# CI 1871

# Computer Literacy and Problem Solving Study Guide for Fall 2019 Table of Contents

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#### **Course Details**

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# **Prerequisites**

You should have some familiarity with Microsoft Windows, which is the operating system<sup>1</sup> most PCs run on. The textbook is written to Microsoft Windows 10, but older versions may also work.

If you have never used Windows, you will find it useful to read textbook pages 1 through 94, which contain basic information that will make the rest of the course go more smoothly for you. You do not have to do the activities.

#### **Textbook**

Gaskin, Vargas, Geoghan & Graviett. GO! with Microsoft Office 365, 2019 Edition Introductory. New York: Prentice Hall, 2020. ISBN: 9780135417812. We do not use the CD or access code that comes with some new books so a used copy is fine.

# **Computer access**

You may use any Windows computer that has the 2016 or 2019 versions of Microsoft Excel, Word, and PowerPoint. If you want to do the extra credit Access projects then you will need that program also. You can get Office 365 free through the U. See the syllabus for details. The Macintosh versions of the software are different from the Windows versions so using a Mac for this course will be a bit more challenging. It is possible to set up a Windows partition on your Mac but you might find that expensive. 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.

That being said, the textbook has many "Mac Tips" that point out how things are different on the Mac. You might want to use your Mac for as much as you can and then use the classroom or public labs Windows computers for the parts that are confusing.

#### Be sure to read footnotes

<sup>&</sup>lt;sup>1</sup> An **operating system**, like Windows 10 or Mac OS, is a program that manages other programs, like Word. A **program** (AKA **application** or simply **app**) is a set of instructions that accomplishes a task.

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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.

Lette	er Grade	Points Needed	Definition			
Α	= 4.00	100 – 95	Represents achievement that is outstanding			
A-	= 3.67	94 – 90	relative to the level necessary to meet course requirements			
B+	= 3.33	89 – 86	Represents achievement that is significantly			
В	= 3.00	85 – 82	above the level necessary to meet course			
B-	= 2.67	81 – 80	requirements			
C+	= 2.33	79 – 76	Decree de la live de la la constante de			
С	= 2.00	75 – 73	Represents achievement that meets the course requirements in every respect			
C-	= 1.67	72 – 70				
D+	= 1.33	69 – 68	Represents achievement that is worthy of			
D	= 1.00	67 – 65	credit even though it fails to meet fully the course requirements			
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			

Course Details SG3

Projects 14 and 15 cover Access. They are for extra credit and NOT required nor are they covered on the final exam. If you do them the scores will be added to your homework total when final grades are calculated.

Thus, it is possible to earn up to 110% on homework.

# **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 Project 5 you will use Excel to find out how much a person would need to sell in order to make a certain level of income. 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 Project 5 you will use Excel to calculate and summarize sales commissions for employees. 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, and social science. For example, in Project 13 you will create a presentation that includes text, tables, charts, audio, animation, and video to inform people about the benefits of computer-mediated instruction. In Project 10 you will 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 26 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 105.** The numbers outlined by green pentagons, like this indicate keystrokes or mouse clicks that you should do on your computer as you go through the material. As you do each step, compare your result with the screen shots. The explanations are quite good so carefully reading them will enhance your learning.

On the next page, **Step 3** begins "Type **Internships Available** and then press 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 115, Step 6. 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 5 ends with "Press Ctrl + Home to move to the top..." Ctrl + Home tells you 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 123, Step 5 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.

#### You **NEVER** have to print in color.

Look at the very back of the book, page G-1. 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 textbook that contain instruction on specific topics. If you forget how to do something, look it up in the *Index*.

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# **Companion Web Site for CI 1871**

This course does not have a Canvas site. Instead, on my faculty web site you will find links that will allow you to download the files you will need, the syllabus, this Study Guide, and exam instructions. The URL is <a href="http://www.z.umn.edu/robertson">http://www.z.umn.edu/robertson</a>

# **Study Guide**

This Study Guide has three parts.

Introductory material: You are reading that part right now.

Lessons: There are 13 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.

There are two additional projects, 14 and 15. These cover Access. You may do those, if you wish, for extra credit. Getting all the points on those two projects will allow you to earn 110% on homework. Access will NOT be covered on the final.

Homework keys: Starting on page SG347 of this Study Guide <sup>2</sup> 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 textbook on one line stops and continues on the next line, and page breaks, which are the points where the textbook 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 will only take a minute or two but it is time well spent.

<sup>&</sup>lt;sup>2</sup> Page numbers with **SG** in front of them refer to pages in this **Study Guide**.

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#### 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 display is not 1280 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, and presentations 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 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 **Homework Submission Form** (found in your syllabus given out in class) at the front, and stable 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.

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# Step 5 Backup Be sure to read footnotes

It is good practice to backup your files<sup>3</sup> every so often, especially if they are stored on a USB drive (also known as Thumb drive, Memory stick, and Flash drive)<sup>4</sup>, which can be lost or broken. To backup, 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 **SG23**).



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.

# 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 four-hour block of time to go through all the activities and complete the reading (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 the 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.

<sup>&</sup>lt;sup>3</sup> A **file** is information, such as a Word document, an Excel workbook, or a photo, that is stored and organized in a container known as a **folder**.

<sup>&</sup>lt;sup>4</sup> 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.

# 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 (e.g., Excel, Word, PowerPoint) you will find it useful to work through the textbook activities at the beginning of the textbook (pages 1 to 94). 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 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 <a href="https://it.umn.edu/technology/google-drive?km">https://it.umn.edu/technology/google-drive?km</a>

- a. To download the files, follow the steps given below. Note that some of the screen shots are from my office computer running Windows 10. If you are using Windows 7 or Windows 8 things may look a bit different but you should be able to follow the instructions without too much trouble.
  - 1. Open a web browser such as Microsoft Edge 🦲 or FireFox 🌅
  - 2. Type the following in the address bar near the top of the screen.

#### z.umn.edu/1871f19

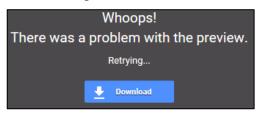


This is a "shortened" URL that actually points to

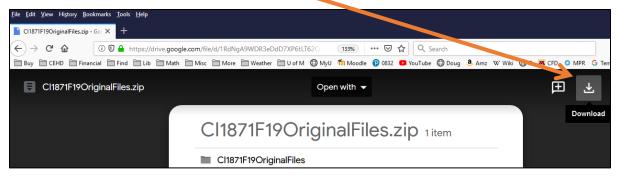
https://drive.google.com/open?id=1-S-tbBJY0oMarlLioklpUhMVnkal 2y

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 **1871f19**, which is easy to remember within the context of this course. There is a short introduction to this service, which anyone can use, at **z.umn.edu/zhelp** 

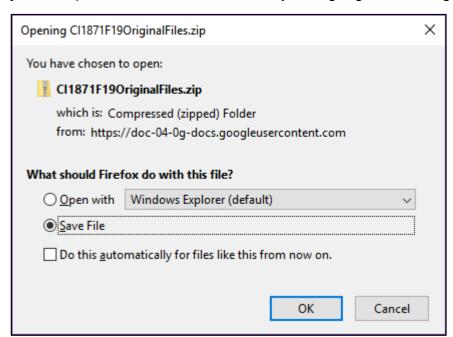
**3.** Tap the **Enter** key. Google Drive will open and show the file. If you get this message



click **Download**. Otherwise, move the cursor to the spot in the upper right and click the download arrow.



