Sort by** drop down menu.



You want the names in alphabetical order so leave the **Order** as **A to Z**.

5. Click **OK**.

- d. Break-up the names in column **B** so that the last names and first names are shown in separate cells by doing the following:
 1. Select columns **C** and **D**, right click, and choose **Insert**. This will make room for the new columns for last and first names.
 2. In cell **C9**, type **Al Sadr**. This is the last name of the first person on the list. Click the **Enter** checkbox ☒ to accept the typing and remain in cell **C9**.



3. With **C9** still selected, on the **DATA** tab, in the **Data Tools** group, click **Flash Fill**. The last names are filled in column **C**. Note that the last name of the second person is listed as Baker Jr. His last name actually is Baker – the Jr means he was named after his father. If this were a real situation you probably would have to go in and clean up the data (remove the Jr). The same goes for the third person Bastian-Smith III. For this project, do not bother.
4. In cell **D9**, type **Amanda**. This is the first name of the first person on the list. Click the **Enter** checkbox ☒ to accept the typing and remain in cell **D9**.
5. With **D9** still selected, on the **DATA** tab, in the **Data Tools** group, click **Flash Fill**. The last names are filled in column **D**.
6. Select column **B**, right click, and select **Delete** from the menu. The columns to the right are shifted left so now **Sex** is in column **D**, **Pay Rate** is in column **E** and so on.
7. Type **Last Name** in **B8** and **First Name** in **C8**.

- e. In **G9**, enter a formula to calculate the regular pay for **Al Sadr**. You can use the IF function described on textbook page 379 to do that. Essentially, the IF function chooses between two alternatives. Excel uses this structure:

=IF(logical test, value if true, value if false)

For example, **IF** I am hungry **THEN** I will eat **ELSE** I will not eat.

logical test is a **condition** that is either true or false.

Here, the **logical test** is **I am hungry**. This is either true or false.

value if true is what will be displayed if the logical test is true.

Here, **value if true** means you will eat.

value if false is what will be displayed if the logical test is not true.

Here, **value if false** means you will not eat.

For the regular pay problem, here is the logic you need to use:

- If she worked 40 hours or less (**F9<=40**) then the regular pay is computed by multiplying rate and hours (**E9*F9**).
- If she worked over 40 hours, then she worked 40 regular hours. In that case, the regular pay is the product of rate and 40 (**E9*40**).

=IF(logical test, value if true, value if false)

logical test is a condition that is either true or false.

Here, you will test the hours worked to see if it is 40 or less.

value if true is what will be displayed if the logical test is true.

Here, you will display the regular pay, which is pay rate times hours worked.

value if false is what will be displayed if the logical test is not true.

Here, you will display the maximum regular pay possible, which is pay rate times 40.

1. Type your formula in **G9** and tap **Enter**.

	logical test (condition)	display if condition TRUE	display if condition FALSE
=IF(	F9<=40	E9*F9	E9*40
	are hours under 40?	pay rate times hours	pay rate times 40
)			

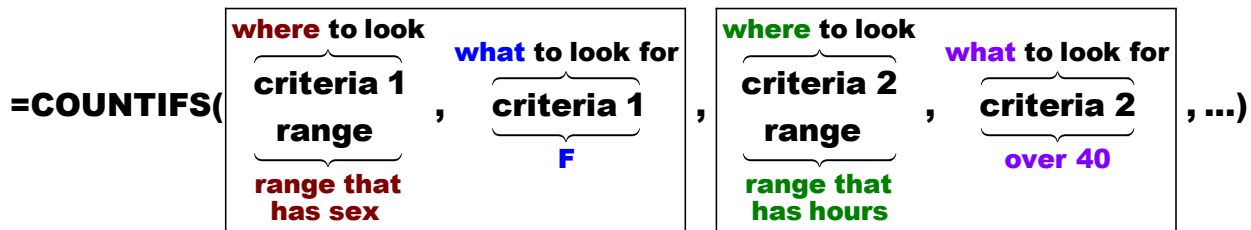
2. Check the result. Since Al Sadr worked 21 hours her regular pay will be her **Pay Rate** times her **Total Hours**, $6 \times 21 = 126$.
3. Fill the formula in **G9** down to row **36**.
4. Check the result for Baker, in **G10**. Baker worked 50 hours, which is 40 regular hours and 10 overtime hours. So, his regular pay will be his **Pay Rate** times **40**, $5 \times 40 = 200$.

- f. In **H9**, enter a formula to calculate the overtime pay for **Al Sadr**.
- If she worked 40 hours or less (**F9<=40**) then the overtime pay is **0** (she has not worked overtime so she does not earn overtime pay).
 - If she worked over 40 hours, then her overtime pay is computed by multiplying the rate times 1.5 (for time and a half) times the number of overtime hours worked. Here, the overtime hours will be the total hours minus 40. Remember to use parentheses where appropriate because you want the computer to do the subtraction of the hours before it multiplies by the rate.
1. Type your formula in **H9** and tap **Enter**.

	logical test (condition)	display if condition TRUE	display if condition FALSE
=IF(	F9<=40	0	E9*1.5*(F9 - 40)
	are hours under 40?	no overtime	pay rate times 1.5 times hours over 40

2. Check the result. Since Al Sadr worked 21 hours her overtime pay will be 0.
3. Fill the formula in **H9** down to row **36**.
4. Check the result for Baker, in **H10**. Baker worked 50 hours, which is 40 regular hours and 10 overtime hours. So, his overtime pay will be his **Pay Rate** times **1.5** times **10**, $5*1.5*10 = 75$.
- g. In **I9** (that is eye *nine* not 19) enter a formula that will add the regular and overtime pay for Al Sadr.
- h. In **J9** type **=rank(i9,\$i\$9:\$i\$36)**. This will calculate Al Sadr's rank in terms of total pay. The **RANK** function compares the value in **I9** (Al Sadr's Total Pay) with the values in cells **I9:I36** and displays her rank (1, 2, 3, etc.). Note the use of dollar signs to indicate the range **\$I\$9:\$I\$36** is to be held constant when you copy the formula to other cells.
- i. Fill the formula in **J9** down to row **36**.
- Notice the ranks range from 1, highest pay, to 28, lowest pay. Notice that Carter, Isakson, and Iverson all made \$120 so they are tied for 19th place. Hence, there is no ranking of 20 and 21.
- j. In **J3**, insert a function that will display the number of people who earned overtime pay. Remember, the form for **COUNTIF** is **=COUNTIF(range, criteria)**. Be sure to put the **criteria** inside quotation marks.

- k. In **J4**, insert a function that will display the number of **women** who earned overtime pay. To count cells based on multiple criteria (here, sex and overtime pay), use the **COUNTIFS** function. It has the form:

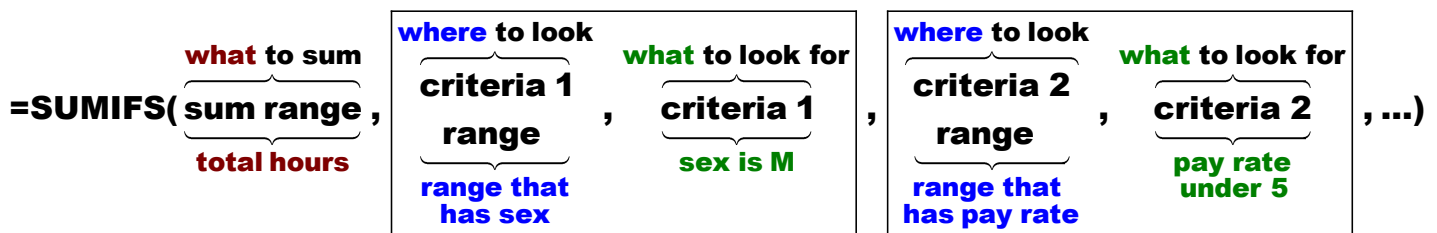


It is basically the **COUNTIF** function with two or more ranges and corresponding criteria. Again, remember to put the criteria inside quotation marks, as in "**=F**".⁴

- l. In **J5**, insert a **SUMIF** function that will display the sum of the **Total Pay** for people who worked overtime. Set the format for this cell to accounting. Remember, the form for **SUMIF** is **SUMIF(range, criteria, sum range)**. Be sure to put the **criteria** inside quotation marks.

Be sure to read footnotes

- m. In **J6**, insert a function that will display the total hours for men whose pay rate is under 5 dollars. To sum cells based on multiple criteria (here, pay rate and sex), use the **SUMIFS** function. It has the form:



It is basically the **SUMIF** function with two or more ranges and corresponding criteria. The form is a bit different from **SUMIF** because the **sum range** comes first, and then the multiple criteria ranges and corresponding criteria. Think about the parts in relation to this problem:

sum range: Which cells do you want to sum? **Total Hours (F9:F36)**.

criteria 1 range: Whose **Total Hours** do you want to include?
Those of **Men**, so use the **Sex range D9:D36**

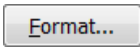
criteria 1: What should the **Sex** be? **M**, so use "**=M**"

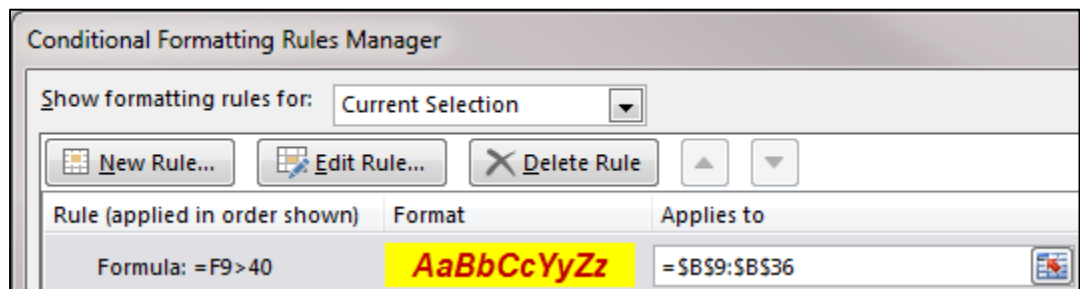
criteria 2 range: What kind of men do you want to include?
Those who have a certain **Pay Rate**, which is in **E9:E36**

criteria 2: What should the **Pay Rate** be? Under **5**, so use "**<5**"

Be sure to read footnotes

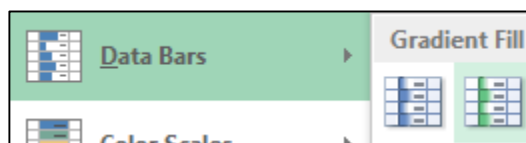
⁴ Here is the formula: **=COUNTIFS(F9:F36,">40",D9:D36,"=F")**

- n. Create a conditional format so that the last names of the people who worked overtime has **Bold Italic Red** text and a **Yellow** cell fill by doing the following:
1. You want to apply the formatting to the last names, which are in **B9:B36**. So, select **B9:B36**.
 2. On the **HOME** tab, in the **Styles** group, click **Conditional Formatting** and select **Manage Rules**.
 3. Click .
 4. Click the last bullet, **Use a formula...**
 5. Type this into the formula box: **=f9>40** This tells Excel to see if the value in **F9** (the **Hours** for Al Sadr) is greater than 40. If it is, apply a special format to **B9**; otherwise, leave the cell alone.
 6. Click  and set the text to **Bold Italic Red** and the fill to **Yellow**.
 7. Click **OK** twice.



Notice that the formula **=F9>40** looks like it will only evaluate Al Sadr's pay. However, under **Applies to** the range for this conditional format is **\$B\$9:\$B\$36** so Excel will use **=F10>40** for Baker Jr, and **=F11>40** for Bastian-Smith III, and so on.

8. Click **OK** to return to edit mode. The format is applied to the last names of the people who have worked overtime.
- o. Insert a conditional format so that the **Pay Rank** cells have **Data Bars** where the length of the data bar represents the value in the cell by doing the following:
1. Select the range **J9:J36**.
 2. On the **HOME** tab, in the **Styles** group, click **Conditional Formatting**, select **Data Bars**, and select the green **Gradient Fill** icon



The conditional formats will look like this:

Pay Rank	
18	
4	
17	
11	

p. Enter the date and time and apply custom formatting by doing the following:

1. Click **B3**. Then tap **Ctrl + ;** (that is, hold down the **Ctrl** key and tap the semicolon key) and then tap **Enter**.

This will enter the current date. This is a static date, which means that it will stay at that value until you type in a new one.

2. Click **B4**. Then tap **Shift + Ctrl + :** (that is, hold down both the **Shift** key and the **Ctrl** key and tap the colon key) and then tap **Enter**.

This will enter the current time. This is a static time, which means that it will stay at that value until you type in a new one.

3. Click **B5**, type **=now()** and tap **Enter**. Note the parentheses **()** with nothing inside them! This enters the current date and time that will automatically change each time Excel recalculates any formula. Excel also has a **DATE** function, but that does not display the date! **DATE** displays a number that Excel uses to internally keep track of time. It is not very useful unless you are a programmer.

4. Click **B6**, type **=now()** and tap **Enter**.

5. Select cells **B3** and **B5**, right-click, and select **Format Cells**. To select non-adjacent cells, click the first cell, then hold down the **Ctrl** key and click the second cell.

6. Click the **Number** tab and click **Custom**.

7. Replace the text in the **Type:** box with **ddd d mmm yyyy**. This tells Excel to display the date using the day of the week (**ddd**), the date (**d**), the month (**mmm**), and the four-digit year (**yyyy**).

8. Click **OK**. If you see **#####** in the cell it means the column is too narrow. Make the column wider if necessary.

9. Select cells **B4** and **B6** and follow the same procedure except replace the text in the **Type:** box with **h:mm AM/PM** and tap **Enter**. The **h** tells Excel to display the hour, **mm** tells Excel to display the minutes, and **AM/PM** tells Excel to display either **AM** or **PM**, depending on whether the current time is before noon or after noon. Notice that the times in the two cells are different. Cell **B4** displays the time when you tapped **Shift + Ctrl + :** while **B6** displays the current time (it was just updated when you tapped **Enter**).

10. Click **J3** and follow the same procedure except replace the text in the **Type:** box with **#" people" _)** The **#** tells Excel to display the number without decimal places, the **" people"** says to display the word **people**, and the **_)** says to leave one blank space on the right (so this lines up nicely with the accounting format in **J5**).

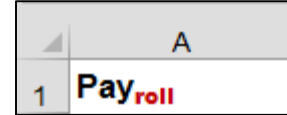
11. Click **J4** and follow the same procedure except replace the text in the **Type:** box with **#_)**. This puts a space on the right to line up things.

12. Click **J6** and follow the same procedure except replace the text in the **Type:** box with **#" hours" _)**.

Number of people who earned overtime pay =	9 people
Number of women who earned overtime pay =	6
Sum of Total Pay for people who worked overtime =	\$ 2,137.50
Total hours for men whose pay rate is under \$5 =	243 hours

q. Excel allows you to change the font characteristics of text. Try this:

1. Double click **A1** to enter edit mode.
2. Select the **roll** in **Payroll**.
3. On the **HOME** tab, in the **Font** group, click the **Open Dialog** button.
4. Put a check in the box next to **Subscript**, make the color red, and the font Arial Black.
5. Click **OK** and then tap **Enter**.



r. Follow a similar procedure make the following changes:

In **I3**, make the word **people** bold and purple.

In **I4**, make the word **women** bold and red.

In **I6**, make the word **men** bold and blue.

- s. Note that the time in **B4** is the same as it was when you tapped **Shift + Ctrl + ;** but the time in **B6** is the current time because you just made a change to **I6** and so Excel did a recalculation of all cells. If you open this file tomorrow, the date in **B3** will be today's but the date in **B5** will be tomorrow's.
- t. **Autofit** the columns (see page **SG34**) and then change the width of column **I** to 13 (124 pixels).
- u. Set up the **Payroll Data** worksheet to print landscape and all on one page (**Page** tab), centered horizontally but not vertically (**Margins** tab), and with a footer that contains the file name on the left and the worksheet name on the right (**Header/Footer** tab).
- v. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the **Payroll Data** worksheet, save the workbook but do not close it.
- w. Copy the **Payroll Data** worksheet and rename the new worksheet **Payroll Formulas**.
- x. Tap **Ctrl + `** to display the formulas and **Autofit** the widths of the columns. Then, change the width of column **I** to **6** (122 pixels).
- y. Set up the **Payroll Formulas** worksheet to print landscape and all on one page, centered horizontally but not vertically, with a footer that contains the file name on the left and the worksheet name on the right, and **without** gridlines but **with** row and column headings showing.
- z. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the worksheet, save the workbook, and then close it.

Step 4 Submit You now are ready to submit your homework for grading.

1. Put your 5 homework papers in the following order:
 - HW03-1 Inventory Status Report
 - HW03-2 Weekly Sales Summary
 - HW03-3 Inventory Formulas
 - HW03-4 Payroll IF Data
 - HW03-4 Payroll IF Formulas
2. Cut out Submission Form 3 and put it on the top of the papers.
3. Staple the papers in the upper left corner.
4. Turn in the packet by the due date.

Step 5 Backup Now would be a good time to backup your files.

Project 4

Excel Chapter 3: Analyzing Data with Charts and What-If Tools

Step 1 Read Before turning on the computer, read the introductory material on pages 431-432.

Step 2 Activities Turn on the computer and open your textbook to page 433. Do all the steps of all the activities for this Chapter.

To save paper, do NOT print when the textbook instructs you to. You will be told what to print when you do the homework listed in this Study Guide. YOU DO NOT HAVE TO PRINT IN COLOR.

Step 3 Homework After you have completed the activities for this Chapter, return to this Study Guide, do the problems listed below, and turn them in for grading.

HW04-1 Enterprise Fund

Problem: How can you visually display the relationship between expenditures for an enterprise?

- a. Open the workbook [Lastname_Firstname_3A_Enterprise_Fund](#), which you created while following the directions in the text and saved on page 444.
- b. Save the workbook to the **Excel Files** folder using the name [HW04-1 Lastname Firstname HWID 3A Enterprise Fund Done](#)
- c. Click the **Expenditures Chart** chartsheet. In the footer, insert the name of the chartsheet on the right. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections and then print the chart.
- d. Click the **Enterprise Fund Expenditures** worksheet. In the footer, insert the name of the worksheet on the right. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections and then print the worksheet.

HW04-2 Tourism Spending Projection

Problem: How can you make data-based predictions concerning tourism at a resort?

- a. Open the workbook [Lastname_Firstname_3B_Tourism](#), which you created while following the directions in the text and saved on page 462.
- b. Save the workbook to the **Excel Files** folder using the name [HW04-2 Lastname Firstname HWID 3B Tourism Done](#)
- c. Rename **Sheet1** as **Data and Graph** and make its tab color red.

- d. The background picture makes the chart more interesting and visually pleasing but it detracts from clearly seeing the data. That is a problem with being cute: it sometimes makes it more difficult to see through to that which is important. Adjust the transparency of the chart by doing the following:
 - 1. Click anywhere in the chart.
 - 2. On the **CHART TOOLS FORMAT** tab, in the **Current Selection** group, click the down arrow and select **Chart Area**.
 - 3. Click **Format Selection** to open the **Format Chart Area** pane.
 - 4. Click the arrow to the left of **FILL** to show its options.
 - 5. Make the **Transparency** 60%. Now you can better see the information on the chart. You still can see the picture but it is not so overpowering.
- e. Tap **Ctrl + F2**. If only the chart shows, and not the data, tap **Esc** and then click cell **A1** to deselect the chart and tap **Ctrl + F2**. In the footer, insert the name of the worksheet on the right. Compare the preview with the key. Make needed corrections, print the worksheet, save the workbook and then close it.

HW04-3 HLOOKUP-Gradebook

Problem: Given the total points earned by students in a course, how can you look up the corresponding letter grades?

LOOKUP functions allow you to select a specific value from a set of values based on certain criteria. For example, at the end of the semester I will assign you a letter grade based on the total number of points you earned on your homework and exams. Below is the grading criteria that I typically use:

	B	C	D	E	F	G	H	I	J	K	L	M
5	Total points are at least	0	65	68	70	73	76	80	82	86	90	96
6	Letter Grade	F	D	D+	C-	C	C+	B-	B	B+	A-	A

The **HLOOKUP** function can be used to “lookup” the total points from the list in the first row and then display the corresponding letter grade in the second row. The **HLOOKUP** function has the following form:

=HLOOKUP(what to look for **lookup value** , where to look **table array** , row to display **row index num** , need exact or approximate match? **range lookup**)

total points range with total points and grades number of row with letter grades approximate match

- **lookup value** is the value to be found in the first row of the table. It can be a value, a reference, or a text string. In this example it is the **total points** earned by a particular student.
- **table array** is the range where the **lookup value** is to be looked up, such as **C5:M6**. In this example, it is

0	65	68	70	73	76	80	82	86	90	96
F	D	D+	C-	C	C+	B-	B	B+	A-	A

← Find lookup value here

- **row index number** is the row number in the table from which the matching value will be displayed. In this example, it is row 2.
- **range lookup** is an optional parameter that specifies whether you want Excel to find an **exact** match or an **approximate** match.

If you type **TRUE** or omit this parameter then the values in the first row of the table must be placed in ascending sort order. In that case, Excel will find an **approximate** match. For example, if the **lookup value** (total points) is **79**, Excel will scan the first row of the table for **79**. Since **79** is not listed, Excel will use the next lowest number in the table (**76**) and display the corresponding letter grade (**C+**). If the **lookup value** were **80**, Excel would display **B-**.

If you type **FALSE** then the values in the first row of the table need not be in ascending sort order. In that case, Excel will find an **exact** match. If no exact match exists Excel will display **#N/A**.

To see how **HLOOKUP** works, modify a worksheet that has a simplified version of a gradebook used for a large lecture precalculus course by doing the following:

- Open the workbook **HW04-3 HLOOKUP-Gradebook Original**, which is one of the files you copied at the start of the term.
- Save the workbook to your **Excel Files** folder using the name **HW04-3 Lastname Firstname HWID HLOOKUP-Gradebook Done**.
- Construct the **HLOOKUP** function for **Aaron** in **K11** by filling in the parameters for Aaron.

=HLOOKUP(what to look for **lookup value** , where to look **table array** , row to display **row index num** , need exact or approximate match? **range lookup**)

total points range with total points and grades number of row with letter grades approximate match

- lookup value** is **Aaron's** total points in **J11**.
- table array** is the range that contains the total points and letter grades. That is the range **C5:M7**.
- row index num** is the number of the row in the table whose value you want displayed.
Row 1 contains the possible total points.
Row 2 contains a comment concerning the grade earned.
Row 3 contains the letter grades.

You want the letter grade displayed so the **row index num** should be **3** because the letter grades are in **Row 3** of the table.

- range lookup** is **TRUE** (or leave it blank) since you want an approximate rather than an exact match.

Click **K11** and type **=hlookup(**

A **ScreenTip** will appear to remind you of the form of the function.

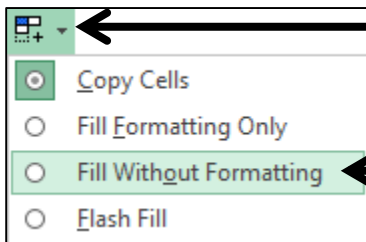
Total	Grade	Comment
79	=hlookup(	
68	HLOOKUP(lookup_value, table_array, row_index_num, [range_lookup])	

Now finish by typing **j11,\$c\$5:\$m\$7,3)**

Your complete formula should be **=hlookup(j11,\$c\$5:\$m\$7,3)**

Click the **Enter** button  The grade **C+** appears in **K11** and the formula appears in the **Formula Bar**.

A second way of duplicating the formula is to click **K11**, grab the **fill handle** (black dot in the lower right corner of the cell), and drag down to **K121**. If you do that, select **Fill Without formatting** from the **Auto Fill Options** menu to preserve the heavy black border at the bottom of **K121**.



You could also duplicate the formula by selecting **K11:K121** and then tapping **Ctrl + D**. If you do that, you will have to manually insert the heavy black border at the bottom of **K121** since, like the fill handle, **Ctrl + D** duplicates the contents, formulas, and formatting of cells and **K11** does not have a heavy black border at its bottom.

- f. For cells **L11:L121**, create an **HLOOKUP** formula that will display the appropriate comment from the table in cells **C5:M7**. The comment should be based on the **Total** in column **J**.
- g. In **C8:M8**, enter a formula that will display the number of students that earned each grade in row **7**. Give it a try. You want to count the number of students who earned each grade so you will use **COUNTIF**, which has the form:

where to look what to look for
=COUNTIF(criteria range**,** criteria**)**
range that has grades grade in C7

The **criteria** are located in row **7** so use a cell reference rather than typing the criteria inside quotation marks. Be sure to use absolute referencing where appropriate so you can duplicate the formula in **D8:M8**.⁵

Use one of the above techniques to duplicate the **C8** formula to **D8:M8**.

- h. At the start of the precalculus course, students take a diagnostic pretest to see if they have the necessary background in high school algebra. I want to know how many students who scored below a certain cutoff also scored above a certain cutoff in their final total points. In other words, the instructor want to know how badly a student can do on the pretest and still pass the course.

⁵ Here is the formula for **C8**: **=COUNTIF(\$K\$11:\$K\$121,C7)**

Create a formula for **J4** that will display the number of students with diagnostic test scores below the diagnostic test cutoff score in **J2** **AND** above the total points cutoff score in **J3**. You want to count the number of students who meet **two** criteria at the same time so use the **COUNTIFS** function, which has the form:

The diagram illustrates the structure of the **=COUNTIFS** formula with two criteria. It shows the formula as **=COUNTIFS(** followed by two pairs of arguments, each enclosed in a box, and then a closing parenthesis **)**.

- First pair (Criteria 1):**
 - where to look:** criteria 1 range (range that has diag test scores)
 - what to look for:** criteria 1 (diag test cutoff score)
- Second pair (Criteria 2):**
 - where to look:** criteria 2 range (range that has total pts)
 - what to look for:** criteria 2 (total pts cutoff score)

criteria 1 range is the location of the diagnostic test scores, **E11:E121**

criteria 1 is the value in **J2**

criteria 2 range is the location of the total points, **J11:J121**

criteria 2 is the value in **J3**

To use > or < with cell references for criteria you must put > or < inside quotation marks and you must put an ampersand & to the left of the cell reference (that does not make sense to me but Excel requires it). Here is the formula:

=COUNTIFS(	where to look	what to look for	where to look	what to look for	)
	E11:E121	"<"&J2	J11:J121	">"&J3	
	range that has diag test scores	diag test cutoff score	range that has total pts	total pts cutoff score	

=COUNTIFS(E11:E121,"<"&J2,J11:J121,">"&J3)						
D	E	F	G	H	I	J
Cutoff on Diagnostic Test ->						65
Cutoff on Total Points Earned ->						65
Num Stu with Diag Below Cutoff and Total Above Cutoff ->						1

You can see that out of 111 students only 1 who scored under 65 on the test was able to earn at least 65 for a total and pass the course. I now have to make a decision: Should I *force* students who score under 65 on the test to drop to a lower course or should I only *suggest* that they do it, knowing that not dropping would almost certainly be a big time-wasting and money-wasting mistake.

- i. Make a copy of the **Gradebook** worksheet and name the copy **Formulas**. Display the formulas on that worksheet and **Autofit** the columns. Set the print area to **I1:L13** (select **I1:L13**, click **PAGE LAYOUT**, **Print Area**, **Set Print Area**). Set the **Page Setup** parameters so that the worksheet will print **landscape** and all on **one page**, be **centered horizontally** but not vertically, have a footer that contains the file **name on the left** and the **worksheet name on the right**, and print without gridlines but with the **row and column headings**.
- j. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the **Formulas** worksheet, save the workbook and then close it.

HW04-4 VLOOKUP-Shipping

Problem: Given the weight of an item, how can you look up the corresponding shipping cost?

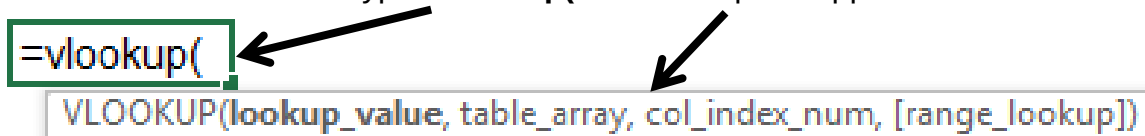
The **VLOOKUP** function works the same way as the **HLOOKUP** function except the **table array** is a vertical table rather than a horizontal table.

- Open the workbook **HW04-4 VLOOKUP-Shipping Original**, which is one of the files you copied at the start of the term.
- Save the workbook to your **Excel Files** folder using the name **HW04-4 Lastname Firstname HWID VLOOKUP-Shipping Done**
- For cells **D9:D68**, you want Excel to display the **Shipping Cost** for each **Item Number**. To do that, you can use the **VLOOKUP** function, which has the same form as **HLOOKUP** except **H** is replaced by **V** and **row** is replaced by **column**.

=VLOOKUP(what to look for **lookup value** , where to look **table array** , column to display **column index num** , need exact or approximate match? **range lookup**)

weight
range with weights and shipping costs
column with shipping costs
approximate match

- Click **D9** and type **=vlookup(** A screen tip will appear:



- lookup_value** is what you want to find. It is the weight in **C9**.
- table_array** is the vertical range where you want to look. In this case, it is the range that contains the **Weights** and **Shipping costs**, **G9:H18**.
- col_index_num** is the number of the **column** in the table whose value you want displayed.

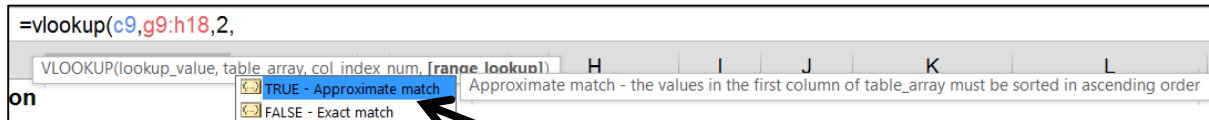
Column 1 contains the **Weights**.

Column 2 contains the corresponding **Shipping costs**. This is what you want to display so a **2** goes here.

- [range_lookup]** tells Excel if you want an exact match or an approximate match.

FALSE says to look for an **exact** match. If there is no exact match the error message **#N/A** will be displayed. This is **not** what you want because the weights are in tenths of a pound and the **table_array** **Weights** are in whole pounds.

TRUE indicates that data in the first column of **table_array** are in **ascending sort order** and you want either an exact match or an approximate match. If an exact match is found, great; if not then Excel settles for the next lowest value. The weight in **C9** is **7.5** so Excel chooses the **Shipping Cost** for **7.0** (the next value below **7.5**). This is what you want.



When you type the comma after **col_index_num** a screen tip provides the definition of **TRUE** and **FALSE**.

2. Type **true**) and then click the **Enter** checkbox ☒. In the next step you will fill this formula to other cells so check to see if you need any absolute references (the dollar signs).
3. Put in the \$ where needed and fill the **D9** formula down to **D68** and preserve the formatting. If you get an **#N/A** error then go back and insert absolute references (the \$) where appropriate.

D9					
=VLOOKUP(C9,\$G\$9:\$H\$18,2,TRUE)					
	A	B	C	D	E
8		Item Number	Weight (lbs)	Shipping Cost	
9		44537	7.5	\$30.60	

Note that for this example if a weight is between two whole numbers then the **Shipping Cost** for the **lower** weight is used. Thus, a weight of **7.9** would use the **Shipping Cost** for **7.0**. If you wanted to use the higher weight then you would use **C9+0.99** for the **lookup_value**. The formula would be:

=VLOOKUP(C9+0.99,\$G\$9:\$H\$18,2,TRUE) ← **Don't use this one!**

This formula is a bit more complicated but it probably is more realistic because the shipper will always want to charge the highest shipping cost he can.

- d. In **G3**, insert a function that will display the total weight and total shipping cost of all the items, as well as text that gives meaning to the numbers. That is, you want to display the following:

Total weight is 329.5 lbs and Total Cost is \$1,555.60

To display this, you need a formula that contains four separate parts which are joined together end to end. Computer programmers refer to this type of joining as **CONCATENATION**. Here are the four parts:

Total weight is **329.5** **lbs and Total Cost is** **\$1,555.60**
Text 1 **Calculation 1** **Text 2** **Calculation 2**

Text 1 will go inside quotation marks: **"Total weight is "**

Calculation 1 finds the sum of all the weights: **SUM(C9:C68)**

Text 2 will go inside quotation marks: **" lbs and Total Cost is "**

Calculation 2 finds the sum of all the shipping costs: **SUM(D9:D68)**

To join these four pieces together in one formula you can use the ampersand, **&**, between the pieces as follows:

1. Type this formula into **G3** and click the **Enter** checkbox 

= "Total weight is "&SUM(C9:C68)&" lbs and Total cost is "&SUM(D9:D68)

The text between quotation marks **"Total weight is "** is displayed,
 then the **SUM** of **C9** through **C68** is displayed,
 then the text between quotation marks **" lbs and Total Cost is "** is displayed,
 then the **SUM** of **D9** through **D68** is displayed.

G3											= "Total weight is "&SUM(C9:C68)&" lbs and Total cost is "&SUM(D9:D68)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
A											B											C											D											E											F											G											H											I											J											K																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
1											Shipping Costs Calculation																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													

Excel offers an alternative to the ampersand that does the same thing but uses the **CONCATENATE** function to join (concatenate) the four parts. Here is the formula using **CONCATENATE**:

=CONCATENATE("Total weight is ",SUM(C9:C68) ," lbs and Total Cost is ",SUM(D9:D68))

CONCATENATE is a remnant from the early days of computer programming.

2. The formula in **G3** displays the cost as **1555.6**. This is the correct value but it should be in currency style as in **\$1,555.60**. To do that you can use the **TEXT** function. It has the form:

=TEXT(value, format)

- **value** is a number or cell reference.
- **format** is the way you want the **value** to be displayed. This part must go inside quotes. For example, use
"m/d/yyyy" to display **12/31/2014**
"ddd d mmm yyyy" to display **Tue 31 Dec 2014**
"\$#,###.00" to display **\$1,555.60**

The **value** you want to display is calculated by **SUM(D9:D68)** so that will be the **value** in the **TEXT** function. The format you want is currency so **"\$#,###.00"** will be the format.

Modify the formula in **G3** by putting **SUM(D9:D68)** inside the **TEXT** function.

G3		= "Total weight is "&SUM(C9:C68)&" lbs and Total cost is "&TEXT(SUM(D9:D68),"\$#,###.00")									
	A	B	C	D	E	F	G	H	I	J	K
1	Shipping Costs Calculation										
2											
3	Ship Cost by Item Number			Ship Cost by Weight			Total weight is 329.5 lbs and Total cost is \$1,555.60				

- e. Enter a function in **G4** that will display the **Item Number** of the item with the highest weight. The **MAX** function can be used to find the highest weight in **C9:C68**. To find the **Item Number** you can use the **VLOOKUP** function. Unfortunately, **Item Number** is to the left of **Weight** so **VLOOKUP** cannot be used directly. To get around this, create a "scratch area" where **Weight** is to the left of **Item Number**. Do the following:
1. In **J7**, type **Scratch Area** and center and merge it across **J7:L7**.
 2. In **J8** type **Weight**, in **K8** type **Item Number**, and in **L8** type **Shipping Cost**.
 3. In **J9**, type **=c9**, in **K9**, type **=b9** and in **L9** type **=d9**.
 4. Fill the formulas in **J9:L9** down to **J68:L68**. This creates a new table where the **Weight** is to the left of the **Item Number**.
 5. To make the table easier to read, format as shown below (to put in borders select the table, tap **Ctrl + 1**, and click **Borders** tab):

	I	J	K	L
6				
7	Scratch Area			
8	Weight	Item Number	Shipping Cost	
9	7.5	44537	\$30.60	
10	9.9	80680	\$33.00	
11	8.7	43913	\$31.80	
12	5.7	71304	\$26.75	

6. In **G4**, enter a **VLOOKUP** function that will display the **Item Number** of the item with the highest **Weight**. Here is the structure:

=VLOOKUP(**what to look for** **where to look** **column to display** **need exact or approximate match?** **)**

lookup value **table array** **column index num** **range lookup**

highest weight **range with weights and item numbers** **column with item numbers** **exact match**

- **lookup value** is the highest **Weight** in **J9:J68**. To find that, use **MAX**.
- **table array** is the range that contains **Weights** and **Item Numbers** in the scratch area.
- **column index num** is the number of the column in the table whose value you want displayed.

Column 1 contains Weights

Column 2 contains Item Numbers

- **range lookup** is **TRUE** or **FALSE**. Make your choice by noting that the **Weight** are not in ascending sort order and you want an exact match.

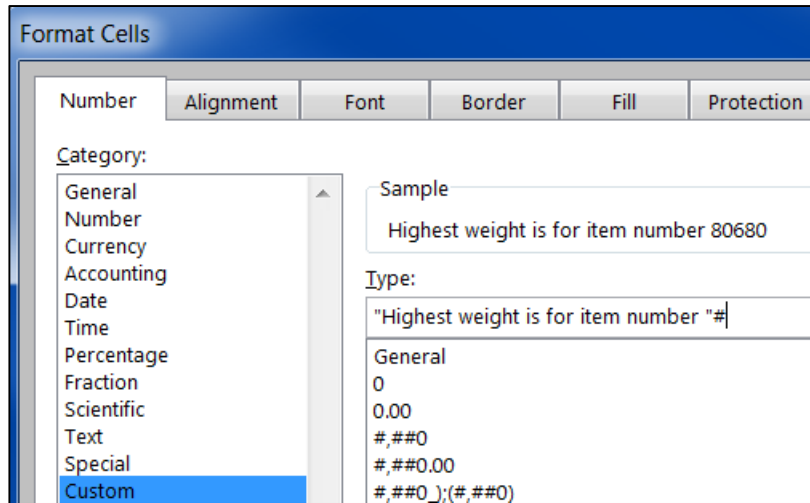
TRUE for approximate match

FALSE for exact match

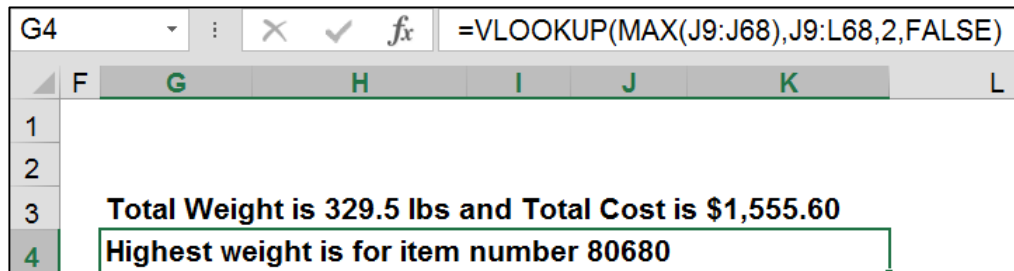
7. Enter your formula and click the **Enter** checkbox .

G4		=VLOOKUP(MAX(J9:J68),J9:L68,2,FALSE)					
	F	G	H	I	J	K	L
1							
2							
3	Total Weight is 329.5 lbs and Total Cost is \$1,555.60						
4		80680					

8. Display the value in **G4** with some explanatory text. Use **Format Cells** to display the text **Highest weight is for item number** to the left of **80680**. To do that, tap **Ctrl + 1**, click **Number**, click **Custom**, and put in the code **"Highest weight is for item number "#**



When you tap **Enter** you will see **#####**, which indicates the value to display will not fit entirely in **G4**. To fix that, select **G4:L4**, click **Merge & Center**, and then click the **Align Left** button.



- f. Enter a function in **G5** that will display the **Item Number** of the item with the highest weight and also the **Shipping Cost** for that item. It should look like this:

Highest weight is for item number 80680 whose shipping cost is \$33.00

You have to use **VLOOKUP** twice and ampersands to concatenate the values and text. Because there are two values to look up you cannot use **Format Cells** to show the explanatory text.

- **range lookup** is **TRUE** or **FALSE**. Make your choice by noting that the **Item Numbers** are not in ascending sort order and you want an exact match.

TRUE for approximate match

FALSE for exact match

C6	:				=VLOOKUP(B6,B9:D68,3,FALSE)
	A	B	C	D	E
1	Shipping Costs Calculation				
2					
3	Ship Cost by Item Number		Ship Cost by Weight		
4	Choose	Shipping	Enter	Shipping	
5	Item Number	Cost	Weight	Cost	
6	43913	\$31.80	1.1		

- h. Misspelled words can be embarrassing.⁶ For example, a recent news headline read “Floods from the Mississippi may be prevented by putting big dames in the river.” Here is a road sign that was in South Bend Indiana:



When you misspell a word in an email or letter the reader often can figure out what you are trying to say from the context. Try reading this:

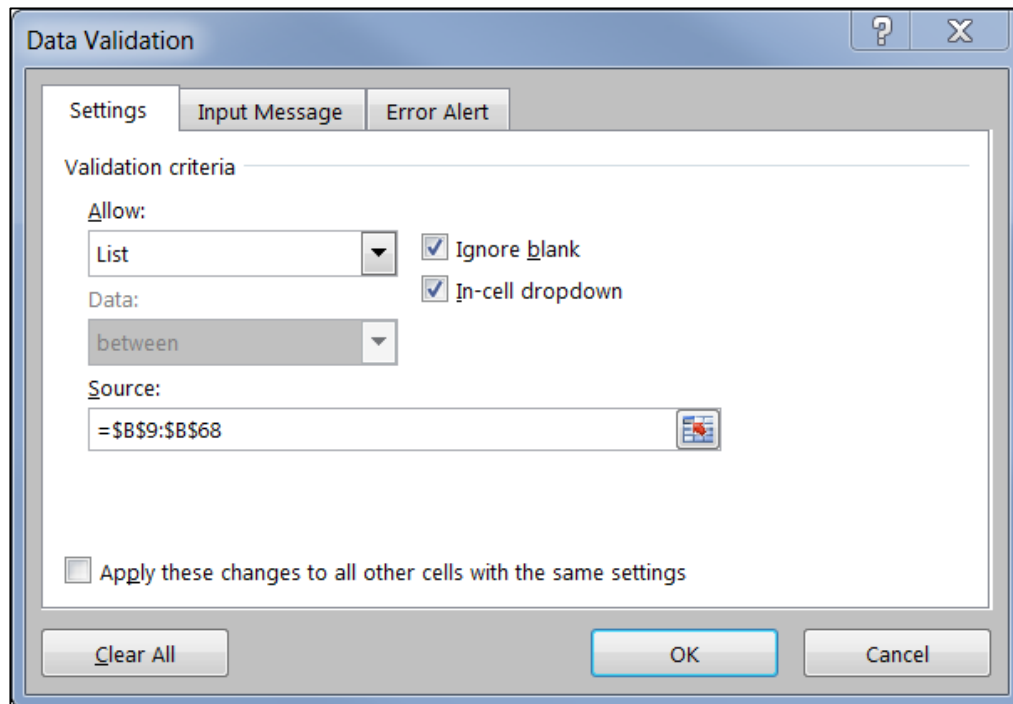
I cdnuolt blveiee taht I cluod aulacly uesdnatnrd waht I was rdanieg. The phaonmneal pweor of the hmuan mnid. Aoccdrnig to rscheearch it deosn't mttair in waht oredr the ltteers in a wrod are, the olny iprmoatnt tihng is taht the frist and lsat ltteer be in the rghit pclae. The rset can be a taotl mses and you can sitll raed it.

Your amazing brain is able to fill in what it needs to make sense of this from the context and your facility with English.

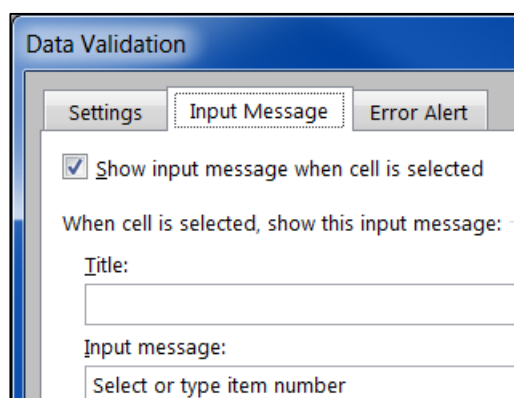
However, if you enter a wrong number in Excel the user probably will not be able to tell if it is wrong by looking at the context, and any analysis you do that uses that number will be wrong. While you cannot completely prevent data entry errors, Excel allows you to check some of the characteristics of data you enter through its **Data Validation** feature. Let's see how this works.

⁶ Adapted from <http://www.dummies.com/how-to/content/limit-data-entry-with-data-validation-in-excel-201.html>

1. Click **B6**, and then, on the **Data** tab, in the **Data Tools** group, click **Data Validation** and select **Data Validation...** There are a lot of choices that you can explore on your own. For this project, **Item Numbers** must be those that are in the range **B9:B68**.
2. Click the **Settings** tab and select **List** from the **Allow:** drop down menu.
3. In the **Source:** box, type the range where the **Item Numbers** are listed. That is type **=B\$9:\$B\$68** (or simply select that range with your mouse).



4. Click the **Input Message** tab and in the **Input message:** box type **Select or type item number**.



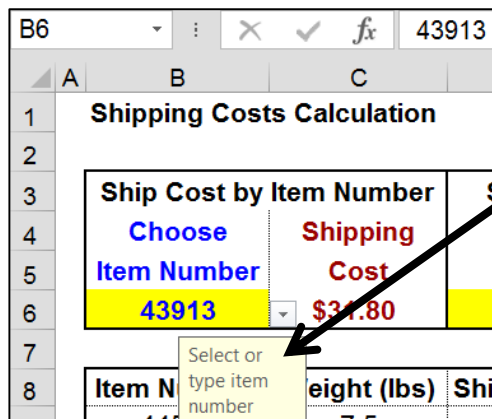
Now, when you click **B6** that message will appear to remind you of what type of data goes in **B6**.

5. Click the **Error Alert** tab and, in the **Error message:** box, type **Item Number not found**. Now, if you enter an **Item Number** that is not on the list of numbers in **B9:B68** you will get an error message.

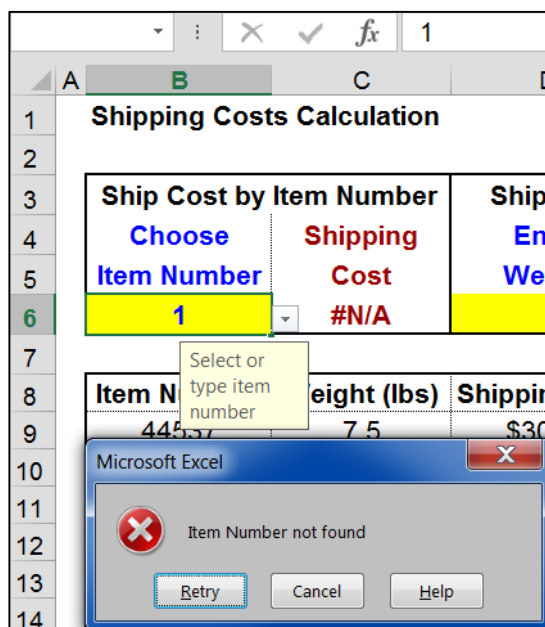
The default under **Style:** is **Stop**. That means Excel will not allow a number outside the range. If you change the **Style:** to **Warning** Excel will display the error message as a warning but it will allow the value to be entered if you wish.



6. Leave the **Style:** as **Stop** and click **OK**, You will see the **Input message** for cell **B6**.



7. To see how data validation works, click **B6**, type **1**, and tap **Enter**.



Click **Cancel**.

8. When **B6** is active, there will be an upside triangle just to the right of the cell. This is a drop down menu that can be used to select an **Item Number** rather than type it.

To see how the drop down menu works, click the down arrow, scroll up a bit, and select **80680**. The **Shipping Cost** in **C6** will show **\$33.00**.

- i. Enter a function in **E6** that will display the **Shipping Cost** for an item whose **Weight** is entered in **D6**. Give it a try by following the same process you did for the formula in **C6**. If you have difficulty, follow these steps:

=VLOOKUP(what to look for **lookup value** , where to look **table array** , column to display **column index num** , need exact or approximate match? **range lookup**)

weight range with weights and shipping costs column with shipping costs approximate match

- **lookup value** is the **weight** in **D6**.
- **table array** is the range that contains **Weights** and **Shipping Costs**. This is **G9:H18**.
- **column index num** is the number of the column in the table whose value you want displayed.

Column 1 contains **Weights**

Column 2 contains **Shipping Costs**

- **range lookup** is **TRUE** or **FALSE**. The **Weights** are sorted low to high and you want only an approximate match (that is, the exact weight in **D6** need not be listed in **G9:G18**).

TRUE for approximate match

FALSE for exact match

E6

:

✖

✓

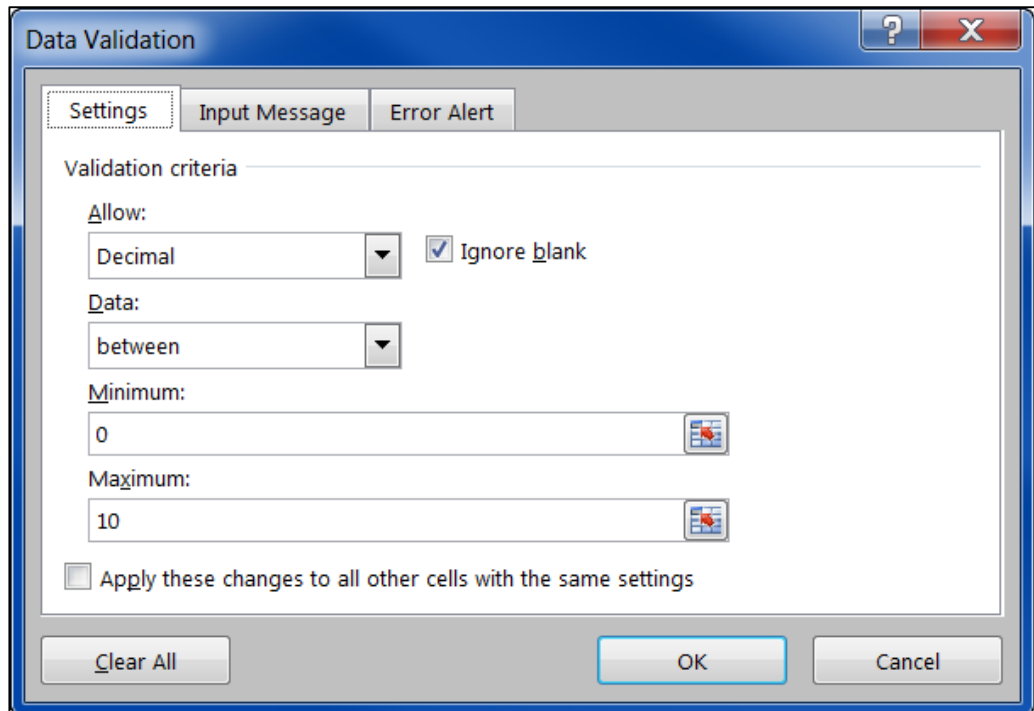
fx

=VLOOKUP(D6,G9:H18,2,TRUE)

	A	B	C	D	E
1	Shipping Costs Calculation				
2					
3		Ship Cost by Item Number		Ship Cost by Weight	
4		Choose	Shipping	Enter	Shipping
5		Item Number	Cost	Weight	Cost
6		80680	\$33.00	1.1	\$15.75

The weight in **D6** is 1.1, which is between 1.0 (**Shipping Cost** is \$15.75) and 2.0 (**Shipping Cost** is \$18.50). Excel chooses the lower value of \$15.75.

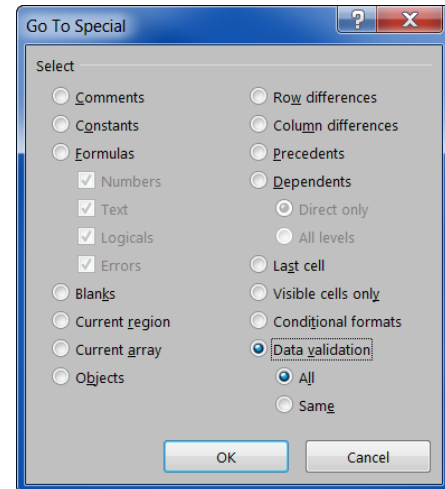
- j. Set up a validation rule so that the weights entered must be between 0 and 10 pounds. Give it a try. If you need help, do the following:
1. Click **D6**, and then, on the **Data** tab, in the **Data Tools** group, click **Data Validation** and select **Data Validation...**
 2. Click the **Settings** tab and select **Decimal** from the **Allow:** drop down menu.
 3. In the **Data:** box, select **between**.
 4. In the **Minimum:** box type 0.
 5. In the **Maximum:** box type 10.



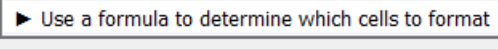
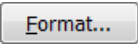
6. Click the **Input Message** tab. In the **Input message:** box type **Enter decimal between 0 and 10.**
7. Click the **Error Alert** tab and, in the **Error message:** box, type **Weight must be a decimal between 0 and 10.**
8. In the **Style:** box confirm that **Stop** is selected.
9. Click **OK**.
10. To see how data validation works, click **D6**, type **11**, and tap **Enter**. You should see the error message.
11. Click **Cancel**.

If you want to find cells to which **Data Validation** has been applied, tap the **F5** key, click the **Special** button, click the **Data Validation** option button, and click **OK**. Every cell that has **Data Validation** will be highlighted.

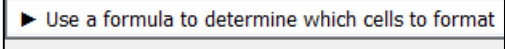
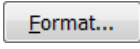
If you want to get rid of **Data Validation** assigned to a particular cell range, select the range, open the **Data Validation** dialog box, click the **Clear All** button, and click **OK**. Do **NOT** do this now.



- k. Create a conditional format for the range **B9:D68** that highlights cells in columns **B:D** that contain the **Item Number** in **B6**. The highlight should set the text to **Bold Italic Red** and the fill to **light blue**. Give it a try. If you have trouble, follow these steps:

1. You want to apply the formatting to the **Item Numbers, Weights, and Shipping Costs**, which are in **B9:D68**. So, select **B9:D68**.
2. On the **HOME** tab, in the **Styles** group, click **Conditional Formatting** and select **Manage Rules**.
3. Click .
4. Click the last bullet, **Use a formula...** .
5. Type this into the formula box: **=B9=\$B\$6** This tells Excel to see if the **Item Number** in **B9**, or **B10**, or **B11**, etc. is the same as the **Item number** in **B6**. If it is, apply a special format; otherwise, leave the cell alone. Note the use of absolute references (the \$). You want Excel to always check cell **B6** so you need the \$ there but you also want Excel to look at cell **B10** and **B11** and **B12**, etc., so there is no \$ in front of the **9** in **\$B9**.
6. Click  and set the text to **Bold Italic Red** and the fill to **light blue**.
7. Click **OK** three times to exit **Conditional Formatting**. Notice that row 10 is highlighted since it has the Item Number in **B6**.

	A	B	C	D	E
1		Shipping Costs Calculation			
2					
3		Ship Cost by Item Number		Ship Cost by Weight	
4		Choose	Shipping	Enter	Shipping
5		Item Number	Cost	Weight	Cost
6		80680	\$33.00	1.1	\$15.75
7					
8		Item Number	Weight (lbs)	Shipping Cost	
9		44537	7.5	\$30.60	
10		80680	9.9	\$33.00	

- I. Create a conditional format for the range **B9:D68** that sets the text to **Bold Italic Purple** and the fill to **light orange** for the row that contains the item with the lowest **Weight**. Give it a try or follow these steps:
 1. You want to apply the formatting to the **Item Numbers, Weights, and Shipping Costs**, which are in **B9:D68**. So, select **B9:D68**.
 2. On the **HOME** tab, in the **Styles** group, click **Conditional Formatting** and select **Manage Rules**.
 3. Click .
 4. Click the last bullet, **Use a formula...** .
 5. Type this into the formula box: **=Sc9=MIN(\$c\$9:\$c\$68)**
This tells Excel to see if the weight in **C9** (or **C10**, or **C11**, etc.) is the smallest of all the weights in **C9:C68**. Again, note the use of the **\$** to indicate absolute referencing.
 6. Click  and set the text to **Bold Italic Purple** and the fill to **light orange**.
 7. Click **OK** three times to exit **Conditional Formatting**.

There are three items that match the minimum of 1.1 pounds.

	A	B	C	D	E
1		Shipping Costs Calculation			
2					
3		Ship Cost by Item Number		Ship Cost by Weight	
4		Choose	Shipping	Enter	Shipping
5		Item Number	Cost	Weight	Cost
6		80680	\$33.00	1.1	\$15.75
7					
8		Item Number	Weight (lbs)	Shipping Cost	
9		44537	7.5	\$30.60	
10		80680	9.9	\$33.00	
11		43913	8.7	\$31.80	
12		71304	5.7	\$26.75	
13		64287	4.2	\$24.00	
14		60417	3.1	\$21.25	
15		54049	4.2	\$24.00	
16		48320	1.1	\$15.75	
17		90169	4.9	\$24.00	
18		13529	1.1	\$15.75	

- m. Set the **Print Area** to **B1:L18**. Set the **Page Setup** parameters so that the worksheet will print **landscape** and all on **one page**, have left and right margins of 0.25 inch, be **centered horizontally** but not vertically, have a footer that contains the file **name on the left** and the **worksheet name on the right**, and print without gridlines but with the **row and column headings**.

- n. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the **Shipping Data** worksheet, save the workbook, and then close it.

Step 4 Submit You now are ready to submit your homework for grading.

1. Put your 5 homework papers in the following order:
 - HW04-1 Enterprise Fund Chart**
 - HW04-1 Enterprise Fund Data**
 - HW04-2 Tourism**
 - HW04-3 HLOOKUP-Gradebook Formulas**
 - HW04-4 VLOOKUP-Shipping Data**
2. Cut out Submission Form 4 and put it on the top of the papers.
3. Staple the papers in the upper left corner.
4. Turn in the packet by the due date.

Step 5 Backup Now would be a good time to backup your files.

Project 5

Excel: Customize Charts, Make Decisions, and Sort

Step 1 Read For this project, there are no pages to read in your textbook.

Step 2 Activities For this project, there are no textbook activities.

Step 3 Homework Do the problems listed below, and turn them in for grading.
You do NOT have to print in color.

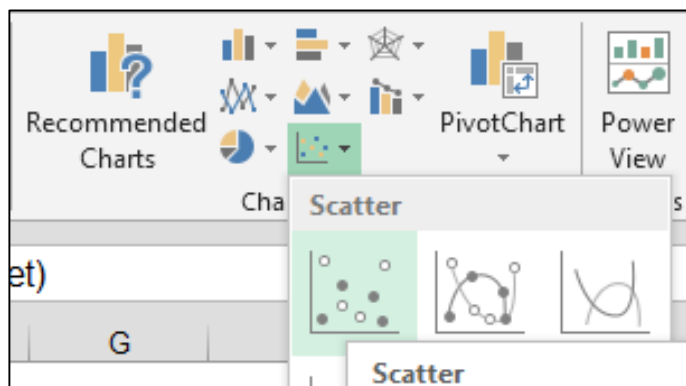
This Project will extend your knowledge of using Excel to make graphs and to help make decisions using **IF/THEN/ELSE** logic.

HW05-1 River Chart

Problem: How can you create a mathematical model (formula) based on empirical data and put two graphs on one chart?

In this exercise you will be given measurements that show the relationship between the depth of a river and the distance from one of its banks. Water depth measurements are routinely made by government agencies to help keep rivers navigable and to help with flood control and prevention. Your task is to graph this relationship and to create a mathematical model that can be used to predict what the water depth should be at any distance from the shore. Where the actual depth does not match the model might indicate that dredging is needed.

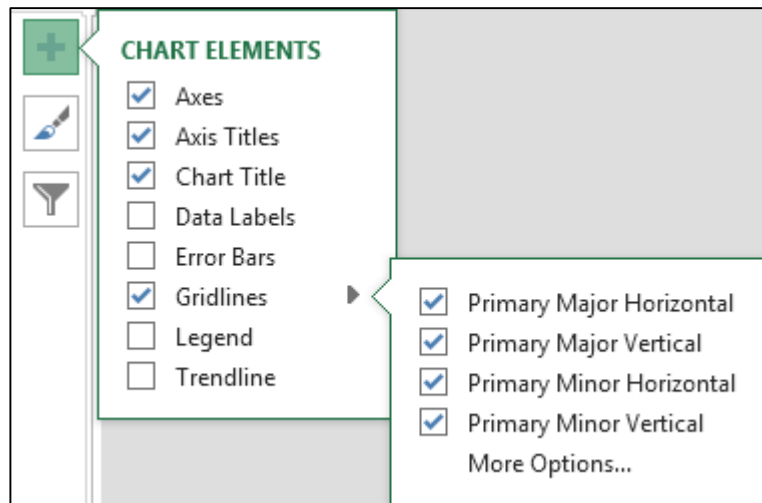
- Open the workbook **HW05-1 River Original**, which is one of the files you copied at the start of the term.
- Save the workbook to your **Excel Files** folder using the name **HW05-1 Lastname Firstname HWID River Done**.
- Graph the data by doing the following:
 - Select cells **A1:B9**.
 - On the **INSERT** tab, in the **Charts** group, click **Scatter** and select **Scatter**.



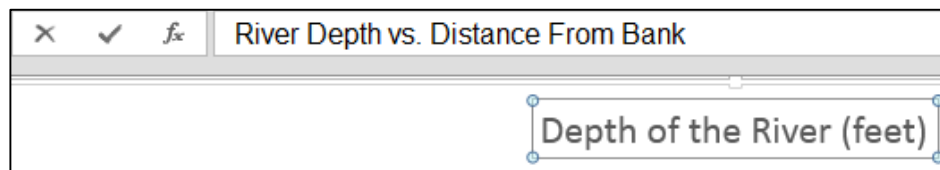
3. Be sure the chart is selected and then on the **CHART TOOLS DESIGN** tab in the **Location** group (way over on the right), click **Move Chart**.
4. Click the button next to **New sheet:**, type **River Chart**, and click **OK**. The chart appears in its own chartsheet.

d. Format the chart as follows:

1. Click the **Chart Elements** button, the green cross  in the upper right corner of the chart, to open the **CHART ELEMENTS** menu and insert checks as shown below:



2. Click the **Chart Title** box to select it, then click the formula bar and type **River Depth vs. Distance From Bank**

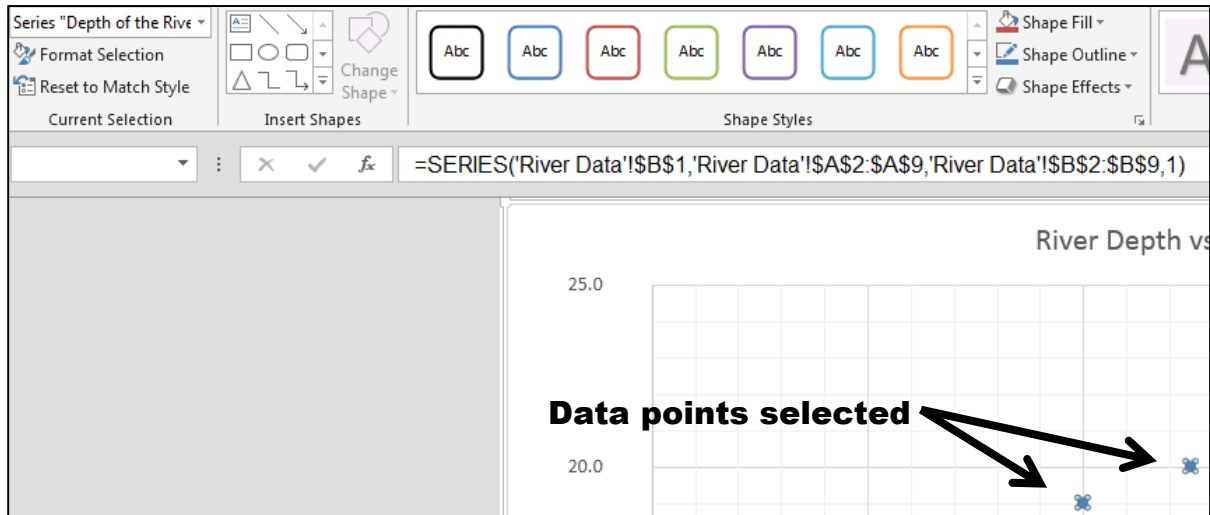


Tap **Enter** to update the title.

3. Using the same technique, change the **Horizontal Axis Title** to **Distance From West Bank (feet)** and the **Vertical Axis Title** to **Depth (feet)**

e. Format the data points by doing the following:

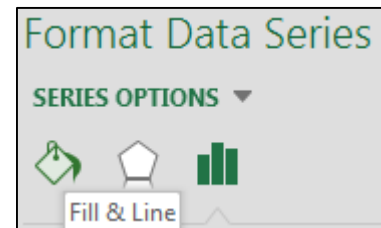
1. On the **CHART TOOLS FORMAT** tab, in the **Current Selection** group (way over on the left), click the down arrow and select **Series "Depth of the River (feet)"**. This selects the data points.



2. On the **CHART TOOLS FORMAT** tab, in the **Current Selection** group click **Format Selection** to open the **Format Data Series** pane.

Click the paint bucket  to see the **Fill and Line** options.

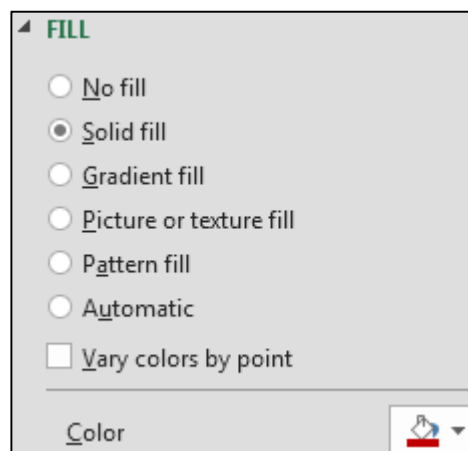
3. Click **MARKER** to drop down its menu and then click **MARKER OPTIONS**, and then click the **Built-in** button.



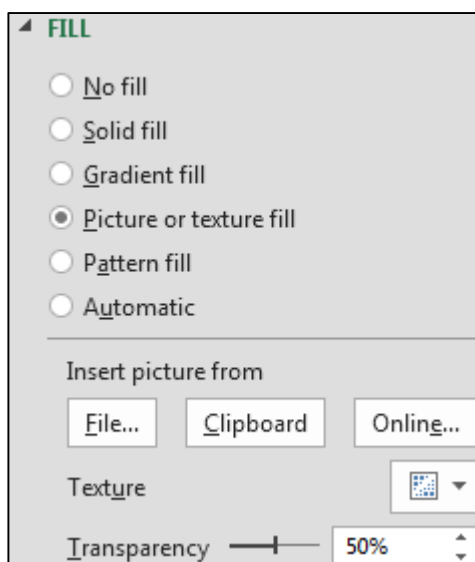
Click the down arrow next to **Type:** and be sure it is set to circle (third choice from the bottom).

Change the size to 10.

4. Click **FILL** to drop down its menu, and then click **Solid fill**, and change the color to red.



- f. Change the background color of the chart by doing the following:
1. On the **CHART TOOLS FORMAT** tab, in the **Current Selection** group, click the down arrow and select **Chart Area**.
 2. On the **CHART TOOLS FORMAT** tab, in the **Current Selection** group click **Format Selection** to open the **Format Chart Area** pane.
 3. If necessary, click **FILL** to show its options and then click **Picture or texture fill**.
 4. Click the down-arrow next to **Texture:** and click the **Blue tissue paper** texture. Move the **Transparency:** slider until it reads **50%**.



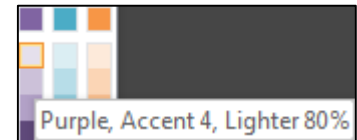
- g. Format the horizontal and vertical axes as follows:
1. On the **CHART TOOLS FORMAT** tab, in the **Current Selection** group, click the down arrow and select **Horizontal Axis** and then click **Format Selection** to open the **Format Axis** pane.
 2. On the **HOME** tab, in the **Font** group, change the font to **purple Arial Black**.
 3. On the **CHART TOOLS FORMAT** tab, in the **Current Selection** group, click the down arrow and select **Vertical Axis** and then click **Format Selection** to open the **Format Axis** pane.
 4. Click **Axis Options** (it looks like a little column chart)



In the **Bounds** group, change the **Maximum** to **25**. This may automatically change the **Minimum** to **-10**. If it does, change the **Minimum** back to **0**.

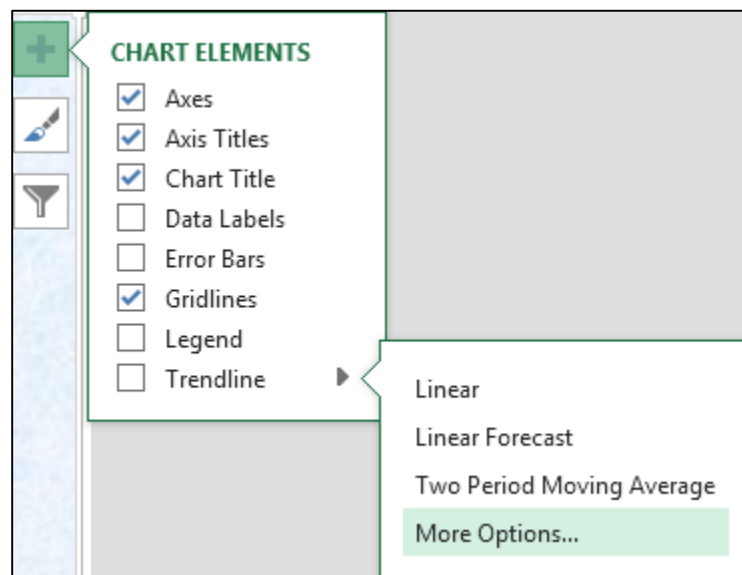
5. Click the paint bucket  and change the **LINE** color to **purple** and make the width **3 pt**.
6. Follow the same procedure to make the vertical axis font **purple Arial Black** and the line color **3 pt purple**.

7. Follow a similar procedure to make the **widths** of the **Horizontal** and **Vertical major gridlines** 2 pt, and the **widths** of the **minor gridlines** 1 pt. Make all the gridlines light purple (Purple, Accent 4, Lighter 80%).



h. Have Excel calculate and insert a trend line by doing the following:

1. Click the **Chart Elements** button, the green cross  in the upper right corner of the chart, to open the **CHART ELEMENTS** menu, click the arrow next to **Trendline**, and select **More Options** to open the **Format Trendline** pane.



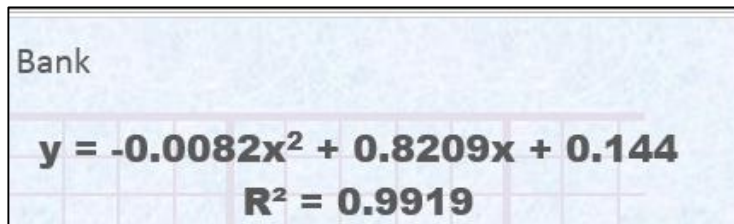
2. Notice how most of the points of the graph look like they would fall on an upside down parabola. So, you will try a mathematical model whose graph is a parabola. To do this, if necessary, click **Trendline Options** to open its menu, then click the button next to **Polynomial**. Confirm that the **Order** is set to **2**. Excel uses a mathematical technique called polynomial regression to create the second degree (quadratic) polynomial that best describes the data. The graph of such an equation is a parabola.

Check the box next to **Display Equation on chart**.

Check the box next to **Display R-squared value on chart**. This value gives an idea of how well the mathematical model describes the data. The optimal value is $R^2 = 1$, which indicates a perfect fit.

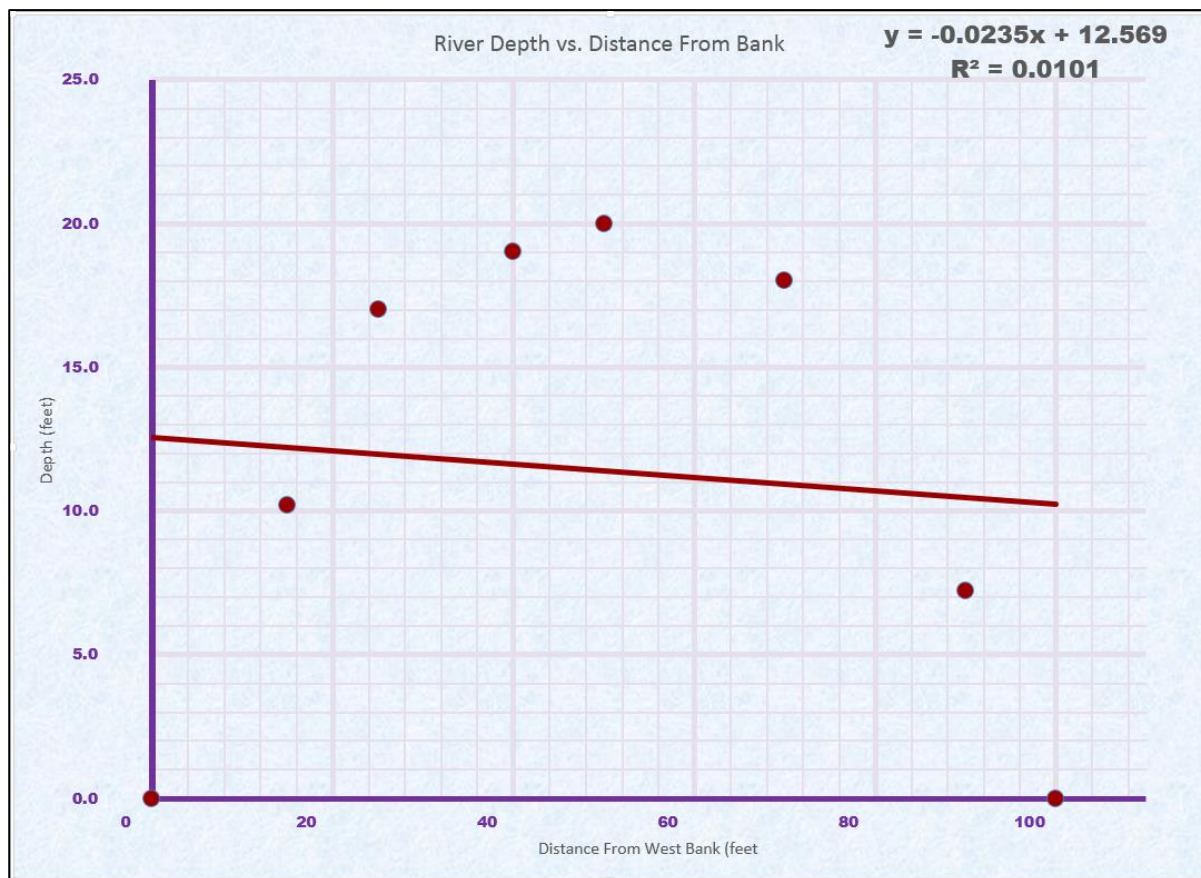
3. Click the **Fill & Line** paint bucket, , and change the line color to dark red, the **Width** to 3 pt, and the **Dash** type to solid.

4. Click the equation and R^2 , change the font to **bold Arial Black** and make the size to **14**. Then, drag it to the upper right corner of the Plot area.



The actual data points are represented by the red dots and the mathematical model calculated by Excel is represented by the solid line. The displayed R^2 value, 0.9919, indicates that the mathematical model fits the data very well.

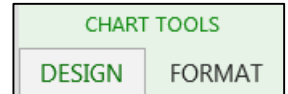
- i. Different mathematical models will fit the data more or less precisely. To see this, do the following:
 1. Make a copy of the **River Chart** chartsheet and rename it **River Chart Modified**.
 2. Change the **Trend** to **Linear**.   Linear



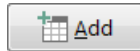
The shape of the trendline has changed to a straight line, the mathematical model now has only two terms, and the displayed R^2 value of 0.0101 indicates that this new model does not fit the data very well (that is obvious from the graph!).

3. Change the **Trend** to **Polynomial** and change the **Order** to **6**. Notice how the shape of the trendline has changed to a more complex curve that better follows the flow of the data, the displayed equation has more terms, and the displayed **R²** value of 0.9985 indicates that this new model fits the data even better than the quadratic model. There is an obvious trade-off here: when the model is more complex it generally fits the data better but it also may be more difficult to work with.
- j. Add a second graph that shows how temperature varies from one side of the river to the other. Do the following:

1. Click anywhere in the **River Chart Modified** chart so that the **CHART TOOLS DESIGN** and **FORMAT** tabs display.
2. On the **CHART TOOLS DESIGN** tab in the **Data** group click **Select Data**.



3. Click the **Add** button.
4. The **X** values for the new data series will be the **Distance from the East Bank** data in **A2:A9** on the **River Data** sheet.

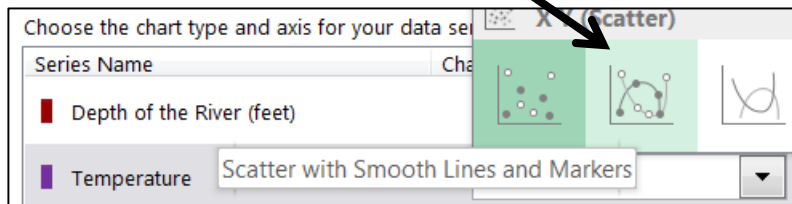


The **Y** values for the new data series will be the **Water Temp Deg C** in **C2:C9** on the **River Data** sheet.

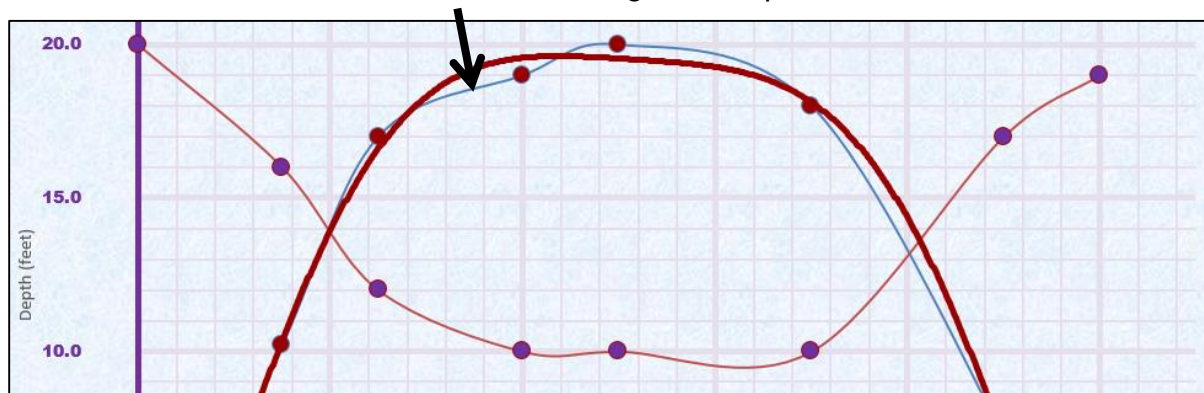
Fill in the **Edit Series** data as shown below. You can type the information for **X** and **Y** or use the collapse dialog buttons and then drag across the ranges you need on the **River Data** sheet.

5. Click **OK** and then click **OK** again. The graph will show a second set of data points. Make the marker size 10 and the fill purple (**FORMAT**, select Series "Temperature", Format Selection, Paint bucket, MARKER, MARKER OPTIONS, Build-in, Size 10, FILL, Solid fill, Color purple).
6. On the **CHART TOOLS DESIGN** tab in the **Type** group click **Change Chart Type**.

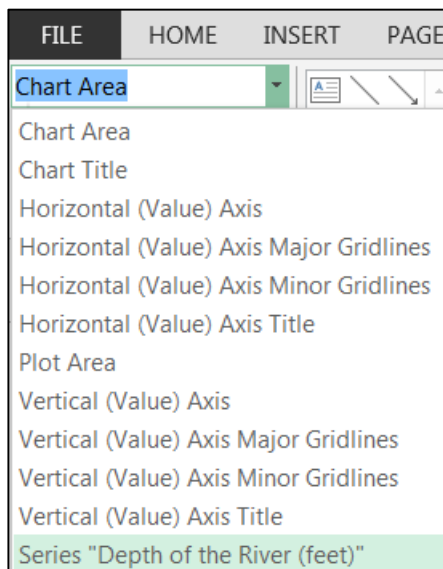
7. From the drop down menu to the right of **Temperature**, choose **Scatter with Smooth Lines and Markers**.



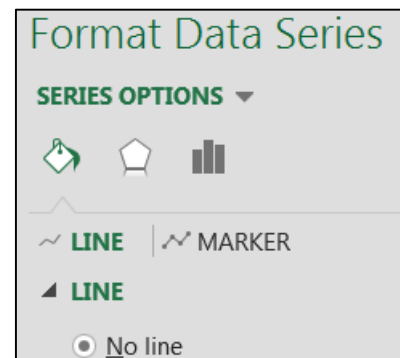
8. Click **OK**. A second graph will appear. Notice that the Depth graph now also has a smooth line connecting its data points.



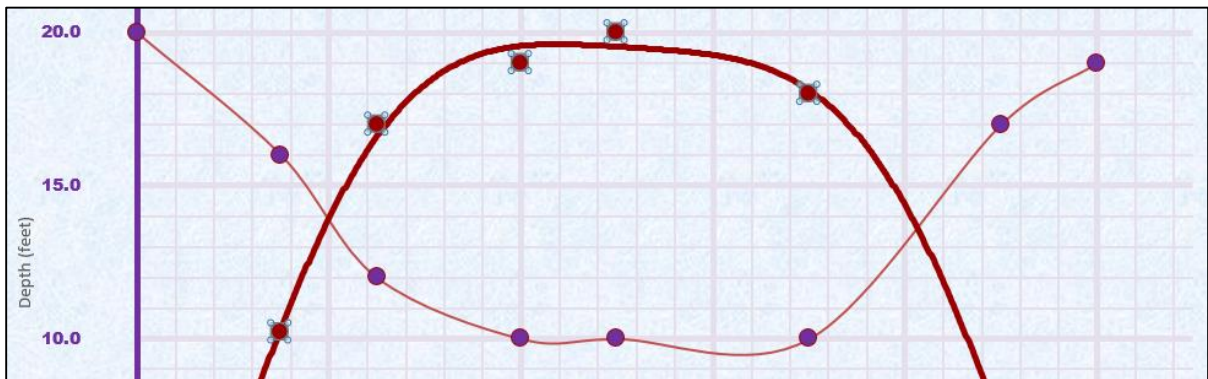
9. To remove the unwanted line, click **CHART TOOLS, FORMAT**, and select **Series "Depth of the River (feet)"**

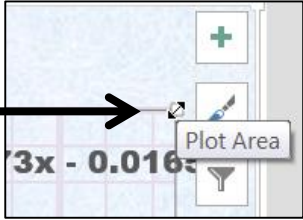


Click **Format Selection**. In the **Format Data Series** pane, click the **paint bucket**, then click **LINE**, then click **No line**.



This is the graph you want.



- k. Adjust the way the chart looks by doing the following:
 1. Click **CHART TOOLS, FORMAT** and, in the **Current Selection** group, click the drop down menu and select **Chart Title**. Click **Format Selection**, click the **HOME** tab and change the font to 18 pt Arial Black.
 2. In the same way, change the font of the **Horizontal (Value) Axis Title** and the **Vertical (Value) Axis Title** to 16 pt Arial Black.
 3. Make the chart a bit smaller by selecting **Plot area**, moving the mouse pointer to the upper right corner of the chart until you see a double headed arrow, holding down the left button, and dragging down and to the left about one inch (this does not have to be exact). 
 4. If necessary, move the equation so it is centered under the title.
- l. Insert a footer that contains the file name on the left and the chartsheet name on the right. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the ***River Chart Modified*** chartsheet, save the workbook, and close it.

HW05-2 Loans IF

Problem: How can you determine if a loan payment is overdue?

The worksheet you develop for this problem will determine if a loan payment is more than 30 days past due and, if so, it will calculate the number of days it is overdue. This project and the next two will give you more experience in working with the IF function, which you used to calculate regular and overtime pay on page **SG50**.

- a. Open the workbook **HW05-2 Loans IF Original**, which is one of the files you copied at the start of the term.
- b. Save the workbook using the name **HW05-2 Lastname Firstname HWID Loans IF Done**.

- c. For cells **D6:D9**, construct a formula that uses the **IF** function to display the word **OVERDUE** if the payment is more than 30 days overdue.

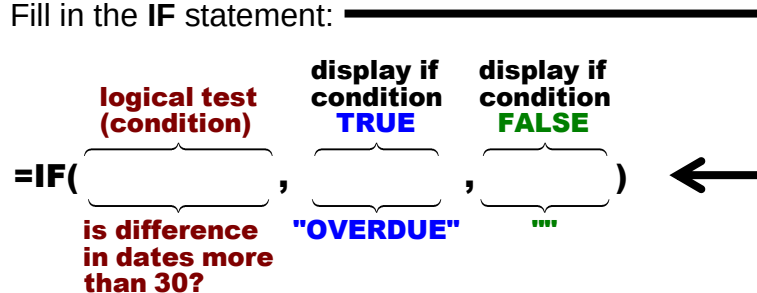
To help you write the complete **IF** function, consider the following three parts:

Logical test — how will Excel choose between the two possibilities (to display the word **OVERDUE** or to display a blank)? The difference of **Today's Date** and the **Due Date** must be greater than 30. Write this inequality as you would in algebra using cell references instead of variables.

Value if true — if the **Logical test** is true, what should be displayed?
You want to display the word **OVERDUE**. You must put **OVERDUE** inside quotation marks or else Excel will think it is a special function or a named range and not know what to do with it.

Value if false — if the **Logical test** is false, what should be displayed?
You want to display a blank so you must type two sets of double quotation marks next to each other, like this **""**. This is called a **null string** since it contains nothing (it is null).

Fill in the **IF** statement:



- Once you have constructed the formula, type it in **D6** and then fill down to **D9**. After you fill, be sure to click the down arrow on the **Auto Fill Options** button and select **Fill Without Formatting** to preserve the original formatting of the cells. If you do not, the bottom border of **D9** will be incorrect.

	A	B	C	D
1	Loan Payments			
2				
3	Today's Date: 13 Jul			
4				
5	Loan	Due Date	Amount	Loans more than 30 days overdue
6	Boat	11 Jun	\$450.00	OVERDUE
7	Car	30 Jun	\$520.00	
8	Home	04 Jul	\$980.00	#VALUE!
9	Student	24 May	\$300.00	

Notice the **#VALUE!** error in **D8**. Click **D8** to show the formula it contains:

D8 : ✕ ✓ *f_x* =IF(B5-B8>30,"OVERDUE","")

When you filled down the formula, Excel changed the row numbers in the formula one at a time. That is, **B6** became **B7**, and then **B7** became **B8**, and so on. That is what you want. However, Excel also changed **B3** to **B4**, and then **B4** to **B5** and so on. That is **NOT** what you want because **Today's Date** is in **B3** and so **B3** should remain **B3** in all the formulas.

To tell Excel to keep **B3** the same use an **absolute reference**. So, in **D6** change **B3** to **B\$3**. The \$ to the left of **3** means to keep that row number constant (**absolute**) when you fill down. Note that you also could use **\$B\$3** but since you are not copying left or right the **B** will not change anyway.

2. Correct the formula in **D6** and fill down, again preserving the formatting.

D9	:	✕	✓	<i>f_x</i>	=IF(B\$3-B9>30,"OVERDUE","")
	A	B	C	D	E
1	Loan Payments				
2					
3	Today's Date: 13 Jul				
4					
5	Loan	Due Date	Amount	Loans more than 30 days overdue	Number of days overdue
6	Boat	11 Jun	\$450.00	OVERDUE	
7	Car	30 Jun	\$520.00		
8	Home	04 Jul	\$980.00		
9	Student	24 May	\$300.00	OVERDUE	

3. Check **D6**. It should display **OVERDUE** since **Today's Date**, 13 Jul is 30 days after the **Due Date**, 11 Jun.
 4. Check **D7**. It should be blank since **Today's Date**, 13 Jul is only 14 days after the **Due Date**, 30 Jun.
- d. For cells **E6:E9**, construct a formula that will display the number of days the loan is overdue, if it is, or a blank if it is not. These formulas will be almost the same as the formulas in cells **D6:D8** but in place of "OVERDUE" have Excel calculate the actual difference.

Fill in the **IF** statement:

=IF(logical test (condition) , display if condition TRUE , display if condition FALSE)

is difference in dates more than 30? B\$3-B6 ""

- e. Make a copy of the worksheet and rename the new worksheet **Loan Formulas**.
- f. Tap **Ctrl + `** to display the formulas and **Autofit** the widths of the columns.
- g. Set up the **Loan Formulas** worksheet to print portrait, all on one page, centered horizontally but not vertically, with a footer that contains the file name on the left and the worksheet name on the right, and with gridlines, and row and column headings. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the **Loan Formulas** worksheet, save the workbook and close it.

HW05-3 Rent IF

Problem: How can you determine which of several rates should be applied to various rental properties?

The worksheet you develop for this problem will determine the payment that is due for renting floor space. In this situation, there are two possible rates: a low, introductory rate of \$5.00 per square foot for clients that have been renting for under a year, and a regular rate of \$9.00 per square foot for older clients.

- a. Open the workbook **HW05-3 Rent Original IF**, which is one of the files you copied at the start of the term.
- b. Save the workbook as **HW05-3 Lastname Firstname HWID Rent IF Done**
- c. For cells **D9:D12**, construct a formula that displays the payment for renting floor space. The condition in the **IF** function should test to see if the difference of **Today's Date** and the **Initial Date** is greater than 365 (that is, one year). If it is, the payment is calculated by multiplying the **Floor Space** by the **Normal Rate** (in **B5**); otherwise, the payment is calculated by multiplying the **Floor Space** by the **Introductory Rate** (in **B6**).

To help you write the complete **IF** function, fill in the following three parts:

Logical test — how will Excel choose between the two possibilities (what criteria will Excel use to choose between the formula that uses the **Normal Rate** or the **Introductory Rate**)?

Value if true — if the **Logical test** is true, what should be displayed (which formula should be used)?

Value if false — if the **Logical test** is false, what should be displayed (which formula should be used)?

Fill in the **IF** statement:

logical test (condition)	display if condition TRUE	display if condition FALSE
=IF(,	 ,	)
is difference in dates more than 365?	Floor Space * Normal Rate	Floor Space * Intro Rate

1. Once you have constructed the formula, type it into **D9**. Be sure to include absolute references (the **\$**) where appropriate.
 2. Check **D9**. The **Initial Date**, 10 Oct 2009, is more than 365 days from **Today's Date**, 11 July 2013, so the payment should use the **Normal Rate**: $9 \times 5000 = 45000$.
 3. If your formula displays 45000, fill it down to **D12**. Otherwise, fix it. After you fill, be sure to click the down arrow on the **Auto Fill Options** button and select **Fill Without Formatting** to preserve the original formatting of the cells. If you do not, the bottom border of **D12** will be incorrect.
 4. Check the value in **D10**. The difference between **Today's Date** and the **Initial Date** is less than 365 so the **Introductory Rate** should be used: $5 \times 1500 = 7500$. If that does not check, look at your formula. Did you put in absolute referencing for the cells that should not change (**B3**, **B5**, and **B6**)? If necessary, click **D9**, put in the **\$** where appropriate, fill down again preserving formatting, and check the results.
 5. Format the dollar amounts in column **D** as currency with two decimal places.
- d. Apply custom formats to some cells by doing the following:
1. Select cells **B5:B6**, right-click **B5**, and select **Format Cells**, click the **Number** tab, and click **Custom**. The shortcut for displaying **Format Cells** is **Ctrl + 1**.
 2. Change the text in the **Type** box to **\$.00" per sq. ft.** (the quotation marks are needed).
 - **\$** says to display the dollar sign;
 - **.00** is a place holder that says to display the number, rounded to two decimal places.
 - **" per sq. ft."** says to display the text between the quotation marks exactly as it is shown.
 3. Click **OK**.
 4. Select cells **B9:B12** and follow the same procedure as above to apply this custom format: **#,###" sq. ft."**
 - the **#,###** says to display the number with a comma if the number is over one thousand;
 - the **" sq. ft."** says to display the text between the quotation marks exactly as it is shown.
 5. Click **OK**.

	A	B
8	Company	Floor Space
9	Lisa's Camping Supply	5,000 sq. ft.
10	Badtke Burger Barn	1,500 sq. ft.
11	Brainiac Books, Inc.	800 sq. ft.
12	Know It All Notions	2,000 sq. ft.

- e. In **D14**, enter a formula that displays the number of payments that are over \$8,000. Here, you are counting something so use the **COUNTIF** function. If you forget the form, type **=countif(** and a **ScreenTip** will remind you.



If you have an internet connection, you can click the underlined blue **COUNTIF** for a more extensive explanation.

1. Type the formula. Remember to use quotation marks around the condition.
 2. Check your answer (there are 2 payments over \$8,000).
 3. Left align the cell and format the number with zero decimal places.
- f. In **D15**, display the sum of the payments that are over \$8,000.
1. Type the formula. Here, you are finding a sum so use the **SUMIF** function.
-
2. Check your answer. The first and last payments are over \$8,000 so the sum should be 45000 + 10000 = 55000.
 3. Left align the cell and format it as currency with two decimal places.
- g. In **D16**, display the sum of the **Floor space** where the **Payment** is over \$8,000.
1. Type the formula. Here, you are finding a sum so use the **SUMIF** function. Note that the **range** where the **criteria** is checked (**D9:D12**) is different from the **sum_range** that you will sum (**B9:B12**).
 2. Check the result. The first and last payments are over \$8,000 so the sum should be 5000 + 2000 = 7000.
 3. Format the cell the same as **B9**. You could type the custom format as you did for **B9**, or you could click **B9**, click **Format Painter**, click **D16**. Then, left align and remove the border.
- h. Set up the **Rent** worksheet to print in portrait and all on one page, centered horizontally but not vertically, with a footer that contains the file name on the left and the worksheet name on the right, and **without** gridlines or row or column headings. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the worksheet, save the workbook but do **NOT** close it.
- i. Copy the worksheet and rename the new worksheet **Rent Formulas**.
- j. Tap **Ctrl + `** to display the formulas and **Autofit** the widths of the columns. Then, change the width of column **C** to 4 (102 pixels).
- k. Set up the **Rent Formulas** worksheet to print in portrait and all on one page, centered horizontally but not vertically, with a footer that contains the file name on the left and the worksheet name on the right, and **with** gridlines and row and column headings. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the worksheet, save the workbook and close it.

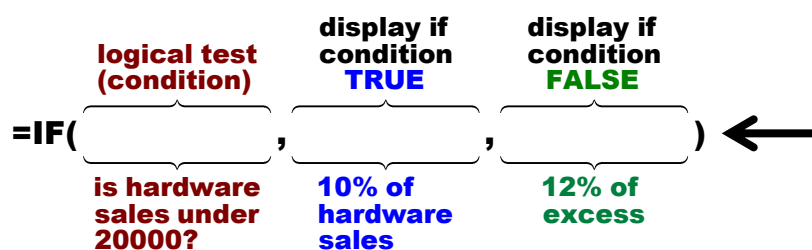
HW05-4 Commission IF

Problem: How can you determine an employee's commission, total pay, and target pay based on their sales record?

- Open the workbook **HW05-4 Commission IF Original**, which is one of the files you copied at the start of the term.
- Save the workbook using the name **HW05-4 Lastname Firstname HWID Commission IF Done**
- In **D4**, enter a formula that will calculate Sherri's hardware commission. Use the following rules to construct the formula:
 - If an employee sells less than \$20,000 worth of hardware, she earns a hardware commission of 10% of her hardware sales. For example, Mary will earn 10% of \$13,500.
 - If an employee sells more than \$20,000 worth of hardware, she earns a hardware commission of 10% of \$20,000 plus 12% of the amount that her hardware sales were over \$20,000. For example, Sherri will earn 10% of \$20,000 plus 12% of \$3,000.

This is a tough problem so be sure to spend some time thinking carefully about how the commission is to be calculated. Write out the decision logic before you begin to type the formula. Basically, you want to use the **IF** function to select between two formulas: one that calculates the commission if the hardware sales are under \$20,000 and the other if the sales are over \$20,000. This commission problem is similar to the overtime pay problem described in **Project HW03-4** on page **SG48**.