**4.** Google Drive may give you a warning that the file is too large to scan for viruses. In that case, click **Download anyway**. Depending on how your browser is set up, the **Cl1871F19OriginalFiles** 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 button next to Save File.

5. Click OK.

6. Close your browser by clicking the **X** in the upper right corner of its window. You should see on your desktop the folder you just downloaded. Notice the little zipper on the icon. To save download time and server space, the folder you just downloaded is compressed in **ZIP**<sup>5</sup> format.



- b. **UNZIP** the folder by doing the following:
  - 1. Point to the folder, right-click, and click **Extract All**. 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\CI1871F19OriginalFiles

**C:** represents the hard drive of my computer.

\ is a subdirectory delimiter (folder separator).

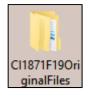
**Users** means my computer is set up for multiple users.

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

**Desktop** means the folder will be put on my desktop.

Cl1871F19OriginalFiles 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 a few seconds you will see a new folder called Cl1871F19OriginalFiles. The new folder contains folders for each section of the course (Excel, Word, PowerPoint, and the extra credit Access folder). Each folder contains the UNZIPPED files you will need. Notice that this folder has no zipper.
- 3. Right-click the Cl1871F19OriginalFiles folder, select Rename, type Cl 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.

<sup>&</sup>lt;sup>5</sup> **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".

Very useful

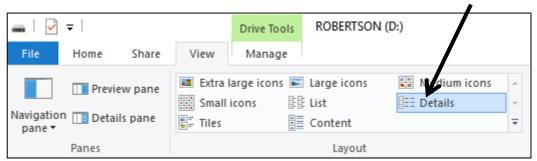
**6.** To see the contents of your USB drive, tap **Win + e**. That is, hold down the Windows key and tap the letter **e** on the keyboard.



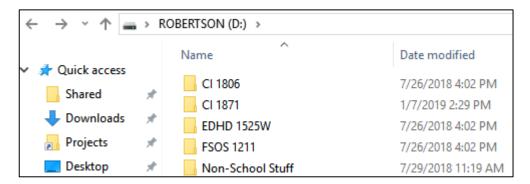
You can also open your USB drive by right-clicking the Windows icon, (left corner of the taskbar, which is at the bottom of the screen), clicking **File Explorer**, and selecting your USB drive. It probably will have a drive designator of **D**: or **E**: as in ROBERTSON (D:)

The name of my USB drive is **ROBERTSON**; the name of 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, if there is one. The classroom computers do not have one. Your USB drive might show up as **D:**
- E: is for a USB drive.
- F: is for another USB drive.
- 7. If necessary, click the **View** tab and, in the **Layout** group, select **Details**.



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

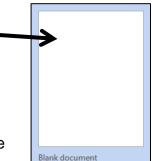


**Option 2** If your computer has a Word icon on the desktop, click it **twice**.

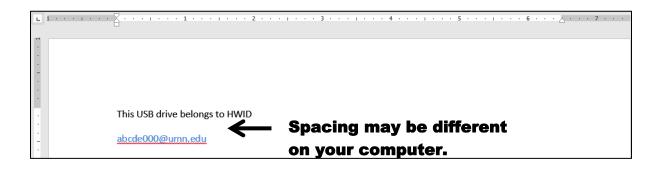


**Option 3** In the search box at the lower left of the window, type **Word** and select **Word 2019**.

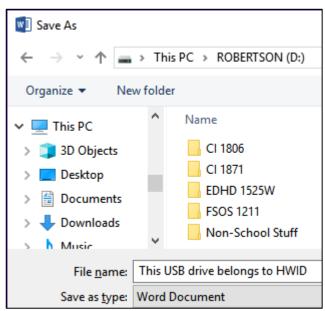
2. After Word starts, click Blank document.



- Type the following: This USB drive belongs to HWID where HWID is your four character homework ID 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 doing this because you are going to save your files to this USB drive. If you lose your drive 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 SG105 and more on page SG178.



- 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 name of your USB drive (mine says **ROBERTSON**)



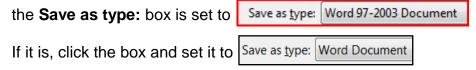
Notice that Word is suggesting the first line of text in the file for the **File Name**. That is the name you want.

9. Click Save. Word will save the file as This USB drive belongs to 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.

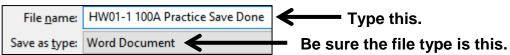
- 10. Tap F12 (on the top row of keys). This will open the Save As dialog box. This allows you to save another copy of the file using a different name and/or in a different location.
- 11. Double-click the CI 1871 folder to open it.
- **12.** Double-click the **Word Files** folder to open it. You will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



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

#### **HW01-1 HWID Practice Save Done**

where **HWID** is the four-character homework ID from your syllabus. If your **HWID** is **100A**, you would type this:



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

#### **Word Recognition**

If you have to type a large document and you are not a good typist you might try Word's **Dictate** feature. You will need a microphone and Word 365 installed on your computer. If you look in the upper right corner of the Word window, you will see the dictate icon.



Click the icon and a red dot will appear in the icon showing you are being recorded. As you speak, the words will be typed on your screen. The transcription is good but not perfect so you will have to go back and do some editing. The process is a bit slow and in fact a good typist can go faster than the word recognition but you might want to give this a try just to see how it works. Here's a web reference if you'd like more information

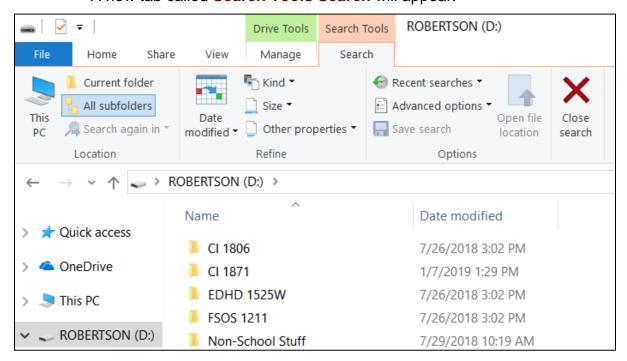
https://support.office.com/en-us/article/dictate-your-documents-d4fd296e-8f15-4168-afec-1f95b13a6408

#### **Finding Files**

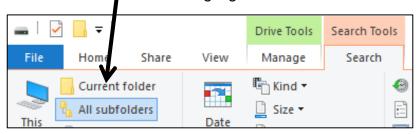
Windows has a powerful search engine that will help you find and open files without having to locate them by sifting through layers of folders. You can search for files with particular names, contents, modification dates, and many other characteristics.

- a. To see how this works, try the following. Note that your results will be different from mine because we are using different computers that contain different files and folders.
  - 1. On the **taskbar** (bottom row of screen), click the **File Explorer** icon Or, tap **Win + e** (that is hold down the Windows key **a** on the keyboard and tap the **e** key). The **e** stands for **Explorer**.

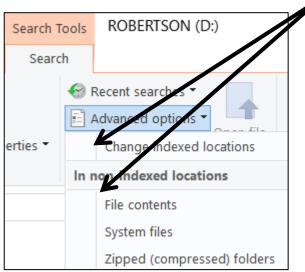
2. Click your USB drive to open it. My drive is ROBERTSON (D:) In the upper right, click in the box that says Search ROBERTSON (D:) A new tab called Search Tools Search will appear:



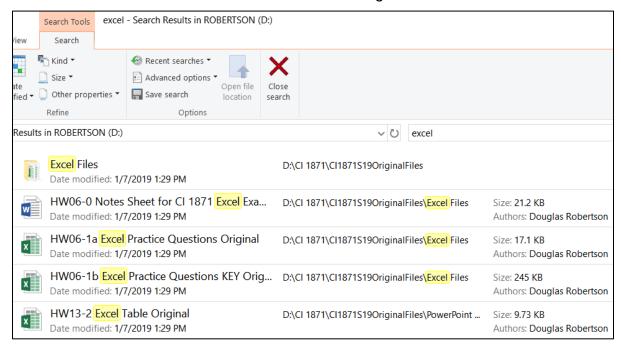
On the **Search Tools Search** tab, in the **Location** group, be sure **All subfolders** is highlighted.



In the **Search Tools Search** tab, in the **Options** group, click **Advanced options** and be sure nothing is checked.

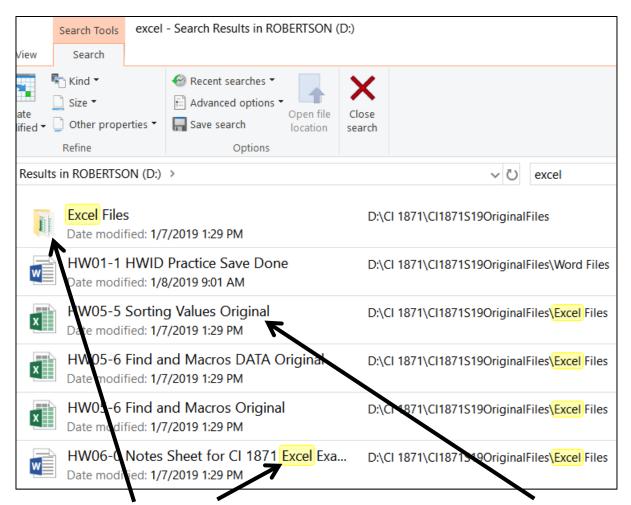


3. Type excel in the search box. This will search the USB drive for files and folders whose name contains the letters excel. Capitalization of words does not matter so Excel or EXCEL will give the same result as excel.



This shows that the USB drive ROBERTSON has one folder and four files whose names contain the word **excel** (or **Excel** or **EXCEL**).

4. In the Search Tools Search tab, in the Options group, click Advanced options and CHECK File contents. Now the search will include files that contain the word excel (or Excel or EXCEL) in their names AND in their contents.

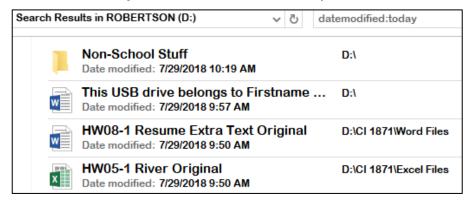


This lists folders and files that have **excel** in their names and also files that contain **excel** somewhere inside them.

b. In searches, you can use Boolean operators<sup>6</sup> such as AND, OR, and NOT. For example, typing excel OR original shows all files that contain either word. Typing exc OR ori lists the same files plus others that start with the letters exc (e.g., exciting) or ori (e.g., origami). You must use CAPITAL LETTERS for the operators.

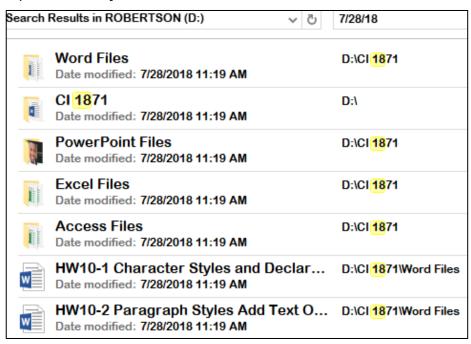
Named after the 19<sup>th</sup> century English mathematician, philosopher, and logician George Boole, who is considered one of the founders of the field of computer science.

- c. You can also search for items that were modified on specific dates. To see how this works, do the following:
  - 1. Delete any text that is in the search box.
  - 2. On the **Search Tools Search** tab, in the **Refine** group, click **Date modified** and select **Today**. Notice the search box says **datemodified:today**.



So far today, July 29, 2018, I have modified 1 folder and 3 documents...

 You can also search for files modified on any specific date. For example, to see the files I modified on 28 July 2018 I clicked in the search box and replaced Today with 7/28/18.



This displayed the names of 113 files and folders I modified on 7/28/18.

- **4.** To find file names that were modified within a range of dates, type the dates with two dots between them. For example, to find the names of files that were modified between 26 July 2018 and 29 July 2018 in the search box type **datemodified:7/26/2018..7/29/18**
- 5. Close all open windows.
- d. To sign out of a computer in 128 Appleby classroom, tap the **Windows** key, click your account icon and select **Sign out**.

#### **Keyboard Shortcuts in Windows 10**

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** keys.

Open the Start Menu.

Minimize all windows and show the desktop. Tapping this again restores all the minimized windows.

Very useful

P + e Open the Computer window (to show drives C:, D:, E:, etc.).

**Ctrl + y** Redo the last action.

**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 **four** homework projects and turn them in for grading. Each begins with the statement of a **Problem** and the activity provides the solution.



**Problem:** How can you open and save Word documents?

- a. This first problem is a quick one to be sure you know how and where to save your files and to remind you of the glossary (contains definitions of words used in the text) and index (contains the page numbers of various topics in the text). Both are located at the back of the text.
  - 1. Navigate to the CI 1871 folder and double-click it.
  - 2. Double-click the folder Word Files.
  - Double-click the file name HW01-1 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. On a laptop you may have to hold down the Fn key as well as the Ctrl key and tap the End key.

- **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 textbook 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.

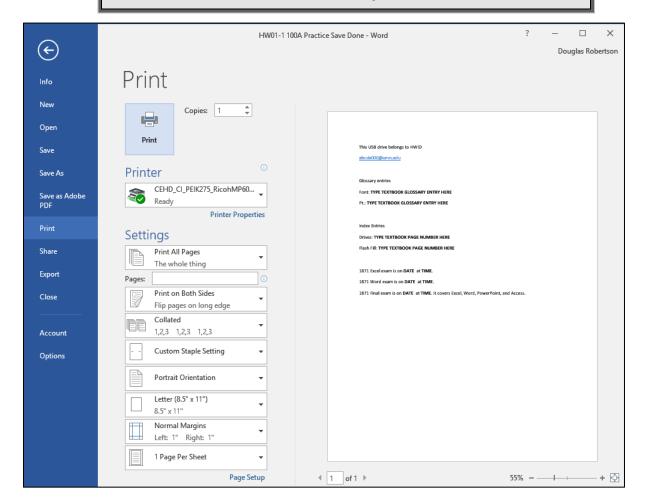
1871 Word exam is on DATE at TIME.

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

**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 128 Appleby.

- b. Print the document by doing the following:
  - 1. Tap Ctrl + p to display the Print dialog box.

#### You NEVER have to print in color.



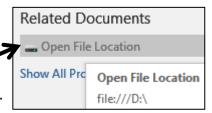
2. Compare the preview with the key on page SG347 of this Study Guide. If you need to make corrections, tap the Esc key (upper left corner of the keyboard) to get back to edit mode and then make your changes. When you are sure your document matches the key, print the file by taping Ctrl + p (if needed) and then clicking the Print button.

Keep the printed output to hand in with the other parts of this project.

c. Do the following to open the folder where the file HW01-1 HWID Practice Save Done is saved:

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).