Fill in the **IF** statement:



- Type the formula in **D4** and tap **Enter**.
- Check the result. Sherri's Hardware Sales were 23000. So, her commission should be $10\% \times 20000 + 12\% \times 3000 = 2360$.
- Click **A9** and split the screen (**View, Window, Split**) and scroll so you can see row 78 in the bottom pane.

8	Monica
75	Taylor
- Fill **D4** down to row **80**. Check the result for Mary in **D5**. Her Hardware Sales were 13500 so her commission should be $10\% \times 13500 = 1350$.

- d. Click **E4** and enter an Excel formula to calculate the software commission. An employee earns 8% on software sales. You do not need an **IF** function here because there is no decision to be made—every software commission is calculated in the same way.
- e. Click **F4** and enter an Excel formula to calculate the total commission (the sum of the **Hardware Commission** and the **Software Commission**).
- f. Click **G4** and enter an Excel formula to calculate the **Total Earnings** for Sherri. Employees earn a base salary plus their **Total Commission**. The base salary is calculated as follows:

\$10,000 if the **Total Commission** is \$1,200 or less;
 \$11,000 if the **Total Commission** is between \$1,200 and \$1,400;
 \$12,000 if the **Total Commission** is over \$1,400.

You can do this calculation using “nested” **IF** formulas; that is, one **IF** formula inside another. You use nested **IF** logic when you approach a traffic signal when driving your car:

IF green light **THEN** keep going, **ELSE**
IF red light **THEN** stop **ELSE**
 the light is yellow so speed up or slow down depending on how far you are from the light

For this problem the logic will go like this:

IF Total Commission <= 1200 THEN 10000 + Total Commission ELSE
IF Total Commission < 1400 THEN 11000 + Total Commission ELSE
12000 + Total Commission

1. Type the formula in **G4** and tap **Enter**.
2. Check the result. Sherri's Total Commission is 2424. Since this is over 1400 her base will be 12000. So, her Total Earnings should be 12,000 + 2424 = 14424.
3. Fill **E4:G4** down to row **80**.

Check the result for Mary in **G5**. Her Total Commission is 1390, which is between 1200 and 1400, so her base is 11000. Her Total Earnings should be 11,000 + 1390 = 12,390.

Check the result for Monica in **G8**. Her Total Commission is 970.24, which is less than 1200, so her base is 10000. Her Total Earnings should be 10,000 + 970.24 = 10,970.24.

- g. In cells **B81:G81**, enter formulas for the **Totals** of columns **B:G**
- h. In cells **B82:G82**, enter the formulas for the **Averages** of columns **B:G**
- i. Perform a **Goal Seek** for Lawrence to see what his Hardware Sales would have to be to make his Total Earnings \$15,000.⁷

⁷ The answer is \$28,200.00

- j. Set up a conditional format to highlight the high performers by making the cell fill for **Employee** names yellow if their **Total Earnings** is over \$20,000.⁸
- k. Format the worksheet so that it looks like the following:

	A	B	C	D	E	F	G
1	<i>MicroMania, Inc., Sales and Earnings Summary</i>						
2							
3	Employee	Hardware Sales	Software Sales	Hardware Commission	Software Commission	Total Commission	Total Earnings
4	Sherri	\$ 23,000.00	\$ 800.00	\$ 2,360.00	\$ 64.00	\$ 2,424.00	\$ 14,424.00
5	Mary	\$ 13,500.00	\$ 500.00	\$ 1,350.00	\$ 40.00	\$ 1,390.00	\$ 12,390.00
6	Lawrence	\$ 28,200.00	\$ 200.00	\$ 2,984.00	\$ 16.00	\$ 3,000.00	\$ 15,000.00
7	Brady	\$ 75,192.00	\$ 960.00	\$ 8,623.04	\$ 76.80	\$ 8,699.84	\$ 20,699.84
8	Monica	\$ 9,500.00	\$ 253.00	\$ 950.00	\$ 20.24	\$ 970.24	\$ 10,970.24
75	Taylor	\$ 54,779.00	\$ 256.00	\$ 6,173.48	\$ 20.48	\$ 6,193.96	\$ 18,193.96
76	Marisa	\$ 25,271.00	\$ 782.00	\$ 2,632.52	\$ 62.56	\$ 2,695.08	\$ 14,695.08
77	Sean	\$ 98,630.00	\$ 810.00	\$ 11,435.60	\$ 64.80	\$ 11,500.40	\$ 23,500.40
78	Max	\$ 62,357.00	\$ 958.00	\$ 7,082.84	\$ 76.64	\$ 7,159.48	\$ 19,159.48
79	Amy	\$ 33,883.00	\$ 974.00	\$ 3,665.96	\$ 77.92	\$ 3,743.88	\$ 15,743.88
80	Jessica	\$ 58,418.00	\$ 388.00	\$ 6,610.16	\$ 31.04	\$ 6,641.20	\$ 18,641.20
81	Totals	\$ 4,050,169.00	\$ 44,539.00	\$ 456,120.06	\$ 3,563.12	\$ 459,683.18	\$ 1,378,683.18
82	Averages	\$ 52,599.60	\$ 578.43	\$ 5,923.64	\$ 46.27	\$ 5,969.91	\$ 17,904.98

There is no **AutoFormat** style that you can use to do the formatting. So, you will have to use the buttons on the **HOME** tab and the **Format Cells** dialog box. For example:

- For columns **A** through **G**, set the width to 14 (which is 133 pixels).
- For **Row 1**, center the title across the table, and make it bold, italic, 16 pt.
- For **Row 3**, bold the cells and then use **Format Cells** and the **Alignment** tab to set **Wrap** text and center. You may need to insert a manual line break (**Alt + Enter**) for some titles so that **B3:G3** each have only one word per line.
- For **Row 3** through **Row 82**, use **Format Cells** and the **Border** tab to set the different border types. For the borders, be sure you select the cell whose border you wish to set before choosing **Format Cells**. Once you are in the **Border** tab, click the style of the line you want (single line, double line, thick line) in the **Line, Style:** box and then click where you want the line to be applied in the **Border** box, and then click **OK**. This will take some experimentation on your part, but will help you gain familiarity with these powerful formatting features.

- l. Do the following to print the worksheet:

1. Set the Print Area to **A1:G82**
2. Remove the split screen
3. Hide rows **11** through **75**.

⁸ Select **A4:A80** since that is where you want the formatting to appear. Click **Conditional Formatting, Manage Rules, New Rule, Use a formula to determine which cells to format, =G4>20000, Format, Fill**.

4. Set the worksheet to print landscape and all on one page, centered horizontally but not vertically, with a footer that contains the file name on the left and the worksheet name on the right. Do not print gridlines or row and column headings.
 5. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the worksheet, save the workbook but do not close it.
- m. Do the following to print the formulas:
1. Copy the worksheet and rename the new worksheet **Sales Formulas**.
 2. Tap **Ctrl + `** to display the formulas and **Autofit** the widths of the columns.
 3. Change the width of column A to 4 (86 pixels).
 4. Set up the **Sales Formulas** worksheet to print landscape and all on one page, centered horizontally but not vertically, with left and right margins set to 0.25 inch, with a footer that contains the file name on the left and the worksheet name on the right, and without gridlines, but **with** row and column headings. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the worksheet, save the workbook and then close it.

HW05-5 Sorting Values

Problem: How can you create summary information on home values and then display particular values based on certain conditions?

- a. Open the workbook **HW05-5 Sorting Values Original**, which is one of the files you copied at the start of the term.
- b. Save the workbook using the name **HW05-5 Lastname Firstname HWID Sorting Values Done**.
- c. Do the following:
 1. Insert two new blank columns to the left of column **A**. Now, the **Addresses** are in column **C**.
 2. In **B1**, make the fill match that of **C1**.
 3. In **B2**, type **Num** and make it bold.
- d. Number the addresses by doing the following:
 1. In **B3**, type **=ROW()** to display the row number of the cell and click the **Enter** checkbox . The number **3** is displayed.
 2. Change **B3** to **=ROW()-2**, click the **Enter** checkbox , and the number **1** is displayed. This is the first entry in the list. Later, when you sort the rows, the number **1** will remain in **B3** indicating that there is a new number **1** in the list.
 3. Fill the formula down to **B17**. You can see that there are 15 items in the list.

- e. Create a conditional format so that the data for homes whose **Lot Sizes** are greater than 1 will have a light orange fill. If you need help, follow the steps below:

1. You want to apply the formatting to all the data so select **B3:I17**
2. On the **HOME** tab, in the **Styles** group, click **Conditional Formatting** and select **Manage Rules**.

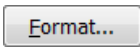
3. Click  **New Rule...**

4. Click the last bullet, **Use a formula...**

► Use a formula to determine which cells to format

Edit the Rule Description:

5. Type this into the formula box: **=F3>1** This tells Excel to see if the value in **F3** (the **Lot Size** for the first home) is greater than **1**. If it is, Excel will apply a special format; otherwise, the format will not change. Note the use of the **\$**. You need that so that Excel will always check the value in column **F** and not values in other columns.

6. Click  **Format...** and set the fill to light orange.

7. Click **OK** three times.

	A	B	C	D	E	F	G	H	I
1		Home Values							
2		Num	Address	Estimated Value	Property Tax	Lot Size (acre)	Cable TV Hookup	Small Lot with Cable	Small Lot or Cable
3		1	1457 Via Colinas	\$ 252,467	\$ 1,969.00	0.80	Yes		
4		2	1459 Via Colinas	\$ 301,582	\$ 2,352.00	1.20	Yes		
5		3	1461 Via Colinas	\$ 285,456	\$ 2,227.00	0.94	Yes		
6		4	23 Fourth Street	\$ 242,467	\$ 2,051.00	1.12	No		

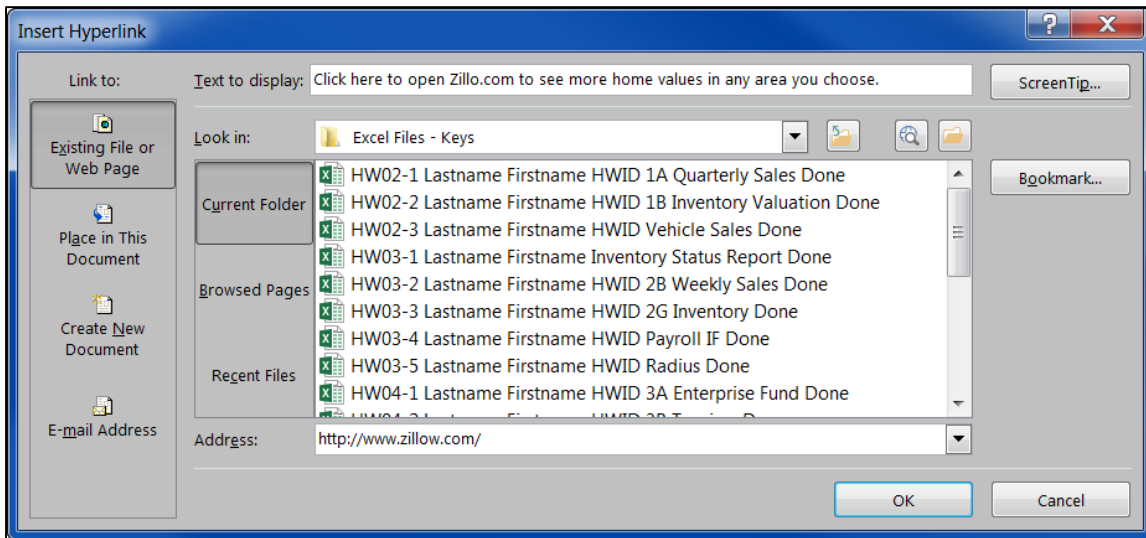
- f. Create additional summary information by doing the following:

1. In **C21**, enter a formula that will display the number of houses that have a **Cable TV Hookup**. Check the result.
2. In **C22**, enter a formula that will display the number of properties that are over one acre in size and whose **Property Taxes** is under \$2,100. Check the result.
3. In **C23**, enter a formula that will display the sum of the **Property Taxes** for lots that are over one acre. Check the result. A quick way of doing that is to click the **Property Tax** of home **2**, hold down the **Ctrl** key, and then click the **Property Taxes** of homes **4**, **9**, and **10**. Now, look in the bottom right corner of the screen, on the **Status Bar**, and you can see the **SUM** of the selected cells is \$8,724.00.

AVERAGE: \$2,181.00 COUNT: 4 SUM: \$8,724.00    - + 130%

4. In **C24**, enter a formula that will display the sum of the **Estimated Value** of the properties whose **Lot Size** is over 1 and that do not have **Cable TV Hookup**. Check the result.

5. In **C25**, type **Click here to open Zillo.com to see more home values in any area you choose**. Click the **Enter** checkbox  to keep **C25** active.
6. With **C25** still active, tap **Ctrl + k**. This is the shortcut for **Insert Hyperlink**. You can also click **Hyperlink** on the **INSERT** tab.
7. Near the bottom of the **Insert Hyperlink** dialog, in the **Address** box, type the URL for Zillo: **http://www.zillow.com/**



8. Click **OK**. The hyperlink is created and the style for the **URL** is automatically set to **Hyperlink** (underlined blue text).
9. Point to (do NOT click) **C25** to see the hyperlink.

25	Click here to open Zillo.com to see more home values in any area you choose.
26	http://www.zillow.com/ - Click once to follow. Click and hold to select this cell.
27	

10. Click **C25** and your web browser will open and take you to the web site. Just for fun, if you wish, type your home address and Zillo will show you its estimated value. Here is what you will see if you type 1600 Pennsylvania Ave NW, Washington, DC 20006 (President Obama's house, valued at \$381.7 million, helicopters not included).



11. Close the web browser.

If you want to select the cell that contains the hyperlink, point to it and hold down the left mouse button for 3 seconds. That selects the cell without activating the link.

If you want to remove the link, select the cell, tap **Ctrl + k**, and the click the **Remove Link** button.

- g. On page **SG18** you used **Boolean Operators** in searching for files that contained specific words. Those operators, **AND**, **OR**, and **NOT** can be used in **IF** functions. To see how this works, do the following:

1. Click **H3**. You want to create a formula that will determine which homes have a **small lot AND cable TV**. To do that you can use the **AND** operator inside an **IF** formula.
2. Type `=if(and(F3<1,G3="Yes"),"Yes", "")` and click the **Enter** checkbox . Here, the **AND** function requires that **both** conditions be met. That is, **F3**, the **Lot Size**, must be **less than 1** and also **G3, Cable TV Hookup**, must be **Yes**. If either is not true then the condition is not true.

Check the result. The **Lot Size** for the first home is **0.80**, which is less than 1, **AND** the **Cable TV Hookup** is **Yes** so the result should be **Yes**.

3. Fill the formula down to row **17**. Check the result for the second home. It's **Lot Size** in **1.20**, which is greater than 1, and it has **Cable**. Since one of the two conditions is not true, the entire condition is not true and so **H4** displays a blank.
4. Click **I3**. You want to create a formula that will determine which homes have a **small lot OR cable TV**. To do that you can use the **OR** operator inside an **IF** formula.

Type `=if(or(F3<1,G3="Yes"),"Yes", "")` and click the **Enter** checkbox .

Here, the **OR** function requires that **either** condition be met. That is, **F3**, the **Lot Size**, must be **less than 1** OR **G3, Cable TV Hookup**, must be **Yes**. If both are not true then the condition is not true.

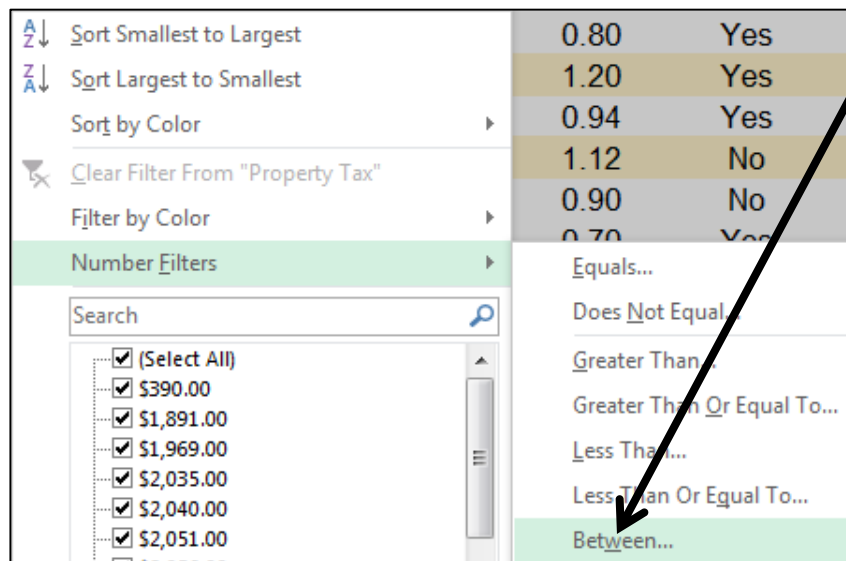
Check the result. The **Lot Size** for the first home is **0.80**, which is less than 1, and the **Cable TV Hookup** is **Yes** so the result should be **Yes**.

5. Fill the formula down to row **17**. Check the result for the second home. It's **Lot Size** in **1.20**, which is greater than 1, so it meets at least one of the conditions and so **I4** displays **Yes**.

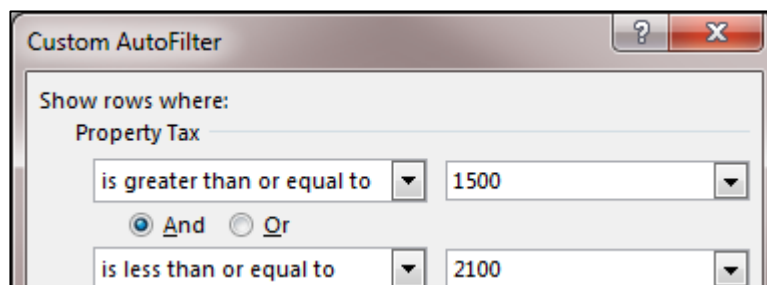
- h. Do the following to filter the data in the table so that only rows with the **Property Tax** between **1500** and **2100** are displayed:

1. Select the range **B2:I17**.
2. On the **HOME** tab, in the **Editing** group, click **Sort & Filter**, and select **Filter**. This puts little upside down triangles in row **2**.

- 3.** Click the triangle in **E2**, select **Number Filters**, and select **Between**.

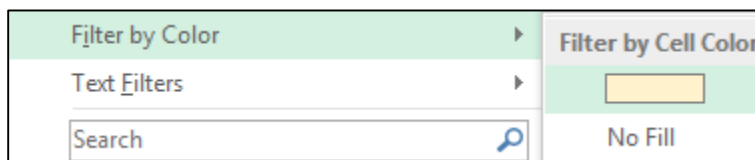


4. Enter **1500** and **2100** in the **Custom Autofilter** dialog box.



- 5. Click OK.**

- i. Add a second filter so that only rows whose **Address** has an orange fill are displayed. To do this, click the filter button in cell **C2** and select **Filter by Color** and click the orange box.



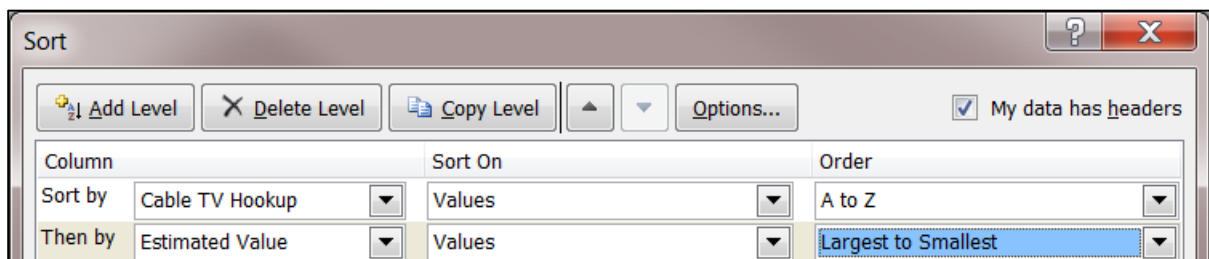
Now, the only data displayed are for those whose **Property Tax** is between 1500 and 2100 **AND** whose **Address** cell fill is orange (which corresponds to **Lot Size** is greater than 1).

	A	B	C	D	E	F	G	H	I
1		Home Values							
2								Small Lot	
6		Nu	Address	Estimated Value	Property Tax	Lot Size (acre)	Cable TV Hooku	with Cable	Small Lot or Cabl
11			4 23 Fourth Street	\$ 242,467	\$ 2,051.00	1.12	No		
20			9 3580 Lake Avenue	\$ 262,890	\$ 1,891.00	1.05	No		
21			9 = number with cable						
22			2 = number over one acre and tax under \$2,100						
23			\$8,724 = sum of taxes for lots over one acre						
24			\$768,347 = sum of values for lots over 1 acre and no cable						

- j. Set the **Print Area** to be **B1:I25**. Set up the worksheet to print **Portrait** and all on one page, centered horizontally but not vertically, with a footer that contains the file name on the left and the worksheet name on the right, and **without** gridlines, and **with** row and column headings. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the worksheet, save the workbook but do not close it.
- k. Do the following to sort the data in ascending order by **Cable TV Hookup** status and then, within that, in descending order by **Estimated Value**.
1. Copy the **Values Original** worksheet and rename the new worksheet **Values Sorted Formulas**.
 2. Remove the filters so all rows show.
 3. Select rows **2:17** (be sure to select the entire rows).
 4. On the **HOME** tab, in the **Editing** group, click **Sort & Filter**, and then select **Custom Sort**.

Be sure ☒ My data has headers is checked.

5. In the **Sort by** drop down menu, select **Cable TV Hookup** and confirm that the **Order** is **A to Z**.
6. With the **Sort** dialog box still open, click . This provides an additional level of sorting.
7. In the **Then by** section select **Estimated Value** and choose **Largest to Smallest** from the drop down menu under **Order**.



8. Click **OK**. The data are sorted by **Cable TV Hookup** with the **No's** first, and then the **Yes's**. Within the **No's**, the data are sorted by **Estimated Value** in reverse numerical order. Likewise, within the **Yes's**, the data are sorted by **Estimated Value** in reverse numerical order.

	A	B	C	D	E	F	G	H	I
1			Home Values						
2		Num	Address	Estimated Value	Property Tax	Lot Size (acre)	Cable TV Hookup	Small Lot with Cable	Small Lot or Cable
3		1	24 Fourth Street	\$ 262,990	\$ 2,430.00	1.10	No		
4		2	3580 Lake Avenue	\$ 262,890	\$ 1,891.00	1.05	No		
5		3	3578 Lake Avenue	\$ 261,578	\$ 2,149.00	0.80	No		Yes
6		4	3579 Lake Avenue	\$ 252,467	\$ 2,056.00	0.90	No		Yes
7		5	23 Fourth Street	\$ 242,467	\$ 2,051.00	1.12	No		
8		6	25 Fourth Street	\$ 50,000	\$ 2,313.00	0.95	No		Yes
9		7	3581 Lake Avenue	\$ 311,582	\$ 2,051.00	0.88	Yes	Yes	Yes
10		8	1459 Via Colinas	\$ 301,582	\$ 2,352.00	1.20	Yes		Yes
11		9	1460 Via Colinas	\$ 297,566	\$ 2,321.00	0.97	Yes	Yes	Yes
12		10	3582 Lake Avenue	\$ 296,566	\$ 390.00	0.77	Yes	Yes	Yes
13		11	1461 Via Colinas	\$ 285,456	\$ 2,227.00	0.94	Yes	Yes	Yes
14		12	21 Fourth Street	\$ 275,456	\$ 2,040.00	0.60	Yes	Yes	Yes
15		13	22 Fourth Street	\$ 263,578	\$ 1,969.00	0.82	Yes	Yes	Yes
16		14	1458 Via Colinas	\$ 260,890	\$ 2,035.00	0.70	Yes	Yes	Yes
17		15	1457 Via Colinas	\$ 252,467	\$ 1,969.00	0.80	Yes	Yes	Yes

Notice that the **Num** column is still in order. That is because rather than typing the numbers individually you used the **ROW()** function to have them keyed to the row number.

- I. Do the following to print the formulas:
1. Tap **Ctrl + `** to display the formulas and **Autofit** the widths of the columns.
 2. Change the width of columns **D:G** to **4** (66 pixels).
 3. Set up the worksheet to print landscape and all on one page, centered horizontally but not vertically, with left and right margins set to 0.25 inch, with a footer that contains the file name on the left and the worksheet name on the right, and with gridlines and row and column headings. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the worksheet, save the workbook and then close it.

HW05-6 Find and Macros

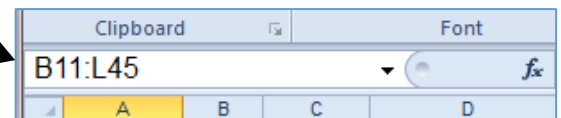
Problem: How can you download large sets of data, break up the values into meaningful pieces, and use buttons to sort data and to move about a large worksheet?

Before the start of each semester, I download from the University's database Excel files that contain my class lists. A typical file looks like this:

ID	Name	Sec	Type	UnitsTaken	Grd Basis	Acad Career	Acad Level	PrimaryProgram	Primary Plan	Email	FERPA
7023072	Bergameister,Alexandra D	1	LAB	4	A-F	UGRD	Senior	CLA	Economics	berg7023@umn.edu	Suppress
7266721	Bets,Sam A	1	LAB	4	A-F	UGRD	Senior	EHD	Kinesiology	bets7266@umn.edu	
2106779	Biff,Timothy B	1	LAB	4	A-F	UGRD	Freshman	CLA	Computer Science		

For each student, I need to place the last name and first name in separate cells so I can access each individually as I need it. In [HW03-4 Payroll IF](#) (page [SG49](#)) you did just that by using the **Flash Fill** feature in the **Data Tools** group on the **DATA** tab. That was quick and easy and is fine if you occasionally need to break up data strings. However, every semester I have to set up a gradebook for each of the 14 sections of the 3 different courses that I regularly teach so using **Flash Fill** would not be efficient. To get around this I created Excel formulas to do the separation automatically. To see how this works, do the following.

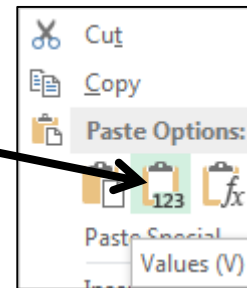
- Open the workbook [HW05-6 Find and Macros Original](#), which is one of the files you copied at the start of the term. This is a simplified version of my gradebook for CI 1871 section 1.
- Save the workbook using the name [HW05-6 Lastname Firstname HWID Find and Macros Done](#).
- Open the workbook [HW05-6 Find and Macros DATA Original](#), which is one of the files you copied at the start of the term. This is the file I downloaded from the University's database. For privacy sake, I scrambled the names, emails, and student IDs.
- Select the data in the range **B11:L45** (I do not need the FERPA data in column **M**). Here are three ways of doing the selection (your choice):
 - Click **B11** and drag down to **L45**. This is fine for small ranges but if the range crosses multiple screens the scrolling can be a pain.
 - Type **B11:L45** in the **Name Box**. Tapping **Enter** will select the range. This is fine if you know the range exactly. The files I download have between 1 and 200 rows of data so this method does not work for me.
 - Select **B11:L11**, press and hold down **Shift**, tap **End**, and then tap the **down arrow**. This selects the cells in columns **B:L** until just before the first blank row. This method is great for large files.
- Tap **Ctrl + C** to copy the selected cells.



- f. Switch to the **HW05-6 Lastname Firstname HWID Find and Macros Done** workbook, click the **Server** tab, right-click cell **B3**, and click **Paste Values**.

This will paste the data without its formatting (that is, it will preserve the formatting of the destination cell).

You will not need **HW05-6 Find and Macros DATA Original** anymore so close it.



- g. You need to put the **Last Name** and **First Name** in separate cells but in the data file they are in a single cell with this structure:

Last Name, comma, First Name, space, middle initial (if there is one).

Name
Bergameister,Alexandra D

This means that the **Last Name** consists of the characters from the start of the name until the comma. You will have Excel find the position of the comma and then display the letters to the left of that position.

The **FIND** function can be used to find the position of the comma in cell **C3**. The **FIND** function has the form:

=FIND(find text,within text)

You are looking for the comma in the cell that has the student name:

=FIND(what to look for, where to look)
 Looking for comma so use "," C3 has the name so use C3

To see how this works, do the following:

1. In **V3** type **=find(",","c3)** and click the **Enter** checkbox ☒. For **Bergameister,Alexandra D** the comma is the 13th character from the left so **13** will be displayed. That means the last name is the first 12 characters in the string.

V3				
=FIND(",","C3)				
	S	T	U	V
1	Scratch Area			
2	Email	First name	Last name	Comma
3				13

If there were no comma in **C3**, then **#VALUE!** would have been displayed.

The **MID** function can be used to display text in the **middle** of a string. The **MID** function has the form:

=MID(text,start num,num chars)

You are looking in the cell that contains the student name, starting to the right of the comma, and choosing the characters between the space and the comma.

=MID(where to look , position where to start , number of characters **)**
C3 has the name **Position of comma + 1** **Position of space - 1 - Position of comma**

The **position** of the comma is in **V3** so the position where to start is one more than that, **V3+1**.

The **number** of characters is the difference between the position of the space (in **W3**) and the position of the comma (in **V3**) minus 1, which is **W3-V3-1**.

Click **T3** and type **=mid(c3,v3+1,w3-v3-1)** and click the **Enter** checkbox ☒. This will pick off the characters in the middle of the string between the comma and the space. **Alexandra** is displayed.

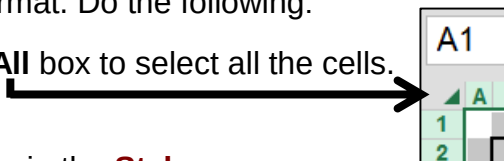
OK, whew, that was a fair amount of work but now that you know how to do it you can use the formulas and techniques to automatically break up any string of characters you wish.

- j. In cell **N3**, display the **Last name** and **First name**, separated by a comma and a space. For **Bergameister,Alexandra D** it should look like **Bergameister, Alexandra**. You can use the **&** to concatenate the **Last name**, the comma and space, and the **First name**.⁹ **Be sure to read footnotes**
- k. In cells **O3:S3** insert formulas to display the **ID**, **College (Program)**, **Year (Acad Level)**, **Major (Primary Plan)**, and **email** for each student. These will be simple reference statements. For example, to display the **ID** in **O3** you would enter **=B3** since **B3** is where the **ID** is displayed.

N	O	P	Q	R	S	T	U	V	W
Copy and paste in Sec 1 sheet at A11								Scratch Area	
Name	ID	College	Year	Major	Email	First name	Last name	Comma	Space
Bergameister, Alexandra	7023072	CLA	Senior	Economics	berg7023@umn.edu	Alexandra	Bergameister	13	23

- l. The worksheet has both raw data and formulas. It will be helpful to make their fonts different colors so you can easily distinguish them. You can do that using a conditional format. Do the following:

1. Click the **Select All** box to select all the cells.



2. On the **HOME** tab, in the **Styles** group, click **Conditional Formatting** and choose **New Rule...**
3. Click **Use a formula to determine which cells to format**.

⁹ The formula is **=U3&" "&T3**

4. Click in the box and type **=isformula(a1)** The **ISFORMULA** function is **TRUE** if the cell contains a formula (that is, its begins with an = sign).
 5. Set the format so that the font for formulas is red.
 6. Click **OK** two times. The font of the cells that contain formulas is red.
- m. Fill the formulas for **N3:W3** down to row **42** and preserve the formatting.

The rows that have no student data (**38 to 42**) have errors and zeros displayed. That is no big deal because you will not use those cells. If you want things to look nicer, you could use the **IF** function to tell Excel to display a blank for each cell that does not correspond to a student. For example, cell **N3** would be **=IF(C3="", "", U3&", "&T3)** rather than simply **=U3&", "&T3**

The error **#VALUE!** appears in **T6**. That indicates the formula cannot be calculated. The problem is that the name in cell **C6** looks like this: **Bing Jr,William Henry**. Here, a space appears to the **left** of the comma and that means in the formula **=MID(C6,V6+1,W6-V6-1)** the **W6-V6** is a negative number and the **MID** function does not know what to do with it. You could put in more formulas to take such a situation into account but it would make the worksheet much more complicated and since this seldom occurs it is easiest to simply change **Bing Jr** to **Bing**. This brings up the important point that unexpected errors can occur and so you should always eyeball your formula results to be sure things look OK. To make locating errors like this easier to find, set up a conditional format to make them stand out by doing the following:

1. Select the entire worksheet.
2. On the **HOME** tab, in the **Styles** group, click **Conditional Formatting** and choose **New Rule...**
3. Click **Use a formula to determine which cells to format**.
4. In the box, type **=iserror(a1)** The **ISERROR** function is **TRUE** if the cell contains one of these errors: **#N/A**, **#VALUE!**, **#REF!**, **#DIV/0!**, **#NUM!**, **#NAME?** or **#NULL!**
5. Format the flagged cells so they have an orange fill.
6. Click **OK** two times. The cells that contain **#VALUE!** are highlighted.

N	O	P	Q	R	S	T	U
Copy and paste in Sec 1 sheet at A11							
Name	ID	College	Year	Major	Email	First name	Last name
Bergameister, Alexandra	7023072	CLA	Senior	Economics	berg7023@umn.edu	Alexandra	Bergameister
Bets, Sam	7266721	EHD	Senior	Kinesiology	bets7266@umn.edu	Sam	Bets
Biff, Timothy	2106779	CLA	Freshman	Computer Science	0	Timothy	Biff
#VALUE!	3263672	CLA	Sophomore	Pre Business	bing3263@umn.edu	#VALUE!	Bing Jr

7. Fix the problem for **Bing Jr,William Henry** by deleting space Jr in **C6**.

N	O	P	Q	R	S	T	U
Copy and paste in Sec 1 sheet at A11							
Name	ID	College	Year	Major	Email	First name	Last name
Bergameister, Alexandra	7023072	CLA	Senior	Economics	berg7023@umn.edu	Alexandra	Bergameister
Bets, Sam	7266721	EHD	Senior	Kinesiology	bets7266@umn.edu	Sam	Bets
Biff, Timothy	2106779	CLA	Freshman	Computer Science	0	Timothy	Biff
Bing, William	3263672	CLA	Sophomore	Pre Business	bing3263@umn.edu	William	Bing

9. There is also a problem with **Tondryk,Marvin** in row **33**. Marvin has no middle name so there is no “space” for the **FIND** function to locate. Fix this by clicking **C33** and adding a space to the end of the name **Marvin**. Again, you could take care of this automatically by adding more code but it seldom occurs so do not bother. If you are interested, here is a fix:

=IF(**ISERROR(FIND(" ",C33))****,** **LEN(C33)+1****,** **FIND(" ",C33)****)**

If no space is found THEN pretend OTHERWISE show
space is at end position of space

This says if there is an error in attempting to find the space then pretend there is a space at the end of the string. Otherwise, display the location of the real space.

- n. Set up the gradebook by doing the following:
1. On the **Server** worksheet, copy **N3:U37**.
 2. Click the **Sec 1** worksheet tab, click **B11**, and use **Paste Special** to paste the values only. To save you some typing, I have already entered scores for the students so you can test the formulas you will enter that calculate the **HW**, **Tot Pts**, and **Grade**.
 3. The email for **Biff, Timothy** in **G13** is **0**. On the original data file that cell was blank but when you entered the formula **=L5** in cell **S5** on the **Server** worksheet Excel replaced the blank with a **0**. I have no idea why! Delete the **0** in **G13**.
 4. Autofit the widths of columns **B:K**.
 5. Like the **Server** worksheet, this worksheet has both raw data and formulas. As you did before, set up a conditional format that will make the font red of all cells that contain formulas.
- o. This workbook is larger than can fit on a single screen. Do the following to freeze the panes so that the column headings (row **10**) and the student names (column **B**) are always visible.
1. Click **C11**. When you apply **Freeze Panes** the rows above **11** and the columns to the left of **C** will be frozen.
 2. On the **VIEW** tab, in the **Window** group, click **Freeze Panes** and select **Freeze Panes**.

3. To see how freeze panes works, scroll horizontally and vertically until the screen looks like the one shown below. The freeze lines are indicated by the vertical line just to the right of column **B** and the horizontal line just below row **10**.

	A	B	AG	AH	AI
1	CI 1871 sec 1, 4 cr, Fall 2016, MW				
2					
3					
4					
5					
6					
7					
8					
9					
10	HWID	Name	Tot Pts	Grade	
44	134	Vang, Linda			
45	135	Yang, Bryan			
46	136				
47	137				
48	138				
49	139				
50	140				
51					

- p. In **AF11**, enter a formula that will calculate the score for homework, rounded to the nearest whole number. A student's homework score is the sum of the student's scores divided by the sum of the points possible for each homework project, and then multiplied by 100. That is,

$$\text{HW} = \frac{\text{sum of R11 through AE11}}{\text{sum of R9 through AE9}} * 100$$

Written in Excel code this is **=SUM(R11:AE11)/SUM(\$R\$9:\$AE\$9)*100**

Notice the use of the absolute references (the \$ signs) in the denominator. Those are needed so that when the formula is filled down the data in row 9 are always used in the denominator.

To round off the homework score to a whole number, use the **ROUND** function, which has the form:

=ROUND(number,num digits)

You want to round **SUM(R11:AE11)/SUM(\$R\$9:\$AE\$9)*100** to 0 digits:

=ROUND(SUM(R11:AE11)/SUM(\$R\$9:\$AE\$9)*100,0)

If a student name is blank, you want a blank displayed rather than a 0. Use an **IF** function to do that. That is, if the name in **B11** is blank, display a blank (a null string ""); otherwise, display the results of the formula.

=IF(B11="", "", ROUND(SUM(R11:AE11)/SUM(\$R\$9:\$AE\$9)*100,0))

Enter this formula into **AF11** and click the **Enter** checkbox.

- q. In **AG11**, enter a formula that will calculate the total points for each student. The total points is calculated using weightings of 25% for the Excel exam, 20% for the Word exam, 35% for the final exam, and 20% for the homework score. That is:

$$\text{Total points} = 25\% * \text{Excel exam score} + 20\% * \text{Word exam score} + 35\% * \text{Final exam score} + 20\% * \text{Homework score}$$

The weights for the exams are listed in **O5:Q5** and the weight for the homework is in **AF9**. The Excel code will use those cell references along with the cell references of the scores.

$$= \underbrace{(\$O\$5 * O11)}_{\text{Excel}} + \underbrace{(\$P\$5 * P11)}_{\text{Word}} + \underbrace{(\$Q\$5 * Q11)}_{\text{Final}} + \underbrace{(\$AF\$9 * AF11)}_{\text{Homework}} \underbrace{/ 100}_{\text{Converts to a percent}}$$

Now, add the **ROUND** and **IF** functions as you did for the homework score and type your formula in cell **AG11**.¹⁰ **Be sure to read footnotes**

- r. In **AH11**, enter a formula that will display the grade based on the total points in **AG11** and the table of points and letter grades in **U1:AE2**. Remember to use absolute references, \$, where appropriate.

Use an **IF** function to display a blank if the student name is blank.¹¹

- s. Fill the formulas in **AF11:AH11** down to row **50** and preserve the formatting.

- t. It will look nicer if the letter grades are aligned on the left. Selecting the letter grades and clicking the left align button will produce this:

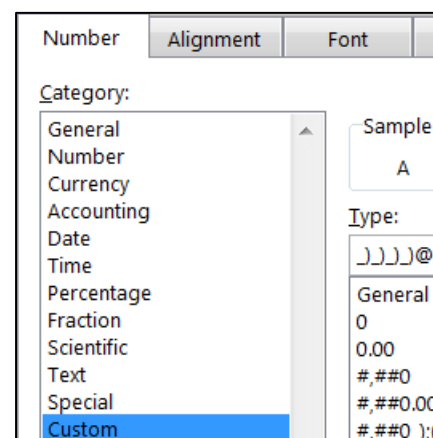
Grade
A
B+
C+

AF	AG	AH
HW	Tot Pts	Grade
100	100	A
90	86	B+
85	77	C+

It will look even better if the letter grades are aligned on the left and also appear in about the middle of the cells. Do the following:

1. Select **AH11:AH50**. Set the alignment set to left. 
2. Tap **Ctrl + 1** to open the **Format Cells** dialog.
3. On the **Number** tab, click **Custom**, and in the **Type:** box enter **_)_)_@**. The underscore right parenthesis add spaces and the @ says to treat the letter grade as text.
4. Click **OK**.

HW	Tot Pts	Grade
100	100	A
90	86	B+
85	77	C+



¹⁰ The formula is **=IF(B11="", "", ROUND((\$O\$5*O11+\$P\$5*P11+\$Q\$5*Q11+\$AF\$9*AF11)/100,0))**

¹¹ The formula is **=IF(B11="", "", HLOOKUP(AG11,\$U\$1:\$AE\$2,2))**

- u. In **AE3**, enter a formula that will display how **Total Points** is calculated. The formula should display:

$$\text{Total Points} = 25\% * \text{Excel} + 20\% * \text{Word} + 35\% * \text{Final} + 20\% * \text{Homework}$$

You could just type the above in **AE3** but if you were to change one of the percentages the formula would have to be updated. To have this done automatically, use cell references. This basically is the same as the formula in **AG11** but with words in place of some cell references and no **IF** or **ROUND**. Use the **&** to concatenate the text parts with the cell references.¹²

AG11 formula (without IF and ROUND) is

$$=(\underbrace{\$O\$5*O11}_{\text{Excel}} + \underbrace{\$P\$5*P11}_{\text{Word}} + \underbrace{\$Q\$5*Q11}_{\text{Final}} + \underbrace{\$AF\$9*AF11}_{\text{Homework}})/100$$

AE3 formula will look like

$$=\text{"Total Points = " \& } \underbrace{\$O\$5}_{\text{Excel}} \& \text{"%*Excel+" \& } \underbrace{\$P\$5}_{\text{Word}} \& \text{"%*Word+" \& and so on}$$

Type your formula and set the alignment or right .

- v. Insert an **Arc** shape that connects the formula description in **AE3** to the **Tot Pts** title in **AG10** by doing the following:

1. On the **INSERT** tab, in the **Illustrations** group, click **Shapes**, **Basic Shapes**, and select **Arc**.



2. Move the mouse pointer so that it is about in the center of **AF3**, click and sweep down and to the right. As you drag the arc will appear and move to the right. No need to position it exactly now; you will do that later.

	AF	AG	AH
Pct of Final Grade			
20			
HW	Tot Pts	Grade	

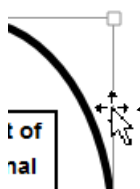
3. On the **DRAWING TOOLS FORMAT** tab, in the **Shape Styles** group, click **Shape Outline**, click **Weight**, and select **4½ pt**.

Similarly, make the color **black** and apply **Arrow Style 2**.



¹² Formula is `= "Total Points = " & $O$5 & "%*Excel + " & $P$5 & "%*Word + " & $Q$5 & "%*Final + " & $AF$9 & "%*Homework"`

4. Positioning the arrow is a bit tricky.



To change the location of the arc, point to an edge of the rectangular box that contains the arc and a **double arrow cross** will appear. Dragging this will move the entire box.

To change the width and height of the box, click the **side handles** (tiny square boxes) and drag left, right, up, or down.

To change the locations of the ends of the arc, click and drag the tiny yellow boxes at the ends of the arc.

Size and position the arc as shown (but don't waste a lot of time on it - anything reasonable will do):

AC	AD	AE	AF	AG	AH
86	90	95			
B+	A-	A			
5%*Final + 20%*Homework					
Acc: TP = 80					
Mon 28 Nov	Mon 5 Dec	Wed 7 Dec	Pct of Final Grade		
40	40	40	20		
H12	H13	H14	HW	Tot Pts	Grade
40	40	40	100	100	A
40			90	86	B+
			85	77	C+
			0	0	F
			12	2	F

- w. If a student registers for a class, and then drops, instructors are required to keep the name in the gradebook and record a grade code of either **NOL** or **W**.

NOL stands for **Not On List**. This is for students who drop before week 3 of the semester. In that case, the course will not appear on their transcript.

W stands for **Withdraw**. This is for students who drop after week two of the semester. In that case, the course will appear on their transcript with a grade of **W**.

It helps to keep track of such students by using a conditional format to gray fill the cells that contain their data. Do the following:

1. In **K14** enter **NOL** and in **K15** enter **W** so you can see if your conditional format works properly.
2. Select **A11:AH50**.
3. On the **HOME** tab, in the **Styles** group, click **Conditional Formatting**, select **New Rule**, and click **Use a formula to determine which cells to format**.
4. Enter a formula that will be true if **K11** is either **NOL** or **W**.

Since there are two conditions, use the **OR** function to make the cells have a gray fill if **either** condition is true.

If you entered `=or(k11="NOL",k11="W")` when you click **OK** to apply the conditional format, the worksheet will look like the following:

	A	B	C	D	E	F	G	H	I	J	K
1	CI 1871 sec 1, 4 cr, Fall 2016, MW 1:25 PM to 3:05 PM, Professor Robertson										
2			College	Number	Total Pts Ave		Year in school	Number	Total Pts Ave		
3			CLA				Freshman				
4			COAFES				Sophomore				
5			CSE				Junior				
6			CSOM				Senior				
7			EHD				Non-degree				
8			UC								
9											
10	HWID	Name	ID	College	Year	Major	email	First Name	Last Name	Comments	Code
11	101	Bergameister, Alexandra	7023072	CLA	Senior	Economics	berg7023@umn.edu	Alexandra	Bergameister		
12	102	Bets, Sam	7266721	EHD	Senior	Kinesiology	bets7266@umn.edu	Sam	Bets		
13	103	Biff, Timothy	2106779	CLA	Freshman	Computer Science		Timothy	Biff		
14	104	Bing, William	3263672	CLA	Sophomore	Pre Business	bing3263@umn.edu	William	Bing		NOL
15	105	Cheng, Rebecca	2172092	EHD	Freshman	Undecided	chen2172@umn.edu	Rebecca	Cheng		W

All of rows **14** and **15** should have a gray fill but here the only cells with a gray fill are **A14** and **A15**. The problem is that the condition is for column **K** but you want the entire row from **A** through **AH** to be gray. So, a **\$** is needed to the left of **K11** to ensure that Excel only checks column **K**, where the grade code is located. Go back and add the **\$** and you should see the following: ¹³

	A	B	C	D	E	F	G	H	I	J	K
1	PsTL 1571 sec 1, 4 cr, Fall 2015, MW 1:25 PM to 3:05 PM, Doug Robertson										
2			College	Number	Total Pts Ave		Year in school	Number	Total Pts Ave		
3			CLA				Freshman				
4			CSE				Sophomore				
5			CSOM				Junior				
6			EHD				Senior				
7			UC				Non-degree				
8											
9											
10	HWID	Name	ID	College	Year	Major	email	First Name	Last Name	Comments	Code
11	101	Bergameister, Alexandra	7023072	CLA	Senior	Economics	berg7023@umn.edu	Alexandra	Bergameister		
12	102	Bets, Sam	7266721	EHD	Senior	Kinesiology	bets7266@umn.edu	Sam	Bets		
13	103	Biff, Timothy	2106779	CLA	Freshman	Computer Science		Timothy	Biff		
14	104	Bing, William	3263672	CLA	Sophomore	Pre Business	bing3263@umn.edu	William	Bing		NOL
15	105	Cheng, Rebecca	2172092	EHD	Freshman	Undecided	chen2172@umn.edu	Rebecca	Cheng		W

- x. There are some operations that you have to do repeatedly within a workbook. For example, in my gradebook I sometimes need student names in alphabetical order, such as when I check registrations and submit my final grades, while other times I need the names in HWID order, such as when I insert scores from the paper grader. Since I do these two types of sorts many times throughout the semester for each of my gradebooks, I have constructed **macros** so I can do the sorts with a single mouse click. A **macro** is a small program or set of commands you can have Excel carry out with a single mouse click or keystroke. While very useful, macros have the potential to completely mess up a worksheet so it is a good idea to make a backup copy before working with macros.

¹³ The formula is `=OR($K11="NOL",$K11="W")`

To see how macros work, do the following:

1. To be safe, make a backup. To do that, save your workbook. Then, tap **F12** to open the **Save As** dialog and type a new name, such as **HW05-6 Lastname Firstname HWID Find and Macros Done BU**, and tap **Enter**. Close the backup file and reopen **HW05-6 Lastname Firstname HWID Find and Macros Done**.
2. Add a new student by typing the following data in cells **B46:I46**.

	A	B	C	D	E	F	G	H	I
46	136	Apple, Ben	1234567	CLA	Senior	Biology	appl0001@umn.edu	Ben	Apple

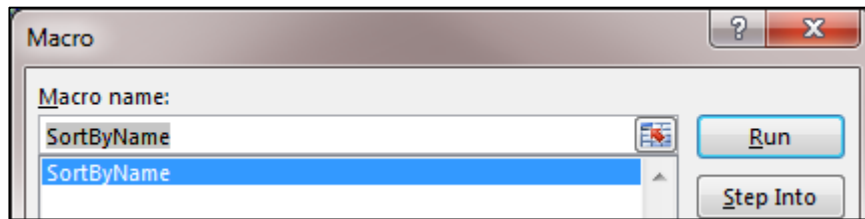
3. If the **DEVELOPER** tab is not showing, click the **FILE** tab, click **Options**, click **Customize Ribbon**, and put a check in the box next to **Developer**. Then, click **OK**.

Excel macros use a programming language called **Visual BASIC**. If you know the language you can directly write your own macros. If you do not know the language, you can ask Excel to record your keyboard and mouse actions and it will write the code for you. To see how this works, do the following:

4. Click the **DEVELOPER** tab.
5. In the **Code** group, click **Record Macro**.
6. In the **Macro name:** box, type **SortByName**. Macro names can contain only letters and numbers and must begin with a letter.
7. Click **OK**. Excel will record all of your keystrokes and mouse actions until you tell it to stop.
8. Select rows **11:50**.
9. On the **HOME** tab, in the **Editing** group, click **Sort & Filter**, and select **Custom Sort**.
10. Be sure that there is no check in **My Data has headers**. In the **Sort by** box, select **Column B** and be sure **A to Z** is selected.
11. Click **OK**.
12. Tap **Ctrl + Home**.
13. Click the **DEVELOPER** tab and click **Stop Recording**. You should see **136 Apple, Ben** at the top of the list.

	HWID	Name	ID	College	Year	Major
11	136	Apple, Ben	1234567	CLA	Senior	Biology
12	101	Bergameister, Alexandra	7023072	CLA	Senior	Economics
13	102	Bets, Sam	7266721	EHD	Senior	Kinesiology

14. On the **DEVELOPER** tab, in the **Code** group, and click **Macros**.



The new macro is listed. To see what the code looks like, click **Edit**.

```
Sub SortByName()  
'  
' SortByName Macro  
'  
'  
Rows("11:50").Select  
ActiveWorkbook.Worksheets("Sec 1").Sort.SortFields.Clear  
ActiveWorkbook.Worksheets("Sec 1").Sort.SortFields.Add Key:=Range("B11:B50") _  
    , SortOn:=xlSortOnValues, Order:=xlAscending, DataOption:=xlSortNormal  
With ActiveWorkbook.Worksheets("Sec 1").Sort  
    .SetRange Range("A11:CN50")  
    .Header = xlGuess  
    .MatchCase = False  
    .Orientation = xlTopToBottom  
    .SortMethod = xlPinYin  
    .Apply  
End With  
Range("C11").Select  
End Sub
```

Sub at the top and **End Sub** at the bottom indicate that this is what programmers call a **subroutine**, which is a mini-program within a larger one. The apostrophes indicate comment lines where you can write any comments you wish. The rest of the lines are the executable code.

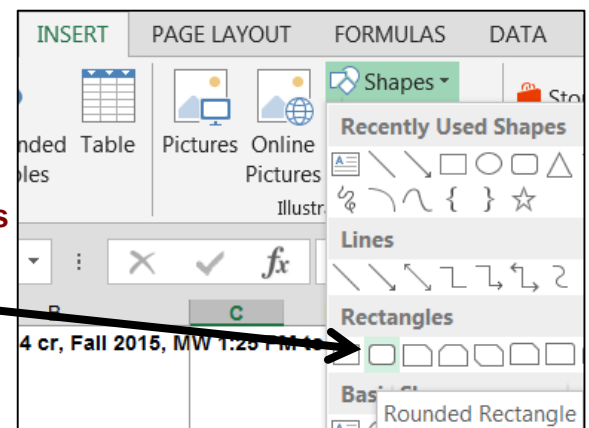
15. Tap **Alt+Q** to close the **Visual Basic** window.

- y. Follow a similar procedure to create a macro called **SortByHWID** that sorts the data by the **HWID** in column **A**.
- z. To create buttons that you can click to run the macros, do the following:
1. On the **INSERT** tab, in the **Illustrations** group, click **Shapes** and click **Rounded Rectangle**.

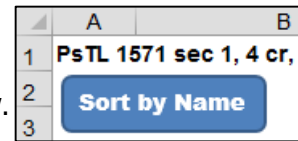
The cursor will turn into a small cross.

2. Drag the cross down and to the right to form the rectangle.

3. Let up the mouse button to reveal the rectangle.

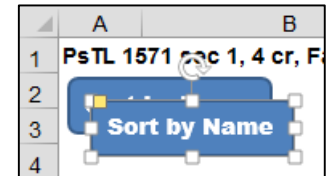


4. Make the height of the rectangle **0.4** and the width **1.5**.
5. Right-click the rectangle, select **Edit text**, and type **Sort By Name**. Make the font 12 pt **Arial Black**.
6. Move the rectangle to the upper left corner of the window.
7. Right-click the rectangle and click **Assign Macro...**



8. Click **SortByName** and then **OK**. Now, you have a button that will run the macro with a single mouse click.

9. Select the button by holding down the **Ctrl** key and clicking the button.

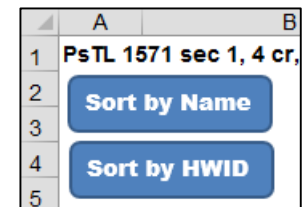


10. Tap **Ctrl + D** to create a duplicate of the button.

11. Change the name to **Sort By HWID**.

12. Assign the **SortByHWID** macro to this button.

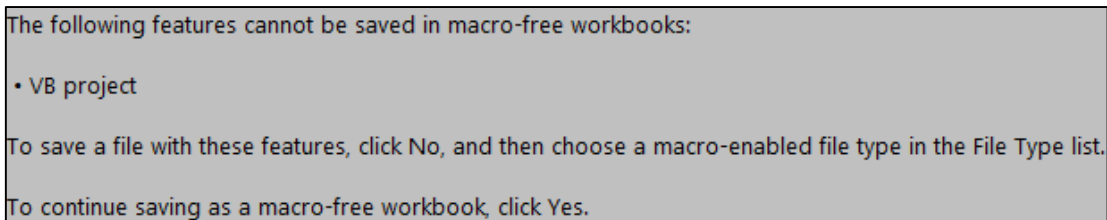
13. **Ctrl + Click** the new button and move it so that it is just below the other one.



14. Click the **Sort By Name** button and notice how the data are sorted by **Name** with **136 Ben Apple** at the top

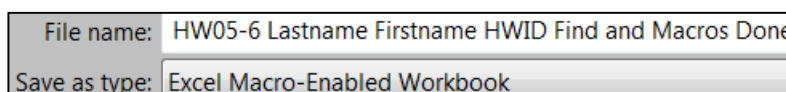
15. Click the **Sort By HWID** button and notice how the data are sorted by **HWID** with **101 Bergameister, Alexandra** at the top.

16. Tap **Ctrl + s** to save the file. You will get an error message that says:



This says that you cannot save a file that has macros (**Visual Basic** subroutines) unless you save it as a macro-enabled file. If you click **Yes** the file will be saved without the macros. **DON'T DO THAT!**

17. Click **No** and the **Save As** dialog will open.
18. Click **Computer** and then click **Current Folder**.
19. Change the file type to **Excel Macro-Enabled Workbook**.

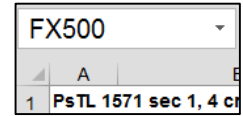


20. Click **Save**. Now when you save your file the macros will be saved also. If you look at the icon next to the file name you will see it has changed from



to (there is now a little white scroll in the lower right corner).

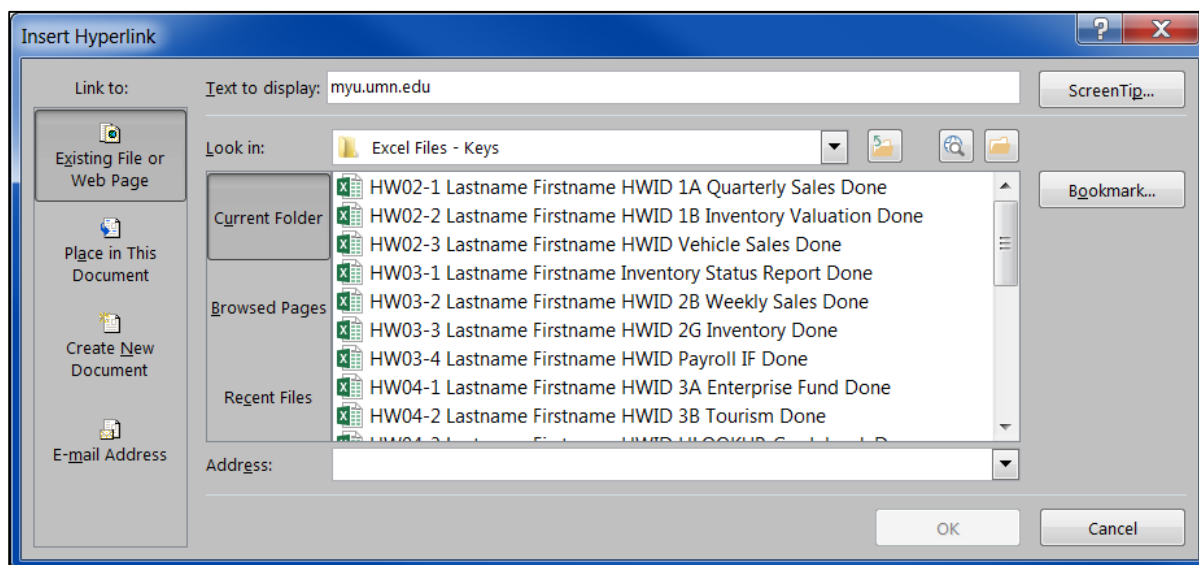
- a. Macros can be used to move to specific places in a worksheet with the click of a button. This is useful for large worksheets where scrolling would be time consuming. To see how this works, do the following:
1. On the **DEVELOPER** tab, in the **Code** group, click **Record Macro**.
 2. In the **Macro name:** box, type **Grades** and then click **OK**.
 3. In the **Name Box**, type **fx500** and tap **Enter**. This will move the active cell to a place far away from the cell I want to go to. This is needed because if the active cell is close to the cell I want to go to Excel may not adjust the screen properly.
 4. In the name box, type **af1** and tap **Enter**. This is where I want to be.
 5. Click the **DEVELOPER** tab and click **Stop Recording**.
 6. Create a button with the label **Grades** and assign this new macro to it. Move the button so it is just below the **Sort By HWID** button.
 7. Try your new macro by tapping **Ctrl + Home** to make **C11** active and then click the new button to make **AF1** active.



 A screenshot of an Excel worksheet. The Name Box at the top left shows 'AF1'. The worksheet has columns A through AH and rows 1 through 12. In cell A1, there is text: 'PsTL 1571 sec 1, 4 cr, Fall 2015, M'. In cell B2, there is a blue button labeled 'Sort by Name'. In cell B4, there is a blue button labeled 'Sort by HWID'. In cell AF6, there is a small table with the text 'Pct of Final Grade' and the value '20'. A curved arrow points from this table to the main data table. The main data table starts at row 10 and has columns HWID, Name, HW, Tot Pts, and Grade.

HWID	Name	HW	Tot Pts	Grade
101	Bergameister, Alexandra	100	100	A
102	Bets, Sam	90	86	B+

- b. As a reminder for where to get class lists and enter final grades, insert a hyperlink to the U's PeopleSoft program by doing the following:
1. In **A8** type **Get class lists & enter grades at**
 2. In **A9** type **myu.umn.edu** and click the **Enter** checkbox ☒ to keep **A9** active.
 3. Tap **Ctrl + k**. This is the shortcut for inserting a hyperlink. You can also click **Hyperlink** on the **INSERT** tab.



The top box shows the text that will be displayed, **myu.umn.edu**. Leave that as is so if someone is reading a printed copy she will be able to see what **URL** to type to get to the web page.

4. Type the **URL** in the **Address** box at the bottom: **https://myu.umn.edu**

5. Click **OK**. The hyperlink is created and the style for the **URL** is automatically set to **Hyperlink** (underlined blue text).

8	Get class lists & enter grades at
9	myu.umn.edu
10	HWID Name

6. Click the hyperlink and your web browser will take you to the **myu** web site.

7. Close the web browser.

If you want to select the cell that contains the hyperlink, point to it and hold down the left mouse button for 3 seconds. That selects the cell without activating the link.

If you want to remove the link, select the cell, tap **Ctrl + k**, and then click the **Remove Link** button.

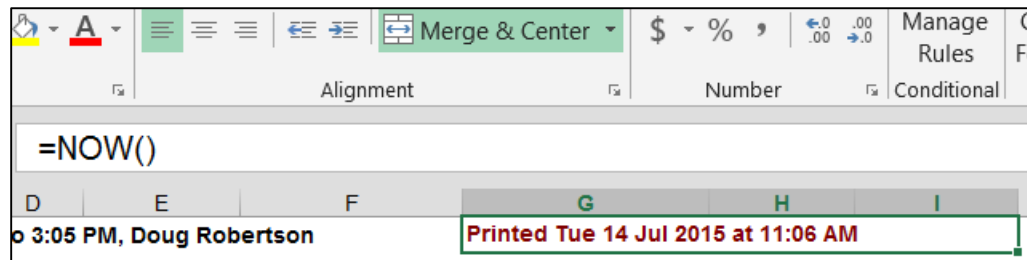
c. Enter formulas that summarize the total points for students in different colleges and at different academic levels. Do the following:

1. In **D4**, enter a formula that will display the number of **CLA** students in the gradebook. Since you want the **NUMBER** of students who meet a certain criteria, **COUNTIF** would be a good choice. ¹⁴
2. In **E4**, enter a formula that will display the average total points of **CLA** students in the gradebook. Since you want an **AVERAGE** of students who meet a certain criteria, **AVERAGEIF** would be a good choice. ¹⁵

¹⁴ The formula is **=COUNTIF(\$D\$11:\$D\$50,C4)**

¹⁵ The formula is **=AVERAGEIF(\$D\$11:\$D\$50,C4,\$AG\$11:\$AG\$50)**

3. In **H4**, enter a formula that will display the number of **Freshmen** in the gradebook.
 4. In **I4** (that is eye four not 14), enter a formula that will display the average total points of **Freshmen** in the gradebook.
 5. Fill down the formulas in **D4:E4** and **H4:I4** and preserve the formatting.
- d. In **G1**, use the **NOW** function to enter the current date and time. Then, format the cell so it displays something like **Printed Tue 14 Jul 2015 at 11:06 AM**. Merge **G1:I1** and right align.



- e. Set the print area of the **Sec 1** worksheet so that the range **A1:AH15** will be printed (select **A1:H15**, click **PAGE LAYOUT**, **Print Area**, **Set Print Area**).
- f. Hide columns **C:F** (select the columns, right click, select **Hide**). Also hide columns **L:AC**.
- g. Tap **Ctrl + F2** and set the worksheet to print in portrait and all on one page, centered horizontally but not vertically, with a footer that contains the file name on the left and the worksheet name on the right, and **without** gridlines but **with** row and column headings. Compare the preview with the key. Make needed corrections, print the worksheet, save the workbook but do **NOT** close it.
- h. Click the **Server** worksheet. Tap **Ctrl + `** to display the formulas. Set the print area to **T1:W8**.
- h. Tap **Ctrl + F2** and set the worksheet to print in portrait and all on one page, centered horizontally but not vertically, with a footer that contains the file name on the left and the worksheet name on the right, and **without** gridlines but **with** row and column headings. Compare the preview with the key. Make needed corrections, print the worksheet, save the workbook, and close it.

Step 4 Submit You now are ready to submit your homework for grading.

1. Put your 10 homework papers in the following order:
 - HW05-1 River Chart Modified
 - HW05-2 Loans IF Formulas
 - HW05-3 Rent IF
 - HW05-3 Rent IF Formulas
 - HW05-4 Commission IF
 - HW05-4 Commission IF Formulas
 - HW05-5 Sorting Values
 - HW05-5 Sorting Values Formulas
 - HW05-6 Find and Macros Sec 1 Worksheet
 - HW05-6 Find and Macros Server Worksheet
2. Cut out Submission Form 5 and put it on the top of the papers.
3. Staple the papers in the upper left corner.
4. Turn in the packet by the due date.

Step 5 Backup Now would be a good time to backup your files.

Project 6

Sample Exam Questions for Excel

Step 1 Read For this project, there are no pages to read in your textbook.

Step 2 Activities Go back through projects 1 through 5 and be sure you know how to do the activities in both the textbook and this Study Guide. Then, do the following sample exam questions.

Step 3 Homework Do the problems listed below, and turn them in for grading. *You do NOT have to print in color.*

HW06-1 Sample Exam Questions for Excel

Problem: How can you do well on the Excel exam?

These sample questions will give you a place to start in your studying but they **do not** constitute a “practice” exam so you will also need to study the activities in your textbook as well as those in this Study Guide in order to be fully prepared for the exam. I may ask questions on material that was covered in the textbook and Study Guide that are NOT specifically covered here.

When I grade your exam, I will look at your formulas rather than the displayed results. So, if you cannot get something to work **DO NOT waste time** trying to figure out the answer by hand and typing in the result. You will get no points for that.

As you work through the questions, remember that as you start typing a function Excel will display a screen tip that will show the structure of the function. So, for example, typing **=vlookup(** will display the following:

	A	B	C	D	E
1	=vlookup(				
2	VLOOKUP(lookup_value, table_array, col_index_num, [range_lookup])				

The screen tips should help jog your memory. Here, it shows that you must enter:

- the **lookup_value** (the cell reference of the thing you are looking for, e.g. **A4**)
- the **table_array** (the range of cells where you are looking, e.g., **C5:D12**)
- the **col_index_num** (the number of the column in the **table_array** that contains the thing you want to display, e.g., **2**)
- the **[range_lookup]** is **TRUE** if the **table_array** is sorted low to high and you want only an approximate match, or **FALSE** if you must have an exact match

Below are some tips on the seven functions students find most difficult:

=VLOOKUP(what to find, where to look, what column to display, TRUE or FALSE)

Used to find an item in a vertical list and then to display something in the same row. See **SG64**.

=HLOOKUP(what to find, where to look, what column to display, TRUE or FALSE)

Used to find an item in a horizontal list and then to display something in the same column. See **SG59**.

=IF(logical test, display if true, display if false)

Used to choose between two things based on a **logical test**. See **SG50**.

=COUNTIF(where to look, "what to look for")

Used to find the **number** of things that match the "what to look for" criteria. Criteria goes inside quotes. See **SG51**.

=SUMIF(where to look, what to look for, which cells to sum up)

Used to find a **total** of things that match the "what to look for" criteria. Criteria goes inside quotes. See **SG45**.

=AVERAGEIF(where to look, what to look for, which cells to average)

This is just like **SUMIF** but it calculates the average of things that match the "what to look for" criteria. Criteria goes inside quotes. See **SG45**.

Conditional format

Used to highlight values that match a specific criteria. Select the range you want to format BEFORE you open the conditional formatting dialog. Then, choose **Conditional Formatting, Manage Rules, New Rule**, Type the condition that describes what you want to find and then choose a format. See **SG53**.

Projects HW03-4 and HW04-4 have many of the above features so going through those two projects again will be very good preparation for the Excel exam.

Do the following:

- a. Open the workbook **HW06-1a Excel Practice Questions Original**, which is one of the files you copied at the start of the term.
- b. Save the workbook to your **Excel Files** folder using the name **HW06-1 Lastname Firstname HWID Excel Practice Questions Done**.
- c. Click the **Sales Data** worksheet tab to make it active and do the following:
 1. Insert the following data in between the rows for **Braasch** and **Good**:

7	Clover, May	Sales	5584
8	Day, Dennis	Marketing	6588

2. In **C17**, insert a formula that will find the total of the values in **C4:C15**.¹⁶

This formula and all the others you construct must work if the data change. In other words, you cannot simply figure out the sum on your calculator and then type in the answer.

3. In **C18**, insert a formula that finds the average of the values in **C4:C15**.¹⁷
4. In **D4**, enter a formula that will calculate the commission for Adams. If his total sales are below \$5,000, the commission is \$9,000 plus 8% of his total sales. Otherwise, the commission is \$9,400 plus 12% of the total sales that are above \$5,000. Fill the formula down to **D15**.¹⁸
5. In **E4**, enter a formula that will calculate the percent of **Total Sales** for Adams. This is the value in **C4** divided by the total in **C17** and then multiplied by 100.¹⁹ Fill the formula down to **E15**.
6. Format **C4:D20** as currency with two decimal places and the dollar sign showing. Use currency style, not accounting style.
7. Format **E4:E15** so that two decimal places are shown.
8. In **F4**, display the word **Great** if Kathy's **Total Sales** in **C4** are over \$8,000, **Good**, if **C4** is between \$6,000 and \$8,000, and **Poor** if **C4** is \$6,000 or less.²⁰ Fill the formula down to **F15**.
9. In **D20**, enter a formula that will display the sum of the **Total Sales** for people whose **Commissions** are over \$9,800.²¹
10. In **D22**, enter a formula that will display the number of commissions that are over \$9,600 for people in the **Marketing Department**.²²
11. Create a conditional format so that the names of the people in the **Marketing Department** whose commissions are over \$9,600 have a yellow fill.²³
12. In **E1**, enter a formula that will display **Printed on ddd d mmm yyyy** where **ddd** is the day, **d** is the date, **mmm** is the month, and **yyyy** is the year. The date should update automatically.²⁴ Remember, the **DATE** function does **NOT** display the date!
13. In **G4**, enter a formula that will locate the position of the **comma** in Adam's name.²⁵
14. In **H4**, enter a formula that will display last name of the person whose name is in **A4**.²⁶

¹⁶ =SUM(C4:C15)

¹⁷ =AVERAGE(C4:C15)

¹⁸ =IF(C4<5000,9000+8%*C4,9400+12%*(C4-5000))

¹⁹ =C4/\$C\$17*100 Note use of \$ to make an absolute reference.

²⁰ =IF(C4<=6000,"Poor",IF(C4<8000,"Good","Great"))

²¹ =SUMIF(D4:D15,">9800",C4:C15)

²² =COUNTIFS(D4:D15,">9600",B4:B15,"Marketing")

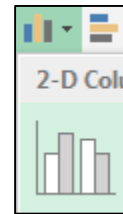
²³ Select **A4:A15**, condition is =AND(B4="Marketing",D4>9600)

²⁴ =NOW() Then set a custom format to "Printed on "ddd d mmm yyyy"

²⁵ =FIND(", ",A4)

²⁶ =LEFT(A4,G4-1)

15. Fill the formulas in **G4:H4** down to row **15**.
 16. Change the value in **C4** so that Adam's **% of Total Sales** is exactly **25.00**. The answer should be **24370.6624489115**.²⁷
 17. Change the widths of all the columns to **10** (97 pixels).
 18. Merge **E1:F1** and right align it.
 19. Center and wrap the text in **D19** and **D21**.
 20. Copy the **Sales Data** worksheet and name the new worksheet **Sales Formulas**. Tap **Ctrl + `** to display the formulas. **Autofit** the widths of the columns.
 21. Set up the **Sales Formulas** worksheet to print landscape and all on one page, centered horizontally but not vertically and with 0.25 inch left and right margins, with a footer that contains the file name on the left and the worksheet name on the right, with gridlines and row and column headings showing. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the **Sales Formulas** worksheet, save the workbook but do not close it.
- d. Create a **chart** of the data on the **Sales Data** worksheet.
1. Create a clustered column chart of the data in **C4:C15**.
 2. Place the chart on a new chartsheet called **Column Chart**.²⁸
 3. Use the data in **A4:A15** for the horizontal axis.
 4. Type your name as the **Chart Title**.
 5. Type **People** for the **Horizontal Axis Title**.
 6. Type **Total Sales** for the **Vertical Axis Title**.
 7. Display the **Data Labels** and make their font Arial Black and red.
 8. Do not show the **Legend**.
 9. Insert a picture in the upper right corner of the chart. Any image will do. Resize it so it is 1" high and 2" wide.²⁹
 10. Add a **callout** with the text **High Achiever** to highlight the highest sales (**Adams**). Make the font 18 pt Arial Black and the color yellow.
 11. Change the background of the chart to a picture (any picture is fine). Set the transparency to 70% and if necessary change the **Plot Area** so that it has no background (so the picture can be seen).
 12. Set up the **Column Chart** chartsheet to print landscape with a footer that contains the file name on the left and the worksheet name on the right. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the chartsheet, save the workbook but do not close it.



²⁷ Use **Data** tab, **What-If**, **Goal Seek** to get the exact value.

²⁸ Do NOT copy and paste the chart. Use **CHART TOOLS DESIGN**, **Location**, **Move Chart**.

²⁹ You will have to uncheck **Lock aspect ratio** in order to change each dimension separately.

- e. Click the **Bonus Data** worksheet.
1. Click **A1** and make the text bold and red, center the text across columns **A:G**, and make the fill light blue.
 2. Enter a formula in **C4** that will display the bonus for the sales value in **B4**. Use the data table in **B10:G12**.³⁰ Fill the formula down to **C8** and preserve the formatting.
 3. Sort the rows of data by **Bonus** in decreasing order.³¹
 4. For **A4:A8**, create a conditional format that will make the text bold red and the background of the cell light green if the bonus for a person is \$800 or more.³²
 5. For **A4:C8**, create a second conditional format that will make the cell fill yellow if the bonus for a person is under \$600.³³
 6. In **A2**, display this message: **Highest Bonus Awarded was \$x,xxx.00**, where **xxx** is the largest value in **C4:C8**.³⁴
 7. Create a **Column Sparkline** in **C9** that references **C4:C8**. Make the color orange.
 8. Copy the **Bonus Data** worksheet and name the new worksheet **Bonus Data Two**.
 9. In the **Bonus Data Two** worksheet, freeze the panes so that rows **1, 2**, and **3** and column **A** are always on the screen.³⁵
 10. Hide rows **5** and **6**.
 11. Set the zoom to 200%.
 12. Set up the **Bonus Data Two** worksheet to print landscape and all on one page, centered horizontally but not vertically, with a footer that contains the file name on the left and the worksheet name on the right, with gridlines and row and column headings showing. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the **Bonus Data Two** worksheet, save the workbook but do not close it.
- f. Make the **Sort Data** tab active and do the following:
1. Delete **Row 8** (it has red text). Don't just delete the data but delete the entire row so the rows below **8** move up.
 2. Delete **Column C** (it has blue text). Don't just delete the data but delete the entire column so the columns to the right of **C** move left..
 3. Sort the data by **Class** in ascending order (A to Z) and, within **Class** by **Trend** in descending order (Largest to Smallest).

³⁰ The formula is =HLOOKUP(B4,\$B\$10:\$G\$12,3)

³¹ Be sure you select all the data in each row and not just the data in column **C**.

³² Be sure to select A4:A8 before opening Conditional formatting. Rule is =C4>=800

³³ =C4<600 Note use of \$ to make the column in **C4** an absolute reference.

³⁴ ="Highest Bonus Awarded was "&TEXT(MAX(C4:C8),"\$,###.00") Or, enter =MAX(C4:C8) and enter this custom format: "Highest Bonus Awarded was "\$,###.00

³⁵ Be sure to click in cell **B4** before going to **View, Freeze Panes** so everything **above row 4** and to the **left of column B** will be frozen on the screen.

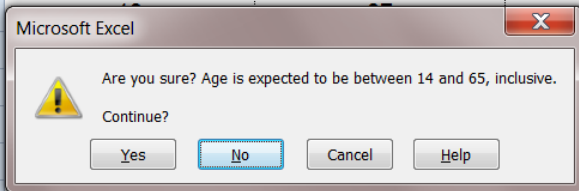
4. Filter the data in **A1:D33** so that only rows with **Class** to **C** or **T** are showing.

	A	B	C	D
1	Level	Trend	Width	Class
5	1	9	7	C
6	5	5	85	C
7	2	3	111	C
8	2	3	111	C
22	5	5	7	T
23	5	5	7	T
24	1	4	114	T
25	2	3	111	T

- g. Click the **Births Data** worksheet tab.

- Split the screen just below row **9** and then scroll the bottom half of the screen down so you can see row **50**.
- Set up **Data Validation** for **A2:A8**. The ages should be whole numbers between 14 and 65, inclusive. If an error occurs, have a **Warning** message display the text **Are you sure? Age is expected to be between 14 and 65, inclusive.**

	A	B	C
1	Age of Mother	Births/Thousand	Fertility Index
2	1	34	100
3			96
4			90
5			84
6			78
7			70



- Create an **XY Scatter** plot of the births data in columns **A** and **B**. Do not connect the points by a smooth line (that is, use display markers only)
- Move the chart to its own chartsheet called **Births Chart**.
- Chart Title: **Live Births Per Thousand Women vs. Age**
- Horizontal Axis title: **Age (years)**
- Vertical Axis Title: **Live Births Per Thousand Women**
- Show the Major and Minor gridlines for both axes.
- Make the data points square, green, and 8 point width. ³⁶
- Add a **Trendline** that is a degree 4 polynomial. Make the line solid (Dash type) red and 3 pt width. Display the equation and move it so it is just below the title. Make its font 12 pt Arial Black
- Make the color of the background (**Chart** and **Plot** areas) light gray.
- Make the x- and y-axes 4 point width and dark blue.

³⁶ Format Data Series, **MARKER OPTIONS**, **Build-in**, **Type**.

13. Make the major gridlines 2 point width and color Gray 25%.
14. Scale the horizontal axis so that it starts at 12 and ends at 44 and make the interval between major grid lines 4.
15. Add a second set of data markers using **Age** for the horizontal (X) axis and **Fertility Index** for the vertical axis (Y). Use **Fertility Index** for the **Series name**.³⁷
16. Set up the **Births Chart** chartsheet to print landscape and all on one page, centered horizontally but not vertically, with a footer that contains the file name on the left and the worksheet name on the right. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the chartsheet, save the workbook but do not close it.

h. In algebra, the **Quadratic Formula** finds the solutions to any quadratic equation

of the form $ax^2 + bx + c = 0$. The formula is $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$.

1. Insert a new worksheet, change the name to **Quadratic**, and make the tab color orange.
2. Select the entire worksheet and make the font 16 pt Arial Black.
3. In **A1**, type the quadratic equation. Make the font 16 pt Arial Black. Use superscript in the **Font Settings** to make the exponent.
4. Go to http://en.wikipedia.org/wiki/Quadratic_equation
5. Use the **Snipping Tool** to copy the image of the formula and paste it just below the equation.
6. In **A5**, type the letter **a**, in **A6** type **b**, in **A7** type **c**, in **A8** type **x1** and in **A9** type **x2**. In **A8** and **A9** make the numbers subscripts. Center **A5:B9**.
7. In **B5** enter a formula that displays the value in **A5** of the **Sort Data** worksheet.³⁸
8. In **B6** enter 5.
9. In **B7** enter 6.
11. Enter in cell **B8** the quadratic formula for the positive root (use the + sign in front of the square root). This is a complicated formula so be careful with your use of parentheses.³⁹

5	a
6	b
7	c
8	x₁
9	x₂

³⁷ **CHART TOOLS DESIGN, Data, Select Data, Add**

³⁸ **= 'Sort Data'!A5**

³⁹ **=(-B6+SQRT(B6^2-4*B5*B7))/(2*B5)**

12. In **B9**, enter the quadratic formula for the negative root (use the - sign in front of the square root).

	A	B
1	$ax^2 + bx + c = 0$	
2	$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$	
3		
4		
5	a	1
6	b	5
7	c	6
8	x_1	-2
9	x_2	-3

The results will be the roots of **$x^2 + 5x + 6 = 0$** , which are -2 and -3.

13. Tap **Ctrl + `** to display the formulas. **Autofit** the widths of the columns.
14. Set up the worksheet to print landscape and all on one page, centered horizontally but not vertically, with a footer that contains the file name on the left and the worksheet name on the right, with gridlines and row and column headings showing. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the worksheet, save the workbook but do not close it.

- i. Arrange the sheet tabs alphabetically left to right.

Births Chart	Births Data	Bonus Data	Bonus Data Two	Column Chart	Quadratic	Sales Data	Sales Formula	Sort Data

Step 4 Submit You now are ready to submit your homework for grading.

1. Put your 5 homework papers in the following order:

HW06-1 Sales Formulas
HW06-1 Column Chart
HW06-1 Bonus Data Two
HW06-1 Births Chart
HW06-1 Quadratic

2. Cut out Submission Form 6 and put it on the top of the papers..
3. Staple the papers in the upper left corner.
4. Turn in the packet by the due date.

The Excel file key for this project is **HW06-1b Excel Practice Questions Original**. Take a look if you would like to see the actual formulas.

Be sure to go through this project several times as a part of your preparation for the Excel exam and the final exam.

Information on the Excel Exam

The first exam will cover only Excel.

Date: Check your syllabus for the exact date and time.

Length: 90 minutes

Notes: The exams will be closed book and notes but you may use one 8.5 inch by 11 inch sheet (both sides) of notes (typed, hand written, scanned, whatever). Your note sheet will be collected when you hand in the exam.

The Excel exam is a timed test. You must complete the exam in one and a half hours.

Since you will only have one and a half hours for the exam you must practice a lot so that you can do the computer operations quickly and efficiently from memory. If you do not have your own computer, to get extra practice time go to one of the campus labs, such as 103 Walter Library. See the following for public lab locations:

<http://www.oit.umn.edu/computerlabs/>

When you enter the classroom for the exam you will be asked to sit at a computer that has your name on it. You will use a special exam partition on the computer. The files you will need will be in a folder in that partition. You will be given a packet of questions. You will not do any printing; I will grade the files you save in the exam partition.

Ground Rules for Taking the Exam

The exam begins and ends at specific times. So, for example, if you show up 15 minutes late you will have 15 minutes less time to work on it. It is a good idea to plan on getting to class 15 minutes early on exam day as a cushion in case you are delayed for some reason.

Before you enter the exam room, plug your parking meter, go to the bathroom, sharpen your pencil, turn off your cell phone, and take out a pen or pencil and your **U of M student photo ID**.

After you enter the exam room

- Sit at the computer with your name on it.
- Log in using the **User Name** and **Password** written on the board.
- Place your **U of M student photo ID** on system unit. For security reasons, you will not be allowed to take the exam without your student photo ID.
- Place all your papers, notes, books, cell phone, CD player, headphones, bottled water, etc. in your pack and zip it up. Place your pack under the table. You will not be allowed to get anything from your pack during the exam.

- On exam day, you may not use a classroom computer to do activities other than take the exam. If you need to check your email or print something you will have to do it at another location. Internet and printing access will be disabled.

The exam starts when I begin to hand out the exam papers.

- You may not leave your seat or the room until you hand in your exam.
- You may not ask questions, unless you think your computer is defective.
- You may not talk to anyone, get help from anyone, look at anybody else's work, use any notes, use your textbook or Study Guide, etc.
- You may not get anything out of your pack, purse, pockets, or anywhere else.
- You may not use a cell phone or headphones or listen to CDs, tapes, radio, etc.
- When you finish the exam, raise your hand and I will come to you to pick it up. Then, pick up your pack and leave the room quietly.

Do NOT log off the computer or your work may be lost and you will end up with a 0 for the exam.

- When I say to stop working you must stop immediately and wait for your paper to be picked up. Failure to do so may result in your getting a score of 0 for the exam.

Project 7

Word Chapter 1: Creating Documents

Step 1 Read Before turning on the computer, read the introductory material on pages 121-122.

Step 2 Activities Turn on the computer and open your textbook to page 123. Do all the steps of all the activities for this Chapter.

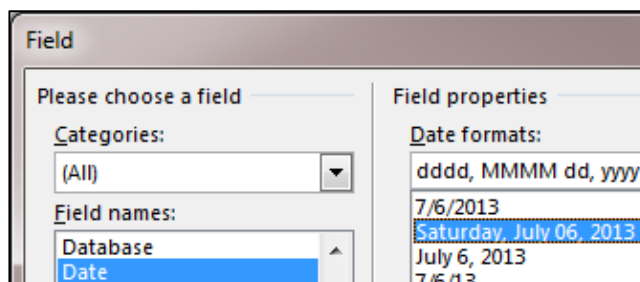
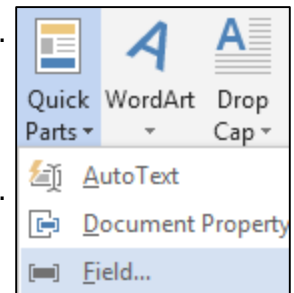
On page 155, step 2 if typing "Go 2013 1B Video" produces no hits, type something else and insert one of the videos listed.

Step 3 Homework After you have completed the activities for this Chapter, return to this Study Guide, do the problems listed below, and turn them in for grading. *You do NOT have to print in color.*

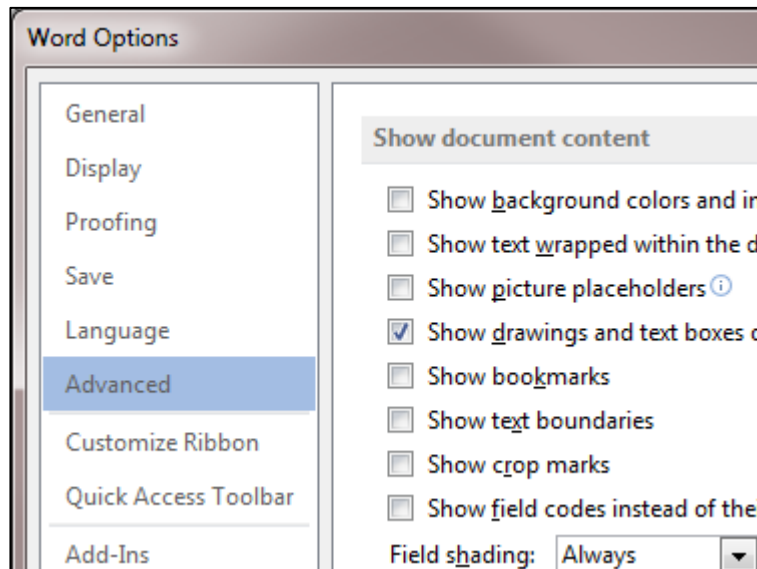
HW07-1 Flyer

Problem: How can you create a flyer to advertise an upcoming event?

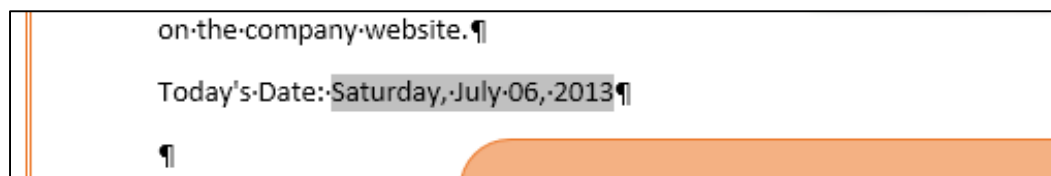
- a. Open the document **Lastname_Firstname_1A_Flyer**, which you created while following the directions in the textbook and saved on page 137.
- b. Save the document in the **Word Files** folder using the name **HW07-1 Lastname Firstname HWID Flyer Done**.
- c. In this lesson you learned how to insert a **field code** that displayed the name of the file in the footer. This is a bit different from Excel but the result is the same. Insert a few more field codes by doing the following:
 1. Tap **Ctrl + End** to place the cursor at the bottom of the document.
 2. Tap **Enter** and type **Today's Date:** and then a space.
 3. On the **INSERT** tab, in the **Text** group, click **Quick Parts** and select **Field**.
 4. In the **Field** names group, scroll down and click **Date**.
 5. In the **Date formats** group, select the format that has day, date, and year.



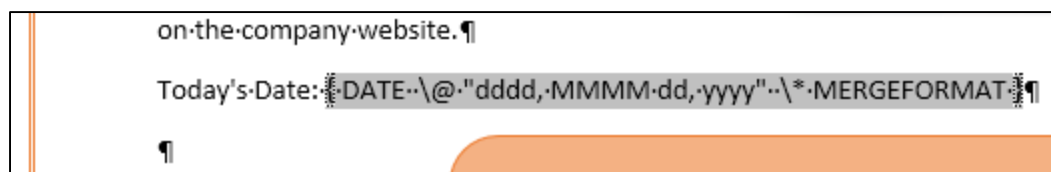
6. Click **OK**. The current date will be shown.
7. To make it easy to identify text that is the result of a field code, tell Word to highlight all fields in the document by doing this: Click the **FILE** tab, click **Options**, click **Advanced**, scroll down to the **Show document content** group, click the down arrow next to **Field shading**, and select **Always**.



8. Click **OK**. The date now appears with a shaded background. However, the shading will not appear on the printed copy.



9. Tap **Alt + F9** to view the actual field code:



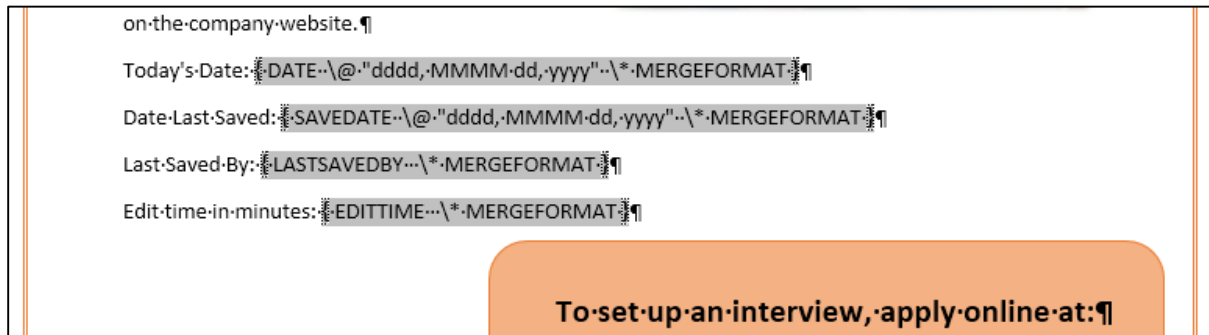
To show the results of the field codes, you would tap **Alt + F9** again. But, **do not do that yet**. **Alt + F9** is called a toggle because it switches (toggles) between two things.

10. Use the same technique to insert under the date field the following fields with appropriate text, one per line. If necessary, adjust the position and height of the orange textbox so that it does not cover the field codes.

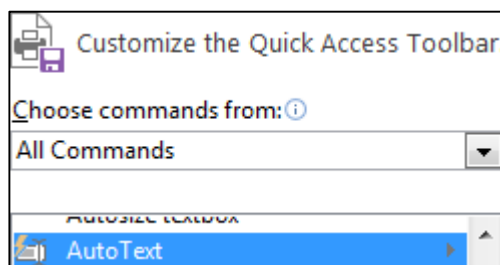
Date Last Saved: **SAVEDATE**

Last Saved By: **LASTSAVEDBY**

Edit time in minutes: **EDITTIME**



- d. You are going to add a footer that contains the file name for every Word document you save. Here is a quick way of doing that using Word's **AutoText** feature. First, you will add **AutoText** to the **Quick Access Toolbar**.
1. Click the **FILE** tab.
 2. Click **Options**.
 3. Click **Quick Access Toolbar**.
 4. In the list under **Choose commands from**, click **All Commands**.
 5. Scroll through the list of commands until you see **AutoText**.
 6. Click **AutoText**.

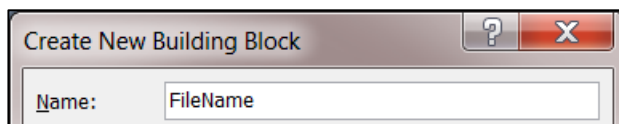


7. Click **Add**. The **AutoText** button  now appears in the **Quick Access Toolbar**.

- e. To add an entry to the **AutoText** gallery, do the following:
1. Select the text that you want to add to the **AutoText** gallery. In this case, double-click the footer area where the file name appears and select the file name field code.



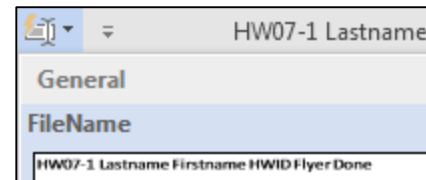
2. In the **Quick Access Toolbar**, click **AutoText**, and then click **Save Selection to AutoText Gallery**.
3. Type **FileName** in the top box of the **Create New Building Block** dialog.



Leave the other boxes as they are.

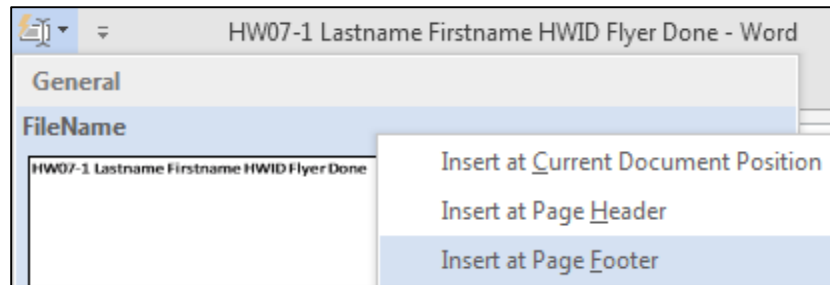
4. Click **OK**.
5. Click the **AutoText** button and you will see the **FileName** entry you just created.

Even though the actual file name shows the **AutoText** entry is really the field code that will change if you change the file name.

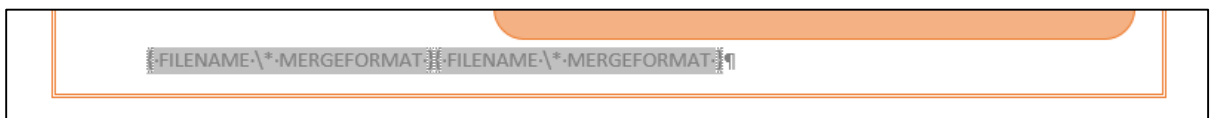


- f. Do the following to insert the **AutoText** entry:
1. Double-click anywhere in the body of the document to close the **Header/Footer** window and then tap **Ctrl + End** to place the insertion point at the end of the document.
 2. Click the **AutoText** button on the **Quick Access Toolbar** and select **FileName**. The file name field code is inserted.
 3. Tap **Ctrl + z** to undo the insertion.

- g. Even better, you can have Word insert the file name field code directly into the footer. Click the the **AutoText** button on the **Quick Access Toolbar** point to **FileName**, right-click, and select **Insert at Page Footer**.



The file name field code is inserted directly into the footer. If necessary, adjust the size of the orange text box so the file name in the footer is visible.



- h. So I can see the codes, I want you to print them instead of their results. This is similar to your printing formulas in Excel rather than the results of the formulas.
1. Click the **FILE** tab, click **Options**, click **Advanced**, scroll down to the **Print** group, click the check box next to **Print field codes instead of their values**.
-
2. Click **OK**.
- i. Tap **Ctrl + F2** and compare the preview with the key. Notice the field codes print but the shading does not. Make needed corrections and print the document.
- j. Now, turn off printing the field codes by unchecking the box you just checked.
1. Click the **FILE** tab, click **Options**, click **Advanced**, scroll down to the **Print** group, click the check box next to **Print field codes instead of their values** to remove the check.
 2. Click **OK**.
 3. Tap **Alt + F9** to view the result of the field codes rather than the codes.
- k. After you print you might notice that the edit time has not changed. Fields usually are updated when a document is printed or saved, depending on how your computer is set up. Manually update the fields by doing the following:
1. Tap **Ctrl + A** to select the entire document.
 2. Tap **F9** to update all the fields. Note the updated edit time.
 3. Save the document and then close it.