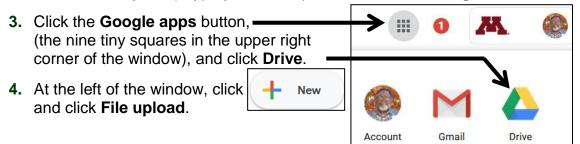
- 3. Close the folder you just opened.
- **4.** Tap the **Esc** key to close **Backstage** view and return to normal view.
- d. Save the document and then close it by clicking **X** in the upper right corner.

#### **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 Aps button if your U of M email is open. Do the following:
  - 1. Start a web browser, type mail.umn.edu in the address bar, and tap Enter.
  - 2. Type your Internet ID (the characters in your U of M email address to the left of the @ symbol), type your email password, and click **Sign In**.



Navigate to your file HW01-1 HWID Practice Save Done and double-click.
 When the upload is complete, you will see an Uploads completed window.

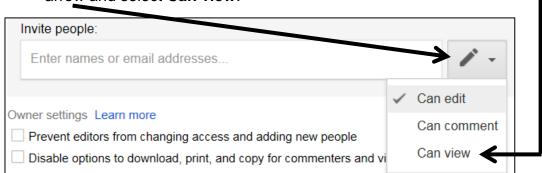


6. Click the X to close the window. The file will be listed.



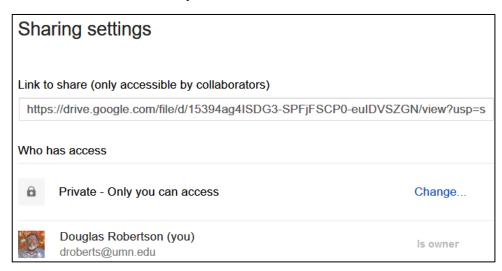
Now, you need to specify who can access your uploaded file.

- 7. Right-click the file name and select **Share**. Share...
- 8. Click Advanced to show the Sharing settings.
- **9.** To **not** allow others to change the file, click the pencil icon down arrow 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 window shows me as the owner of the file and that it is initially set to **Private** so that only I can access it.



- 10. Click Change to see the other sharing options.
- 11. Click the button to the left of **On 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.

**14.** To get the link, right-click the file name and click **Get shareable link**. You will see the following confirmation:

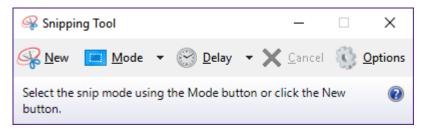
# Link copied to the clipboard.

The link is now on the clipboard. You can send it to anyone you want to be able to view your file.

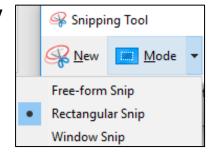
- c. Do the following to take a screenshot of your **Google Drive** homepage:
  - 1. Start Word and open a blank document.
  - 2. Type **HW01-2 HWID**, where **HWID** is your four-character homework ID from your syllabus.
  - 3. Tap Enter two times.
  - 4. Click the Google Drive window to make it active
  - 5. On the lower left side of the keyboard, tap the **Windows** key **(2)** (between **Ctrl** and **Alt**) to open the **Start** menu.
  - 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.



- Click Options and be sure Always copy snips to the Clipboard is checked.
- 9. Click OK.
- Click the Mode down arrow 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. Note that your Google Drive window will look different from mine.

- d. Print the document, save it using the name **HW01-2 HWID Google Drive Done**, and close it.
- e. Close your web browser.

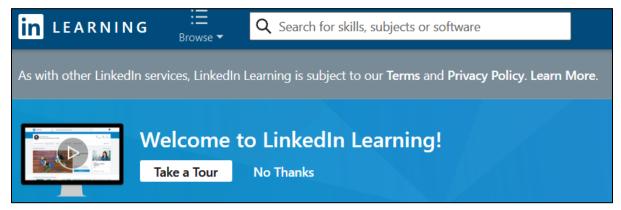
#### **HW01-3 Web-Based Training Using LinkedIn Learning**

**Problem:** How can you get online training videos on a wide range of topics?

To make extensive online training available to all students, staff, and faculty, the University provides free access to **LinkedIn Learning**, which includes access to **Lynda.com**, a learning platform that teaches skills in a video format. Lynda.com was founded in 1995 by Lynda Weinman and Bruce Heavin. Users may watch videos on **Business**, **Creativity**, and **Technology**. It has videos that cover some of the content of this course. In this project, you will have an opportunity to explore the site and watch a brief video of your choosing.

More information on LinkedIn Learning may be found at <a href="https://it.umn.edu/technology/linkedin-learning">https://it.umn.edu/technology/linkedin-learning</a>

- a. Create a new Word document.
  - 1. Start Word and open a new blank document.
  - All on one line, type HW01-3 HWID Web-Based Training Using LinkedIn Learning, where HWID is your four-character homework ID from your syllabus.
  - **3.** Tap **Enter** two times.
  - **4.** Tap the **F12** key, navigate to the Word folder, and save the document using the name **HW01-3 HWID Web-Based Training Done**.
- b. Access online learning videos by doing the following:
  - 1. Start your web browser and go to <a href="https://www.linkedin.com/learning/">https://www.linkedin.com/learning/</a>



2. Click **Take a Tour** to view a 2.5 minute introduction.

When it is done, close the video window.

3. To view a list of topics, click the **Browse** down arrow:

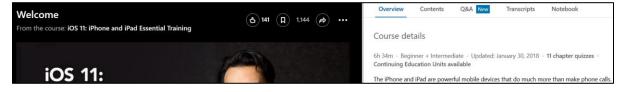


In the search box, type anything you are interested in. I typed **ipad training**.

4. I was interested in the course iOS 12: iPhone and iPad Essential Training. The screen shot below shows the course is 5 hours and 23 minutes in duration.



I clicked that. The **Welcome** video started and a menu was displayed on the right.



I then clicked **Contents** to get a list of all the parts of the course.

- 5. For this problem, click any part of any video and play it. Use the Snipping tool as you did on page SG25 to take a screen shot of the video at any point.
- **6.** Switch to Word and paste the screenshot.
- 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:
  - Navigate to your Word Files folder and open the document HW10-1 Character Styles and Declaration Original, which is one of the files you downloaded 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 box. In the File name box type HW01-4 HWID Pdf Done.
  - 3. Click the Save as type down arrow and select PDF.

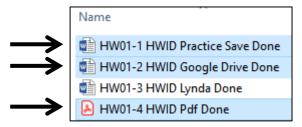


4. Click Save. An accurate copy of this file now can be opened by any computer with the aid of Adobe Reader, a program that is available free from <a href="http://get.adobe.com/reader/?promoid=JZEFU">http://get.adobe.com/reader/?promoid=JZEFU</a>

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.

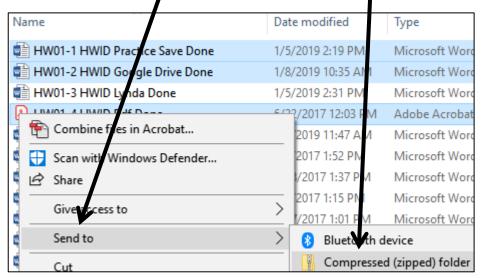
- If necessary, close the newly created pdf file. Also, close HW10-1
   Character Styles and Declaration Original without saving changes to it.
- b. Do the following to email to **yourself** (NOT me!) a compressed folder that contains some files:
  - 1. Navigate to the **Word Files** folder.
  - 2. Click **ONCE** the icon just to the left of file name **HW01-1 HWID**Practice Save Done.