HW07-2 Programs

Problem: How can you create a flyer that advertises available internships?

- a. Open the document **Lastname_Firstname_1B_Programs**, which you created while following the directions in the textbook and saved on page 156.
- b. Save the document in the **Word Files** folder using the name **HW07-2 Lastname Firstname HWID Programs Done**
- c. Adjust the title so that it is on two lines.
 1. Click just to the left of the word **Productions** in the title.
 2. Tap the **Backspace** key to remove the blank space.
 3. Tap **Shift + Enter** to insert a line break.
This is indicated by a little left-pointing arrow ↵



Sturgeon Point
Productions

This means the two lines are still considered a single paragraph and so the **space after** paragraph setting does not apply between the lines.

- d. Insert a piece of clip art and then modify it by doing the following.
 1. Tap **Ctrl + Home** to be sure the insertion point is at the start of the document.
 2. On the **INSERT** tab, in the **Illustrations** group, click **Online Pictures**.



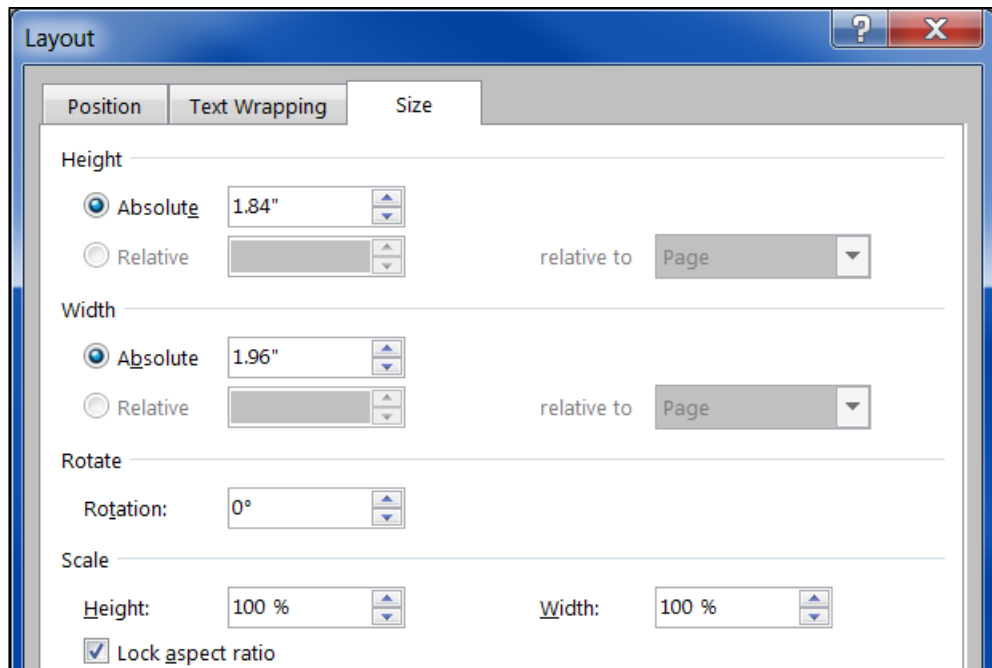
In the search box type **movie camera** and tap **Enter**.

Click an illustration you like to select it and then click **Insert**.

If **Online Pictures** does not open, click **Pictures** to insert one from your computer. Navigate to your Word folder and double click **HW07-2 Movie Camera Original**.

e. Modify the image by doing the following.

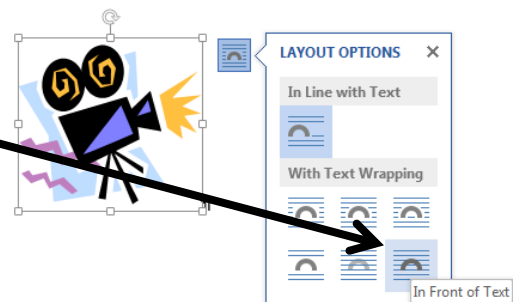
1. Click the image and then, on the **PICTURE TOOLS FORMAT** tab, in the **Size** group, click the **Open Dialog** button  (lower right corner) to open the **Layout Size** dialog.



There is a check next to **Lock aspect ratio**. That means if you change the height the width will automatically change to keep the same relative dimensions. If you uncheck this box, you can change the height and width independently of each other (but that may cause the image to be distorted a little or a log).

Change the height to 1.2 inches.

2. Click the **LAYOUT OPTIONS** button and select **In Front of Text**. This will allow you to move the image to any location on the screen independently of the text.



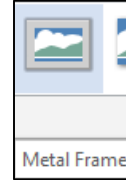
3. Point to the image, hold down the left mouse button, and drag the image to the upper right corner of the document (but keep it inside the margins).
4. Point to the little circle at the top of the image.



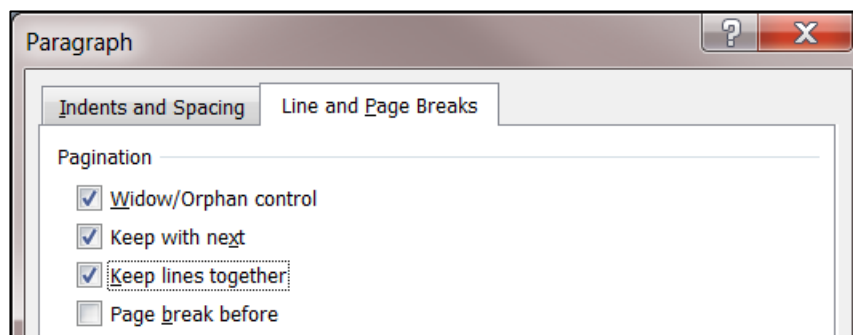
5. With the tip of the pointer on the circle, hold down the left mouse button and drag right until the image is rotated about 45 degrees. Let go of the button.

You can get an exact rotation by going to the **PICTURE TOOLS FORMAT** tab and, in the **Arrange** group, clicking **Rotate** and selecting **More Rotation Options**.

6. On the **PICTURE TOOLS FORMAT** tab, in the **Picture Styles** group, click the **Metal Frame** button to place a frame around the picture.



- f. Scroll down so you can see the break between pages 1 and 2. Notice how the list is split between the two pages. If possible, it is a good idea to keep all the items of a list on a single page so the reader can see it all at once.
 1. Select the text from **Here is a partial list...** through the end of the list.
 2. Right-click and select **Paragraph**.
 3. Click **Line and Page Breaks**.
 4. Check the boxes as shown.



A **widow** is the last line of a paragraph that appears by itself at the top of a page. It is considered good form to force a second line to accompany a widow.

An **orphan** is the first line of a paragraph that appears at the bottom of a page by itself. It is considered good form to send an orphan to the next page to rejoin its paragraph.

Keep with next forces the current paragraph to appear on the same page as the next paragraph. This is good for lists and for rows of tables (so the table will not split across a page break) and subheads (so the subhead will stay with its following text).

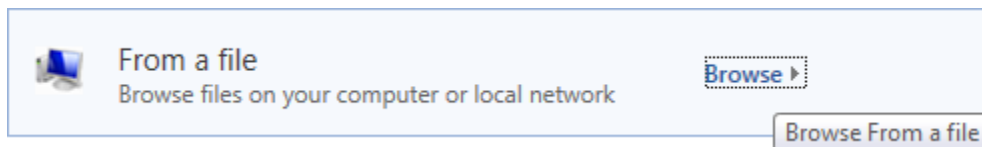
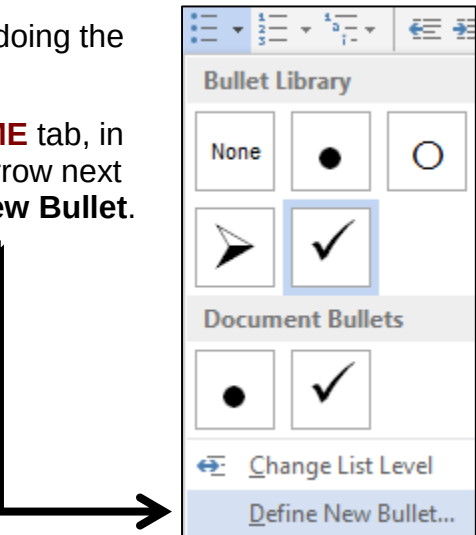
Keep lines together forces a paragraph to have all of its text on the same page, rather than split between the bottom of one page and the top of the next. This is good to do for short paragraphs but it is not practical for long paragraphs.

Page break before. This puts the text on the next page no matter what.

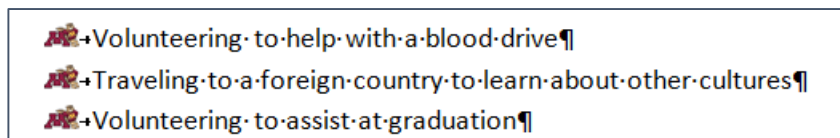
5. Click **OK**. The selected items now are together on page 2.

g. Change the bullet type on the first page by doing the following:

1. Select the bulleted list and, on the **HOME** tab, in the **Paragraph** group, click the down arrow next to the **Bullet** icon, and select **Define new Bullet**.
2. Click **Picture**.
3. Click **Browse** next to **From File**.



4. Navigate to the **Word Files** folder, select **HW07-2 UM Logo Original**, and click **Insert** and then **OK**. If the image of Goldie cannot be added to the gallery, drag the file **HW07-2 UM Logo Original** to the desktop and try again. If that fails, use any other image in the gallery.

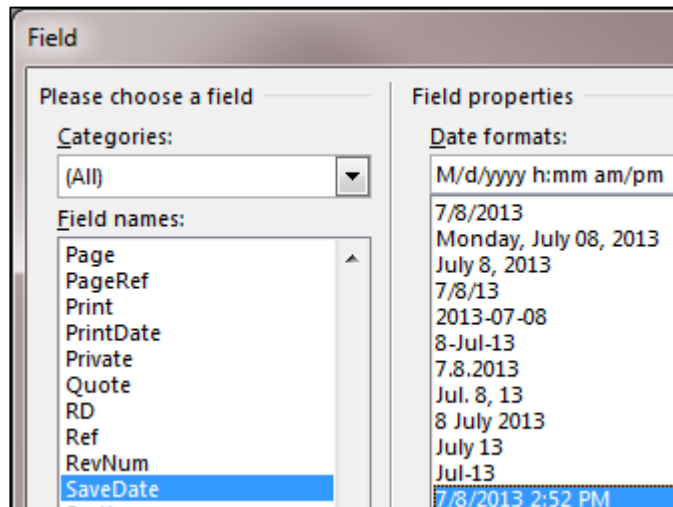


- h. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print **page 1 only**, save the document and close it.

HW07-3 Agenda

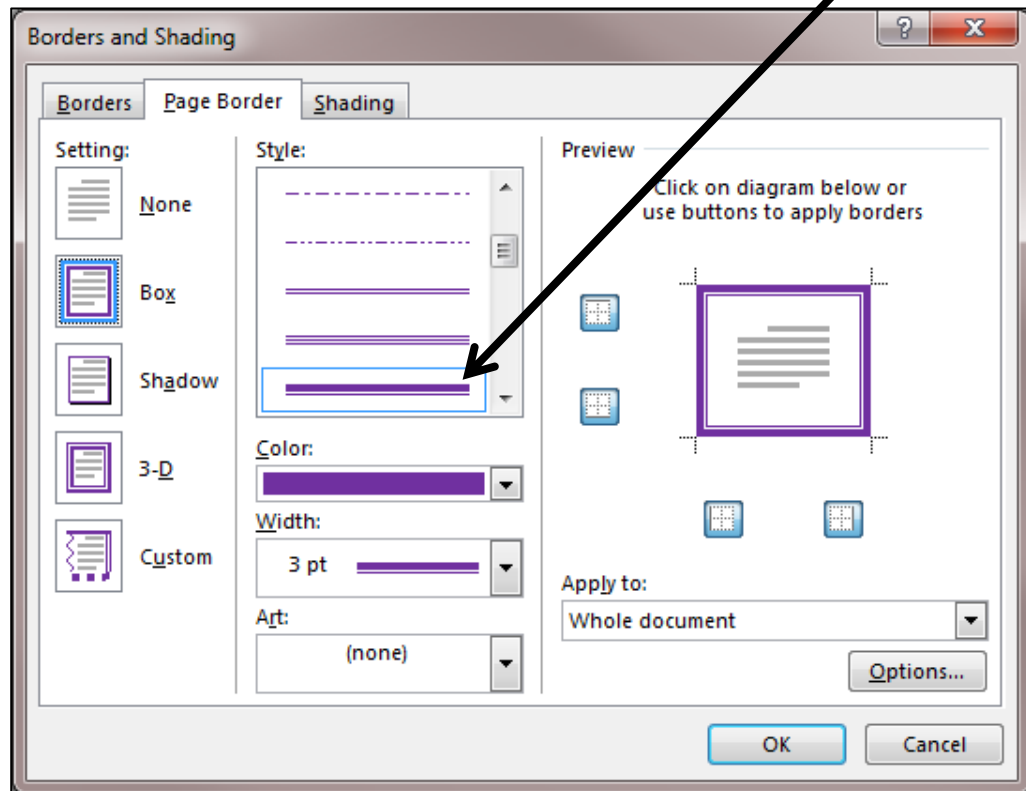
Problem: How can you create a draft agenda for a club meeting?

- a. Open the document **HW07-3 Agenda Original**, which is one of the files you copied at the start of the term.
- b. Save the document in the **Word Files** folder using the name **HW07-3 Lastname Firstname HWID Agenda Done**.
- c. Insert a footer that contains the name of the file.
- d. Do the following to insert in the footer the date the document was saved.
 1. Double click the footer area to open it.
 2. Click to the right of the file name and tap Enter.
 3. On the **INSERT** tab, in the **Text** group, click **Quick Parts** and then select **Field**.
 4. Click **SaveDate** and the format that displays the date and time.



- e. Change all four margins to 1.25 inches.

- f. Put a border on the page. The border should have a purple thick and thin 3 pt line (**DESIGN**, **Page Background**, **Page Borders**).



- g. Insert a Watermark that says **Draft** slanted across the page (**DESIGN**, **Page Background**, **Watermark**)
- h. Make the font of the first two lines of the Agenda Arial Black, 18 pt, and red.
- i. Set up the agenda as an outline.
1. Select the lines starting with **New Business** and continuing all the way through **Continue discussion of fund raising projects**.
 2. On the **HOME** tab, in the **Paragraph** group, click the **Multilevel List** button , and then click this format:

 The list will appear with numbers going from **1** to **12**.

- j. Do the following to change the outline level of the lines from **Treasurer's report** through **Other new business** so that they are subordinate to **New Business**.

1. Select those lines.
2. On the **HOME** tab, in the **Paragraph** group, click the **Increase Indent** button, . Notice how the numbers of the selected lines are automatically changed to letters.

- 1. New Business
 - a. Treasurer's report
 - b. Big brother and big sister project
 - c. Election of officers
 - d. President
 - e. Vice President
 - f. Treasurer
 - g. Secretary
 - h. Other new business
 - 2. Old Business
 - 3. Reading of minutes
 - 4. Continue discussion of fundraising projects

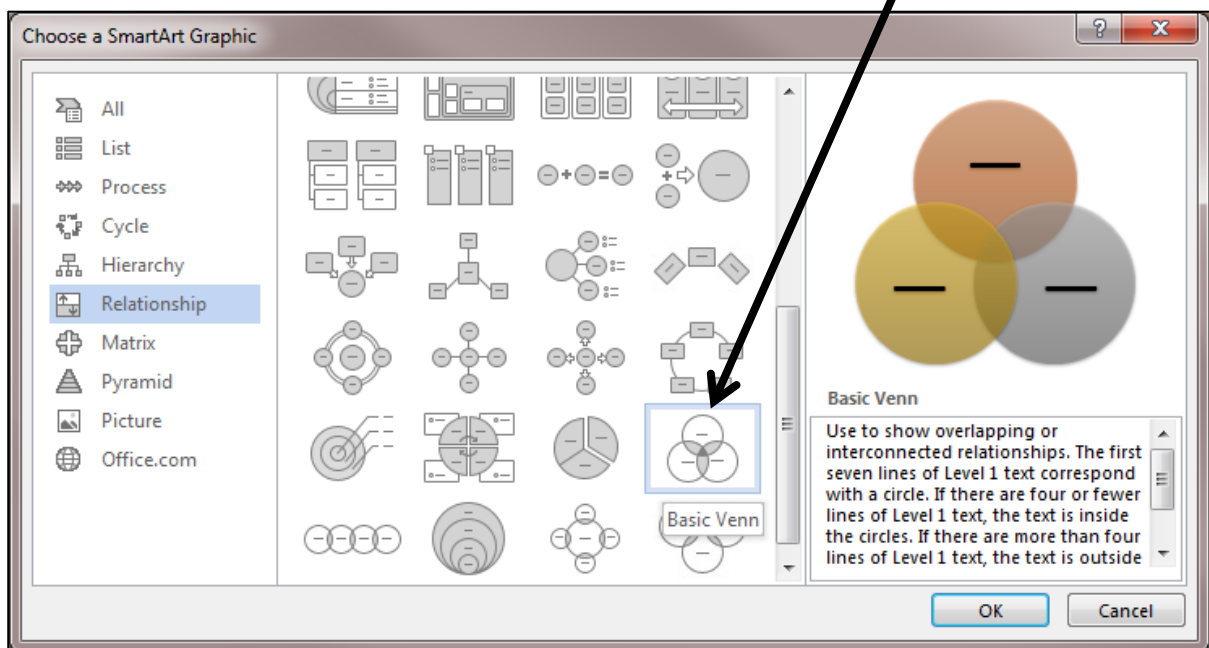
- k. Change the outline level of the list of officers.
1. Select the lines from **President** through **Secretary**.
 2. Click the **Increase indent** button. The list of officers will be indented and listed with Roman Numerals.
- l. Follow a similar procedure to change the outline level of the last two lines (**Reading of minutes** and **Continue discussion of fundraising projects**) so that they are subordinate to **Old Business**.
- m. To see how Word will automatically adjust the lettering of the items, add the following two lines just under **Big brother and big sister project**:

Food Shelf donations
Tax program

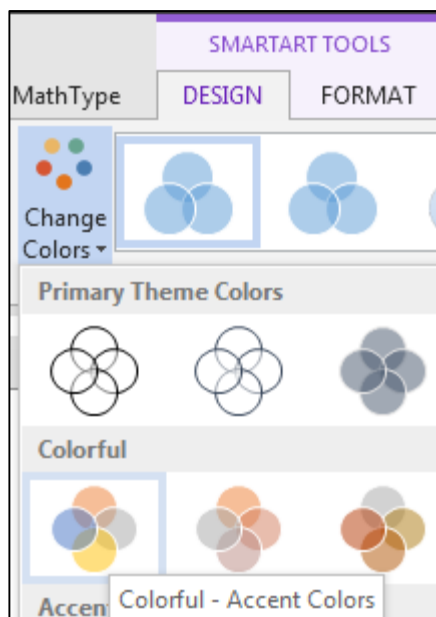
Notice how the items are automatically given letters and the letters of following items are changed.

- a. Treasurer's report
 - b. Big brother and big sister project
 - c. Food Shelf donations
 - d. Tax program
 - e. Election of officers

- n. Delete the line with **Vice President**. Again, notice how the numbers for **Treasurer** and **Secretary** are automatically updated.
- o. Insert a **SmartArt** object.
 1. Tap **Ctrl + Home** to move to the top of the document.
 2. On the **INSERT** tab, in the **Illustrations** group, click the **SmartArt** button.
 3. From the **Relationship** category, choose the **Basic Venn** shape.

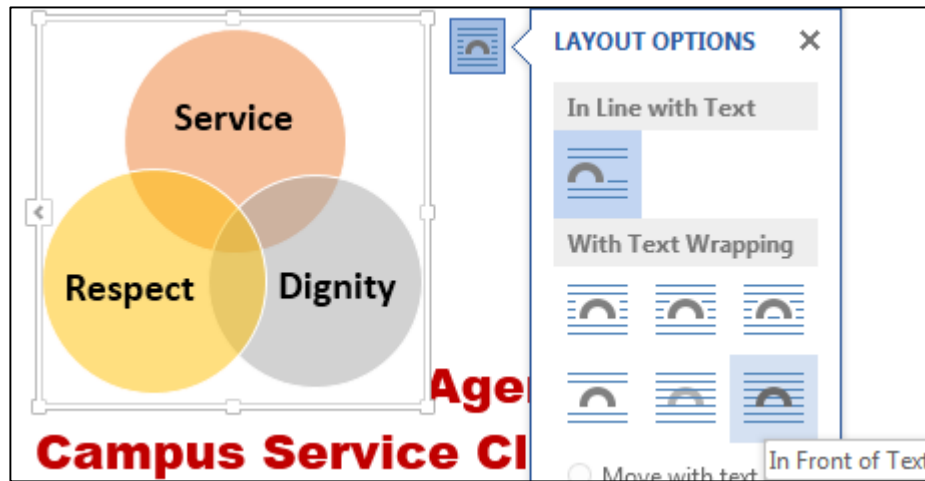


4. In the top circle, type **Service**; in the left circle, type **Respect**; in the right circle, type **Dignity**.
5. Apply a **Colorful** theme.



6. Make the font purple 12 pt Comic Sans MS.

7. Make the height and width of the object 2 inches.
8. Set the **Wrap Text** to **In Front of Text**.



9. Move the object to the upper right corner just inside the page border.
- p. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the document, save it, and close it.

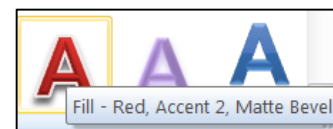
HW07-4 Brochures

Problem: How can you create a memo outlining features of a brochure that will be published?

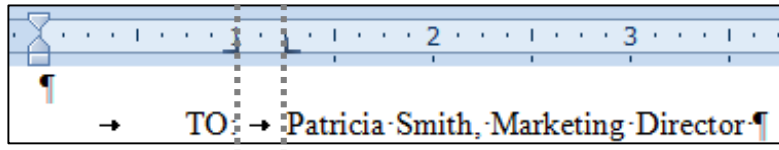
- a. Open the document **HW07-4 Brochures Original**, which is one of the files you copied at the start of the term.
- b. Save the document in the **Word Files** folder using the name **HW07-4 Lastname Firstname HWID Brochures Done**.
- c. Insert a footer that contains the name of the file.
- d. Set up the company logo and memo header by doing the following:
 1. Insert the JPG file, **HW07-4 Brochures Logo Original**.
 2. Change the **Wrap Text** to **In Front of Text** and move the logo so it is in the upper left corner of the page.
 3. Insert a text box (**INSERT**, **Text**, **Text Box**, **Draw Text Box**) and enter this text:

PO Box 75732
 Colorado Springs, CO 80970
 719-638-9511
 719-638-9515 fax
 JohnWells@ad-excellence.net
 4. Change the font to 10 pt Comic Sans MS.

5. Move the text box to the upper right corner of the page. It should have no border or fill.
6. Select the word **MEMO** and, on the **INSERT** tab, in the **Text** group, click the **Word Art** down arrow, and select **Fill – Red, Accent 2, Matte Bevel** (if that is not there, choose another style).
7. Move the **Word Art** to the top center of the document.

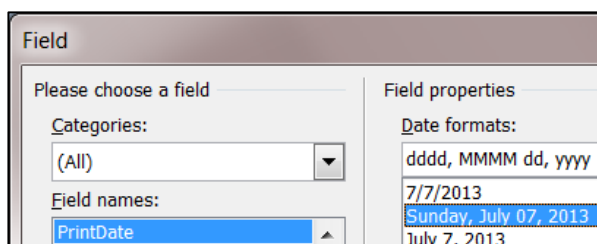


- e. Modify the first seven lines by doing the following:
1. Select the 7 lines starting with the line that contains **TO** and ending with the line that contains **DATE**. Set a right tab stop  at 1 inch and a left tab stop  at 1.25 inches.
 2. Click just to the left of **P** in **Patricia** and then tap **Tab**. It looks like nothing happened! Now, click just to the left of the **T** in **TO:** and tap **Tab**. Notice how the colon in **TO:** lines up with the right tab stop and the **P** in **Patricia** lines up with the left tab stop.



Remember, the **Tab stops** are the little markers on the ruler  and  showing where the text will be aligned while the **Tabs** are the little arrows → that show where the **Tab** key was tapped to move the text in the body of the document.

3. Repeat this procedure for the **FROM**, **SUBJECT**, and **DATE** lines.
4. Click to the right of the tab arrow in the **DATE** line.
5. Insert the **PrintDate** field, which will display the date the memo was printed (**INSERT**, **Text**, **Quick Parts**, **Field**). Set the date format to show the day, month, date, and year.



6. Click **OK**. The field may display **XXX, XXX 00, 0000** because you have not yet printed the document. When you print it the proper date will appear.

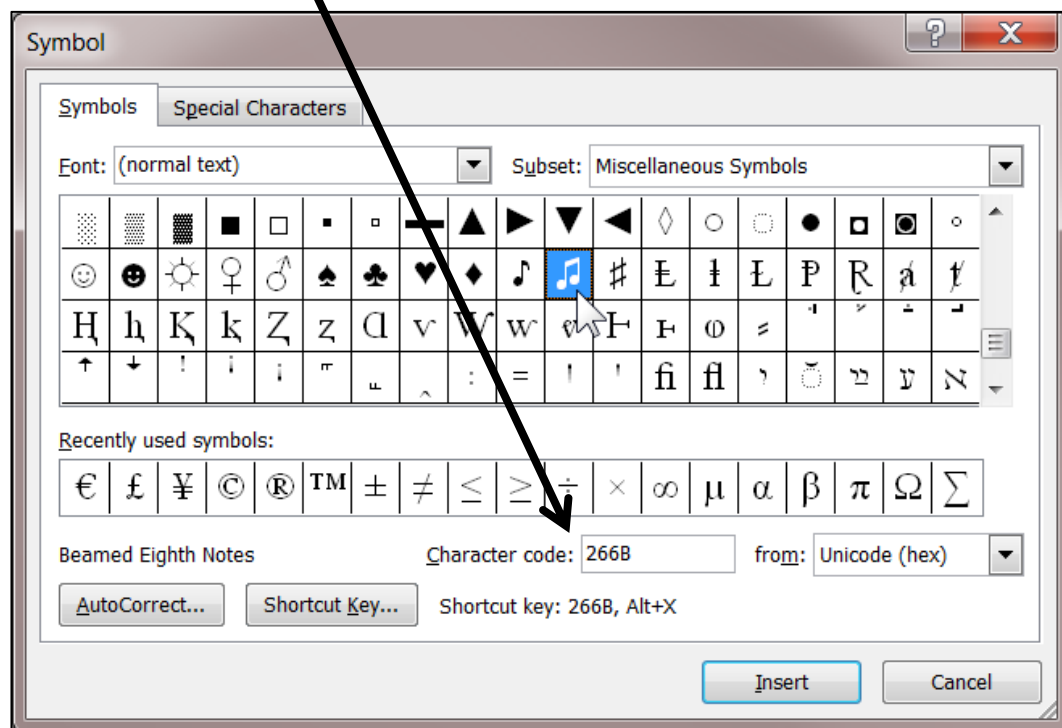
7. Tap **Alt + F9** to see the field code.

→ **DATE:** → {**PRINTDATE \@ "dddd, MMMM-dd, yyyy" * MERGEFORMAT**}

8. Tap **Alt + F9** again to see the result. Note that since you probably have not yet printed the document, the date appears as **X**'s. When you print today's date will be inserted.

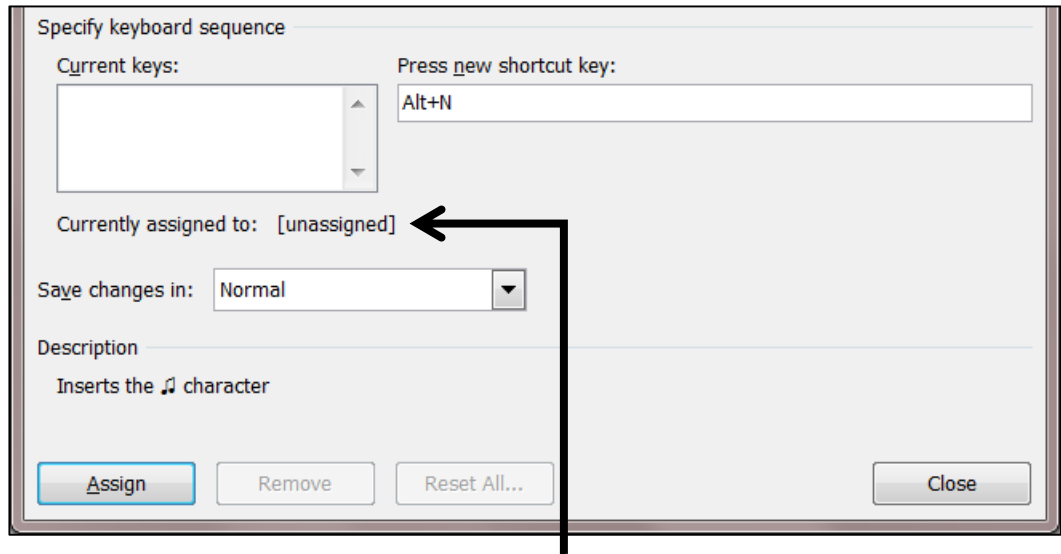
→ **DATE:** → **XXX,XXX-00,0000**

- f. Click in the paragraph that begins with **The concept for the new...** and set the first line indentation to 0.25 inch. You can do this by right-clicking the paragraph and then selecting **Paragraph** from the shortcut menu or by sliding the upside down triangle ▼ on the left side of the ruler to 0.25.
- g. Click in the paragraph that begins **I need to schedule....** Tap **Ctrl + y**. This is the shortcut for the **Repeat** command. It repeats your last action or text entry. The first line indent is set to 0.25 inch.
- h. Move the insertion point to the left of the first word of the paragraph that begins **Be prepared to discuss**. You are to insert a bullet here without using the automatic bulleted list feature. Like many of Word's automated features, the automatic bulleted list feature can save time but it also can be annoying and do things behind your back that you do not want.
1. On the **INSERT** tab, in the **Symbols** group, click **Symbol** and then click **More Symbols**.
 2. In the dialog box, if necessary click the **Symbols** tab.
 3. From the **Font:** box drop down menu, select **(normal text)**
 4. From the **Subset:** box drop down menu, select **Miscellaneous Symbols**.
 5. Click the beamed eighth notes, . If you have trouble finding it, type **266B** in the **Character code** box near the bottom of the window.



The lower left corner of the dialog box says you have selected **Beamed Eighth Notes** and it gives you the option of creating a **Shortcut Key** for this symbol. Let's do that so that if you want to insert this symbol again all you have to do is tap the shortcut.

6. Click **Shortcut key**.
7. Click in the box under **Press new shortcut key:** and then tap **Alt + n** (n for note).



Notice that **Alt + n** currently is **[unassigned]**. That means it is not used by Word for any other shortcut. Always be sure to check this so you don't accidentally reassign a shortcut to a different action (unless you want to).

8. Click **Assign**.
9. Click **Close**.
10. Click **Insert** and then click **Close**. The **Beamed Eighth Notes** are inserted.
11. Tap **Tab** to move the text **Be prepared to discuss...** to the next tab stop.
12. Follow the same procedure, or use the new shortcut key, **Alt + n**, to insert the **Beamed Eighth Notes** just to the left of **Have ready in...**
13. Select the two paragraphs you just worked on and use your mouse to slide the indent markers on the ruler as follows:

First line indent ▾ to 0.25 inch

Left indent (hanging indent) ▴ to 0.5 inch.

Right indent ▴ to 5.5 inches.

14. For the two paragraphs you just worked on, set a right tab stop with a dot leader at 5.5 inches by doing the following:

Select the two paragraphs,

Right-click and select **Paragraph...**,

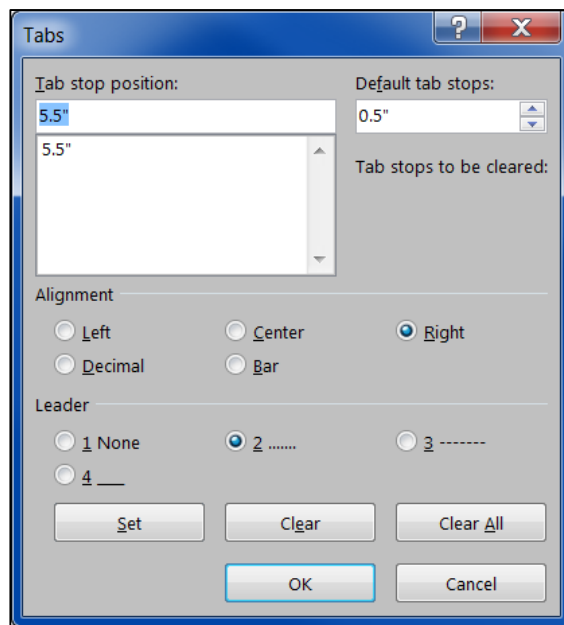
Click the **Tabs...** button,

Type **5.5** in the **Tab stop position** box,

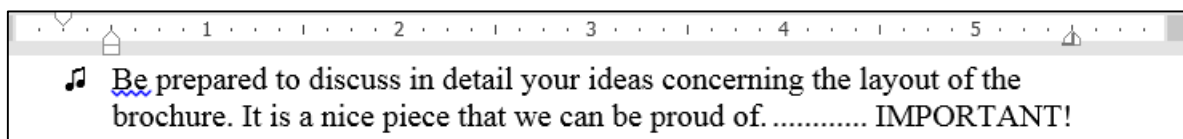
Click **Right** in the **Alignment** group,

Click **2....** in the **Leader** group,

Click the **Set** button.

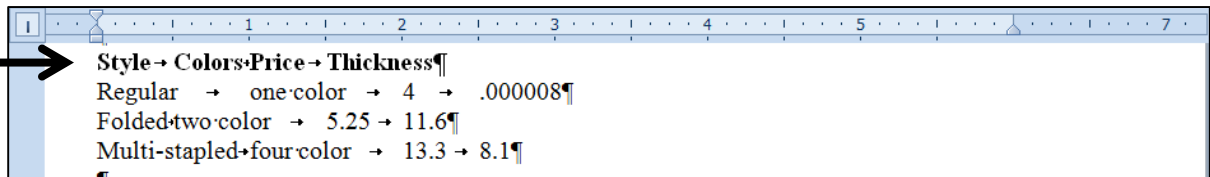


15. Click **OK**.
16. In the first of the two paragraphs, click to the right of the words **proud of**. tap the **Tab** key, and then type **IMPORTANT!**

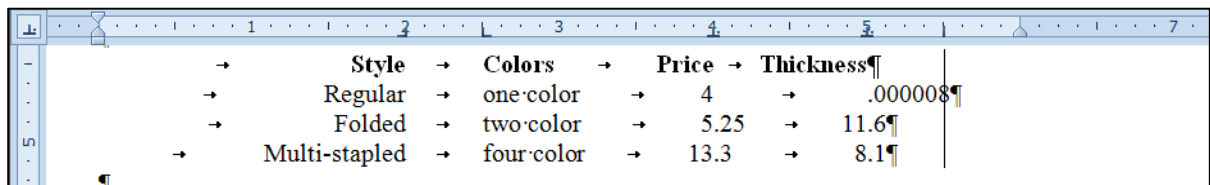


Depending on how your computer is set up, you might have noticed that the word **Be** in the first bulleted paragraph has a blue squiggly underline. Word does this to alert you that the grammar might not be correct. It is like Word asking you "Are you sure this is the word you want?" In this case, it is correct as is.

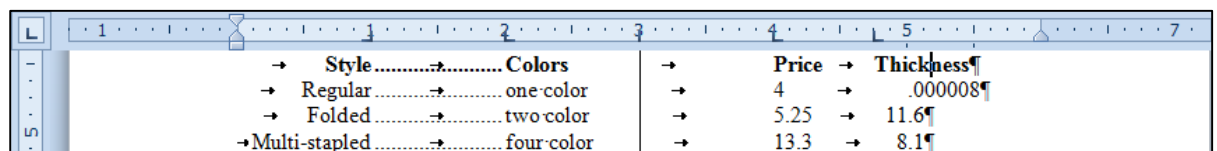
- i. Use tabs to align the items in the list at the bottom of the document.
- The items are separated by a comma and a space. Replace the comma and space by a **TAB** code. You can do that in one of two ways:
 - Use your mouse and the **TAB** key and make the changes one by one. This is easy but soooo unsophisticated and takes time.
 - OR, you can select the four lines, tap **Ctrl + h**, type a comma and a space in the **Find what** box, type the **TAB** code, **^t**, in the **Replace with** box, and click **Replace All**. Twelve replacements will be made. When asked if you want to continue from the top of the document, click **No**.



- On the ruler, insert the following tab stops:
 - Right tab stop at 2 inches
 - Left tab stop at 2.5 inches
 - Decimal tab stops at 4 and 5 inches.
 - Bar tab stop at 5.5 inches.
- Click at the left of each line and tap the **TAB** key to right align the first word of each line.

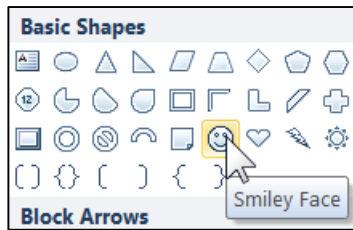


- j. Change the tab stops for the above list as follows:
- Select the four lines.
 - Move the right tab stop to 1 inch (click it and drag to the left).
 - Move the left tab stop to 2 inches and set a dot leader for this tab (double click any tab stop to open the **Tabs** dialog box).
 - Change the decimal tab stop at 4 inches to a left tab. To do that, click the tab stop and drag it down off the ruler. Then, set the tab type to **Left** and click at 4 inches. Notice that when you do this the numbers in the column no longer line up on their decimal points.
 - Move the bar tab to 3 inches.
 - Select only the line with the titles and change the decimal tab at 5 inches to a left tab at 4.75 inches.



k. Insert a motivational shape by doing the following:

1. Move to the bottom of the document and, just to the right of **Is that correct?**, insert a **Smiley Face** (**INSERT**, **Shapes**, **Basic Shapes**, **Smiley Face**).

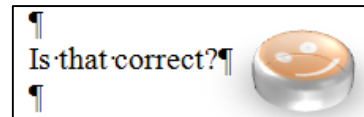
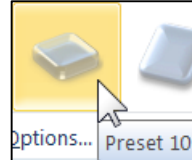


2. Apply the **Preset 10 Shape Effect**.

3. Make the fill color orange.

4. Make the height and width 0.5 inch.

5. Change the **Wrap Text** to **In Front of Text** and move the shape so it is centered on the line.



l. Put in some text boxes to highlight parts of the memo.

1. Insert a text box (**INSERT**, **Text**, **Text Box**, **Draw Text Box**).
2. Type the text **Decimals lined up** and make it Arial Black 14 point red.
3. Make the text box border red 3 pt and **Format** the **Shape Fill** to **No Fill**.

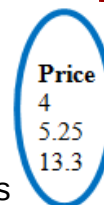
4. Adjust the position and size of the text box so its box surrounds the last column of numbers.

5. Insert an oval and place it around the second column of numbers.

6. Set the oval to have no fill.

7. Make the border 3 pt and blue.

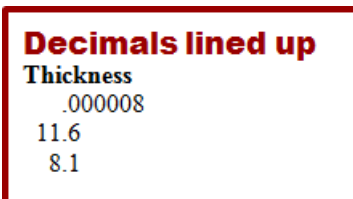
8. Adjust the position and size so the oval surrounds the second column of numbers



9. Insert a **Cloud Callout** (**INSERT**, **Illustrations**, **Shapes**, **Callouts**).

10. Type **Decimals NOT lined up** and make the font Arial Black 14 pt white.

11. Set the **Fill** to **Texture**, **Purple mesh**.



12. Position the callout as shown below. To move the pointer part of the callout, click the little yellow box and drag it.



I need to schedule this with the printer so they can order paper. My understanding is that we will be printing copies as follows.

Style	Colors	Price	Thickness
Regular	one color	4	.000008
Folded	two color	5.25	11.6
Multi-stapled	four color	13.3	8.1

Is that correct?

Here is our latest promotional video. Check it out.

Decimals lined-up

Decimals NOT lined-up

- m. When you fill out a form or write a paper for publication you typically are given a limit on the words or characters you may use. Word has a feature to help you determine this.
1. On the **REVIEW** tab, in the **Proofing** group, click **Word Count**. You should see that this document has **about** 162 words (plus or minus a few).
 2. Use the **Snipping Tool** to take a screen shot of the **Word Count** window.
 3. Paste the screen shot into the document and move it to the bottom right of the page.
- n. Insert a link to a promotional video for **Ad-Excellence** by doing the following:
1. On the **INSERT** tab, in the **Media** group, click **Online Video**.
 2. Type **ad-excellence** in the search box.

Insert Video

Bing Video Search
Search the web

ad-excellence

3. Tap **Enter**.
4. Click one of the **Ad-Excellence** videos.



5. Click **Insert**.
 6. Position the image so that it is just below the last sentence of the document.
- o. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the document, save it, and close it.

Step 4 Submit You now are ready to submit your homework for grading.

1. Put your 4 homework papers in the following order:
 HW07-1 Flyer With Field Codes Showing
 HW07-2 Programs
 HW07-3 Agenda
 HW07-4 Brochures
2. Cut out Submission Form 7 and put it on the top of the papers.
3. Staple the papers in the upper left corner.
4. Turn in the packet by the due date.

Step 5 Backup Now would be a good time to backup your files.

Project 8

Word Chapter 2: Creating Tables and Letters

Step 1 Read Before turning on the computer, read the introductory material on pages 179-180 of the textbook.

Step 2 Activities Turn on the computer and open your textbook to page 181. Do all the steps of the Activities 2.01 through 2.10.

Do NOT do Activity 2.11 on pages 191-192.

Then, do all the steps of the Activities 2.12 (page 196) through 2.21.

On **page 198**, the textbook shows you how to save a Word template. It would be best to save the template to your USB drive so that it will be available at a later time. If you save it to the **Custom Word Templates** folder on a classroom or library computer it probably will be deleted the next time the computer is restarted. So, follow the directions in the orange **ALERT!** boxes on **page 198**.

Do NOT do Activities 2.22, 2.23 and 2.24 (pages 209-212).

Save typing time: To save time, instead of typing the text shown in several places in the textbook you may copy the text from the files listed below and paste in the proper locations. Here are the references in the textbook:

HW08-1 Resume Extra Text Original

Page 182, step 3 (top)
Page 182, step 2 (bottom)
Page 183, step 7
Page 186, step 4

HW08-2 Cover Letter Extra Text Original

This is all the text of the letter so as you follow the directions in the Activities you can paste most of the text as needed and just do the formatting and so on.

Step 3 Homework After you have completed the assigned activities for this Chapter, return to this Study Guide, do the problems listed below, and turn them in for grading. **You do NOT have to print in color.**

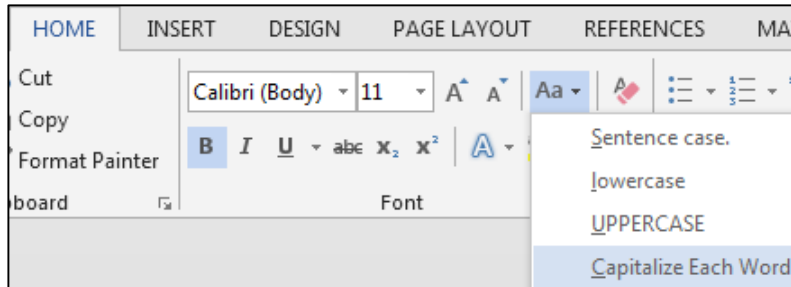
HW08-1 Resume

Problem: How can you create a professional looking resume?

- Open the document **Lastname_Firstname_2A_Resume**, which you created while following the directions in the textbook and saved on page 190.
- Save the document to your **Word Files** folder using the name **HW08-1 Lastname Firstname HWID Resume Done**

c. Make the following modifications.

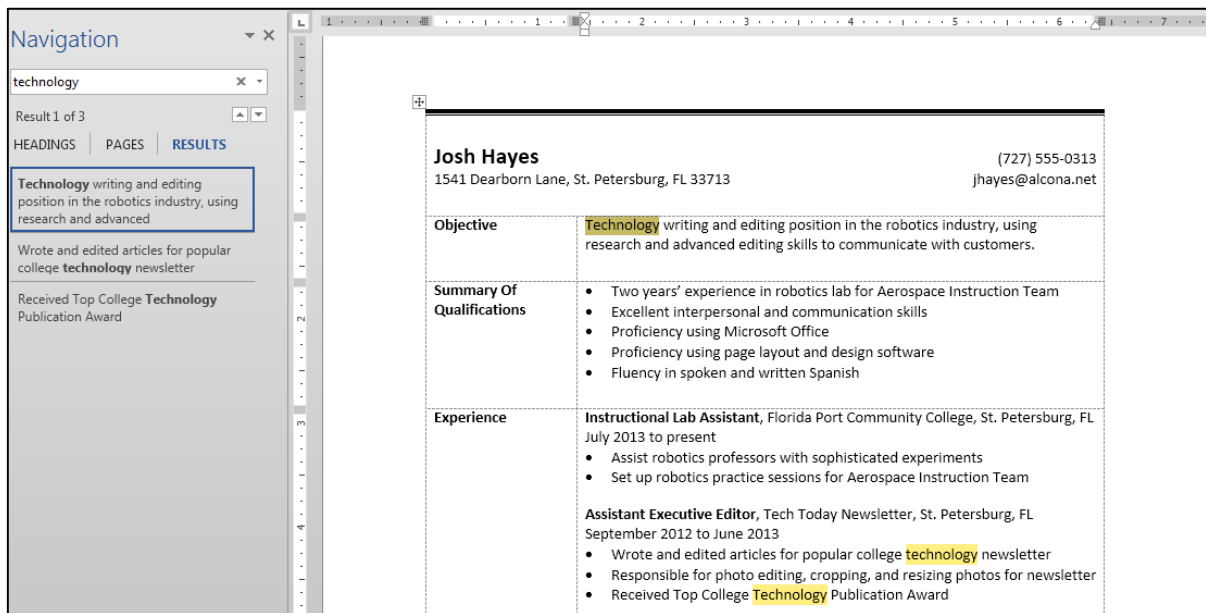
1. On the **TABLE TOOLS LAYOUT** tab, in the **Table** group, click **View Gridlines** so you can see the non-printing cell gridlines.
2. In the first column, select from **OBJECTIVE** through **HONORS AND ACTIVITIES**.
3. On the **HOME** tab, in the **Font** group, click the **Change Case** button  and select **Capitalize Each Word**.



The letters are converted from all UPPERCASE so that each individual word is capitalized. This is really useful if you mistakenly tap the **CAPS LOCK** key and type a bunch of stuff that you did not want to be UPPERCASE.

d. Word allows you to quickly find and highlight text in your documents.

1. Tap **Ctrl + Home** to move to the top of the document.
2. Tap **Ctrl + f** (for **find**) to open the **Navigation** pane.
3. Type **technology**. All 3 instances of the text **technology** are highlighted. The search is not case sensitive so that both **Technology** and **technology** are highlighted.



These highlights will not print. They are there to help you quickly spot the text you are interested in.

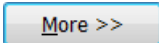
4. Type **robotics** in the **Search** box. From the drop down arrow to the right of **robotics**, select **Replace** to open the **Find and Replace** dialog box.



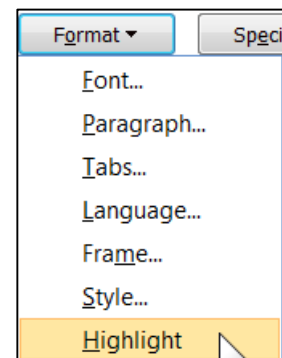
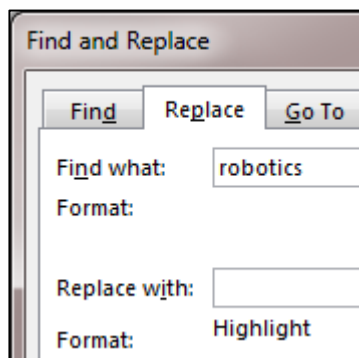
5. Click **Find Next**. This finds and selects the first occurrence of **robotics** after the location of the insertion point. Each time you click **Find Next** the next occurrence of **robotics** is highlighted.
 6. Click **Cancel** to close the **Find and Replace** box.
- e. To actually print the highlights, use the **Replace** feature.

1. Tap **Ctrl + Home** to move to the top of the document.
2. On the **HOME** tab, in the **Font** group, click the **Highlight** button  and select **Pink**.
3. Tap **Ctrl + h** to open the **Find and Replace** dialog box.

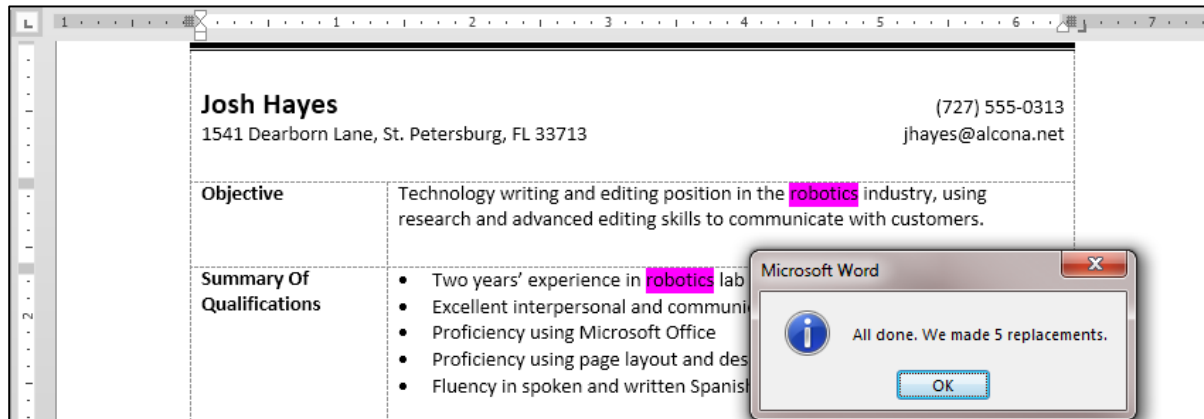


4. Type **robotics** in the **Find what** box.
5. Click in the **Replace with** box and be sure nothing is in the box.
6. Click  to display more options.
7. Click **Format** and select **Highlight** from the menu.

Be sure your dialog box matches this:



8. Click **Replace All**. A pink highlight is applied to all 5 occurrences of **robotics**.



9. Click **OK** and close the **Replace** dialog box.

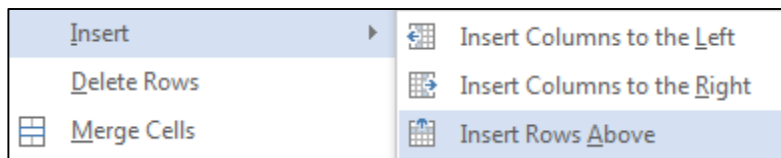
This has the same effect as finding the text but these highlights will print.

- f. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the document, save it, and close it.

HW08-2 Cover Letter

Problem: How can you create a cover letter that will catch the attention of the reader?

- Open the document **Lastname_Firstname_2B_Cover_Letter**, which you created while following the directions in the textbook and saved on page 209.
- Save the document to your **Word Files** folder using the name **HW08-2 Lastname Firstname HWID Cover Letter Done**
- Modify the table in this document by doing the following:
 - Select the first row of the table.
 - Right-click and select **Insert, Insert Rows Above**.

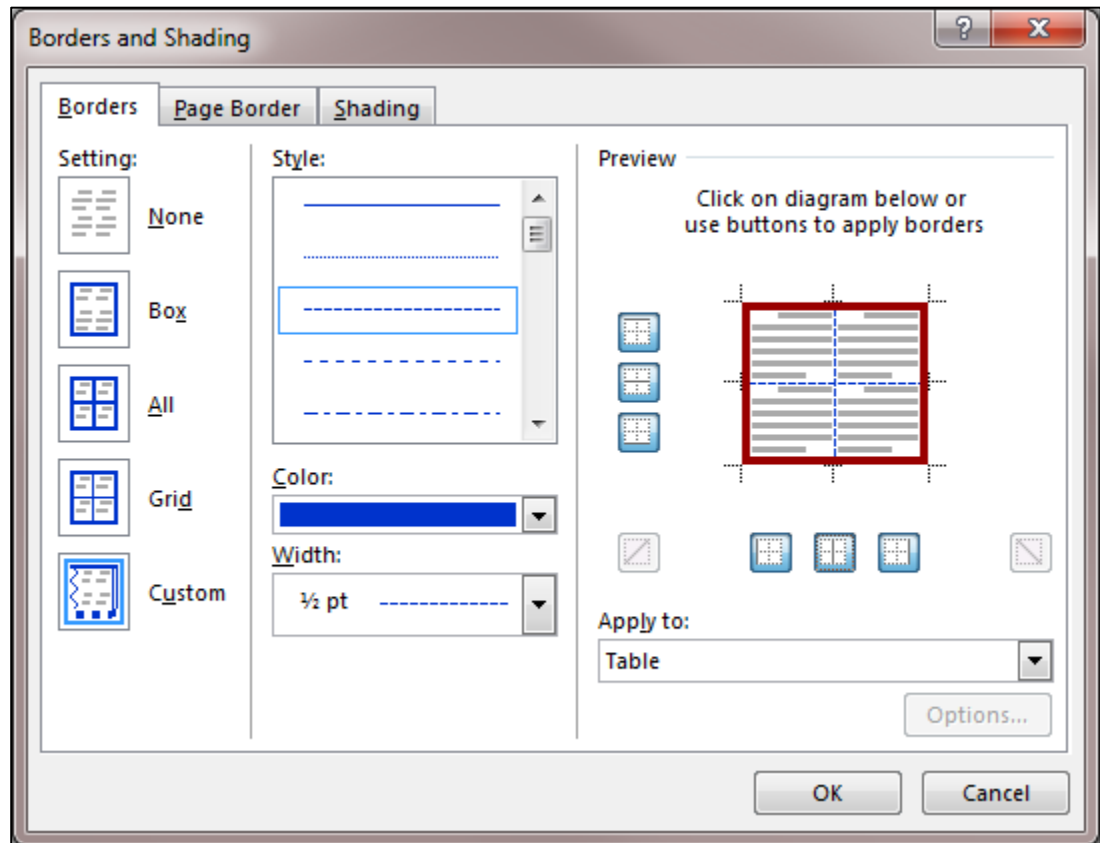


- In the new top row, type **Program** in the left cell and **Duty** in the right.
- Select the entire table, right click, and select  **Borders and Shading...**

- Click  **Custom**

- Place a solid, red, 3 pt width border on the outside of the table.

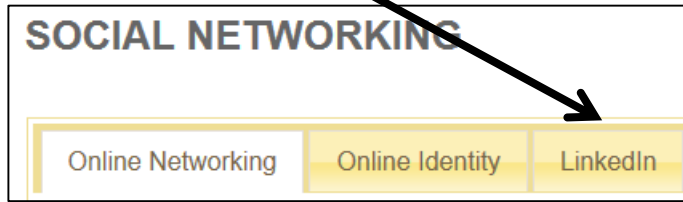
7. Place a dotted, blue, 1 pt width border on the inside of the table.



8. Click **OK**.
 9. Select row 1 and shade the background a light gray.
 10. Select column 1 and shade the background a light pink.
- d. Setting up a resume is a necessary first step in finding a job while you are in school, and a must as graduation approaches. This project gave you some experience creating a resume that should help you get started using your own information. The next step is to make connections with employers and others who are working at jobs that might be of interest to you. "Networking" often is important in landing a job and in being effective once you are hired. One way to do that is through social networking sites like **Facebook**, **Twitter**, and **LinkedIn**.
1. As an introduction, you might want to read the article on job searching at <http://jobsearch.about.com/od/networking/a/socialmedia.htm>
 2. Open the CEHD Career Services web site at <http://www.cehd.umn.edu/career/networking/social/default.html>

If you wish, read the information on the **Online Networking** and **Online Identity** tabs.

3. Click the **LinkedIn** tab.



If you are unfamiliar with LinkedIn, click **Get Started with LinkedIn: What is LinkedIn & Why Should I Join?** to view a five-minute introductory video. View the other videos to get more information and tips.

4. Click the **Online Networking** tab and then click **LinkedIn** to see their **Get started** page. Type your **FirstName** and **LastName** in the appropriate boxes and type your **HWID** in the Email box.
5. Take a screenshot of the **LinkedIn** window and paste it into **HW08-2 Lastname Firstname HWID Cover Letter Done**. Change the height of the screenshot to 2 inches and set the **Wrap Text** to **In Front of Text**. Move the image so that it is in the blank space to the right of **Sincerely**.

If you would like to join **LinkedIn** that is fine but you do not have to.

6. Close your web browser.
- e. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the document, save it, and close it.

HW08-3 Bill of Rights⁴⁰

Problem: How can you reformat text from an email to make it easier to read?

During the debates on the adoption of the U.S. Constitution, its opponents repeatedly charged that the Constitution as drafted would open the way to tyranny (cruelty and injustice in exercising authority) by the central government. Fresh in their minds was the memory of the British violation of civil rights before and during the American Revolution. They demanded a *bill of rights* that would spell out the immunities of individual citizens. Several state conventions in their formal ratification of the Constitution asked for such amendments; others ratified the Constitution with the understanding that the amendments would be offered.

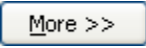
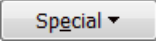
On September 25, 1789, the First Congress of the United States therefore proposed to the state legislatures 12 amendments to the Constitution that met arguments most frequently advanced against it. The first two proposed amendments, which concerned the number of constituents for each Representative and the compensation of Congressmen, were not ratified. However, Articles 3 to 12 were ratified by three-fourths of the state legislatures and they constitute the first 10 amendments of the Constitution. These amendments are collectively known as the **Bill of Rights**.

⁴⁰ Adapted from <http://www.archives.gov/exhibits/charters/charters.html>

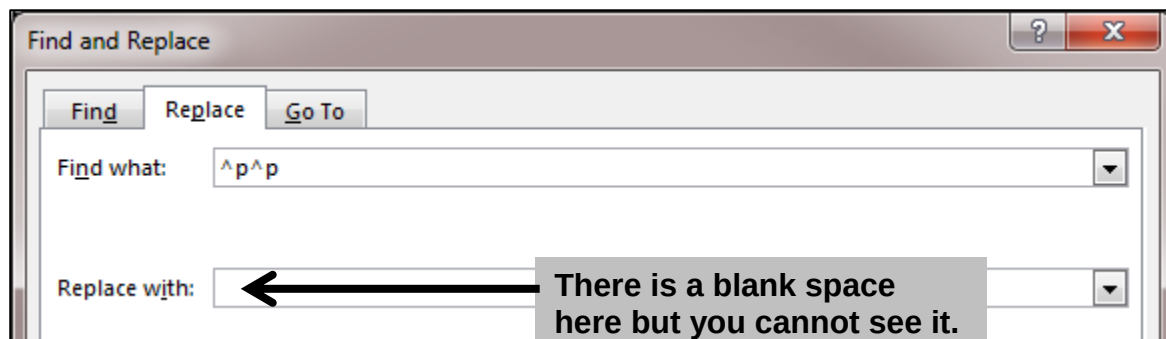
The amendments are necessarily brief and were designed to be applicable for centuries to come. It is the duty of the U.S. Supreme Court to interpret those rights in light of our current society. This is not easy. For example, the second amendment says “A well regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed.” In 1789 “Arms” were knives, swords, and front loading single shot muskets. Today “Arms” include assault weapons, bazookas, and rocket-propelled grenades. Should every citizen be allowed to own those, or only front loading muskets, or something in between?

- a. Open the file **HW08-3 Bill of Rights Original**, which is one of the files you copied at the start of the term.
- b. Save the document in the **Word Files** folder using the name **HW08-3 Lastname Firstname HWID Bill of Rights Done**
- c. Insert a footer that contains the name of the file.

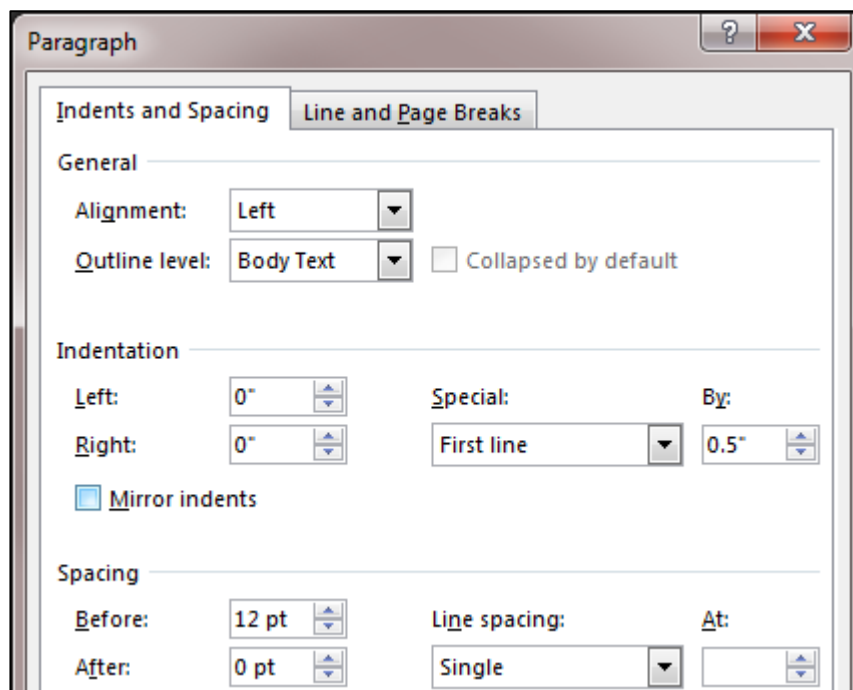
This copy of the **Bill of Rights** was received as a forwarded email. Instead of employing word wrap, the email program inserted paragraph marks at the end of each line. Your task is to reformat the document by removing the paragraph marks, restoring word wrap, and formatting the document to make it easier to read and more interesting to look at. This project will provide instruction and practice on using the powerful Find and Replace features of Word.

- d. Center the first three lines of the document and change the font to Arial Black.
- e. Make the first line 18 point.
- f. If necessary, make the paragraph marks ¶ visible. Notice that most of the lines in the body of the text are separated by double paragraph marks. Replace the double paragraph marks with a space by doing the following:
 1. Open the **Find and Replace** dialog by tapping **Ctrl + h** (or, on the **HOME** tab, in the **Editing** group, click **Replace**).
 2. If the **More** button  is showing, click it to display the advanced options of the **Replace** feature. If the **Less** button  is showing the advanced options are already displayed.
 3. In the **Find What:** box, type two paragraph codes: ^p^p To type a circumflex, ^, tap **Shift + 6**. The paragraph codes may also be selected from the **Special** menu .
 4. In the **Replace With:** box, type a space (tap the **Spacebar**).

5. Be sure that none of the boxes are checked and, unless it is dimmed, click the **No Formatting** button to be sure character formatting will be ignored.



6. Click **Replace All**. There should be 56 replacements.
 7. Close **Find and Replace**.
- g. Format the paragraphs by doing the following.
1. Right-click anywhere in the paragraph that begins **Amendment I** and choose **Paragraph**.
 2. Type **12** in the **Spacing before:** box. This will put some blank space before (above) each paragraph and help to visually separate the paragraphs.
 3. Select **First line** from the drop down menu under the word **Special**. Confirm and confirm that **0.5"** shows in the **By:** box (if not, type it in). This will indent the first line of each selected paragraph.



4. Click **OK**.

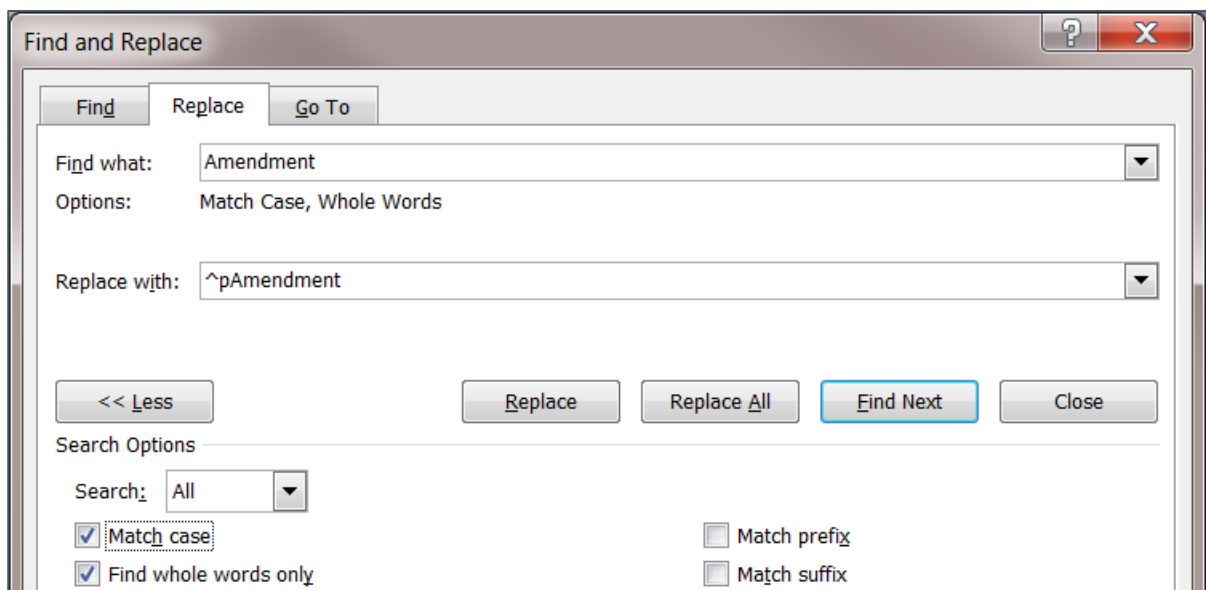
- h. The document will be easier to read if you make each occurrence of the word **Amendment** into a heading. To do this, you can use one of Word's built in heading styles.

1. Tap **Ctrl + Home** to move the insertion point to the top of the document and then tap **Ctrl + h**.
2. In the **Find What:** box, type **Amendment**

With the insertion point still in the **Find What:** box, click the **Match case** box to ensure that words like **amendment** (lowercase **a**) will not match the criteria.

Also click the **Find whole words only** box to ensure that words like **Amendments** (it has an **s** on the end) will not match the criteria.

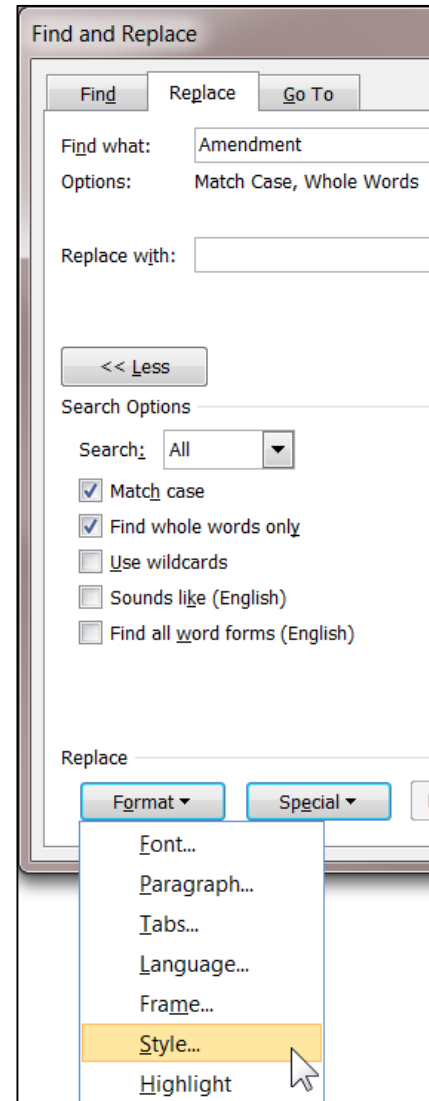
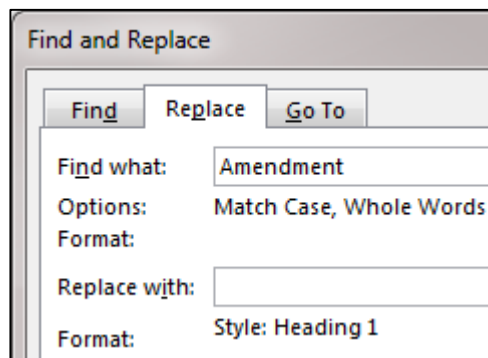
3. In the **Replace With:** box, type **^pAmendment**. The **^p** is equivalent to tapping the **Enter** key before each occurrence of **Amendment** so they will appear on their own lines.



4. Click **Replace All**. There should be 10 replacements. Click **OK**.
 5. In the **Find What:** box, type six spaces (tap the **Spacebar** 6 times). If necessary, uncheck the **Match case** and **Find whole words only** boxes.
 6. In the **Replace With:** box, type a single paragraph code: **^p**
 7. Click **Replace All**. There should be 10 replacements. The paragraphs now are properly formatted. Click **OK**.
- i. Use **Replace** to change all occurrences of two spaces to one space. To do that, put two spaces in the **Find What:** box, one space in the **Replace With:** box, and click **Replace all**. There should be 16 replacements. Click **OK**.

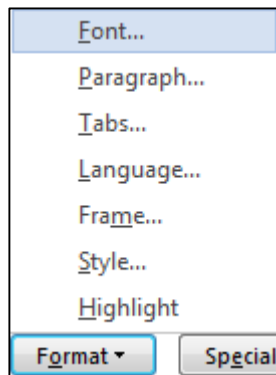
- j. Apply a heading style to each line that contains the word **Amendment** by doing the following:

1. In the **Find What:** box, type **Amendment**
2. With the insertion point still in the **Find What:** box, make sure the **Match case** and **Find whole words only** boxes are checked.
3. In the **Replace With:** box, clear any text or spaces so that the box is blank. Be sure the insertion point is in that box.
4. At the bottom of the **Find and Replace** window, click the **Format** button and then select **Style**. This will display a list of the styles available to this document.
5. Scroll down and click **Heading 1**.
6. Click **OK**.



7. Click **Replace All**. There should be 10 replacements. Click **OK**. All the amendment headings are changed to the **Heading 1** style.
- k. To see how replace works within paragraphs, tell Word to find only words that exactly match **The** by doing the following:
1. In the **Find What:** box, type **The**. Confirm that the **Find whole words only** box and the **Match case** boxes are checked. This will ignore words like **the**, which is not capitalized and **these** and **thereof** which have **the** embedded within them.
 2. Click in the **Replace With:** box and delete any text. Click **No Formatting** to remove the reference to the **Heading 1** style.

3. In the lower left corner of the **Find and Replace** window, click **Format** and select **Font**.



4. Change the font to red Arial Black. Click **OK**.
 5. Click **Replace All**. There should be only 3 changes. Click **OK** and then close **Find and Replace**.
 6. Save the document but do not close it.
- I. Excel can sometimes be used to help edit text for Word documents. To see how this works, do the following:
1. Navigate to your Word Files folder and double click the file **HW08-3 List of 1789 Senators Original**. This is a **pdf** file that contains the names of the US Senators in March 1789 when the Bill of Rights was proposed. I downloaded these names from

http://www.senate.gov/artandhistory/history/common/briefing/senators_chronological.htm

This file is in **pdf** format so it can be easily read on any computer. You want to insert the names at the end of the Bill of Rights document and with the names in the form **FirstName LastName**.

As you will see on pages 251-253 of the textbook, you can open a pdf file directly from within Word and have Word convert it to a Word document so you can edit it. That conversion often takes a while and you need only a small part of the file so it is not worth the time.

2. Scroll to page 2 and select the lines with the names of the senators as of March 4, 1789 (**Bassett** through **Wingate**).

FIRST CONGRESS MARCH 4, 1789, TO MARCH 3, 1791			
Start of Initial Senate Service	Name/Party	End of Service	Rank
* * * 1789 * * *			
March 4	Bassett, Richard (Anti-Admin/Pro-Admin-DE)	March 3, 1793	1
	Butler, Pierce (Pro-Admin/Anti-Admin/R-SC)	October 25, 1796	2
	(Served again 1802)		
	Carroll, Charles (Pro-Admin-MD)	November 30, 1792	3
	Dalton, Tristram (Pro-Admin-MA)	March 3, 1791	4
	Ellsworth, Oliver (Pro-Admin/F-CT)	March 8, 1796	5
	Elmer, Jonathan (Pro-Admin-NJ)	March 3, 1791	6
	Few, William (Anti-Admin-GA)	March 3, 1793	7
	Grayson, William (Anti-Admin-VA)	March 12, 1790	8
	Gunn, James (Anti-Admin/F-GA)	March 3, 1801	9
	Henry, John (Pro-Admin/F-MD)	November 28, 1797	10
	Izard, Ralph (Pro-Admin-SC)	March 3, 1795	11
	Johnson, William S. (Pro-Admin-CT)	March 4, 1791	12
	Langdon, John (Pro-Admin/Anti-Admin/R-NH)	March 3, 1801	13
	Lee, Richard Henry (Anti-Admin-VA)	October 8, 1792	14
	Macclay, William (Anti-Admin-PA)	March 3, 1791	15
	Morris, Robert (Pro-Admin-PA)	March 3, 1795	16
	Paterson, William (Pro-Admin-NJ)	November 13, 1790	17
	Read, George (Pro-Admin-DE)	September 18, 1793	18
	Schuyler, Philip John (Pro-Admin-NY)	March 3, 1791	19
	(Served again 1797)		
	Strong, Caleb (Pro-Admin/F-MA)	June 1, 1796	20
	Wingate, Paine (Anti-Admin-NH)	March 3, 1793	21

3. Tap **Ctrl + c**.

4. Open a new blank **Excel** file. Be sure cell **A1** is active. On the **HOME** tab, in the **Clipboard** group, click the **Paste** down arrow, and select **Keep Text Only**.

5. Autofit column **A**.

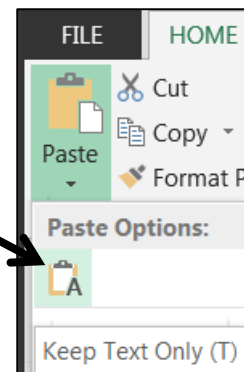
6. Delete the following:

- In row 1, delete **March 4 <space>**
- Delete the entire row 3 (**Served again 1802**). Now, **Butler, Pierce** is in row 2.
- Delete the entire row 20 (**Served again 1797**).

Now, all 21 remaining rows have this same pattern:

LastName, FirstName (stuff in parentheses) Date Number

7. In **B1** type **Richard** and tap **Enter**.



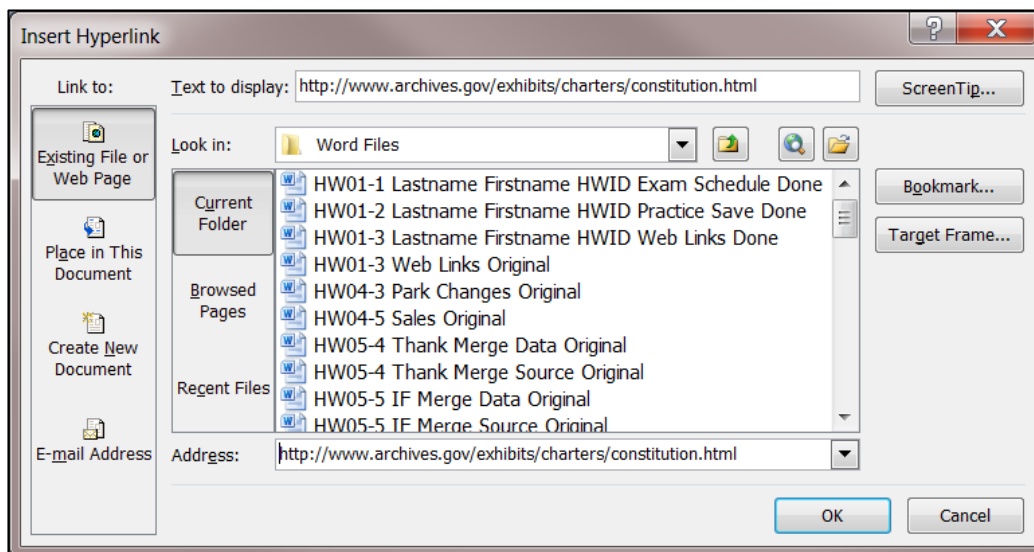
8. On the **HOME** tab, in the **Editing** group, click the **Fill** down arrow and select **Flash Fill**. This will enter the first names in column **B**.
9. In **C1** type **Bassett** and tap **Enter**.
10. On the **HOME** tab, in the **Editing** group, click the **Fill** down arrow and select **Flash Fill**. This will enter the last names in column **C**.

	A	B	C
1	Bassett, Richard (Anti-Admin/Pro-Admin-DE) March 3, 1793 1	Richard	Bassett
2	Butler, Pierce (Pro-Admin/Anti-Admin/R-SC) October 25, 1796 2	Pierce	Butler
3	Carroll, Charles (Pro-Admin-MD) November 30, 1792 3	Charles	Carroll

11. In **D1** enter a formula to concatenate **FirstName space Lastname**.⁴¹
 12. Fill the formula down to row **21**.
 13. Copy **D1:D21**.
 14. Switch back to **HW08-3 Lastname Firstname HWID Bill of Rights Done**
 15. Tap **Ctrl + End** to go to the end of the document.
 16. Tap **Enter**.
 17. Type **Names of Senators in March, 1789** and on the **HOME** tab, in the **Styles** group, click the **Heading 1** style.
 18. Tap **Enter**.
 19. Use **Paste Special** to paste the names as text only.
 20. Select the names and remove the space before each paragraph.
 21. Save the document **HW08-3 Lastname Firstname HWID Bill of Rights Done** but do not close it.
- m. If your document will be read online it may be useful to include hyperlinks to web sites so that the user can go directly there with a single mouse click. The process in Word is similar to the one you used in Excel.
1. In the blank line under **Ratified December 15, 1791**, type the following:
The Constitution may be viewed at
<http://www.archives.gov/exhibits/charters/constitution.html>
 2. Remove the first line indent, if necessary.

⁴¹ The formula is **=B1&" "&C1**

3. Select the web address and tap **Ctrl + k**. This is the shortcut for **Insert Hyperlink**. You can also click **Hyperlink** on the **INSERT** tab.



The top box shows the text that will be displayed. Leave that as is so if someone is reading a printed copy he will be able to see what to type to get to the web page. The bottom box has the actual web address. That is where you want to send the user when she clicks the link in the online document.

4. Click **OK**. The hyperlink is created and the style for the web address is automatically set to **Hyperlink** (underlined blue text). Click the hyperlink and a screen tip will appear.

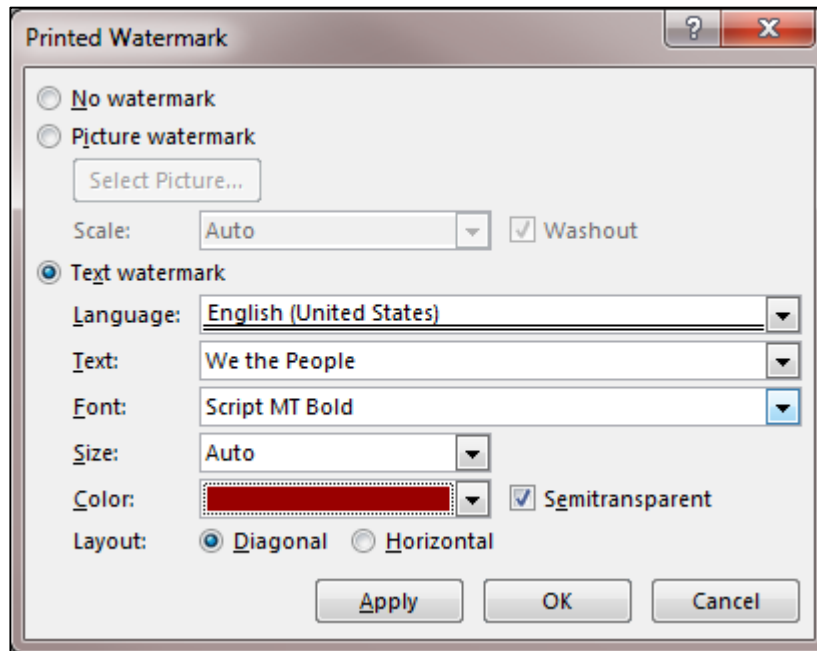


5. Hold down the **Ctrl** key and click the hyperlink and your web browser will open and take you to the web site.



6. Use the **Snipping Tool** to copy to the clipboard the image of the first page of the Constitution.
 7. Close the web browser.
 8. Paste the screenshot in the second page of the Bill of Rights document. Change the height to 4 inches and set the **Wrap Text** to **In Front of Text**. Move the image so that it is in the lower right corner of the page.
- n. Put some text in the background of the document.
1. On the **DESIGN** tab, in the **Page Background** group, click **Watermark** and select **Custom Watermark**.
 2. Click the button to the left of **Text** watermark.
 3. In the **Text** box type **We the People**
 4. In the **Font** box, select the **Script MT Bold** font (if that is not available, pick another font).

5. In the **Color** box, select dark red and leave **Semitransparent** checked.



6. Click **OK**.

- o. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print **page 2 only**, save the document and close it. Close the Excel document **Book1** without saving it.

HW08-4 Park

Problem: How can you create an eye-catching memo that includes tables?

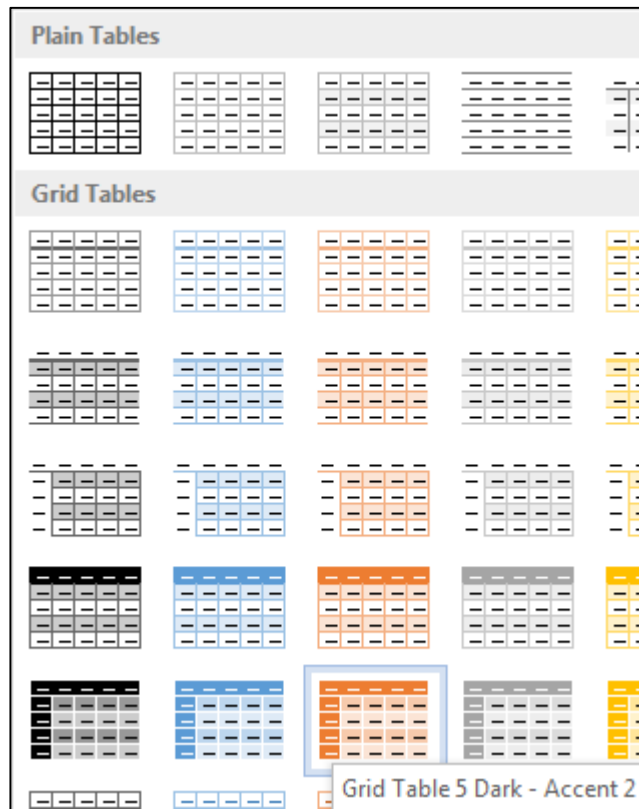
- Open the document **HW08-4 Park Original**, which is one of the files you copied at the start of the term.
- Save the document in the **Word Files** folder using the name **HW08-4 Lastname Firstname HWID Park Done**.
- Insert a footer that contains the name of the file.
- To the right of **DATE** in line 3, enter **PrintDate** field code. Use the format **Day, Month Date, Year**.
- Select the five lines starting with **Days, Open, Closes** through **Sunday...**
 - Set the left and first line indents to 0.5"
 - Change the commas to tabs. A quick way to do this is to select the lines and then use the **Replace** feature with a comma in the **Find what:** box and the tab code, **^t**, in the **Replace with:** box.
 - Set a right tab stop at 3" and a left tab stop at 3.75". Make the tab stops have dot leaders.

- f. Select the 5 lines of text starting with the line that has **Ave, One Day, Season Pass**. Convert the text to a table (**Insert, Table, Convert Text to Table**). If necessary, change the font to 12 pt Arial
- g. Format the table so that it looks like the following. The width of each column is 1.2 inches and the table is **centered** between the margins (select the whole table and click the **Center** icon in the **Paragraph** group of the **HOME** tab).

	Ave	One Day	Season Pass
Toddler	3 & under	Free	Free
Junior	4 to 11	\$19	\$89
Adult	12 to 59	\$39	\$129
Senior	60+	\$29	\$99

- h. Adjust the table at the bottom of the page, as follows:
1. Select the cells that are under the headings **Minimum height/age:** and **To be able to:** (there are 18 cells).
 2. Right-click, select **Table Properties**, and click the **Row** tab.
 3. Click the check box to the left of **Specify height:** and then type **0.3"** in the box to the right of **Specify height:**
 4. Choose **Exactly** from the drop down menu to the right of **Row height is:**
 5. Click the **Cell** tab.
 6. Under **Vertical alignment**, click **Center**.
 7. Click **OK**.
- i. Merge some cells by doing the following:
1. Click in the cell that contains **Speedway Go-Karts** and drag down to select the next two cells (so you have 3 cells selected).
 2. Right-click and select **Merge Cells**.
 3. Follow the same procedure to merge the cells for **Bumper Boats** and the two blank cells below it. As a shortcut, you can select the three cells and then tap **Ctrl + y** to have Word repeat your last action.
 4. Follow the same procedure to merge the cells for **Miniature Golf** and the two blank cells below it.
- j. Word allows you to change the orientation of text in a table. This is useful to save space or to fit a long row heading in a narrow column.
1. Select the cells that contain the three row headings on the left (**Speedway Go-Karts**, **Bumper Boats**, and **Miniature Golf**).
 2. Right-click the mouse and select **Text Direction** from the shortcut menu.
 3. Select the vertical orientation displayed on the left side of the **Orientation** area and click **OK**.

4. On the **HOME** tab, in the **Paragraph** group, click the center button  to center the text within the cells.
5. Change the width of the first column to 0.5.
6. Select the whole table, right-click, select **Table Properties**, click the **Cell** tab, and then click **Center** under **Vertical alignment** and click **OK**.
7. Select the whole table. Then, on the **TABLE TOOLS DESIGN** tab, in the **Table Styles** group, click the **More** button  and select the **Grid Table 5 Dark – Accent 2** design.



8. Center the table between the page margins.
- k. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the document, save it, and close it.

HW08-5 Sales

Problem: How can you insert a large amount of data into a table, format the table, and include calculation fields?

- a. Open the document **HW08-5 Sales Original**, which is one of the files you copied at the start of the term.
- b. Save the document in the **Word Files** folder using the name **HW08-5 Lastname Firstname HWID Sales Done**.

- c. Select the lines starting at **Date** and all the way down to the last line of data. Convert the data to a table.
- d. Format the table so numbers and dates are aligned on the right, headings are centered, and, if necessary, the columns are wide enough for the data without wrapping words.
- e. Click anywhere in the table and, on the **TABLE TOOLS LAYOUT** tab, in the **Data** group, click the **Sort** button to open the **Sort dialog** box.

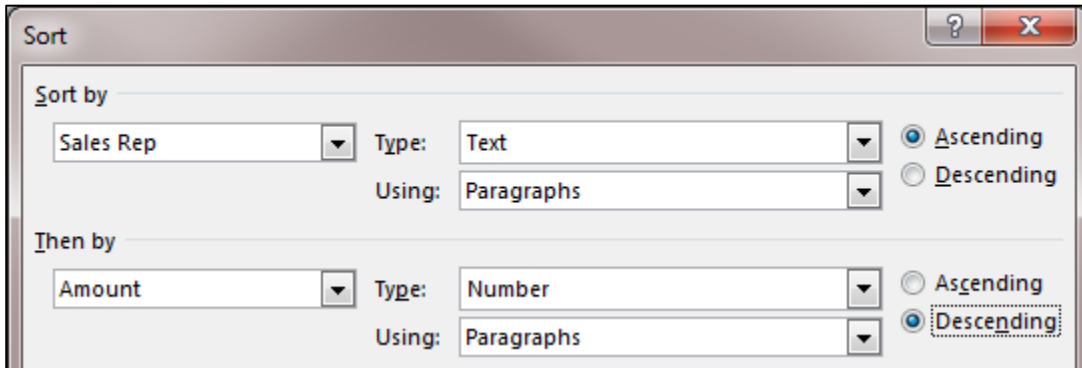
Make sure the **Ascending** option is checked and **Header row** is checked in the **My list has** area. Make sure **Date** is chosen in the **Sort by** box and, if necessary, choose **Date** in the **Type:** box.

The screenshot shows the 'Sort' dialog box with the following settings:

- Sort by:** Date (dropdown), Type: Date (dropdown), Ascending (selected radio button).
- Using:** Paragraphs (dropdown).
- Then by:** (empty dropdown), Type: Text (dropdown), Ascending (selected radio button).
- Using:** Paragraphs (dropdown).
- Then by:** (empty dropdown), Type: Text (dropdown), Ascending (selected radio button).
- Using:** Paragraphs (dropdown).
- My list has:** Header row (selected radio button), No header row (radio button).
- Buttons:** Options..., OK, Cancel.

- f. Click **OK**. The table should be sorted by the dates in the first column.
- g. Sort the table again, but this time by **Sales Rep** and, within **Sales Rep**, by **Amount** by doing the following:
 - 1. Click anywhere in the table and, on the **TABLE TOOLS LAYOUT** tab and in the **Data** group, click the **Sort** button to open the **Sort dialog** box. Make sure the **Header row** is checked in the **My list has** area.
 - 2. In the **Sort by** box, select **Sales Rep**. Notice that the **Type:** is automatically changed to **Text**.
 - 3. In the first **Then by** box, select **Amount**. If the **Type:** is not automatically changed to **Number**, make this change.

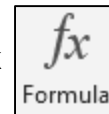
4. Choose **Descending** order for the **Amount** column.



5. Click **OK**. The data are sorted by **Sales Rep**, in alphabetical order, and, for each **Sales Rep**, the data are listed by amount from biggest to smallest.

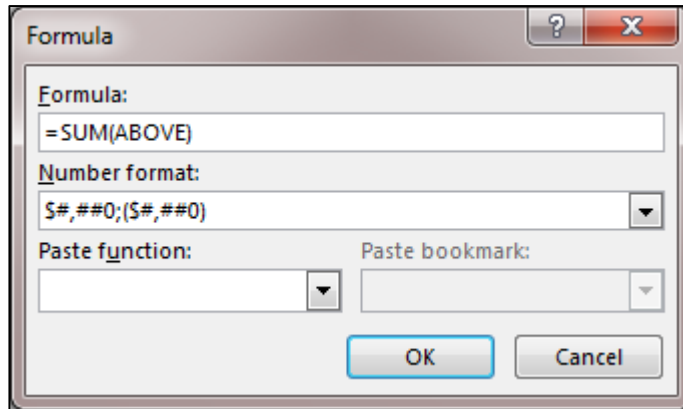
Date	Product	Amount	Sales Rep	Branch	Points
16-Jan	Certificate	50,000	Betsey	Main	400
26-Jan	Certificate	15,000	Betsey	Main	120
29-Jan	Savings	6,300	Betsey	Main	44
12-Jan	Savings	6,000	Betsey	Main	42
13-Jan	Certificate	25,000	Carolyn	Plymouth	200
22-Jan	Credit Card	2,000	Carolyn	Plymouth	16
30-Jan	Savings	1,450	Carolyn	Plymouth	10

- h. Have Word find the sum of the numbers in the **Amount** column and find the average of the numbers in the **Points** column by doing the following:
1. Add a row at the bottom of the table (click in the last cell and then tap **Tab**).
 2. Click the empty cell at the bottom of the **Product** column, type **Sum =** and then tap the **Spacebar**.
 3. Click the empty cell at the bottom of the **Branch** column, type **Average =** and then tap the **Spacebar**.
 4. Click the empty cell at the bottom of the **Amount** column.
 5. On the **TABLE TOOLS LAYOUT** tab, in the **Data** group, click the **Formula** button.

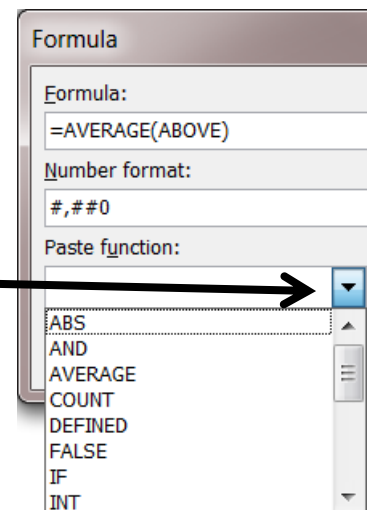


The **Formula** dialog box opens and displays **=SUM(ABOVE)** in the **Formula:** box.

6. Use the drop-down arrow at the end of the **Number format:** box to select the format for dollars. Since you do not want to display the decimal points, click in the **Number format:** box and delete the decimal points and trailing zeros.



7. Click **OK**. The sum of the numbers in the **Amount** column is displayed. If the formula itself is displayed, tap **Alt + F9** to show the actual sum.
8. Click the empty cell at the bottom of the **Points** column.
9. On the **TABLE TOOLS LAYOUT** tab, in the **Data** group, click the formula button. The **Formula** dialog box opens and displays **=SUM(ABOVE)** in the **Formula:** box. Replace the word **SUM** with the word **AVERAGE**. This tells Word to display the average of the numbers rather than the sum. You can see the other functions available by clicking the down arrow on the **Paste function:** box.
10. Use the drop-down arrow at the end of the **Number format:** box to select the format for numbers with no decimal places displayed.
11. Click **OK**. The average of the numbers in the **Points** column is displayed.



	Sum =	\$983,600		Average =	282

- i. If you change some of the data that a formula uses you can instruct Word to recalculate the result by selecting the formula and then tapping **F9**.

1. Click anywhere in the last row of the table, right click, click **Insert** and select **Insert Above**.



2. Add the following data to the blank row.

7-Jan	Checking	1,000	Sharon	Dexter	1000

To update the results of the formulas, select the row that contains the **Sum** and **Average** and tap **F9**. Notice that the **Sum** has increased by 1,000 and the **Average** has changed from 282 to 303.

3. To see the actual field codes, tap **Alt + F9**.

	Sum =	{ =SUM(ABOVE) \# "\$#,##0;(\$ #,##0)" }		Average =	{ =AVERAGE(A BOVE) \# "\$#,##0"

4. Tap **Alt + F9** again to show the results rather than the codes.

You can do calculations on specific parts of the table by thinking of it as an Excel worksheet and use Excel-like referencing. The columns are given the letters A, B, C, etc. and the rows are numbered 1, 2, 3, etc. So, the top of the table can be thought to look like this:

	A	B	C	D	E	F
1	Date	Product	Amount	Sales Rep	Branch	Points
2	16-Jan	Certificate	50,000	Betsey	Main	400
3	26-Jan	Certificate	15,000	Betsey	Main	120
4	29-Jan	Savings	6,300	Betsey	Main	44
5	12-Jan	Savings	6,000	Betsey	Main	42

If you want to find the sum of the amounts of only **C2:C4** you would replace **ABOVE** with **C2:C4** and then tap **F9** to recalculate. The result would be **\$71,300**.

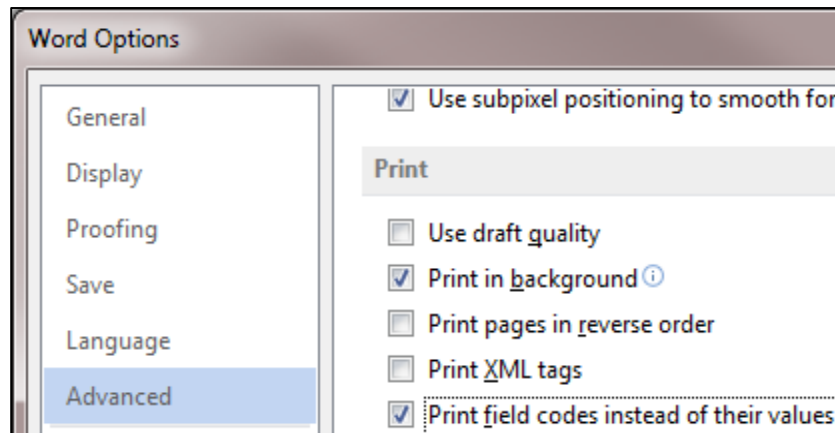
- j. Format the table by doing the following:

1. Center the table on the page.
2. Put a heavy (3 pt width) red border around the outside of the entire table and a dotted border on each cell on the inside.
3. Put a double line border between the column headings and the data.
4. Merge the cells that contain **Sum =** and **\$984,600**, right align the new merged cell, and shade the new merged cell yellow. Note that when you merge two cells Word will insert a paragraph mark and the values in the two cells will be on two separate lines. Delete that paragraph mark so **Sum =** and **\$984,600** appear on the same line.
5. Merge the cells that contain **Average =** and **303**, right align the new merged cell, and shade the new merged cell orange.