 Hold down the Ctrl key and click the icons next to the file names HW01-2 HWID Google Drive Done and HW01-4 HWID Pdf Done.

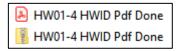


Three items are selected.

4. With the arrow pointing at the icon next to file HW01-4 HWID Pdf Done, 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.



- Right-click the file name on the zipped folder, select Rename, and type HW01-4 HWID ZIPPED Done
- 6. Open your email program and compose an email with the message:

  Attached is the compressed file.

  YOUR EMAIL ADDRESS
- 7. Type your own email address in the To box and HW01-4 in the Subject box.

  HW01-4

  Attached is the compressed file
- 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 HWID ZIPPED Done. The file will be attached to the email.

HW01-4 HWID ZIPPED Done.zip (279K)

**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 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.



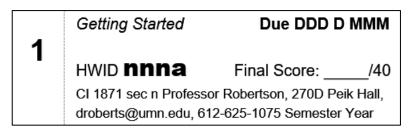
- 5. Click at the end of the new Word document and then tap Ctrl + v to paste the screen shot into the document.
- d. Tap Ctrl + P and compare the preview with the key. Make needed corrections, print, save the document using the name HW01-4 HWID Email Done and close it.

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

1. Put your 4 homework papers in the following order:

HW01-1 Practice Save HW01-2 Google Drive HW01-3 HWID Web-Based Training HW01-4 PDF Files

2. Cut out Submission Form 1 (from your syllabus) 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 them to Google Drive.

# **Project 2**

# **Excel Chapter 1: Creating Worksheets and Charts**

**Step 1 Read** Read the introductory material on page 315 of the textbook.

**Step 2 Activities** Turn on the computer and open the textbook to page 316.

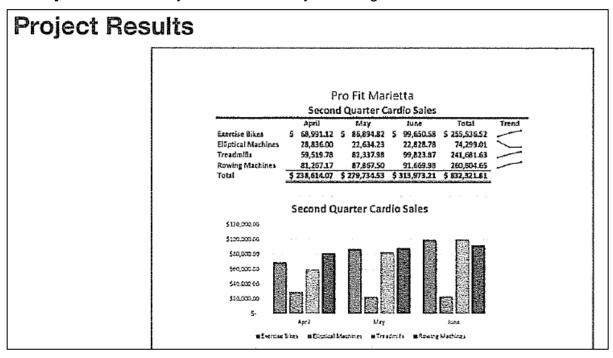
We are not using MyLab IT so **SKIP Project Files for MyLab IT Grader**.



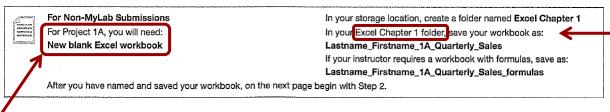
#### Project Files for MyLab IT Grader

- 1. In your storage location, create a folder named Excel Chapter 1.
- 2. In your MyLab IT course, locate and click Excel 1A Quarterly Sales, Download Materials, and then Download All Files.
- 3. Extract the zipped folder to your Excel Chapter 1 folder. Close the Grader download screens.
- 4. Take a moment to open the downloaded Excel\_1A\_Quarterly\_Sales\_Instructions; note any recent updates to the book.

Just below that, under **Project Results**, there is a picture of how your output will look after you finish all the activities for Project 1A Sales Report and before you make the changes outlined in this Study Guide. This is not the final result for **Project 1A** because you will add to it by following the instructions below.



Just below the **Project Results** are directions for those **NOT** using MyLab IT. That is us.



This lists the files you will need for **Project 1A**. For this first project, you will need a new blank Excel workbook and nothing else.

We are not going to use sub folders (e.g., Excel Chapter 1). Save all your Excel files in the Excel Files folder so you can see them all at once.

Note that if the resolution of your display is not 1280 x 768 *things may look a bit different from the screen shots in the book*. Don't worry, especially if you need to increase or decrease the widths of cells to make things look right on your computer.

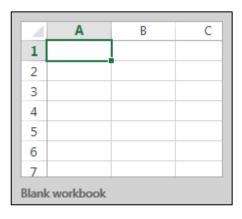
#### Keep this in mind:

- Do NOT print when the textbook instructs you to print.
- Do NOT do GO! With Google Sheets (pages 345-346).
- When you have completed Project 1A, do Project 1B (pages 348-362).
- Do NOT do GO! With Google Sheets (pages 363-364).
- Do **NOT** do **GO! To Work** (page 365).

**Project 1A:** Start at the top of page 317.

**Instead of Activity 1.01** step 1 do the following:

1. Start Excel and click **Blank workbook** to open a new blank workbook.



2. Tap the F12 key to open the Save As dialog box. You can also do this by clicking the File tab, clicking Save As, and then clicking Save As again.

3. Navigate to the Excel Files folder on your USB drive.



**4.** In the **File name** box replace **Book1** with:

LastName\_FirstName\_1A\_Quarterly\_Sales

where **LastName** is **YOUR** last name and **FirstName** is **YOUR** first name.

- 5. Click Save.
- **6.** Complete the rest of the Activities for this Project EXCEPT do **NOT** do steps 11 and 12 on page 344.
- 7. Return here when you have completed Project 1A on page 344.

Do NOT do GO! With Google Sheets.

**Project 1B:** When you have completed Project 1A, start at the top of page 348.

**Instead of Activity 1.18** step 1 do the following:

- Open a blank Excel workbook and save it to your Excel Files folder using the name Lastname\_Firstname\_1B\_Plyo\_Products
- 2. Complete the rest of the Activities for this Project EXCEPT do **NOT** do steps 12 and 13 on page 362.
- 3. Return here when you have completed Project 1B on page 361.

Do NOT do GO! With Google Sheets or GO! To Work.

**Step 3 Homework** After you have completed Projects A and B return here, do the following additional activities, and turn them in for grading. A list of what to turn in for grading is on page **SG46**. The output keys begin on page **SG348**.

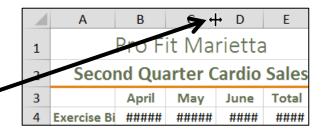
#### **HW02-1 Quarterly Sales (Based on Project 1A)**

**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 in step 3 on page 342.

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, move the mouse pointer so that it is between two column heading letters. It will change to a double arrow. Click' and drag right.



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

Save the workbook in your **Excel Files** folder using the name **HW02-1 HWID 1A\_Quarterly\_Sales\_Done** where **HWID** is your four-character homework ID from your syllabus.

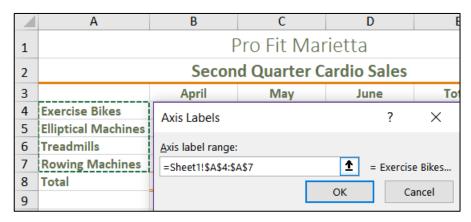
- c. Create a bar chart of the total sales for different machines by doing the following:
  - 1. Select E4:E7.
  - 2. On the **Insert** tab, in the **Charts** group, click the **Insert Column or Bar Chart** down arrow and select **3-D Clustered Bar**. Notice that a column chart is vertical, like the columns on a building, while a bar chart is horizontal.



- 3. On the Chart Tools Design tab, in the Location group, click Move Chart.
- 4. Click New sheet, type the new chart name Machines Bar Chart, and click OK. This puts the chart on a separate chartsheet where only the chart is shown (versus a worksheet where a chart and data cells are shown). This will make it easier to work on.
- 5. To put the proper names on the bars, on the Chart Tools Design tab, in the Data group, click Select Data to open its dialog box.
  Horizontal (Category) Axis Labels
- **6.** Under **Horizontal (Category) Axis Labels** click **Edit**.