6. Remove part of the border on the two cells in the last row, as shown below:

7-Jan	Checking	1,200	Sharon	Dexter	6
7-Jan	Checking	1,000	Sharon	Dexter	1000
Sum = \$984,600				Average = 303	

- k. So that your printed output will show the field codes for the **Sum** and **Average**, on the **FILE** tab, click **Options**, click **Advanced**, scroll down to the **Print** group, and click the box next to **Print field codes instead of their values**.



Click **OK**.

- l. **Type** the name of the file in the footer. You cannot use a field code because you have set up the file to display the codes rather than the results.
- m. Tap **Ctrl + F2** and compare the preview with the key. Notice that the field codes will be printed rather than their values. This is what you want. Make needed corrections, print the document, save it, but **do not** close it.
- n. **Now, turn off field code printing by** clicking the **FILE** tab, then clicking **Options**, then clicking **Advanced**, scrolling down to the **Print** group, and clearing the check in the box next to **Print field codes instead of their values**.

Click **OK**.

- o. Save the document if needed and then close it.

HW08-6 Infections Memo

Problem: How can you create a memo that includes a table of data and a graph of those data?

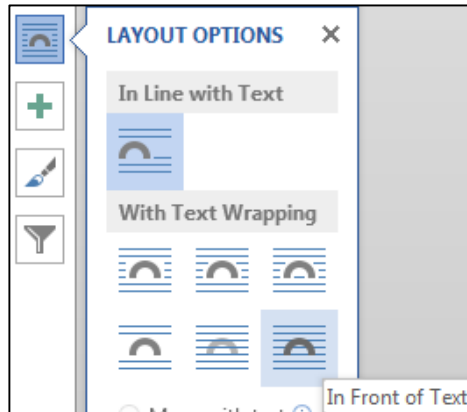
Excel tables and charts can be inserted into Word documents. Follow these directions to copy a data table and chart an Excel workbook.

- a. Open the document **HW08-6 Infections Memo Original**, which is one of the files you copied at the start of the term.
- b. Save the document in the **Word Files** folder as **HW08-6 Lastname Firstname Infections Memo Done**
- c. Replace **<your name>** with the field code for **UserName** (**INSERT**, **Text**, **Quick Parts**, **Field**, **UserName**). This will insert the name of the owner of the computer you are using (this may not be you if you are using a friend's computer or a computer in a lab).
- d. Replace **<today's date>** with the field code for the present date. Use the format that shows the day, month, date, and year. If you want to see the field codes, tap **F9**.

Memo
To: Infectious Diseases Foundation From: { USERNAME * MERGEFORMAT } Date: { DATE \@ "dddd, MMMM dd, yyyy" * MERGEFORMAT } Re: Data you requested Below please find the raw data and graphical interpretation of the infectious diseases model you requested we develop. Please contact me if you need further analysis.

- e. Copy information from an Excel workbook and paste it into the memo by doing the following:
 1. Open the Excel file **HW08-6 Infections Data Original**, which is one of the files you copied at the start of the term and is in the **Word Files** folder. You cannot open the file while you are in Word. Either start Excel and then open the file, or open your **Word Files** folder in Windows Explorer and double click the file name.
 2. Click the **Infections Data** tab and select **A1:C22**.
 3. Tap **Ctrl + c** to copy the data table.
 4. Switch to Word and tap **Ctrl + End** to move the insertion point to the bottom of the document.
 5. Tap **Ctrl + v** to paste the table into the memo.
 6. Switch to Excel and click the **Infections Chart** tab.
 7. Select the **Chart Area** (**CHART TOOLS FORMAT**, **Current Selection**, **Chart Area**).

8. Tap **Ctrl + c** to copy the chart.
 9. Switch to Word and tap **Ctrl + End** to move the insertion point to the bottom of the document.
 10. Tap **Ctrl + v** to paste the chart into the memo.
- f. Adjust the chart as follows:
1. Click once on the edge of the chart to select it.
 2. Click the **Layout Options** button and select **In Front of Text**.



3. On the **CHART TOOLS FORMAT** tab, in the **Size** group, click the **Dialog Box** launcher button and click the **Size** tab.
 4. In the **Scale** group, put a check in the box next to **Lock aspect ratio** so the relative height and width of the graph remains constant.
 5. Change the **Width** to 5".
 6. Click **OK**. The **Height** will automatically adjust to 3.63".
 7. Click the edge of the chart and drag it so that it is just to the right of the table.
- g. As you did with **HW08-5**, set the document so that the merge codes are printed.
- h. **Type** the name of the file in the footer. You should not use a field code because you have set up the file to display the codes rather than the results.
- i. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the document, save it, and close it. ***Be sure to set the document back to the normal state where the merge codes are not printed.***

Step 4 Submit You now are ready to submit your homework for grading.

1. Put your 6 homework papers in the following order:
 - HW08-1 Resume
 - HW08-2 Cover Letter
 - HW08-3 Bill of Rights
 - HW08-4 Park
 - HW08-5 Sales With Merge Codes Showing
 - HW08-6 Infections Memo With Merge Codes Showing
2. Cut out Submission Form 8 and put it on the top of the papers.
3. Staple the papers in the upper left corner.
4. Turn in the packet by the due date.

Step 5 Backup Now would be a good time to backup your files.

Project 9

Word Chapter 3: Research Papers, Newsletters, and Mail Merge

Step 1 Read Before turning on the computer, read the introductory material on pages 237-238 of the textbook.

Step 2 Activities Turn on the computer and open your textbook to page 239. Do all the steps of all the activities for this Chapter.

Step 3 Homework After you have completed the activities for this Chapter, return to this Study Guide, do the problems listed below, and turn them in for grading. *You do NOT have to print in color.*

HW09-1 Research Paper

Problem: How can you create a short research paper?

- Open the document [Lastname_Firstname_3A_Quantitative_Technology](#), which you created while following the directions in the textbook and saved on page 251.
- Save the document to your **Word Files** folder using the name [HW09-1 Lastname Firstname HWID Research Paper Done](#)
- Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print *page 4 only*, save the document and close it.

HW09-2 Newsletter

Problem: How can you create a newsletter?

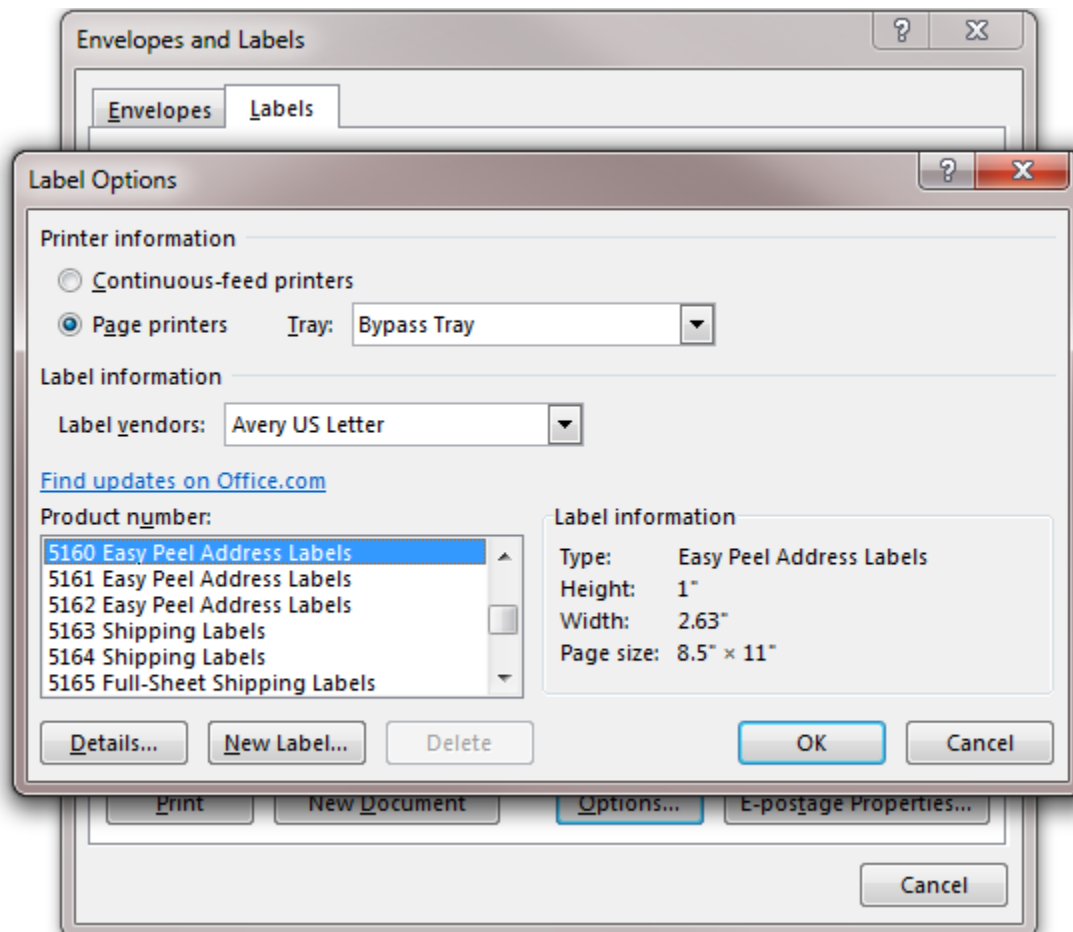
- Open the document [Lastname_Firstname_3B_Environment_Newsletter](#), which you created while following the directions in the textbook and saved on page 268.
- Save the document to your **Word Files** folder using the name [HW09-2 Lastname Firstname HWID Environment Newsletter Done](#)
- Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the document, save it, and close it.
- Open the document [Lastname_Firstname_3B_Mailing_Labels](#), which you created while following the directions in the textbook and saved on page 274.
- Save the document to your **Word Files** folder using the name [HW09-2 Lastname Firstname HWID Mailing Labels Done](#)
- Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the document, save it, and close it.

HW09-3 Home Address Labels

Problem: How can you create address labels?

In this project you will create labels that have your campus address. You can put these on your books, USB drive, etc. to identify them as yours. These are not mail merge labels because there is no data file involved.

- a. Start Word and open a blank document.
 1. On the **MAILINGS** tab, in the **Create** group, click **Labels**.
 2. Click the **Labels** tab and then **Options**. Under **Label vendors**, click **Avery US Letter** and then select **Avery 5160**.



Notice under **Printer information** **Page printers** is checked. That assumes you will put in blank label sheets one at a time in the Bypass Tray (usually Tray 1). If you want to print several sheets you can select **Continuous-feed printers**. You will fix this later for use in the classroom printer.

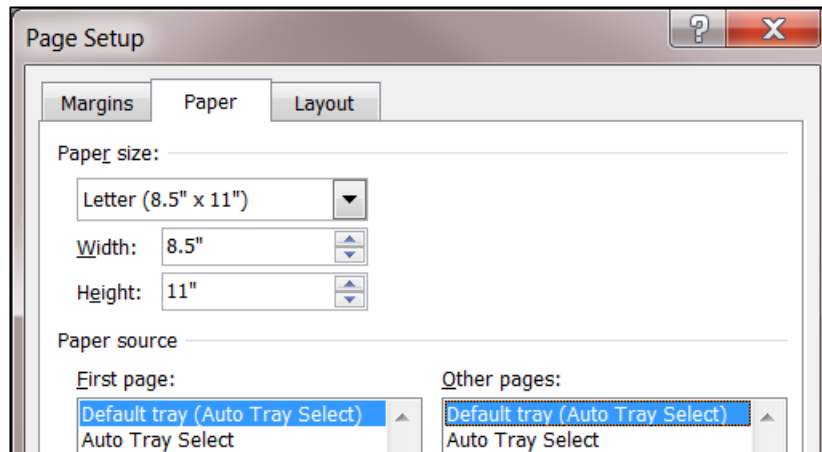
3. In the **Address** box, type something like following using your own information and adding anything you want.

Joe College
Room 203 Bailey Hall, St. Paul Campus
Campus mail code: 6017
651-555-1234
coll001@umn.edu

The screenshot shows the 'Envelopes and Labels' dialog box with the 'Labels' tab active. The address text is entered in the 'Address' field. The 'Print' section is set to 'Full page of the same label'. The 'Label' section shows the selected label type. The bottom buttons are 'Print', 'New Document', 'Options...', 'E-postage Properties...', and 'Cancel'.

4. Click **New Document**. A new document with the mailing labels is produced.
- b. Save the document in the **Word Files** folder using the name **HW09-3 Lastname Firstname HWID Home Address Labels Done**
- c. Insert a footer that contains the name of the file.
- d. Delete the row of labels on page 2 so that the document is one page in length. If you were actually going to print these labels on label paper you would not add a footer to the document and so you would not have to delete any rows.

- e. Print the document on regular paper by doing the following:
1. On the **PAGE LAYOUT** tab, in the **Page Setup** group, click the open dialog button.
 2. Click the **Paper** tab.
 3. Under **Paper source** change the setting to **Auto Tray Select** so the printer will not wait until you put a blank sheet of labels in its bypass tray. You will print on regular paper from the normal source.



4. Click **OK**. If you get a caution message about the margins being outside the printing area, click **Ignore**.

You are going to print on regular paper rather than actual labels. When you want to print actual labels you should print on regular paper first and then check to see if the printed labels line up properly with the labels on the sheet. Often, you will have to make minor adjustments due to differences in printer characteristics. Printing on paper first will save you the cost of label sheets you might have to throw away.

- f. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the document, save it, and close it.

HW09-4 Name Tag Labels

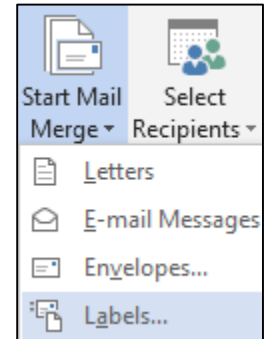
Problem: How can you create individual name tags?

In this project you will create labels to be used as name tags at a college orientation session.

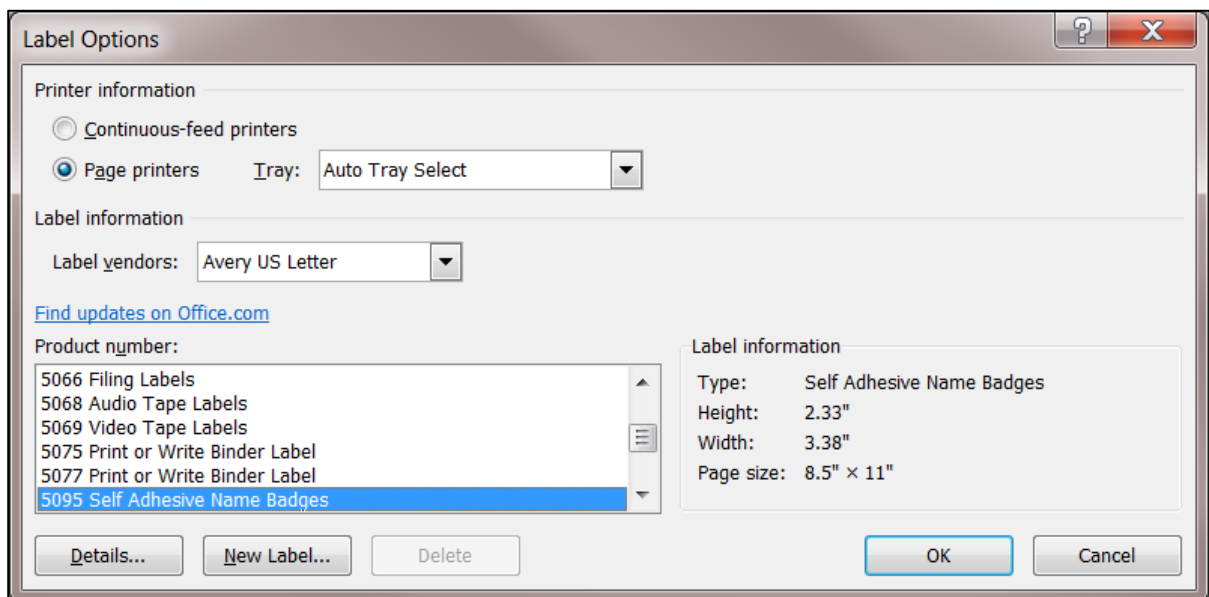
a. Create the blank labels.

1. Start Word.
2. On the **MAILINGS** tab, in the **Start Mail Merge** group, click **Start Mail Merge** and select **Labels**.

Notice you are not selecting **Labels** from the **Create** group, which makes all the labels the same. For this project, you want each label to have different information.



3. Select the **5095 Self Adhesive Name Badges**. These are described in detail on the Avery.com web site.
4. In the **Printer information** area, in the **Tray** box, select **Auto Tray Select** so the printer will not wait until you put a piece of paper in its bypass tray.



5. Click **OK**.

b. Save the document to your **Word Files** folder using the name **HW09-4 Lastname Firstname HWID Name Tag MAIN Done**

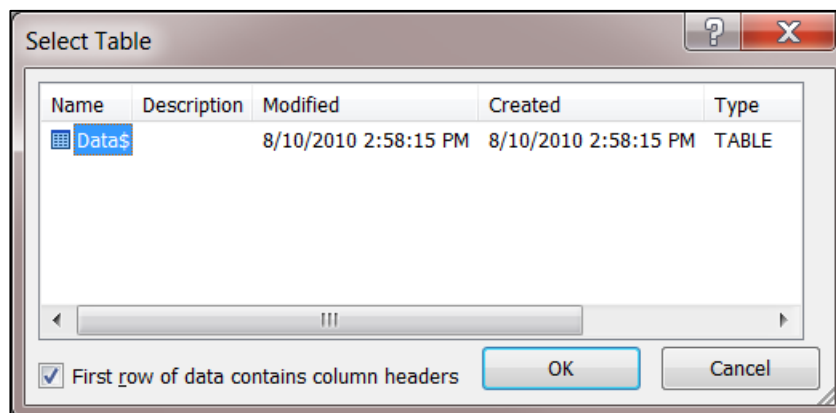
It is good practice to use the word **MAIN** in the name of a mail merge file to indicate that this is the main document into which the data from the **DATA** document will be inserted.

c. Select the data file by doing the following:

1. On the **MAILINGS** tab, in the **Start Mail** merge group, click **Select Recipients**, and then **Use Existing List**.
2. Navigate to your **Word Files** folder and select **HW09-4 Name Tag Labels DATA Original**. It is good practice to use the word **DATA** in the name of a mail merge data file to indicate that it contains the data for a main file. This data file is an Excel file where the first row contains the names of the merge fields. You could copy the data and paste it into a new Word document but that is not necessary.

	A	B	C	D	E	F	G
1	First	Last	Major	Interest1	Interest2	Interest3	Dorm
2	Jill	Barnum	English	Flute	Walking	Gardening	Bailey
3	Sue	Vanage	Biology	Band	Jogging		Territorial
4	Bill	Gates	Computer Science	Money	Money	Money	
5	Barak	Obama	Political Science	Community Service	Sports		
6	Albert	Einstein	Physics	Special Relativity	General Relativity	Photons	Territorial
7	Will	Shakespeare	English	Poetry	Plays		Bailey

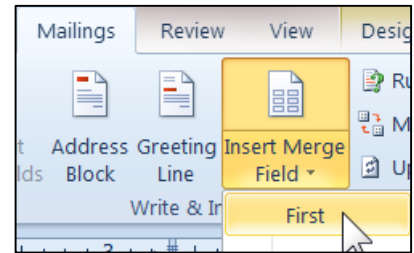
3. Click **Open**.



4. Click **OK**.
5. On the **FILE** tab, click **Options**, click **Advanced**, scroll down to the **Show document content** group and verify that the **Field shading** box is set to **Always**. This allows you to easily distinguish between normal text and text that is displayed by a field.

d. Insert the field codes.

1. Click the upper left corner of the first cell in the table.
2. Type **Hello, my name is** and then tap the **Spacebar**
3. On the **MAILINGS** tab, in the **Write & Insert Fields** group, click **Insert Merge Field** and select **First**



The code for the person's first name is inserted.

Hello, my name is «First»	«Next Record»

4. Click **Preview Results** to see what will be inserted when the merge is carried out.

Hello, my name is Jill	

5. Tap **Alt + F9** to see the actual field codes.

Hello, my name is { MERGEFIELD First }	{ NEXT }

6. Type the text and insert the fields as shown below. Remember that to insert a tab within a table cell you tap **Ctrl + Tab** rather than **Tab** because tapping **Tab** will send you to the next cell or add a row to the bottom of a table.

Hello, my name is { MERGEFIELD First } My major is { MERGEFIELD Major } My interests are → { MERGEFIELD Interest1 } → { MERGEFIELD Interest2 } → { MERGEFIELD Interest3 }	{ NEXT }

- e. In the data file some of the Dorm information is missing and the campus of the dorm not given. Word can use an **IF/THEN/ELSE** structure similar to the one in Excel to help with a situation like that.
1. Click in the blank line at the bottom of the first cell. On the **MAILINGS** tab, in the **Write & Insert Fields** group, click the **Rules** button and select **If...Then...Else**.
 3. Set the dialog as follows. Leave the **Otherwise insert this text** box blank.

Insert Word Field: IF

IF

Field name: Comparison: Compare to:

Insert this text:

I live in Bailey Hall on the St. Paul Campus

This is says that if the **Dorm** field is **Bailey** then **I live in Bailey Hall on the St. Paul Campus** will be displayed. Otherwise, nothing will be displayed.

4. Click **OK**.

Hello, my name is { MERGEFIELD-First }
 My major is { MERGEFIELD-Major }
 My interests are
 → { MERGEFIELD-Interest1 }
 → { MERGEFIELD-Interest2 }
 → { MERGEFIELD-Interest3 }
 { IF { MERGEFIELD-Dorm } = "Bailey" "I live in Bailey Hall on the St. Paul Campus" "" }

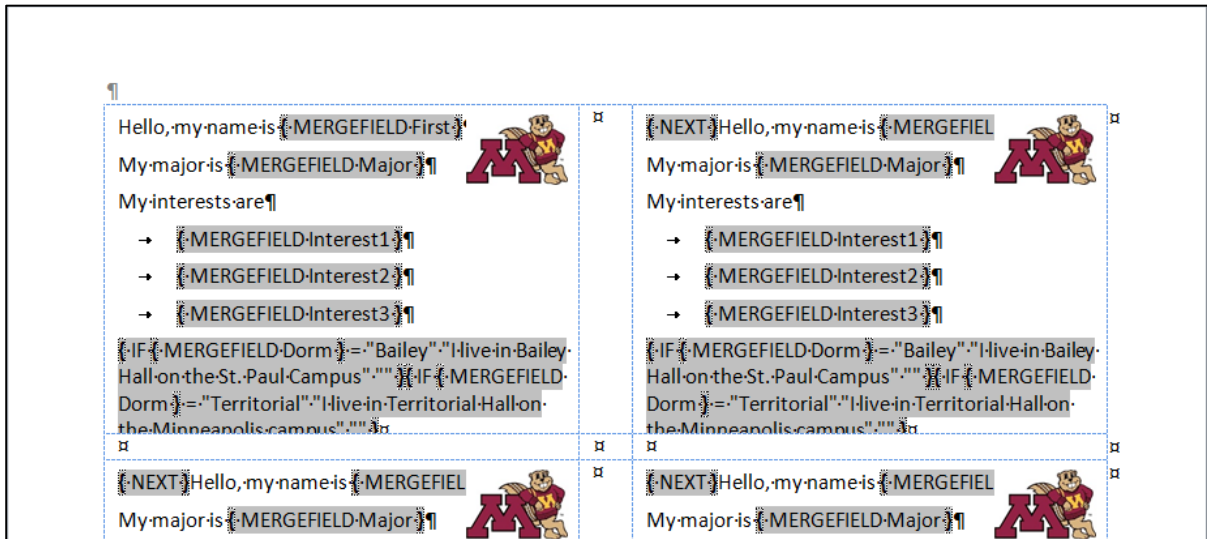
Notice that the code for the **IF/THEN/ELSE** rule has a form that is similar to an Excel **IF** function. Where Excel uses a comma to separate the three parts Word uses a space.

Excel: **=IF(A1="Bailey","I live in Bailey Hall on the St. Paul Campus",")**

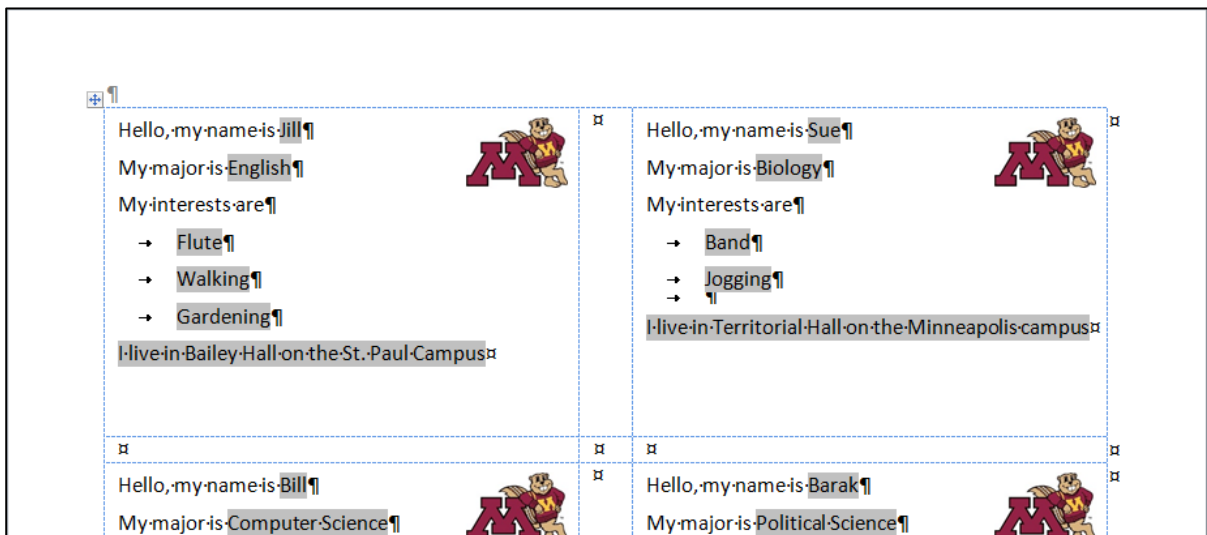
Word: **{ IF { MERGEFIELD Dorm } = "Bailey" "I live in Bailey Hall on the St. Paul Campus" "" }**

5. Enter a similar rule for Territorial Hall. You could go through a similar process as you did for Bailey Hall or you could simply copy the rule for Bailey Hall, paste it, and then change **Bailey** to **Territorial** and **St. Paul** to **Minneapolis**.

- f. Add an image to the labels.
1. Click to the left of **H** in **Hello**.
 2. On the **INSERT** tab, in the **Illustrations** group, click **Pictures**.
 3. Navigate to the **Word Files** folder and select the picture of **Goldie (HW07-2 UM Logo Original)**. Or, choose any other picture you wish.
 4. Click **Insert**.
 5. Double-click the image and change its height to **0.5** inch.
 6. Click the **Wrap text** button and select **In Front of Text**.
 7. Move the image to the upper right corner of the first cell.
 8. On the **MAILINGS** tab, in the **Write & Insert Fields** group, click **Update Labels** to copy this cell to all the other cells.



9. Tap **Alt + F9** to preview the results (click **Preview Results** if necessary).



- g. Insert a footer that contains the name of the file.

- h. Delete the row of labels on page 2 so that the document is one page in length.
- i. On the **PAGE LAYOUT** tab, in the **Page Setup** group, click the open dialog button, and click the **Paper** tab. Under **Paper source** if necessary, change the setting to **Auto** tray. Click **OK**. If you get a message about the margins being off, click **Ignore**.
- j. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the document, save it, and close it.

HW09-5 Thank Merge

Problem: How can you create individualized thank you notes that can be automatically emailed to people?

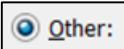
Each October, the University sponsors a Community Fund Drive to encourage employees to donate to charitable organizations such as the United Way. As the person in charge of the CEHD effort, I download contact information from the University Data Warehouse and use mail merge to send individual solicitations to each of CEHD's 850 employees (I do the same to send progress reports to my 300 students every few weeks). In this exercise you will use mail merge to send individual letters to people thanking them for contributing and telling them how to enter a prize drawing. Addressing letters or emails individually increases the reader's interest and the likelihood of his or her reading it.

- a. Open the file **HW09-5 Thank DATA Original**, which is one of the files you copied at the start of the term. This contains the names and email addresses of the people to whom you wish to send the letter.

- b. Save the document to your **Word Files** folder using the name **HW09-5 Lastname Firstname HWID Thank DATA Done**.

- c. Convert the paragraphs into a table:

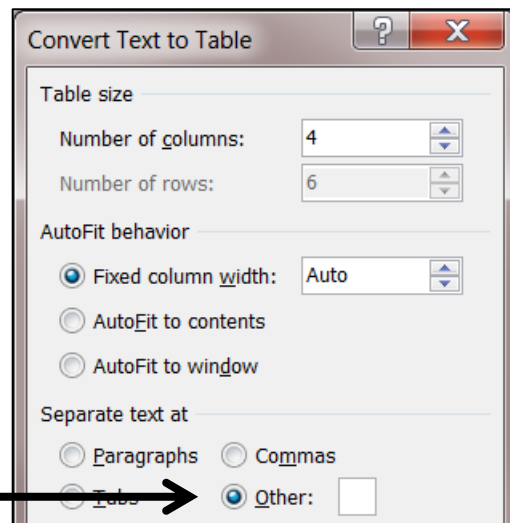
1. Select all 6 paragraphs and then, on the **INSERT** tab, in the **Table** group, click **Convert Text to Table**.

2. Click  and then put a space in the box. This tells Word to make separate columns when it sees a space.

3. Click **OK**.

- d. Modify the table as follows:

1. Apply a colorful style to the table (your choice).
2. Use the Replace feature to remove the commas (put a comma in the **Find what:** box and leave the **Replace with:** box empty).



3. Adjust the table so the rows are exactly 0.5 inches high (**TABLE TOOLS, LAYOUT, Cell Size, Height**).
4. Center the text vertically within the rows (**TABLE TOOLS, Layout, Properties**).
5. Center the table on the page.
6. Make the width of the last column, **Priority**, 0.8 inches.
7. Center horizontally the text in the column labeled **Priority**.
8. Sort the data by **Priority** in descending order and then, within **Priority**, by **Last** in ascending order.
9. Insert a column between the **Email** and **Priority** columns and enter the data as shown below. Center the text within the cells vertically so the new cells match the other cells.

First	Last	Email	Category	Priority
Joyce	Banch	banc001@umn.edu	Hi	3
Doug	Robertson	droberts@umn.edu	Med	3
Sue	Sherro	sher001@umn.edu	Hi	2
Kathy	Osterberg	oste001@umn.edu	Low	1
Alan	Samek	same001@umn.edu	Med	1

- e. Insert a footer that contains the name of the file.
- f. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the document, save it, and close it.
- g. Open the document **HW09-5 Thank MAIN Original**, which is one of the files you copied at the start of the term. This contains the letter you want to send to the individuals listed in the data file.
- h. Save the document to your **Word Files** folder using the name **HW09-5 Lastname Firstname HWID Thank MAIN Done**
- i. Insert a footer that contains the name of the file.
- j. In the third paragraph, select **Community Fund Drive** and create a hyperlink to its web site. The Web address is <http://www1.umn.edu/cfd/>. Include a screen tip that says **CFD Web site home page**.

- k. On the **MAILINGS** tab, in the **Start Mail Merge** group, click the **Start Mail Merge** button and select **Letters**. This tells Word you want to create a set of letters or emails that will go to the people whose names are on the data file.
- l. On the **MAILINGS** tab, in the **Start Mail Merge** group, click the **Select Recipients** button and select **Use Existing List**.

Navigate to the file **HW09-5 Lastname Firstname HWID Thank DATA Done**, which you just created, and double click its name.

- m. Insert the mail merge codes.

1. Select the red text **ReplaceWithFirstNameField**. This shows you where you are going to insert the first mail merge field code. Delete the text.
2. On the **MAILINGS** tab, in the **Write & Insert Fields** group, click the down arrow of the **Insert Merge Field** button and select **First**.



This will insert the field code **<First>**. When the data are merged into the document, the first names in the data file will be inserted at this location for each individual letter created.

3. Go to the bottom of the document and repeat the process for the following text:

ReplaceWithFirstNameField

ReplaceWithLastNameField

Be sure to insert a space between the first name and last name field codes.

I Gave to the Community Fund Drive

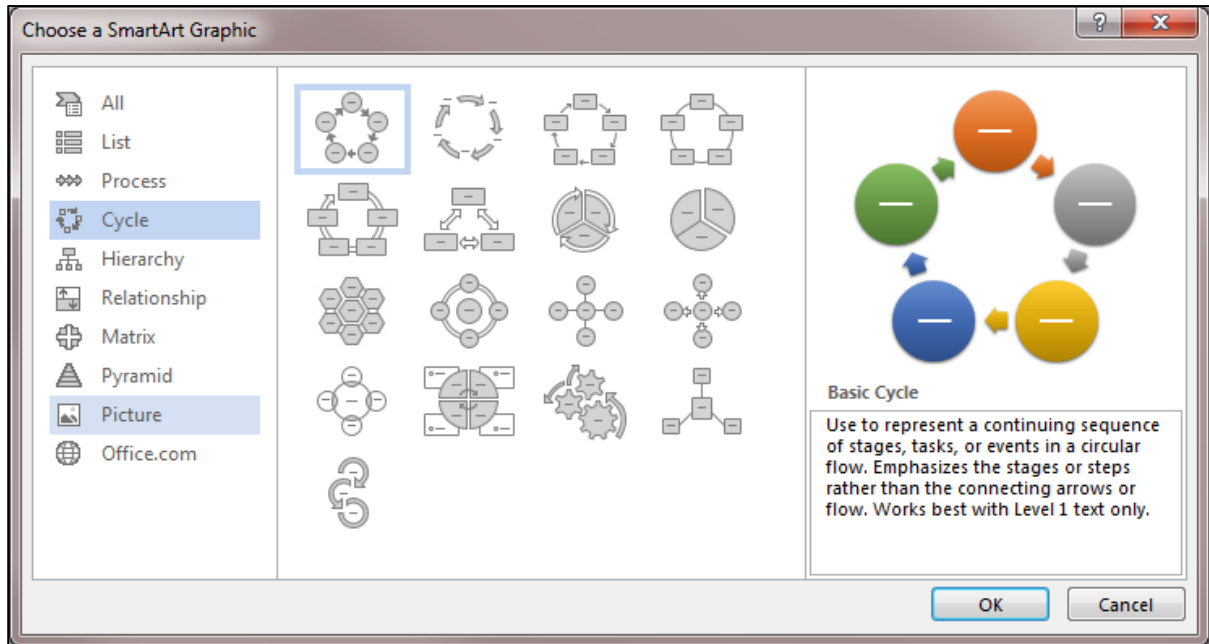
<First>:

When you send in your contribution to the **Community Fund Drive**, please drop this card in the fish bowl in the mail room. This will help us keep track of the number of contributions that have come in and it will tell us if you want to be in the raffle for prizes. If you do not want to be included in the drawing for prizes, check here:

If you do not want to be included in the All University drawing for prizes, check here:

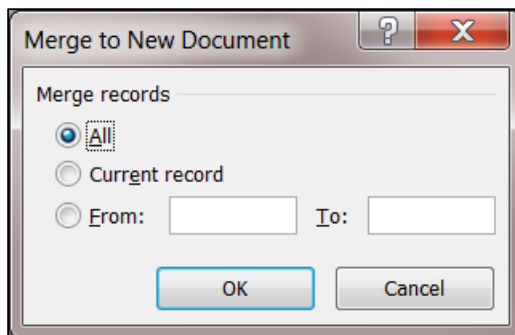
<First> <Last>

- n. Insert a **SmartArt** graphic by doing the following:
 1. Tap **Ctrl + End** to move to the bottom of the document.
 2. On the **INSERT** tab, in the **Illustrations** group, click the **SmartArt** button.
 3. Click the **Cycle** button and click the upper left selection, **Basic Cycle**



4. Click **OK**.
 5. In the first four bullets, type the following: **I help him, He helps her, She helps them, They help me**. Delete any other bullets so you have only four.
 6. On the **SMARTART TOOLS DESIGN** tab, in the **SmartArt Styles** group, click the **Change Colors** button and choose a colorful design (your choice).
 7. Change the font to 16 pt Arial Black.
 8. Click outside the **SmartArt** box to deselect it. Be sure the Preview Results button is **not** highlighted so that the field codes are visible.
- o. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the document and save it but **do NOT close** it.

- p. On the **MAILINGS** tab, in the **Finish** group, click the **Finish & Merge** button and select **Edit Individual Documents**. A dialog box appears allowing you to merge the data and the main file.

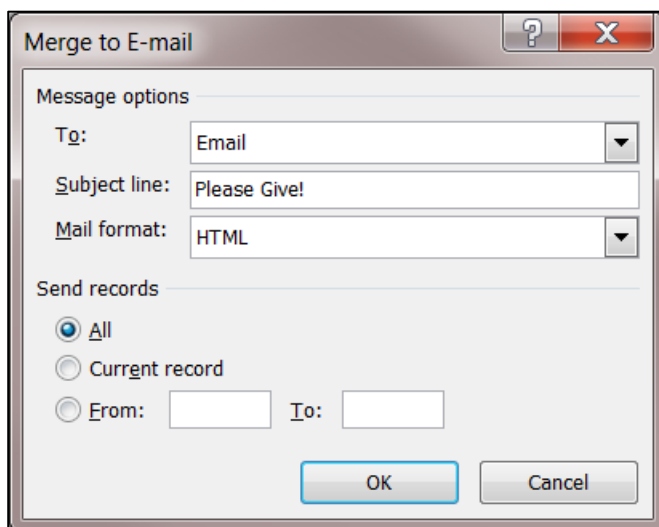


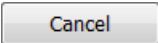
Be sure the **All** button is checked, and then click **OK**. This will produce a new document that contains a letter for each of the people listed in the data document. The new document will have the name **Letters1**.

Scroll through the new document and you should see 5 letters, one each to **Joyce, Doug, Sue, Kathy, and Alan**. To save paper, **do NOT print** the document. Close the document **without** saving it.

- q. You can also merge the letters to individual emails that can be sent electronically to the recipients.

To do an email merge (**DO NOT ACTUALLY DO THIS**), on the **Finish & Merge** drop down menu you would select **Send E-mail Messages** (instead of **Edit Individual Documents**). This would display the **Merge to E-mail** dialog box. To send the emails to the outbox of your mail program you would type in a subject and then click **OK** (do **NOT** do that).



Cancel this operation by clicking  and close the document without saving it.

- r. Close **HW09-5 Lastname Firstname HWID Thank MAIN Done** and save it if necessary.

HW09-6 IF Merge

Problem: How can you create customized letters or emails that will send different information to different people depending on given conditions?

In this exercise you will set up an email that offers a deal on magazine subscriptions to **Sports Illustrated** for men and **Ms. Magazine** for women. Also, you will display a different shipping and handling charge depending on the zip code of the person.

- a. As is always the case, the data file might have errors or missing data or unexpected data. You have to know the sex of the person in order to offer the correct magazine. The title **Mr.** clearly indicates a man while **Ms.**, **Miss**, or **Mrs.** clearly indicates a woman. But what if the title is missing, or if it is listed as **Dr.** or **Professor**? In those cases you would want to skip the record entirely. Unfortunately, Word mail merge does not have an **OR** function like Excel so you cannot easily skip records based on multiple criteria. To get around this problem you will paste the data into Excel and then create a function to determine the person's sex, where possible. Do the following:
 1. Open the document **HW09-6 IF Merge DATA Original**, which is one of the files you copied at the start of the term.
 2. Save the document to the Word Files folder using the name **HW09-6 Lastname Firstname HWID IF Merge DATA Done**.
 3. Copy the data, start Excel, and paste the data as text starting in **A1**.
 4. In **H1** type **Sex**.
 5. In **H2** enter an Excel formula that will display:
Male if the title in **A2** is **Mr.**
Female if the title in **A2** is **Ms.**, **Miss**, or **Mrs.**
Unknown if neither of the above is true (that is, the sex is not obvious).
 6. Fill the formula in **H2** down to **H39**.

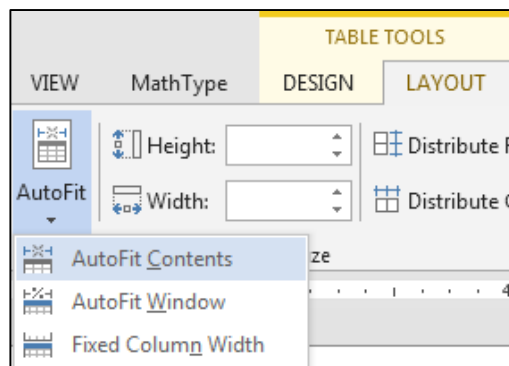
H2	=IF(A2="Mr.,"Male",IF(OR(A2="Ms.",A2="Miss",A2="Mrs."),"Female"),"Unknown"								
	A	B	C	D	E	F	G	H	I
1	Title	LastName	FirstName	Address	City	State	Zip	Sex	Sex using nested IF
2	Mr.	Anderson	Eric	619 4th St. NE apt. 1	Robbinsdale	AZ	85375	Male	Male
3	Ms.	Arias	Jennifer	1522 Colleen Ave	Syosset	NY	11791	Female	Female
4	Miss	Aure	Sue	601 West 104th Street	Renton	WA	98059	Female	Female
5	Dr.	Ayu	Alexander	60 70th Way NE	Reston	VA	20191	Unknown	Unknown

Above, I used the **OR** function but the following formula with nested **IF** functions does the same thing:

=IF(A2="Mr.,"Male",IF(A2="Ms.,"Female",IF(A2="Miss","Female",IF(A2="Mrs.,"Female"),"Unknown"))))

Now you have a clean set of data. If it is important, you could eyeball the data and manually enter the sex of the **Unknown** people, if possible. For example, Dr. Alexander Ayu most likely is a man so you could type **Male** in **H5**. However, Terry Bagha could be either male or female so you are out of luck there. With 50 names cleaning the data would take 2 minutes; with 50,000 names it might not be worth the time and money. That is why it sometimes is difficult to have data about yourself corrected (say your social security number or date of birth) — it is difficult and costs too much if the database is large.

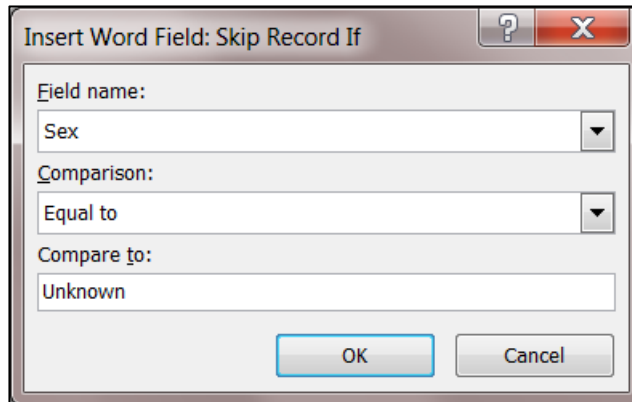
7. Copy **A1:H39**, switch to Word, tap **Ctrl + A** to select everything, tap **Delete**, and finally tap **Ctrl + v** to paste the new data. It will paste as a table but that is fine.
8. Select the table and, on the **TABLE TOOLS LAYOUT** tab, in the **Cell Size** group, click **AutoFit** and select **AutoFit Contents**.



9. Save and close **HW09-6 Lastname Firstname HWID IF Merge DATA Done**
 10. Save the Excel file using the name **HW09-6 Lastname Firstname HWID IF Data Cleaned Done** and then close it.
- b. Set up the mail merge main file by doing the following:
1. Open the document **HW09-6 IF Merge MAIN Original**, which is one of the files you copied at the start of the term.
 2. Save the document to the **Word Files** folder using the name **HW09-6 Lastname Firstname HWID IF Merge MAIN Done**
 3. Insert a footer that contains the name of the file.
 4. On the **MAILINGS** tab, in the **Start Mail Merge** group, click **Start Mail Merge** and select **Letters**.
 5. On the **MAILINGS** tab, in the **Start Mail Merge** group, click **Select Recipients** and select **Use Existing List**. Navigate to your **Word Files** folder and double-click **HW09-6 Lastname Firstname HWID IF Merge DATA Done**.
 6. Replace the red text **Title**, **FirstName**, **LastName**, **Address**, **City**, **State**, **ZIP** with their merge field codes (**MAILINGS**, **Write & Insert Fields**, **Insert Merge Field**).

c. Create the mail merge by doing the following:

1. You want to skip records where the **Sex** is **Unknown**. Be sure the insertion point is at the top of the document and then, on the **MAILINGS** tab, in the **Write & Insert Fields** group, click **Rules** and select **Skip Record If...**
2. Select **Sex** for the **Field name**, select **Equal to** for the **Comparison**, and type **Unknown** for the **Compare to** boxes.



3. Click **OK**.
4. Select the red text **MagazineChoice**.
5. On the **MAILINGS** tab, in the **Write & Insert Fields** group, click **Rules** and select **If...then...Else**.
6. Choose **Sex** from the **Field name** menu and **Equal to** from the **Comparison** menu. Type **Male** in the **Compare to** box. Type **Sports Illustrated** in the **Insert this text** box. Leave the **Otherwise...** box empty and click **OK**.
7. Choose **Sex** from the **Field name** menu and **Equal to** from the **Comparison** menu. Type **Female** in the **Compare to** box. Type **Ms. Magazine** in the **Insert this text** box. Leave the **Otherwise...** box empty and click **OK**.

8. The prices of the two magazines are different. Sports Illustrated costs \$15.99 while Ms. Magazine costs \$13.99. So, follow the same procedure as above to replace the red word **Price** with the following:

Insert Word Field: IF

IF

Field name: Sex Comparison: Equal to Compare to: Male

Insert this text: \$15.99

Otherwise insert this text: \$13.99

OK Cancel

9. In the same way, replace the red word **Shipping** with the following:

Insert Word Field: IF

IF

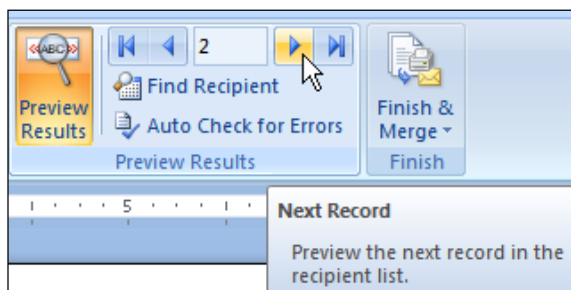
Field name: Zip Comparison: Greater than Compare to: 50000

Insert this text: \$6.95

Otherwise insert this text: \$4.95

OK Cancel

- d. On the **MAILINGS** tab, in the **Preview Results** group, click the **Preview Results** button. This will show the results for the first person in the data file, **Eric Anderson**. If you click the **Next Record** arrow you will see the results for **Jennifer Arias**.



- e. So that you can see the actual field codes, tap **Alt + F9**. On my computer I have elected to always shade the field codes so that I can see them easily. To do that, go to **File, Options, Advanced**, Scroll down to **Show Document Content** and click the arrow next to **Field shading**.

```
{ SKIPIF { MERGEFIELD Sex } = "Unknown" } { MERGEFIELD Title } {  
MERGEFIELD FirstName } { MERGEFIELD LastName }  
{ MERGEFIELD Address }  
{ MERGEFIELD City }, { MERGEFIELD State } { MERGEFIELD Zip }
```

Dear { MERGEFIELD Title } { MERGEFIELD LastName }:

Thank you for your interest in our magazines. As a new customer I would like to offer you a special deal on { IF { MERGEFIELD Sex } = "Male" "Sports Illustrated" "" } { IF { MERGEFIELD Sex } = "Female" "Ms. Magazine" "" }. Your special yearly rate is { IF { MERGEFIELD Sex } = "Male" "\$15.99" "\$13.99" }. The shipping and handling charge would be { IF { MERGEFIELD Zip } > 50000 "\$6.95" "\$4.95" }.

Take a moment to look at the field codes. For example:

```
{ IF { MERGEFIELD ZIP } > 50000 "$6.95" "$4.95" }
```

You can edit the field parameters as if they were text. For example, if you wanted to change the **ZIP** charge for codes greater than **50000** to **\$7.95**, you could simply change **\$6.95** to **\$7.95**.

- f. You can make a merge more selective by nesting merge fields. To see how this works, do the following to edit the shipping and handling charges so that a **ZIP** over **80000** costs \$6.95, a **ZIP** between **50000** and **80000** costs \$5.95, and a **ZIP** under **50000** costs \$4.95.

1. Change **50000** to **80000**.
2. Select **\$4.95** and then, on the **MAILINGS** tab, in the **Write & Insert Fields** group, click **Rules** and select **If...then...Else**.
3. Choose **ZIP** from the **Field name** menu and **Less than** from the **Comparison** menu. Type **50000** in the **Compare to** box. Type **\$4.95** in the **Insert this text** box and **\$5.95** in the **Otherwise insert this text** box.
4. Click **OK**. Here is what the field should look like:

```
{ IF { MERGEFIELD ZIP } > 80000 "$6.95" "{ IF { MERGEFIELD ZIP }  
< 50000 "$4.95" "$5.95" }" }
```

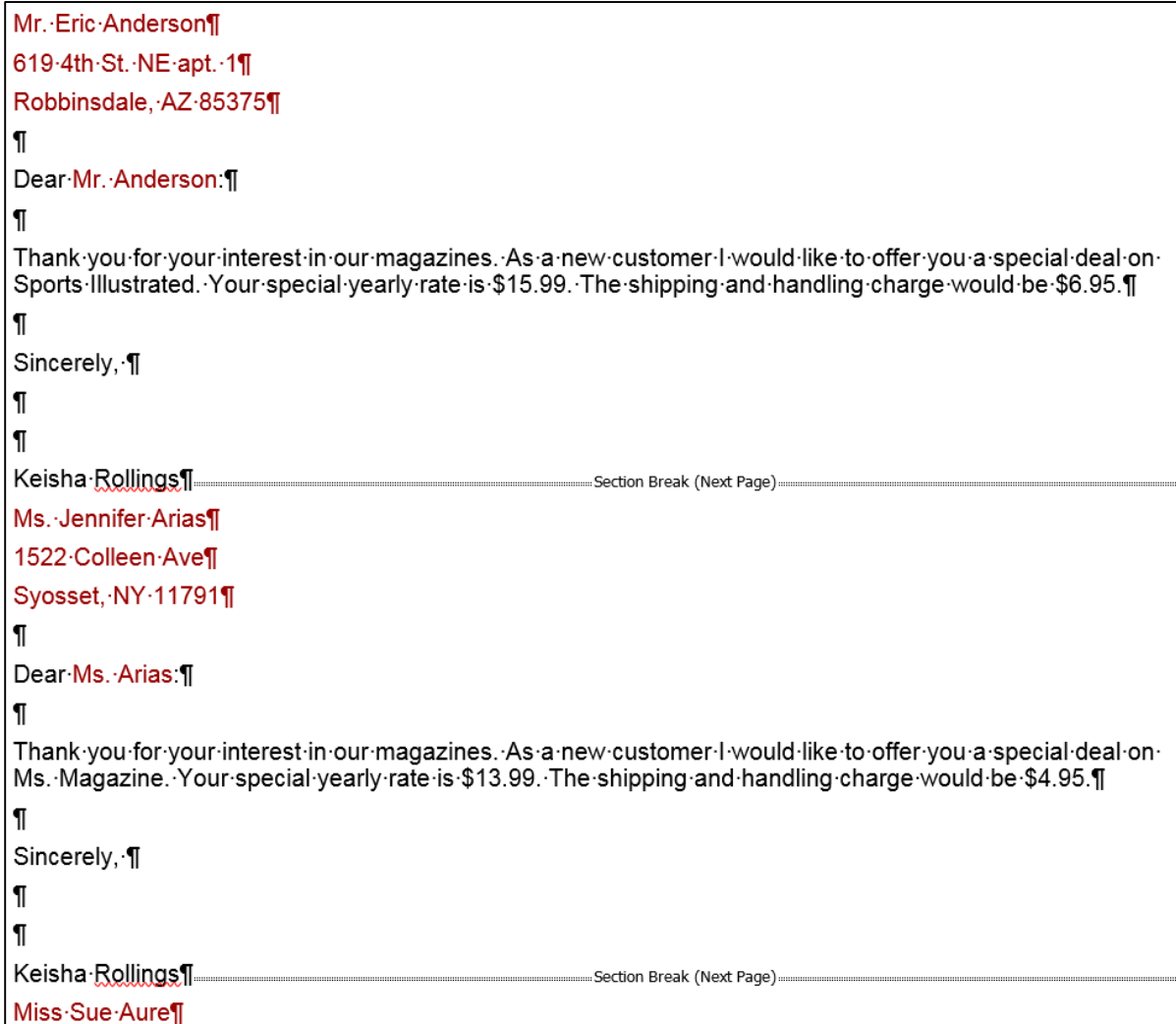
Here is what the code would look like in Excel (assuming **ZIP** is in cell **A1**):

```
=IF(A1>80000,6.95,IF(A1<50000,4.95,5.95))
```


Note that you cannot put **SKIP** or **NEXT** inside an **IF** so you could not use this technique for determining which records to skip without the extra **Sex** field that you created in Excel.

- g. On the **MAILINGS** tab, in the **Finish** group, click **Finish & Merge** and select **Edit Individual Documents**. When the **Merge to New Document** dialog box appears, click **OK**. This will produce a new document that contains the individual letters separated by next page section marks.

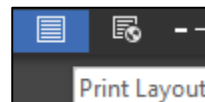
To better see the individual letters and next page section breaks, on the status bar click **Web Layout**.



Scroll down a bit and notice that **Ayu**, **Bagha**, **Baker**, and **Baltz** were skipped because their sex is unknown.

If you had wanted to email these letters rather than print them you would have selected **Send E-mail Messages**.

Switch the view back to **Print Layout**.



- h. Close the newly merged document **without** printing or saving it.

- i. Do the following to print the main document with the field codes displayed:
 1. Click the **FILE** tab, select **Options**, click **Advanced**, scroll down to the **Print** group and click the box next to **Print field codes instead of their values**.
 2. Click **OK**.
 3. Tap **Ctrl + F2** and compare the preview with the key. Notice that the field codes will be printed rather than their values. This is what you want. Make needed corrections and print the document but **do not** close it.
 4. **Now, turn off the field codes printing by doing this:** Click the **FILE** tab, select **Options**, click **Advanced**, scroll down to the **Print** group and clear the check in the box next to **Print field codes instead of their values**.
 5. Click **OK**.
 6. If the field codes are still displayed, tap **Alt + F9** so the results are displayed rather than the codes.
- j. Save the document and exit Word.

Step 4 Submit You now are ready to submit your homework for grading.

1. Put your 8 homework papers in the following order:
 - HW09-1 Research Paper, page 4 (Works Cited)
 - HW09-2 Newsletter
 - HW09-2 Mailing Labels
 - HW09-3 Home Address Labels
 - HW09-4 Name Tag Labels
 - HW09-5 Thank Merge DATA
 - HW09-5 Thank Merge MAIN
 - HW09-6 IF Merge MAIN With Merge Codes Showing
2. Cut out Submission Form 9 and put it on the top of the papers.
3. Staple the papers in the upper left corner.
4. Turn in the packet by the due date.

Step 5 Backup Now would be a good time to backup your files.

Project 10

Word: Styles, Cross-References, TOC, Indexes

Step 1 Read For this project, there are no pages to read in your textbook.

Step 2 Activities For this project, there are no textbook activities.

Step 3 Homework Do the problems listed below, and turn them in for grading.
You do NOT have to print in color.

In Word, a style is defined as a collection of text and paragraph formats. These formats are saved as a collection, given a name, and applied to text just like any other format. As you will see below, styles are extremely useful.

Word has five style types:

Character styles contain formatting characteristics that can be applied to text, such as font name, size, color, bold, italic, underline, borders, and shading. In a list of styles, character styles are indicated using this icon .

Paragraph styles include everything that a character style contains, but it also controls all aspects of a paragraph's appearance, such as text alignment, tab stops, line spacing, and borders. In a list of styles, paragraph styles are indicated using this icon .

Linked styles behave as either character styles or paragraph styles, depending on what you select. If you click in a paragraph or select a paragraph and then apply a linked style, the style is applied as a paragraph style. However, if you select a word or phrase in the paragraph and then apply a linked style, the style is applied as a character style, with no effect on the paragraph as a whole. In a list of styles, paragraph styles are indicated using this icon .

List styles determine the look of lists, including characteristics such as bullet style or number scheme, indentation, and any label text.

Table styles determine the look of tables, including characteristics such as the text formatting of the header row, gridlines, and accent colors for rows and columns.

HW10-1 Character Styles and the Declaration of Independence

Problem: How can you create character formats that can be changed throughout a document by changing one occurrence?

There may be times when you want a particular word or phrase to have special font characteristics throughout a document. For example, in this Study Guide, the default paragraph font is black 12 point Arial, without bold or italic or other enhancements. However, all computer file names appear in 12 point Arial, dark blue, bold. This makes them stand out from the rest of the text and helps the reader quickly identify them as file names.

Individually applying 12 point Arial dark blue bold to each of the 226 occurrences of file names that appear in this Study Guide would be very time consuming. To get around problems like this, Word allows you to create **character styles** (also called **font styles**). These are sets of characteristics, like font, size, enhancement, and color, that can be defined and given a name. When you want a particular word or phrase to have those characteristics, you simply select the text and tell Word to apply the character style you have defined.

If you want to change any characteristic (color, size, etc.) of a character style, that is easily done. When the definition is changed all text with that character style changes immediately, throughout the entire document.

To see how this works, you will carry out some character style modifications on an excerpt from the Declaration of Independence.⁴² The Declaration was drafted by Thomas Jefferson (who later became the third president of the United States) between June 11 and June 28, 1776. In it Jefferson expressed the convictions in the minds and hearts of the American people. The political philosophy of the Declaration was not new; its ideals of individual liberty had already been expressed by people such as John Locke (not the stoic guy in *Lost* but the seventeenth century English philosopher and physician). What Jefferson did was to summarize this philosophy in **self-evident truths** (ideas so obvious that they need no proof), such as “all men are created equal”⁴³. The Declaration is considered to be a powerful and important statement on human rights. It also set forth a detailed list of grievances against King George III of England in order to justify before the world the breaking of ties between the American colonies and Great Britain. Benjamin Franklin and John Adams (who later became our second president) had a hand in editing Jefferson’s draft.



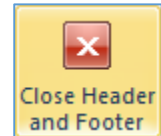
The original Declaration, hand printed on parchment most likely by a clerk named Timothy Matlack, currently is on display in the National Archives in Washington, DC. The Continental Congress voted to declare independence from Great Britain on July 2, 1776 and approved the wording of the Declaration on July 4, which we celebrate as Independence Day. Many copies were printed on paper and read aloud from town squares throughout the colonies so that those who could not read would receive the news about the intended separation from England.

In **declaring** their independence, the thirteen British colonies referred to themselves as **States** and that they are **uniting** to form a new and independent country in **America**; hence, the United States of America.

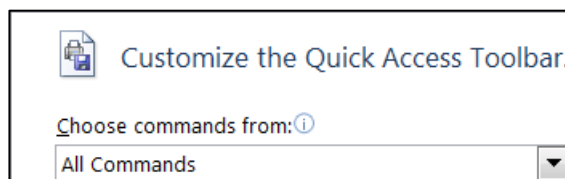
⁴² Text is adapted from <http://www.archives.gov/national-archives-experience/charters/declaration.html>

⁴³ While he espoused equality, Jefferson himself owned slaves. He was always deeply in debt and slave labor made his lifestyle and many accomplishments possible. In an 1820 letter he wrote about slavery, “We have the wolf by the ears; and we can neither hold him, nor safely let him go. Justice is in one scale, and self-preservation in the other.” Although he was born into one of the wealthiest families in North America, Jefferson was deeply in debt when he died.

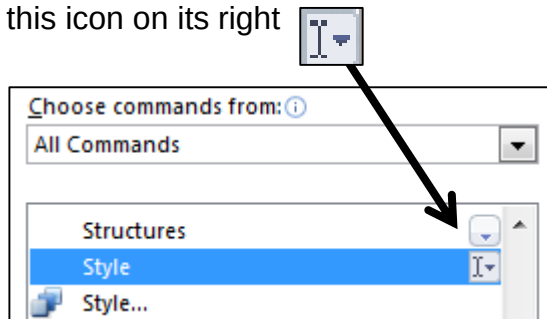
- a. Start the process of formatting the document by doing the following:
 1. Open the document **HW10-1 Character Styles and Declaration Original**, which is one of the files you copied at the start of the term.
 2. Save the document in the **Word Files** folder using the name **HW10-1 Lastname Firstname HWID Character Styles Done**
 3. Insert a footer that contains the name of the file. Note that the background graphic of the flag takes up the entire header/footer area so you cannot exit the footer by simply double-clicking in the body of the document. To exit, on the **HEADER & FOOTER TOOLS DESIGN** tab, in the **Close** group, click **Close Header and Footer**.



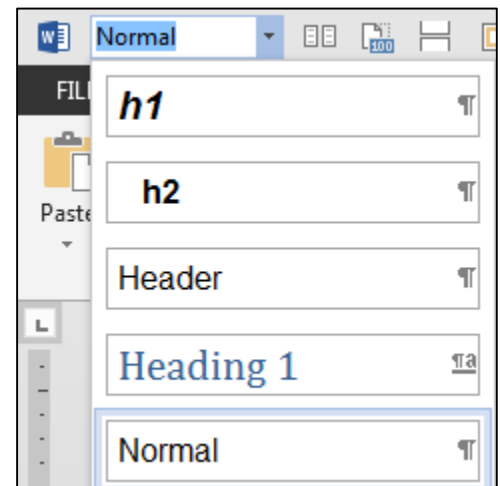
- b. On page **SG133**, in **HW07-1 Flyer**, you learned how to modify the **Quick Access Toolbar** by placing the **AutoText** icon on it. In this project you will be working a lot with styles so it will be helpful to add the **Styles** icon. Do the following:
 1. Click the **FILE** tab, click **Options**, and then click **Quick Access Toolbar**.
 2. In the list under **Choose commands from**, click **All Commands**.



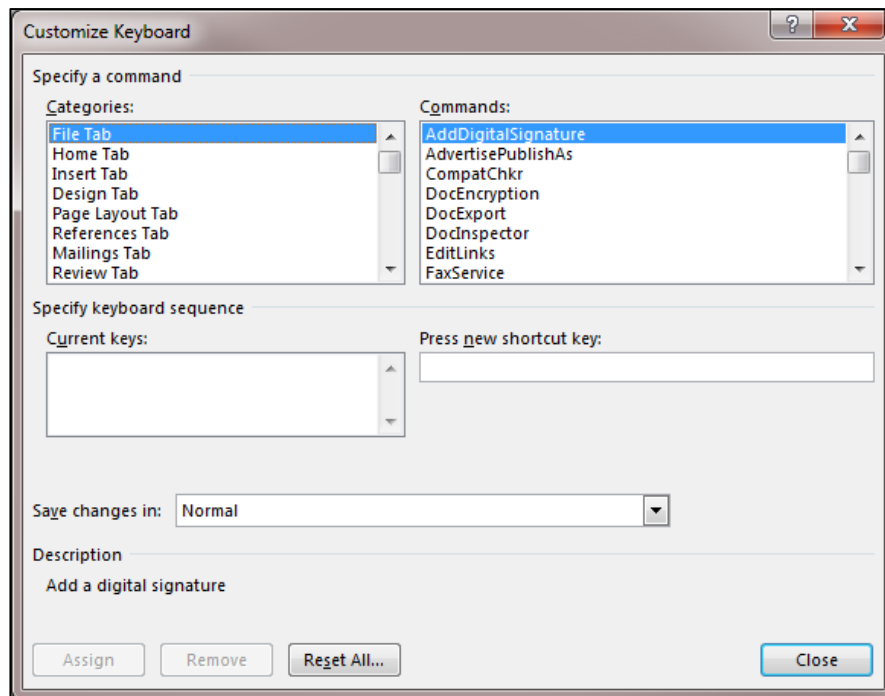
3. Scroll through the list of commands until you see **Style**. A quick way to get to **Style** is to click any command, and then tap the **t** key. This will take you to the start of the **t**'s in the list. Then scroll up a little until you see **Style**. There are a bunch of **Style** commands but Word does not tell you what each one does. I found out the one I wanted by trial and error. It has this icon on its right



4. Click **Add** and then **OK**. The **Style** menu now appears in the **Quick Access Toolbar**. It shows you the style of the paragraph that contains the insertion point. If you click the down arrow, you will get a list of the styles in your document and you can select what you want from the list. Or, you can simply type the style name in the box. Here is what it looks like on my computer:

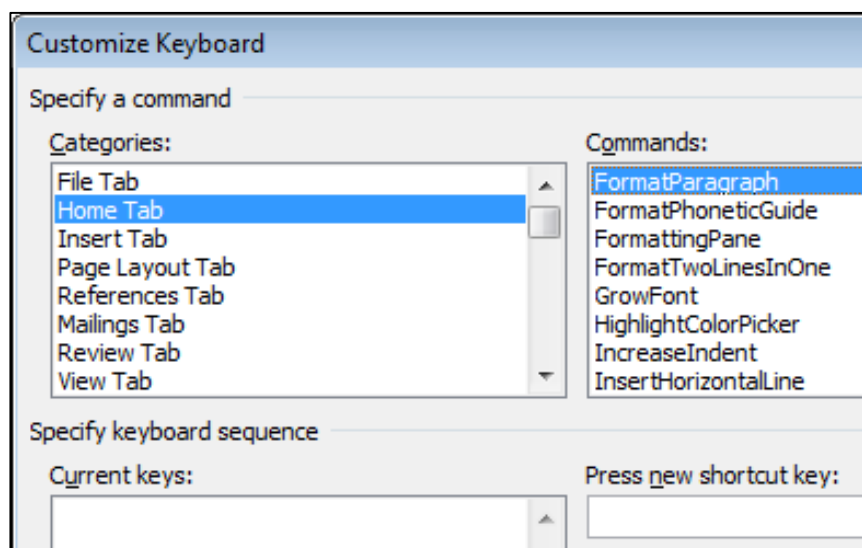


- c. Word allows you to assign keyboard shortcuts to most commands. Using the keyboard often is quicker than selecting with the mouse. Do the following:
1. Click the **FILE** tab, click **Options**, click **Customize Ribbon**, and finally click **Customize** just to the right of **Keyboard shortcuts**.



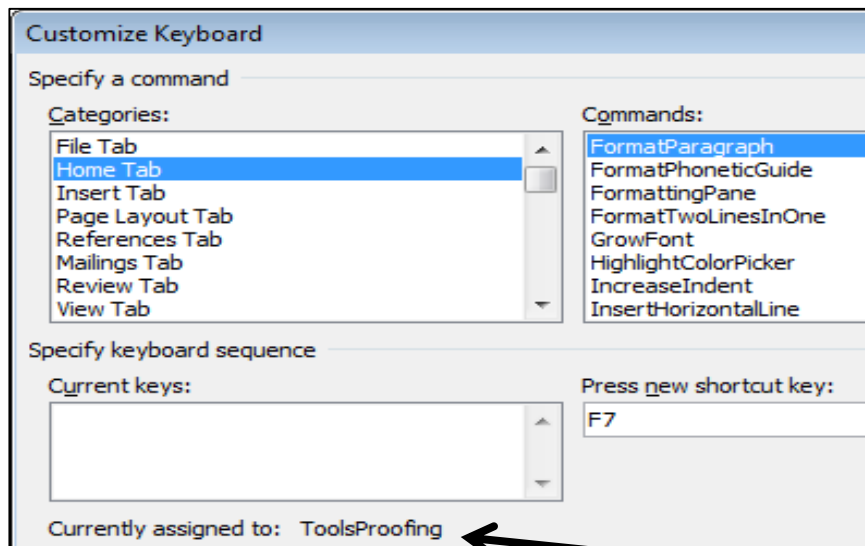
Here, you can select a command and then assign a shortcut key. Let's assign the **F7** key to open the paragraph dialog.

2. Under **Categories**, click **Home** tab. This will display the commands that appear on the **Home** tab.
3. Under **Commands**, scroll down and click **FormatParagraph**.



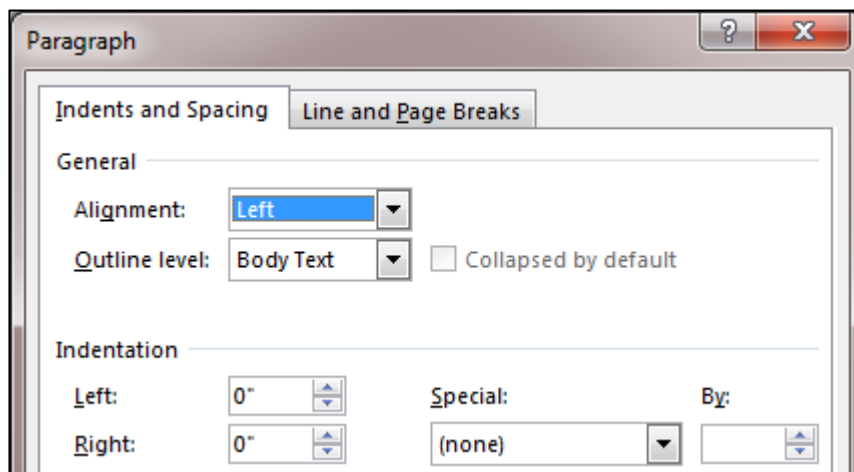
The box under **Current keys** is blank, which means currently there are no shortcut keys to open the **Paragraph** dialog.

4. Click in the box under **Press new shortcut key:** and tap the **F7** key.



Word tells us that the **F7** key currently is assigned to the **ToolsProofing** command.

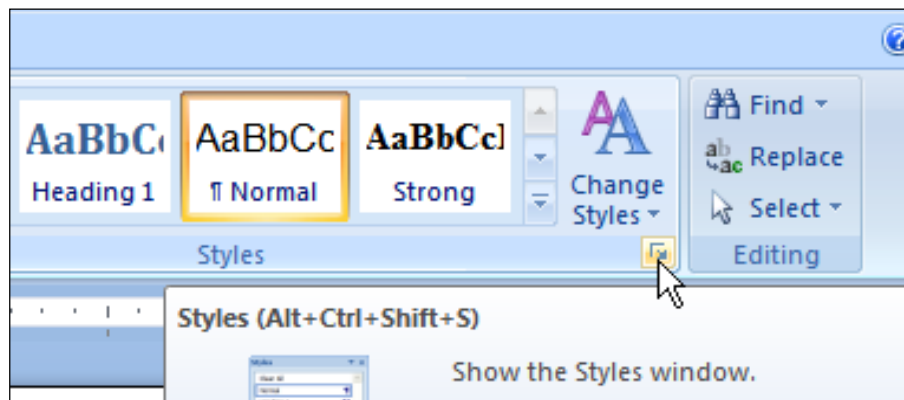
5. Click the **Assign** button to reassign the **F7** key.
6. Click **Close**.
7. Click **OK**.
8. To test the new assignment, tap **F7**. The **Paragraph** dialog will open.



9. Click **Cancel**.
10. Follow the same procedure to assign **Ctrl + Num 0** to the **Go Back** command (**All Commands, GoBack**). **Num 0** means the **0** key on the numeric keypad. Even though this key does the same thing as the **0** on the second row of keys, Word distinguishes it from that key. The **Go Back** command tells Word to move the insertion point to its previous location. If you execute the command again, Word moves the insertion point back to the next previous location. If you execute the command a third time, Word moves the insertion point back to where it started (in other words, you can only "Go Back" to two previous locations).

FYI, here are the keyboard assignments that I have made on my computer:

- F1 Help** – This one cannot be changed.
 - F2 Cut (Home Tab, EditCut)**
 - F3 Copy (Home Tab, EditCopy)**
 - F4 Paste (Home Tab, EditPaste)**
 - F5 Keep with next** – ensures that the current paragraph is on the same page as the next paragraph (**All Commands, ParaKeepWithNext**)
 - F6 Paste Special** – makes it easy to paste things from the clipboard in different formats. I use this to paste text without any formatting (**Home Tab, EditPasteSpecial**)
 - F7 Paragraph dialog** – Opens the paragraph dialog box (**Home Tab, FormatParagraph**)
 - F8 Bold (Home Tab, Bold)**
 - F9 Update Field** – This is the default value.
 - F10 Repeat last Find** – I use this so I do not have to keep going back to the **Find** and **Replace** dialog when I want to move to the next item in a search (**All Commands, RepeatFind**)
 - F11 Revert to style** – Removes any “extra” formatting from the style of the current paragraph (**All Commands, ResetPara**)
 - F12 Save As** – This is the default value.
 - Ctrl + Num 0 Go back to the previous location (All Commands, GoBack)**
 - Alt + a Repeat the last action** – Ctrl + y does this but it is too difficult to do with one hand (**All Commands, EditRedoOrRepeat**)
 - Alt + d Insert date (Insert, InsertDateTime)**
 - Alt + F1 Moves to next window (All Commands, NextWindow)**
 - End Moves to end of document (All Commands, EndOfDocument)**
 - Home Moves to top of document (All Commands, StartOfDocument)**
- d. Now, you will change the all occurrences of the word **Government** to blue 18 point bold Arial Black by creating a character style called **gov** and then applying it to every occurrence of the word **Government** in the file. Do the following:
1. At the top of the document, click just to the left of the first letter in the sentence that begins ***The unanimous Declaration.***
 2. On the **HOME** tab, in the lower right corner of the **Styles** group, click the **Styles Dialog Box Launcher**, . This will open the **Styles and Formatting** pane.



3. Click the **New Style** button at the bottom left of the pane.

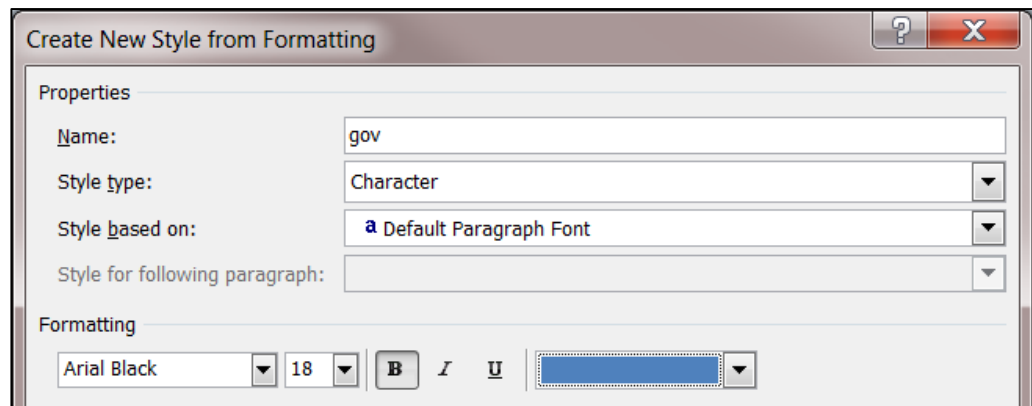


This will open the **Create New Style from Formatting** dialog box.

In the **Name:** box, replace **Style1** with **gov**. This defines the name of the style for future reference.

In the **Style type:** box, select **Character** from the drop down menu. This defines the style as a character style and so only selected characters will be affected by this style, rather than entire paragraphs.

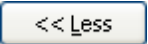
Change the font to bold blue 18 pt Arial Black.



4. Click **OK**. The new style, **gov**, will appear in the list of styles.

The little letter, **a**, to the right of **gov** indicates that this is a character style. The other styles, like **Normal** have a little paragraph mark, ¶, showing that these are paragraph styles (discussed later).

- e. Apply the new character style to all occurrences of the word **Government** throughout the document. You could do this manually by looking for and then selecting each occurrence of **Government** in the document and making the changes individually, but that would be time consuming. Here is a faster way:

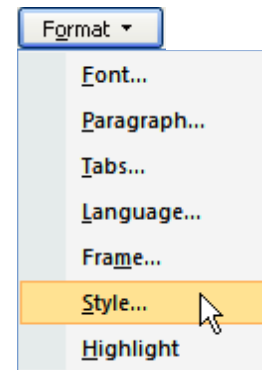
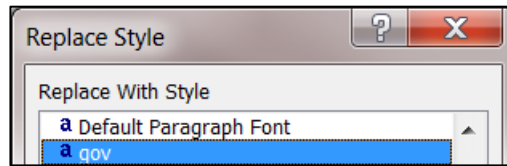
1. Tap **Ctrl + Home** to move the insertion point to the top of the document.
2. Tap **Ctrl + h** to open the **Find and Replace** dialog box.
3. If the **More** button  is showing, click it to display the advanced options of the **Replace** feature. If the **Less** button  is showing the advanced options are already displayed.
4. Click in the **Find what:** box and type the word **Government**.

With the insertion point still in the **Find What:** box, click the **Match case** box. This will ensure that words like **government** (it starts with a lowercase **g** rather than an uppercase **G**) will not match the criteria.

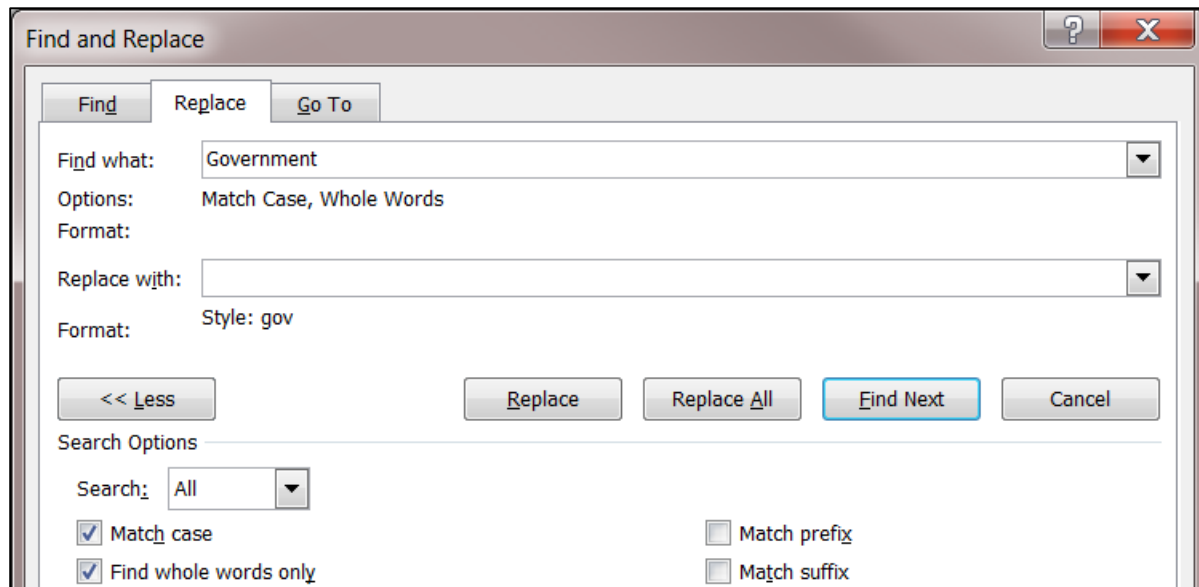
5. Click the **Find whole words only** box. This will ensure that words like **Governments** (it has an **s** on the end) will not match the criteria.
6. Click in the **Replace With:** box and clear any text so that the box is blank.

7. At the bottom of the **Find and Replace** dialog box, choose **Format, Style**.

This will display a list of all the styles available to this document. Scroll down and click **gov** (if you type the letter **g** Word will automatically scroll to the first word that begins with the letter **g**; that saves scrolling time).

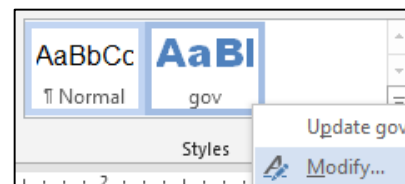


8. Click **OK**.



9. Click **Replace All**. There should be 5 replacements.
10. Click **OK**.
11. Close the **Find and Replace** dialog box. Notice the effect on all occurrences of the word **Government**.
- f. Suppose you want to make the word **Government** red instead of blue and you want the font to be underline italic. There is no need to do this manually. All you have to do is redefine the **gov** style. Do the following:

1. On the **HOME** tab, in the **Styles** group, right click the **gov** style and select **Modify**.
2. Click the **Italic** button and the **Underline** button and change the font color to red.



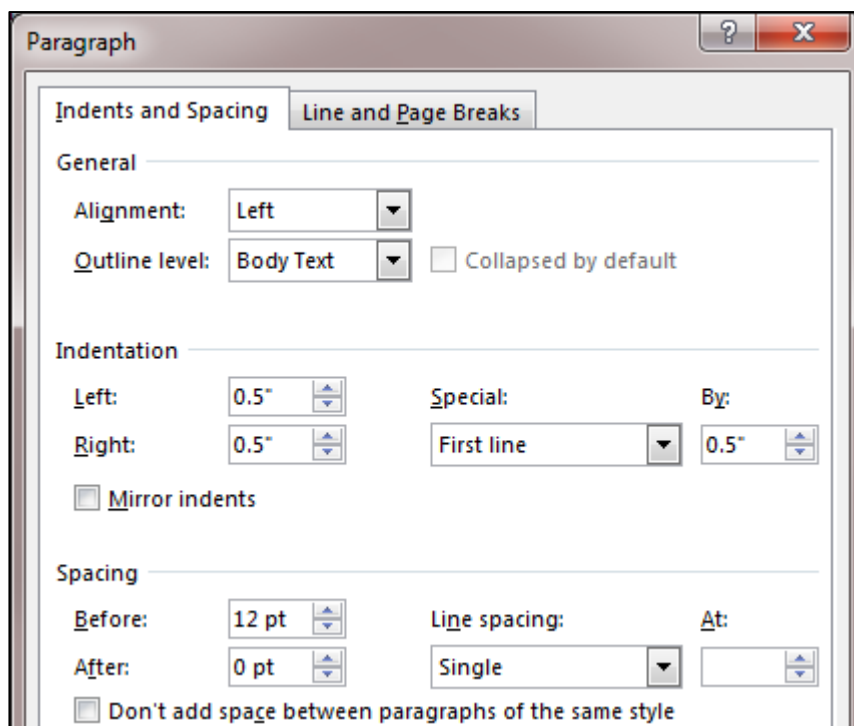
3. Click **OK**. Notice that all occurrences of the word **Government** now are red, italic, and underlined (and still bold from before).
- g. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, **print page 1 only**, save the document, and close it.

HW10-2 Paragraph Styles

Problem: How can you create paragraph formats that can be changed throughout a document by changing one occurrence?

Paragraph styles are like character styles but they affect an entire paragraph rather than only a word or phrase.

- a. Do the following to get some practice in creating paragraph styles.
 1. Open the document **HW10-2 Paragraph Styles Original**, which is one of the files you copied at the start of the term.
 2. Save the document in the **Word Files** folder using the name **HW10-2 Lastname Firstname HWID Paragraph Styles Done**.
 3. Open the **Styles and Formatting** pane.
 4. In the **Styles and Formatting** pane, move the mouse pointer so the tip of the white arrow is over **Normal**  click the down arrow and select **Modify...** from the drop down menu.
 5. Set the font to 12 point Times New Roman and click **OK**. This changes all the text because every paragraph is in **Normal** style.
 6. Select the first paragraph, center align it, and change the font to Arial Black 16 point italic.
 7. Click anywhere in the paragraph which begins **In 1988 the mathematics....**
 8. On the **HOME** tab, in the **Paragraph** group, click the **Dialog Box Launcher**. Set the **Left Indentation** to 0.5 inch, the **Right Indentation** to 0.5 inch, the **First line Indentation** to 0.5 inch, the **Spacing before** to 12 pt, and the **Line spacing** to single.



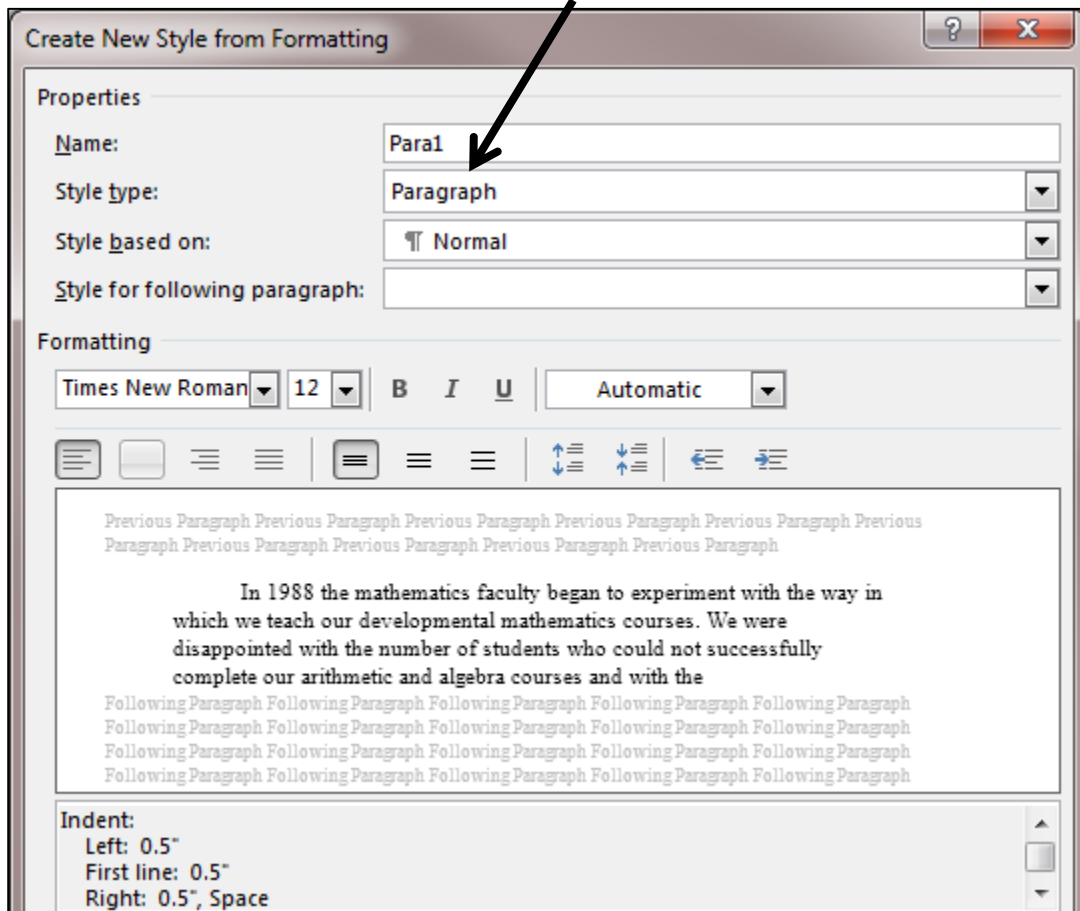
9. Click **OK**.

10. Click the **New Style** button at the bottom left of the **Styles** pane to open the **Create New Style from Formatting** dialog box.



In the **Name:** box type **Para1**. This new style is automatically set to match the formatting of the paragraph you just modified.

Be sure the **Style type** is set to **Paragraph**.



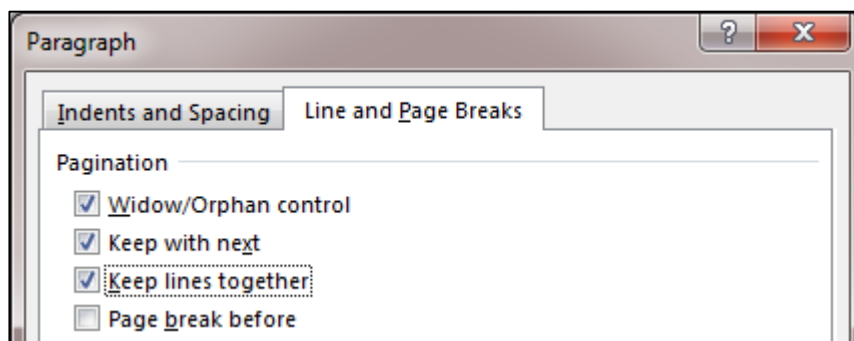
Click **OK**. A new paragraph style called **Para1** appears in the **Styles** pane and in the **Quick Styles Gallery**.

11. Select the text from just after the first paragraph (starting with the line that contains the single word **Courses**) to the end of the document and apply the **Para1** style.
- b. Set up a style for the **sideheads** (the subtitles that separate parts of the text). These should stand out from the regular text.
 1. Select the paragraph that contains the single word **Courses** and change the style of that paragraph to **Normal**.
 2. Change the font to 14 point Arial bold italic.

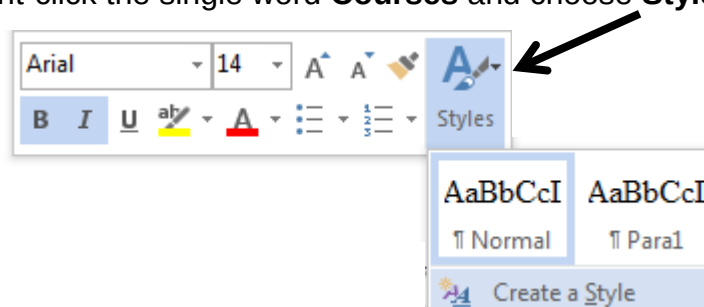
The way text breaks across pages can affect the readability of a document. For example, it is best that a sidehead does not appear at the bottom of a page when the following text appears at the top of the next page. Word has several ways of addressing line and page breaks.

3. Right-click the single word **Courses** and choose **Paragraph**.
4. Change the **Spacing Before** to 12 points.
5. Click the **Line and Page Breaks** tab.
6. Click the **Widow/Orphan control** box. A **widow** is the last line of a paragraph that appears by itself at the top of a page while an **orphan** is the first line of a paragraph that appears at the bottom of a page by itself.
7. Click **Keep with next**. This forces the current paragraph to appear on the same page as the next paragraph. This is good for rows of tables (so the table will not split across a page break) and sideheads (so the sidehead will stay with its following text).
8. Click **Keep lines together**. This forces a paragraph to have all of its text on the same page, rather than split between the bottom of one page and the top of the next. This is good for short paragraphs but it is not practical for long paragraphs.

Do **NOT** click **Page break before**. This would cause each sidehead to appear at the top of a new page.



9. Click **OK**.
10. Right-click the single word **Courses** and choose **Styles, Create a Style**.

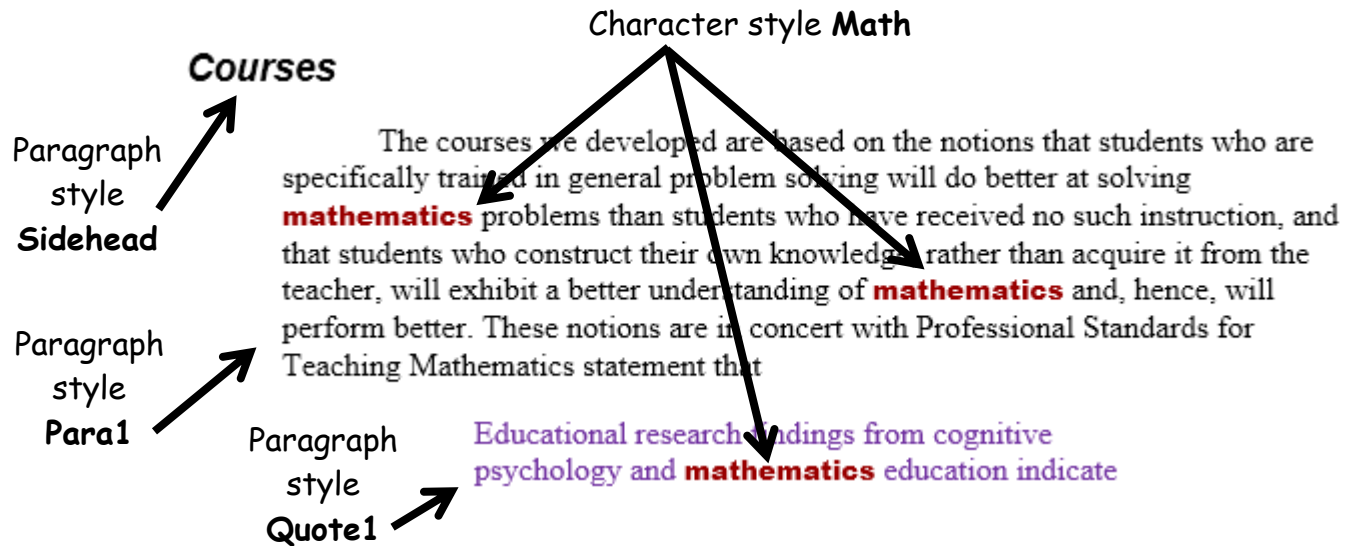


The **Create New Style from Formatting** dialog box will appear. Type the name **Sidehead**, and click **OK**. This defines the style **Sidehead** using the characteristics you just set for this paragraph. This is a little bit faster than the way you defined the **Para1** style; you can use whichever way you feel more comfortable with.

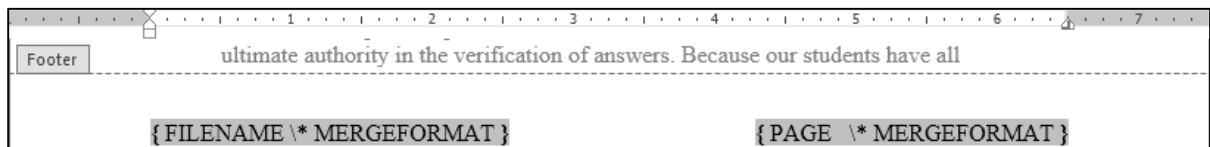
11. Scroll down and apply the **Sidehead** style to the line with the single word **Implementation** and to the line with the two words **Typical Class**.

12. Scroll up to the second paragraph under the sidehead **Courses** (the paragraph begins **Educational research findings...**) and click anywhere in that paragraph. This is a quotation and so it needs to be formatted differently from other paragraphs.
 13. Apply the **normal** style and then right-click anywhere in the paragraph and select **Paragraph**. If necessary, click the **Indents and Spacing** tab. Set the left indent to 1.5 inches, the right indent to 1.5 inches, the first line indentation to none, the space before to 0, and the line spacing to single.
 14. Click **OK**.
 15. Right-click anywhere in the paragraph and choose **Styles, Create a Style**. Type **Quote1**, and click **OK** to create a new style.
- c. Add text at the bottom of this file by inserting the text from another file.
1. Tap **Ctrl + End** to move the insertion point to the end of the document.
 2. On the **INSERT** tab, in the **Text** group, click the down arrow to the right of the **Object** button and select **Text from File**. Navigate to the document **HW10-2 Paragraph Styles Add Text Original**, which is one of the files you copied at the start of the term. Then, click the **Insert** button.
 3. Apply the **Para1** style to all the added paragraphs.
 4. Apply the **Sidehead** style to the headings **Discussion**, **Problem Types**, **New Courses**, **Effects**, and **Conclusion**.
 5. Apply the **Quote1** style to the two new paragraphs in red (**The idea is to help students...** and **I think the three mathematics professors...**).
 6. Modify the **Quote1** style so that the paragraphs have 12 pt spacing before and so the text is in purple.
 7. Modify the **Normal** style so that it has **Widow/orphan** control.
 8. Close the **Styles** pane.
- d. Be sure you understand the difference between **character** styles, which only affect individual words or phrases, and **paragraph** styles, which affect entire paragraphs.
1. Create a **character** style called **Math** that makes the font **Arial Black**, **10 point**, **red**.

2. Use the Replace feature to change all occurrences of the word **mathematics** to style **Math**. Do NOT change the word **Mathematics** to that style. There should be 9 replacements.



- e. Insert a footer that contains the name of the file. In the footer, delete the center tab stop, move the right tab stop to the right indent (if necessary), and insert the automatic page number field.



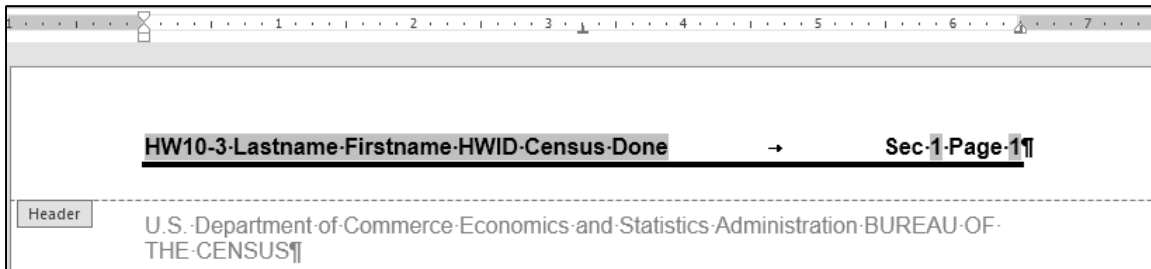
- f. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, and then **Print page 1 only**, save the document and then close it.

HW10-3 Census

Problem: How can you break up a document into different sections that can be formatted independently?

- a. Open the document **HW10-3 Census Original**, which is one of the files you copied at the start of the term.
- b. Save the document in the **Word Files** folder using the name **HW10-3 Lastname Firstname HWID Census Done**.
- c. Insert a **HEADER** that contains the following:
 - On the left, a field with the name of the file.
 - On the right, the word **Sec** a space and the automatic section number (**INSERT**, **Quick Parts**, **Field**, **Section**) a space and the word **Page** a space and the automatic page number.

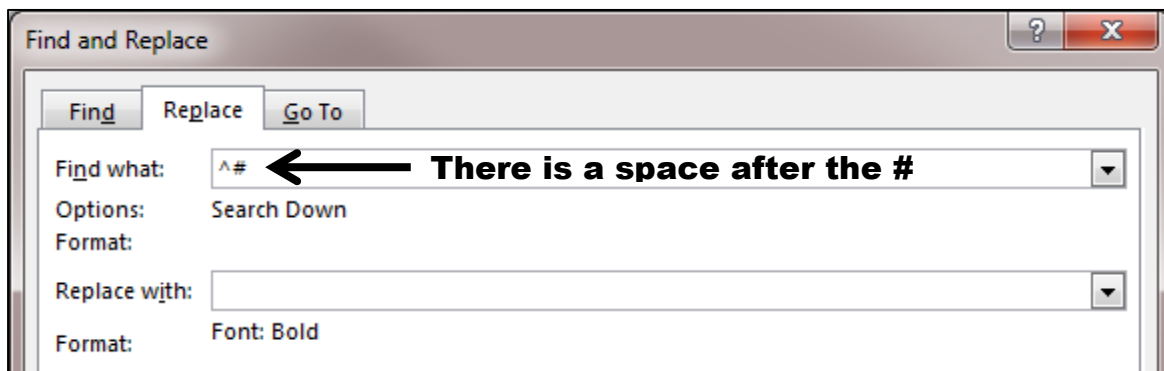
- Modify the **Header** style so that it is bold and the paragraph is underlined with a 3 pt weight border. To do this, on the **HOME** tab, in the **Styles** group, click the **Dialog Box Launcher** to open the **Styles** pane and then make the modifications.



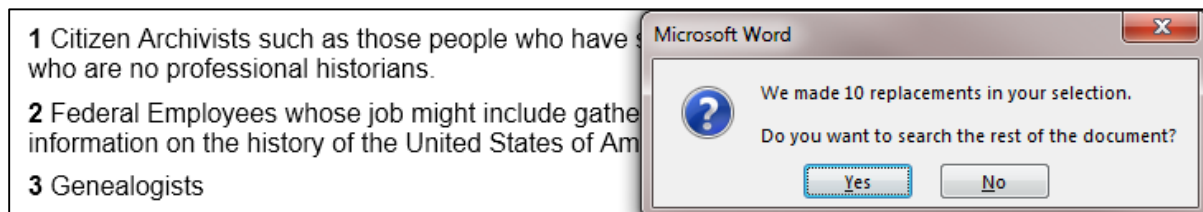
- d. In the numbered list at the bottom of the first page, convert the spaces after the numbers into periods followed by tabs. You cannot simply change the space into a tab (using the **^t** code) because some lines have more than one space and you only want to change the space next to the number. So, you will apply bold to the space to the right of each number and then change the bold spaces into **^t** codes. Do the following:

1. Select the 10 lines.
2. Tap **Ctrl + h** to open the **Replace** dialog box.
3. In the **Find what** box, type **^#** and tap the **Spacebar**. The **^#** represents any single digit so Word will "find" a digit followed by a space.

Click in the **Replace with** box and tap **Ctrl + b**.



4. Click **Replace All**. There will be 10 replacements. Click **No** when asked if you want to search the rest of the document.

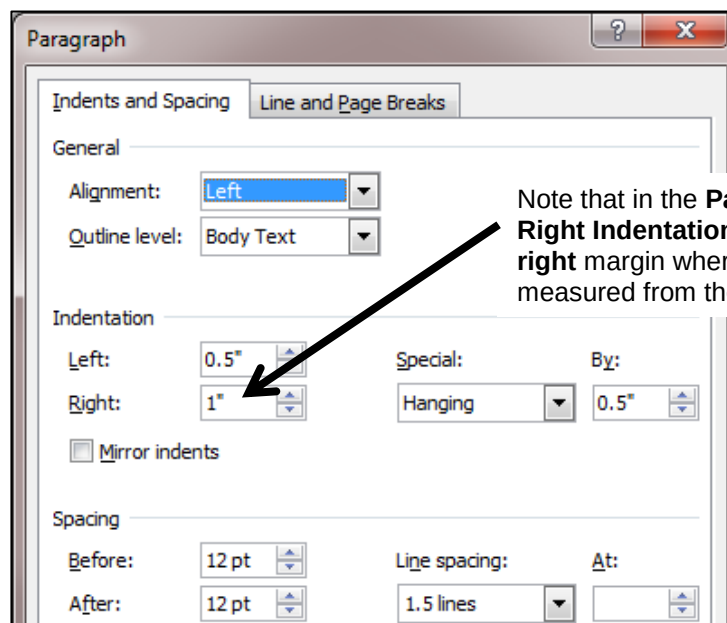


5. Now, change the bold spaces to **^t** by doing the following:

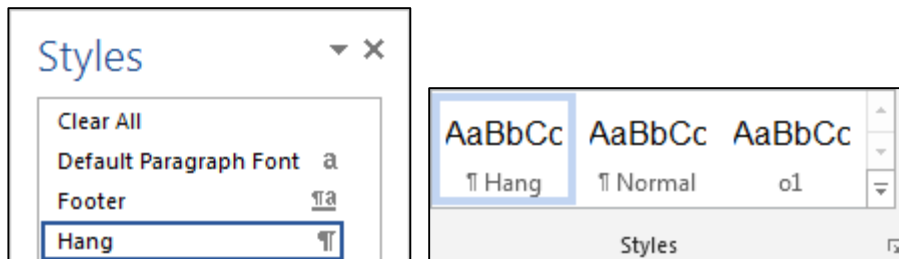
In the **Find what** box, enter a single space and tap **Ctrl + b**.

In the **Replace with** box, enter **.^t**. Be sure to type the period to the left of **^t**.

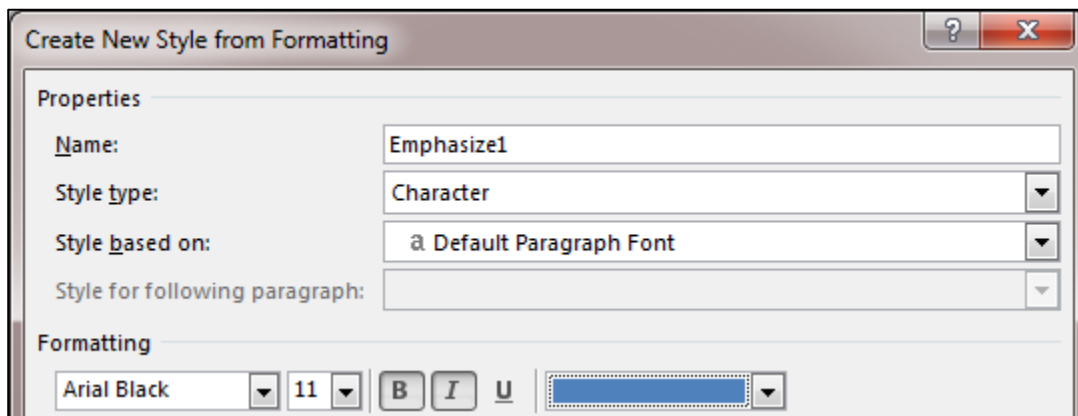
6. Click **Replace All**. There will be 10 replacements. Click **No** when asked if you want to search the rest of the document.
 7. Remove the bold from all the lines.
 8. Apply the style **Outdent 1** to all the lines and add **Outdent 1** to the **Quick Style Gallery**.
- e. The last two paragraphs of the document have been set to have indentations and red bold italic text. Remove all the formatting and create a new style by doing the following:
1. Select the last two paragraphs of the document.
 2. If necessary, on the **HOME** tab, in the **Styles** group, click the **Dialog Box Launcher**  to open the **Styles** pane.
 3. Click **Clear All**. This will return the formatting of the selected paragraphs to normal style. The keyboard shortcut for this is **Ctrl + Spacebar**.
 4. Click anywhere in the second to last paragraph (the one that begins **Rental The National...**). Point to the upside down triangle on the left side of the ruler  and drag it to the 0.5 inch mark. This is the first line indent.
 5. Point to the right-side-up triangle on the left side of the ruler  and drag it to the 1 inch mark. This is the left or hanging indent. Be sure the first line indent triangle stays at 0.5.
 6. Point to the triangle on the right side of the ruler  and drag it to the 5.5 inch mark. This sets the right indent 5.5 inches from the left margin.
 7. Right-click anywhere in the second to last paragraph and select **Paragraph** to open its dialog box. In the **Spacing After:** section, click the up spinner arrow to set the **Spacing after** to 12 points (or just type 12 in the box to the right of **After**). Also, select 1.5 lines from the **Line spacing:** box.



8. Click **OK**.
9. In the **Styles** pane, click the **New Style** button  (lower left corner).
10. In the **Create New Style from Formatting** dialog, type **Hang** in the **Name** box. This will create the new style based on the formatting of the selected paragraph.
11. Click **OK**. The **Hang** paragraph style name appears in the **Styles** pane and in the **Styles** group on the **HOME** tab.



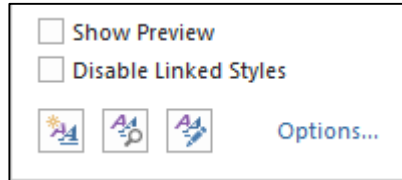
12. Apply the style **Hang** to the last paragraph by clicking anywhere in the last paragraph and then, on the **HOME** tab, in the **Styles** group, clicking **Hang** (or, click **Hang** in the **Styles** pane).
- f. Follow the directions given below to create a character style called **Emphasize1** that makes the font 11 pt, Arial Black, bold, italic, and blue.
1. Click anywhere on the word **Sales** at the start of the last paragraph.
 2. At the bottom left corner of the **Styles** pane, click the **New Style** button. 
 3. Set the **Create New Style from Formatting** dialog box as follows:



4. Click **OK**. The **Emphasize1** character style name appears in the **Styles** pane and in the **Quick Styles Gallery**.
5. Apply the style to the word **Sales** by selecting **Sales** and clicking the **Emphasize1** name in the **Quick Styles Gallery**. Because this is a character style only the selected word is modified.
6. Apply **Emphasize1** to the word **Rental** in the second to last paragraph.

- g. Word has a large number of predefined styles that you can apply to words or paragraphs. For example, do the following to apply the predefined paragraph style **Heading 3** to the title and four headings:

1. Tap **Ctrl + Home** to move to the top of the document.
2. At the bottom of the **Styles** pane, click the **Options** button.

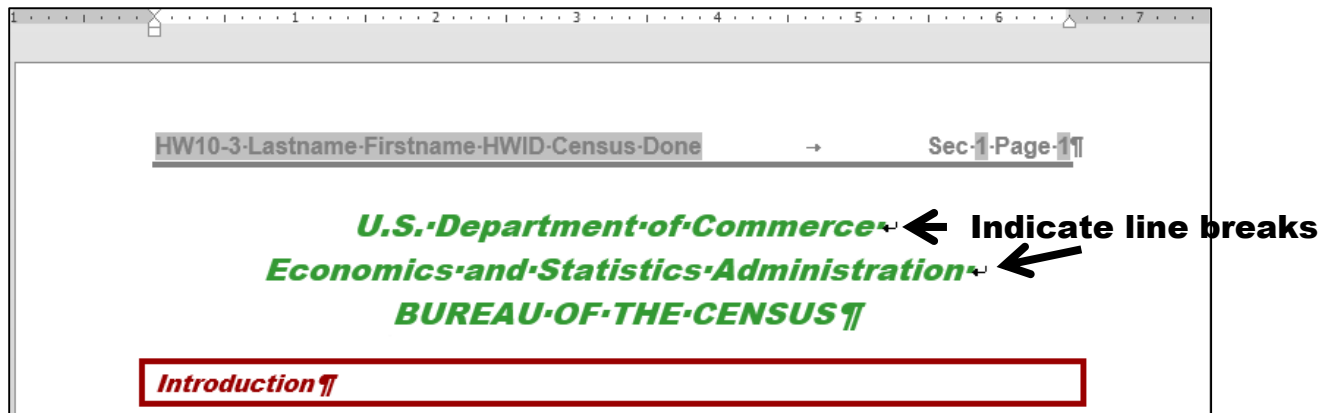


3. In the **Style Pane Options** dialog box, in the top drop down menu, select **All styles**. This will display all the styles available to this document.
4. Click **OK**.
5. Add **Heading 3** to the **Quick Style Gallery** so you can apply it to a paragraph quickly.
6. Close the **Styles** pane.
7. Apply the **Heading 3** style to the following 5 headings:

U.S. Department of Commerce Economics...
Introduction
The Document
Census Schedules Available to the Public
Microfilm Rental and Sales

- h. Modify the style **Heading 3** so that it has the following characteristics:
- The font is 12 pt Arial Black, bold, italic, and red.
 - There is a red border around the paragraph. The width of the border should be 3 pt.
- i. Tap **Ctrl + Home** to move to the top of the document and create a new paragraph style called **T1** that is based on the **Heading 3** style but with these changes:
- Remove the borders
 - Make the font 16 point
 - Center the paragraph
 - Remove the 12 pt space before
 - Make the color green

- j. In the first line of the document, insert a line break just before the word **Economics** and another line break just before the word **BUREAU**. To do this, place the cursor just before each word and tap **Shift + Num Enter**.



- k. Click the left side of the heading **Census Schedules Available...** and tap **Ctrl + Enter**. This will insert a page break so that the heading **Census Schedules Available...** will begin at the top of page 2. You can also insert a page break by choosing **INSERT, Pages, Page Break**.

There are times when it is appropriate to break a document into several **sections** that have different characteristics, such as page layout (portrait or landscape), margins, headers and footers, and numbers of columns.

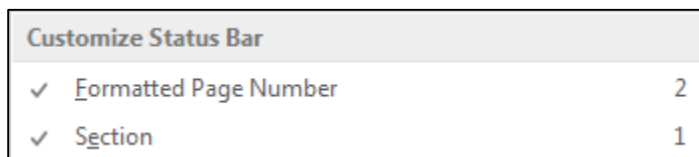
For example, I wanted a different header for each project in this Study Guide so the reader could quickly see which project was being discussed. I did this by separating the projects into different **sections** and then putting the name of the project in the header of each **section**.

For this document, you will display some of the text in a 3 column format and also insert a graphic that is better viewed in landscape orientation. Do the following:

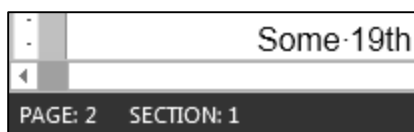
- l. It will be helpful if you display on the **Status Bar** the number of the section that contains the insertion point. To do this, right-click the **Status Bar**.

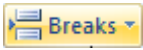


This opens the **Customize Status Bar** dialog box. Click the second choice, **Section**.



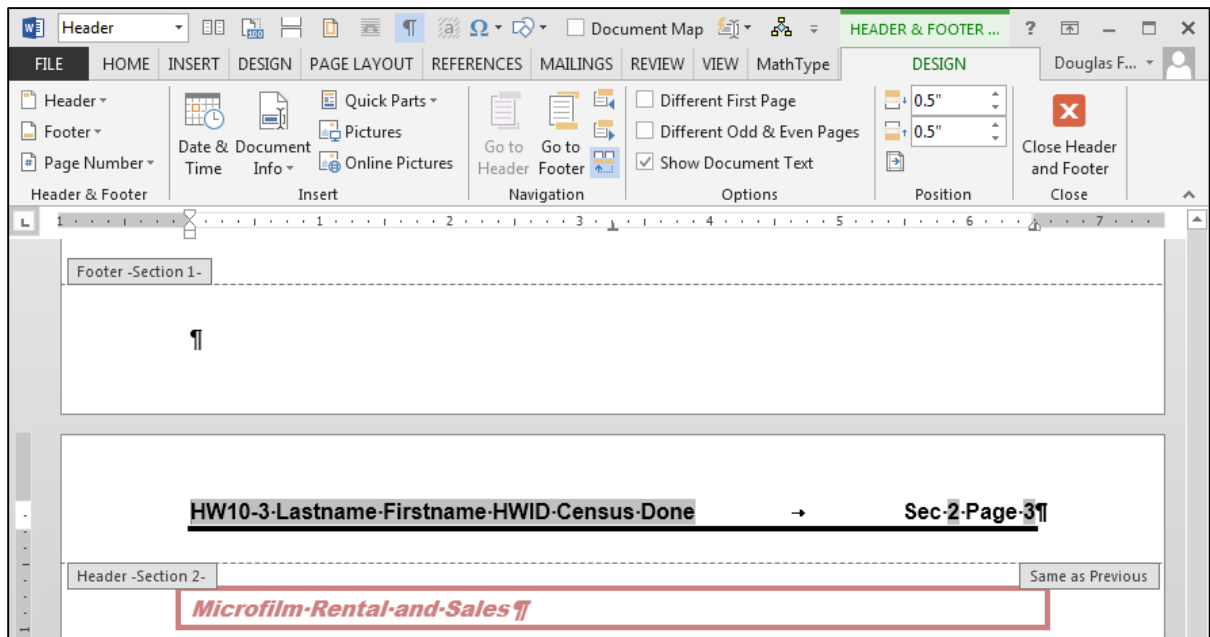
Click anywhere outside the dialog box to close it. The lower left corner of the window shows that the insertion point is located in **Section 1** (there is only one section so far).



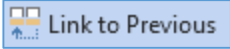
- m. Move the insertion point to the left of the heading **Microfilm Rental Sales**. On the **PAGE LAYOUT** tab, in the **Page Setup** group, click  and in the **Section Breaks** section select **Next Page**.

A **Next Page** section break is like a page break but it also creates a new section in the document to which you can apply different characteristics.

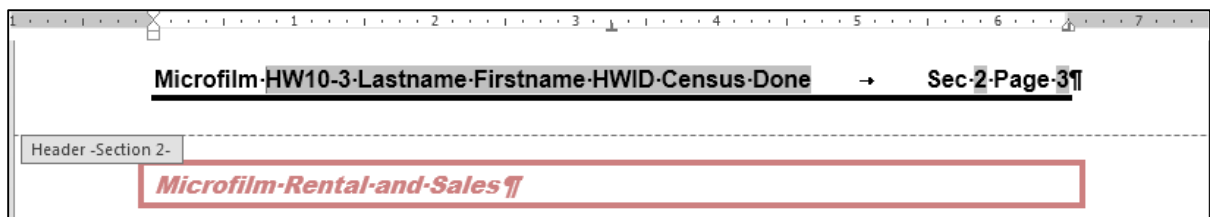
- n. Insert a new header for this section by doing the following:
1. Double click in the header area.



Notice that the footer of the previous page is labeled **Footer-Section 1** while the header for the current page is labeled **Header-Section 2**.

You can tell that Word wants to use the same header for section 2 as for section 1 because in the **Navigation** group the **Link to Previous** button, , is highlighted and **Same as Previous** appears in the header section.

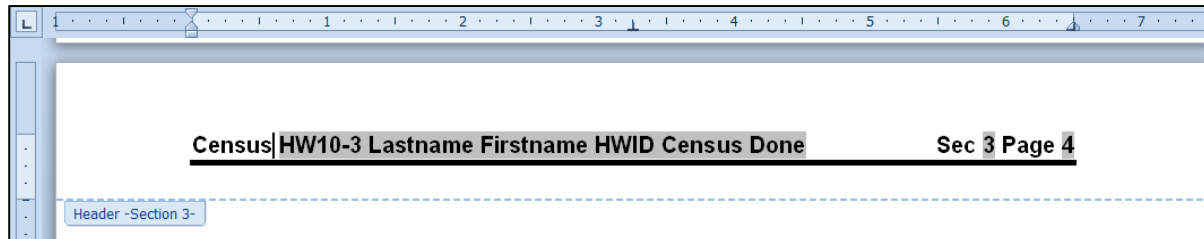
2. To be able to insert a new header for this section, click the **Link to Previous** button to turn it off.
3. To the left of the file name, type **Microfilm** and a blank space.



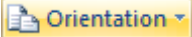
4. Close the **Header**.

- o. Move the insertion point to the bottom of the document and insert another next page section break.

- p. Change the header of the new section.
1. Double-click in the **Header** area on page 4 to open it.
 2. Turn off the **Link to Previous** button.
 3. Replace the word **Microfilm** with the word **Census**.

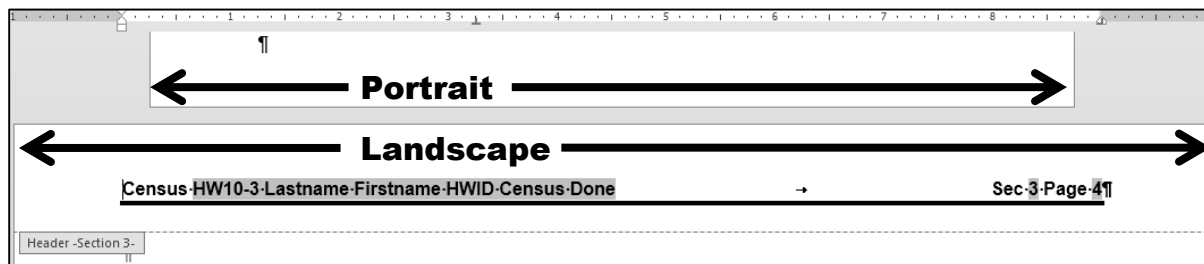


4. Close the **Header**.
- q. Since you are about to insert a picture that should be displayed sideways you must set this new section to landscape orientation. Be sure the insertion point is in the new section (this is section 3).

1. On the **PAGE LAYOUT** tab, in the **Page Setup** group, click  and select **Landscape**.

Scroll up a few lines to see that the previous section remains in portrait mode (vertical) while the new section is changed to landscape.

2. Open the Header and move the right tab stop to the right indent marker so **Sec 3 Page 4** is all the way over on the right.



Close the Header.

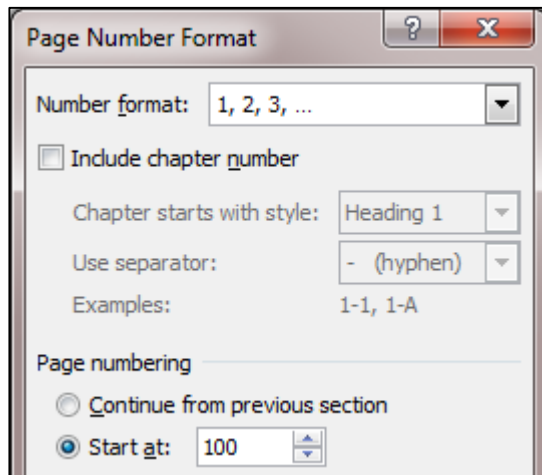
3. On the **INSERT** tab in the **Illustrations** group, click the **Picture** button. Navigate to your **Word Files** folder and insert the file **HW10-3 Census Picture Original.jpg**, which is one of the files you copied at the start of the term. This is a photo of a census record from 1910.
4. If necessary, change the style of the paragraph that contains the graphic to **Normal**.

- r. Different sections of a document can have different page number sequences. You will see how this is useful when you work on a large document in the next project. To see how this works now, change the automatic page number in the last section to 100 by doing the following:

1. On the **INSERT** tab, in the **Header & Footer** group, click **Page Number** and select **Format Page Numbers**.

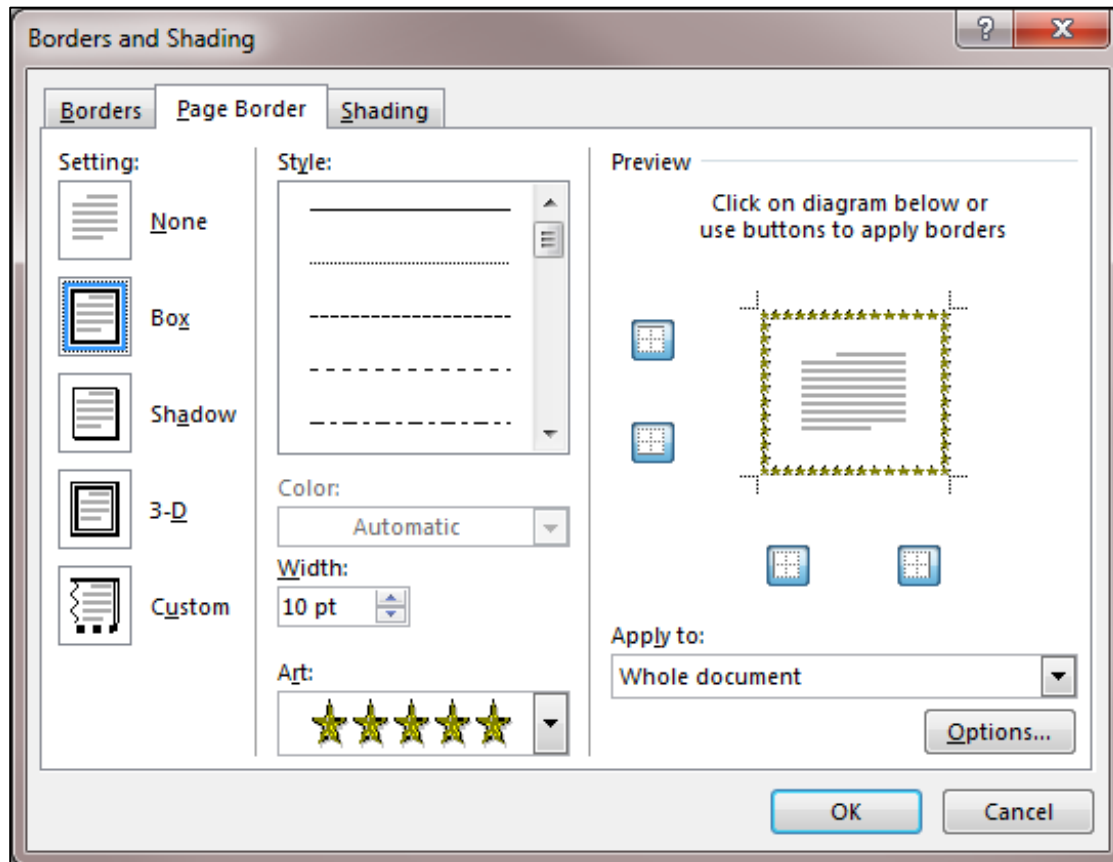
This allows you to have the page numbers displayed in different formats, such as letters or Roman Numerals. It also allows you to change where the page numbering begins for this section.

2. To the right of **Start at** type 100.



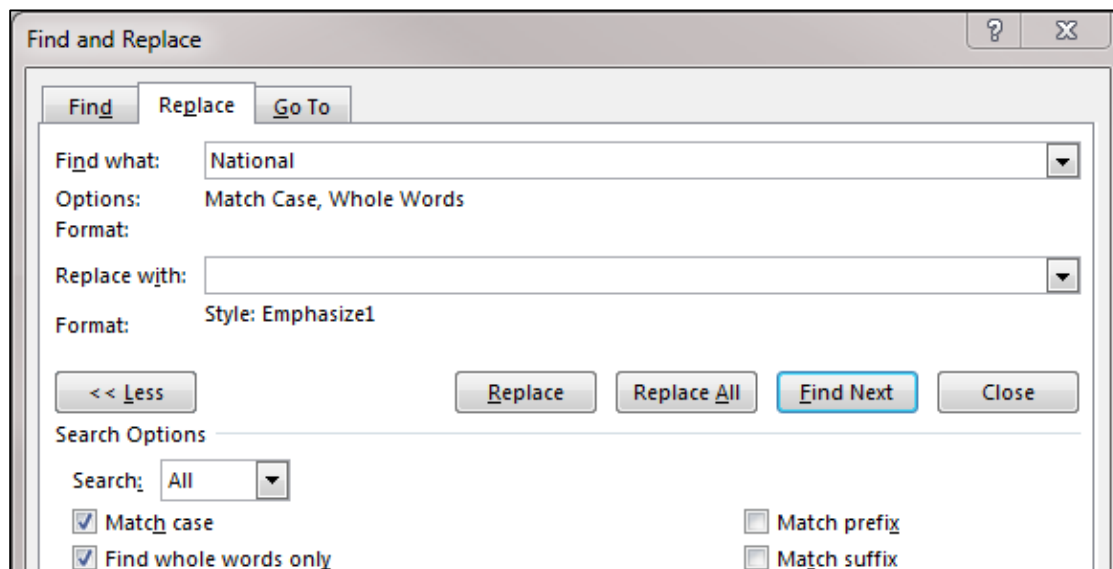
3. Click **OK**. The page numbering is set to start at 100 for section 3.
- s. Place a border around section 3 only by doing the following:
1. On the **DESIGN** tab, in the **Page Background** group, click **Page Borders**.
 2. Select **This section** from the drop down menu under **Apply to**. This will ensure that the border is placed around the pages in this section only and not every page in the document.
 3. Click the down arrow next to **Art** and choose a border you like. I chose stars.

4. Change the number in the Width box to 10.



5. Click **OK**.

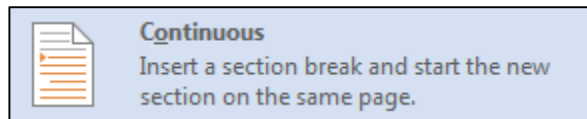
- t. Change every occurrence of the word **National** to the **Emphasize1** style by doing the following:
1. Tap **Ctrl + h** and set up the **Replace** dialog as follows. Notice that the **Match case** box is checked so **national** will not be changed and that the **Find whole words only** box is checked so **Nationalized** will not be changed.



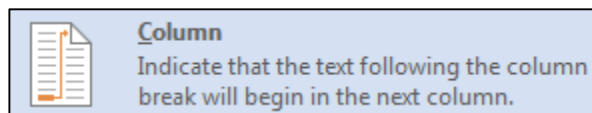
2. Click **Replace All**. There should be 5 replacements (**NOT** 7).

- u. Sometimes displaying text in multiple columns makes a document easier to read because the reader's eyes do not have to track so far from the end of a line to the start of the next line. Do the following to make part of this document display in 3 columns:

1. On page 2, click just to the left of the first word in the second paragraph (**Microfilm copies of the original...**).
2. On the **PAGE LAYOUT** tab, in the **Page Setup** group, click **Breaks** and select **Continuous** under **Section Breaks**.



3. Insert another continuous section break at the start of the paragraph **A number of State and territorial...**
4. Click anywhere between the two continuous section breaks. The status bar should show **PAGE: 2 SECTION: 2**
5. On the **PAGE LAYOUT** tab, in the **Page Setup** group, click **Columns** and select **3**.
6. Click to the left of the first word in the paragraph that begins **There are sound....**
7. On the **PAGE LAYOUT** tab, in the **Page Setup** group, click **Breaks** and select **Column**. This will ensure the second column starts at that point.



8. Click to the left of the first word in the paragraph that begins **Researchers may find...** and insert another column break.

HW10-3-Lastname-Firstname-HWID-Census-Done → Sec. 1-Page 2

Section 1 { **Census Schedules Available to the Public ¶**

Individual records from the national population censuses are confidential for 72 years, by law (Title 44, U.S. Code). Thus, April 2002 is the scheduled date for the **National Archives** to open the 1930 records to public use. ¶ Section Break (Continuous)

Section 2 {

Microfilm copies of the original population schedules, from 1790 through 1920 (virtually all of the 1890 records were destroyed in a 1921 fire), are available at the National Archives in Washington (http://www.archives.gov/index.html) and its 13 regional archives, and many libraries in various parts of the United States. Most have facilities for making paper copies from the microfilm. ¶ Column Break	There are sound of the surname rather than its spelling indexes on microfilm for the 1880, 1900, and 1920 censuses for each State, and for 1910 for 21 States, principally in the South. Alphabetic indexes to the 1790-1860 and most of the 1870 censuses are available in genealogical libraries. ¶ Column Break	Researchers may find two Bureau of the Census publications useful; most major libraries have copies: Heads of Families at the First Census of the United States Taken in the Year 1790 (12 vols., Washington, DC, 1907-08, reprinted 1965-75), contains specific names. A Century of Population Growth—1790-1900 (Washington, DC, 1909, reprinted 1967-1970), includes the incidence of surnames in 1790, and a variety of summary tables from colonial censuses and from 1790 to 1900. ¶ Column Break

Section 3 { A number of State and territorial censuses were Nationalized in the intra-decennial

- v. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, **print pages 1, 2, and 100 only**, save the document, and then close it.

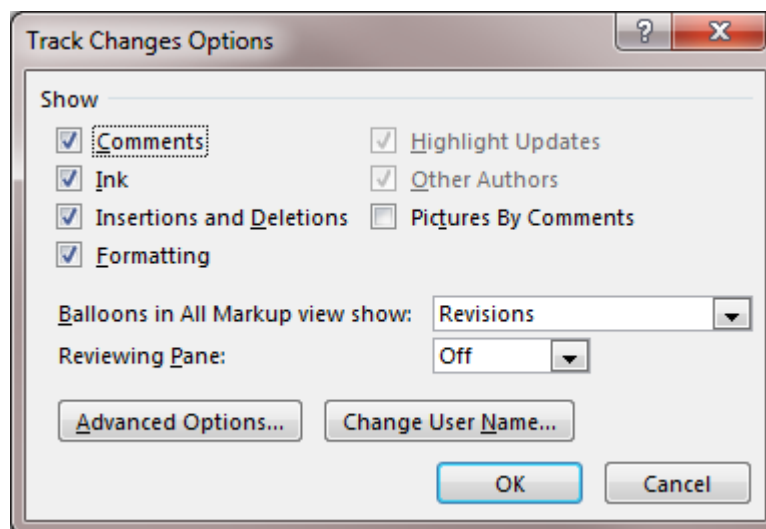
HW10-4 Track Changes

Problem: How can several people collaborate on and edit a document and allow everyone to see the changes made by each individual?

If you are working on a group project you may need to make changes to documents that were written by other group members. The person who writes the original draft is referred to as the **author**. The others who read the document and suggest changes are referred to as the **reviewers**.

You can use Word's **Comment** feature to insert comments into a document, perhaps expanding on something or clarifying something, or suggesting some change that needs to be made. To see how this works, you will edit a paper concerning mathematical modeling and global poverty⁴⁴

- a. Set up the document by doing the following:
 1. Open the document **HW10-4 Track Changes Original**.
 2. Save the document to your **Word Files** folder using the name **HW10-4 Lastname Firstname HWID Track Changes Done-part a**
 3. On the **REVIEW** tab, in the **Tracking** group, click the open dialog button. Make the settings match the following:



Click **Change User Name...** Be sure that the **User name** and **Initials** are yours. Edit as needed and check **Always use these values...**

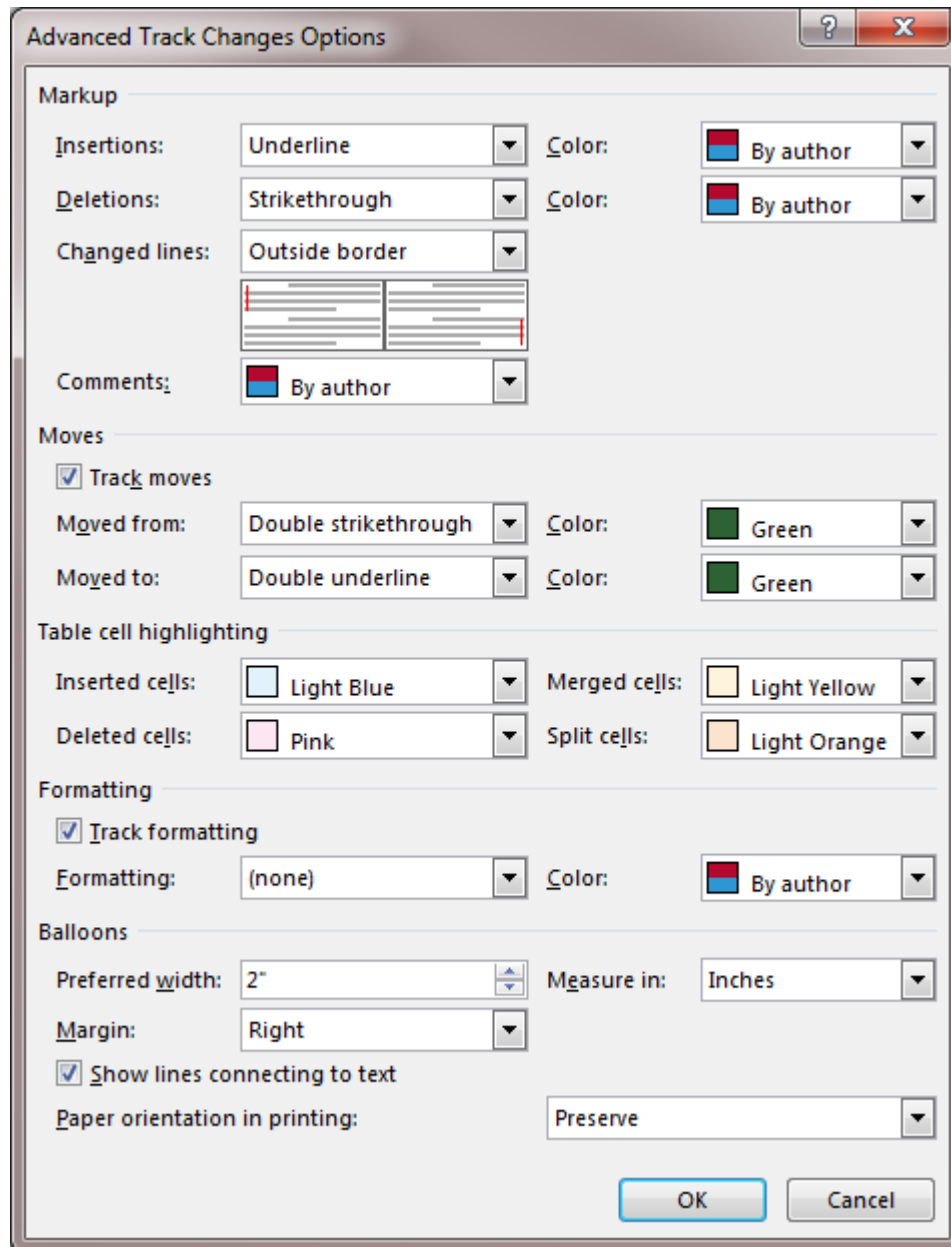
4. Click **OK**.

⁴⁴ Material adapted from Staats, S. K., Robertson, D. F. (2009). International Inequalities: Algebraic Investigations into Health and Economic Development. MathAMATYC Educator, 1(1) 6-11.

b. Set the options and insert some comments by doing the following:

1. In the **Track Changes Options** dialog box, click **Advanced Options...**

Here is where you can set the way changes are indicated and the colors that will be used. If necessary, make the settings as follows:



2. Click **OK** and click **OK** again.
3. On the **REVIEW** tab, in the **Tracking** group, be sure **All Markup** is showing. If not, select it from the drop down menu.
4. Select the author's names (**Douglas Robertson and Susan Staats**)
5. On the **REVIEW** tab in the **Comments** group, click **New Comment**. The screen is redrawn with the selected text highlighted and a balloon on the right.

6. Type the following in the balloon: **The names of the authors should be reversed since Sue did the original draft.**

International Development Issues through Algebra Douglas Robertson and Susan Staats University of Minnesota	FirstName LastName The names of the authors should be reversed since Sue did the original draft.

7. Point to the selected text and a screen tip appears showing the date and time the comment was made and the name of the person who made it.

FirstName LastName, Wednesday, July 24, 2013 7:29:00 AM commented: The names of the authors should be reversed since Sue did the original draft.	me

Douglas Robertson and Susan Staats

8. In the first paragraph, click just to the right of **Sub-Saharan Africa** (it is bold lavender) and insert a comment with the text **Should we list countries here?**
9. Near the end of the first paragraph, click just to the right of the word **complex** and insert the comment **Should we use the word "complicated" instead?**
10. Look at the **REVIEW** tab in the **Comments** group. The four buttons now are available.



You can



Insert a new comment



Delete the selected comment



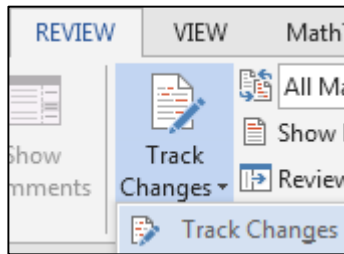
Move to the previous comment



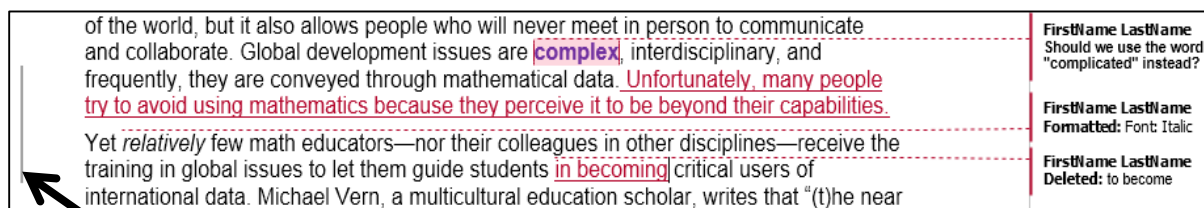
Move to the next comment

11. Click anywhere in the second comment.
12. In the **REVIEW** tab in the **Comments** group click **Delete**. You can also delete a comment by clicking in it, right-clicking, and selecting **Delete Comment** from the menu.

- c. If you want to make changes to a document and have Word keep a record of those changes you can use the **Track Changes** feature. This is helpful to the author and other reviewers because it allows them to see specifically what you think should be added, deleted, or modified, and how. For example, a comment like **This paragraph is confusing** would be useful but it would be much more helpful if you made specific suggestions as to how the paragraph could be changed to make it better. Once you save the document and send it to others they can accept or reject your changes, or modify them.
1. Turn on the **Track Changes** feature by clicking its button in the status bar at the bottom of the window or by selecting **Track Changes**, which is on the **REVIEW** tab in the **Tracking** group.



2. Right after the last sentence in the first paragraph, type a space and then insert the following text: **Unfortunately, many people try to avoid using mathematics because they perceive it to be beyond their capabilities**. Because you set insertions to be red and underlined that is how the text appears.
3. At the start of the next paragraph, make the second word (relatively) italic. The change in formatting is noted on the right side.
4. In the same sentence, select the words **to become** and type **in becoming**. Notice how easy it is to see what was deleted and what was inserted.



The changes (added text and formatting) are indicated on the left side by a vertical line.

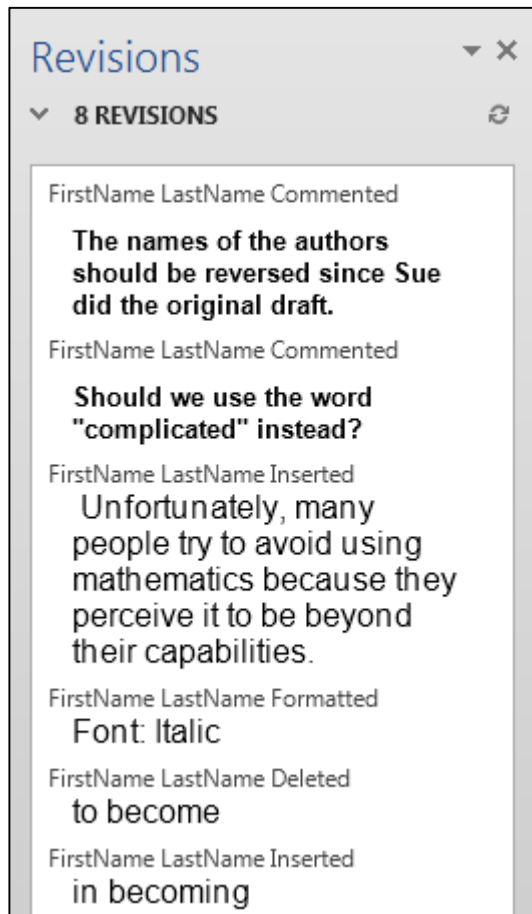
5. On page 2, select the following text:

Insert Figure 1 About Here

Figure 1: Millennium Development Goals. The assessment targets are available at <http://www.un.org/millenniumgoals/>.

Cut the text. Track changes notes the deleted text on the right side.

6. Go back to page 1, click just to the left of the start of the third paragraph, **In this paper, we...**, and paste the deleted text.
7. On the **REVIEW** tab, in the **Tracking** group, click **Reviewing Pane** and select **Reviewing Pane Vertical**. This opens on the left and shows you all the changes you have made.



- d. You can choose to view your documents in four different ways. Do the following:
 1. On the **REVIEW** tab, in the **Tracking** group, notice that **All Markup** is displayed. This tells you that the current view of the document details all the comments and proposed changes.
 2. Click the arrow and select **Simple Markup**. This shows a simplified version of the markup.
 3. Click the arrow and select **No Markup**. This shows how the document will look if all the changes are accepted.
 4. Click the arrow and select **Original**. This shows how the document looked before you started making changes.
 5. Click the arrow and select **All Markup** again.
 6. Tap **Ctrl + Home** to move to the top of the document.

- e. Tap **Ctrl + F2** and compare the preview with the key. Note that the comments in the right side look a bit different in the printed version than on the screen. You can ignore that. Otherwise, make needed corrections, print **page 1 only**, and save the document but do not close it.
- f. Save a new copy of the document using the name **HW10-4 Lastname Firstname HWID Track Changes Done-part b**.
- g. Now, let's process the suggested changes.
 1. Tap **Ctrl + Home** to move to the top of the document, if necessary.
 2. On the **REVIEW** tab, in the **Changes** group, click the **Next** button. This will select the first comment.
 3. Click the **Next** button again to select the second comment.
 4. Click the **Reject** button. The comment is deleted and the next change is selected, which is the inserted text **Unfortunately, many people...**
 5. Click the **Accept** button to retain this change and move to the next change, which is the format change of the word **relatively**.

You can move through the document rejecting and accepting changes one at a time. You can accept all the remaining changes by clicking the arrow on the **Accept** button and selecting **Accept All Changes in Document**. Using a similar procedure you can reject all the rest of the changes.
 6. Accept all the rest of the changes in the document.
 7. Turn off **Track Changes**.
- h. Save the document and close it without printing.

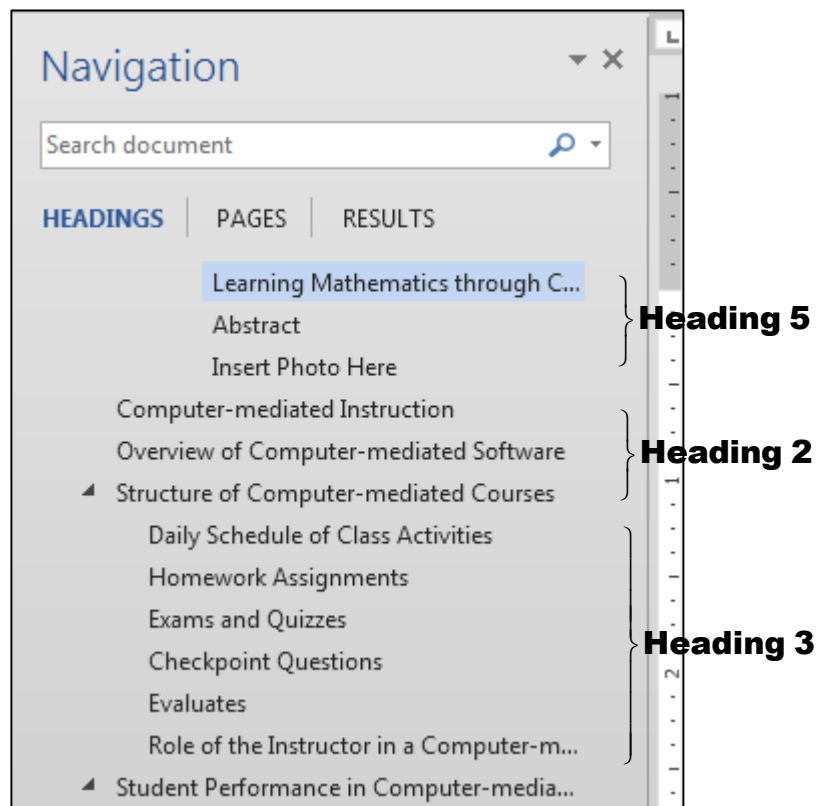
HW10-5 Large Document

Problem: How can a large document, such as this Study Guide, be organized and include graphs, equations, a table of contents, an index, and cross references?

The following book chapter on computer-mediated mathematics courses serves as the basis for this assignment:

Kinney, D. P., Kinney, L. S., Robertson, D. F. (2005). *Learning Mathematics Through Computer-mediated Instruction*. In J. L. Higbee, D. B. Lundell, & D. R. Arendale (Eds.), *The General College vision: Integrating intellectual growth, multicultural perspectives, and student development* (299-318). Minneapolis: University of Minnesota, General College, Center for Research on Developmental Education and Urban Literacy.

- a. Open the document **HW10-5 Large Document Original**, which is one of the files you copied at the start of the term.
- b. Save the document to the **Word Files** folder using the name **HW10-5 Lastname Firstname HWID Large Document Done**
- c. One way to move quickly through a document is to use the **Navigation Pane**. This is a pane that displays a list of headings in the document; when you click a heading in the **Navigation Pane** Word jumps to the corresponding heading in the document, displays it at the top of the window, and highlights the heading in the **Navigation Pane**. Do the following:
 1. On the **VIEW** tab, in the **Show** group, click the checkbox to the left of **Navigation Pane**. This displays an outline of the document in a pane on the left side of the screen.

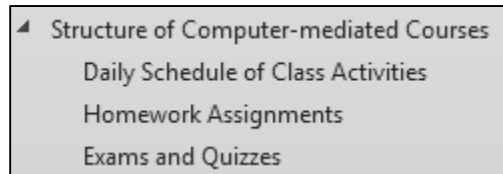


The outline entries are automatically generated using the built-in styles called **Heading 1**, **Heading 2**, **Heading 3**, etc. For example, you applied the following styles to various parts of the paper:

Heading 1: This heading normally would be used for the title but later on you will create a Table of Contents from the first three levels of headings and you do not want the title in the Table of Contents. So, **Heading 1** is not used. However, you do want the title to appear in the **Navigation Pane** so **Heading 5** was applied to it.

Heading 2: Section headings such as **Computer-mediated Instruction**, **Overview of Computer-mediated Software**, and **Structure of Computer-mediated Courses**.

Heading 3: Some sections have sub-parts. For example, **Structure of Computer-mediated Courses** has sub-parts such as **Daily Schedule of Class Activities**, **Homework Assignments**, and **Exams and Quizzes**.

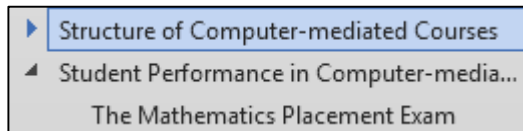


This illustrates how a good outline of a paper can be helpful later on as the paper grows and details are filled in.

2. If you think the width of the **Navigation Pane** is too narrow or too wide, you can change it. Point to the vertical bar that separates the **Navigation Pane** from the document screen and the pointer will change to a double pointed arrow. Drag left or right to change the width.



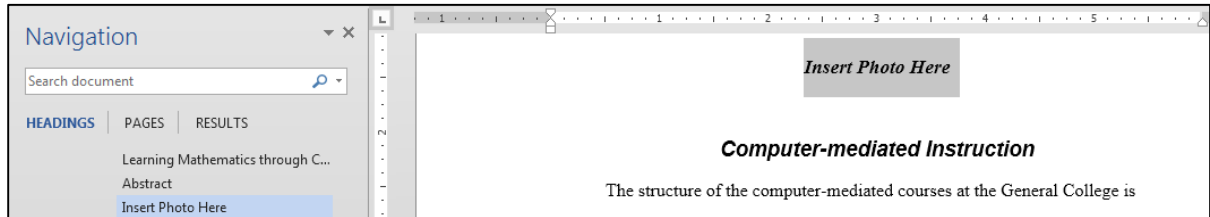
3. In the **Navigation Pane**, click **Structure of Computer-mediated Courses**. The insertion point will jump to that section of the document.
4. Click the **arrow**  on the left of **Structure of Computer-mediated Courses**. The **down-pointing arrow** turns into a **right-pointing arrow**, and the subheadings of **Structure of Computer-mediated Courses** are hidden.



You can collapse or expand any section that you wish. In a large document, collapsing and expanding selected levels can make it easier to see the parts of the document you are working on.

5. Click the **arrow** on the left of **Structure of Computer-mediated Courses** to once again display its subheadings.
6. Point to any heading, right-click, and select **Expand all** so you can see all the headings and subheadings.
7. This document contains a lot of hidden codes that will be explained later. For now, hide these codes, if necessary, by clicking the **Show/Hide** button  on the **HOME** tab.

- d. Insert a photo of the computer classroom where the classes are taught by doing the following:
1. Use the **Navigation Pane** to move the insertion point to **Insert Photo Here** (third line from the top in the **Navigation Pane**).
 2. Select the entire line.



3. On the **INSERT** tab, in the **Illustrations** group, click the **Pictures** button.
 4. Navigate to your **Word Files** folder and double-click the file **HW10-5 Photo Original.jpg**.
- e. Insert two tables and a graph by doing the following:
1. Move the insertion point to **Insert Table 1 Here**.
 2. Select the entire line.
 3. On the **INSERT** tab, in the **Text** group, click the down arrow on the right of **Object** and choose **Text from File**.
 4. Navigate to your **Word Files** folder and then double-click the file **HW10-5 Table 1 Original**, which is one of the files you copied at the start of the term.
 5. Change the style of the caption, **Table 1: Course Satisfaction**, to **Heading 5** (**HOME**, **Styles**, scroll down and click **Heading 5**).

Lecture	216	3.33	0.48	0.03
<i>Table 1: Course Satisfaction</i>				

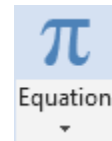
6. Move the insertion point to **Insert Table 2 Here**. Follow the same procedure as you did for **Table 1** to insert the file **HW10-5 Table 2 Original**, which is one of the files you copied at the start of the term. Change the style of the caption to **Heading 5**.
7. Move the insertion point to **Insert Figure 1 Here**. Follow the same procedure as you did for **Table 1** to insert the file **HW10-5 Graph Word Original**, which is one of the files you copied at the start of the term. Change the style of the caption to **Heading 5**.

f. Word offers two ways to enter equations.

- Use an equation editor (**INSERT, Text, Object, Microsoft Equation 3.0**) where you can type the equation directly. This is the faster way but it takes some time to learn.
- Use a pallet from which you can choose mathematical symbols and structures. This is slower but it is easier to use. You will use this way since most of you are not STEM majors and probably will not do this very often. Do the following:

1. Use the **Find** feature to locate the text **QuadraticFormulaHere** (about page 9).
2. Delete the text **QuadraticFormulaHere**.

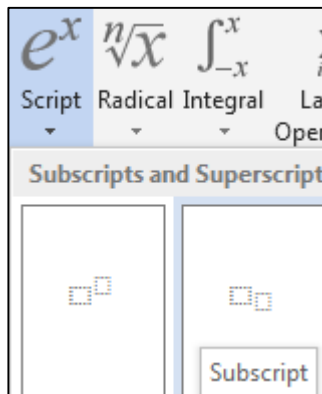
You will insert this formula at this location: $x_{1,2} = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$



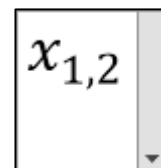
3. On the **INSERT** tab, in the **Symbols** group, click the big pi symbol. This opens up the **EQUATION TOOLS DESIGN** tab.
4. It will be easier if you change the magnification to 200% by repeatedly clicking the plus symbol on the **Status Bar** in the lower right corner of the window.



5. Click the **Script** down arrow and select **Subscript**.

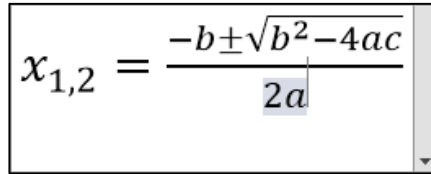


This inserts a template where you can enter the values. In the larger box, type **x** and in the smaller box type **1,2**



6. Tap the **Right Arrow** key to move out of the subscript box and type **=**
7. Click the **Fraction** down arrow and select **Stacked Fraction**
8. Click the numerator and type **-b**.
9. In the **Symbols** group, click the plus or minus symbol 
10. Click the **Radical** down arrow and select **Square Root**.

11. Click inside the square root symbol, click the **Script** down arrow and select **Superscript**. Type **b** in the base box and **2** in the superscript box.
12. Tap the **Right Arrow** key to move out of the superscript box and type **-4ac**
13. In the denominator type **2a**



$$x_{1,2} = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

14. Click outside the editor box to return to normal Word editing mode.
15. Follow the same procedure to replace **EquationHere** with the equation $5x^2 - 3x + 1 = 0$.

“Use the Quadratic Formula, $x_{1,2} = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ to solve $5x^2 - 3x + 1 = 0$.”

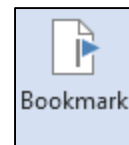
16. Change the magnification back to 100% by repeatedly clicking the minus symbol on the **Status Bar** in the lower right corner of the window.
 17. After the quotation mark, insert a footnote that says **Here, quad refers to the number of sides of a square, which has 2 dimensions.**
- g. Create cross references to specific pages in the document so the reader can be directed to other places for more information. Here is an example of a cross-reference in this Study Guide:

For information on opening a **Navigation Pane** see page **SG231**.

You cannot simply type the page numbers because as parts of the document are added or deleted the page numbers will change. Fortunately, Word has a way of creating page references that will automatically update each time the document is saved or printed.

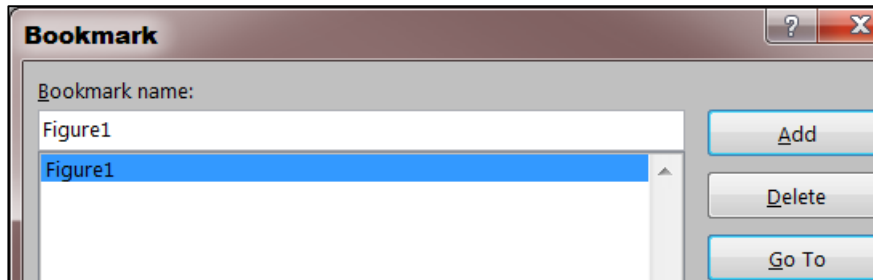
Do the following:

1. Locate the caption **Figure 1: Gender and Type of Class Chosen**. Select the text **Figure 1**.
2. On the **INSERT** tab, in the **Links** group, click **Bookmark**. This will display the bookmark dialog box.
3. Type **Figure1** in the **Bookmark name:** box. A bookmark name must begin with a letter and may contain numbers or the underscore but no spaces. So, **Figure_1** is fine but **Figure 1** will not be accepted.



4. Click **Add**. The dialog box closes automatically. This creates a hidden bookmark at this location. If you want to see where a bookmark is, click the **FILE** tab, click **Options**, click **Advanced**, scroll down to **Show document content**, and put a check next to **Show bookmarks**. Click **OK**. Bookmarks will appear as gray brackets if they enclose text, *[Figure 1]* or, if no text was selected when you created bookmark, as a gray I beam: I

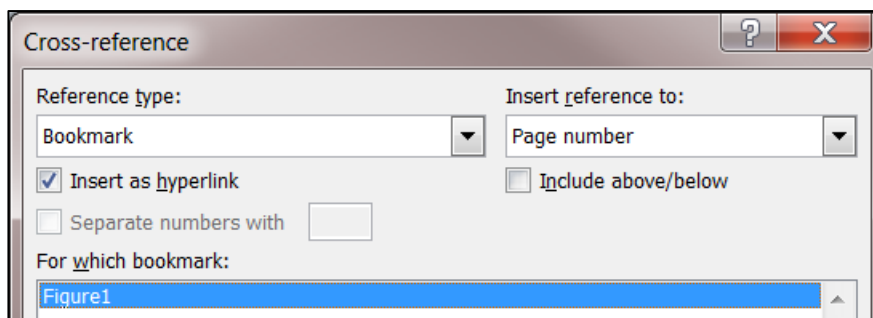
To go to a specific bookmark, open the **Bookmark** dialog, click the bookmark you want, and click **Go To**.



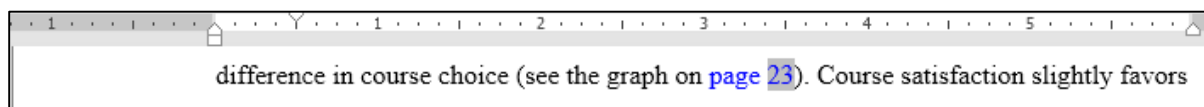
To delete a bookmark, open the **Bookmark** dialog, click the bookmark you want, and click **Delete**.

5. Be sure the **Show/Hide** feature is off. Use the **Find** feature to locate the blue text **page xx** near the top of the document (about page 3). You want to replace **xx** with the page number where the reference can be found.
6. Delete **xx**. Then, on the **INSERT** tab, in the **Links** group, **Cross-reference**.
7. Set the choices in the **Cross-reference** dialog box as follows:

Reference type: **Bookmark**
 Insert reference to: **Page number**
 Insert as **hyperlink**
 For which bookmark: **Figure1**

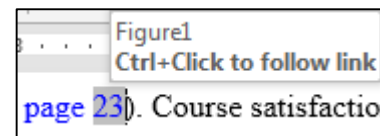


8. Click **Insert** and then close the dialog box. Page number, **23**, is inserted.

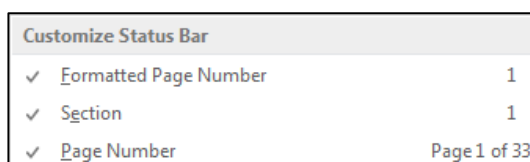


If you add or delete text from the document this page number will automatically be updated when you save or print.

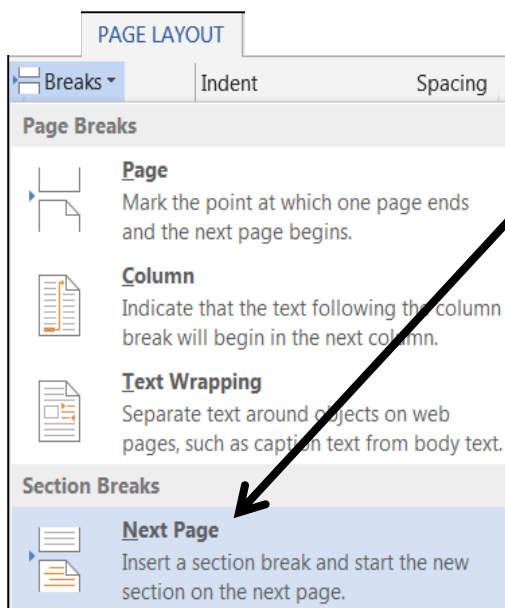
Since you checked the box next to **Insert as hyperlink**, if you hold down the **Ctrl** key and click the page number cross-reference you just set up, the insertion point will jump to that part of the document.



9. Set up a bookmark for **Table 1: Course Satisfaction**.
 10. Use the **Find** feature to locate the blue text **page yy** near the top of the document. Replace **yy** with a cross-reference that contains the page number where **Table 1** can be found.
- h. Breakup the document into different sections and insert headers for each section by doing the following:
1. Right-click the **Status Bar** to open the **Customize Status Bar** dialog box. If they are not already there, click to place check marks to the left of **Formatted Page Number** (explained later) and **Section**.



2. Move the insertion point to the left of the heading **Abstract** near the top of the document. On the **PAGE LAYOUT** tab, in the **Page Setup** group, click the **Breaks** button and select **Section Breaks, Next page**.



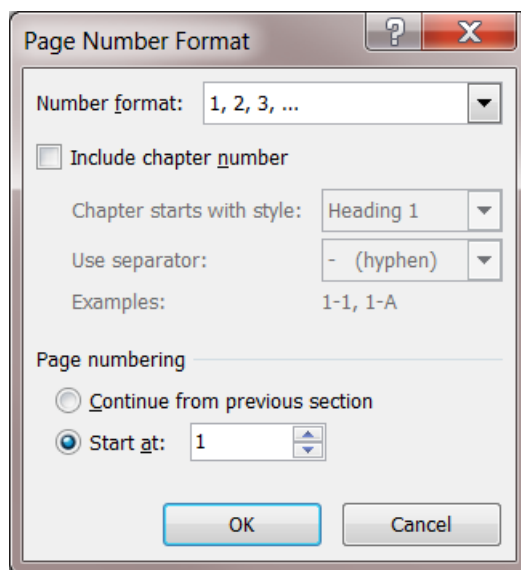
Now, the **Abstract** section starts at the top of page 2. The **Status Bar** will show **PAGE 2 SECTION 2**.

3. Move the insertion point to the left of the heading **Insert Table of Contents Here** and insert a next page section break. Now, the **Table of Contents** section starts at the top of page 3. The **Status Bar** will show **PAGE 3 SECTION 3**.
4. Move the insertion point to the left of the heading **Computer-mediated Instruction** and insert a next page section break. The **Status Bar** will show **PAGE 4 SECTION 4**.

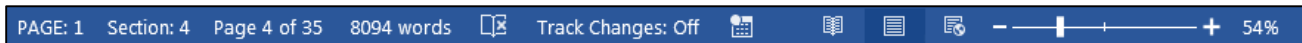
5. Move the insertion point to the left of the heading **Works Cited** near the bottom of the document and insert a next page section break. The **Status Bar** will show **PAGE 32 SECTION 5**.
 6. Move the insertion point to the left of the heading **Insert Index Here** and insert a next page section break. The **Status Bar** will show **PAGE 35 SECTION 6**.
- i. Adjust the page numbers of the body of the paper by doing the following:
1. Move the insertion point to the left of the heading **Computer-mediated Instruction** (near the top of the document).

Look at the **Status Bar** in the lower left of the window. The page number is 4. This is because the title page, abstract, and Table of Contents are all counted as pages, which is not what you want. The **Computer-Mediated Instruction** section should begin on page 1.

2. On the **INSERT** tab, in the **Header & Footer** group, click **Page Number**, and click **Format Page Numbers**. In the **Page Number Format** dialog box, click **Start at:** and be sure a **1** is in the **Start at:** box.



3. Click **OK**. Look at the **Status Bar**:



PAGE: 1 is called the **Formatted Page Number**. That is the page number that will appear in the document header or footer. This is the page number you just set to 1 in the **Page Number Format** dialog box.

SECTION: 4 means the insertion point is in the fourth section of the document.

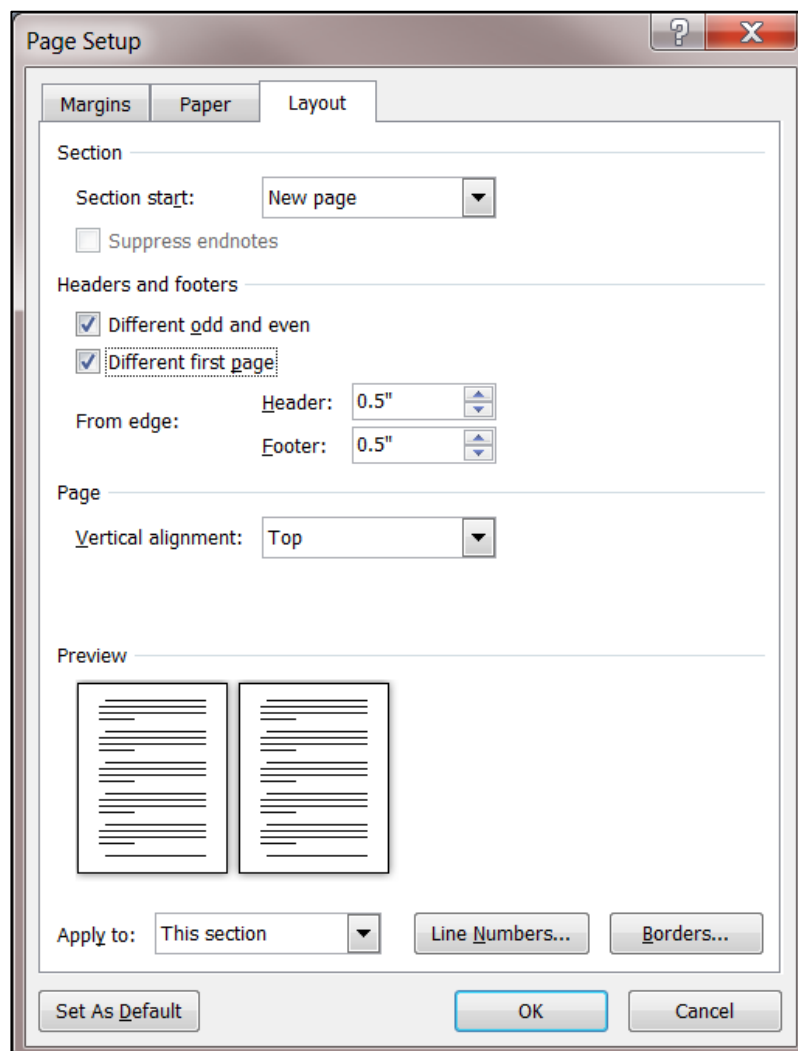
PAGE: 4 of 35 means the insertion point is in the "real" 4th page of the document and the document has a total of 35 "real" pages. Your document may have 34 or 36 "real" pages due to differences in printer setups. That is no big deal.

You have done a lot of work on this document so far so now would be a good time to save it.

j. Put in headers by doing the following:

1. Move the insertion point to just to the left of the **Computer-mediated Instruction** heading near the top of the document.
2. On the **PAGE LAYOUT** tab, in the **Page Setup** group, click the **Dialog Box Launcher**  This opens the **Page Setup** dialog box.

Click the **Layout** tab, click the check boxes next to **Different odd and even** and **Different first page**. Be sure **This section** is selected in the **Apply to:** drop down menu.

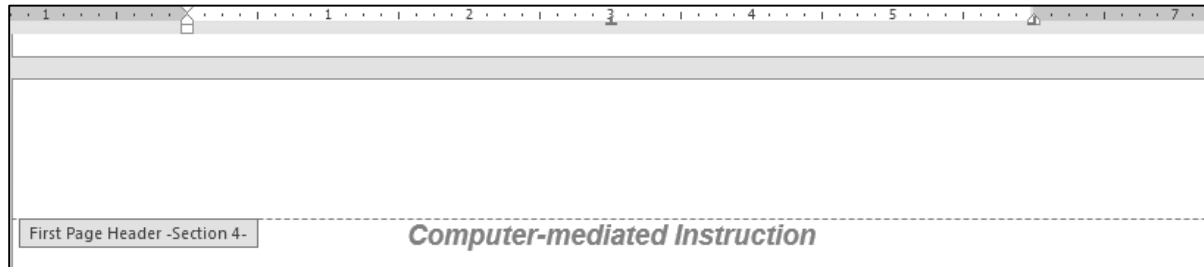


3. Click **OK**. The status bar says there now are 36 pages in the document and the insertion point is on the “real” page 5. Word has automatically inserted an invisible blank page after page 3 because you just told it to set up different headers for this section for the first page of the section, the odd pages of this section, and the even pages of this section.

4. Double-click in the **Header** area.

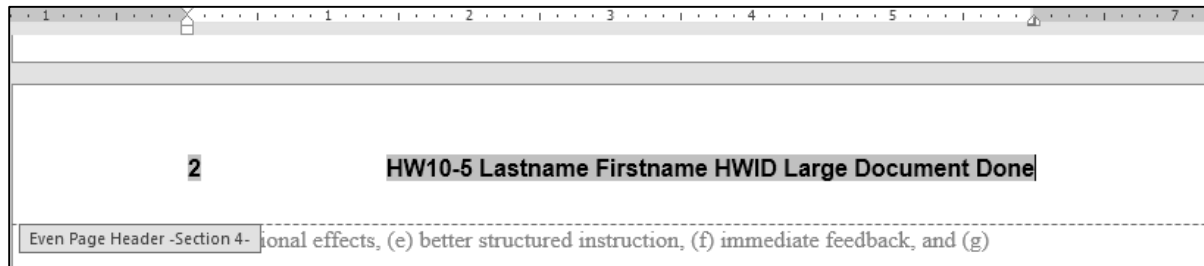
On the **HEADER & FOOTER TOOLS DESIGN** tab, in the **Navigation** group, click **Link to Previous** to deselect it. This will enable you to change the header for this section without affecting the header in the previous section.

Notice that the header area is now called **First Page Header -Section 4**. This is the first page of section 4 and you do not want a header on this page.



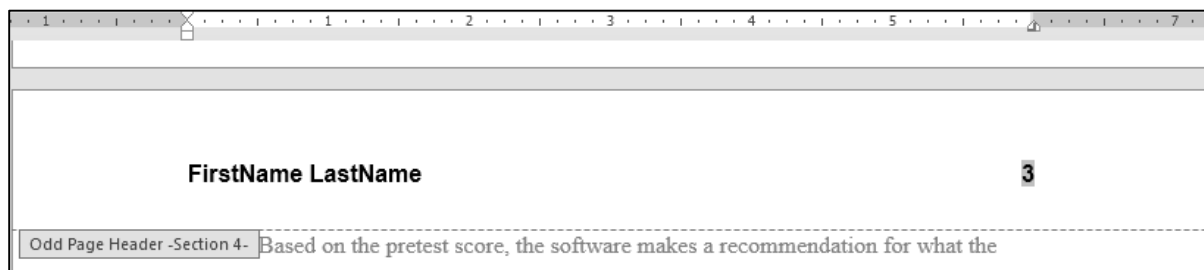
5. Scroll down and click in the **Even Page Header -Section 4** in the header area, deselect the **Link to Previous** button and remove the center tab stop.

Insert field codes so that the automatic page number is displayed on the left and the file name is displayed on the right.



6. Scroll down and click in the next header area. It has the label **Odd Page Header -Section 4**. Deselect the **Link to Previous** button and remove the center tab stop.

Type a header that contains your name on the left and the automatic page number on the right.

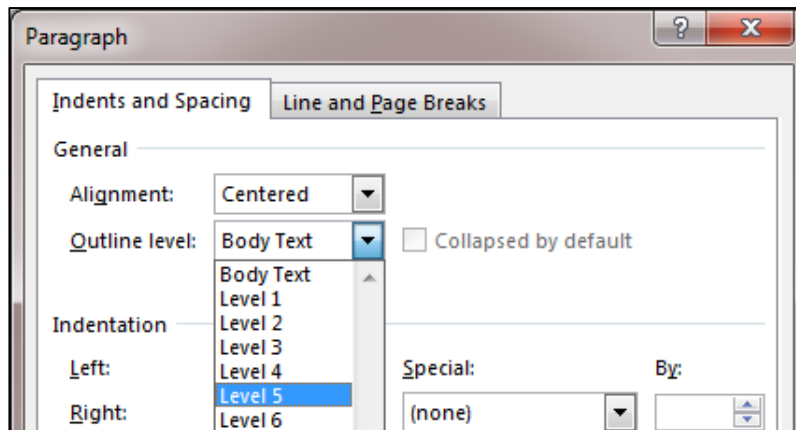


7. Close the Header and Footer area.

k. Add a **Table of Contents** by doing the following:

1. Move the insertion point to the left of the heading **Insert Table of Contents Here**.
2. Replace the text with the words **Table of Contents** and tap **Enter**.
3. Change the style of the line that contains **Table of Contents** to normal.

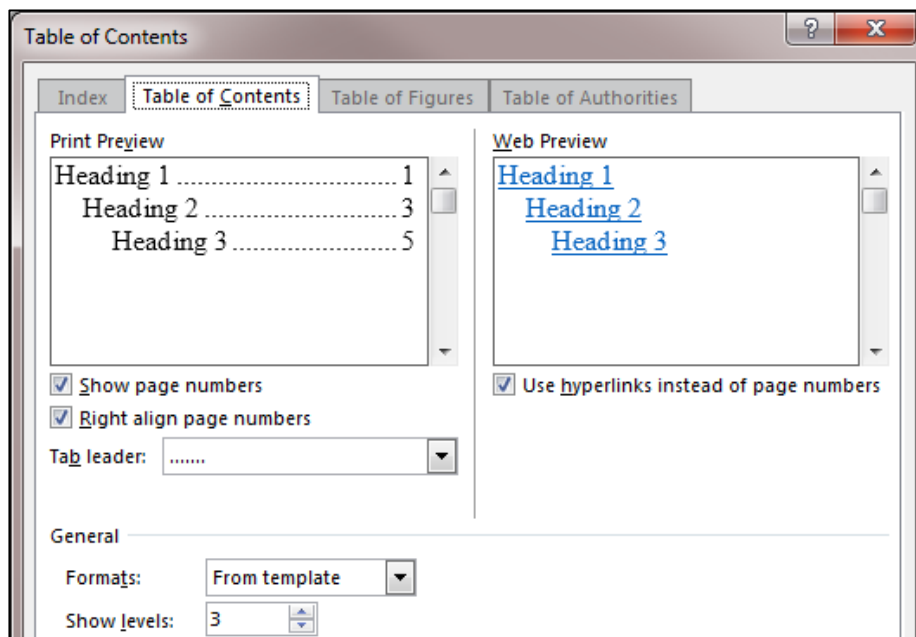
4. Format the line that contains **Table of Contents** as 18 point, bold, Arial, and center the line.
5. Right-click anywhere in the Table of Contents line and select **Paragraph**. Set the **Outline Level:** to **Level 5**.



Click **OK**.

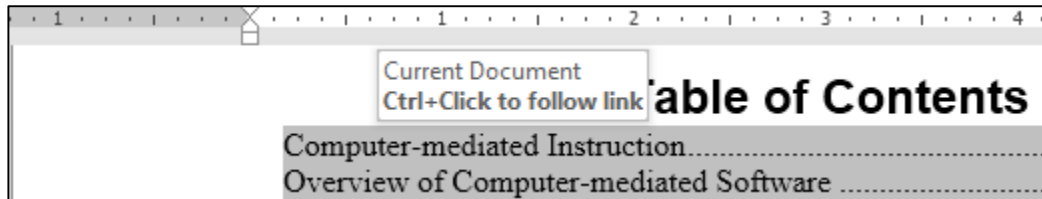
This will make the **Table of Contents** heading at the same level as paragraphs that have style **Heading 5** and it will appear in the **Navigation Pane**. Do not use **Heading 1** or **Heading 2** or **Heading 3** style because you do not want the **Table of Contents** heading to be in the actual **Table of Contents**.

6. Click in the blank line just under **Table of Contents**.
7. On the **REFERENCES** tab, in the **Table of Contents** group, click **Table of Contents** and select **Custom Table of Contents** near the bottom of the menu. The **Table of Contents** dialog box opens. Set it to look like the following (show the page numbers, right align the page numbers, apply a dotted tab leader to the page numbers, choose the format from a template, and show the top 3 levels only):



8. Click **OK**. The **Table of Contents** is inserted.

You can use the **Table of Contents** to quickly go to any item listed. To do this, point to the item, hold down the **Ctrl** key, and click.



Try it. Hold down the **Ctrl** key, point to **Homework Assignments** and click. The insertion point is moved to the section titled **Homework Assignments**.

- I. An index is helpful in a large document or book because it can help the reader quickly find particular words and phrases of interest. Creating an index involves four steps:

Step 1 Mark words and phrases that are to appear in the index. For this document, I have already marked quite a few index entries in order to save you time. You are going to mark a few more and then create the index.

Step 2 Edit the index codes so the wording is appropriate and makes sense.

Step 3 Have Word create the index from the index codes.

Step 4 Check the index and edit the index codes as needed.

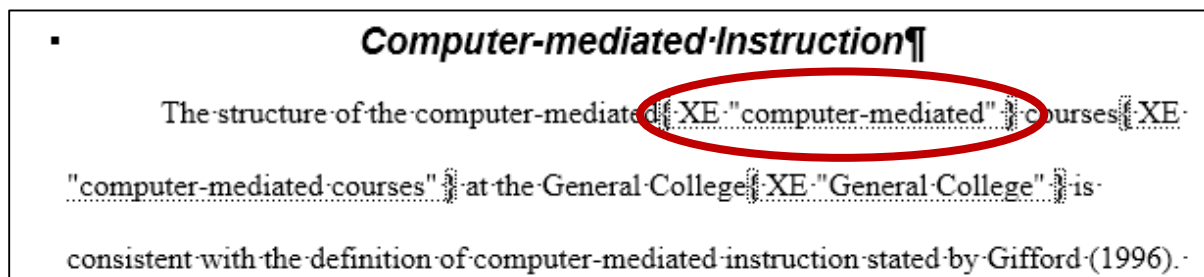
Do the following:

1. Move the insertion point to the left of the heading **Computer-mediated Instruction**.

If the hidden codes are not showing, on the **HOME** tab in the **Paragraph** group click the **Show/Hide** button . This will display the paragraph marks, , tabs , spaces, , and other document marks such as index codes.

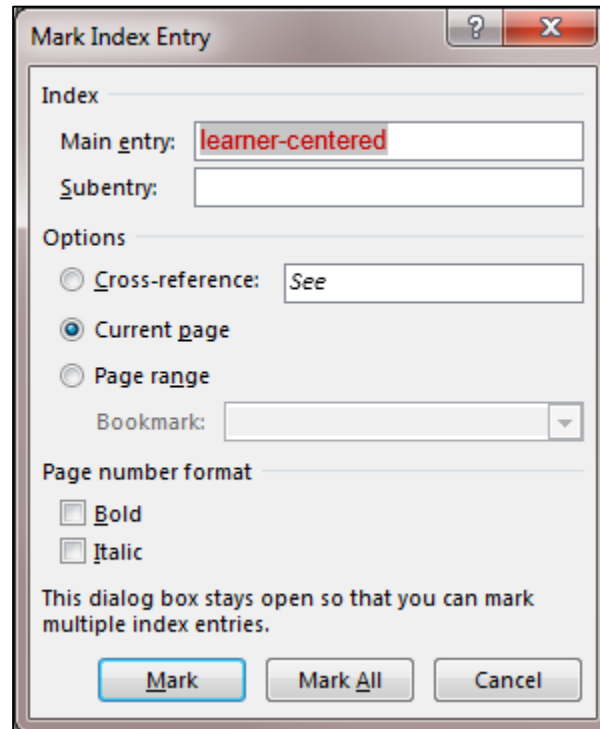
The index codes look like this: { XE "computer-mediated" }

The prefix **XE** stands for index Entry. The word or phrase that will appear in the index is shown inside quotation marks.



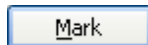
2. Select **learner-centered** in the first paragraph (it is in red to help you find it quickly).

3. Tap **Alt + Shift + x** (or choose **REFERENCES, Index, Mark Entry**).



The selected word appears in the **Main entry** box.

If you want to change it for some reason you can type in what you want.



If you click **Mark** the index entry will be marked for this occurrence only.



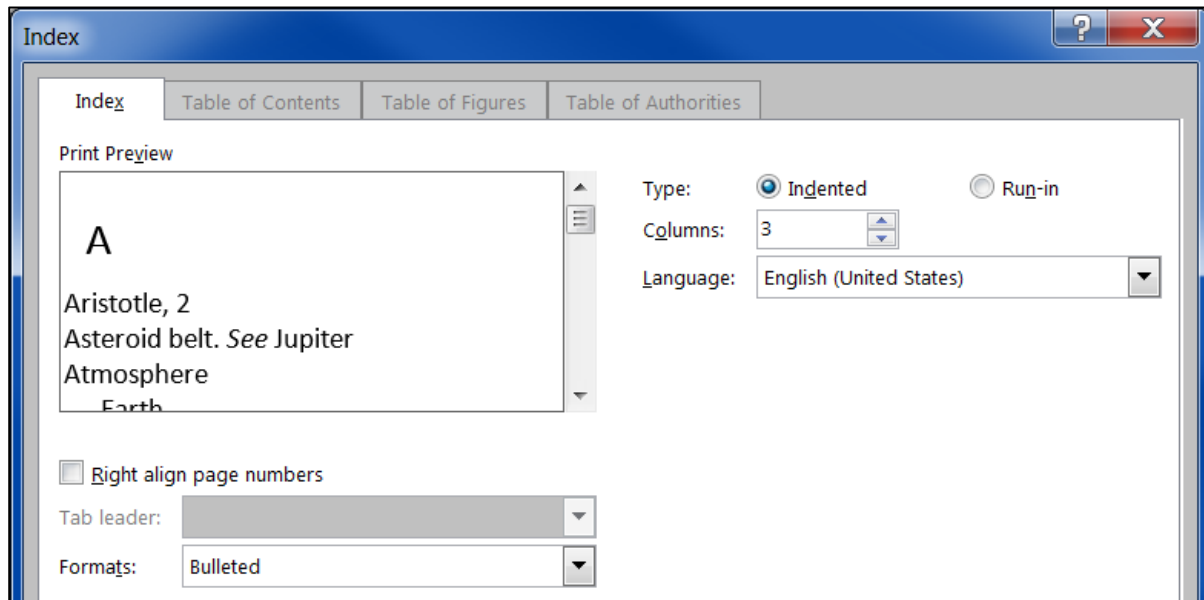
If you click **Mark All** the entry will be marked for every occurrence of **learner-centered** in the document.

4. Click **Mark**. The phrase **learner-centered** is marked as an index entry. The **Mark Index Entry** dialog box stays open so you can mark more entries.
5. Move four lines down in the document and select **graphics** (it is in red). Click anywhere in the **Mark Index Entry** dialog box and then click **Mark All**. This will mark every occurrence of **graphics** in the entire document. Note that this will NOT mark **graphic** or **graphical**. That is one of the drawbacks of the **Mark All** button—variations on the word or phrase will not be marked even though they may be important. Hence, you will have to carefully read the document and tweak the index to make it accurate. This takes time!
6. Close the **Mark Index Entry** dialog box.

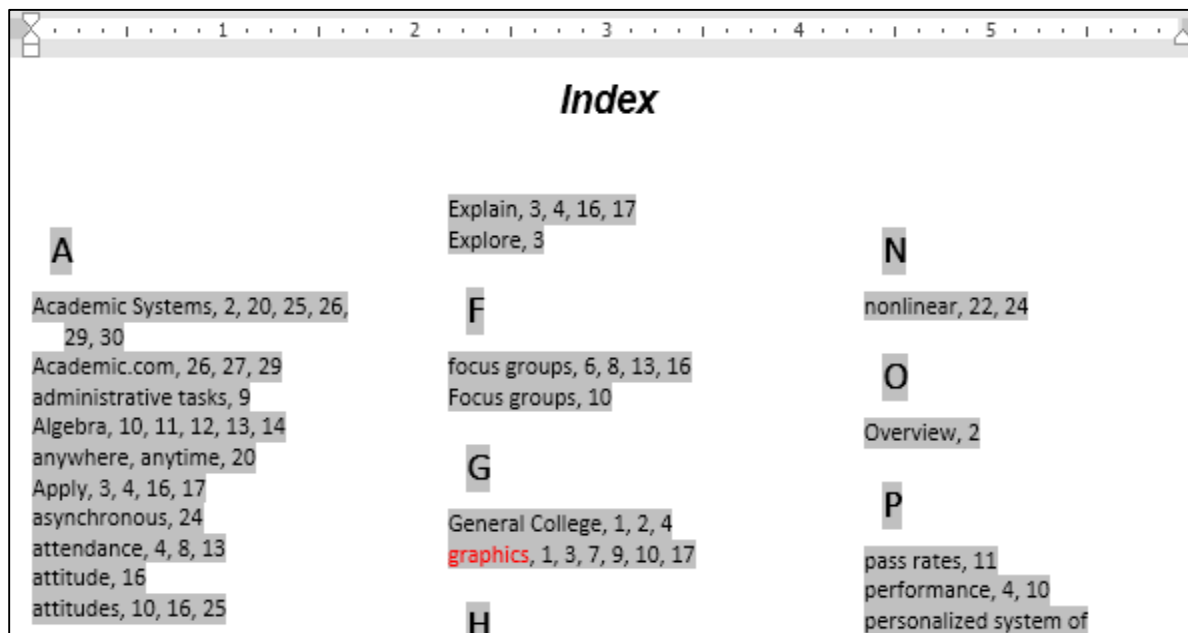
m. Create the index by doing the following.

1. Move the insertion point to the heading **Insert Index Here**.
2. Replace **Insert Index Here** with the single word **Index** and apply the **Heading 2** style.
3. Click in the blank line below **Index**.

4. Turn off the **Show/Hide** feature by clicking the **Show/Hide** button . If you do not turn off the **Show/Hide** feature the page numbers will be incorrect because the text of the marked index entries will add to the length of the document.
5. On the **REFERENCES** tab, in the **Index** group, click . In the **Columns:** box, change the number of columns to 3. In the **Formats:** box, click the arrow, scroll down, and select **Bulleted**.



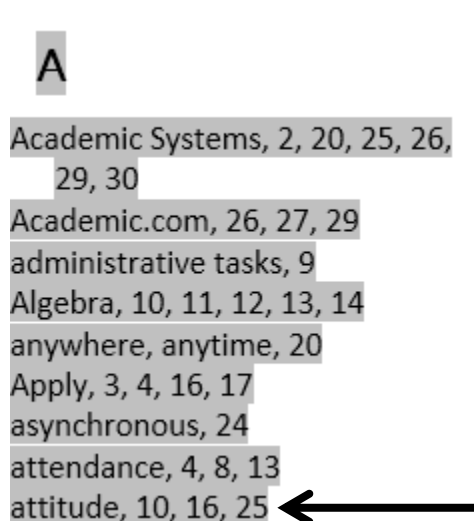
5. Click **OK** to create the index. Note that the page numbers in your index may be slightly different from those shown due to the setup for different printers.



- n. It is often the case that after you create the index you will have to modify it. For example, the index you just created lists **attitude** and **attitudes** as separate entries even though they are the same topic. The same is true for **Evaluate** and **Evaluates**. So, after you create the index it is a good idea to print it, go through the entries, and make changes as appropriate. But, do NOT edit the index directly—only edit the marked entry codes in the body of the document. Once you make the entries consistent you can create a new index with a single keystroke.

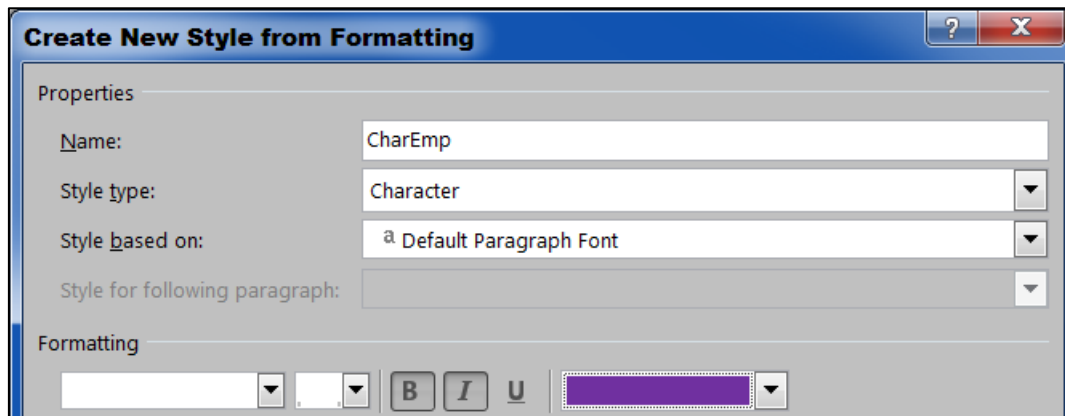
Change the **Evaluates** index entries to **Evaluate** by doing the following:

1. Tap **Ctrl + Home** to move to the top of the document.
2. Turn on the **Show/Hide** feature by clicking the **Show/Hide** button .
3. Tap **Ctrl + h** to open the **Find and Replace** dialog box.
In the **Find what:** box type: **XE "Evaluates"**
In the **Replace with:** box type: **XE "Evaluate"**
4. Click **Replace All**. Word replaces all the index entries that contain **Evaluates** with **Evaluate** (there should be three replacements). Word does not change the text of the document, only the index entry codes.
5. Click **OK**.
6. Repeat the process changing the index entries for **attitudes** to **attitude** (there should be three replacements). Close the **Find and Replace** dialog box.
7. Turn off the **Show/Hide** feature by clicking the **Show/Hide** button .
8. Now, you need to update the index. To do that, move the insertion point to index point to any place in the index, right-click, and select **Update Field**. You could also choose **REFERENCES**, **Index**, **Update Index**. Now, only **attitude** appears in the index.

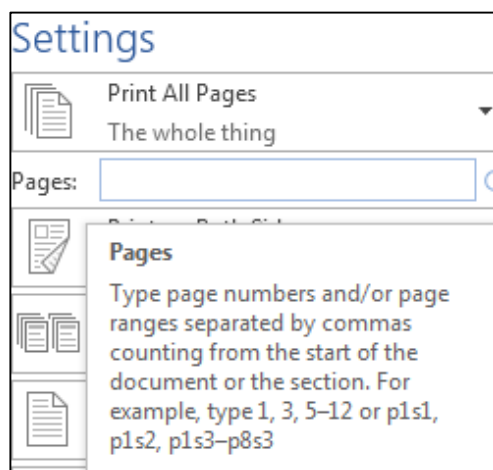


There are several other similar situations (e.g., **focus groups** & **Focus groups**, and **math placement** & **mathematics placement**) but, to save time, you can leave those alone.

- o. Create a new character style and apply it to specific words by doing the following:
 1. Tap **Ctrl + Home** to move to the top of the document.
 2. Create a new **character** style called **CharEmp** that makes the font bold, italic, and purple.

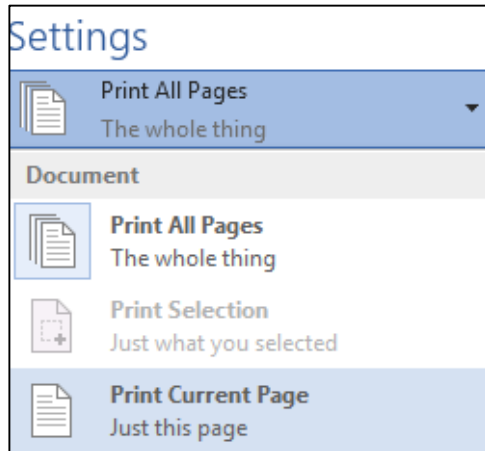


3. Use the **Replace** feature to apply the character style **CharEmp** to all occurrences of the word **skills**. Match case and Find whole words only so words like Skills and skill are not modified. There should be 23 replacements.
- p. To save paper, **do NOT print the whole document**. Print selected pages by doing the following:
 1. Tap **Ctrl + p** to open the **Print** dialog box.
 2. In the **Settings** section, click the **Pages:** option. The **Screen Tip** shows you how to print selected pages or sections.