7. Here, you could type in the range for the labels but there is an easier way. Click the collapse dialog button then click the **Sheet1** tab, and finally, select **A4:A7**.



This puts in the reference for you. It says to go to **Sheet1** and select the names in cells **A4:A7**. Excel puts a green dotted line around that range so you can clearly see what you have selected.

8. Click the collapse dialog button again and then click **OK**. Now, the machine names show up under the **Horizontal (Category) Axis Labels**.

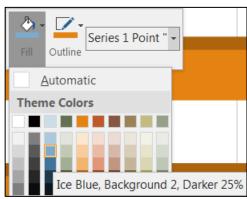


- 9. Click OK.
- 10. Click anywhere in the chart and notice there is a little green cross in its upper right corner. Click that and put a check next to **Data Labels**. This puts the values (labels) at the ends of the bars.
- 11. On the Chart Tools Format tab, in the Current Selection group (upper left corner), click the Chart Elements down arrow and select Series 1 Data Labels. Just under that, click Format Selection.



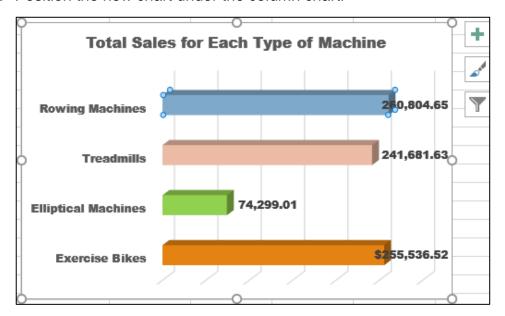
- 12. On the **Home** tab, in the **Font** group, select **Arial Black** and make the font size **9**.
- 13. On the **Chart Tools Format** tab, in the **Current Selection** group, click the **Chart Elements** down arrow and select **Vertical (Category) Axis**. Just under that, click **Format Selection**.
- **14.** On the **Home** tab, in the **Font** group, select **Arial Black** and make the font size **9**.
- 15. On the Chart Tools Format tab, in the Current Selection group, click the Chart Elements down arrow and select Horizontal (Value) Axis. Just under that, click Format Selection. Tap the Del key to remove this axis.
- 16. On the Chart Tools Format tab, in the Current Selection group, click the Chart Elements down arrow and select Chart Title. Just under that, click Format Selection. Click in the Chart Title text box and type Total Sales for Each Type of Machine. Make its font 12 pt Arial Black.
- 17. Click the bar for **Rowing Machines** once, wait a second, and click it again. This will select that single bar. This is not a "double-click" but a click, a pause, and then another click. Double-clicking will select all the bars and open the **Format Data Series** pane (not what you want).

Right-click, click the paint bucket, and select blue.



- **18.** Follow the same procedure to change the color of the **Treadmills** bar to pink.
- **19.** Follow the same procedure to change the color of the **Elliptical Machines** bar to green.
- 20. On the Chart Tools Design tab, in the Location group, click Move Chart.

  Click the button next to Object in, select Sheet1 (if necessary), and click OK.
- 21. Position the new chart under the column chart.



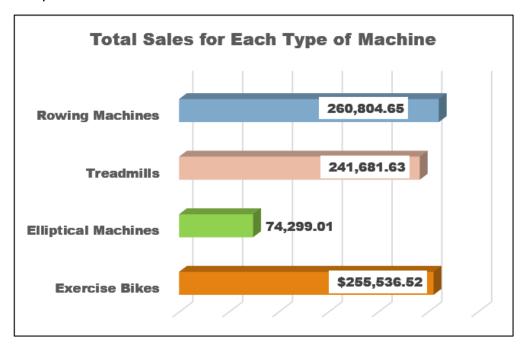
Depending on your screen resolution, the bar labels may be difficult to read and/or the digits may wrap. Do the following to make the labels more readable.

- **22.** Click the **Rowing Machines** label value once, wait a second, and then click it again to select it.
- 23. On the Chart Tools Format tab, in the Shape Styles group, click the down arrow next to Shape Fill and select White.

Now the number is more easily read.



24. Grab the edge of the number box and slide it to the left so that the end of the bar shows and the number is vertically centered on the bar. Repeat this process for the **Treadmills** and **Exercise Bikes** data labels.



This illustrates that when working with graphs you sometimes have to fiddle around with the parts to get it to look the way you want it.

- d. Double-click the **Sheet1** tab name to select it. Type **Data** for the new name and then tap **Enter**.
- e. Tap Ctrl + p to open the Print window.

Click Page Setup.

Click the **Page** tab and confirm that the orientation is **Portrait**.

Click the **Margins** tab and put a check in the box next to **Horizontally**.

Click the Header/Footer tab and click Custom Footer.

Click in the **Left section** box and click the **Insert File Name** icon

Click in the **Right section** box and click the **Insert Sheet Name** icon

Click in the **Center section** box and click **Insert Picture** icon

Navigate to your **Word Files** folder and double-click **Goldy**. Notice the codes inserted by Excel.





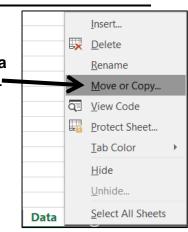
and time.

Click the Format Picture icon and change the Height to 0.3 inch.

Click **OK** three times and compare the preview with the key on page **SG348**. Make corrections, print the worksheet, save the workbook but *do not* close it.

You **NEVER** have to print in color.

- f. Copy the worksheet by doing the following:
  - Near the bottom left of the screen, right-click the Data tab and 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 and names it **Data (2)**.
  - **4.** Double-click the tab name, **Data (2)**, to select it. Type the new name, **Formulas**, and tap **Enter**.

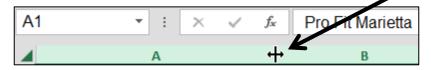


4

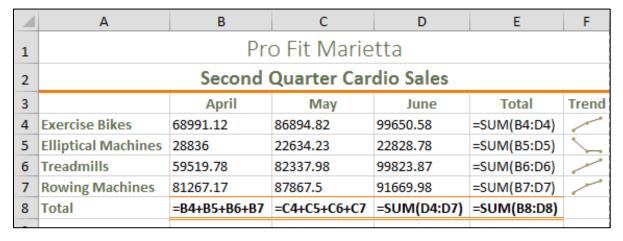
1

2

- g. 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 342 of the textbook but they are quicker to execute.
  - 1. If necessary, delete the two charts by clicking on them and tapping the **Del** key.
  - 2. 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 going to the Formulas tab and, in the Formula Auditing group, clicking Show Formulas.
  - 3. Click the **Select All** box in the upper left corner of the worksheet. This selects all the cells of the worksheet.
  - **4.** Move the pointer to the column heading boundary between any two columns until the pointer becomes a double-headed arrow.

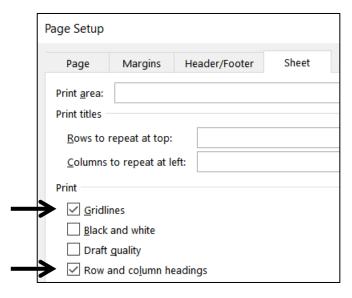


**5.** Double-click. This process, called **AutoFit**, will adjust the column widths to fit the formulas displayed. Don't worry if the formatting looks different because displaying the formulas sometimes messes it up.



6. Click cell A1 to deselect all the cells.

- h. Print the worksheet. The setup should be the same as for the **Data** worksheet, but check to be sure. In addition, do the following:
  - 1. Tap Ctrl + p and then click Page Setup.
  - 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.
  - 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.** Compare the preview with the key. Make needed corrections, print the worksheet, save the workbook, and then close it.

You **NEVER** have to print in color.

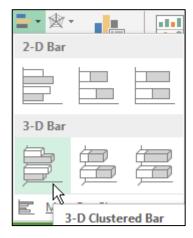
#### **HW02-2 Plyometric Products Inventory (Based on Project 1B)**

**Problem:** How can you summarize data and 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 in step 10 on page 361.
- b. Tap F12 to open the Save As dialog box. Save the workbook in the Excel Files folder using the name HW02-2 HWID 1B\_Plyo\_Products\_Done where HWID is your four-character homework ID from your syllabus.

- c. Do the following to insert a bar chart that displays the **Percent of Total Retail Value** for each Item.
  - Select A4:A10. Then, hold down the Ctrl key and select F4:F10. This selects the range with the item names and also the range with the percents of total sales.
  - 2. On the **Insert** tab, in the **Charts** group. click the bar chart icon and select **3-D Clustered Bar**.





 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.



Percentage

NUMBER

<u>C</u>ategory

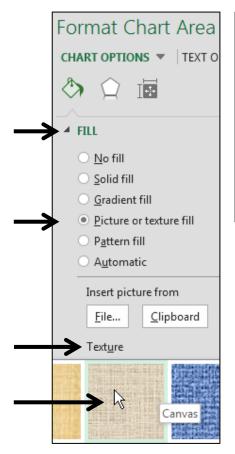
6. With the chart selected, on the **Chart Tools Format** tab, in the **Current Selection** group (on the left), select **Chart Area**.

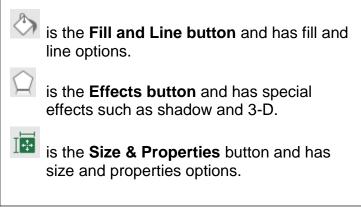
Horizontal (Value) Axis

Pormat Selection

7. Click Format Selection.

8. Click the paint bucket to see the **Fill and Line** options. Confirm that **Picture or texture fill** is checked. Then click the **Texture** down arrow and click **Canvas**.

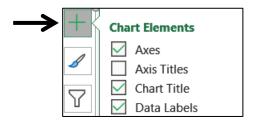




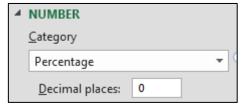
9. Set the Transparency to 50%. Transparency 50% 

\$\frac{1}{2}\$

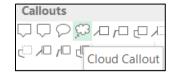
10. Click the green cross in the upper right corner of the chart to open the **Chart Elements** menu. Put a check next to **Data Labels**.



- 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 Clout Callout (way down at the bottom of the menu).
  A small cross will appear. +



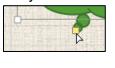
Power Hurdle

6 Speed Hurdle

4

5

- **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 callout.
- 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.





- **24.** Change the name of the worksheet to **Data and Graph**.
- d. Tap Ctrl + p and set the worksheet to print in Landscape orientation, all on one page, centered horizontally but not vertically, and include a footer that contains the file name on the left and the sheet name on the right. Compare the preview with the key. Make needed corrections, print the worksheet, save the workbook and then close it.

You **NEVER** have to print in color.

#### **HW02-3 Vehicle Sales Charts**

**Problem:** How can you create detailed three-D column charts to visually display relationships between data?

- a. Open the workbook **HW02-3 Vehicle Sales Original**, which is one of the files you downloaded at the start of the term.
- Save the workbook to the Excel Files folder using the name HW02-3 HWID Vehicle Sales Done
- c. Merge and center A1:E1 Merge and center 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. Click F17 and type ="Average is "&AVERAGE(B17:E17)

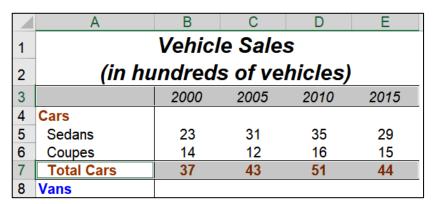
  The ampersand, &, allows you to display more than one item in a cell. It has the effect of concatenating (sticking together) the items. So, the text inside the quotation marks will be displayed followed by the calculated average.
- f. Click the Enter checkbox <a> and the cell will display Average is 84.25</a>
- g. Insert Sparklines as follows:
  - Click 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** in **F6**.
  - 3. Click F9, insert a column Sparkline for the Full Sized Vans data. Do the same for the Mini Vans and the Four Wheel Drive Vans. Make the Sparkline for Full Sized red, for Mini green, and for Four Wheel Drive orange.
- h. Tap Ctrl + p and set the worksheet to print in Portrait, all on one page, centered horizontally but not vertically and include a footer that contains the file name on the left and the sheet name on the right. Compare the preview with the key. Make needed corrections, print the worksheet, save the workbook and but do NOT close it.

#### You **NEVER** have to print in color.

- Create a line chart of the Total Cars and Total Vans and Total SUVs for the years 2000 through 2015 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.

2. Hold down the Ctrl key and select A12:E12.

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.



- 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**.

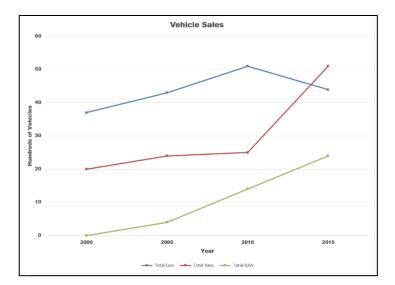


Move Chart

Location

- 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, the two Axis Titles, and the two Axis Numbers 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 and numbers. Ctrl + y repeats your last action.
- 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.

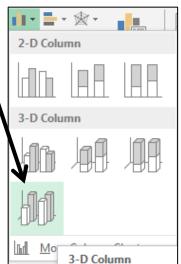


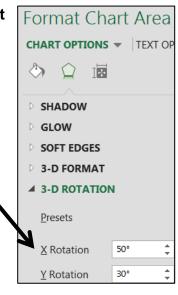
j. Follow these directions to create a 3-D column chart.

Click the **Data** worksheet tab. Create a **3-D Column** chart for **2000**, **2010**, and **2015** using the data for **Sedans**, **Coupes**, **Full Sized**, **Mini**, and **Regular**. **Be careful** when you select the data! 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 2000, 2010, 2015
- Horizontal axis title: Type of Vehicle
- Vertical axis title (rotated): Hundreds of Vehicles
- Depth axis title: Year
- Make the **Title** and **Axis Titles** font 14 pt Arial Black.
- Make the three axes labels 12 pt Arial Black.
- Legend: None
- Set the X Rotation to 50° and the Y Rotation to 30°





h. Tap **Ctrl + p** and set the chartsheet to print in **Landscape**, and include a footer that contains the **file name** on the left and the **sheet name** on the right. Compare the preview with the key. Make needed corrections, print the chartsheet, save the workbook and 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 1A Quarterly Sales Worksheet** 

**HW02-1 1A Quarterly Sales Formulas Worksheet** 

**HW02-2 1B Plyometric Products Inventory Valuation** 

**HW02-3 Vehicle Sales Data Worksheet** 

HW02-3 Vehicle Sales 3-D Column Chartsheet

- **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** Read the introductory material on page 385 in the textbook.