3. Type **s3** in the box. This will print section 3, which has the **Table of Contents**.
4. Click **OK** to print the one page in section 3.

5. Move the insertion point to the page that contains the **quadratic formula**. This probably is page 7 but, depending on your printer, it could be page 6 or page 8.
6. Tap **Ctrl + p** to open the **Print** dialog box.
7. In the **Settings** section, click the down arrow and select **Print Current Page**. This will print the page that currently contains the insertion point.



8. Click **OK** to print the page.
 9. Follow the same procedures to print the page with **Table 1** (probably page 14) and the **Index**.
- q. Check your output with the key. Then, save the document and close it.

Step 4 Submit You now are ready to submit your homework for grading.

1. Put your 10 homework papers in the following order:
 - HW10-1 Character Styles, page 1
 - HW10-2 Paragraph Styles, page 1
 - HW10-3 Census, page 1
 - HW10-3 Census, page 2
 - HW10-3 Census Sample Page, page 100
 - HW10-4 Track Changes, page 1
 - HW10-5 Large Document Table of Contents
 - HW10-5 Large Document Equations
 - HW10-5 Large Document Table 1
 - HW10-5 Large Document Index
2. Cut out Submission Form 10 and put it on the top of the papers.
3. Staple the papers in the upper left corner.
4. Turn in the packet by the due date.

Step 5 Backup Now would be a good time to backup your files.

Information on the Word Exam

The second exam will cover only Word. The exam will be similar to the Excel exam in length, scope, and level of difficulty. The ground rules for taking the Word exam are the same as those for taking the Excel exam.

Date: Check your syllabus for the exact date and time.

Length: 90 minutes

Notes: The exam is closed book and notes but you may use one 8.5 inch by 11 inch sheet (both sides) of notes (typed, hand written, scanned, whatever). Your note sheet will be collected when you hand in the exam so be sure to put your name and HWID on it.

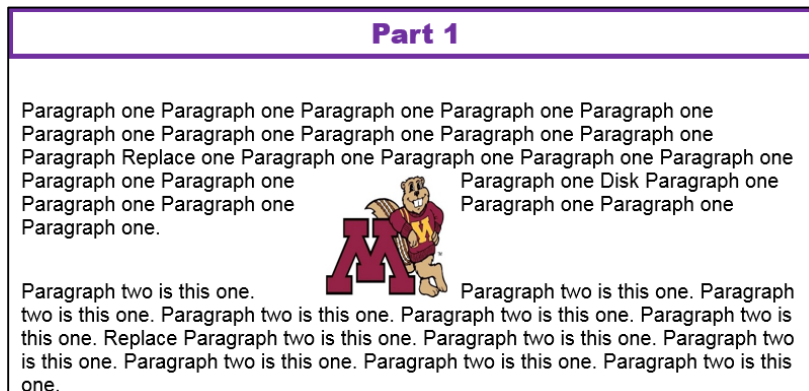
Sample Exam Questions for Word

These sample questions will give you a place to start in your studying but they **do not** constitute a “practice” exam so you will also need to study the activities in your textbook as well as those in this Study Guide in order to be fully prepared for the real exam. I will ask you questions on material that was covered in the textbook, this Study Guide, and your projects that are NOT specifically covered here.

This is not to be handed in for grading. The keys are in the Word Files folder.

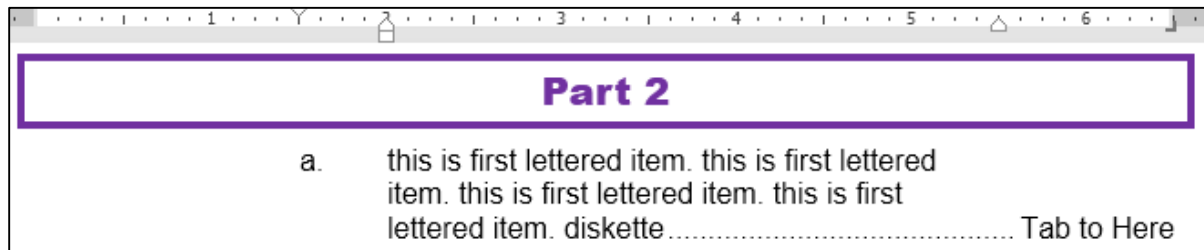
General Word Operations

- a. Open the file **Sample Questions Original**, which is one of the files you copied at the start of the term.
- b. Save the file to your **Word Files** folder using the name **Sample Questions Done**
- c. **Heading style**
 1. Apply the **h1** style to the 9 headings labeled **Part 1**, **Part 2**, **Part 3**, **Part 3a**, **Part 3b**, **Part 3c**, **Part 4**, **Part 5**, and **Part 6**. A quick way to do this is to use **Replace** with **Part** in the **Find** box and style **h1** in the **Replace** box.
 2. Modify the **h1** style so that the font color is purple, the paragraph is center aligned and there is a 3 pt purple border around the paragraph.
- d. **Part 1**
 1. For the two paragraphs under **Part 1**, set the spacing before to 24 pt and the spacing after to 12 pt.
 2. Insert the picture of Goldie in the two paragraphs, change the size to 1 inch by 1 inch, and position the picture as shown below:

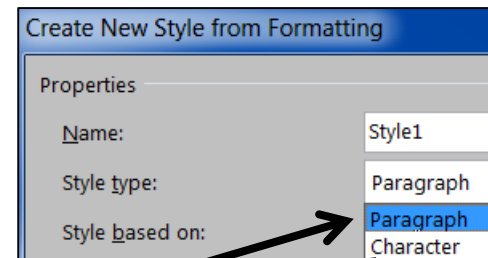


e. **Part 2**

- For the heading, Part 2, set the **Line and Page breaks** so **Part 2** appears at the top of the next page.
- For the 3 lettered items under **Part 2**, use the ruler to do the following:
 - Set a right **tab** stop at 6.5 inches.⁴⁵
 - Set the left paragraph **indent** to 2 inches.⁴⁶
 - Set the right paragraph **indent** to 5.5 inches.
 - Set the first line **indent** to 1.5 inches.
- In section **a.** click to the right of the word **diskette**, tap the **Tab** key, and type **Tab to Here**. Make the tab have a dot leader.

f. **Part 3**

- Click to the right of **Part 3** and insert a bookmark called **Part3**.
- Double space the paragraph that begins with **DOUBLE SPACE THIS PARAGRAPH**.
- Create a new **paragraph** style called **Side1** that makes the text blue, Arial Black, 18 point, centered and with a light blue shading. Apply this style to **SIDE HEAD Moved Paragraph Goes Under This Side Head**.



Remember, a **paragraph** style applies to an entire paragraph while a **character** style applies to selected characters (text) only.

- Find the words **SIDE HEAD TWO**. Apply the **Side1** paragraph style to this paragraph.
- Create a new **character** style called **Enhance1** that makes text bold, italic, blue, and underlined.

Use the Replace feature to apply this style to all occurrences of the word **Disk** (match the case of the letters and the whole word so that words like **disk** and **Diskette** are not changed). There should be two replacements.

- At the end of the paragraph, insert the distance formula from algebra:

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

⁴⁵ Recall that the tab stops are the black markers for left , center , right , and decimal .

⁴⁶ Recall that the indent markers are the little white triangles.

g. Part 4

1. Break up the paragraph which begins **BREAKUP THIS PARAGRAPH**. Make the breaks just before **(a)**, just before **(b)**, and just before **(c)**.
2. For each lettered paragraph **(a)**, **(b)**, and **(c)**, set a left tab stop at 1 inch, a center tab stop at 3 inches, and a decimal tab stop at 5 inches. Make the decimal tab have a leader that is a dotted line. Use tabs to make these paragraphs look as follows:

Part 4¶		
BREAK-UP-THIS-PARAGRAPH-¶		
→ (a)	→ SKINNY	→ 0.0025¶
→ (b)	→ REALLY-PORTLY	→ 82.1¶
→ (c)	→ SOMEWHERE-IN-BETWEEN.....	→ 177¶

3. Locate the word **SKINNY**. Insert a footnote mark right after **SKINNY**. The text of the footnote should be **By skinny, we mean really thin.**

h. Part 5

1. Convert the four paragraphs under Part 5 to a table. Format the table as follows:
 - The width of the outside border should be 2 ¼ pt.
 - The width of the inside lines should be 3/4 pt. Make the inside lines double lines. The inside lines should be green.
 - Make the fill color of the top row light red and the text bold italic.
2. Insert a new row between the rows for **Doug** and **Melissa**. Delete the row for Noah. Insert a new column to the right of the **Phone** column.
3. Make the height of all the rows 0.5 inch. Center the text vertically within the cells. Make the width of all the columns 1 inch. Center the table on the page.
4. In the column to the right of **Phone** type **Pay** in the heading, **555** in the Melissa row, **0** in the blank row, and **111** in the Doug row.

5. Insert a new row below the last row of the table. In the cell in the **Pay** column, insert a formula that calculates the average of the numbers in that column. Use a format that shows 0 decimal places and inserts a comma between the hundreds and thousands place. Adjust the borders of the last row as shown below:

Part-5¶			
Name	Title	Phone	Pay
Melissa	Ms.	555-0000	555
			0
Doug	Boss	555-9999	111
			=AVERAGE(ABOVE) #,##0

i. **Part 6**

1. Insert a manual page break just after the table so **Part 6** is at the top of the next page.
2. Use the Multilevel List feature on the 16 lines after the table to make them look like the following:

Part 6
1) Colors
a) Black
b) Red
i) Light
ii) Dark
c) Green
d) Blue
2) Sizes
a) Six
b) Eight
c) Ten
d) Twelve
i) Medium width
ii) Wide width
iii) Extra wide width
e) Fifteen

3. Insert a text box next to the heading **Part 6**. Type the following in the text box: **More colors are available on our Web site.** Make the text orange Arial Black. Remove the outline and fill color from the text box.

4. Insert an arrow pointing from the text box to the word **Colors** in the outline. Make the width of the arrow 3 pt and the color blue.
5. Insert an orange four-pointed star under the text box.

Part 6

1) Colors

- a) Black
- b) Red
 - i) Light
 - ii) Dark
- c) Green
- d) Blue

2) Sizes

- a) Six
- b) Eight

More colors are available
on our Web site



- j. Set up and insert a **Table of Contents** by doing the following:
 1. Set the outline level of the paragraph **BREAKUP THIS PARAGRAPH** to 2 so it will appear in the Table of Contents.
 2. Insert a **Table of Contents** at the top of the document. Construct the table using the *first two heading levels only*.

Part 1	1
Part 2	2
Part 3	2
Part 3a	2
Part 3b	2
Part 3c	2
Part 4	3
BREAK UP THIS PARAGRAPH	3
Part 5	3
Part 6	4

3. Insert a section break right after the **Table of Contents** so that **Part 1** appears on the next page.
- k. Adjust the page number for section 2 to start at 1 (in other words, do not include the Table of Contents in the page numbering).

- l. Set up the **headers** for section 2 as follows. Be sure to deselect the **Link to Previous** button.

First Page Header contains the filename on the left and the date the file was last saved on the right in the format **Day, Month Date, Year**.

Even Page Header contains the word **Page**, a space, and the page number on the left and the word **Sec**, a space, and the section number on the right.

Odd Page Header contains your name on the left and the word **Page**, a space, and the page number on the right.

- m. Set up and insert an **Index** by doing the following:
1. Go to the bottom of the document, tap **Enter**, and type **Part 3 is on page**. Insert a page number cross-reference to the **Part3** bookmark.
 2. Mark the following as index entries: **Disk, Distance Formula, REALLY PORTLY**.
 3. Move to the end of the document and tap **Enter** two times, type the word **Index**, and tap **Enter**.
 4. Apply the **h1** style to the paragraph with the word **Index**.
 5. Insert an index. Use the **Modern** style and two columns.

Index	
D	R
Disk - 1, 2	REALLY PORTLY - 3
Distance Formula - 2	

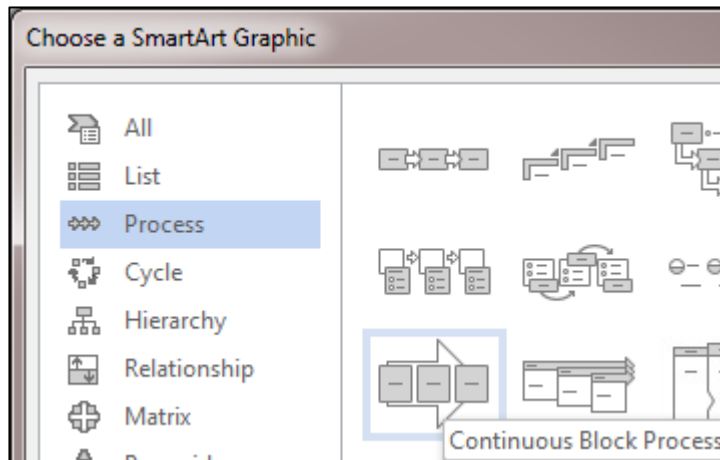
- n. Update the Table of Contents so that Index now appears.
- o. Save the document and close it.

Graphics and Other Stuff

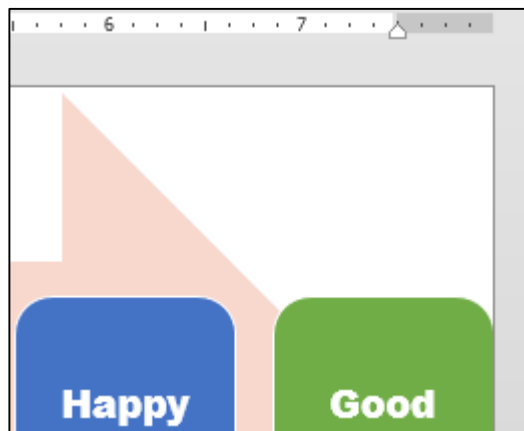
- a. Start Word and open a new blank document.
- b. Type **Practice Questions for Word Final** and tap **Enter**.
- c. Apply a page border that is blue, 3 pt in width, and a double line.
- d. Apply a custom text horizontal watermark with the text **CI 1871**. Make the color orange.
- e. Save the document in the **Word Files** folder using the name **Sample SmartArt Done**.

f. **SmartArt**

1. Insert a **SmartArt** object **Process, Continuous Block Process**.



2. Enter the following, one in each textbox: **Sleep, Alert, Good Grades, Happy Stu, Good Life**.
3. Change the colors to **Colorful**.
4. Change the font to **14 pt Arial Black**.
5. Make the object exactly 6.5 inches wide.
6. Move the object to the upper right corner of the page so it just touches the top and right side.⁴⁷

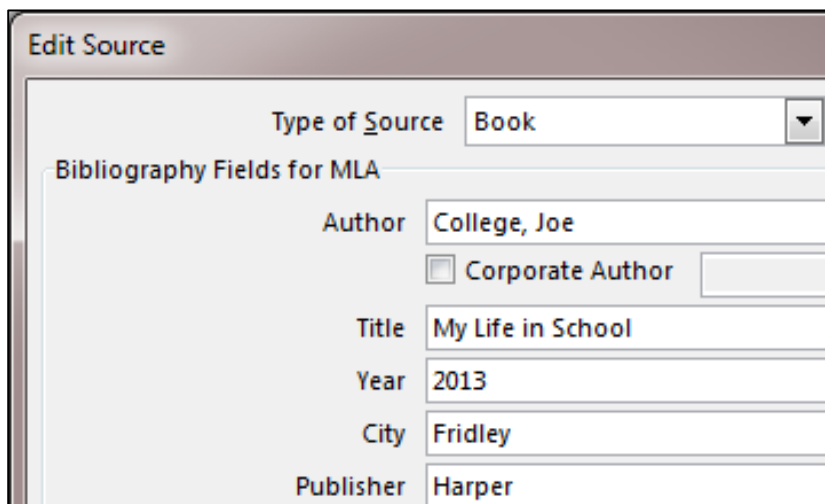
g. **Picture**

1. Insert a picture of your choice.
2. Change the height to 2 inches.
3. Apply the **Soft Edge Oval** Picture Style.
4. Rotate the picture 45 degrees.
5. Drag the picture to the lower right corner of the document.



⁴⁷ Set **Wrap Text** to **In Front of Text**.

- h. Create a **citation** for the following book and then insert the citation. Use MLA style.



The screenshot shows the 'Edit Source' dialog box in Microsoft Word. The 'Type of Source' is set to 'Book'. The 'Bibliography Fields for MLA' section contains the following information:

Field	Value
Type of Source	Book
Author	College, Joe
Corporate Author	☐
Title	My Life in School
Year	2013
City	Fridley
Publisher	Harper

- i. **Sections and Columns**
1. Insert a next-page section break right after the citation.
 2. Format section 2 for 3 columns.
 3. Insert the text from the file [w02B_Cover_Letter_Text](#).
 4. Insert a column break at the start of the second and third paragraphs.
 5. Insert a continuous section break at the end of the third paragraph.
- j. At the bottom of the document, insert a **Works Cited** bibliography.
- k. Save the document and close it.

Mail Merge

- a. Open the file [Sample Merge DATA Original](#), which is one of the files you copied at the start of the term.
- b. Save the document to your **Word Files** folder using the name [Sample Merge DATA Done](#)
- c. **Table**
 1. Convert the paragraphs to a table.
 2. Sort the table by **Class** in descending order and, within **Class**, by **Name** in ascending order.
 3. Apply a colorful design.
 4. Change the column widths to 1 inch.
 5. Save the document and close it.
 6. Center the table between the margins.

d. Mail Merge **MAIN** document

1. Start from a blank new document and type the following letter:

Dear NAME:

We have analyzed your data and find that your height of HEIGHT and weight of WEIGHT indicates that IF.

Sincerely,

Dr. Watson

2. Save the document as **Sample Merge MAIN Done**.
3. Change the normal style of the document so that the font is Arial bold and the left and right indents are set to 1 inch.
4. Convert the document to a mail merge document, and select **Sample Merge DATA Done** as the data source.
5. At the top of the document, insert a mail merge rule that will skip the record if the **email** field is empty.
6. In place of the word **NAME** insert the merge field code **Name**.
7. In place of the word **HEIGHT** insert the merge field code **Height**.
8. In place of the word **WEIGHT** insert the merge field code **Weight**.
9. In place of the word **IF** insert a field so that if **Weight** is over 160 Word will display **you need to lose a few pounds**. Otherwise, Word should display **you are in good shape**.
10. Tap **Alt + F9** to see the merge codes:

```
{ SKIPIF { MERGEFIELD email } = "" }Dear { MERGEFIELD Name }:  
We have analyzed your data and find that your height of {  
MERGEFIELD Height } and weight of { MERGEFIELD Weight }  
indicates that { IF { MERGEFIELD Weight } > 160 "you need to lose a  
few pounds" "you are in good shape" }.  
Sincerely,  
Dr. Watson
```

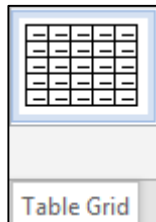
11. Tap **Alt + F9** again to hide the merge codes.

- e. Merge the main file and the data to a new document. It will contain all the individual letters, except for Maren since her email address was missing. If you show the codes and click the **Web Layout** button on the **Status Bar** you should see the following:



Dear-Kathy:¶
 We-have-analyzed-your-data-and-find-that-your-height-of-62-and-weight-of-110-indicates-that-you-need-to-gain-a-few-pounds.¶
 Sincerely,¶
 Dr.-Watson.....Section Break (Next Page).....
 Dear-Sue:¶
 We-have-analyzed-your-data-and-find-that-your-height-of-60-and-weight-of-144-indicates-that-you-are-in-good-shape.¶
 Sincerely,¶
 Dr.-Watson.....Section Break (Next Page).....
 Dear-Bill:¶

- f. Save the new document as **Sample Merge PRINTED Done**.
- g. Close all open documents.
- h. **Mailing Labels**
1. Create mailing labels using the **Avery US Letter 5160 Easy Peel Address Labels** style and **Sample Merge DATA Done** as the data source. Include on each label the **Name**, **Height**, and **Weight** of each person and on separate lines.⁴⁸
 2. Insert the picture **HW07-2 UM Logo Original**, make the height and width 0.5 inch, and move it to the lower right corner of each label.
 3. Apply the **Table Grid** style.



4. Apply the **Recycled Paper** texture to the page.



⁴⁸ You want this to create a different label for each person so start from **MAILINGS, Start Mail Merge, Labels** rather than **MAILINGS, Labels**, which is used to make all the labels the same.

The file should look like the following:

Name: «Name» Height: «Height» Weight: «Weight» 	«Next Record»Name: «Name» Height: «Height» Weight: «Weight» 	«Next Record»Name: «Name» Height: «Height» Weight: «Weight» 
«Next Record»Name: «Name» Height: «Height» Weight: «Weight» 	«Next Record»Name: «Name» Height: «Height» Weight: «Weight» 	«Next Record»Name: «Name» Height: «Height» Weight: «Weight» 

5. Save the file as **Sample Merge Labels Done**. Don't bother carrying out the merge.
- i. Close all open documents and quit Word.

Do not submit this work for grading but do go through it several times as a part of your preparation for the Word exam and for the final exam.

Project 11

PowerPoint Chapter 1: Getting Started

Step 1 Read Before turning on the computer, read the introductory material on pages 713-716.

Step 2 Activities Turn on the computer and open your textbook to page 717. Do all the steps of all the activities for this Chapter.

To save paper, do NOT print when the textbook instructs you to. You will be told what to print when you do the homework listed in this Study Guide.

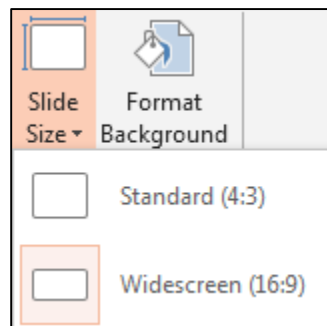
Step 3 Homework After you have completed the activities for this Chapter, return to this Study Guide, do the problems listed below, and turn them in for grading.

If you are using a black and white printer choose color for your output because that will give you better quality than the grayscale setting. If you are using a color printer you can use the grayscale setting to save ink, if you wish.

HW11-1 Overview

Problem: How can you create an electronic presentation suitable for large audiences?

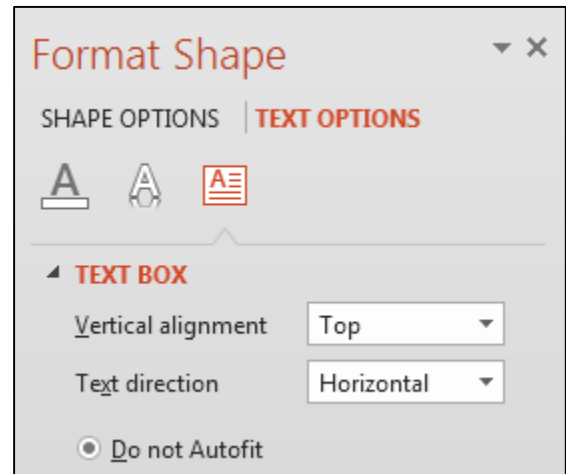
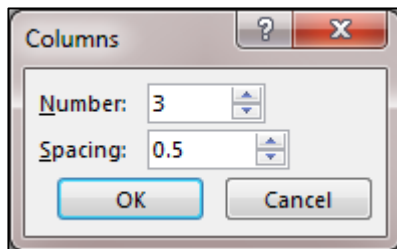
- Open the presentation [Lastname_Firstname_1A_KWT_Overview](#), which you created while following the directions in the textbook and saved on page 734.
- Save the document to your **PowerPoint Files** folder using the name [HW11-1 Lastname Firstname HWID Overview Done](#)
- On the **DESIGN** tab, in the **Customize** group, click **Slide Size**.



Notice that this slide is set to **Widescreen** format, that is, a **16 to 9** ratio of width to height. **Standard** dimensions have a **4 to 3** ratio of width to height. Most of the presentations are in **Widescreen** but feel free to change the ratio to **Standard** if you wish.

- d. To make the text easier to read, in Slide 5 change the paragraph to three columns by doing the following:
1. On Slide five, **About Our Company**, click anywhere in the bottom textbox.
 2. On the **HOME** tab, in the **Paragraph** group, click the **Align Text** down arrow and select **More Options**.

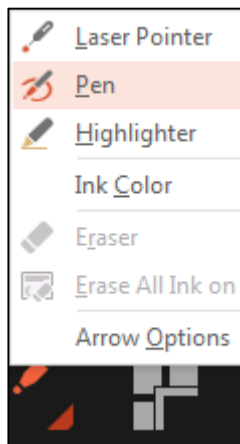
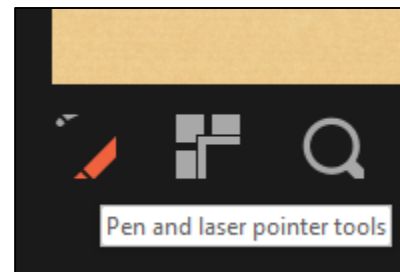
3. In the **Format Shape** pane, click **TEXT OPTIONS** and then click **Do not Autofit**. This will allow the text to stay the same size when you insert the columns.
4. Click **Columns** and set the **Number** to **3** and the **Spacing** to **0.5**.



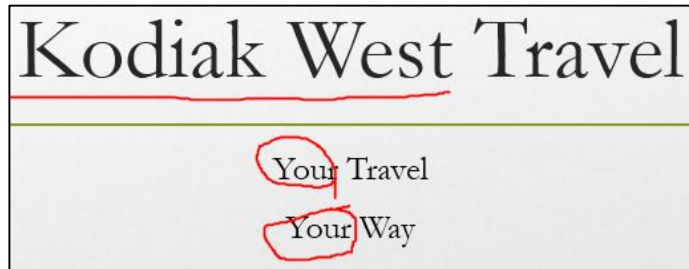
5. Click **OK**.

- e. PowerPoint allows you to make annotations during your slide presentation. To see how this works, do the following:

1. On the **SLIDE SHOW** tab, in the **Monitors** group, be sure there is a check next to **Use Presenter View**.
2. Tap **F5** to start the presentation.
3. In **Presenter View** click the **Pen and laser pointer tools** button to open its menu.
4. Select **Pen**.



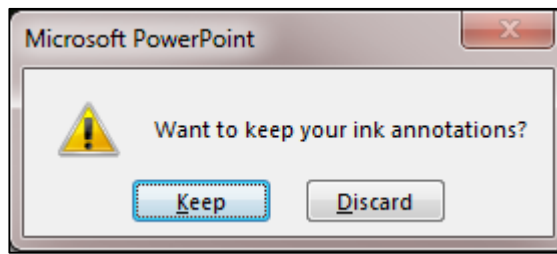
5. Draw a line under **Kodiak West** and circle both occurrences of **Your**.



6. Select the **Highlighter** tool, move to **Slide 3** and highlight **Expertise**.



7. Tap the **Esc** Key to end the show. When asked if you want to keep the annotations, click **Keep**.



- f. Print a handout by doing the following:

1. Tap **Ctrl + F2** and set up to print a handout that contains slides 1, 3, 4, and 5 only, 4 slides horizontal per page, landscape orientation, in color (even if you are using a black and white printer).

Settings

Custom Range
Enter specific slides to print

Slides: 1,3,4,5

4 Slides Horizontal
Handouts (4 slides per page)

Print One Sided
Only print on one side of the page

Collated
1,2,3 1,2,3 1,2,3

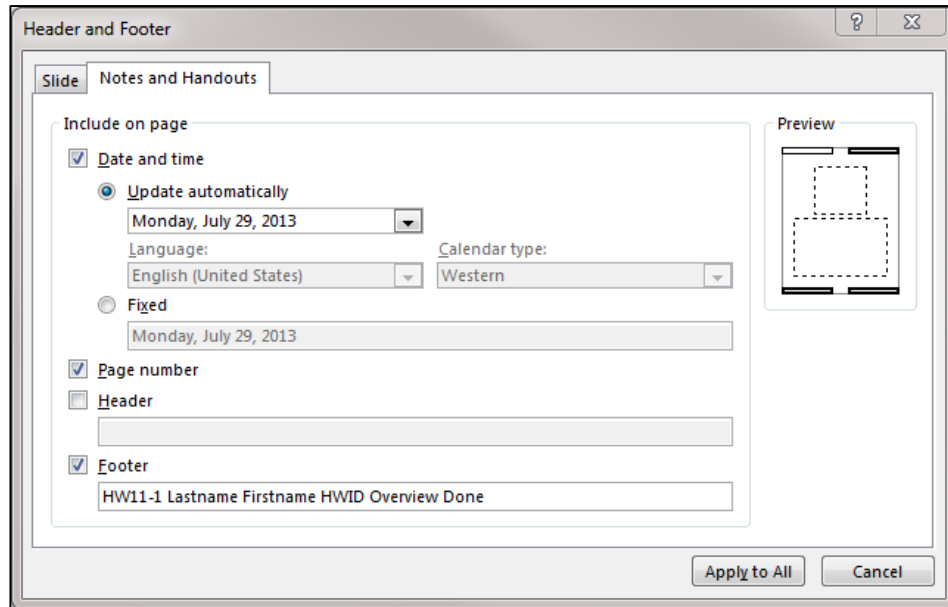
Landscape Orientation

Color

[Edit Header & Footer](#)

Do NOT print Slide 2

2. Click **Edit Header & Footer** and then click the **Notes and Handouts** tab. Be sure the handout contains the date in the format **Day, Month Date, Year**, updated automatically, no header, the page number, and the name of the file in the footer.



3. Click **Apply to All** and compare the preview with the key. Make needed corrections, print the handout, save the presentation, and close it. If part of the file name is cut off just leave it. We will see how to fix that type of problem on page **SG276**.

Note that unlike Excel and Word, PowerPoint does not have an automatic way of inserting the file name. One shortcut you can try is tapping **F12**, **Ctrl + c**, **Esc**. That will put the file name on the clipboard. Then, when you open the **Header and Footer** dialog you can paste the name in the **Footer** box.

4. Compare the preview with the key. Make needed corrections, print the handout, save the presentation, and close it.

HW11-2 Itinerary

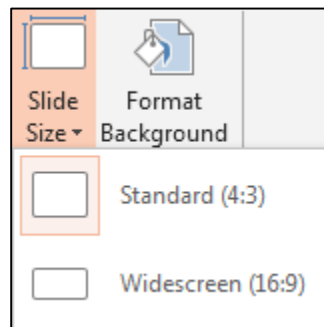
Problem: How can you edit and format a presentation and include custom transitions between slides?

- a. Open the presentation **Lastname_Firstname_1B_Seattle**, which you created while following the directions in the textbook and saved on page 752.
- b. Save the document to your **PowerPoint Files** folder using the name **HW11-2 Lastname Firstname HWID Itinerary Done**
- c. Tap **Ctrl + F2** and set up to print a handout that contains slides 1, 3, 4, and 7 only, 4 slides horizontal per page, portrait orientation, in color (even if you are using a black and white printer). Compare the preview with the key. Make needed corrections, print the handout, save the presentation, and close it.

HW11-3 Bird

Problem: How can you add graphics to a PowerPoint presentation and then edit them?

- Open the presentation **HW11-3 Bird Original**, which is one of the files you copied at the start of the term.
- Save the presentation in the PowerPoint Files folder using the name **HW11-3 Lastname Firstname HWID Bird Done**.
- On the **DESIGN** tab, in the **Customize** group, click **Slide Size**.



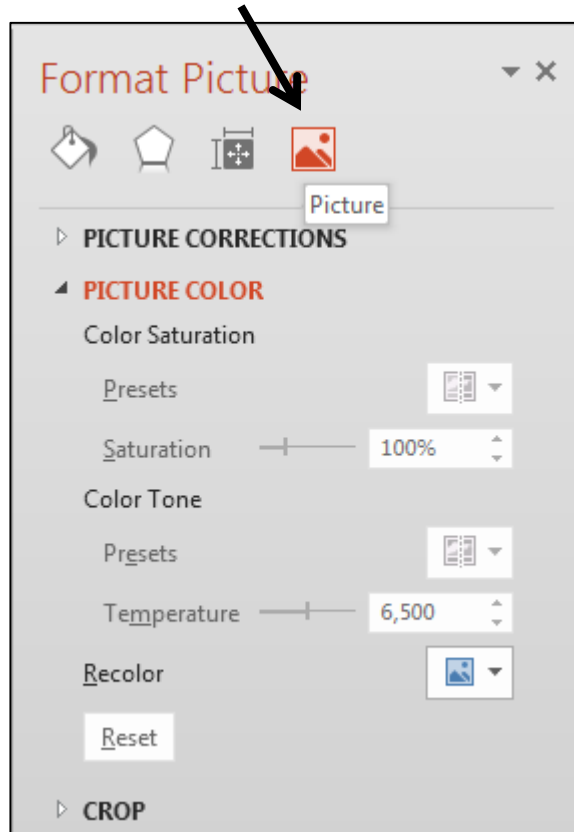
Notice that this slide is set to **Standard** dimensions, that is, a **4 to 3** ratio of width to height. The previous two presentations were in **Widescreen** format, that is, a **16 to 9** ratio of width to height. You can adjust this ratio to best fit the screen you will be using.

- Start **Word** and open the file **HW11-3 Bird Graphic WORD Original**, which is one of the files you copied at the start of the term. **The file is in the PowerPoint folder NOT the Word folder, but it is a Word file so you cannot open it from within PowerPoint.**
- Select the picture of the bird, copy it, and then close Word.
- Switch to **PowerPoint** and paste the picture.



- g. Adjust this image so that it is a "washout" (a light grayscale picture, sometimes this is called a "watermark") and place it behind the text on the slide by doing the following:

1. Right-click the bird and select **Format Picture**.
2. Click the **Picture** icon and then click the arrow next to **PICTURE COLOR**.



3. To the right of **Recolor**, click the arrow and select **Washout**. The picture now is much lighter, washed out like faded jeans.
4. On the **PICTURE TOOLS FORMAT** tab, in the **Size** group, click the **Dialog Box Launcher** to open the **Size and Position** pane.
5. Click the **Lock aspect ratio** box so that when you change one of the dimensions the other dimensions will change in the same ratio—if you don't do this the picture will be distorted when you change either the height or the width.
6. Change the height to 6".
7. Center the bird on the slide. You can do this by eye, or use the ruler and gridlines to position the picture precisely. To display the ruler and gridlines, on the **VIEW** tab, in the **Show** group, put checks in the **Ruler** and **Gridlines** boxes. The ruler and gridlines will not print or display during a slide show.



- h. Notice that the bird is blocking some of the text. To fix this, right-click the bird and then choose **Send to back**, and then **Send to Back**. Now, the bird serves as a background for the slide.
- i. In the **Slides/Outline** pane (on the left), right-click the slide and select **Duplicate Slide**. This makes an exact copy of the slide.
- j. If necessary, make **Slide 2** active by clicking it in the **Slides/Outline** pane. For this slide, you want the text to go only halfway across the screen.
 1. Click anywhere on the bulleted text to display the text box.
 2. Click the right center resize handle (the little square box on the middle of the right side of the rectangle), and drag to the left until the text box is half its original size.
- k. Crop, resize, and move the picture so that only the head of the bird appears in the lower right corner of the slide by doing the following:
 1. Click the picture. In the Format Picture pane, click the picture icon, and then click **Reset**. This restores the picture to its original form. Drag the picture to the lower right corner of the slide.
 2. On the **PICTURE TOOLS FORMAT** tab, in the **Size** group, click **Crop** to turn on the cropping feature.



3. Move the cursor to the bottom left cropping handle, , press and hold the mouse button, and drag up and right until you just reach the shoulder of the bird.



4. Once again, click the **Crop** button to turn off the cropping feature.
5. Drag the picture to the lower right corner of the slide.
6. Click the upper left sizing handle and resize the picture as shown.



- I. To make the slide a bit more flashy, apply a light blue blended background by doing the following:
 1. Move the pointer to an area of the **Slide** so that the pointer becomes a white arrow, , and right-click. Choose **Format Background** from the menu.
 2. Click **Fill** and then click the button next to **Gradient fill** to apply a colorful background.
 3. In the **Preset gradients** drop down menu, click one of the options (I used the light blue).
 4. In the **Direction:** drop down menu, click the third choice, **Linear Diagonal**. Do NOT click **Apply to All** because you want this background on this slide only, not on the other slide.
- m. On the **REVIEW** tab, in the **Proofing** group, click **Spelling** and fix any errors.
- n. Set up to print a handout that contains both slides, 2 slides per page, portrait orientation, in color (even if you are using a black and white printer). Be sure the handout contains the date (updated automatically), no header, the page number, and the name of the file in the footer. Compare the preview with the key. Make needed corrections, print the handout, save the presentation, and close it.

Step 4 Submit You now are ready to submit your homework for grading.

1. Put your 3 homework papers in the following order:
 - HW11-1 Overview**
 - HW11-2 Itinerary**
 - HW11-3 Bird**
2. Cut out Submission Form 11 and put it on the top of the papers.
3. Staple the papers in the upper left corner.
4. Turn in the packet by the due date.

Step 5 Backup Now would be a good time to backup your files.

Project 12

PowerPoint Chapter 2: Formatting Presentations

Step 1 Read Before turning on the computer, read the introductory material on pages 775-776.

Step 2 Activities Turn on the computer and open your textbook to page 777. Do all the steps of all the activities for this Chapter.

Step 3 Homework After you have completed the activities for this Chapter, return to this Study Guide, do the problems listed below, and turn them in for grading.

If you are using a black and white printer choose color for your output. If you are using a color printer you can use the grayscale setting to save on ink, if you wish

HW12-1 Safety

Problem: How can lists, pictures, text boxes, and shapes be added to a PowerPoint presentation?

- Open the presentation [Lastname_Firstname_2A_Safety](#), which you created while following the directions in the textbook and saved on page 795.
- Save the document to your **PowerPoint Files** folder using the name [HW12-1 Lastname Firstname HWID Safety Done](#)
- For the first slide, change the background color to light purple and the font color to red. This will save a lot of ink.
- Set up to print a handout that contains all of the slides, 6 slides horizontal per page, portrait orientation, in color (even if you are using a black and white printer). Be sure the handout contains the date (updated automatically), no header, the page number, and the name of the file in the footer.
- Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the handout, save the presentation, and close it.

HW12-2 Celebrations

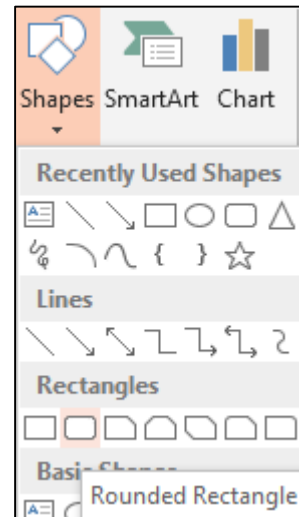
Problem: How can specially formatted artwork be created and added to a PowerPoint presentation?

- Open the presentation **Lastname_Firstname_2B_Celebrations**, which you created while following the directions in the textbook and saved on page 808.
- Save the document to your **PowerPoint Files** folder using the name **HW12-2 Lastname Firstname HWID Celebrations Done**
- Set up to print a handout that contains all of the slides, 6 slides horizontal per page, portrait orientation, in **grayscale** (to save ink). Be sure the handout contains the date (updated automatically), no header, the page number, and the name of the file in the footer.
- Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the handout, save the presentation, and close it.

HW12-3 Graphics and Sound

Problem: How can graphics sound be added to a PowerPoint presentation?

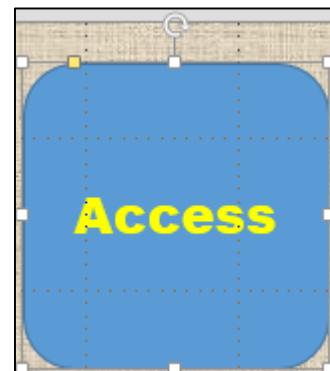
- Start PowerPoint and open a blank slide. Change the slide layout to **Blank** (**HOME**, **Slides**, **Layout**, **Blank**).
- Set the background for the slide to the canvas texture fill (right-click, **Format Background**, **Fill**, **Picture or texture fill**, click the second texture in the first row).
- Save the document to your **PowerPoint Files** folder using the name **HW12-3 Lastname Firstname HWID Graphics and Sound Done**
- Add some drawing objects by doing the following:
 - If the ruler or gridlines are not showing, turn them on (**VIEW**, **Show Hide**, **Ruler**, **Gridlines**).
 - On the **INSERT** tab, in the **Illustrations** group, click **Shapes** and choose **Rounded Rectangle**. The mouse pointer will turn into a cross .



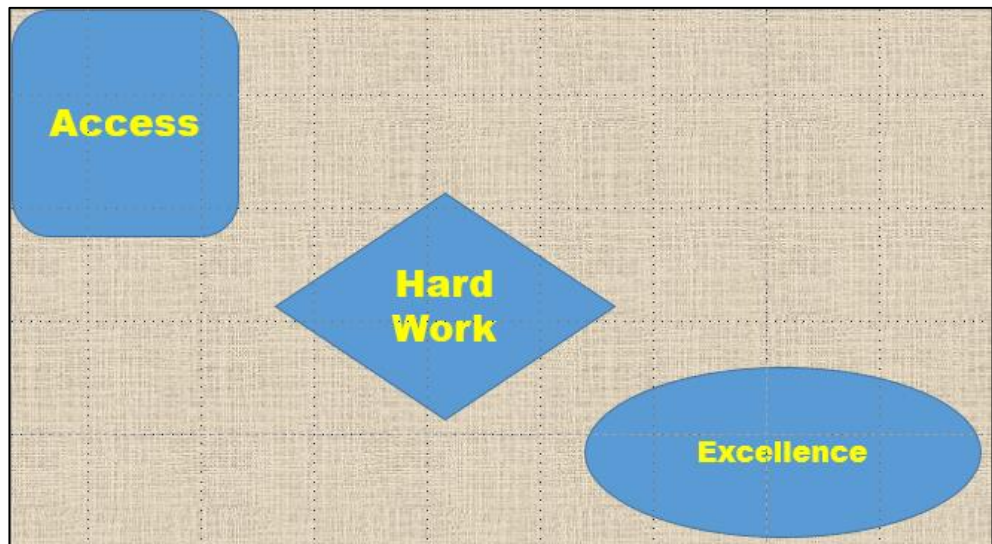
- Move the mouse pointer onto the slide, and then click and drag to produce a small square.

On the **DRAWING TOOLS FORMAT** tab, in the **Size** group, change the **Height** and **Width** to 2".

- Click in the square and type **Access**.
- Make the font Arial Black, 24 pt, and yellow. If necessary, center align the text within the box.



6. Repeat the process to create a diamond and an oval. The diamond should contain the words **Hard Work** and be 2 inches high and 3 inches wide. You can use the **Format Painter** as you did in Word and Excel to copy the text formatting quickly. The oval should contain the word **Excellence** and be 1.5 inches high and 3.5 inches wide.



- e. Add some lines to connect the three shapes by doing the following:
 1. On the **INSERT** tab, in the **Illustrations** group, click **Shapes**, and then **Elbow Arrow Connector**.



2. Move the mouse pointer, which is now a cross, to the middle of the right side of the square and then click and drag to the right and down to connect to the top center of the diamond and release the mouse button.

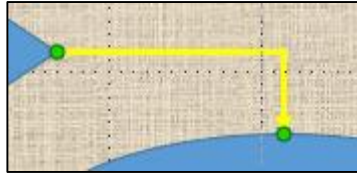


The green dots show the objects are "connected" by the line. When you move an object, the line will stay connected and move with the object.

With the new line still selected, on the **DRAWING TOOLS FORMAT** tab, in the **Shape Styles** group, click the **Shape Outline** down arrow and select **Weight** and then **3 pt**.

Change the line color to **yellow**.

3. Use the same technique to add a connector between the oval and the diamond. A quick way to do this is to select the line you just created and tap **Ctrl + d**. This duplicates the line. Then, drag the ends to the proper location. The ends will be green dots when the connection is correct.

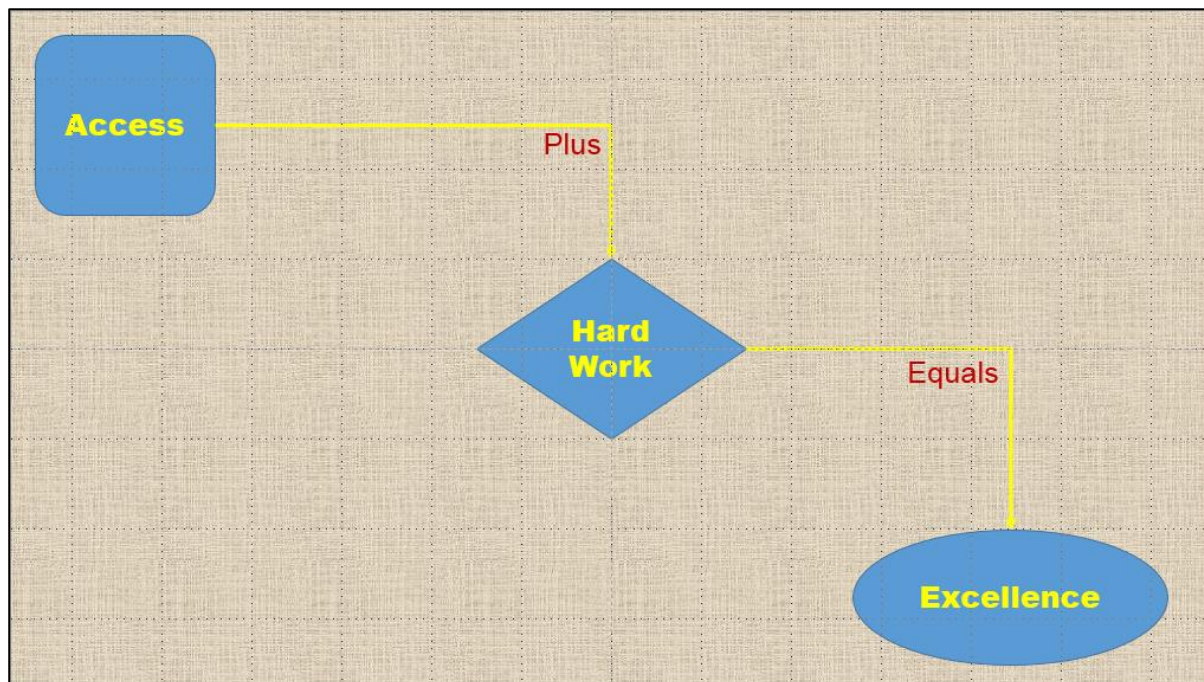


- f. Add some text boxes by doing the following:

1. On the **INSERT** tab, in the **Text** group, click **Text Box**.
2. It will be easiest if you create the text box at an arbitrary location on the slide and then use the mouse or arrow keys to position it after you have entered the text and formatted it.

Draw two text boxes and type **Plus** in one and **Equals** in the other. Make the font Arial, red, 24 pt, and bold. As a shortcut, use **Ctrl + d** to duplicate the **Plus** box after you get it formatted and then change the text to **Equals**.

Adjust the locations of the text boxes and shapes as shown.



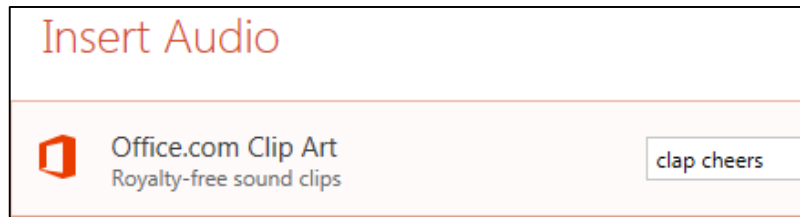
- g. Insert a couple of photos by doing the following:

1. On the **INSERT** tab, in the **Images** group, click **Picture**. Navigate to your **PowerPoint Files** folder and select **HW12-3 Photo Original.jpg**, which is one of the files you copied at the start of the term.
2. Click **Insert**.
3. Make the photo height 2.5".

4. Move the photo to the lower left corner of the slide.
 5. Insert the picture [HW12-3 UM Logo Original.jpg](#), which is one of the files you copied at the start of the term.
 6. Make the picture height 2.5”.
 7. Move the picture to the upper right corner of the slide.
- h. Add a sound clip to this slide by doing the following. **Note that if you are doing this in our computer classroom or a public computer lab the speakers will be disabled and so you cannot add a sound clip. If so, skip this and move to part i.**

1. On the **INSERT** tab, in the **Media** group, click the **Audio** arrow and select **Online Audio**.

2. In the **Insert Audio** box, type **Clap Cheers**.



3. Tap **Enter**.
4. Click **Small Crowd Cheer** to hear a preview.
5. Click **Insert**.



6. On the **AUDIO TOOLS PLAYBACK** tab, in the **Audio Options** group, select **Automatically** from the **Start** box and click **Hide During Show**.
 7. Drag the speaker icon to the upper left corner of the screen.
- i. You can insert an **mp3** formatted file into your presentation.
1. On the **INSERT** tab, in the **Media** group, click the **Audio** arrow and select **Audio on my PC**. Select the file [HW12-3 Audio Tracks Original.mp3](#), which is one of the files you copied at the start of the term.
 2. Click **Insert**.
 3. Drag the speaker icon to the lower right corner of the screen.
 4. On the **AUDIO TOOLS PLAYBACK** tab, in the **Audio Options** group, select **On Click** from the **Start** box but **DO NOT** click **Hide During Show**.
 5. Tap **F5** to start the slide show. The clapping will start as soon as the show starts. To start the music, click the speaker icon. To stop the music, point to the speaker in the lower right corner and click the pause button.
 6. Tap the **Esc** key to end the slide show.

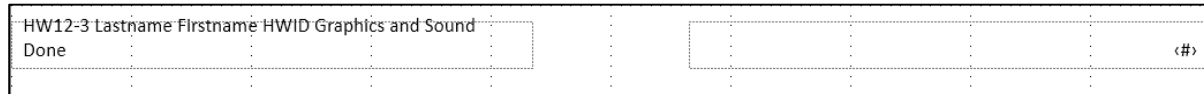
- j. Set up to print a **handout** (**NOT** a slide) that contains 1 slide horizontal per page, landscape orientation, in color (even if you are using a black and white printer). Be sure the handout contains the date (updated automatically), no header, the page number, and the name of the file in the footer.

Look at the bottom of the **Print Preview**. Depending on your printer, you may see that the footer is partially cut off at the bottom.

HW12-3 Lastname Firstname HWID Graphics and Sound

To fix that, do the following:

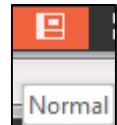
1. On the **VIEW** tab, in the **Master Views** group, click **Handout Master**.
2. At the bottom of the screen, click in the **Footer** box and drag the box up a bit. Do the same for the **Page Number** box



3. Tap **Ctrl + F2**. The entire footer should show.

HW12-3 Lastname Firstname HWID Graphics and Sound
Done

4. Compare the preview with the key. If you need to make corrections, tap **Esc** and then **Normal** in the **Status Bar** to return to normal view.
5. Make needed corrections, print the handout, save the presentation, and close it.



HW12-4 Poster

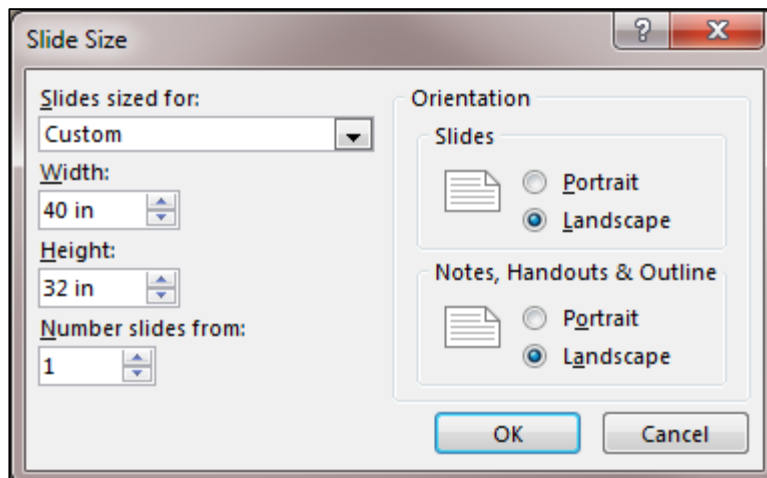
Problem: How can a PowerPoint presentation be transformed into a very large poster suitable for display at a research conference?

PowerPoint is useful when one person wants to present information to an audience and there is a computer and projector available. PowerPoint can also be used to create large posters that can be displayed in a room or hall where people are walking by. In such a setting, people can read the posters that have topics which interest them. Typically, the person who made the poster is available to have one-on-one discussions of their work with passers-by.

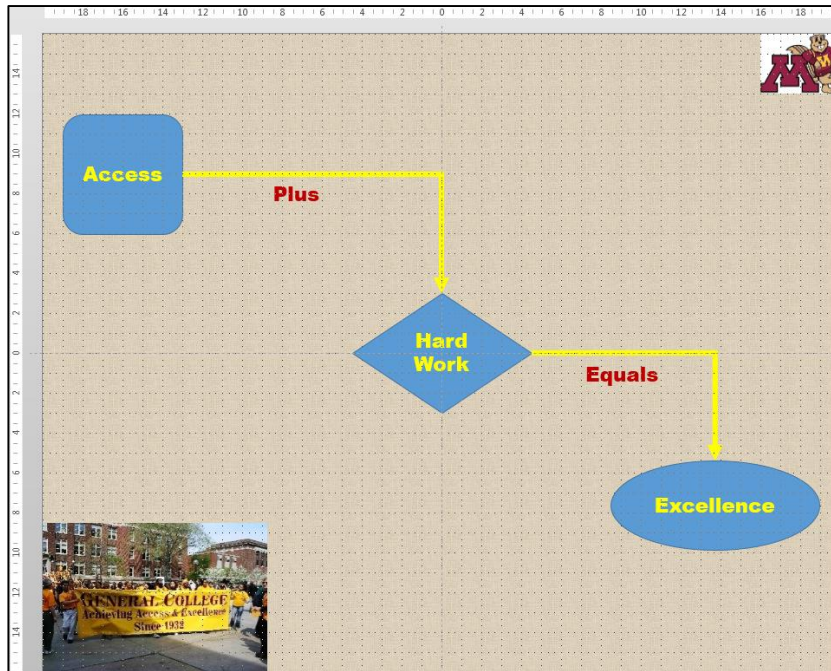


In this project, you will create a large poster by modifying one of your previous PowerPoint presentations. More information, useful tips, and some nice templates can be found at <http://www.writing.engr.psu.edu/posters.html> One of their templates is included in your **PowerPoint Files** folder under the name **HW12-4 PowerPoint Poster Template Original**

- a. Open the presentation **HW12-3 Lastname Firstname HWID Graphics and Sound Done**, which you created for **HW12-3**.
- b. Save the presentation to your **PowerPoint Files** folder using the name **HW12-4 Lastname Firstname HWID Poster Done**
- c. Modify the slide by doing the following:
 1. Delete the two sound icons.
 2. On the **Design** tab, in the **Customize** group, click **Slide Size**.
 3. Select **Custom Slide Size**.
 4. In the **Slides sized for** box click the down arrow and select **Custom**.
 5. Set the width to **40** inches and the height to **32** inches. Be sure the **Orientation** is **Landscape**.



6. Click **OK** and then click **Maximize**.
7. Move the **Access** square so its top is about at 12 inches and move the **Excellence** oval up a bit so its bottom is about at 10 inches..
8. Resize Goldie to be 3 inches high and 4 inches wide and move him to the upper right corner of the slide.
9. Move the photo to the lower left corner
10. Change the widths of the yellow connectors to 20 pt.
11. Change the font of **Plus** and **Equals** to Arial Black and position them as shown below.



12. Insert a text box at the top of the slide with the text **General College University of MN**. Make the text Arial Black and 128 pt.
13. Insert a text box at the top of the slide under the word **College** and type **Presented by LastName FirstName HWID**. Make the text purple Arial Black and 60 pt.
14. Insert another text box above the photo and enter this text in black 66 pt Arial. You can either type the text or copy it from the file [HW12-4 PowerPoint Poster Text Original](#), which is one of the files you copied at the start of the term.

Mission: To develop, through teaching, research, and service, the potential for baccalaureate education in students who are serious about fulfilling their previously undeveloped or unrecognized academic promise.

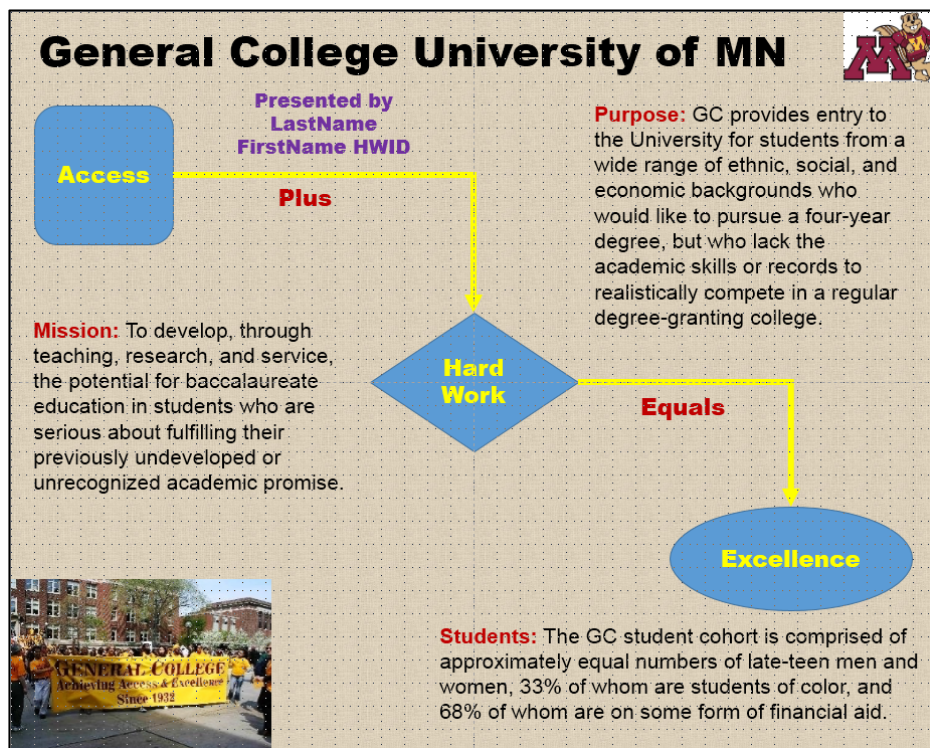
15. Just below **Goldie**, enter this text in black 66 pt Arial.

Purpose: GC provides entry to the University for students from a wide range of ethnic, social, and economic backgrounds who would like to pursue a four-year degree, but who lack the academic skills or records to realistically compete in a regular degree-granting college.

16. Just below **Excellence**, enter this text in black 66 pt Arial.

Students: The GC student cohort is comprised of approximately equal numbers of late-teen men and women, 33% of whom are students of color, and 68% of whom are on some form of financial aid.

17. Adjust the sizes of the text boxes so they do not overlap any of the other objects on the slide.
18. Make the titles **Mission:**, **Purpose:**, and **Students:** red and bold.

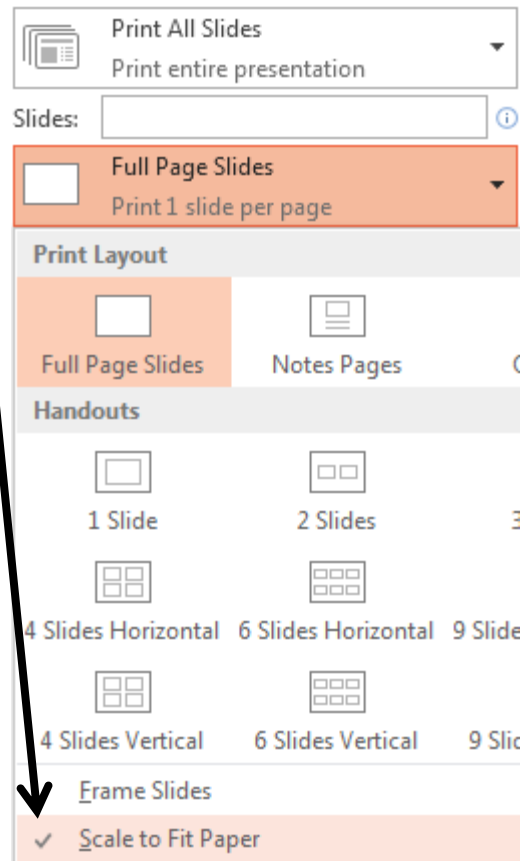


- d. The poster is ready to print. Because you will print it on a regular-sized black and white printer, you need to tell PowerPoint to scale the output to fit an 8.5 by 11 inch piece of paper. Do the following:

1. Tap **Ctrl + F2** to open **Print Preview**.
2. In the **Settings** group, click **Full Page Slides** and then be sure there is a check next to **Scale to fit paper**.
3. Choose **Color** even if you are printing on a black and white printer.
4. Compare the preview with the key. Make needed corrections, print the poster, save the presentation, and close it.

If you want to print a poster on a large format printer you can use the lab in Coffman Union. The cost is \$4.50 per square foot so the poster you created for this homework would run you about \$36. For details on printing, see <http://it.umn.edu/services/all/academic-technology-spaces/computer-labs/large-format/>

Settings



Step 4 Submit You now are ready to submit your homework for grading.

1. Put your 4 homework papers in the following order:
HW12-1 Safety
HW12-2 Celebrations-Grayscale
HW12-3 Graphics and Sound
HW12-4 PowerPoint Poster
2. Cut out Submission Form 12 and put it on the top of the papers.
3. Staple the papers in the upper left corner.
4. Turn in the packet by the due date.

Step 5 Backup Now would be a good time to backup your files.

Project 13

PowerPoint Chapter 3: Animation, Tables & Charts

Step 1 Read Before turning on the computer, read the introductory material on pages 829-830.

Step 2 Activities Turn on the computer and open your textbook to page 831. Do all the steps in **Project 3A only**.

Skip Project 3B.

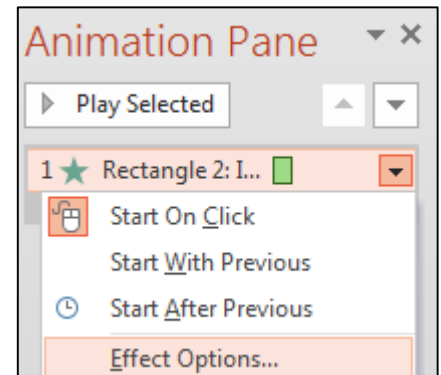
Step 3 Homework After you have completed the activities for this Chapter, return to this Study Guide, do the problems listed below, and turn them in for grading.

If you are using a black and white printer choose color for your output because that will give you better quality than the grayscale setting. If you are using a color printer you can use the grayscale setting to save on ink, if you wish.

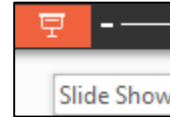
HW13-1 Trails

Problem: How can customizable backgrounds, themes, and animations be added to a PowerPoint presentation?

- Open the presentation [Lastname_Firstname_3A_Trails](#), which you created while following the directions in the textbook and saved on page 847.
- Save the presentation to your **PowerPoint Files** folder using the name [HW13-1 Lastname Firstname HWID Trails Done](#)
- To help your audience focus on what you currently are saying, it sometimes helps to dim previous bullets when a new one enters the screen. To see how this works, do the following:
 - Click Slide 3 and then, on the **ANIMATIONS** tab, in the **Advanced Animation** group, click **Animation Pane**.
 - Select the three bullets.
 - In the **Animation Pane**, click the down arrow next to **Rectangle** and select **Effect Options**.
 - Click the down arrow next to **After animation** and select the color **brown**.

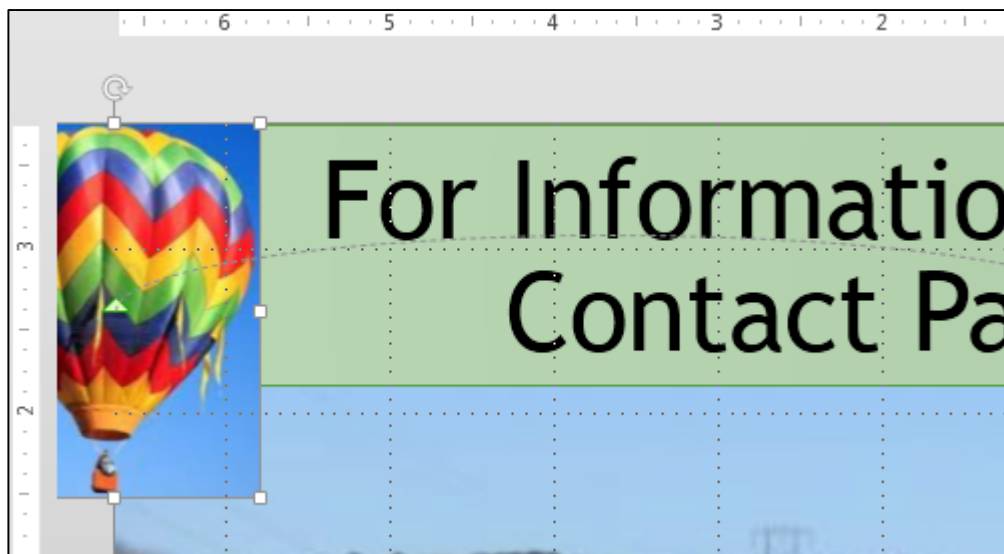


5. Click the down arrow next to **Animate text** and select **By letter**.
6. Click **OK**.
7. Click the **Slide Show** button on the **Status Bar** and click through the animations on this slide.
8. Repeat the process for Slide 4. Or, use the **Animation Painter**.

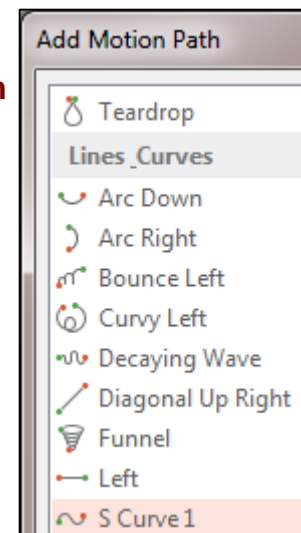


- d. For a bit of comic relief, on Slide 6, insert a picture of a hot air balloon and have it move across the screen by doing the following.

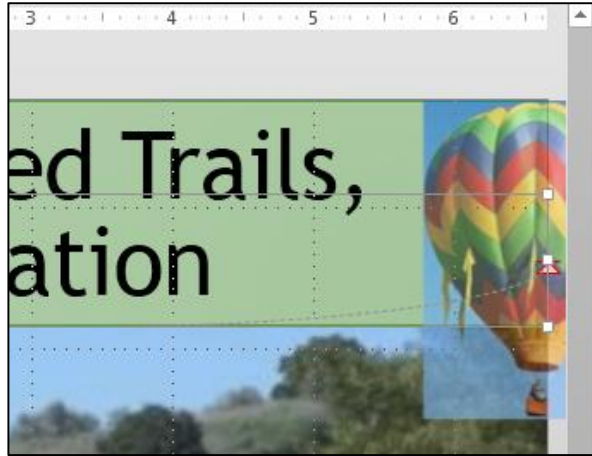
1. Click Slide 6 and insert the picture **HW13-1 Trails Balloon Original**, which is one of the files you copied at the start of the term.
2. Crop the picture to remove as much blue sky as you can.
3. Move the picture to the top far left of the slide.



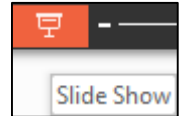
4. For the entrance animation, use **Fade**.
5. On the **ANIMATIONS** tab, in the **Advanced Animation** group, click **Add Animation**, and select **More Motion Paths**.
6. In the **Lines, curves** group, click **S Curve 1**.
7. Click **OK**.



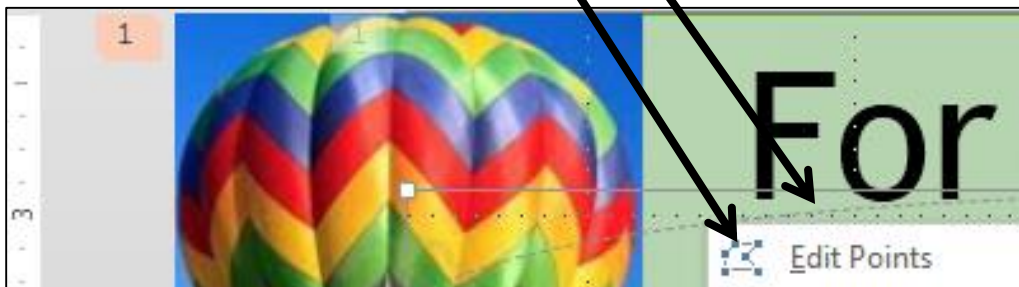
8. Move the cursor over the red triangle until it becomes a **horizontal double headed arrow** and drag to the far right of the slide.



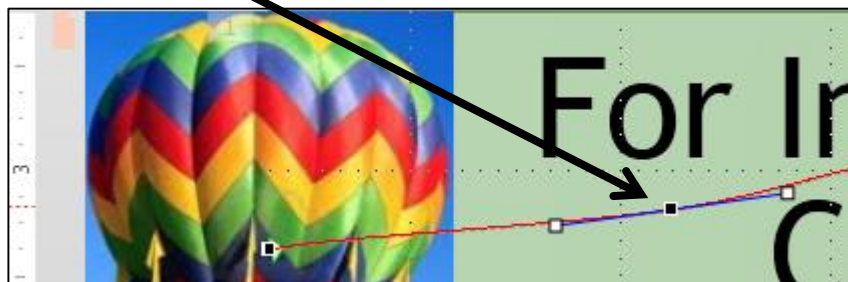
9. Set the duration of the **S curve 1** animation to 12 seconds.
10. Click **Add Animation** and choose **Fade** for the **Exit** animation.
11. Select the textbox with the title and choose **Fade** for the **Exit** animation.
12. Reorder the **Rectangle** animation to make it the first one.
13. Set the three picture animations to start **After Previous**.
14. Click the **Slide Show** button on the **Status Bar**. When you click the mouse the title box will disappear, the balloon will appear on the left, float across the screen, and then disappear on the right.



If you would like to change the path of the balloon a bit, right click the path line (faint dotted line that shows path of motion) and select **Edit Points**.



Click at any point on the line and drag up or down to change the path.



- e. Set up to print a handout that contains all of the slides, 6 slides horizontal per page, portrait orientation, in color (even if you are using a black and white printer). Be sure the handout contains the date (updated automatically), no header, the page number, and the name of the file in the footer.
- f. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the handout, save the presentation, and close it.

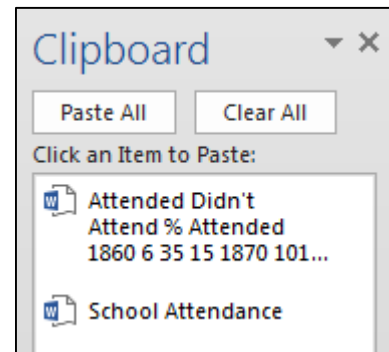
HW13-2 Tables

Problem: How can tables and charts created in Excel or Word be added to a PowerPoint presentation?

I asked you to skip Project 3B in the textbook because it showed you how to create tables and charts from within PowerPoint. You already know how to do that in Excel and Word so all you really need to know is how to import them into PowerPoint. In this exercise, you will copy a table from a Word document and another table from an Excel workbook and paste them into a PowerPoint presentation. In HW13-3 you will import a chart from Excel.

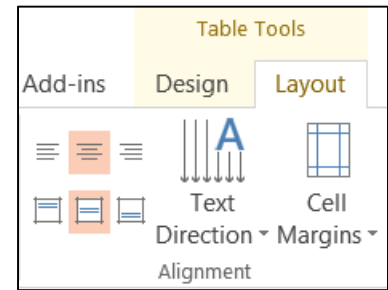
- a. Open the Word document **HW13-2 Word Table Original**, which is one of the files you copied at the start of the term. It is in your **PowerPoint Files** folder. Note that you cannot open it from within PowerPoint – you must double click its icon to have Word open it. Copy the information by doing the following:

1. On the **HOME** tab, in the **Clipboard** group (on the far left), click the **Clipboard Dialog Box Launcher** to open the **Clipboard** pane.
2. If necessary, click **Clear All** to delete any items stored on the clipboard.
3. Copy the title, **School Attendance**.
4. Select the table. Be careful to **not** include the **School Attendance** title or the paragraph mark at the bottom of the screen when you make your selection.
5. Copy the table.
6. Minimize Word but do NOT exit Word.



- b. Do the following to paste the Word items you just copied into PowerPoint.
 1. Start PowerPoint and change the layout of the first slide to **Blank**.
 2. On the **HOME** tab, in the **Clipboard** group, click the **Clipboard Dialog Box Launcher** to open the **Clipboard** pane.
 3. In the **Clipboard** pane, click the title **School Attendance** to insert it.
 4. Change the font to 36 pt Arial Black. Move the title so it is near the top center of the slide.
 5. Click in a blank area of the slide to deselect the title.

6. In the **Clipboard** pane, click **Attended Didn't Attend...** to insert the table.
7. On the **TABLE TOOLS LAYOUT** tab, in the **Table Size** group, change the width of the table to 9 inches and the height to 3 inches.
8. Make the font 24 pt Arial.
9. Center the text in each cell both vertically and horizontally, and center the table on the slide (**TABLE TOOLS LAYOUT** tab, **Alignment**, **Center Horizontally**, **Center Vertically**).
10. Apply a table style of your choice.
I chose **Medium Style 2 - Accent 2** and checked **Header Row**, **First Column**, and **Banded Rows**.



11. With the table still selected, on the **ANIMATIONS** tab, in the **Animation** group, click **Add Animation**, and select **More Entrance Effects**.
12. Click **Bounce** (under **Exciting**).
13. Click **OK**.

School Attendance			
	Attended	Didn't Attend	% Attended
1860	6	35	15
1870	101	103	50
1880	444	452	50
1900	1000	1019	50

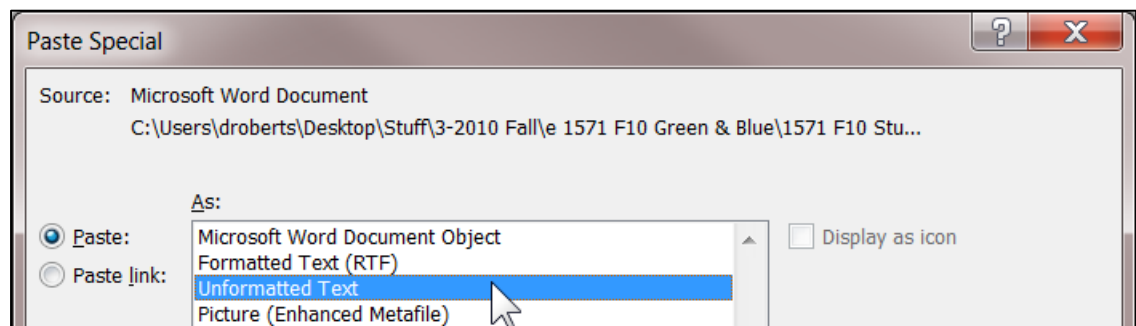
- c. Open the Excel workbook **HW13-2 Excel Table Original**, which is one of the files you copied at the start of the term. It is in your **PowerPoint Files** folder. Copy the information by doing the following:
1. In Excel, if the **Clipboard** pane is not open, on the **HOME** tab, in the **Clipboard** group, click the **Clipboard Dialog Box Launcher**.
 2. Click cell **A1** and tap **Ctrl + c** to copy the title, **Literacy Rate Claims**.
 3. Select cells **B3:E7**. Tap **Ctrl + c** to copy the table.
 4. Minimize Excel but do NOT exit Excel.
- d. Do the following to paste the Excel items you just copied into PowerPoint.
1. Insert a new slide using the **Blank** layout.
 2. In the **Clipboard** pane, click the title **Literacy Rate Claims** to insert it.
 3. Change the font to 36 pt Arial Black and move it so it is near the top center of the slide.
 4. Animate the entrance of the title with the **Grow & Turn** animation and set it to start **After Previous**.
 5. Click in a blank area of the slide to deselect the title.
 6. In the **Clipboard** pane, click the table **Males Females...** to insert it.
 7. Make the width of the table 9 inches and the height 3 inches.
 8. Make the font 24 pt Arial Black.
 9. Center the text in each cell both vertically and horizontally, and center the table on the slide.
 10. Apply to the table a style of your choice and remove the background fill of the table (**Design, Shading, Table Background, No Fill**).
 11. Do a Google search for a male/female symbol. Pick one, copy it, and insert it as the background of the slide with 85% transparency.
 12. Animate the entrance of the table using **Fade** (under **Subtle**) and set it to start **After Previous** with a 1 second delay.
 13. Close the **Clipboard** pane.
 14. Make the transition to this slide **Fall Over** and the sound **Drum Roll**. Set the duration to **3** seconds.
 15. Tap **F5** to play the slide show.
- e. Save the presentation to your **PowerPoint Files** folder using the name **HW13-2 Lastname Firstname HWID Tables Done**.

- f. Set up to print a handout that contains all of the slides, 2 slides per page, portrait orientation, in color (even if you are using a black and white printer). Be sure the handout contains the date (updated automatically), no header, the page number, and the name of the file in the footer.
- g. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the handout, save the presentation, and close it. Exit Word and Excel.

HW13-3 Integration

Problem: How can a PowerPoint presentation be created from a Word document and objects from other files?

- a. You will use the **Table of Contents** of a large Word document as the basis for the PowerPoint slides. To do this you first must set up the **Table of Contents** as text (it currently is a field) and then you tell PowerPoint which entries should be the titles on new slides and which should be subtitles.
 1. Open the Word document **HW13-3 Large Doc PPT Original**, which is one of the files you copied at the start of the term. It is in the **PowerPoint Files** folder.
 2. Select the **Table of Contents** (not the title **Table of Contents** but the table itself) and tap **Ctrl + c**.
 3. Tap **Ctrl + n** to create a new Word document.
 4. On the **HOME** tab, in the **Clipboard** group, click the **Paste** down arrow and select **Paste Special**. You need to paste the **Table of Contents** as text so that PowerPoint can deal with it correctly.
 5. Click **Unformatted Text**.



6. Click **OK**. The information on the clipboard is inserted as plain text without fields or formatting.
7. Click the **Show/Hide** button  on the **HOME** tab to display hidden codes.

Computer-mediated-Instruction-1¶	
Overview-of-Computer-mediated-Software →	2¶
Structure-of-Computer-mediated-Courses →	4¶

- b. Remove the page numbers from the **Table of Contents**. You can do that by hand but the **Replace** feature and **wildcards** can make the job go quickly. A **wildcard** is a special character that can take the place of one or several unknown characters. For example, the asterisk, *, is a wildcard that can take the place of any number of characters. For example, typing **b*k** in the **Find What** box will find words and phrases like **book** and **blink** and **beatnik** and **beans can be fun to pick**. In each case, the * takes the place of the underlined text. Here are four popular wildcards that can be used in Word:⁴⁹

Wildcard	Replaces	Example
?	A single character	s?t finds sat and set but not seat
*	A string of characters	s*t finds sat and set and seat
<	Beginning of a word	<(inter) finds words that begin with inter such as interesting and intercept , but not splintered .
>	End of a word	(in)> finds words that end with in such as in and within , but not interesting .

Do the following:

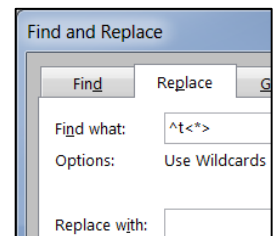
1. Tap **Ctrl + h** to open the **Find and Replace** dialog box.
2. If necessary, click the **More** button and check **Use wildcards**.
3. In the **Find what:** box type **^t<*>** This says to find tabs followed by any word or letter.

^t means to find places where the **Tab** key was tapped

< means to begin at the start of a word or number

***** is a wildcard that means to select all characters

> means to stop at the end of the word or number. So, **<*>** means to select an entire word or number.



Leave the **Replace with:** box empty. This will find the tab code, **^t**, and replace it and the next word or number on the line that comes after it with nothing (that is, it will remove the tab codes and following numbers).

4. Click **Replace All**. All the entries that have a tab followed by page numbers are deleted (there are 23 of them). Click **OK**.
5. Close the **Find and Replace** dialog box.
6. To make the text easier to read, modify the **Heading 1** and **Heading 2** paragraph styles as follows:

Heading 1 font is Arial, 14 pt, black, with 0 pt before the paragraphs.

Heading 2 font is Arial, 12 pt, purple.

- c. Set up the **Table of Contents** with the proper heading styles:

Heading 1 style will be interpreted by PowerPoint as a new slide.

Heading 2 style will be interpreted as a subheading within a slide.

⁴⁹ For an extensive tutorial on using Wildcards, see <http://www.pcworld.com/article/3060753/software/word-pro-tips-use-wildcards-for-faster-more-accurate-search-and-replace-results.html>

Do the following:

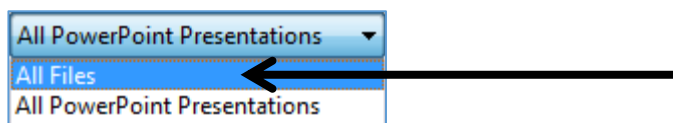
1. Click **Show/Hide** button  on the **HOME** tab to remove hidden codes.
2. Select all the text. There may be a blank line at the bottom of the document. If so, do not select it.
3. On the **HOME** tab, in the **Styles** group, click **Heading 1**.
4. Select the subheadings shown in gray below. To select nonadjacent subheadings hold down the **Ctrl** key as you select each paragraph.

Computer-mediated Instruction
Overview of Computer-mediated Software
Structure of Computer-mediated Courses
Daily Schedule of Class Activities
Homework Assignments
Exams and Quizzes
Checkpoint Questions
Evaluates
Role of the Instructor in a Computer-mediated Class
Student Performance in Computer-mediated and Lecture Classes
The Mathematics Placement Exam
Common Final Exams
Pass Rates
Proportion of Withdrawals
Attendance
Survey Items
Focus Groups
Trends in Computer-mediated Mathematics Instruction

5. Apply the **Heading 2** style.

Computer-mediated Instruction
Overview of Computer-mediated Software
Structure of Computer-mediated Courses
Daily Schedule of Class Activities
Homework Assignments
Exams and Quizzes
Checkpoint Questions
Evaluates
Role of the Instructor in a Computer-mediated Class
Student Performance in Computer-mediated and Lecture Classes
The Mathematics Placement Exam
Common Final Exams
Pass Rates
Proportion of Withdrawals
Attendance
Survey Items
Focus Groups
Trends in Computer-mediated Mathematics Instruction

6. Save the document to your **PowerPoint Files** folder using the name **HW13-3 Lastname Firstname HWID TOC Done** and close it.
7. Start PowerPoint, open a blank presentation.
8. Now you will insert the text in the Word file you just created. Each **Heading 1** will be a new slide and each **Heading 2** will be a subheading within a slide. To do this, tap **Ctrl + O** to open a new file. Navigate to your **PowerPoint Files** folder. At the bottom right of the dialog box, click the down arrow next to **All PowerPoint Presentations** and select **All Files**.



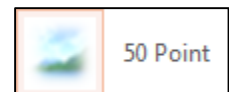
Double click the Word file you just saved, **HW13-3 Lastname Firstname HWID TOC Done**

You now have 10 PowerPoint slides. Each line of the Word document that was formatted with style **Heading 1** is transformed into a new PowerPoint slide; the lines of the Word document that are formatted with style **Heading 2** appear as subheadings within the slides.

9. Delete the last 4 slides so that **Instructional Models** is the last slide. Now you should have 6 slides.
 10. Save the presentation to your **PowerPoint Files** folder using the name **HW13-3 Lastname Firstname HWID Integration Done**
- d. Set up all the slides by doing the following:
1. Select all the slides (click in the thumbnails on the left and tap **Ctrl + a**).
 2. On the **HOME** tab, in the **Slides** group, click the **Layout** down arrow and select **Title only**.
 3. On the **DESIGN** tab, in the **Themes** group, apply the **Wisp** theme.
- e. Do the following to set up **Slide 1**.



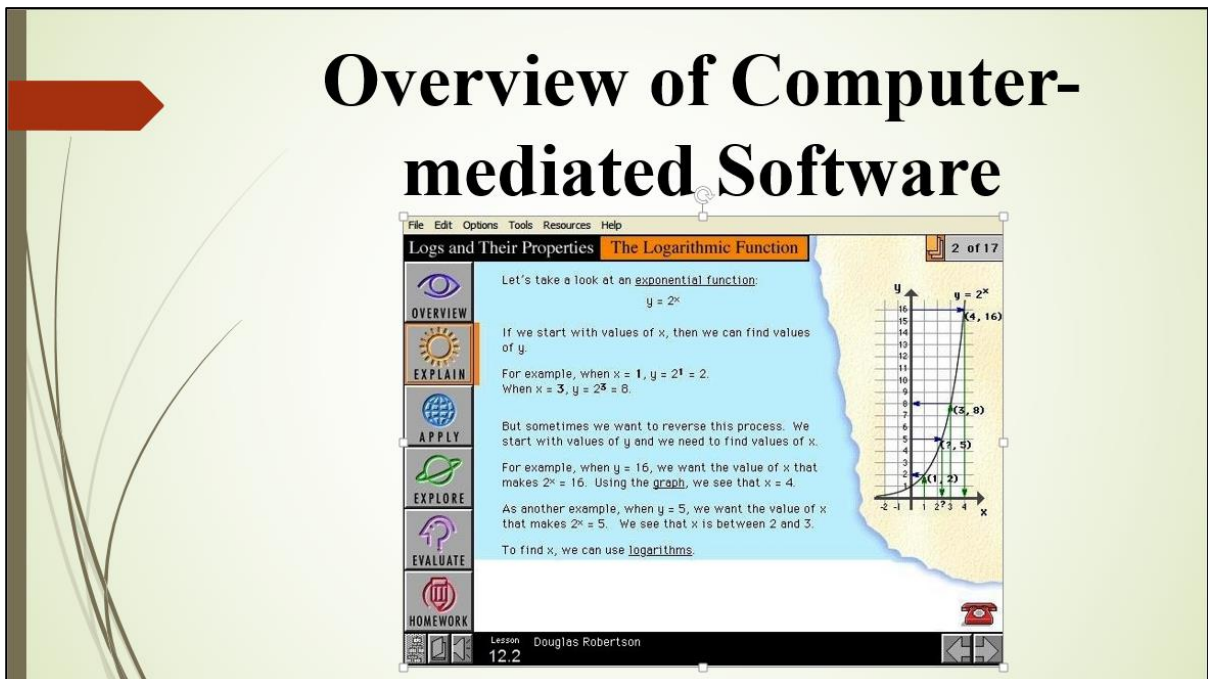
1. Click **Slide 1** and make the title 60 pt bold with center alignment.
2. Switch to the Word document **HW13-3 Large Doc PPT Original** and copy the photo of the computer classroom, which is on the **Abstract** page.
3. Switch to PowerPoint, and paste the photo into **Slide 1**.
4. Right-click the photo and click **Size and Position**. On the **Format Picture** pane, put a check next to **Lock aspect ratio** and change the height of the photo to 5". With the aspect ratio locked, when you change the height the width automatically changes to keep the height and width in the same proportion as the original (hence, no distortion).
5. On the **PICTURE TOOLS FORMAT** tab, in the **Picture Styles** group, click **Picture Effects** and select **Soft Edges, 50 Point**.



6. Position the title and picture as shown below:



- f. Do the following to insert a graphic into **Slide 2**.
1. Click **Slide 2** and make the title 60 pt bold with center alignment.
 3. On the **INSERT** tab, in the **Images** group, click **Pictures**.
 4. Navigate to your **PowerPoint Files** folder and double-click the file **HW13-3 Math Sample Original.jpg**, which is one of the files you copied at the start of the term. The graphic will be inserted.
 5. Adjust the size and location of the objects so that **Slide 2** looks like this:

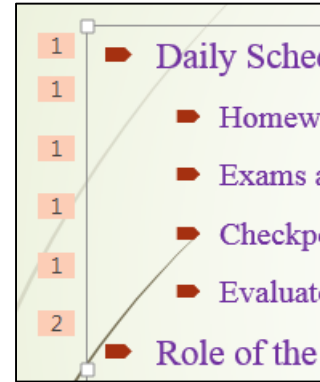


g. Adjust and animate the bullets on **Slide 3**.

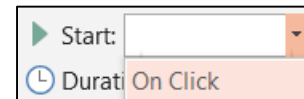
1. If necessary, move the text box that contains the bullets to the right so the bullets are easily visible. Make the four bullets **Homework Assignments**, **Exams and Quizzes**, **Checkpoint Questions**, and **Evaluates** subordinate to **Daily Schedule of Class Activities**.

2. On the **ANIMATIONS** tab, in the **Advanced Animation** group, click **Animation Pane** to display it on the right side of the screen.

3. Click the border of the box that contains all the bullets. Set the bullets to enter using the **Appear** animation. When you click **Appear**, the four sub-bullets will be set to enter when **Daily Schedule of Class Activities** enters (they all have the number 1 next to them).

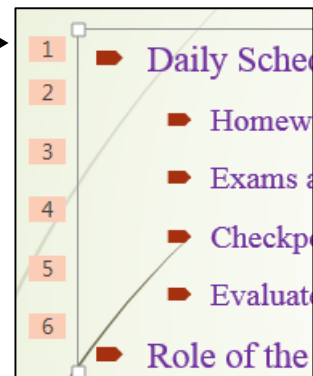
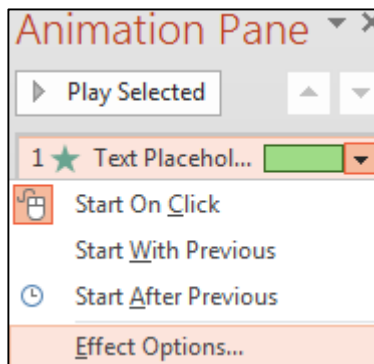


4. To make each individual bullet enter on its own mouse click, click the edge of the bullets box to select all the bullets and then, on the **ANIMATIONS** tab, in the **Timing** group, change the **Start** box to **On Click**.



Now, all the entrance numbers are different, ranging from 1 through 6.

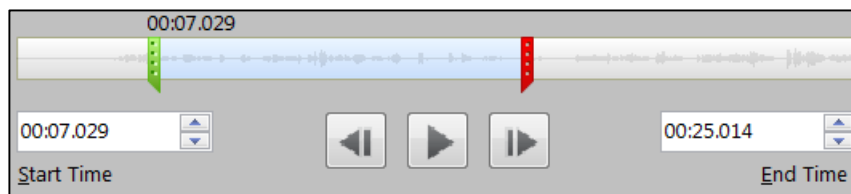
5. In the **Animation Pane**, click the down arrow and select **Effect Options**.



6. Choose the color **orange** in the **After animation** box, and **All at once** in the **Animate** text box.
7. Click **OK**.
8. Click the **Slide Show** button  to start the presentation from this slide and watch the animations as you click the mouse. Click **Esc** to stop the slide show.

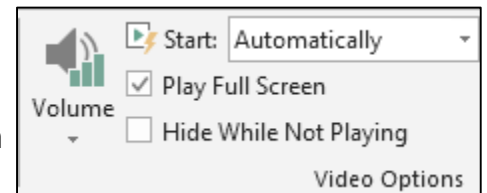
h. Delete **Slide 4 (Student Performance in Computer-mediated...)**

- i. Add a video to the new **Slide 4 (Trends in Computer-mediated Mathematics Instruction)** by doing the following:
 1. Make **Slide 4** active, change the title to **Quadratic Transformations**, and make the text, bold and italic.
 2. Animate the title using the **Bounce** entrance. Set the animation to enter by letter (use **Effect Options**) and **Start After Previous**. Then, deselect the title.
 3. On the **INSERT** tab, in the **Media** group, click **Video** and select **Video on my PC**. You can choose any video you want or use **HW13-3 Transformations Original**, which is one of the files you copied at the start of the semester. This video was made on an iPad by students in **CI 1806 College Algebra through Modeling** after a visit to the Weisman Art Museum on campus. They were looking for mathematical themes in visual art.⁵⁰
 4. On the **VIDEO TOOLS PLAYBACK** tab, in the **Editing** group, click **Trim Video** and use the green slider to set the video to start at about 7 seconds and the red slider so that the video ends at about 25 seconds.



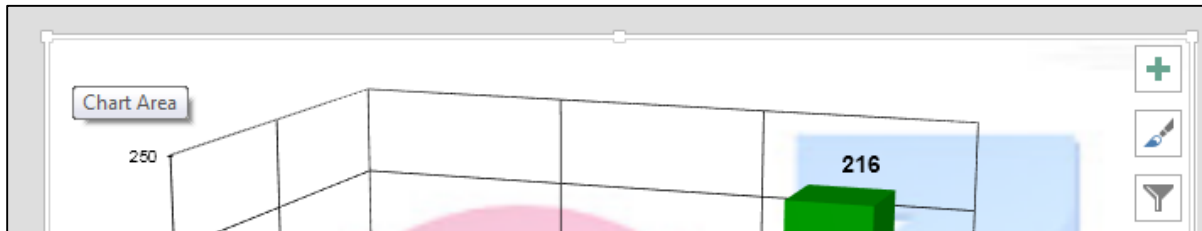
Click **OK**.

5. On the **VIDEO TOOLS PLAYBACK** tab, in the **Video Options** group, select **Start Automatically** and check **Play Full Screen** so the video fills the screen when played.
6. Crop the left and right sides so that only the faces show.
7. Make the height of the image 5.5 inches, center it horizontally, and move it to just below the title.
8. Click the **Slide Show** button  to start the presentation from this slide and watch the video. tap **Esc** to exit the presentation.



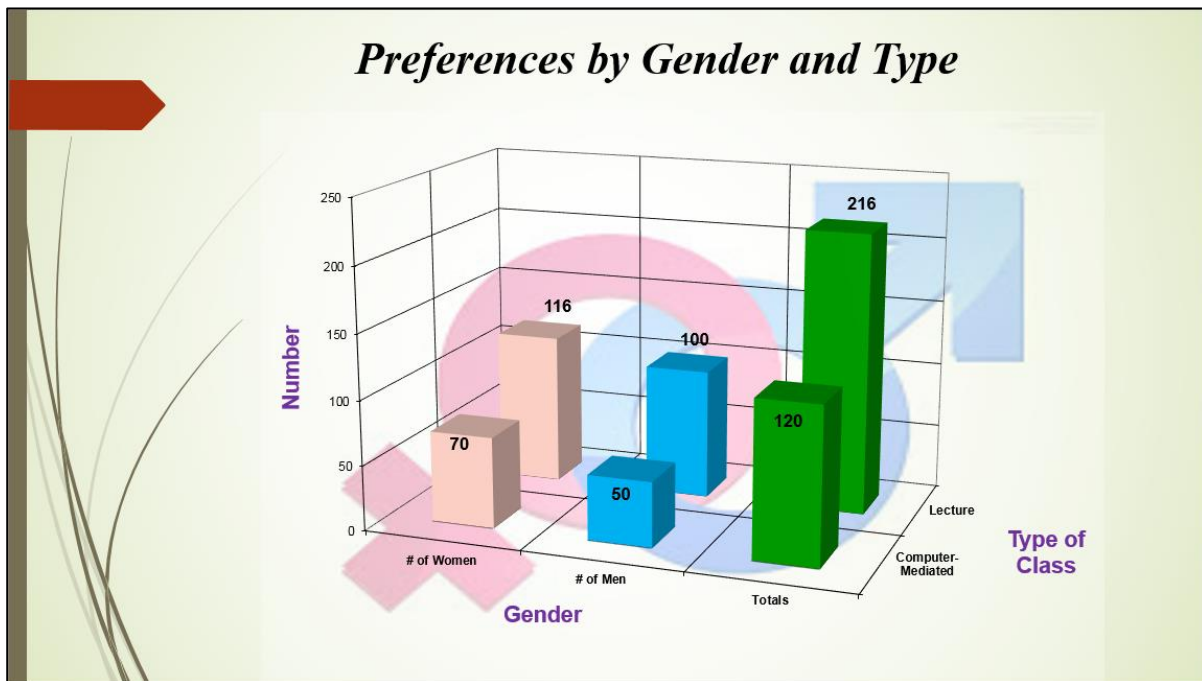
⁵⁰ If you are interested in the project, see Staats, S., Ernst, D., Berken, S. & Robertson, D., 2015. Investigating the mathematics of inaccessible objects: Algebra videos with iPads. Chapter for M. Meletiou-Mavrotheris, K. Mavrou & E. Paparistodemou (Eds). Integrating touch-enabled and mobile devices into contemporary mathematics education. IGI Global.

- j. Do the following to insert a graph from Excel into **Slide 5**.
1. Display **Slide 5** and change the title to **Preferences by Gender and Type**. Use the **Format Painter** to match the format of the title of this slide to that of **Slide 4**. Then, deselect the title.
 2. Minimize PowerPoint and open the **PowerPoint Files** folder. Double click the Excel file, **HW13-3 Gender Graph Original**, which is one of the files you copied at the start of the term. Even though it is an Excel file it is in the **PowerPoint Files** folder.
 3. Select the graph by clicking near the upper left corner of the white area surrounding the graph.

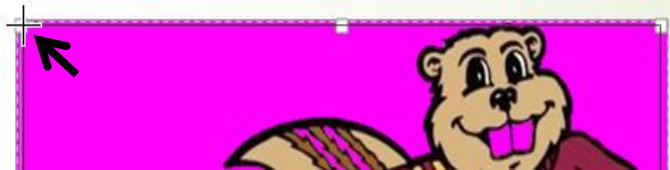


Tap **Ctrl + c** to copy the graph.

4. Switch back to PowerPoint and tap **Ctrl + v**. The graph is inserted.
5. Change the font of the three axis labels to 18 pt purple.
6. Change the color of the two columns for **Women** to pink and the two columns for **Men** to blue. You will have to do each column one at a time. To select a single column, click it, wait a second, and then click it again.
7. Position the title and graph so that the slide looks like the following:



- k. There are times when you may want to set up all the slides with particular objects, like a company logo or page numbers or specific text. Doing that individually to each slide is time consuming for a large presentation. To help with that task, you can use what is called a **Master Slide**. This is like a style in Word. When you edit the **Master Slide** (or a style in Word) every slide in the presentation is affected (just like every paragraph with that style is affected in Word). To see how this works, do the following:
1. Click the thumbnail for **Slide 1**.
 2. On the **VIEW** tab, in the **Master Views** group, click **Slide Master**. This puts a new tab, **SLIDE MASTER** on the left and displays the **Master Slide** and many different slide layouts.
 3. On the **INSERT** tab, in the **Text** group, click **Slide Number** and put a check in the box to the left of **Slide Number**.
 4. Click **Apply to All** to insert the slide number on the **Master Slide**. The current position is inside the red arrow. It can be dragged to any location but, leave it where it is.
 5. On the **INSERT** tab, in the **Images** group, click **Pictures**, navigate to your PowerPoint folder, and insert **HW12-3 UM Logo Original**.
 6. The background of the image covers up the Wisp theme. You can remove the background, if you wish, by doing the following (*this is optional*):
 - With the image still selected, on the **PICTURE TOOLS FORMAT** tab, in the **Adjust** group, click **Remove Background**. This makes the background look pink and inserts a marquee that indicates how much of the image will be included. It cuts off part of Goldie.
 - To keep the entire image, click the little white square handles on the marquee lines and then drag so that the marquee contains the portion of the picture you wish to keep. Drag to **just inside** the edges of the image rectangle (dragging to the very edge will cause a loss of some of Goldie's details, like his face!).
 7. Make the image height 1 inch and move it to the lower right corner of the slide.
 8. Insert a text box, type **American Mathematical Association**, which is the organization that sponsored the conference where I made this presentation.



9. Make the font bold red and move the textbox to the upper left side of the slide, just under the large red arrow.

I used modified versions of the full 60 slide presentation at two conferences, one for the **American Mathematical Association** and the other for the **National Council of Teachers of Mathematics**. Using the **Master Slide** feature I was able to quickly change the organization name on all the slides when I went from one conference to the other.



10. On the **SLIDE MASTER** tab, in the **Close** group, click **Close Master View**.

- l. Tap **F5** to run the slide show and marvel at your work.
- m. Set up to print a handout that contains all 5 slides with 6 slides horizontal per page, portrait orientation, in color (even if you are using a black and white printer). Be sure the handout contains the date (updated automatically), no header, the page number, and the name of the file in the footer.
- n. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the handout, save the presentation, and close it.
- o. If necessary, exit Word and Excel without saving.

HW13-4 (Mis)-communication

Problem: How can images from the web be copied, modified, and inserted into a PowerPoint presentation and then have animations applied?

In my precalculus class, I talk about the importance of clear communication when solving problems and communicating the solutions to others. I created a slide as a humorous way of illustrating how one person can explain an obvious solution that is completely misinterpreted by his colleague.

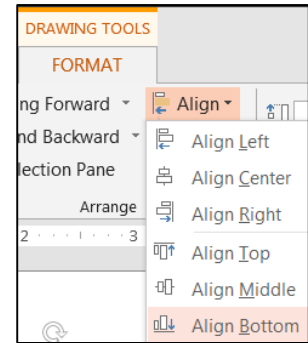
I started with the following BC comic that I downloaded from <http://www.tcj.com/johnny-hart-to-appear-b-c/hart-9/>



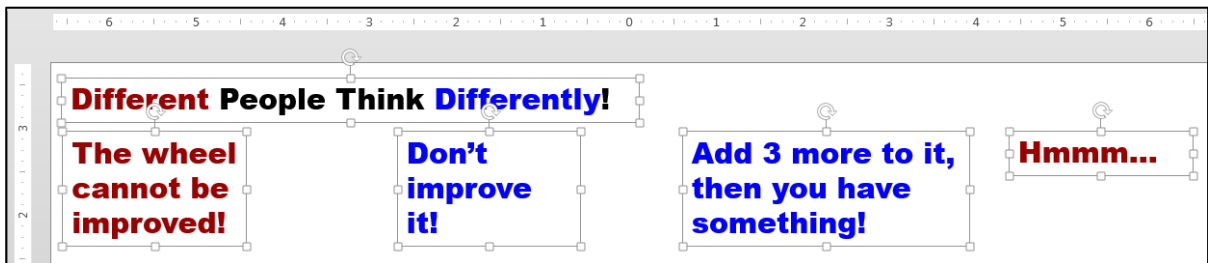
I used the **Snipping Tool** to copy the characters and pasted them in the slide. I wanted the text to be more readable so I typed it into text boxes and made the font Arial Black. Finally, I added animations and sounds. To get some experience with this sort of process, do the following:

- a. Open a new blank PowerPoint slide. Set the **Layout** to Blank. Save the presentation to your **PowerPoint Files** folder using the name **HW13-4 Lastname Firstname HWID Communication Done**

- b. Insert text boxes, type the text shown below, make the font 24 point Arial Black, and position the text boxes as shown. You can quickly align the bottom 4 text boxes by selecting them and choosing **Drawing Tools, Format, Align, Align Bottom**.

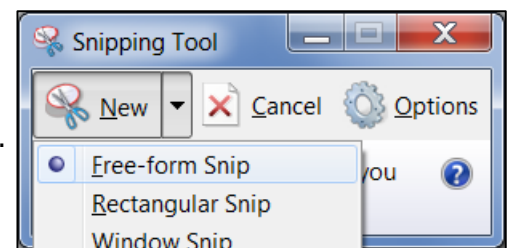


To help viewers keep straight who is talking, make the color of the left-most and right-most text red and the color of the text in the two center boxes blue.



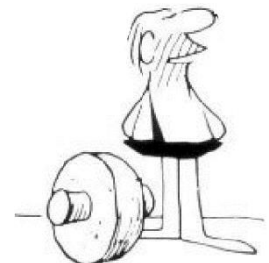
- c. Open the JPEG file **HW13-4 Communication Image Original**. It may help to magnify the image by using the **Display size tool**  at the bottom center of the window. Make the image as large as you can while keeping the quality at an acceptable level. If you make the image too large it will become pixelated and not look good.
- d. Use the **Snipping Tool** to copy the BC characters by doing the following:

1. Tap the **Windows** key, type **snip**, and then click the **Snipping Tool** icon.
2. Click **Options** and be sure **Always copy snips to the Clipboard** is checked.
3. From the **New** menu, select **Free-form Snip**.
4. Click **New** and a little scissors will appear. The selection line will be drawn at the vertex of the scissors.

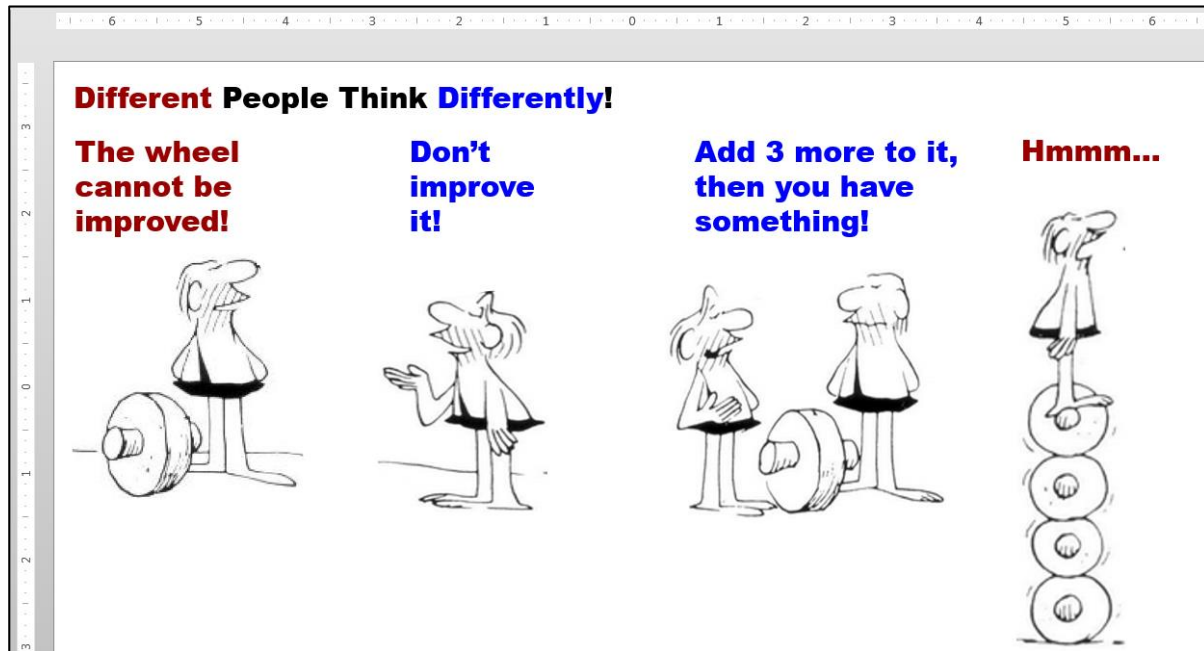


Trace around the character on the left, including the wheel. This is a bit tricky to do with a mouse. Do your best - it does not have to be perfect.

5. Be sure the text boxes are not selected and paste the image in the slide.



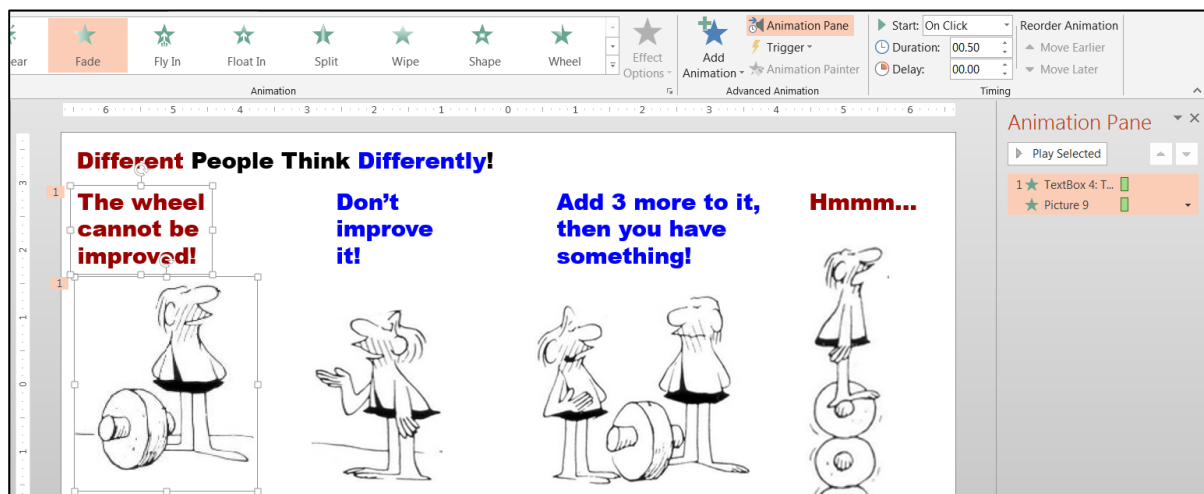
6. Follow the same procedure for the other three images and position them as shown below.



7. Close the window that contains the cartoon.

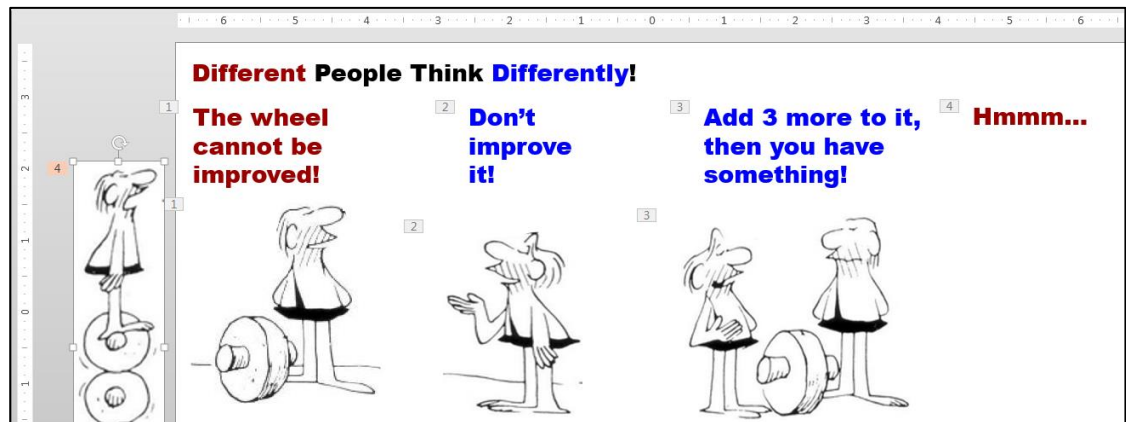
e. Insert animations by doing the following:

1. Select the box with the text **The wheel cannot be improved!** and the image under it.
2. On the **ANIMATIONS** tab, in the **Advanced Animation** group, click **Animation Pane**.
3. On the **ANIMATIONS** tab, in the **Animation** group, click **Fade**.
4. Set the textbox to **Start: On Click**.
5. Set the image to **Start: With Previous**.

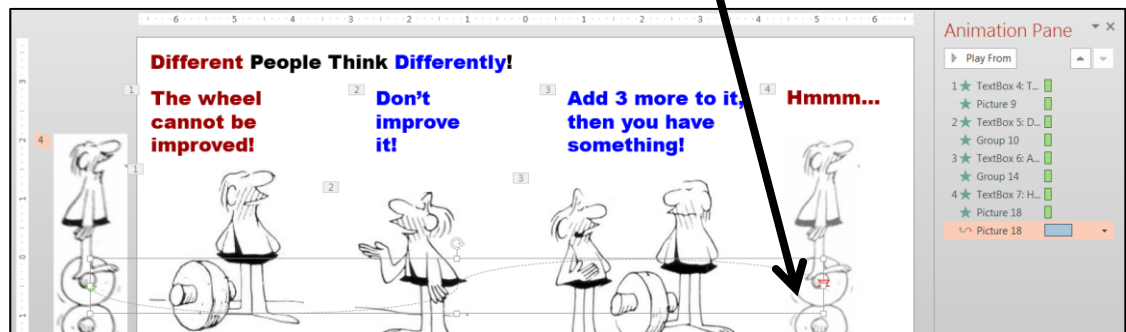


6. Do the same for the three other pairs of text boxes and images.

7. I wanted to have the last image appear on the left and travel across the screen until it is under **Hmmm...** To do this, drag the image under **Hmmm...** way over to the left and out of the slide. PowerPoint may resist you doing that so you may have to drag the image to the left, let up on the mouse button, and then drag the image left again.

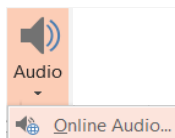


8. With the image that has the four wheels still selected, on the **ANIMATIONS** tab, in the **Advanced Animation** group, click **Add Animation** and select **More Motion Paths...**
9. Select **S Curve 2** and click **OK**. The animation will start at the green triangle and end at the red triangle.
10. Drag the red triangle to the right until it is under the **Hmmm...** text box. Set the animation to **Start: With previous**.



- f. Add sound effects by doing the following:

1. On the **INSERT** tab, in the **Media** group, click **Audio** and select **Online Audio**. If you get the message **No supported audio sites are available at this time**, on the **INSERT** tab, in the **Media** group, click **Audio** and select **Audio on my PC**, and click **HW13-4 Indy Car Pass Original**, which is one of the files you downloaded at the start of the semester. Then, skip to step 5.
2. If the **Online Audio** works, in the search box, type **zoom**, and click search button (magnifying glass).
3. Click **Indy Car Pass**
4. Click **Insert**.
5. Drag the little speaker  down so it is below the images.
6. On the **PLAYBACK** tab, put a check in the **Hide During Show** box.
7. On the **PLAYBACK** tab, select **Start: Automatically**.



8. Deselect the speaker icon.
 9. On the **INSERT** tab, in the **Media** group, click **Audio** and select **Online Audio**. Again, if you get the message **No supported audio sites are available at this time**, on the **INSERT** tab, in the **Media** group, click **Audio** and select **Audio on my PC**, and click **HW13-4 Hmmm Original**, which is one of the files you downloaded at the start of the semester. Then, skip to step 13.
 10. In the search box, type **Hmm** (yes, only two m's) and click the search button.
 11. Click **Long Hmm** and then click **Insert**.
 12. On the **Playback** tab, put a check in the **Hide During Show** box.
 13. On the **Playback** tab, select **Start: Automatically**.
- g. Tap **F5** to run the slide show and check that everything is working properly.
- h. So I can see your animations, print the slide by doing the following:
1. Open a new Word document and save it using the name **HW13-4 Lastname Firstname HWID Communication Word Done**
 2. Insert a footer that contains the name of the file.
 3. Switch to PowerPoint. Be sure the **ANIMATIONS** tab is selected and the **Animation Pane** is showing. Use the **Snipping Tool** to copy to the clipboard the entire slide, including the rulers and **Animation Pane**.
 4. Switch to Word and paste the slide.
 5. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print the document, save the document and close Word.
 6. Close PowerPoint.

OK, so now you know some ways to make your PowerPoint presentations flashy and hopefully more interesting. But, your message is the most important part so be sure to first figure out the message or facts you want your audience to leave with, then map out a talk that accomplishes your goal. Finally, consider adding animations, transitions, audio, video, and so on to liven up things. You want your audience to **pay attention**, to be surprised, to smile and nod and laugh at the right places and the extras can help with that.

Step 4 Submit You now are ready to submit your homework for grading.

1. Put your 4 homework papers in the following order:
 - HW13-1 Trails**
 - HW13-2 Tables**
 - HW13-3 Integration**
 - HW13-4 (Mis)-communication**
2. Cut out Submission Form 13 and put it on the top of the papers.
3. Staple the papers in the upper left corner.
4. Turn in the packet by the due date.

Step 5 Backup Now would be a good time to backup your files.

Sample Exam Questions for PowerPoint

The final exam will cover **Excel**, **Word**, **PowerPoint**, and **Access**. As was the case with the Excel and Word exams, these sample questions will give you a place to start in your studying but they **do not** constitute a “practice” exam so you will need to also study the activities in your textbook as well as those in this Study Guide in order to be fully prepared for the real exam. I will ask you questions on material that was covered in the textbook and your projects that are NOT covered here.

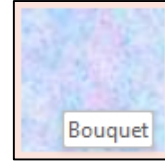
***This is not to be handed in for grading.
The key is in the file PowerPoint Practice Key Original***

- a. Start PowerPoint and open a new blank document
- b. Save the presentation using the name **Sample PowerPoint Questions Done**.
- c. **Slide 1**
 1. Change the layout to **Title and Content**.
 2. In the title placeholder, type your first name on one line and your last name on the next line. Make the font 44 pt Arial Black.
 3. In the content placeholder, type your homework ID number and today's date as separate bulleted items. Make the font 28 pt Arial Black.
 4. Apply the **Rise up** entrance animation (under **Moderate**) to each of the three lines on the slide. Set the animation so the items enter automatically, one by one, when the slide show starts.
 5. Insert a **WordArt** object using the **Fill – Black** motif (or any other of your choice). Enter the following text: **PowerPoint Practice Questions**.
 6. Make the font of the **WordArt** object Arial and the size 54 pt.
 7. Modify the text effect of the **WordArt** object so that it has the **Deflate Bottom** warp ⁵¹.
 8. Move the **WordArt** object to the bottom center of the slide.
 9. Insert the photo **Sample PowerPoint Balloons Original**, which is one of the files you copied at the start of the term.
 10. Change the height of the photo to 3 inches and the width to 5 inches. To make the height and width specific sizes, you may have to open the **Size** dialog and be sure the **Lock aspect ratio** is not checked.
 11. Crop the bottom of the photo so that the trees are not visible.
 12. Place a red border around the photo and make the border width 3 pt.

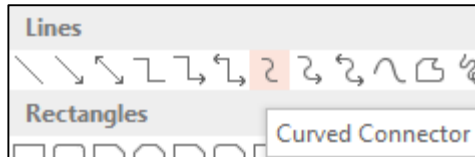


⁵¹ **DRAWING TOOLS FORMAT, Text Effects, Transform**, scroll down to 4th row from bottom and 4th column.

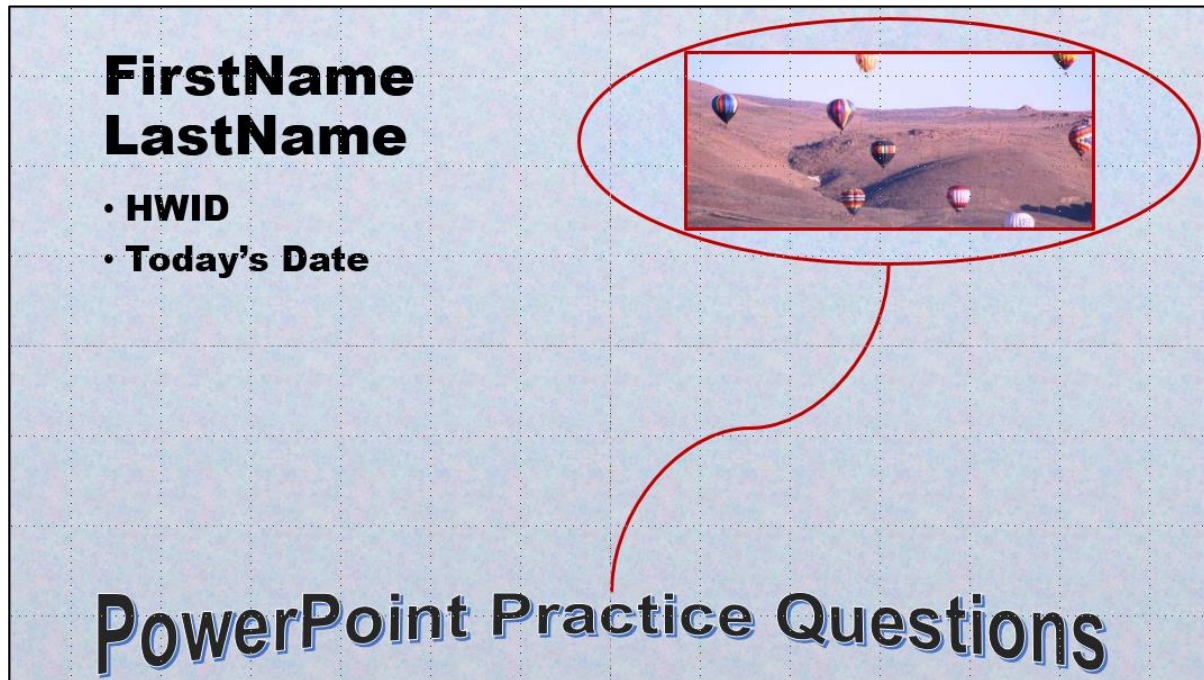
13. Insert an oval, make the fill color **Bouquet** texture fill with 50% transparency, make the border 3 pt red, and send the oval behind the photo.



14. Group the photo and the oval so they act as one object.
15. Draw a curved **connector** between the center of the bottom of the oval and the center of the top of the **WordArt** object. Be sure the connector "attaches" itself to the objects so that when an object is moved the connector stays attached.



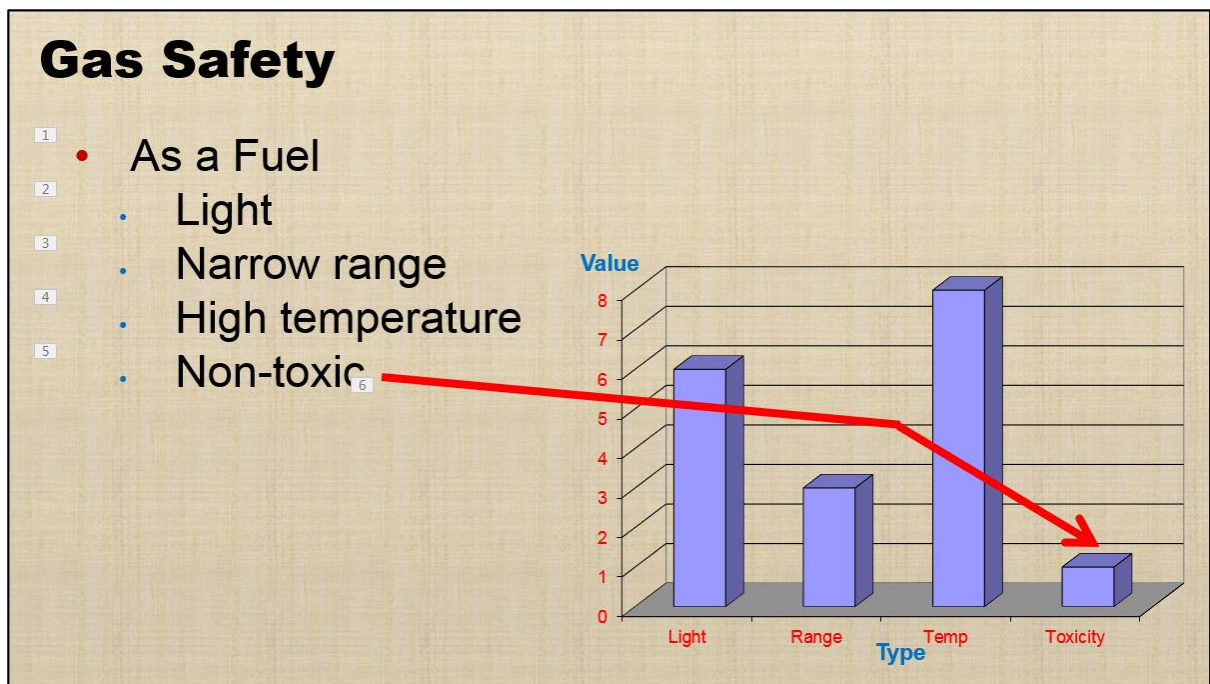
16. Make the color of the connector red and the width 3 pt.
17. Move the photo/oval to the upper right corner of the slide.
18. Set the background for this slide only to **Bouquet** texture fill and set the transparency to 50%



d. *Slide 2*

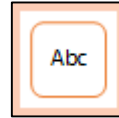
1. Insert a new blank slide.
2. Insert a text box, type **Gas Safety**, and make the font 40 pt Arial Black. Move the title to the upper left corner of the slide.
3. Insert a text box, then type the following bulleted list: **As a Fuel, Light, Narrow range, High temperature, Non-toxic.**
4. Make the last three bullets subordinate to the first bullet, **As a Fuel.**

5. Change the bulleted text to 36 pt Arial and move it so it is under the title.
6. Animate all the bullets so they enter one at a time when the mouse is clicked. Use the **Fly In** animation.
7. Make each bulleted line dim to orange when the next bullet appears.
8. Open the Excel workbook **Sample PowerPoint Chart Original**, which is one of the files you copied at the start of the term. Copy the chart and paste it into this slide.
9. Make the height of the chart 5" and the width 7".
10. Move the chart to the lower right corner of the slide.
11. Make the font size on the axes 14 pt and the font color red.
12. Make the font on the axes labels (**Value** and **Type**) 18 pt blue.
13. Move the **Value** axis label up so the label does not cover the axes values.
14. Change the background (Walls) color so that it has no fill.
15. Draw a straight line and an arrow as shown.
16. Group the line and arrow and make their width 6 pt and color red.
17. Animate the grouped lines so the group enters when the mouse is clicked after the last bullet enters. Use the **Spiral In** animation (under **Exciting**).
18. Make the background of the slide Papyrus.



e. **Slide 3**

1. Insert a new blank slide.
2. Insert a text box that contains the title **Success Factors**.
3. Apply the **Shape Style Colored Outline – Orange Accent 2**.
4. Make the font size 48 pt and center the title near the top of the slide.
5. Create a two column by three row table that looks like the following:



Location	Tenants
Minneapolis	Major Retailers
Duluth	Small Shops

6. Add a row between rows two and three and type **St. Paul** and **Industry**.
7. Apply the **Medium Style 2 - Accent 2** design to the table.
8. Move the table to the middle bottom of the slide.
9. Apply the Pinwheel to the table. Set the duration to 1 sec and have it Start when the slide appears.
10. Do a **Google Image** search to find a photo of a city and insert the photo as the background for this slide. Adjust the transparency so the text on the slide is easily readable.
11. Make the transition to this slide **Wipe** with a **Duration** of 1 sec and the **Applause** sound.

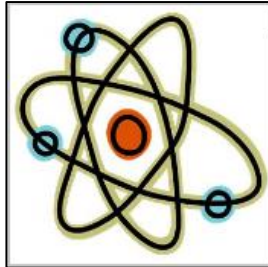


Success Factors

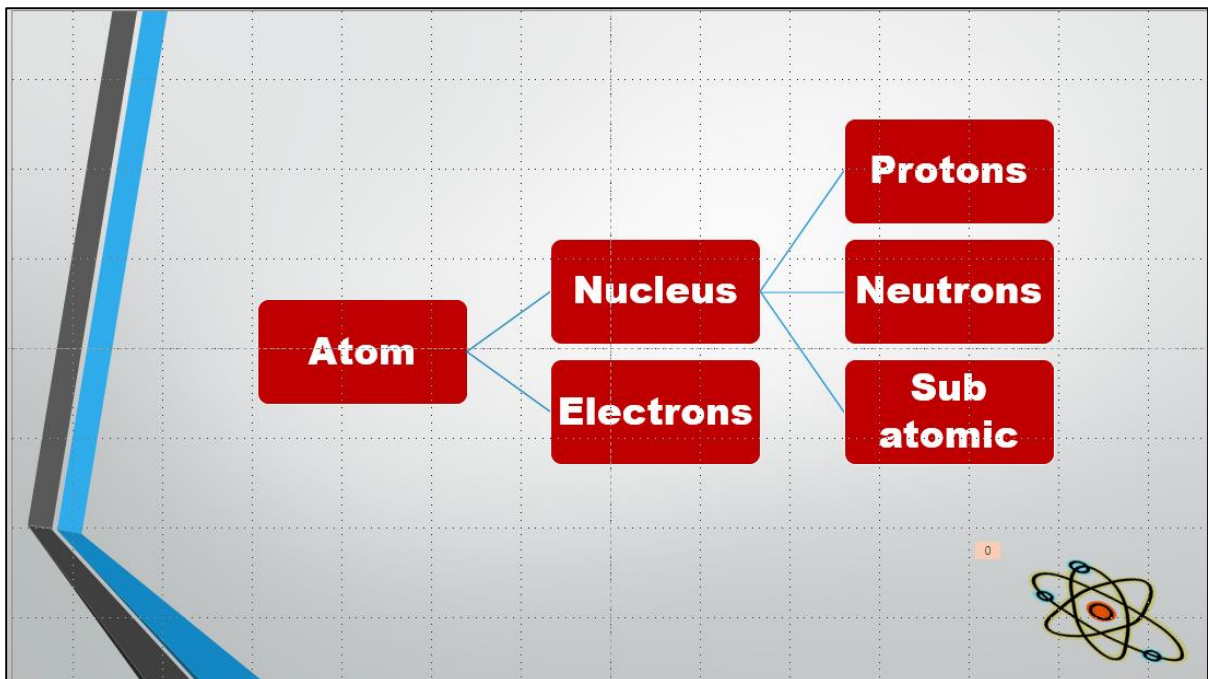
Location	Tenants
Minneapolis	Major Retailers
St. Paul	Industry
Duluth	Small Shops

f. **Slide 4**

1. Insert a new blank slide.
2. Make the Theme of this slide only **Parallax**.
3. Insert a clip art drawing of a diagram of an atom (your choice):



4. Make the height of the atom 1 inch and the width 2 inches, and then rotate the image about 15 degrees to the right. Move the image to the lower right corner of the slide.
5. Add the **Spin Emphasis Effect**. Have it start when the slide appears and repeat until the end of the slide show.
6. Insert a **SmartArt** object that uses the **Hierarchy** category and **Horizontal Hierarchy** subcategory.
7. Add the text shown below:
8. Make the fill of each box red and the font Arial Black.



- g. Click **Slide 1** and then view the slide show.

Do not submit this work for grading but do go through it several times as a part of your preparation for the final exam.

Project 14

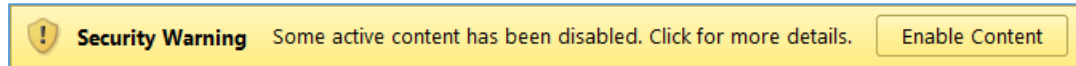
Access Chapter 1: Getting Started with Databases

Step 1 Read Before turning on the computer, read the introductory material on pages 485-488.

Step 2 Activities Turn on the computer and open your textbook to page 489. Do all the steps of all the activities for this Chapter.

To save paper, do NOT print when the textbook instructs you to. You will be told what to print when you do the homework listed in this Study Guide.

When you open a database you might get the following Security Warning:



If that happens, click [Enable Content](#).

Step 3 Homework After you have completed the activities for this Chapter, return to this Study Guide, do the problems listed below, and turn them in for grading. *You do NOT have to print in color.*

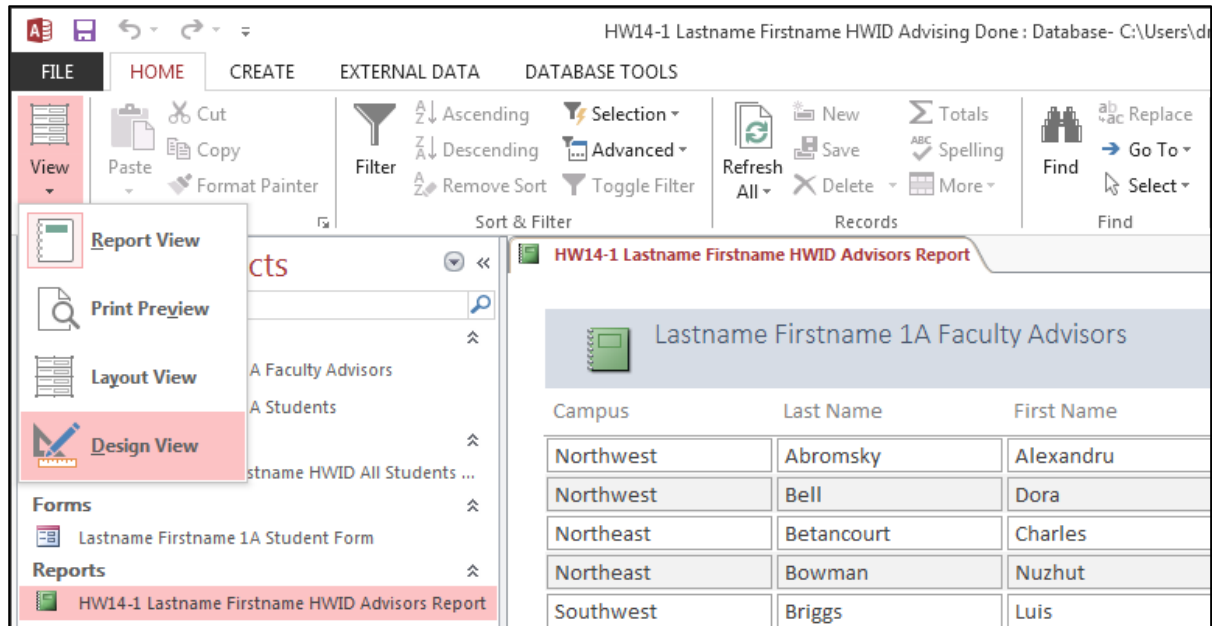
HW14-1 Advising Database

Problem: How can a database be designed and populated with data?

- Open the database [Lastname_Firstname_1A_Advising](#), which you created while following the directions in the textbook and saved on page 517.
- Save the database to your **Access Files** folder using the name [HW14-1 Lastname Firstname HWID Advising Done](#)
- Change the name of the **Lastname Firstname 1A All Students Query** to **HW14-1 Lastname Firstname HWID All Students Query**.
- Choose **File, Print, Print Preview** and compare the preview with the key. Make needed corrections, save the query and print it.
- Change the name of the **Lastname Firstname 1A Faculty Advisors Report** to **HW14-1 Lastname Firstname HWID Advisors Report**.

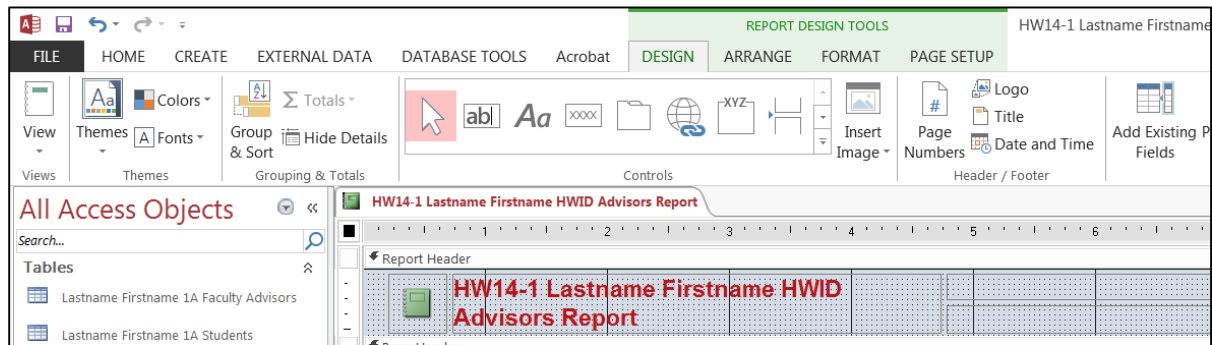
f. Do the following to change the name in the report:

1. Open the Report and, on the **HOME** tab, in the **Views** group, select **Design View**.



Here, you can use your familiar editing techniques.

2. Select the text Lastname Firstname 1A Faculty Advisors, delete it, and replace it with HW14-1 Lastname Firstname HWID Advisors Report



3. In the **REPORT DESIGN TOOLS** click the **FORMAT** tab. Select the text **HW14-1 Lastname Firstname HWID Advisors Report** and change the font to bold Arial, 14 pt, and red.

g. Choose **File**, **Print**, **Print Preview** and compare the preview with the key. Make needed corrections, save the report and print it.

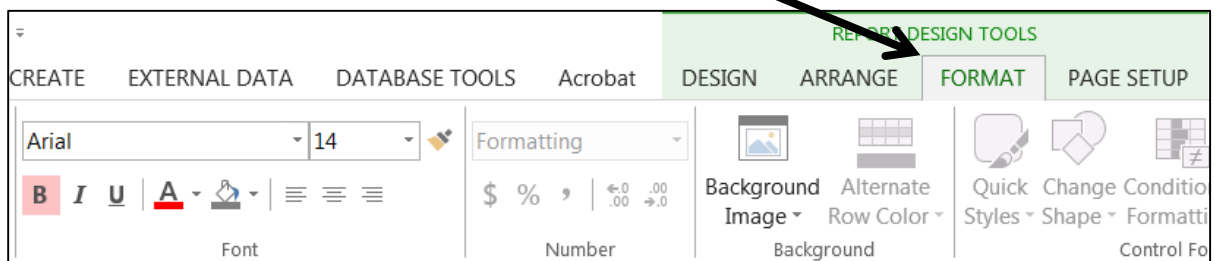
h. Exit Access.

HW14-2 Student Workshops Database

Problem: How can database reports be generated, customized, and printed?

- Open the database **Lastname_Firstname_1B_Student_Workshops**, which you created while following the directions in the textbook and saved on page 531.
- Save the database to your **Access Files** folder using the name **HW14-2 Lastname Firstname HWID Workshops Done**
- Print the **All Events** report by doing the following:

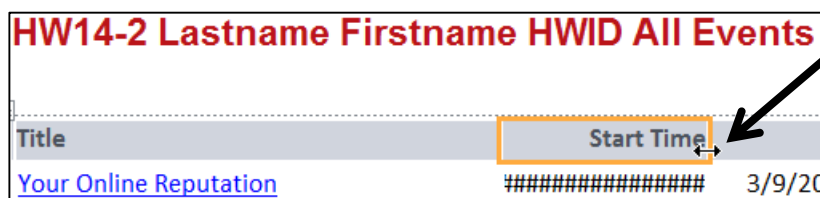
- Open the **All Events** report by double-clicking .
- On the **HOME** tab, in the **Views** group, select **Design View**.
- Change **Lastname Firstname 1B All Events** to **HW14-2 Lastname Firstname HWID All Events**.
- Click the **REPORT DESIGN TOOLS FORMAT** tab.



Select the text **HW14-2 Lastname Firstname HWID All Events** and change the font to bold Arial, 14 pt, and red.

- Click the **HOME** tab and, in the **Views** group, select **Layout View**. Depending on your printer, you may see ##### in the **Start Time** or **End Time** columns. Like in Excel, Access uses these pound symbols to indicate that the columns are too narrow to display the numbers. You can fix that by either changing the column widths or reducing the font size.

To change the column width, click the column head and then move the cursor to the right side of the column head until you see a double sided arrow.



Click and drag to change the column width.

- Choose **File, Print, Print Preview** and compare the preview with the key. Make needed corrections, save the report, print it and then close it.

- e. A database is only as good as the data entered into it. If the data entry person makes a typo the effect can have serious consequences for the people who use the data. For example, if your employer enters the wrong Social Security number for you it could result in your income tax withholding being incorrectly reported, which in turn will cause you great headaches when you try to do your taxes in April.

There is no way to completely protect against typos, but there are some things you can do to catch some errors. You have already seen how you can limit the size of a field to ensure that say, a state code is only two characters.

Like Excel, Access also allows you to set up **validation rules** for most fields. A **validation rule** tells Access to only allow entry of data of a certain form, length, sign (positive or negative), or value range, among others.

For example, all Social Security numbers have 9 digits. You could set up a validation rule that will display an error message if the data entry person types something other than 9 digits. That will not catch reversing digits, like typing 082191234 instead of 082911234 but it would catch 0821912345.⁵²

To see how validation rules work, do the following:

1. Change the name of the table **Lastname Firstname 1B Workshop Locations** to **HW14-2 Lastname Firstname HWID Locations**
2. Open the **HW14-2 Lastname Firstname HWID Locations** table.
3. Switch to **Design** view.
4. Click the **Seats** field name. In the bottom half of the screen, in the **Field Properties** area, click in the **Validation Rule** box.

Field Properties	
General	Lookup
Field Size	Long Integer
Format	
Decimal Places	Auto
Input Mask	
Caption	
Default Value	
Validation Rule	
Validation Text	

Type the rule **>=0 And <=200** in the **Validation Rule** box.

This says that only numeric values greater than or equal to 0 and less than or equal to 200 (that is, between 0 and 200 inclusive) will be allowed in this field. Entering a negative number or a number larger than 200 will break the validation rule and display an error message. Also, since the **Data Type** is **Number**, if you enter something other than a number an error message will appear.

⁵² The validation rule for requiring exactly 9 digits is **Like "#####"**.

5. Click in the **Validation Text** box and enter the message that you want to appear when the rule is violated. Type: **Quantity must be between 0 and 200 inclusive**.

Field Name	Data Type
Room ID	Short Text
Campus/Location	Short Text
Room	Short Text
Seats	Number
Room Arrangement	Short Text
Equipment	Short Text

General	
Field Size	Long Integer
Format	
Decimal Places	Auto
Input Mask	
Caption	
Default Value	0
Validation Rule	>=0 And <=200
Validation Text	Quantity must be between 0 and 200 inclusive

6. Tap **Ctrl + s** to save the table design. Click **Yes** if you see a warning about data integrity rules.
7. Switch to **Datasheet** view.
8. Replace the first **Seats** value with **250** and tap **Enter**. The error message will display.

Room ID	Campus/Location	Room	Seats	Room Arra
NE-01	Northeast Campus	H265	250	Theater
NE-02				
NW-01				
SE-01				
SW-01				
*				

Microsoft Access

Quantity must be between 0 and 200 inclusive

OK Help

[Was this information helpful?](#)

9. Click **OK** to close the error message dialog box.
 10. Tap **Esc** to return the changed value to its original value.
- f. Data entry is costly and tedious. To improve efficiency, Access allows you to set a **default value** for each field. This is the value Access will put in the field unless you tell it differently. Set up a default value for the **Equipment** field by doing the following:

1. Switch to **Design View** and click the **Equipment** field name.
2. In the **Field Properties** area, click in the box to the right of **Default Value** and type **Chalkboard**.
3. Tap **Enter**. Access puts quotation marks around the value you typed.

HW14-2 Lastname Firstname HWID Locations

Field Name	Data Type
Room ID	Short Text
Campus/Location	Short Text
Room	Short Text
Seats	Number
Room Arrangement	Short Text
Equipment	Short Text

General Lookup

Field Size	255
Format	
Input Mask	
Caption	
Default Value	"Chalkboard"

4. Switch back to **Datasheet View**. When asked if you want to save the table, click **Yes**.

Notice that in the new record line, chalkboard is entered automatically. If you enter a new record and want to enter something different for **Equipment**, simply type it in there.

Room ID	Campus/Location	Room	Seats	Room Arrangement	Equipment
NE-01	Northeast Campus	H265	150	Theater	Computer Projector, Surround
NE-02	Northeast Campus	B105	25	U-shaped	25 Computers, Projectors
NW-01	Northwest Campus	C202	50	Lecture Classroom	Smart Board
SE-01	Southeast Campus	D148	20	U-shaped	White Board
SW-01	Southwest Campus	A15	35	Lecture Classroom	Computer Projector
*			0		Chalkboard

g. Set up this table for printing by doing the following:

1. In **Datasheet View**, click the **Equipment** field name, right-click, and change its width to **30**. This will cut off a bit of the data for the first record but you want this to print on one page in portrait orientation.
2. Choose **File, Print, Print Preview**. On the **PRINT PREVIEW** tab, in the **Page Layout** group, click **Page Setup**.
3. Click the **Print Options** tab and set the **Left** and **Right** margins to **0.25** inch.
4. Click the **Page** tab and confirm the **Orientation** is **Portrait**.
5. Click **OK**.

- h. Compare the preview with the key. Make needed corrections and then print the table, and exit Access.

Step 4 Submit You now are ready to submit your homework for grading.

1. Put your 4 homework papers in the following order:
 HW14-1 All Students Query
 HW14-1 Advisors Report
 HW14-2 All Events Report
 HW14-2 Locations Table
2. Cut out Submission Form 14 and put it on the top of the papers.
3. Staple the papers in the upper left corner.
4. Turn in the packet by the due date.

Step 5 Backup Now would be a good time to backup your files.

Project 15

Access Chapter 2: Sort and Query a Database

Step 1 Read Before turning on the computer, read the introductory material on pages 561-562

Step 2 Activities Turn on the computer and open your textbook to page 563. Do all the steps of all the activities for this chapter.

Step 3 Homework After you have completed the activities for this Chapter, return to this Study Guide, do the problems listed below, and turn them in for grading. *You do NOT have to print in color.*

HW15-1 Instructors and Courses

Problem: How can separate databases be linked and information extracted from each to answer questions concerning the data?

- Open the database [Lastname_Firstname_2A_Instructors_Courses](#), which you created while following the directions in the textbook and saved on page 584.
- Save the database to your **Access Files** folder using the name [HW15-1 Lastname Firstname HWID Instructors Courses Done](#)
- Rename the **Relationships** for [Lastname_Firstname_2A_Instructors_Courses](#), which you saved on page 569, as **Relationships HW15-1 Lastname Firstname HWID Done**.
- With the report showing, choose **File, Print, Print Preview** and compare the preview with the key. Make needed corrections, save the report, and print it.
- Rename the **Lastname Firstname 2A No Credits Query**, which you saved on page 584, as **HW15-1 Lastname Firstname HWID No Credits Query**
- With the query showing, choose **File, Print, Print Preview** and compare the preview with the key. Make needed corrections, save the query, and print it.
- Exit Access.

HW15-2 Athletic Scholarships

Problem: How can complex queries be designed and applied to linked databases in order to answer specific questions?

- Open the database [Lastname_Firstname_2B_Athletic_Scholarships](#), which you created while following the directions in the textbook and saved on page 589.
- Save the database to your **Access Files** folder using the name [HW15-2 Lastname Firstname HWID Athletic Scholarships Done](#)

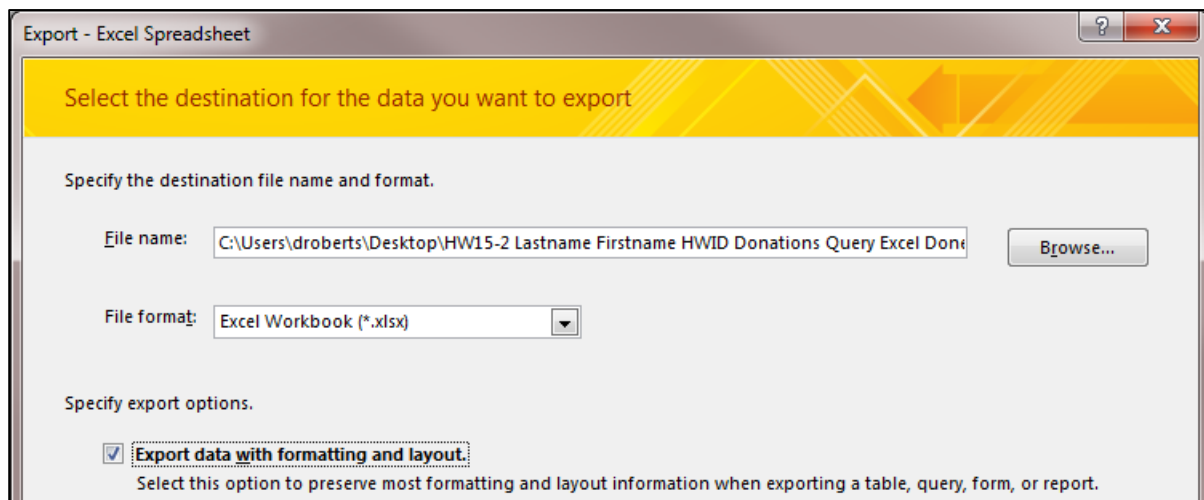
- c. Rename and print the following query, which you created while following the directions in this chapter:

Old Name: **Lastname Firstname 2B Volleyball OR Golf AND Over \$200 Query**

New Name: **HW15-2 Lastname Firstname HWID OR AND Query**

- d. Data from a table or query can be exported to Excel using the **Export** command. To see how this works, export the **Donations Query** to an Excel worksheet by doing the following:

1. With the **HW15-2 Lastname Firstname HWID Donations Query** open, on the **EXTERNAL DATA** tab, in the **Export** group, click **Excel**.
2. Click the **Browse** button, navigate to your **Access Files** folder, and save the workbook using the name **HW15-2 Lastname Firstname HWID Donations Query Excel Done**.
3. Click **Save**.
4. Check the box next to **Export data with formatting and layout**.



5. Click **OK**.
 6. You do not want to save the export steps so click **Close** without checking the box.
- f. Print the Excel workbook you just created.
1. Open the Excel workbook **HW15-2 Lastname Firstname HWID Donations Query Done**.
 2. Autofit the columns.
 3. Insert a footer that contains the file name in the left section and fit all the columns on one page.
 4. Tap **Ctrl + F2** and compare the preview with the key. Make needed corrections, print, save the workbook, and close it and exit Excel.

Why use Access?⁵³

Now that you have extensive knowledge of Excel, and a bit of knowledge about Access you can see how they can do similar things. So, with Excel being so powerful and “easy” to use, why do so many businesses and institutions use Access?

Access helps you manage and manipulate data more effectively and efficiently than Excel. A spreadsheet program is good for small sets of data but it is not suited for handling tens of thousands of records and where data are stored in multiple locations. For example, Excel is ideal for me to keep track of my students’ scores because I have only about 300 students per semester. However, if I wanted to look at trends for homework, or performance on the Excel exam, or whatever, over the 25 years I have been teaching the course I would have to use Access because it would allow me to connect (form relationships between) the 50 gradebooks I have used.

As another example, think of the information the University keeps on each of its 50,000 current students and millions of students who have attended the U over its 164 year history. The data include things like name, address, phone, email, high school data, courses taken, health care used, employment, salaries, benefits, etc. Using Access, each of those attributes can be stored in separate databases and all linked through your U of M ID number as the “primary field.” It would be easy to write queries to look for trends. For example, a simple query could generate a report that shows graduation trends of female Hispanic students between the ages of 18 and 22 who went to high school in South Dakota. Excel could not do that.

While you are in school, you probably will not have to manage or analyze huge sets of data so Excel will probably be your best bet. Once you enter the workforce you most likely will find that your knowledge of Access will come in handy.

Two of the major benefits of using a database are:

Fewer errors and inconsistencies. Maintaining one version of data minimizes the potential for duplication, errors, and inconsistent values (e.g., equivalent names such as William, Will, Willy, Bill, Billy).

Higher productivity. Using Access, you need only change a single record and all other related data in your database will automatically “see” the change. In Excel, you would need to change every occurrence of, say, a customer’s name. Find and replace wouldn’t necessarily catch that a customer’s name is spelled six different ways. In a database, there is only one customer record to change. Every other record (orders, contacts, etc.) that relates to that customer record will never need to change because they are joined to the customer through a one to many relationship.

⁵³ Adapted from <http://www.opengatesw.net/ms-access-tutorials/What-Is-Microsoft-Access-Used-For.htm>

Here is a comparison table to help you decide whether to use Access or Excel for data analysis or reporting.

Use	Excel	Access
Validate simple user input	Yes	Yes
Validate complex user input (e.g., if field X = Y, and field Z is empty, perform some action)	Difficult	Yes
Rows/records supported	1,048,576 rows	Unlimited
Simple cross-references	Yes	Yes
Complex queries	Limited	Yes
Events based on user actions (when user exits a field/cell do X, when they mouse over a field/cell do Y)	No	Yes
Multiple users accessing data at different times	Yes	Yes
Multiple users accessing data at the same time	No	Yes
Frequent mass-update operations	Difficult	Yes
Multiple data entry forms	No	Yes
Mail Merge with Word	Yes	Yes
Reporting	Difficult	Yes
Automated backups	Difficult	Yes
Record-level auditing	No	Yes
Ability to hide the inner workings of your project from the user	Difficult	Yes
Expertise Required	Low	Simple databases: Low to Moderate. Complex databases: Moderate to High
Attaching files/links to fields	No	Yes
Sharing information on the Web	Yes	Yes

HW15-3 Course Evaluation

Problem: How can you help to improve this course for future students?

During the last two weeks of the semester you will be sent an email telling you that the web-based evaluation for this course is available. To access the evaluation, go to <https://moodle.umn.edu/> and scroll down to the section labeled **My Course Evaluations - task list**. A link to your evaluations should be there.

The evaluation is **only available** until the last day of the semester so you must complete it by then.

- If you do not want to fill out the evaluation, log into the site anyway so the system knows you were there and then exit without answering any of the questions.

- b. After you have exited from the course evaluation site, open Word and on separate lines type your name, your homework ID number, the date, and the name of this homework problem **HW15-3 Course Evaluation**. Then, tap the **Enter** key twice and type the words "I accessed the course evaluation web site."
- c. Save the document using the name **HW15-3 Lastname Firstname HWID Course Evaluation Done**, print it, and then close it.

Step 4 Submit You now are ready to submit your homework for grading.

1. Put your 5 homework papers in the following order:
 - HW15-1 Instructors Courses Relationships Report**
 - HW15-1 No Credits Query**
 - HW15-2 OR AND Query**
 - HW15-2 Excel Workbook Exported from Access**
 - HW15-3 Course Evaluation**
2. Cut out Submission Form 15 and put it on the top of the papers.
3. Staple the papers in the upper left corner.
4. Turn in the packet by the due date.

Step 5 Backup Now would be a good time to backup your files.

Sample Exam Questions for Access

The final exam will cover **Excel**, **Word**, **PowerPoint**, and **Access**. As was the case with the Word and Excel exams, these sample questions will give you a place to start in your studying but they **do not** constitute a “practice” exam so you will also need to study the activities in your textbook as well as those in this Study Guide in order to be fully prepared for the real exam. I will ask you questions on material that was covered in the textbook and your projects that are NOT covered here.

This is not to be submitted for grading.
The key is in the file Sample Access Questions KEY Original

- a. Open the database **Sample Access Questions Original**.
- b. Save the database using the name **Sample Access Questions Done**
- c. **Modify Table**
 1. Open the table **Transactions**.
 2. Set the data type for **AmountPaid** to **Currency**. If it is not automatically done, set the format for **AmountPaid** to **Currency**.
 3. Set the data type for **DatePaid** to **Date/Time**.
 4. Set the format for **DatePaid** to **Long Date**.
 5. Insert a new field between **TripID** and **AmountPaid** and label the new field **Guided**.
 6. Set the data type for **Guided** to **Yes/No**.
 7. Make **TransactionNo** the primary key.
 8. Delete the field **FunIndex**.
 9. Switch to **Datasheet** view (click **Yes** when asked if you want to save the table).
 10. Adjust the column widths of all the fields so the data fit nicely.

Transactions					
TransactionNo	MemberID	TripID	Guided	AmountPaid	DatePaid
1	R-101	LA-24	☐	\$200.00	Saturday, September 15, 2001
2	P-504	LA-23	☐	\$2,000.00	Tuesday, October 16, 2001
3	G-334	LA-23	☐	\$500.00	Friday, October 26, 2001

11. Delete the records for all trips where the **AmountPaid** is less than \$275. ⁵⁴

⁵⁴ There are 19 of them so it will be easier if you sort by **AmountPaid** and then delete.

12. Add a new record with the following information:

MemberID: P-512
 TripID: US-38
 Guided: Click to insert a check
 AmountPaid: \$500
 DatePaid: 2/3/2007

	30	P-500	AF-09	☐	\$4,000.00	Saturday, February 16, 2002
	49	P-512	US-38	☒	\$500.00	Saturday, February 03, 2007
*	(New)			☐	\$0.00	

13. Sort the table by **MemberID** in descending order.

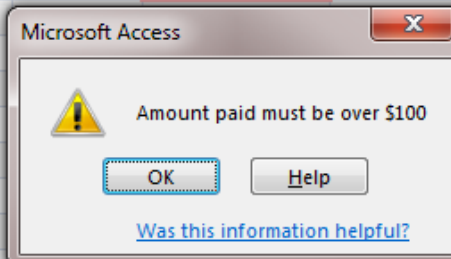
Transactions						
TransactionNo	MemberID	TripID	Guided	AmountPaid	DatePaid	
14	R-106	EU-17	☐	\$1,500.00	Wednesday, January 16, 2002	
19	R-105	EU-17	☐	\$500.00	Tuesday, February 05, 2002	
27	R-104	EU-17	☐	\$500.00	Tuesday, February 12, 2002	

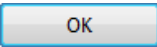
d. **Validation rule**

1. Create a validation rule for the **AmountPaid** field. The validation rule should display an error message if someone tries to enter a value that is 100 or less. The validation text should be **Amount paid must be over \$100**.

To see if your validation rule works correctly, switch to **Datasheet** view (click **Yes** when asked if you want to save the table and then click **Yes** when you get a warning message about data integrity). Change the **AmountPaid** for **TransactionNo 14** to 1 and tap the **Tab** key. You should see the following message:

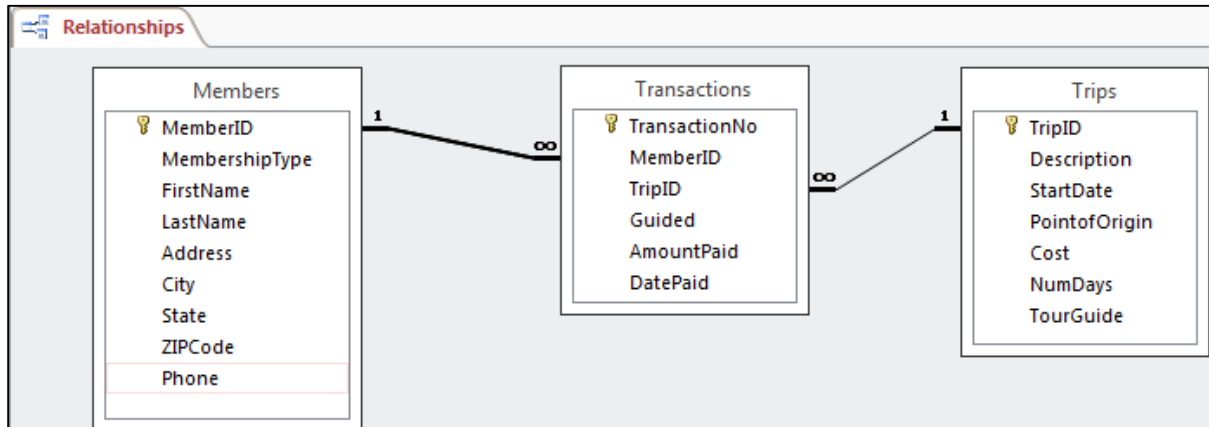
Transactions						
TransactionNo	MemberID	TripID	Guided	AmountPaid	DatePaid	
14	R-106	EU-17	☐	1	Wednesday, January 16, 2002	
19	R-105	EU-17	☐		y, February 05, 2002	
27	R-104	EU-17	☐		y, February 12, 2002	
8	R-103	LA-24	☐		November 26, 2001	
15	R-102	EU-14	☐		ay, January 16, 2002	
24	R-102	EU-14	☐		y, February 06, 2002	
48	R-101	AF-09	☐		ursday, May 16, 2002	
46	R-101	AF-09	☐		esday, April 16, 2002	
33	P-514	EU-14	☐	\$1,000.00	Wednesday, February 20, 2002	



2. Click  and then tap the **Esc** key to return the **AmountPaid** to its original value (\$1,500.00).
3. Close the **Transactions** table.

e. Relationships

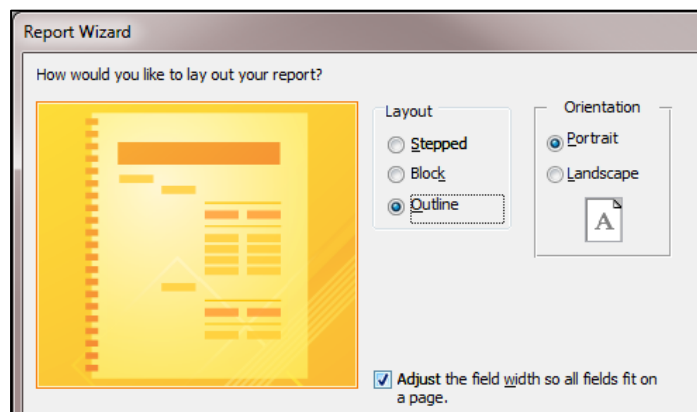
1. Create a relationship between the tables **Trips** and **Transactions**. Use **TripID** as the link field and enforce referential integrity.
2. Create a relationship between the tables **Transactions** and **Members**. Use **MemberID** as the link field and enforce referential integrity.



3. Create a **Relationships Report** and save it using the default name.
4. Close the **Relationships** object.

f. Reports

1. Use the **Report Wizard** to create a report called **Trips** that has these characteristics:
 - Base the report on the **Trips** table.
 - Include the fields **TripID**, **Description**, **NumDays**, and **TourGuide**.
 - Group by **TourGuide**.
 - Within **TourGuide**, sort by **TripID** in descending order.
 - For the layout, use **Outline** and **Portrait** orientation. Be sure that the box **adjust the field width so all fields fit on a page** is checked.



2. Open the report in **Design** view. In the heading, replace the text **Trips** with your name. Format the font to be 18 point Arial, bold, and red. Make the textbox larger, if necessary, so your entire name is displayed.

3. Switch back to **Report View**.

FirstName LastName		
TourGuide Derek Preston		
TripID	Description	NumDays
US-35	Alaska land tour	2
EU-14	The Art of Italy	2
AP-43	Ancient China	8
AF-09	African Safari	5
TourGuide Frank Mainzer		
TripID	Description	NumDays
US-38	Yellowstone	4
LA-23	Galapagos Islands	9

4. Save the report and close it.

g. **Queries** (solutions for the following queries are on page SG326).

1. Create a query that will display the **Lastname**, **AmountPaid**, **TripID**, and **TourGuide** for trips where the **AmountPaid** is between \$350 and \$600 or over \$2500.

Move the **TourGuide** field to the far left and group the data.⁵⁵

Save the query as **qry Between 350 and 600 or over 2500** and then run it.

qry Between 350 and 600 or over 2500			
TourGuide	LastName	AmountPaid	TripID
Derek Preston	James	\$500.00	EU-14
Derek Preston	Prescott	\$4,000.00	AF-09
Derek Preston	Vaughn	\$3,000.00	AF-09
Frank Mainzer	Barber	\$400.00	US-38
Frank Mainzer	Black	\$500.00	LA-23
Frank Mainzer	Bowen	\$500.00	AP-41
Frank Mainzer	Rhoades	\$500.00	EU-17
Frank Mainzer	Richards	\$500.00	EU-17
Frank Mainzer	Vaughn	\$500.00	US-38

2. Use a query to find the name of the person who has a **Premium** membership and who has paid the most for all his trips combined. Save the query using the name **qry Premium Paid Most**.

qry Premium Paid Most			
Membership	SumOfAmot	FirstName	LastName
Premium	\$6,000.00	Zachary	Prescott
Premium	\$5,000.00	Jane	Vaughn
Premium	\$3,000.00	Bob	Benz
Premium	\$2,850.00	Bret	Baulch
Premium	\$1,800.00	Teresa	Shapiro
Premium	\$1,300.00	Charles	Myler
Premium	\$1,250.00	Samantha	Barber
Premium	\$1,000.00	Emma	Prescott
Premium	\$1,000.00	Amanda	Wesley
Premium	\$500.00	Mark	Bowen
Premium	\$300.00	Charlene	Myler

From the list, you can see that **Zachary Prescott** paid the most.

3. Create a query that will answer the question "How many trips had either **Derek Preston** or **Frank Mainzer** as the **TourGuide**".⁵⁶ Save the query as **qry Derek and Frank** and then run it.

qry Derek and Frank	
TourGuide	TripID
Derek Preston	AF-09
Derek Preston	AP-43
Derek Preston	EU-14
Derek Preston	US-35
Frank Mainzer	AP-41
Frank Mainzer	EU-17
Frank Mainzer	LA-23
Frank Mainzer	US-38

⁵⁶ The answer is 8. Be sure to use a Total row to group the data so duplicates are taken care of.

4. Export the results of the query to Excel. The Excel file should look like this:

	A	B
1	TourGuide	TripID
2	Derek Preston	AF-09
3	Derek Preston	AP-43
4	Derek Preston	EU-14
5	Derek Preston	US-35
6	Frank Mainzer	AP-41
7	Frank Mainzer	EU-17
8	Frank Mainzer	LA-23
9	Frank Mainzer	US-38

h. Exit Access.

i. **Answers to query questions**

1. Query that works for **qry Between 350 and 600 or over 2500**.

Field:	TourGuide	LastName	AmountPaid	TripID
Table:	Trips	Members	Transactions	Trips
Total:	Group By	Group By	Group By	Group By
Sort:				
Show:	☒	☒	☒	☒
Criteria:			Between 350 And 600 Or > 2500	

2. Query that works for **qry Premium Paid Most**.

Field:	MembershipType v	AmountPaid	FirstName	LastName
Table:	Members	Transactions	Members	Members
Total:	Group By	Sum	Group By	Group By
Sort:		Descending		
Show:	☒	☒	☒	☒
Criteria:	"Premium"			

3. Query that works for **qry Derek and Frank**.

Field:	TourGuide v	TripID
Table:	Trips	Transactions
Total:	Group By	Group By
Sort:		
Show:	☒	☒
Criteria:	"Derek Preston" Or "Frank Mainzer"	

Do not submit this work for grading but do go through it several times as a part of your preparation for the final exam.

Information on the Final Exam

The two hour final exam is a closed book and notes exam that you will do on a computer in our regular classroom. Unlike the Excel and Word exams, the final exam will be given during a time that is different from our regular class time. Check the syllabus for the date and time for your exam.

Date: Check your syllabus for the exact date and time.

Length: 120 minutes

Notes: The exams will be closed book and notes but you may use one 8.5 inch by 11 inch sheet (both sides) of notes (typed, hand written, scanned, whatever). Your note sheet will be collected when you hand in the exam.

The final exam will be more difficult than the Excel and Word exams because it will cover all four applications, **Excel**, **Word**, **PowerPoint**, and **Access** and it will be longer. The questions will be similar to the Excel and Word exam questions in length, scope, and level of difficulty.

The order of the questions on the final exam is **PowerPoint**, **Access**, **Word**, **Excel**, but **you can do them in any order you wish**. The Excel formulas are the very last part of the test and will be the most difficult for most students so be sure to leave enough time for them (or, do them first).

Be sure to go through the **Sample Exam Questions** for all 4 apps several times. You have not done Excel for three months and those formulas are the most difficult part of the course so be sure to spend extra study time on Excel.

The ground rules for taking the final are the same as for the Excel and Word exams. Be sure to bring your **U of M student ID** and a pencil.

You should go through the Excel, Word, PowerPoint, and Access sample questions several times so you can do the procedures quickly and accurately. But remember, these questions are not intended to be a complete Study Guide for the real final exam. They are designed to help you get an idea of the types and levels of difficulty of questions on the real final. So, be sure to also study your homework projects and assigned textbook activities so you know how to do all of those procedures too.

Keys for Homework Exercises

HW01-1 Practice Save

This USB drive belongs to Firstname Lastname HWID
last000@umn.edu

Glossary entries

Font: A set of characters with the same design and shape.

Pt.: The abbreviation for point, for example when referring to a font size.

Index Entries

Drives: 10

Flash Fill: 371-372

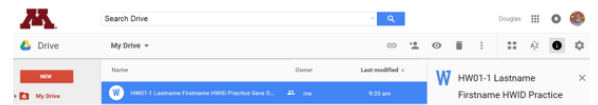
1871 Excel exam is on DATE at TIME.

1871 Word exam is on DATE at TIME.

1871 Final exam is on DATE at TIME. It covers Excel, Word, PowerPoint, and Access.

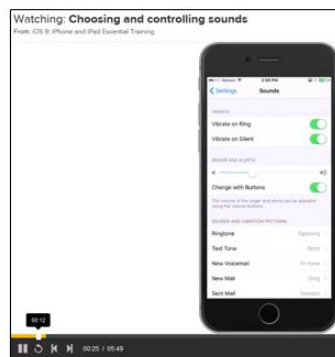
HW01-2 Google Drive

HW01-2 Lastname Firstname HWID



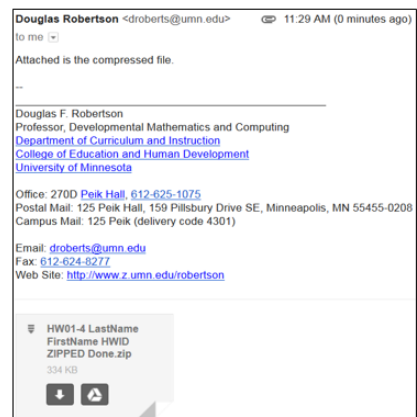
HW01-3 Lynda

HW01-3 Lastname Firstname HWID Lynda



HW01-4 Emailing Files

HW01-4 Lastname Firstname HWID



HW02-1 Quarterly Sales

HW02-1 Quarterly Sales Formulas

Pro Fit Marietta

Second Quarter Cardio Sales

	April	May	June	Total	Trend
Exercise Bikes	\$ 68,991.12	\$ 86,894.82	\$ 99,650.58	\$ 255,536.52	
Elliptical Machines	28,836.00	22,634.23	22,828.78	74,299.01	
Treadmills	59,519.78	82,337.98	99,823.87	241,681.63	
Rowing Machines	81,267.17	87,867.50	91,669.98	260,804.65	
Total	\$ 238,614.07	\$ 279,734.53	\$ 313,973.21	\$ 832,321.81	

Second Quarter Cardio Sales

Month	Exercise Bikes	Elliptical Machines	Treadmills	Rowing Machines
April	68,991.12	28,836.00	59,519.78	81,267.17
May	86,894.82	22,634.23	82,337.98	87,867.50
June	99,650.58	22,828.78	99,823.87	91,669.98

HW02-1 Lastname Firstname HWID 1A Quarterly Sales Done

Pro Fit Marietta

Second Quarter Cardio Sales

	April	May	June	Total	Trend
Exercise Bikes	68991.12	86894.82	99650.58	=SUM(B4:D4)	
Elliptical Machines	28836	22634.23	22828.78	=SUM(B5:D5)	
Treadmills	59519.78	82337.98	99823.87	=SUM(B6:D6)	
Rowing Machines	81267.17	87867.5	91669.98	=SUM(B7:D7)	
Total	=B4+B5+B6+B7	=C4+C5+C6+C7	=SUM(D4:D7)	=SUM(B8:D8)	

Second Quarter Cardio Sales

Month	Exercise Bikes	Elliptical Machines	Treadmills	Rowing Machines
April	68,991.12	28,836.00	59,519.78	81,267.17
May	86,894.82	22,634.23	82,337.98	87,867.50
June	99,650.58	22,828.78	99,823.87	91,669.98

HW02-1 Lastname Firstname HWID 1A Quarterly Sales Done

HW02-2 Inventory Valuation

Pro Fit Marietta

Plyometric Products Inventory Valuation

As of September 30

	Warehouse Location	Quantity in Stock	Retail Price	Total Retail Value	Percent of Total Retail Value
Power Hurdle	Atlanta	125	\$ 32.95	\$ 4,118.75	1.41%
Speed Hurdle	Atlanta	995	59.95	59,650.25	20.37%
Stackable Steps	Marietta	450	251.59	113,215.50	38.65%
Pro Jump Rope	Marietta	1,105	49.95	55,194.75	18.84%
Plyometric Box Set	Marietta	255	158.05	40,302.75	13.76%
Plyometric Mat	Atlanta	215	94.99	20,422.85	6.97%
Total Retail Value for All Products				\$ 292,904.85	

Percent of Total Retail Value

Product	Percent of Total Retail Value
Plyometric Mat	7%
Plyometric Box Set	14%
Pro Jump Rope	19%
Stackable Steps	39%
Speed Hurdle	20%
Power Hurdle	1%

HW02-2 Lastname Firstname HWID 1B Inventory Valuation Done

HW02-3 Vehicle Sales Data Worksheet

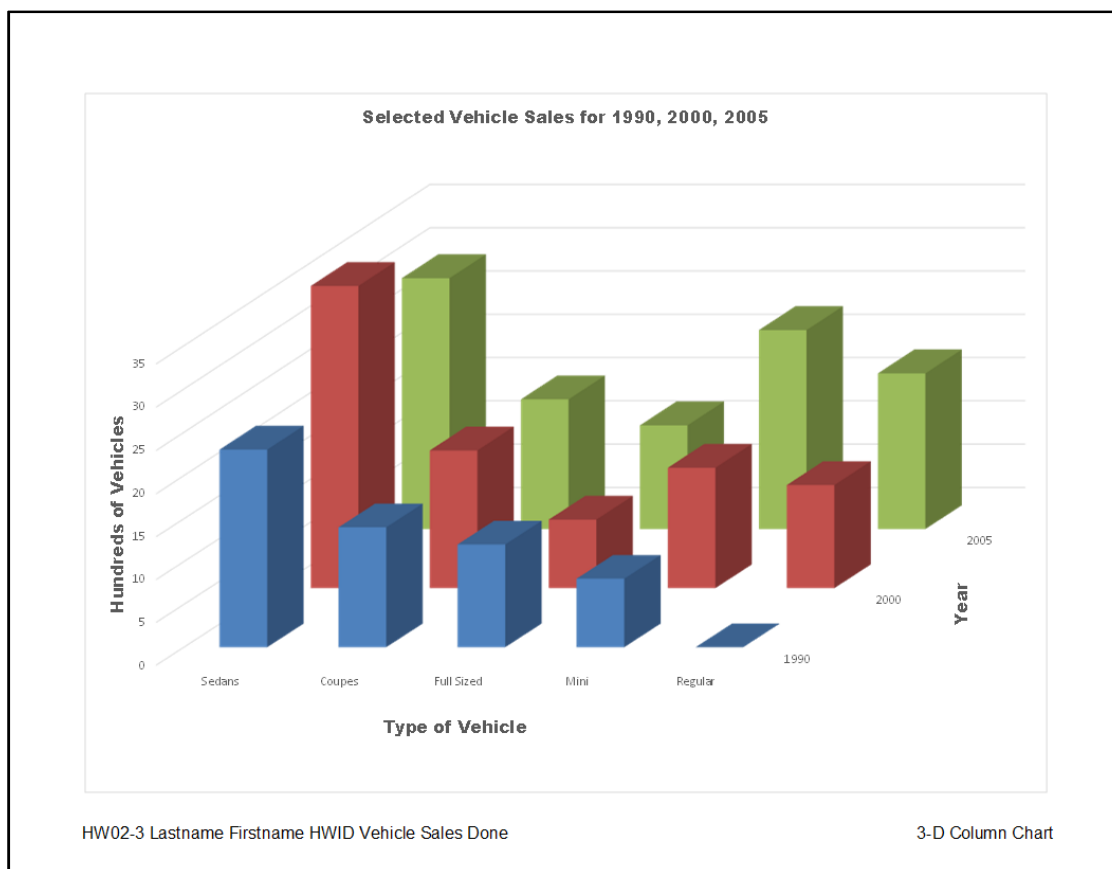
Vehicle Sales (in hundreds of vehicles)				
	1990	1995	2000	2005
Cars				
Sedans	23	31	35	29
Coupes	14	12	16	15
Total Cars	37	43	51	44
Vans				
Full Sized	12	10	8	12
Mini	8	12	14	23
Four Wheel Drive	0	2	3	16
Total Vans	20	24	25	51
SUVs				
Regular	0	4	12	18
Towing Package	0	0	2	6
Total SUVs	0	4	14	24
Grand Total	57	71	90	119

Average is 84.25

HW02-3 Lastname Firstname HWID Vehicle Sales Done

Data

HW02-3 Vehicle Sales 3-D Column Chart



HW03-1 Inventory Status Report

	A	B	C	D	E	F	G	H
1	Pasadena Tree Nursery							
2	As of December 31							
3								
4								
5								
6								
7								
8								
9								
10	Oak Trees	13						
11	Maple Trees	6 (571 total items in stock)						
12								
13	Quantity in Stock	Item #	Tree Name	Retail Price	Light	Landscape Use	Category	Stock Level
14	78	13129	Golden Oak	108.99	Partial Sun	Erosion Control	Oak	OK
15	35	13358	Columnar English	106.95	Full Shade	Border	Oak	Order
16	60	15688	Coral Bark	106.25	Partial Shade	Erosion Control	Oak	Order
17	20	16555	Crimson King	105.50	Full Shade	Border	Oak	Order
18	75	21683	Japanese Blooming	103.99	Partial Shade	Erosion Control	Cherry	OK
19	60	22189	Crimson Queen	109.95	Filtered Sun	Erosion Control	Oak	Order
20	68	23677	Black Japanese	107.99	Partial Sun	Border	Maple	Order
21	350	43153	Bradford	104.99	Full Shade	Border	Pear	OK
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43	Edited by Maria Acuna							
44	1/13/2015 13:50							

HW03-1 Lastname Firstname Inventory Status Report Done

HW03-2 Weekly Sales Summary

Sales of Rose Plants and Rose Supplies				
Week of May 24				
	Roses/Rose Supplies	Rose Sales	Rose Supply Sales	Total Sales
Online Sales		\$ 43,460.56	\$ 13,349.45	\$ 56,810.01
In-Store Sales		32,957.58	11,138.12	44,095.70
Total		\$ 76,418.14	\$ 24,487.57	\$ 100,905.71

HW03-2 Lastname Firstname HWID 28 Weekly Sales DoneSummary

HW03-3 Inventory Formulas

	A	B	C	D
1			Paradisa Inventory Summary	
2			As of December 31	
3				
4		Bulbs	Trees	Bulbs/Trees
5	Total Items in Stock	=Bulb #B4	=Tree #B4	
6	Average Price	=Bulb #B5	=Tree #B5	
7	Min. Price	=Bulb #B6	=Tree #B6	
8	Max. Price	=Bulb #B7	=Tree #B7	
9	High Price	=Bulb #B8	=Tree #B8	
10				
11	Bulb Category	Number in Stock	Number of Collections	Average Price
12	Beginnings	=SUM(Bulb #B11:B142) Summary Formula (A12:B142)	=COUNT(Bulb #B11:B142) Summary Formula (A12:B142)	=AVERAGE(Bulb #B11:B142) Summary Formula (A12:B142)
13	Endings	=SUM(Bulb #B143:B174) Summary Formula (A13:B174)	=COUNT(Bulb #B143:B174) Summary Formula (A13:B174)	=AVERAGE(Bulb #B143:B174) Summary Formula (A13:B174)
14	Outdoors	=SUM(Bulb #B175:B206) Summary Formula (A14:B206)	=COUNT(Bulb #B175:B206) Summary Formula (A14:B206)	=AVERAGE(Bulb #B175:B206) Summary Formula (A14:B206)
15	Indoors	=SUM(Bulb #B207:B238) Summary Formula (A15:B238)	=COUNT(Bulb #B207:B238) Summary Formula (A15:B238)	=AVERAGE(Bulb #B207:B238) Summary Formula (A15:B238)
16	Gifts	=SUM(Bulb #B239:B270) Summary Formula (A16:B270)	=COUNT(Bulb #B239:B270) Summary Formula (A16:B270)	=AVERAGE(Bulb #B239:B270) Summary Formula (A16:B270)
17	Wreaths	=SUM(Bulb #B271:B302) Summary Formula (A17:B302)	=COUNT(Bulb #B271:B302) Summary Formula (A17:B302)	=AVERAGE(Bulb #B271:B302) Summary Formula (A17:B302)
18				
19	Tree Category	Number in Stock	Number of Collections	Average Price
20	Evergreens	=SUM(Tree #B191:B222) Summary Formula (A20:B222)	=COUNT(Tree #B191:B222) Summary Formula (A20:B222)	=AVERAGE(Tree #B191:B222) Summary Formula (A20:B222)
21	Flowering Trees	=SUM(Tree #B223:B254) Summary Formula (A21:B254)	=COUNT(Tree #B223:B254) Summary Formula (A21:B254)	=AVERAGE(Tree #B223:B254) Summary Formula (A21:B254)
22	Fruit Trees	=SUM(Tree #B255:B286) Summary Formula (A22:B286)	=COUNT(Tree #B255:B286) Summary Formula (A22:B286)	=AVERAGE(Tree #B255:B286) Summary Formula (A22:B286)
23	Red Trees	=SUM(Tree #B287:B318) Summary Formula (A23:B318)	=COUNT(Tree #B287:B318) Summary Formula (A23:B318)	=AVERAGE(Tree #B287:B318) Summary Formula (A23:B318)
24	Shade Trees	=SUM(Tree #B319:B350) Summary Formula (A24:B350)	=COUNT(Tree #B319:B350) Summary Formula (A24:B350)	=AVERAGE(Tree #B319:B350) Summary Formula (A24:B350)

HW03-3 Lashname Firstname HWID 20 Inventory Done

Summary Formulas

HW03-4 Payroll IF Data

Payroll

Date Modified: Tue 25 Jun 2013
 Time Modified: 7:31 AM
 Current Date: Tue 25 Jun 2013
 Current Time: 8:22 AM

Number of people who earned overtime pay = 9 people
 Number of women who earned overtime pay = 6
 Sum of Total Pay for people who worked overtime = \$2,137.50
 Total hours for men whose pay rate is under \$5 = 243 hours

ID	Last Name	First Name	Sex	Pay Rate	Hours	Regular Pay	Overtime Pay	Total Pay	Pay Rank
4470881	Al	Sadr	F	6	21	\$126	\$0	\$126	18
3580435	Baker Jr	Cameron	M	5	50	\$200	\$75	\$275	4
4298561	Bastian-Smith III	Christopher	M	4	35	\$140	\$0	\$140	17
4378285	Beil	Elmer Gary	M	3	50	\$120	\$45	\$165	11
4328801	Bergstrom	Kenneth	M	4	23	\$92	\$0	\$92	23
4719182	Besha	Chiyo	F	1	65	\$40	\$38	\$78	26
4650662	Bohken	Ryan	M	7	32	\$224	\$0	\$224	5
4450275	Bostrom	Taylor	F	2	40	\$80	\$0	\$80	24
4595771	Carter	Rebecca	F	3	40	\$120	\$0	\$120	19
4662548	Comer	Jacqueline	F	4	50	\$160	\$60	\$220	6
4580990	Dahl	Thomas	M	4	40	\$160	\$0	\$160	13
4568135	Doublette	Amanda	F	5	40	\$200	\$0	\$200	8
4611455	Ferraro	Claire	F	4	65	\$160	\$150	\$310	3
4382288	Ford	Emily	F	7	23	\$161	\$0	\$161	12
4659441	Francis	Alissa	F	2	40	\$80	\$0	\$80	24
4395057	Grahn	Daniela	F	3	35	\$105	\$0	\$105	22
4578225	Grattan	Meghan	F	6	50	\$240	\$90	\$330	2
4235648	Grill	Christian	M	6	32	\$192	\$0	\$192	9
4334718	Hargett	Chunguang	M	8	21	\$168	\$0	\$168	10
4435600	Hemsen	Michael	M	5	32	\$160	\$0	\$160	13
4019425	Huculak	Alexis	F	7	50	\$280	\$105	\$385	1
4346294	Isakson	Evan	M	4	30	\$120	\$0	\$120	19
4435622	Iverson	Rose	F	3	40	\$120	\$0	\$120	19
4580074	Koch	Do-Kyung	F	3	23	\$69	\$0	\$69	28
4402242	Krieger	Jun	F	2	35	\$70	\$0	\$70	27
4557221	Kuei	Adam	M	2	65	\$80	\$75	\$155	15
4429640	Kuharske	Malyn	F	4	50	\$160	\$60	\$220	6
4566665	Lentsch	Michael	M	7	21	\$147	\$0	\$147	16

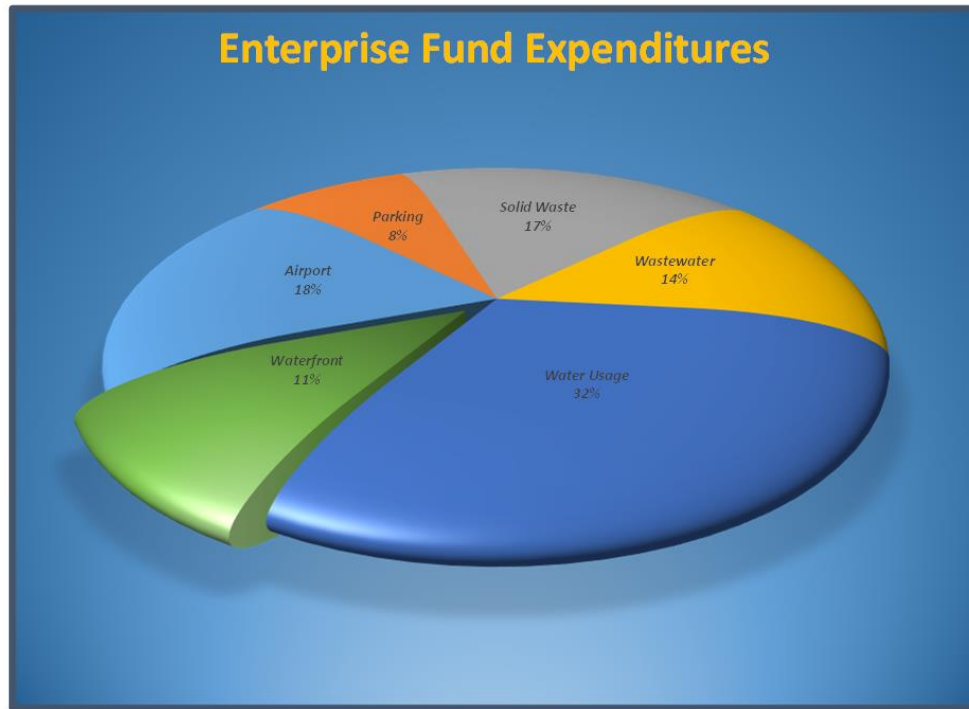
HW03-4 Lashname Firstname HWID Payroll IF Done

Payroll Data

HW03-4 Payroll IF Formulas

	A	B	C	D	E	F	G	H	I	J
1	Payroll									
2										
3	Date Modified: 4/15/20					d overtime pay = =COUNTIF(\$F\$9:\$F\$36,">40")				
4	Time Modified: 0.313194444444444					d overtime pay = =COUNTIF(\$F\$36,">40")*(0.9/0.36)*(\$F)				
5	Current Date: =NOW()					overtime = =SUMIF(\$F\$36,">40")/0.36				
6	Current Time: =NOW()					rate is under 36 = =SUMIF(\$F\$36,"<36")*(0.9/0.36)*(\$F)				
7										
8	ID	Last Name	First Name	Sex	Pay Rate	Hours	Regular Pay	Overtime Pay	Total Pay	Pay Rank
9	4470881	Al	Sadr	Amenda	F	6	=IF(F9<40,E9*F9,E9*40)	=IF(F9<40,0,E9*1.5*(F9-40))	=G9+H9	=RANK(B9:\$B\$36)
10	3560435	Baker Jr	Cameron	M	5	50	=IF(F10<40,E10*F10,E10*40)	=IF(F10<40,0,E10*1.5*(F10-40))	=G10+H10	=RANK(B10:\$B\$36)
11	4293961	Bastian-Smith III	Christopher	M	4	35	=IF(F11<40,E11*F11,E11*40)	=IF(F11<40,0,E11*1.5*(F11-40))	=G11+H11	=RANK(B11:\$B\$36)
12	4378295	Bell	Elmer Gary	M	3	50	=IF(F12<40,E12*F12,E12*40)	=IF(F12<40,0,E12*1.5*(F12-40))	=G12+H12	=RANK(B12:\$B\$36)
13	4328801	Bergstrom	Kenneth	M	4	23	=IF(F13<40,E13*F13,E13*40)	=IF(F13<40,0,E13*1.5*(F13-40))	=G13+H13	=RANK(B13:\$B\$36)
14	4719182	Besha	Chiyo	F	1	65	=IF(F14<40,E14*F14,E14*40)	=IF(F14<40,0,E14*1.5*(F14-40))	=G14+H14	=RANK(B14:\$B\$36)
15	4650952	Bohken	Ryan	M	7	32	=IF(F15<40,E15*F15,E15*40)	=IF(F15<40,0,E15*1.5*(F15-40))	=G15+H15	=RANK(B15:\$B\$36)
16	4450275	Botstrom	Taylor	F	2	40	=IF(F16<40,E16*F16,E16*40)	=IF(F16<40,0,E16*1.5*(F16-40))	=G16+H16	=RANK(B16:\$B\$36)
17	4585771	Carter	Rebecca	F	3	40	=IF(F17<40,E17*F17,E17*40)	=IF(F17<40,0,E17*1.5*(F17-40))	=G17+H17	=RANK(B17:\$B\$36)
18	4662546	Comer	Jacqueline	F	4	60	=IF(F18<40,E18*F18,E18*40)	=IF(F18<40,0,E18*1.5*(F18-40))	=G18+H18	=RANK(B18:\$B\$36)
19	4580990	Dahl	Thomas	M	4	40	=IF(F19<40,E19*F19,E19*40)	=IF(F19<40,0,E19*1.5*(F19-40))	=G19+H19	=RANK(B19:\$B\$36)
20	4588135	Doublette	Amenda	F	5	40	=IF(F20<40,E20*F20,E20*40)	=IF(F20<40,0,E20*1.5*(F20-40))	=G20+H20	=RANK(B20:\$B\$36)
21	4811465	Farano	Clare	F	4	65	=IF(F21<40,E21*F21,E21*40)	=IF(F21<40,0,E21*1.5*(F21-40))	=G21+H21	=RANK(B21:\$B\$36)
22	4382288	Ford	Emily	F	7	23	=IF(F22<40,E22*F22,E22*40)	=IF(F22<40,0,E22*1.5*(F22-40))	=G22+H22	=RANK(B22:\$B\$36)
23	4059441	Francis	Alessa	F	2	40	=IF(F23<40,E23*F23,E23*40)	=IF(F23<40,0,E23*1.5*(F23-40))	=G23+H23	=RANK(B23:\$B\$36)
24	4395057	Gahn	Daniela	F	3	35	=IF(F24<40,E24*F24,E24*40)	=IF(F24<40,0,E24*1.5*(F24-40))	=G24+H24	=RANK(B24:\$B\$36)
25	4573225	Gibbattin	Neghen	F	6	50	=IF(F25<40,E25*F25,E25*40)	=IF(F25<40,0,E25*1.5*(F25-40))	=G25+H25	=RANK(B25:\$B\$36)
26	4235648	Gill	Christian	M	6	32	=IF(F26<40,E26*F26,E26*40)	=IF(F26<40,0,E26*1.5*(F26-40))	=G26+H26	=RANK(B26:\$B\$36)
27	4334718	Hargett	Chunguang	M	8	21	=IF(F27<40,E27*F27,E27*40)	=IF(F27<40,0,E27*1.5*(F27-40))	=G27+H27	=RANK(B27:\$B\$36)
28	4435000	Hermien	Michael	M	5	32	=IF(F28<40,E28*F28,E28*40)	=IF(F28<40,0,E28*1.5*(F28-40))	=G28+H28	=RANK(B28:\$B\$36)
29	4019425	Husarik	Alexis	F	7	50	=IF(F29<40,E29*F29,E29*40)	=IF(F29<40,0,E29*1.5*(F29-40))	=G29+H29	=RANK(B29:\$B\$36)
30	4345294	Isakson	Evian	M	4	30	=IF(F30<40,E30*F30,E30*40)	=IF(F30<40,0,E30*1.5*(F30-40))	=G30+H30	=RANK(B30:\$B\$36)
31	4435622	Iverson	Rose	F	3	40	=IF(F31<40,E31*F31,E31*40)	=IF(F31<40,0,E31*1.5*(F31-40))	=G31+H31	=RANK(B31:\$B\$36)
32	4580074	Koch	Do-Kyung	F	3	23	=IF(F32<40,E32*F32,E32*40)	=IF(F32<40,0,E32*1.5*(F32-40))	=G32+H32	=RANK(B32:\$B\$36)
33	4402242	Krieger	Jun	F	2	35	=IF(F33<40,E33*F33,E33*40)	=IF(F33<40,0,E33*1.5*(F33-40))	=G33+H33	=RANK(B33:\$B\$36)
34	4557221	Kure	Adam	M	2	60	=IF(F34<40,E34*F34,E34*40)	=IF(F34<40,0,E34*1.5*(F34-40))	=G34+H34	=RANK(B34:\$B\$36)
35	4423940	Kutarskie	Melvin	F	4	50	=IF(F35<40,E35*F35,E35*40)	=IF(F35<40,0,E35*1.5*(F35-40))	=G35+H35	=RANK(B35:\$B\$36)
36	4560065	Lentsch	Michael	M	7	21	=IF(F36<40,E36*F36,E36*40)	=IF(F36<40,0,E36*1.5*(F36-40))	=G36+H36	=RANK(B36:\$B\$36)

HW04-1 Enterprise Fund Chart



HW04-1 Lastname Firstname HWID 3A Enterprise Fund Done

Expenditures Chart

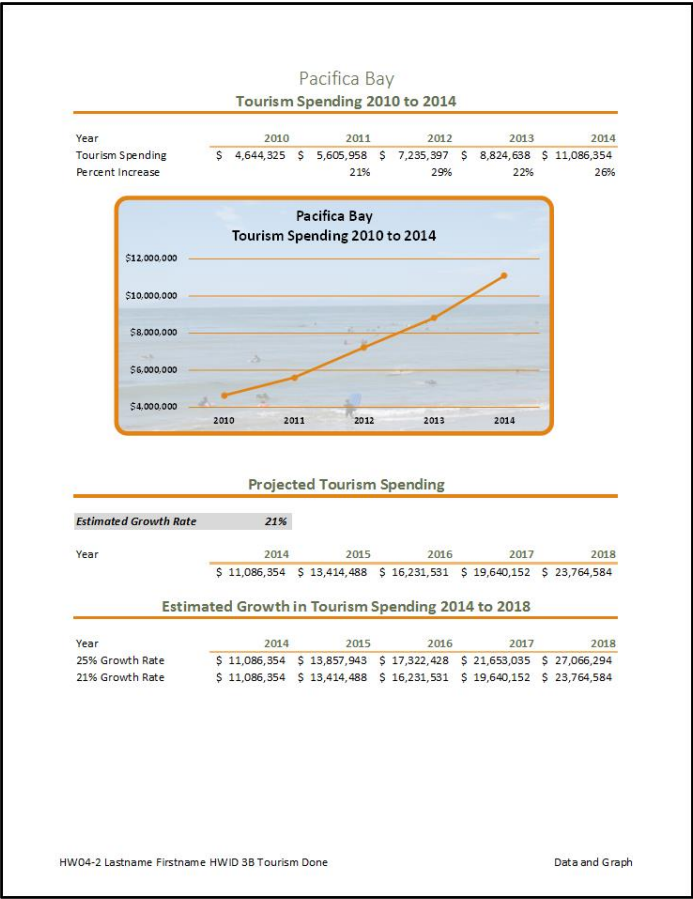
HW04-1 Enterprise Fund Data

Pacifica Bay			
Enterprise Fund Expenditures			
Recommended Adjustments			
	Originally Proposed	Adjusted	% of Total Fund Expenditures
Airport	\$ 17,610,810	\$ 18,121,067	18%
Parking	6,824,865	7,897,526	8%
Solid Waste	18,695,222	17,845,287	18%
Wastewater	12,657,765	13,985,695	14%
Water Usage	30,457,903	32,356,236	32%
Waterfront	10,976,843	10,945,369	11%
Total	<u>\$ 97,223,408</u>	<u>\$ 101,151,180</u>	
Goal: To Reduce Waterfront Expenditures from 11% to 9% of Total Expenditures			
Goal Amount:	\$ 9,103,606	9%	

HW04-1 Lastname Firstname HWID 3A Enterprise Fund Done

Enterprise Fund Expenditures

HW04-2 Tourism



HW04-3 HLOOKUP-Gradebook Formulas

	I	J	K	L
1				
2	Cutoff on Diagnostic Test -> 65			
3	Cutoff on Total Points Earned -> 65			
4	Num Stu with Diag Below Cutoff and Total Above Cutoff -> =COUNTIF(S(E11:E121,"<"&J2,J11:J121,">"&J3))			
5	80	82	86	90
6	Fine	Good	Pretty good	Very good
7	B-	B	B+	A-
8	=COUNTIF(\$K\$11:\$K\$121,I7)	=COUNTIF(\$K\$11:\$K\$121,J7)	=COUNTIF(\$K\$11:\$K\$121,K7)	=COUNTIF(\$K\$11:\$K\$121,L7)
9				
10	Final Ex	Total	Grade	Comment
11	74	79	=HLOOKUP(J11,\$C\$5:\$M\$7,3)	=HLOOKUP(J11,\$C\$5:\$M\$7,2)
12	65	68	=HLOOKUP(J12,\$C\$5:\$M\$7,3)	=HLOOKUP(J12,\$C\$5:\$M\$7,2)
13	67	73	=HLOOKUP(J13,\$C\$5:\$M\$7,3)	=HLOOKUP(J13,\$C\$5:\$M\$7,2)

HW04-3 Lastname Firstname HWID HLOOKUP-Gradebook Done

Formulas

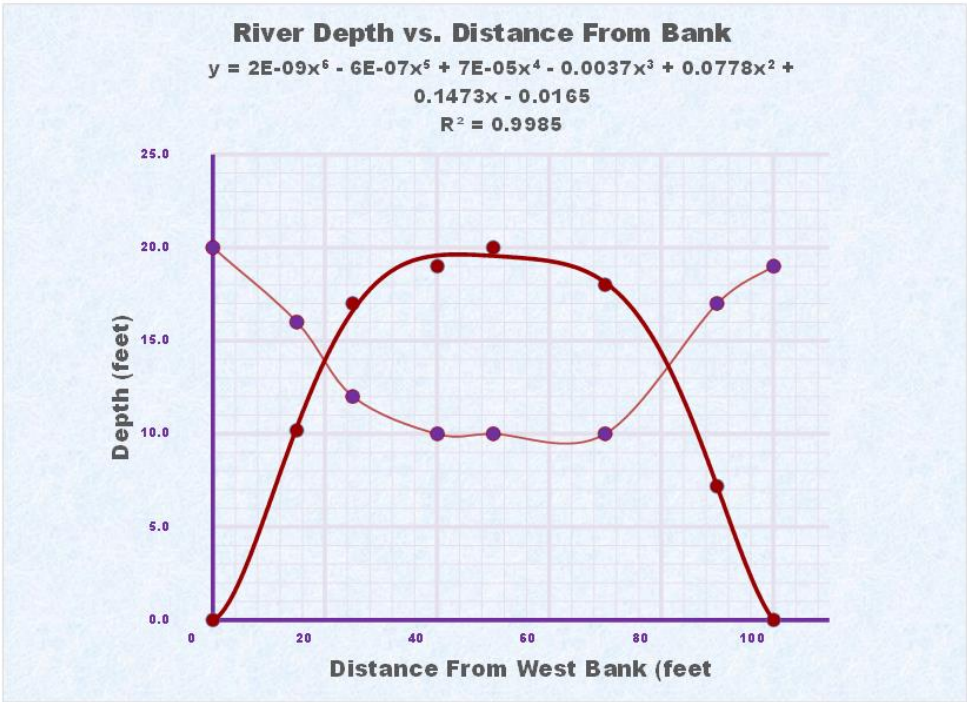
HW04-4 VLOOKUP-Shipping Formulas

	B	C	D	E	F	G	H	I	J	K	L
1	Shipping Costs Calculation										
2											
3	Ship Cost by Item Number		Ship Cost by Weight		Total weight is 329.5 lbs and Total cost is \$1,555.60 Highest weight is for item number 80680 Highest weight is for item number 80680 whose shipping cost is \$33.00						
4	Choose	Shipping	Enter	Shipping							
5	Item Number	Cost	Weight	Cost							
6	80680	\$33.00	1.1	\$15.75							
7											
8	Item Number	Weight (lbs)	Shipping Cost		Weight/Cost Table			Scratch Area			
9	44537	7.5	\$30.60		Weight	Shipping Cost	Weight	Item Number	Shipping Cost		
10	80680	9.9	\$33.00		0.0	\$11.75	7.5	44537	\$30.60		
11	43913	8.7	\$31.80		1.0	\$15.75	9.9	80680	\$33.00		
12	71304	5.7	\$26.75		2.0	\$18.50	8.7	43913	\$31.80		
13	64287	4.2	\$24.00		3.0	\$21.25	5.7	71304	\$26.75		
14	60417	3.1	\$21.25		4.0	\$24.00	4.2	64287	\$24.00		
15	54049	4.2	\$24.00		5.0	\$26.75	3.1	60417	\$21.25		
16	48320	1.1	\$15.75		6.0	\$29.40	4.2	54049	\$24.00		
17	90169	4.9	\$24.00		7.0	\$30.60	1.1	48320	\$15.75		
18	13529	1.1	\$15.75		8.0	\$31.80	4.9	90169	\$24.00		
					9.0	\$33.00	1.1	13529	\$15.75		

HW04-4 Lastname Firstname HWID VLOOKUP-Shipping Done

Shipping Data

HW05-1 River Chart Modified



HW05-1 Lastname Firstname HWID River Done

River Chart Modified

HW05-2 Loans IF Formulas

	A	B	C	D	E
1				Loan Payments	
2					
3	Today's Date:	4/11/03			
4					
5	Loan	Due Date	Amount	Loans more than 30 days overdue	Number of days overdue
6	Boat	4/10/01	450	=IF(B\$3-B\$5>30,"OVERDUE","")	=IF(B\$3-B\$5>30,B\$3-B\$5)
7	Car	4/10/00	520	=IF(B\$3-B\$7>30,"OVERDUE","")	=IF(B\$3-B\$7>30,B\$3-B\$7)
8	Home	4/10/94	980	=IF(B\$3-B\$8>30,"OVERDUE","")	=IF(B\$3-B\$8>30,B\$3-B\$8)
9	Student	4/10/53	300	=IF(B\$3-B\$9>30,"OVERDUE","")	=IF(B\$3-B\$9>30,B\$3-B\$9)

HW05-2 Lastname Firstname HWID Loans IF Done

Loan Formulas

HW05-3 Rent IF

Rent Payments			
Today's Date: 11 Jul 2013			
Normal Rate: \$9.00 per sq. ft.			
Introductory Rate: \$5.00 per sq. ft.			
Company	Floor Space	Initial Date	Payment Due
Lisa's Camping Supply	5,000 sq. ft.	10 Oct 2009	\$45,000.00
Badtke Burger Barn	1,500 sq. ft.	04 Apr 2013	\$7,500.00
Brainiac Books, Inc.	800 sq. ft.	30 Apr 2010	\$7,200.00
Know It All Notions	2,000 sq. ft.	06 Jan 2013	\$10,000.00

Number payments over \$8,000 = 2
 Sum of payments over \$8,000 = \$55,000.00
 Sum of Floor space where Payment over \$8,000 = 7,000 sq. ft.

HW05-3 Lastname Firstname HWID Rent IF Done

Rent

HW05-3 Rent IF Formulas

	A	B	C	D
1	Rent Payments			
2				
3	Today's Date: 4/14/66			
4				
5	Normal Rate: 9			
6	Introductory Rate: 5			
7				
8	Company	Floor Space	Initial Date	Payment Due
9	Lisa's Camping Supply	5000	40096	=IF(\$B\$3-C9>365*\$B\$5*\$B9,\$B\$6*\$B9)
10	Badtke Burger Barn	1500	41368	=IF(\$B\$3-C10>365*\$B\$5*\$B10,\$B\$6*\$B10)
11	Brainiac Books, Inc.	800	40298	=IF(\$B\$3-C11>365*\$B\$5*\$B11,\$B\$6*\$B11)
12	Know It All Notions	2000	41280	=IF(\$B\$3-C12>365*\$B\$5*\$B12,\$B\$6*\$B12)
13				
14			=COUNTIF(D9:D12,>8000)	
15			=SUMIF(D9:D12,>8000,D9:D12)	
16			=SUMIF(D9:D12,>8000,B9:B12)	

HW05-3 Lastname Firstname HWID Rent IF Done

Rent Formulas

HW05-4 Commission IF

MicroMania, Inc., Sales and Earnings Summary

Employee	Hardware Sales	Software Sales	Hardware Commission	Software Commission	Total Commission	Total Earnings
Sherri	\$ 23,000.00	\$ 800.00	\$ 2,360.00	\$ 64.00	\$ 2,424.00	\$ 14,424.00
Mary	\$ 13,500.00	\$ 500.00	\$ 1,350.00	\$ 40.00	\$ 1,390.00	\$ 12,390.00
Lawrence	\$ 28,200.00	\$ 200.00	\$ 2,984.00	\$ 16.00	\$ 3,000.00	\$ 15,000.00
Brady	\$ 75,192.00	\$ 960.00	\$ 8,628.00	\$ 76.80	\$ 8,699.84	\$ 20,699.84
Monica	\$ 9,500.00	\$ 253.00	\$ 950.00	\$ 20.24	\$ 970.24	\$ 10,970.24
Jezebel	\$ 79,944.00	\$ 919.00	\$ 9,193.28	\$ 73.52	\$ 9,266.80	\$ 21,266.80
Abigail	\$ 31,013.00	\$ 112.00	\$ 3,321.56	\$ 8.96	\$ 3,330.52	\$ 15,330.52
Marisa	\$ 25,271.00	\$ 782.00	\$ 2,632.52	\$ 62.56	\$ 2,695.08	\$ 14,695.08
Sean	\$ 98,630.00	\$ 810.00	\$ 11,435.60	\$ 64.80	\$ 11,500.40	\$ 23,500.40
Max	\$ 62,357.00	\$ 958.00	\$ 7,082.84	\$ 76.64	\$ 7,159.48	\$ 19,159.48
Amy	\$ 33,883.00	\$ 974.00	\$ 3,665.96	\$ 77.92	\$ 3,743.88	\$ 15,743.88
Jessica	\$ 58,418.00	\$ 388.00	\$ 6,610.16	\$ 31.04	\$ 6,641.20	\$ 18,641.20
Totals	\$ 4,050,169.00	\$ 44,539.00	\$ 456,120.06	\$ 3,563.12	\$ 459,683.18	\$ 1,378,683.18
Averages	\$ 52,599.60	\$ 578.43	\$ 5,923.64	\$ 46.27	\$ 5,969.91	\$ 17,904.98

Changed to this value using Goal Seek.

HW05-4 Lastname Firstname HWID Commission IF Done

Sales Data

HW05-4 Commission IF Formulas

Note that the title may not show here in formulas view.

	A	B	C	D	E
1					
2					
3	Employee	Hardware Sales	Software Sales	Hardware Commission	Software Commission
4	Berni	23000	300	=F(B4<20000,10%*B4,10%*20000-12%*B4,20000))	=D3*04
5	May	13500	500	=F(B5<20000,10%*B5,10%*20000-12%*B5,20000))	=D5*05
6	Lawrence	28200	200	=F(B6<20000,10%*B6,10%*20000-12%*B6,20000))	=D6*06
7	Barry	15192	860	=F(B7<20000,10%*B7,10%*20000-12%*B7,20000))	=D7*07
8	Monica	9900	253	=F(B8<20000,10%*B8,10%*20000-12%*B8,20000))	=D8*08
9	Jason	79944	919	=F(B9<20000,10%*B9,10%*20000-12%*B9,20000))	=D9*09
10	Adriell	31013	112	=F(B10<20000,10%*B10,10%*20000-12%*B10,20000))	=D10*10
11	Marisa	25271	752	=F(B11<20000,10%*B11,10%*20000-12%*B11,20000))	=D11*11
12	Sean	98930	910	=F(B12<20000,10%*B12,10%*20000-12%*B12,20000))	=D12*12
13	Max	82387	968	=F(B13<20000,10%*B13,10%*20000-12%*B13,20000))	=D13*13
14	Amy	23883	974	=F(B14<20000,10%*B14,10%*20000-12%*B14,20000))	=D14*14
15	Justin	25418	353	=F(B15<20000,10%*B15,10%*20000-12%*B15,20000))	=D15*15
16	Totals	=SUM(B4:B9)	=SUM(C4:C9)	=SUM(D4:D9)	=SUM(E4:E9)
17	Averages	=AVERAGE(B4:B9)	=AVERAGE(C4:C9)	=AVERAGE(D4:D9)	=AVERAGE(E4:E9)

HW05-4 Lastname Firstname HWID Commission IF Done

Sales Formulas

HW05-5 Sorting Values

	B	C	D	E	F	G	H	I
1	Home Values							
2	Num	Address	Estimated Value	Property Tax	Lot Size (acre)	Cable TV Hookup	Small Lot with Cable	Small Lot or Cable
6	4	23 Fourth Street	\$ 242,467	\$ 2,051.00	1.12	No		
11	9	3500 Lake Avenue	\$ 262,890	\$ 1,891.00	1.05	No		
20								
21	9 = number with cable							
22	2 = number over one acre and tax under \$2,100							
23	\$8,724 = sum of taxes for lots over one acre							
24	\$768,347 = sum of values for lots over 1 acre and no cable							
25	Click here to open Zillow.com to see more home values in any area you choose							

HW05-5 Lastname Firstname HWID Sorting Values Done

Values Original

HW05-5 Sorting Values Formulas

	B	C	D	E	F	G	H	I
1								
2	Num	Address	Estimate d Value	Property Tax	Lot Size (acre)	Cable TV Hookup	Small Lot with Cable	Small Lot or Cable
3	=ROW()-2	24 Fourth Street	262990	2430	1.1	No	=IF(AND(F3<1,G3="Yes"),"Yes","")	=IF(OR(F3<1,G3="Yes"),"Yes","")
4	=ROW()-2	3580 Lake Avenue	262890	1891	1.05	No	=IF(AND(F4<1,G4="Yes"),"Yes","")	=IF(OR(F4<1,G4="Yes"),"Yes","")
5	=ROW()-2	3578 Lake Avenue	261578	2149	0.8	No	=IF(AND(F5<1,G5="Yes"),"Yes","")	=IF(OR(F5<1,G5="Yes"),"Yes","")
6	=ROW()-2	3579 Lake Avenue	252467	2056	0.9	No	=IF(AND(F6<1,G6="Yes"),"Yes","")	=IF(OR(F6<1,G6="Yes"),"Yes","")
7	=ROW()-2	23 Fourth Street	242467	2051	1.12	No	=IF(AND(F7<1,G7="Yes"),"Yes","")	=IF(OR(F7<1,G7="Yes"),"Yes","")
8	=ROW()-2	25 Fourth Street	50000	2313	0.95	No	=IF(AND(F8<1,G8="Yes"),"Yes","")	=IF(OR(F8<1,G8="Yes"),"Yes","")
9	=ROW()-2	3581 Lake Avenue	311582	2051	0.88	Yes	=IF(AND(F9<1,G9="Yes"),"Yes","")	=IF(OR(F9<1,G9="Yes"),"Yes","")
10	=ROW()-2	1459 Via Colinas	301582	2352	1.2	Yes	=IF(AND(F10<1,G10="Yes"),"Yes","")	=IF(OR(F10<1,G10="Yes"),"Yes","")
11	=ROW()-2	1460 Via Colinas	297566	2321	0.97	Yes	=IF(AND(F11<1,G11="Yes"),"Yes","")	=IF(OR(F11<1,G11="Yes"),"Yes","")
12	=ROW()-2	3582 Lake Avenue	296566	390	0.77	Yes	=IF(AND(F12<1,G12="Yes"),"Yes","")	=IF(OR(F12<1,G12="Yes"),"Yes","")
13	=ROW()-2	1461 Via Colinas	285456	2227	0.94	Yes	=IF(AND(F13<1,G13="Yes"),"Yes","")	=IF(OR(F13<1,G13="Yes"),"Yes","")
14	=ROW()-2	21 Fourth Street	275456	2040	0.6	Yes	=IF(AND(F14<1,G14="Yes"),"Yes","")	=IF(OR(F14<1,G14="Yes"),"Yes","")
15	=ROW()-2	22 Fourth Street	263578	1969	0.82	Yes	=IF(AND(F15<1,G15="Yes"),"Yes","")	=IF(OR(F15<1,G15="Yes"),"Yes","")
16	=ROW()-2	1458 Via Colinas	260890	2035	0.7	Yes	=IF(AND(F16<1,G16="Yes"),"Yes","")	=IF(OR(F16<1,G16="Yes"),"Yes","")
17	=ROW()-2	1457 Via Colinas	252467	1969	0.8	Yes	=IF(AND(F17<1,G17="Yes"),"Yes","")	=IF(OR(F17<1,G17="Yes"),"Yes","")
18		Average	=AVERAGE					
19		Median	=MEDIAN					
20								
21		=COUNTIF(G3:G17,"Yes")						
22		=COUNTIF(SIF 3:F17,">1",E3:E17,"<2100")						
23		=SUMIF(F 3:F17,">1",E 3:E17)						
24		=SUMIF(SID3:D17,F3:F17,">1",G 3:G17,"No")						
25		Click here to open Zillow.com to see more home v						

HW05-5 Lastname Firstname HWID Sorting Values Done

Values Sorted Formulas

HW05-6 Find and Macros Sec 1 Worksheet

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	CI 1871 sec 1, 4 cr, Fall 2016, MW 1	Printed Tue 9 Aug 2016 at 2:00 PM																								
2	Sort By Name		Year in school	Number	Total Pts Ave																					
3			Freshman	8	59																					
4	Sort By HWID		Sophomore	10	62																					
5			Junior	8	64																					
6	Grades		Senior	8	77																					
7			Non-degree	2	73																					
8	Get class lists & enter grades at																									
9	http://um.edu																									
10	HWID	Name	email	First Name	Last Name	Comments	Code	H13	H14	H15	H16	H17	H18	H19	H20	H21	H22	H23	H24	H25	H26	H27	H28	H29	H30	
11	101	Bergmeister, Alexandra	berg7023@um.edu	Alexandra	Bergmeister																					
12	102	Bets, Sam	bets7266@um.edu	Sam	Bets																					
13	103	Biff, Timothy		Timothy	Biff																					
14	104	Bing, William	bing2563@um.edu	William	Bing																					
15	105	Cheng, Rebecca	chen2172@um.edu	Rebecca	Cheng																					

HW056 Lastname Firstname HWID Find and Macros Done

Sec 1

HW05-6 Lastname Firstname HWID Find and Macros Done

Sec 1

HW05-6 Find and Macros Server Worksheet

	T	U	V	W
1			Scratch Area	
2	First name	Last name	Comma	Space
3	=MID(C3,V3+1,W3-V3-1)	=LEFT(C3,V3-1)	=FIND(" ",C3)	=FIND(" ",C3)
4	=MID(C4,V4+1,W4-V4-1)	=LEFT(C4,V4-1)	=FIND(" ",C4)	=FIND(" ",C4)
5	=MID(C5,V5+1,W5-V5-1)	=LEFT(C5,V5-1)	=FIND(" ",C5)	=FIND(" ",C5)
6	=MID(C6,V6+1,W6-V6-1)	=LEFT(C6,V6-1)	=FIND(" ",C6)	=FIND(" ",C6)
7	=MID(C7,V7+1,W7-V7-1)	=LEFT(C7,V7-1)	=FIND(" ",C7)	=FIND(" ",C7)
8	=MID(C8,V8+1,W8-V8-1)	=LEFT(C8,V8-1)	=FIND(" ",C8)	=FIND(" ",C8)

HW05-6 Lastname Firstname HWID Find and Macros Done

Server

HW06-1 Sales Formulas

1	A	B	C	D	E	F	G	H
2	Names and Total Sales				=NOW()			
3	Name	Department	Total Sales	Commission	% of Total Sales	Quality	Comma	Last Name
4	Adams, Kathy	Sales	24370.8624489115	=IF(C4<5000,9000+8%*(C4-5000),IF(C4<=5000,9000+8%*(C4-5000)))	=C4/\$C\$17*100	=IF(C4<=8000,"Poor",IF(C4<=8000,"Good","Great"))	=FIND(",",A4)	=LEFT(A4,G4-1)
5	Baker, Jeff	Marketing	8568	=IF(C5<5000,9000+8%*(C5-5000),IF(C5<=5000,9000+8%*(C5-5000)))	=C5/\$C\$17*100	=IF(C5<=8000,"Poor",IF(C5<=8000,"Good","Great"))	=FIND(",",A5)	=LEFT(A5,G5-1)
6	Braasch, Cindy	Production	3411	=IF(C6<5000,9000+8%*(C6-5000),IF(C6<=5000,9000+8%*(C6-5000)))	=C6/\$C\$17*100	=IF(C6<=8000,"Poor",IF(C6<=8000,"Good","Great"))	=FIND(",",A6)	=LEFT(A6,G6-1)
7	Clover, May	Sales	5584	=IF(C7<5000,9000+8%*(C7-5000),IF(C7<=5000,9000+8%*(C7-5000)))	=C7/\$C\$17*100	=IF(C7<=8000,"Poor",IF(C7<=8000,"Good","Great"))	=FIND(",",A7)	=LEFT(A7,G7-1)
8	Day, Dennis	Marketing	5588	=IF(C8<5000,9000+8%*(C8-5000),IF(C8<=5000,9000+8%*(C8-5000)))	=C8/\$C\$17*100	=IF(C8<=8000,"Poor",IF(C8<=8000,"Good","Great"))	=FIND(",",A8)	=LEFT(A8,G8-1)
9	Good, Sara	Production	5574	=IF(C9<5000,9000+8%*(C9-5000),IF(C9<=5000,9000+8%*(C9-5000)))	=C9/\$C\$17*100	=IF(C9<=8000,"Poor",IF(C9<=8000,"Good","Great"))	=FIND(",",A9)	=LEFT(A9,G9-1)
10	Guled, Holly	Marketing	6847	=IF(C10<5000,9000+8%*(C10-5000),IF(C10<=5000,9000+8%*(C10-5000)))	=C10/\$C\$17*100	=IF(C10<=8000,"Poor",IF(C10<=8000,"Good","Great"))	=FIND(",",A10)	=LEFT(A10,G10-1)
11	Joshi, Steven	Sales	5475	=IF(C11<5000,9000+8%*(C11-5000),IF(C11<=5000,9000+8%*(C11-5000)))	=C11/\$C\$17*100	=IF(C11<=8000,"Poor",IF(C11<=8000,"Good","Great"))	=FIND(",",A11)	=LEFT(A11,G11-1)
12	Khan, Rachael	Marketing	8327	=IF(C12<5000,9000+8%*(C12-5000),IF(C12<=5000,9000+8%*(C12-5000)))	=C12/\$C\$17*100	=IF(C12<=8000,"Poor",IF(C12<=8000,"Good","Great"))	=FIND(",",A12)	=LEFT(A12,G12-1)
13	Khatoon, Cara	Production	9658	=IF(C13<5000,9000+8%*(C13-5000),IF(C13<=5000,9000+8%*(C13-5000)))	=C13/\$C\$17*100	=IF(C13<=8000,"Poor",IF(C13<=8000,"Good","Great"))	=FIND(",",A13)	=LEFT(A13,G13-1)
14	Mady, Niki	Production	3095	=IF(C14<5000,9000+8%*(C14-5000),IF(C14<=5000,9000+8%*(C14-5000)))	=C14/\$C\$17*100	=IF(C14<=8000,"Poor",IF(C14<=8000,"Good","Great"))	=FIND(",",A14)	=LEFT(A14,G14-1)
15	Schwert, Matt	Sales	9985	=IF(C15<5000,9000+8%*(C15-5000),IF(C15<=5000,9000+8%*(C15-5000)))	=C15/\$C\$17*100	=IF(C15<=8000,"Poor",IF(C15<=8000,"Good","Great"))	=FIND(",",A15)	=LEFT(A15,G15-1)
16								
17		Total	=SUM(C4:C15)					
18		Average	=AVERAGE(C4:C15)					
19				Sum of Total Sales for Commissions over \$9,800				
20				=SUM(IF(D4:D15">\$9800",C4:C15))				
21				Num of Comm over \$9,800 for Marketing				
22				=COUNTIFS(D4:D15">\$9800",B4:B15,"Marketing")				

HW06-1 Lastname Firstname HWID Excel Practice Questions Done

Sales Formulas

HW06-1 Column chart



HW06-1 Lastname Firstname HWID Excel Practice Questions Done

Column Chart

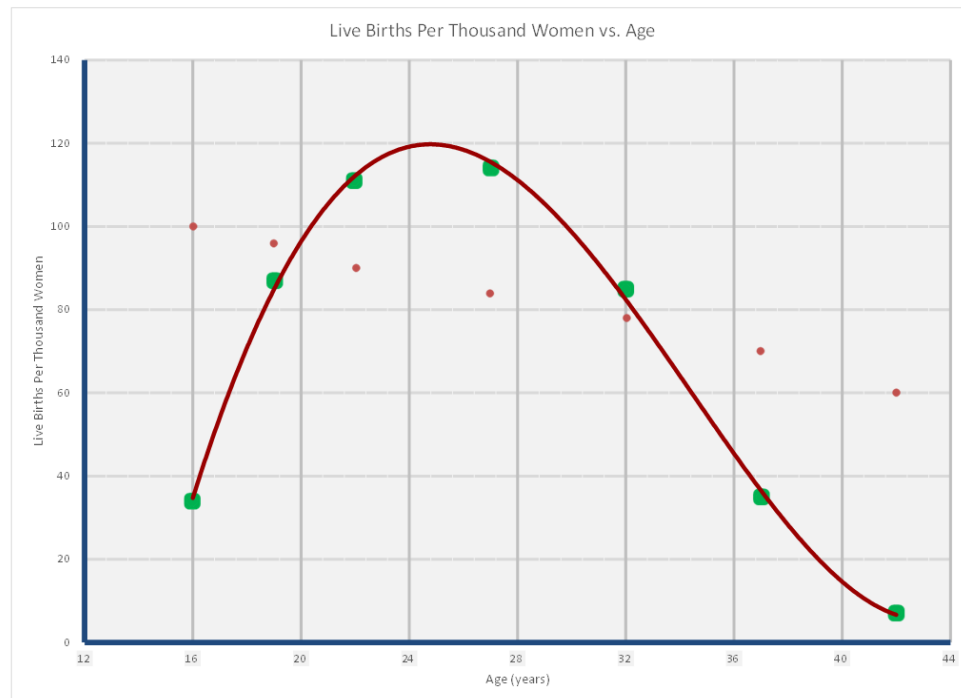
HW06-1 Bonus Data Two

	A	B	C	D	E	F	G	H
1	Bonus Data							
2	Highest Bonus Awarded was \$1,000.00							
3	Name	Sales	Bonus					
4	Maren	\$38,200	\$1,000					
7	Elana	\$22,054	\$400					
8	Kathy	\$17,866	\$200					
9								
10	Sales	\$15,000	\$20,000	\$25,000	\$30,000	\$35,000	\$40,000	
11	Level	Low	Fair	Medium	Good	Excellent	Outstanding	
12	Bonus	200	400	600	800	1000	1200	

HW06-1 Lastname Firstname HWID Excel Practice Questions Done

Bonus Data Two

HW06-1 Births Chart



HW06-1 Lastname Firstname HWID Excel Practice Questions Done

Births Chart

HW06-1 Quadratic

	A	B
1	$ax^2 + bx + c = 0$	
2	$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$	
3		
4		
5	a	= 'Sort Data'!A5
6	b	5
7	c	6
8	x_1	$= (-B6 + \text{SQRT}(B6^2 - 4 * B5 * B7)) / (2 * B5)$
9	x_2	$= (-B6 - \text{SQRT}(B6^2 - 4 * B5 * B7)) / (2 * B5)$

HW07-1 Flyer With Field Codes Showing

Internships Available

Interviews will be held:
Friday and Saturday, January 14 and 15
In the Career Services Conference Room

This summer, Sturgeon Point Productions will be filming a short documentary in Costa Rica about its native birds and has positions available for two interns. We are looking for a first Assistant Director and an Assistant Script Supervisor.

The filming will begin the first week of July and will last approximately two weeks. Payment will be by Day Rate of \$100 per day. Transportation, food, and lodging will be provided.

The First Assistant Director will work with the second film crew, which will be filming background video. The Assistant Script Supervisor will work with the Script Supervisor and will be responsible for coordinating communication between the two camera crews.

You must have a valid U. S. passport; no inoculations are necessary. Details are available on the company website.

Today's Date: { DATE \@ "dddd, MMMM dd, yyyy" * MERGEFORMAT }

Date Last Saved: { SAVEDATE \@ "dddd, MMMM dd, yyyy" * MERGEFORMAT }

Last Saved By: { LASTSAVEDBY * MERGEFORMAT }

Edit time in minutes: { EDITTIME * MERGEFORMAT }

To set up an interview, apply online at:
www.SturgeonPointProductions.com

{ FILENAME * MERGEFORMAT } { FILENAME * MERGEFORMAT }



HW07-2 Programs

Sturgeon Point Productions

Internship Guide





The Internship Program

Sturgeon Point Productions produces and markets educational videos. We started our company in 1968, and now we are a dynamic and creative independent film and commercial production company. From our base in Miami, we create both contract and in-house videos and feature films.

As an intern, you might take part in the following types of productions:

-  Short feature films
-  Documentaries
-  Commercials
-  Training films
-  Sales and marketing videos
-  Recordings of live concerts, sporting events, or theatrical productions

HW07-2 Lastname Firstname HWID Programs Done

HW07-3 Agenda

Agenda Campus Service Club



Our club always follows Robert's Rules of Order.

1. New Business
 - a. Treasurer's report
 - b. Big brother and big sister project
 - c. Food Shelf donations
 - d. Tax program
 - e. Election of officers
 - i. President
 - ii. Treasurer
 - iii. Secretary
 - f. Other new business
2. Old Business
 - a. Reading of minutes
 - b. Continue discussion of fundraising projects

HW07-3 Lastname Firstname HWID Agenda Done
7/8/2013 1:37 PM

HW07-4 Brochures



MEMO

PO Box 15732
 Colorado Springs, CO 80970
 719-638-9511
 719-638-9515 fax
JohnWells@ad-excellence.net

TO: Patricia Smith, Marketing Director

FROM: John Wells, Publications

SUBJECT: Production of brochures

DATE: XXXX, XXXX 00, 0000

The concept for the new product brochures has been reviewed and passed by the marketing committee. Stan is working on design ideas and plans to have something ready for us to look at the next meeting.

♪ Be prepared to discuss in detail your ideas concerning the layout of the brochure. It is a nice piece that we can be proud of.....IMPORTANT!

♪ Have ready in report form your analysis of the marketability of the new product. Include the target population as well as revenue projections.

I need to schedule this with the printer so they can order paper. My understanding is that we will be printing copies as follows.

Style	Colors	Price
Regular	one color	4
Folded	two color	5.25
Multi-stapled	four color	13.3

Is that correct?

Here is our latest promotional video. Check it out.



Decimals lined up

Thickness	Decimals
.000008	11.6
8.1	8.1

Decimals NOT lined up

Word Count

Statistics	Count
Pages	1
Words	162
Characters (no spaces)	772
Characters (with spaces)	930
Paragraphs	14
Lines	31

☐ Include textboxes, footnotes and endnotes

Close

HW07-4 Lastname Firstname HWID Brochures Done

HW08-1 Resume

Josh Hayes (727) 555-0313
1541 Dearborn Lane, St. Petersburg, FL 33713
jhayes@alcona.net

Objective Technology writing and editing position in the **robotics** industry, using research and advanced editing skills to communicate with customers.

Summary Of Qualifications

- Two years' experience in **robotics** lab for Aerospace Instruction Team
- Excellent interpersonal and communication skills
- Proficiency using Microsoft Office
- Proficiency using page layout and design software
- Fluency in spoken and written Spanish

Experience

Instructional Lab Assistant, Florida Port Community College, St. Petersburg, FL July 2013 to present

- Assist **robotics** professors with sophisticated experiments
- Set up **robotics** practice sessions for Aerospace Instruction Team

Assistant Executive Editor, Tech Today Newsletter, St. Petersburg, FL September 2012 to June 2013

- Wrote and edited articles for popular college technology newsletter
- Responsible for photo editing, cropping, and resizing photos for newsletter
- Received Top College Technology Publication Award

Teacher's Assistant, Florida Port Community College, Aerospace Department, St. Petersburg, FL July 2011 to June 2012

- Helped students with homework, explained assignments, organized materials for professor
- Set up **robotics** lab assignments for students

Education

University of South Florida, Tampa, FL
Bachelor of Science, Mechanical Engineering, June 2015

Florida Port Community College, St. Petersburg, FL
Associate of Arts, Journalism, June 2013

Honors And Activities

- Elected to Pi Tau Sigma, honor society for mechanical engineers
- Qualified for Dean's List six semesters
- Student Mentor, help other students in engineering programs

HW08-1 Lastname Firstname HWID Resume Done

HW08-2 Cover Letter

Jennifer Garcia 1776 Bay Cliff Drive, Tampa, FL 33602
(727) 555-0347 jgarcia@alcona.net

September 1, 2013

Ms. Mary Walker-Huelsman, Director
Florida Port Community College Career Center
2745 Oakland Avenue
St. Petersburg, FL 33713

Dear Ms. Walker-Huelsman:

I am seeking a position in which I can use my computer and communication skills. My education and experience, outlined on the enclosed resume, includes a Business Software Applications Specialist certificate from Florida Port Community College.

With a permanent position as my ultimate goal, I hope to use the Florida Port Community College Career Center to secure a temporary job. I can be available for a flexible number of hours or days and am willing to work in a variety of businesses or organizations.

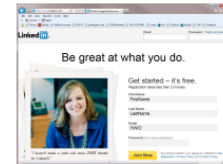
As my resume illustrates, I have excellent computer skills. I am an honor student at Florida Port Community College and have outstanding references. In addition, I have part-time work experience as a software tester, where I perform the following computer activities:

Program	Duty
Microsoft Access	Test database queries
Microsoft Excel	Enter software test data
Microsoft Word	Create and mail form letters

You can contact me by email at jgarcia@alcona.net or by telephone at (727) 555-0347. I am available for an interview at your convenience.

Sincerely,

Jennifer Garcia



HW08-2 Lastname Firstname HWID Cover Letter Done

HW08-3 Bill of Rights

Amendment VII

In Suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved, and no fact tried by a jury, shall be otherwise re-examined in any Court of the United States, than according to the rules of the common law.

Amendment VIII

Excessive bail shall not be required, nor excessive fines imposed, nor cruel and unusual punishments inflicted.

Amendment IX

The enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people.

Amendment X

The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.

Names of Senators in March 1789

Richard Bassett
Pierce Butler
Charles Carroll
Tristram Dalton
Oliver Ellsworth
Jonathan Elmer
William Few
William Grayson
James Gunn
John Henry
Ralph Izard
William Johnson
John Langdon
Richard Lee
William Maclay
Robert Morris
William Paterson
George Read
Philip Schuyler
Caleb Strong
Paine Wingate



HW08-3 Lastname Firstname HWID Bill of Rights Done

HW08-4 Park

MEMO TO: Dana Brothers, Vice President, Marketing

FROM: Valerie Fair

DATE: Saturday, July 13, 2013

SUBJECT: Final Changes in Hours of Operation, Ticket Prices, and Restrictions

The hours of operation are very similar to last year; the Sunday opening time is the only change:

Days	Opens	Closes
Monday-Thursday	1 pm	10 pm
Friday	1 pm	11 pm
Saturday and Holidays	11 am	11 pm
Sunday	Noon	11 pm

Admission charges are significantly different, with the price of season passes reduced by \$20 for Adults, and increased by \$20 for Juniors. Let's hope the 15% increase in revenue is realistic!

	Ave	One Day	Season Pass
Toddler	3 & under	Free	Free
Junior	4 to 11	\$19	\$89
Adult	12 to 59	\$39	\$129
Senior	60+	\$29	\$99

Height and age restrictions are unchanged for most of the activities, with the following exceptions:

Activity	Minimum height/age:	To be able to:
Speed Go-Karts	52" tall	Drive alone
	16 years old	Drive with a passenger
	40" tall	Ride as a passenger
Bumper Boats	44" tall	Drive alone
	14 years old	Drive with a passenger
	32" tall	Ride as a passenger
Miniature Golf	10 years old	Play without parent/guardian
	No age limit	Play with parent/guardian
	5 years old	Play with 12+ year old companion

HW08-4 Lastname Firstname HWID Park Done

HW08-5 Sales With Merge Codes Showing

Sales Record for January for First National Bank

Date	Product	Amount	Sales Rep	Branch	Points
16-Jan	Certificate	50,000	Betsey	Main	400
26-Jan	Certificate	15,000	Betsey	Main	120
29-Jan	Savings	6,300	Betsey	Main	44
12-Jan	Savings	6,000	Betsey	Main	42
13-Jan	Certificate	25,000	Carolyn	Plymouth	200
22-Jan	Credit Card	2,000	Carolyn	Plymouth	16
30-Jan	Savings	1,450	Carolyn	Plymouth	10
23-Jan	Mortgage	175,000	Diane	Plymouth	1750
9-Jan	Auto Loan	14,500	Diane	Plymouth	145
8-Jan	Certificate	1,500	Diane	Plymouth	12
16-Jan	Checking	600	Diane	Plymouth	3
12-Jan	Certificate	45,000	Jonell	Ypsilanti	360
20-Jan	Auto Loan	12,500	Jonell	Ypsilanti	125
30-Jan	Checking	1,200	Jonell	Ypsilanti	6
27-Jan	Mortgage	165,000	Pam	Jackson	1650
6-Jan	Certificate	30,000	Pam	Jackson	240
8-Jan	Auto Loan	30,000	Pam	Jackson	300
30-Jan	Auto Loan	25,000	Pam	Jackson	250
16-Jan	Savings	4,000	Pam	Jackson	28
23-Jan	Checking	6,000	Paula	Main	30
6-Jan	Credit Card	5,000	Paula	Main	40
15-Jan	Savings	1,000	Paula	Main	7
30-Jan	Checking	800	Paula	Main	4
9-Jan	Mortgage	125,000	Rhonda	Jackson	1250
23-Jan	Auto Loan	17,750	Rhonda	Jackson	177
28-Jan	Certificate	15,000	Rhonda	Jackson	120
7-Jan	Mortgage	150,000	Richard	Dexter	1500
30-Jan	Auto Loan	16,500	Richard	Dexter	165
19-Jan	Savings	5,600	Richard	Dexter	39
12-Jan	Credit Card	2,000	Richard	Dexter	16
6-Jan	Auto Loan	17,700	Sharon	Dexter	177
5-Jan	Savings	10,000	Sharon	Dexter	70
7-Jan	Checking	1,200	Sharon	Dexter	6
7-Jan	Checking	1,000	Sharon	Dexter	1000

Sum = { =SUM(ABOVE)
"#.#0,(\$#.#0) }

Average = {
=AVERAGE(ABOVE)
E) # "#.#0" }

HW08-5 Lastname Firstname HWID Sales Done

HW08-6 Infections Memo With Merge Codes Showing

Memo

To: Infectious Diseases Foundation

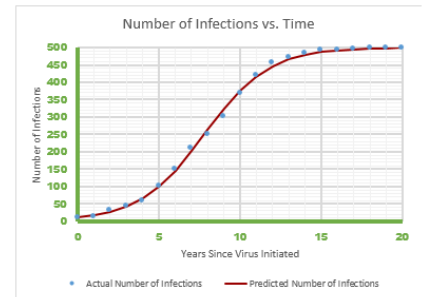
From: { USERNAME * MERGEFORMAT }

Date: { DATE \@ "dddd, MMMM dd, yyyy" * MERGEFORMAT }

Re: Data you requested

Below please find the raw data and graphical interpretation of the infectious diseases model you requested we develop. Please contact me if you need further analysis.

Year	Actual Number of Infections	Predicted Number of Infections
0	10	10.0
1	14	16.3
2	30	26.3
3	44	41.9
4	60	65.5
5	100	99.6
6	150	145.4
7	209	201.6
8	250	263.5
9	301	323.8
10	367	375.9
11	420	416.6
12	456	445.8
13	470	465.7
14	483	478.6
15	492	486.8
16	493	491.9
17	496	495.1
18	498	497.0
19	499	498.2
20	500	498.9



HW08-6 Lastname Firstname Infections Memo Done

Be sure you have typed the file names
(rather than inserted the field codes) so
they appear correctly here.

HW09-1 Research Paper (page 4 ONLY)

Foster 4

Works Cited

Glaser, John P. and Claudia Salzberg. *The Strategic Application of Information Technology in Health Care Organizations*. San Francisco: Jossey-Bass, 2011. Print.

Ogden, Cynthia L., Margaret D. Carroll, Brian K. Kit, and Katherine M. Flegal. *NCHS Data Brief Number 82*. 15 January 2012. Web. 17 January 2016.

Topol, Eric J. *The Creative Destruction of Medicine*. New York: Basic Books, 2012. Print.

HW09-2 Newsletter



University Medical Center Goes Green

Volume 1, Number 1

January 2016

University Medical Center continues its commitment to implementing environmentally friendly practices and fostering ecologically sustainable communities. This newsletter focuses on practices being implemented at the Center in accordance with government guidelines.



RECYCLING TRASH

More than 300 recycling bins have been placed beside trash bins throughout the hospital. That means that for every two to four trash or hazardous waste receptacles, there is now a bin to collect and process recyclable materials. Plastic and aluminum cups, bottles, and cans are the main articles that will be recycled in these bins, which are clearly marked with the recycling sign to differentiate them from other types of waste. In addition to these bins, two extra cardboard balers have been installed to help with our increase of cardboard box recycling.

HARVESTING DAYLIGHT

Low-watt energy-efficient light bulbs have replaced traditional lights throughout the center and energy-efficient lamps and daylight controls have been installed. This move will conserve energy and cut down on the hospital's use of electricity.

GREENER LANDSCAPING

New landscaping incorporates the use of regionally-native plants and a reduction in turf, thus reducing the need for extensive use of power equipment. Water-saving devices and a system that uses 100% recycled water have been installed outside the center, replacing the previous watering system. Plants and fauna stay green in an environmentally conscious manner.

GREENER GROCER

The hospital cafeteria has eliminated non-compostable materials and is using recyclable paper goods. In addition, a vegetable and herb garden outside the southeast corner of the Palomar Pavilion supplements fruits and vegetables purchased at local farmers markets.

GREENER RECORDS

Electronic medical records and consent forms have replaced a paper system, conserving not only paper, but also reclaiming valuable working and storage space.

"Everything we can do here at University Medical Center to protect our environment and conserve resources sets the example for others to do the same."
Emily Lynn—Facilities Director



HW09-2 Mailing Labels

Sherry Andersen 9000 S. Susan Creek Dr. Germantown, TN 38139	Kelley Ballen 179 Auburn Court Collierville, TN 38017	Janice Barnett 2361 Bluebird Lane #8 Memphis, TN 38107
Nancy Chang 2221 S. Flowers Road Memphis, TN 38103	Samuel Connor 124 Whitworth Drive #352 Memphis, TN 38134	Mauricio Diaz 82 E. Ramona Blvd. Arlington, TN 38002
Jackie Epps 653 Constitution Ave. #D Lakeland, TN 38002	Michael Feingold 1821 Alturas St. #1442 Germantown, TN 38138	Anthony Johnson 2820 Clairewood Dr. Collierville, TN 38017
Jason Lau 975 Treestop Place #320 Germantown, TN 38138	Ronald Longoria 36 S. Delowe St. #D Bartlett, TN 38135	Ruth Marigold 4220 Thornewood Dr. #320 Memphis, TN 38112
Ami Mehta 3418 Longview Drive #320 Memphis, TN 38112	Taylor Mines 189 Ventura Street Millington, TN 38053	Karlle Nichols 2000 St. Luke Place Millington, TN 38053
Julian Omdahl 34 Gloucester Pl. Bartlett, TN 38133	Jacob Orr 1550 Glenrosa Drive #1550 Memphis, TN 38104	Walter Parsons 2495 Sunset Drive Arlington, TN 38002
Jessica Pyun 1255 Miravista Street Memphis, TN 38122	Mia Rodriguez 8720 Natchez Trail Millington, TN 38053	Steven Scroggins 1518 Orchard Place Arlington, TN 38002
Michelle Trevino 648 Pine Cliff St. Bartlett, TN 38133	Leonard Wang 600 County Line NE #234 Memphis, TN 38117	Monica Warren 5626 Summer Road #234 Lakeland, TN 38002
Alex Washington 15 Harwell Rd. Memphis, TN 38111	Sharon Williams 1251 Parker Road #843 Memphis, TN 38123	Bin Wu 676 North St. Clair St. Memphis, TN 38120

HW09-3 Home Address Labels

Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu	Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu	Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu
Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu	Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu	Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu
Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu	Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu	Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu
Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu	Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu	Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu
Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu	Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu	Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu
Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu	Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu	Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu
Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu	Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu	Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu
Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu	Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu	Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu
Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu	Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu	Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu
Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu	Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu	Joe College Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 col001@umn.edu

HW09-4 Name Tag Labels

Hello, my name is Jill
My major is English
My interests are
Flute
Walking
Gardening
I live in Bailey Hall on the St. Paul Campus



Hello, my name is Sue
My major is Biology
My interests are
Band
Jogging
I live in Territorial Hall on the Minneapolis Campus



Hello, my name is Bill
My major is Computer Science
My interests are
Money
Money
Money



Hello, my name is Barak
My major is Political Science
My interests are
Community Service
Sports



Hello, my name is Albert
My major is Physics
My interests are
Special Relativity
General Relativity
Photons
I live in Territorial Hall on the Minneapolis Campus



Hello, my name is Will
My major is English
My interests are
Poetry
Plays
I live in Bailey Hall on the St. Paul Campus



HW09-4 Lastname Firstname HWID Name Tag MAIN Done

HW09-5 Thank Merge DATA

First	Last	Email	Category	Priority
Joyce	Banch	banc001@umn.edu	Hi	3
Doug	Robertson	droberts@umn.edu	Med	3
Sue	Sherro	sher001@umn.edu	Hi	2
Kathy	Osterberg	oste001@umn.edu	Low	1
Alan	Samek	same001@umn.edu	Med	1

HW09-5 Lastname Firstname HWID Thank DATA Done

HW09-5 Thank Merge MAIN

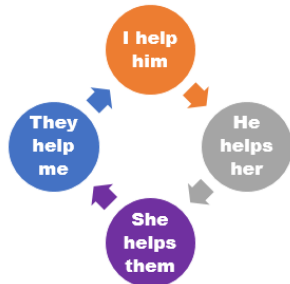
I Gave to the Community Fund Drive

«First»:

When you send in your contribution to the **Community Fund Drive**, please drop this card in the fish bowl in the mail room. This will help us keep track of the number of contributions that have come in and it will tell us if you want to be in the raffle for prizes. If you do not want to be included in the drawing for prizes, check here:

If you do not want to be included in the All University drawing for prizes, check here:

«First» «Last»



HW09-5 Lastname Firstname HWID Thank MAIN Done

HW09-6 IF Merge MAIN With Merge Codes

```
{ SKIP IF { MERGEFIELD Sex } = "Unknown" } { MERGEFIELD Title } {
MERGEFIELD FirstName } { MERGEFIELD LastName }
{ MERGEFIELD Address }
{ MERGEFIELD City }, { MERGEFIELD State } { MERGEFIELD Zip }
```

Dear { MERGEFIELD Title } { MERGEFIELD LastName }:

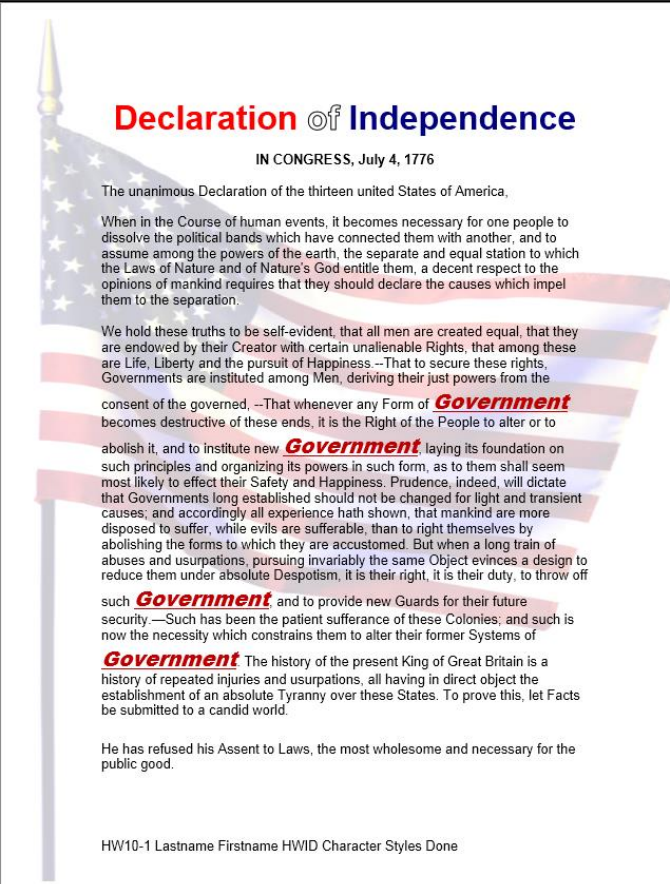
Thank you for your interest in our magazines. As a new customer I would like to offer you a special deal on { IF { MERGEFIELD Sex } = "Male" "Sports Illustrated" "" } { IF { MERGEFIELD Sex } = "Female" "Ms. Magazine" "" }. Your special yearly rate is { IF { MERGEFIELD Sex } = "Male" "\$15.99" "\$13.99" }. The shipping and handling charge would be { IF { MERGEFIELD Zip } > 80000 "\$6.95" " { IF { MERGEFIELD Zip } < 50000 "\$4.95" "\$5.95" } " }.

Sincerely,

Keisha Rollings

{ FILENAME * MERGEFORMAT }

HW10-1 Character Styles (page 1 ONLY)



Declaration of Independence

IN CONGRESS, July 4, 1776

The unanimous Declaration of the thirteen united States of America,

When in the Course of human events, it becomes necessary for one people to dissolve the political bands which have connected them with another, and to assume among the powers of the earth, the separate and equal station to which the Laws of Nature and of Nature's God entitle them, a decent respect to the opinions of mankind requires that they should declare the causes which impel them to the separation.

We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness.—That to secure these rights, Governments are instituted among Men, deriving their just powers from the consent of the governed, —That whenever any Form of **Government** becomes destructive of these ends, it is the Right of the People to alter or to abolish it, and to institute new **Government**, laying its foundation on such principles and organizing its powers in such form, as to them shall seem most likely to effect their Safety and Happiness. Prudence, indeed, will dictate that Governments long established should not be changed for light and transient causes; and accordingly all experience hath shown, that mankind are more disposed to suffer, while evils are sufferable, than to right themselves by abolishing the forms to which they are accustomed. But when a long train of abuses and usurpations, pursuing invariably the same Object evinces a design to reduce them under absolute Despotism, it is their right, it is their duty, to throw off such **Government** and to provide new Guards for their future security.—Such has been the patient sufferance of these Colonies; and such is now the necessity which constrains them to alter their former Systems of **Government** The history of the present King of Great Britain is a history of repeated injuries and usurpations, all having in direct object the establishment of an absolute Tyranny over these States. To prove this, let Facts be submitted to a candid world.

He has refused his Assent to Laws, the most wholesome and necessary for the public good.

HW10-1 Lastname Firstname HWID Character Styles Done

HW10-2 Paragraph Styles (page 1 ONLY)

Problem Solving in Developmental Mathematics

In 1988 the **mathematics** faculty began to experiment with the way in which we teach our developmental **mathematics** courses. We were disappointed with the number of students who could not successfully complete our arithmetic and algebra courses and with the number of the students who successfully completed our intermediate algebra course but who could not successfully complete college algebra offered through the Mathematics Department. We felt that developing a new sequence of courses, based on the ideas of problem solving, was needed.

Courses

The courses we developed are based on the notions that students who are specifically trained in general problem solving will do better at solving **mathematics** problems than students who have received no such instruction, and that students who construct their own knowledge, rather than acquire it from the teacher, will exhibit a better understanding of **mathematics** and, hence, will perform better. These notions are in concert with Professional Standards for Teaching Mathematics statement that

Educational research findings from cognitive psychology and **mathematics** education indicate that learning occurs as students actively assimilate new information and experiences and construct their own meanings.

Basically, we believe that the purpose of education is to transform novices into experts and that knowledge is something that cannot be transferred from one individual to another but rather a personalized version of it must be constructed by the individual learner. We believe that we do not teach **mathematics** to students but that we stimulate the students to construct mathematical concepts and ideas by arranging experiences for them where they are actively involved in the learning process. Under this paradigm, the students are active participants in the teaching process rather than passive recipients of lecture material. Our philosophical approach to the learning process can be thought of as an underlying principle that guides us as we conduct our classes. We can implement the philosophy using a number of activities that include group work, writing, reading, discussing, skill building, problem solving, and discovery learning.

Implementation

Our implementation of problem solving involves students working in groups on various topics with the course instructor taking on the role as a facilitator and question poser rather than as a source of new information or as the ultimate authority in the verification of answers. Because our students have all

HW10-2 Lastname Firstname HWID Paragraph Styles Done

1

HW10-3 Census (page 1)

HW10-3 Lastname Firstname HWID Census Done

Sec 1 Page 1

U.S. Department of Commerce Economics and Statistics Administration BUREAU OF THE CENSUS

Introduction

The U.S. population census records contain a wealth of information. They are useful in learning about one's family and local social and economic conditions at various times in history. For more recent years especially, they are official documents for persons who need to prove their age (in the absence of a birth certificate), relationship, citizenship, residence, and other facts in order to qualify for pensions, get jobs, naturalization papers, passports, or insurance policies; establish an inheritance; or trace ancestry. There was a population census taken in 1790 and every 10th year after that. The Bureau of the Census publication, 200 Years of U.S. Census Taking: Population and Housing Questions, 1790-1990 (Washington, DC, 1989), shows the specific questions and the way they appear on the records. It also reproduces instructions given to the enumerators for taking each census.

The Document

This document explains what census materials are available and how to obtain them, and also lists the sources for some other useful information including:

1. Citizen Archivists such as those people who have some background in history but who are no professional historians.
2. Federal Employees whose job might include gathering, analyzing, or publicizing information on the history of the United States of America.
3. Genealogists
4. Members of Congress many of whom waste their time and the taxpayers money in slowing the progress of the business of the People.
5. Preservation
6. Records Managers
7. The Press
8. Attend an Event
9. Donate to the Archives so that we can continue our work in making accessible many of the artifacts of the country.
10. Work at the Archives

HW10-3 Census (page 2)

HW10-3 Lastname Firstname HWID Census Done

Sec 1 Page 2

Census Schedules Available to the Public

Individual records from the national population censuses are confidential for 72 years, by law (Title 44, U.S. Code). Thus, April 2002 is the scheduled date for the **National** Archives to open the 1930 records to public use.

Microfilm copies of the original population schedules, from 1790 through 1920 (virtually all of the 1890 records were destroyed in a 1921 fire), are available at the National Archives in Washington (http://www.archives.gov/index.html) and its 13 regional archives, and many libraries in various parts of the United States. Most have facilities for making paper copies from the microfilm.	There are sound of the surname rather than its spelling indexes on microfilm for the 1880, 1900, and 1920 censuses for each State, and for 1910 for 21 States, principally in the South. Alphabetic indexes to the 1790-1860 and most of the 1870 censuses are available in genealogical libraries.	Researchers may find two Bureau of the Census publications useful: most major libraries have copies: Heads of Families at the First Census of the United States Taken in the Year 1790 (12 vols., Washington, DC, 1907-08, reprinted 1965-75), contains specific names. A Century of Population Growth—1790-1900 (Washington, DC, 1909, reprinted 1967-1970), includes the incidence of surnames in 1790, and a variety of summary tables from colonial censuses and from 1790 to 1900.

A number of State and territorial censuses were Nationalized in the intra-decennial years, particularly in the 19th century. See Henry J. Dubester, An Annotated Bibliography of Censuses Taken After the Year 1790, by States and Territories of the United States (Washington, DC, 1948, reprinted 1969 and 1975) and State Census Records, Ann S. Lainhart, Genealogical Publishing Co., Inc., 1992. An appendix to the Dubester book tells where the existing records (some including names) were located; copies of many can be obtained commercially on microfiche.

Some 19th century economic, agriculture, and mortality census schedules have survived, mainly in State archives but generally available on microfilm. These records frequently can be related to individuals listed in the population censuses.

HW10-3 Census Sample Page (page 100)

Census HW10-3 Lastname Firstname HWID Census Done

Sec 5 Page 100

HW10-4 Track Changes (page 1 ONLY)

International Development Issues through Algebra

Douglas Robertson and Susan Staats
University of Minnesota

We live in a world in which, on average, people's standard of living is increasing slightly, even for many poor people, yet inequalities between the rich and poor are also increasing. In the 1990's, poverty rates declined slightly in Sub-Saharan Africa, but the number of poor people increased by 140 million (Millennium Development Goals Report 2006, p. 4). Globalization is responsible for desperate working conditions in many parts of the world, but it also allows people who will never meet in person to communicate and collaborate. Global development issues are complex interdisciplinary, and frequently, they are conveyed through mathematical data. Unfortunately, many people try to avoid using mathematics because they perceive it to be beyond their capabilities. Yet relatively few math educators—nor their colleagues in other disciplines—receive the training in global issues to let them guide students in becoming critical users of international data. Michael Vern, a multicultural education scholar, writes that “(t)he near absence of a critical global perspective in teacher education programs is unfortunate because we are situated in the most financially and politically privileged and influential nation in the world. (Vern 2002 101-102). Furthermore, learning to access and evaluate international situations through data is in line with the National Council of Teachers of Mathematics connections standard, which recommends that students learn to use math in interdisciplinary contexts ranging from science to social science and medicine, and to use mathematics to examine social issues. This means that students must have opportunities for using mathematics that they have learned to analyze and assess significant social issues like problems in international development.

Insert Figure 1 About Here

Figure 1: Millennium Development Goals. The assessment targets are available at <http://www.un.org/millenniumgoals/>.

In this paper, we describe international issues that can be taught alongside standard algebra topics. We identify sources of data that teachers need to be able to implement the topics along with the specific learning outcomes for international development that teachers can convey to their students.

The Millennium Project

The United Nations' Millennium Project provides a framework for teaching students about international priorities for development. The project was initiated in the year 2000, and it highlights eight Millennium Development Goals (MDGs) focused on making

Commented [FL1]: The names of the authors should be reversed since Sue did the original draft.

Commented [FL2]: Should we use the word "complicated" instead?

Formatted: Font: Italic

Deleted: to become

HW10-5 Large Document Table of Contents (section 3)

Table of Contents

Computer-mediated Instruction.....1

Overview of Computer-mediated Software.....2

Structure of Computer-mediated Courses.....4

Daily Schedule of Class Activities.....5

Homework Assignments.....6

Exams and Quizzes.....7

Checkpoint Questions.....7

Evaluates.....8

Role of the Instructor in a Computer-mediated Class.....9

Student Performance in Computer-mediated and Lecture Classes.....10

The Mathematics Placement Exam.....10

Common Final Exams.....11

Pass Rates.....11

Proportion of Withdrawals.....12

Attendance.....13

Survey Items.....13

Focus Groups.....16

Trends in Computer-mediated Mathematics Instruction.....18

Instructional Models.....20

Future Directions in Computer-mediated Learning.....26

Summary.....28

Works Cited.....29

Index.....32

HW10-5 Large Document Equations (page 7)

FirstName LastName7

Mathematics Center, and that quiz and exam items should be closely aligned with the homework.

Exams and Quizzes

The exams are given to students on paper rather than on the computer. Students may use a calculator on the exams and quizzes. Five exams are given per semester plus a comprehensive final exam. By giving a fairly large number of exams, students are able to study smaller chunks of the course for each exam. This is especially helpful for students who struggle with math. Six quizzes are also given during the semester according to a set schedule, and students are informed about the contents of the quizzes.

Checkpoint Questions

Checkpoint questions consist of one or two questions, that may include **graphics**, over recently covered concepts or skills. They are given to students typically early in the class period and are due by the end of class. Students are encouraged to work together, compare strategies, and determine if their solutions make sense. Students may use any available resource. When students believe that they have answered the question correctly and have provided a sufficient written explanation of how they arrived at the answer, the instructor checks their work. If it is correct and complete, the instructor informs the student of this and collects it so that the score can be recorded. Here is an example of a checkpoint question:

“Use the Quadratic Formula, $x_{1,2} = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ to solve $5x^2 - 3x + 1 = 0$.”¹

1 Here, quad refers to the number of sides of a square, which has 2 dimensions.

HW10-5 Large Document Table (page 14)

14

HW10-5 Lastname Firstname HWID Large Document Done

The results, shown in Table 1, indicate that the Introductory Algebra students in computer-mediated classes were significantly more satisfied than students in lecture classes, $t(229) = 3.29, p = 0.001$. Similarly, Intermediate Algebra students in computer-mediated classes were significantly more satisfied than students in lecture classes, $t(334) = 3.39, p = 0.001$.

Course	N	Mean	SD	SEM
Introductory Algebra				
Computer-mediated	65	3.52	0.48	0.06
Lecture	166	3.23	0.63	0.05
Intermediate Algebra				
Computer-mediated	120	3.51	0.46	0.04
Lecture	216	3.33	0.48	0.03

Table 1: Course Satisfaction

The end-of-the-semester survey also asked students about their perceptions of the activities that contributed most to their learning. Computer-mediated students were asked the following question: Which of the following activities resulted in your learning the most mathematics? Students selected from the following choices: (a) using software, (b) doing homework, (c) using the math center, and (d) reviewing for exams. For students in lecture classes, the first choice was changed to “listening to lectures.”

The choices “using software” and “listening to lecture” are the primary methods of delivering the instruction in the computer-mediated and lecture formats, respectively.

HW10-5 Large Document Index (section 6)

32

HW10-5 Lastname Firstname HWID Large Document Done

Index

A

Academic Systems, 2, 20, 25, 26, 29, 30

Academic.com, 26, 27, 29

administrative tasks, 9

Algebra, 10, 11, 12, 13, 14

anywhere, anytime, 20

Apply, 3, 4, 15, 17

asynchronous, 24

attendance, 4, 8, 13

attitude, 10, 16, 25

B

bolt-on, 18, 19

Bolt-on, 18

C

checkpoint, 5, 8, 18

Checkpoint, 7, 8

cognitive paths, 2

computer-mediated, 1, 2, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 22, 23, 24, 25, 28, 30

computer-mediated courses, 1, 4, 5, 12

computer-mediated instruction, 1

computer-mediated learning, 1, 8, 19, 25

D

Data, 10, 12

developmental mathematics, 18, 20, 26, 27, 30

distance education, 5, 20, 25, 29

Distance education, 25

Dual coding theory, 2, 29

E

Evaluate, 5, 4, 8

exams, 5, 6, 7, 11, 12, 14, 22, 23

Explain, 3, 4, 16, 17

Explore, 3

F

focus groups, 6, 8, 13, 16

Focus groups, 10

G

General College, 1, 2, 4

graphics, 1, 3, 7, 9, 10, 17

H

homework, 4, 6, 14, 15, 16, 18

Homework, 4, 6

I

instructional materials, 11

instructional staff, 8, 23

instructor, 3, 4, 6, 7, 8, 9, 18, 19, 20, 21, 22, 24, 25, 27

Interactive Mathematics, 2, 5, 20, 25

interactive television, 24

interactivity, 1

Intermediate Algebra, 11, 12, 13, 14

ITV, 24, 25

L

learner-centered, 1

learning styles, 10

lecture classes, 5, 11, 12, 13, 14, 15, 16, 18, 19, 30

linear, 21, 23, 31

M

management system, 4, 8, 9

math placement, 10

mathematics placement, 10

models, 18, 20, 21, 26

multimedia, 1, 2, 10, 15, 17, 19, 20, 22, 25, 27, 29

N

nonlinear, 22, 24

O

Overview, 2

P

pass rates, 11

performance, 4, 10

personalized system of instruction, 23

Q

qualitative, 10, 30

quantitative, 10

questions, 7, 8, 10, 12, 16, 18, 19, 20, 21, 22

quizzes, 3, 5, 7, 8, 22, 23, 25

S

schedule, 5, 6, 7, 9, 18, 24, 26

significant difference, 11, 12, 13, 16

significant differences, 10, 11, 15, 25

software, 1, 2, 3, 4, 5, 8, 9, 10, 13, 14, 15, 16, 17, 18, 19, 20, 22, 23, 25, 26, 27, 29

survey, 13, 14, 31

synchronous, 21, 23

T

teacher-directed, 22

teaching-learning enterprise, 2

technology-mediated instruction, 1, 30

Trends, 18

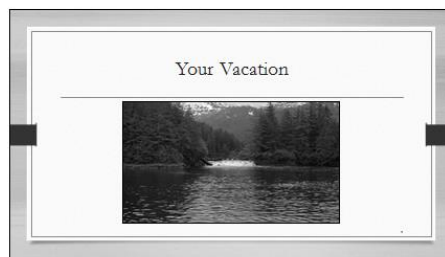
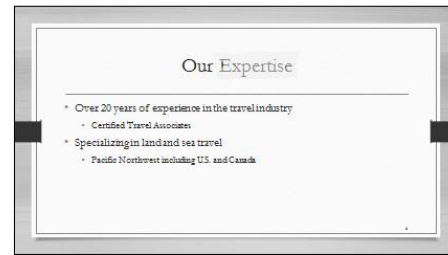
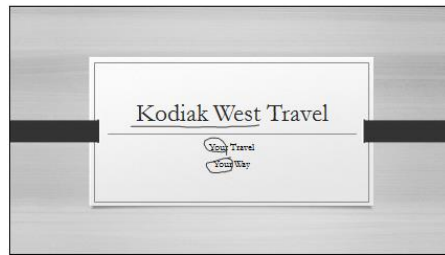
W

WebCT, 25

withdrawals, 12

HW11-1 Overview

Monday, July 29, 2013

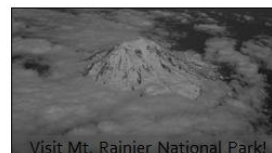
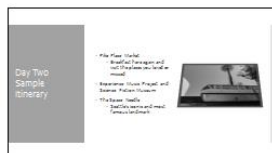
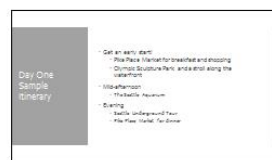


HW11-1 Lastname Firstname HWID Overview Done

1

HW11-2 Itinerary

Monday, July 29, 2013



HW11-2 Lastname Firstname HWID Itinerary Done

1

HW11-3 Bird

Monday, July 29, 2013

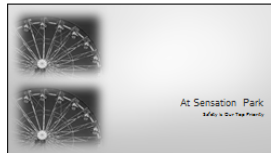
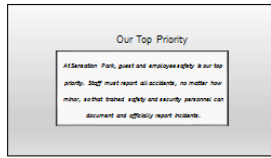
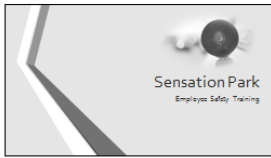


HW11-3 Lastname Firstname HWID Bird Done

1

HW12-1 Safety

Wednesday, July 31, 2013

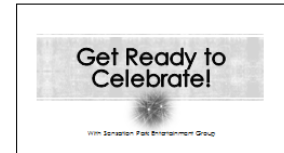
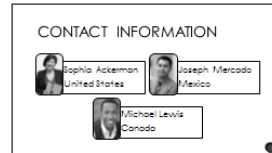
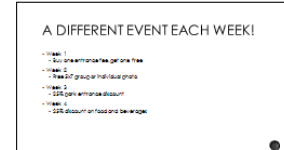


HW12-1 Lastname Firstname HWID Safety Done

1

HW12-2 Celebrations-Grayscale

Wednesday, July 31, 2013

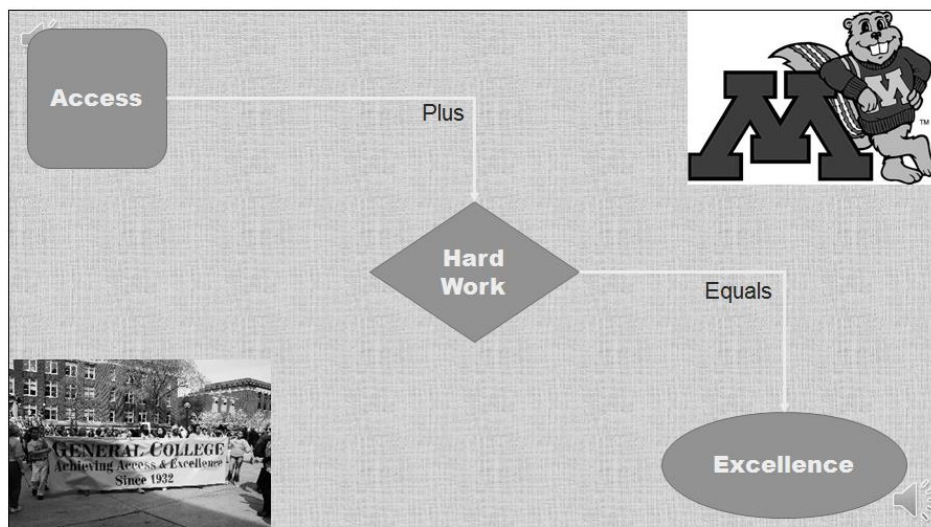


HW12-2 Lastname Firstname HWID Celebrations Done

1

HW12-3 Graphics and Sound

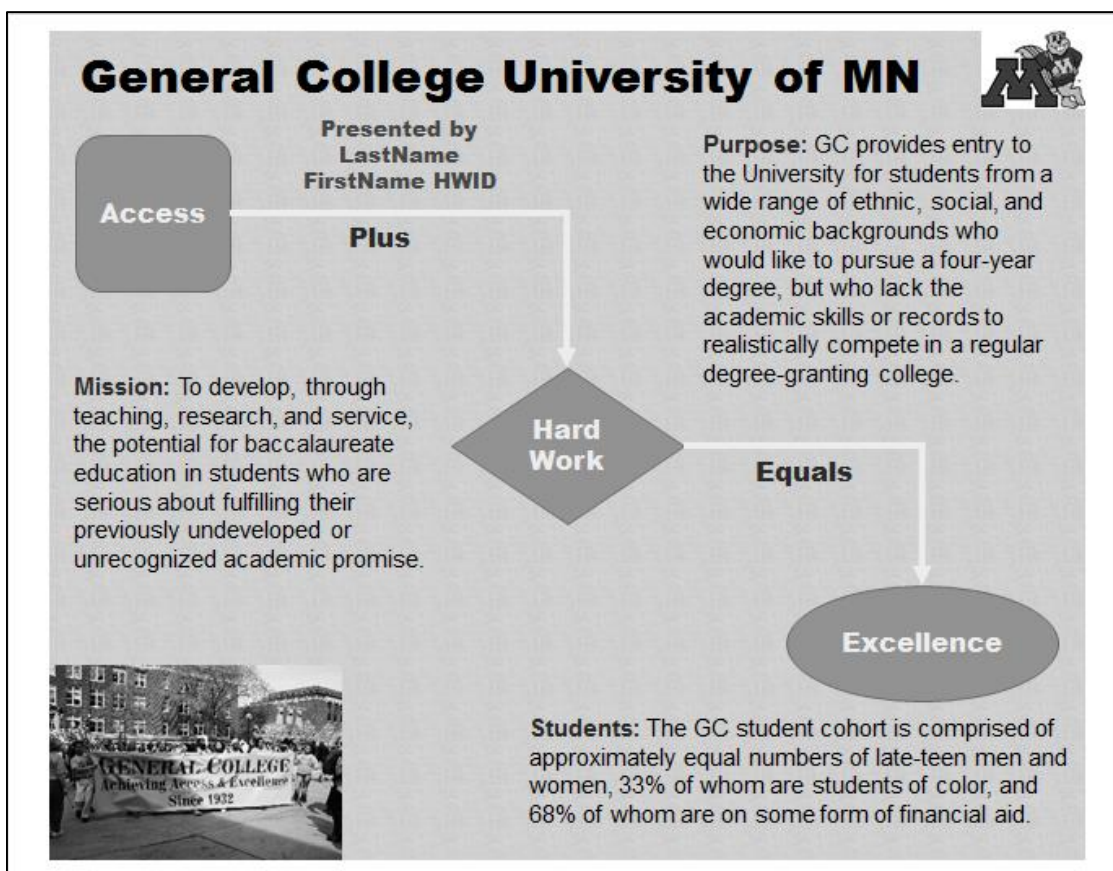
Wednesday, July 31, 2013



HW12-3 Lastname Firstname HWID Graphics and Sound Done

1

HW12-4 PowerPoint Poster



HW13-1 Trails

Thursday, August 01, 2013

Take a Hike!

PARKS, TRAILS, AND SCENIC ROUTES
IN PACIFIC BAY

Improve your physical fitness by exploring Pacific Bay's many paths, trails, and parks.

It's a Great Way To...

Improve your cardiovascular fitness

Learn about local vegetation and wildlife

Get outside and meet your neighbors

Challenge Yourself on a Wilderness Hike

Trail 10 miles in the 10,000-foot mountain range

Wildlife abounds in the woods of our mountains

Unspoiled trails are in virginity and yet bring regular car protection and maintenance

Set a Pace Based on Your Fitness Level

Easy

Moderate

Challenging

Crossroads Park

Oceans Beach Trail

Horizon Vista Park

Madison Trail Park

Pacific Bay State Park

Seaside Beach Trail

For Information on Maintained Trails, Contact Parks and Recreation

HW13-1 Lastname Firstname HWID Trails Done1

HW13-2 Tables

Saturday, August 03, 2013

School Attendance

	Attended	Didn't Attend	% Attended
1860	8	35	15
1870	101	103	50
1880	444	452	50
1900	1000	1019	50

Literacy Rate Claims

	Males	Females	Both
1860	94	98	95
1870	88	88	88
1880	88	93	90
1900	83	85	84

HW13-2 Lastname Firstname HWID Tables Done1

HW13-3 Integration

Saturday, July 25, 2015

Computer-mediated Instruction

Overview of Computer-mediated Software

Structure of Computer-mediated Courses

Early Modules in Class contain

General software

Game and Object

Challenge Courses

Outcomes

Each of the modules is a Computer-mediated Class

Quadratic Transformations

Preferences by Gender and Type

HW13-3 Lastname Firstname HWID Integration Done1

HW13-4 (Mis)-communication

Different People Think Differently!

The wheel cannot be improved!

Don't improve it!

Add 3 more to it, then you have something!

Hmmm...

Animation Panel

Timeline 1: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

HW13-4 Lastname Firstname HWID Communication Word Done

HW14-1 All Students Query

HW14-1 Lastname Firstname HWID All Students Query

8/5/2013

Last Name	First Name	Email	Phone	Student ID
Fresch	Jenna	jfresch@ticc.edu	(512) 555-0857	1023045
Telfer	Larry	ltelfer@ticc.edu	(512) 555-2017	2034834
Ingram	Joey	jingram@ticc.edu	(512) 555-0717	2345677
Vohra	Ashwin	avohra@ticc.edu	(512) 555-0302	2349535
McElaney	Cleta	cmcelaney@ticc.edu	(512) 555-0305	2583697
Wall	WenLi	wwall@ticc.edu	(512) 555-2329	3128456
Snyder	Amanda	asnyder@ticc.edu	(512) 555-9120	3456689
Caputo	Stephanie	scaputo@ticc.edu	(512) 555-2330	3458632
Thomas	Carlis	cthomas@ticc.edu	(512) 555-0301	3569925
Reid	Carla	creid@ticc.edu	(512) 555-2026	3572184
Stavish	Joseph	jstavish@ticc.edu	(512) 555-9360	3586943
Hernandez	Anna	ahernandez@ticc.edu	(512) 555-0301	3593653
Alexander	Rebekah	ralexander@ticc.edu	(512) 555-1017	3768532
Morris	Atonye	amorris@ticc.edu	(512) 555-1018	3852938
Nguyen	Cong	cnguyen@ticc.edu	(512) 555-1004	3856930
Bradley	Christine	cbradley@ticc.edu	(512) 555-2013	4352863
D'Antonio	Avelina	adantoni@ticc.edu	(512) 555-2319	4719238
Alvarez	Eliza	ealvarez@ticc.edu	(512) 555-2025	4739502
Furfy	Jana	jfurfy@ticc.edu	(512) 555-2064	4769304
Parkhill	James	jparkhill@ticc.edu	(512) 555-2323	4852384
Rose	Edward	erose@ticc.edu	(512) 555-2019	5820384
Kakaulian	Anastasia	akakaulian@ticc.edu	(512) 555-2031	5834924
Poon	Laurence	lpoon@ticc.edu	(512) 555-0304	5835035
Soltan	Reza	rsoltan@ticc.edu	(512) 555-9362	5849320
Campbell	Daria	dcampbell@ticc.edu	(512) 555-1016	5860300

Page 1

HW14-1 Advisors Report

HW14-1 Lastname Firstname HWID
Advisors ReportMonday, August 05, 2013
9:19:13 AM

Campus	Last Name	First Name	Email
Northwest	Abromsky	Alexandru	aabromsky@ticc.edu
Northwest	Bell	Dora	dbell@ticc.edu
Northwest	Betancourt	Charles	cbetancourt@ticc.edu
Northwest	Bowman	Nuzhut	nbowman@ticc.edu
Southwest	Briggs	Luis	lbriggs@ticc.edu
Southwest	Capelle	Arturo	acapelle@ticc.edu
Southwest	Friend	Gyula	gfriend@ticc.edu
Southwest	Gilmore	Teshome	tgilmore@ticc.edu
Southwest	Goldani	ZsuZsa	zgoldani@ticc.edu
Southwest	Hackett	Jessica	jhackett@ticc.edu
Southwest	Haq	Mark	mhaq@ticc.edu
Southwest	Hart-Rodriguez	Melanie	mrodriguez@ticc.edu
Southwest	Hasenfeld	Lartha	lhasenfeld@ticc.edu
Northwest	Holland	Timothy John	tjholland@ticc.edu
Southwest	Kilbride	Thea	tkilbride@ticc.edu
Northwest	Kubzansky	Amy	akubzansky@ticc.edu
Southwest	Lang	Phillippe	plang@ticc.edu
Southwest	Michaels	Payne	pmichaels@ticc.edu
Northwest	Ong	Joel	jong@ticc.edu
Northwest	Saguy	Vilma	vsaguy@ticc.edu
Southwest	Sideris	Dana	dsideris@ticc.edu
Southwest	Soja	Binit	bsoja@ticc.edu
Southwest	Suh	Kingston	ksuh@ticc.edu
Southwest	Sweeney	Megan	msweeney1@ticc.edu
Northwest	Szulkin	Martin	mszulkin@ticc.edu
Northwest	Torres	Robert	rtorres@ticc.edu
Southwest	Treiman	Roger	rtreiman@capcc.edu
Northwest	Villareal	Jose Luis	jvillareal@ticc.edu
Northwest	Wazir	Paul	pwazir@ticc.edu

HW14-2 All Events Report

HW14-2 Lastname Firstname HWID All Events

Monday, August 05, 2013 11:02:54 AM

Title	Start Time	End Time	Location
Your Online Reputation	3/9/2018 7:00:00 PM	3/9/2018 9:00:00 PM	Northeast Campus
Internet Safety			
Writing a Research Paper	3/10/2018 4:00:00 PM	3/10/2018 6:00:00 PM	Southwest Campus
Computer Skills			
Resume Writing	3/18/2018 2:00:00 PM	3/18/2018 4:00:00 PM	Northwest Campus
Job Skills			
Careers in the Legal Profession	3/19/2018 2:00:00 PM	3/19/2018 4:00:00 PM	Southeast Campus
Careers			
Transferring to a 4-Year University	4/8/2018 11:00:00 AM	4/8/2018 12:30:00 PM	Northeast Campus
Transfer			
Financial Aid	4/14/2018 7:00:00 PM	4/14/2018 8:30:00 PM	Southeast Campus
CC Info			
Sensitivity Training	4/15/2018 8:00:00 AM	4/15/2018 9:00:00 AM	Northwest Campus
Human Behavior			
Preparing for the Job Interview	4/15/2018 12:30:00 PM	4/15/2018 2:00:00 PM	Northwest Campus
Job Skills			
Class Note Taking	4/18/2018 12:30:00 PM	4/18/2018 1:30:00 PM	Southeast Campus
Study Skills			
Managing Time and Stress	4/18/2018 6:00:00 PM	4/18/2018 7:30:00 PM	Southwest Campus
Study Skills			
Work Smart at Your Computer	4/20/2018 10:00:00 AM	4/20/2018 11:00:00 AM	Northeast Campus
Computer Skills			
Preparing for Tests	4/20/2018 4:00:00 PM	4/20/2018 5:00:00 PM	Southeast Campus
Study Skills			

Page 1 of 1

HW14-2 Locations Table

HW14-2 Lastname Firstname HWID Locations

8/5/2013

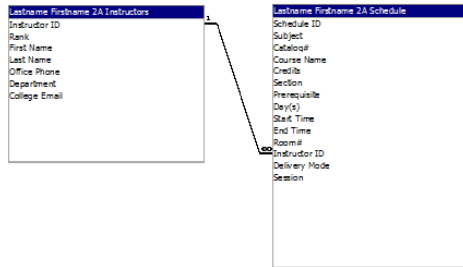
Room ID	Campus/Location	Room	Seats	Room Arrangement	Equipment
NE-01	Northeast Campus	H265	150	Theater	Computer Projector, Surround Sound,
NE-02	Northeast Campus	B105	25	U-shaped	25 Computers, Projectors
NW-01	Northwest Campus	C202	50	Lecture Classroom	Smart Board
SE-01	Southeast Campus	D148	20	U-shaped	White Board
SW-01	Southwest Campus	A15	35	Lecture Classroom	Computer Projector

Page 1

HW15-1 Instructors Courses Relationships Report

Relationships for Lastname_Firstname_2A_Instructors_Courses

Monday, August 5, 2013



HW15-1 No Credits Query

HW15-1 Lastname Firstname HWID No Credits Query

8/5/2013

Subject	Catalog#	Section	Course Name	Credits
HRI	160	N01NE	Executive Housekeeping	
ITE	109	D01NE	Information Systems for Legal Assistants	
ITE	109	N01NE	Information Systems for Legal Assistants	
ITE	115	D01NE	Intro to Computer Applications & Concepts	

Page 1

HW15-2 OR AND Query

HW15-2 Lastname Firstname HWID OR AND Query

8/5/2013

Scholarship Name	Sport	Amount	Award Date
Round Rock Country Club Award	Golf	\$300	5/23/2018
Pflugerville Academic Achievement Award	Volleyball	\$250	5/21/2018

Page 1

HW15-2 Excel Workbook Exported from Access

Student ID	Scholarship Name	Amount	Alumni Donation	Total Scholarship
1034823	Austin Jump Ball Award	\$300.00	\$150.00	\$450.00
1298345	Pflugerville Academic Achievement Award	\$250.00	\$125.00	\$375.00
1846684	First Down Award	\$200.00	\$100.00	\$300.00
2845209	Capital Cities Country Club Foundation Award	\$200.00	\$100.00	\$300.00
2849523	The Touchdown Alumni Association Award	\$600.00	\$300.00	\$900.00
2934853	Spike It Award	\$200.00	\$100.00	\$300.00
3572184	Rivers and Parks Foundation Award	\$750.00	\$375.00	\$1,125.00
3572184	Michael Fresch Foundation Award	\$400.00	\$200.00	\$600.00
3586943	Texas Lakes Sportsmanship Award	\$100.00	\$50.00	\$150.00
3802843	Austin Sports Fellowship Award	\$500.00	\$250.00	\$750.00
3829356	Texas State Baseball Association	\$500.00	\$250.00	\$750.00
3829356	Home Run Foundation Award	\$200.00	\$100.00	\$300.00
3847589	Hoops Sports Award	\$500.00	\$250.00	\$750.00
3852938	Texas Sportswomen Foundation Award	\$300.00	\$150.00	\$450.00
3856958	Austin Country Club Award	\$200.00	\$100.00	\$300.00
3859305	Hoops Fellowship Award	\$500.00	\$250.00	\$750.00
3957203	Gold Helmet Award	\$100.00	\$50.00	\$150.00
4352863	Austin Sports Award	\$500.00	\$250.00	\$750.00
4852384	Texas State Baseball Association	\$300.00	\$150.00	\$450.00
5720358	Hoops National Winner Award	\$400.00	\$200.00	\$600.00
5739437	Go To The Net Award	\$200.00	\$100.00	\$300.00
5748392	District Tennis Club Leadership Award	\$200.00	\$100.00	\$300.00
5834924	Presidential Memorial Award	\$200.00	\$100.00	\$300.00
6738919	Roundball Academic Achievement Award	\$500.00	\$250.00	\$750.00
7384952	Austin Sports Fellowship Award	\$500.00	\$250.00	\$750.00
8394284	Bluebonnet Country Club Foundation Award	\$400.00	\$200.00	\$600.00
8751243	Round Rock Country Club Award	\$300.00	\$150.00	\$450.00
8938456	Dolphin Club Award	\$300.00	\$150.00	\$450.00
8938456	Joseph Ingram Memorial Award	\$400.00	\$200.00	\$600.00
9583924	Texas Science Achievement Award	\$750.00	\$375.00	\$1,125.00

HW15-2 Lastname Firstname HWID Donations Query Excel Done

HW15-3 Course Evaluation

FirstName LastName

HWID

Today's date

HW15-3 Course Evaluation

I accessed the course evaluation web site.

Index

Index entries are followed by a letter that indicates the section of this Study Guide in which the entry is located: **[I]** = Introduction, **[GS]** = Getting Started, **[W]** = Word, **[P]** = PowerPoint, **[E]** = Excel, **[A]** = Access

&

& used in COUNTIFS, 63

A

Access

- default value, 312
- report formatting, 308
- validation rule, 310

- Adding mp3 clip to a PowerPoint slide [P], 275

- Autotext [W], 133

B

- Bookmark [W], 235

- Borders for tables [W], 156

- Borders, table [W], 156

- Button

- auto fill options [E], 88, 91
- increase indent [W], 142
- link to previous in header [W], 240
- mark all button for index [W], 243
- mark entry for index [W], 243
- minimize window [GS], 20
- new style [W], 207
- no formatting in Find and Replace [W], 160

C

- Character style [W], 202

- Chart

- 3-D [E], 41
- bar [E], 36
- line [E], 39

- chartsheet [E], 40

- Clear formatting from a style [W], 215

- Clip art

- insert into PowerPoint [P], 275
- insert into Word [W], 136

- Codes, wildcard [W], 288

- Collapse button of document map [W], 232

- Computer access [I], 1

- Conditional format [E], 53, 97
- connector [P], 273

- Copy Worksheet [E], 34

- COUNTIF [E], 45

- COUNTIF function [E], 92

- COUNTIFS

- Use cell references in, 63

- Create PowerPoint

- presentation from Word document [P], 287

- Crop a picture [P], 267

- Cross reference [W], 235

- Custom format [E], 54, 91

D

- Data Validation, 71

- Declaration of Independence [W], 202

- Default value [A], 312

- Dialog box

- bookmark [W], 235
- format picture [P], 266
- new style [W], 207
- page setup [W], 239

- Display formulas [E], 34, 47

- Document map [W], 231

E

- Even page header [W], 240

- Exam

- information on Excel exam, 129

- Excel

- absolute reference [E], 61
- conditional format, 53, 97
- COUNTIF function [E], 92
- custom format [E], 54, 91
- display formulas [E], 34, 47
- format chart [E], 80
- hide rows [E], 44
- HLOOKUP function [E], 59
- hyperlink, 98, 117
- IF function [E], 48, 50, 90, 93
- line chart [E], 39
- sort data, 101
- SUMIF function, 45, 92
- trendline [E], 83
- VLOOKUP function [E], 64

- Expand button of document map [W], 232

F

- Field code

- in mail merge [W], 190

- in Word [W], 131

- fields, update, 135

- File name extension [GS], 14

- Files needed [GS], 9

- Files, finding **[GS]**, 15

- First page header [W], 240

- Format

- chart [E], 80
- paragraph [W], 160
- picture [P], 266

- Formula, sum in Word table [W], 172

H

- Header

- even page [W], 240
- first page [W], 240
- odd page [W], 240

- Help

- finding files [I], 15

- Hide rows [E], 44

- Highlights [W], 154

- HLOOKUP function [E], 59

- Hyperlink

- Excel, 98, 117
- Word, 237

I

- IF feature in mail merge [W], 186, 193

- IF function [E], 48, 50, 90, 93

- Increase indent button [W], 142

- Indent markers for paragraphs [W], 147

- Insert

- Excel chart into PowerPoint [P], 294
- graphic into PowerPoint [P], 291

- page number [W], 235

- photo [P], 274

- section [W], 219

- ISERROR function, 107

K

- Keep lines together [W], 139, 211

- Keep with next [W], 139, 211

- Keyboard Shortcuts [GS], 19

L

LEFT function, 105
 Line and page breaks [W], 211
 Link to previous button in header [W], 219

M

macro, 113
 Mail merge
 create document [W], 188
 field code [W], 190
 IF feature [W], 193
 Mark button for index entry [W], 243
MID function, 106
 Modify a style [W], 209
 motion path [P], 282

N

New style, create[W], 207

O

Odd page header [W], 240
 Orphan [W], 138, 211
 Outline, setting up [W], 141

P

Page break before [W], 139, 211
 Page setup [W], 239
 Paragraph
 indent markers [W], 147
 keep lines together [W], 139, 211
 keep with next [W], 139, 211
 line and page breaks [W], 211
 page break before [W], 139, 211
 spacing before [W], 160, 209, 212
 style [W], 209
 Paste unformatted text [P], 287
 PowerPoint
 adding an mp3 clip to a slide [P], 275
 create presentation from Word document [P], 287
 insert a photo [P], 274

insert Excel chart [P], 294
 insert graphic [P], 291
 insert sound [P], 275
 ruler [P], 272
 Print field codes [W], 175
 Print selected pages or sections [W], 246

R

Replace feature [W], 155, 159, 162
 Report formatting [A], 308
 Ruler
 PowerPoint [P], 266, 272
 Word [W], 146, 215

S

ScreenTip [E], 60, 81, 92
 Section break [W], 218
 Shutting Down the Computer [GS], 20
 SmartArt [W], 143, 191
 Sort data
 Excel [E], 101
 Word [W], 171
 Sound clip [P], 275
 Spacing before in a paragraph [W], 160, 209, 212
 Start Button [GS], 15, 16
 Start Menu [GS], 16
 Style
 character [W], 202
 clear formatting [W], 215
 modify [W], 209
 paragraph [W], 209
 styles and formatting task pane [W], 209
 SUM formula [W], 172
 SUMIF function [E], 45, 92
 Symbols, inserting [W], 146

T

Table property [W], 169
 Tabs, setting [W], 145
 Task pane
 clip art [P], 275
 document map, 231
 styles and formatting [W], 209
 Textbook for PsTL 1571 [I], 1
 Trendline [E], 83

U

Unformatted text, paste [P], 287
 update fields [W], 135
 USB drive [GS], 11
 USB drive, removing safely [GS], 20

V

Validation rule [A], 310
 VLOOKUP function [E], 64

W

Widow [W], 138, 211
 Wildcard [W], 288
 Windows Key [GS], 15, 16
 Word
 autotext, 133
 borders for tables, 156
 clip art, inserting [W], 136
 count number of words, 151
 field codes, 131
 highlights, 154
 IF feature in mail merge, 186, 193
 page number, inserting [W], 235
 picture, insert from file [W], 220
 print selected pages or sections [W], 246
 replace feature, 155, 159, 162
 section break, 218
 section, inserting [W], 219
 SmartArt, 143, 191
 sort data, 171
 symbols, inserting, 146
 table properties, 169
 tabs, 145
 text from file, inserting [W], 212
 Word count [W], 151
 WordArt [P], 301
 Worksheet, Copy [E], 34

X

XE code in an index [W], 242