**Step 2 Activities** Turn on the computer and do the following:

**Project 2A:** Start at the top of page 387.

**Instead of Activity 2.01** step 1 do the following:

- 1. Navigate to your **Excel Files** folder and open **e02A\_Tree\_Inventory**, which is one of the files you downloaded at the start of the term.
- 2. Save the file in your Excel Files folder using the name Lastname\_Firstname\_2A\_Tree\_Inventory
- **3.** Complete the rest of the Activities for this Project EXCEPT do **NOT** do steps 12 and 13 in **Activity 2.20** on page 409.
- **4. Return here** when you have completed Project 2A on page 409.

Do NOT do GO! With Google Sheets

Project 2B: When you have completed Project 2A, start at the top of page 413.

**Instead of Activity 2.21** step 1 do the following:

- 1. Navigate to your **Excel Files** folder and open **e02B\_Weekly Sales**, which is one of the files you downloaded at the start of the term.
- 2. Save the file in your Excel Files folder using the name Lastname\_Firstname\_2B\_Weekly\_Sales.
- **3.** Complete the rest of the Activities for this Project EXCEPT do **NOT** do steps 5 and 6 in **Activity 2.36** on page 432.
- **4. Return here** when you have completed Project 2B on page 432.

Do NOT do GO! With Google Sheets or GO! To Work

**Step 3 Homework** After you have completed Projects A and B return here, do the following additional activities, and turn them in for grading.

#### **HW03-1 Tree Inventory (Based on Project 2A)**

**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 409.
- b. Save the workbook to the Excel Files folder using the name HW03-1 HWID 2A\_Tree\_Inventory\_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 401)
  - **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 406)

A third way is to **hide** rows or columns. To see how this works, do the following:

- 1. Select rows 17:41 by clicking on row number 17 and dragging to row 41.
- 2. While pointing to any selected row number, right-click and select Hide from the menu. Now it appears that row 16 is followed by row 42. 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.

	Α	В
10	Oak Trees	13
11	Maple Trees	6 (571 tota
12		
13	Quantity in Stock	Item #
14	78	13129
15	35	13358
16	60	15688
42	350	43153
43	7/23/2019 13:22	

- 3. Select rows 16 to 42, right-click, and select Unhide.
- d. Hide rows 21 to 41.
- e. Tap Ctrl + p and set the worksheet to print in Landscape, all on one page, centered horizontally but not vertically and include a footer that contains the file name on the left and the sheet name on the right. Click the Sheet tab and click Row and column headings. Click OK. Compare the preview with the key. Make needed corrections, print the worksheet, save the workbook and close it.

Default value is 0

#### **HW03-2 Weekly Sales Summary (Project 2B)**

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

- a. Open the workbook Lastname\_Firstname\_2B\_Weekly\_Sales, which you created while following the directions in the textbook and saved on page 432.
- b. Save the workbook to the Excel Files folder using the name HW03-2 HWID 2B\_Weekly\_Sales\_Done
- c. Click the Summary worksheet. Tap Ctrl + p and set the worksheet to print in Portrait, all on one page, centered horizontally but not vertically and include a footer that contains the file name on the left and the sheet name on the right. Compare the preview with the key. Make needed corrections, print the worksheet, save the workbook but do NOT close it.
- d. The **IFS** function is described on pages 427-429. This is a powerful function because it allows the user to display different things based on different conditions. However, the conditions must be placed in the correct order for the function to work properly. Here is the formula the authors provided:

=IFS(B4>4999,500,B4>3999,350,B4>2999,250,B4>0,0)

Notice that this starts with the highest cutoff, 4999.

IF that is exceeded, THEN 500 is displayed.

IF it is not, THEN the next highest cutoff, 3999, is checked.

And so on.

What happens if you reverse the order like this?

=IFS(B4>0,0,B4>2999,250,B4>3999,350,B4>4999,500)

In this case, the first condition, **B4>0**, is true for everyone and the result is a bonus of 0 for everyone! Be sure to always check your formula results by hand because it is really easy to get things assbackwards.

Some people find using "nested" **IF** statements easier to understand. "Nested" means putting one **IF** statement inside another. We are choosing between four different bonus values so we need 3 **IF** statements. For this problem, it would look like this:



You will learn more about multiple condition IF functions on page SG101.

- e. Print the **Bonus** worksheet formulas by doing the following:
  - 1. Make a copy of the **Bonus** worksheet and name it **Bonus Formulas**.
  - 2. Move the **Bonus Formulas** sheet tab so it is to the right of the **Bonus** sheet tab.
  - **3.** Tap **Ctrl +** ` to display the formulas.
  - 4. Select all the cells on the worksheet.
  - **5.** AutoFit the cells.
  - 6. Tap Ctrl + p and set the worksheet to print in Portrait, all on one page, centered horizontally but not vertically and include a footer that contains the file name on the left and the sheet name on the right. Display the Gridlines and Row and column headings (Sheet tab). Compare the preview with the key. Make needed corrections, print the worksheet, save the workbook and close it. Do NOT print the other two worksheets.

#### **HW03-3 Inventory (Based on Project 2G)**

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

**Project 2G:** Start at the top of page 453.

**Instead of step 1 do the following:** 

- 1. Open the file **e02G\_Inventory**, which is one of the files you downloaded at the start of the term.
- 2. Save the file in your Excel Files folder using the name Lastname\_Firstname\_2G\_Inventory
- a. Follow the directions for steps **2** through **23** only for **Project 2G Inventory** on pages 453-454.
- b. After you complete step 23, save your file to the **Excel Files** folder using the name **HW03-3 HWID 2G\_Inventory\_Done**
- c. The tables may still be defined for the **Bulbs** and **Trees** worksheets. If necessary, do the following to remove the **Table** designation:
  - 1. Click the **Bulbs** worksheet tab.
  - 2. Click A15. If the Table Tools Design tab appears then this range is still designated as a table. To remove the table designation, in the Table Tools Design tab, in the Tools group. click Convert to Range. Click Yes to confirm the conversion. The Table Tools Design tab will no longer be present.
  - **3.** Do the same to remove the table from the **Trees** worksheet, if necessary.
- d. In step 8, the book showed you one way of determining the quantity in stock of **Tulips** on the **Bulbs** worksheet by using filtering. Below is an easier way of doing that, and one that will automatically update as the data change.

- 1. 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 checkbox ✓ 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 in C11 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:



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?

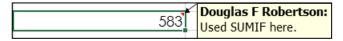
The word "Tulips" The quotation marks are required.

**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.



- 3. Click the **Trees** worksheet tab to make it active.
- 4. Click C11 and enter a formula that will sum the quantity in stock for Evergreens in the range F15:F42. You should get the same number as is in B11.
- **5.** Click **C11**, right-click, and select **Insert Comment**. In the comment box, type **Used SUMIF here**.



Excel comments are useful if you wish to make note, like a Post-It note. Comments do not appear when the worksheet is printed. Notice that Excel inserts the name of the user automatically so if more than one person makes a comment you can see who did it.

6. Click C11. Depending on how your version of Excel is set up, the comment may disappear, leaving only a very small red triangle in the upper right corner of the cell. If you put the white cross mouse pointer in the cell (without clicking) the comment will appear. To have the comment stay on the screen, right-click and select Show/Hide Comments. To hide a comment, right-click and select Hide Comment. To delete a comment, click in the cell, right-click and select Delete Comment.

- e. You can do the same sort of thing with averages. For example, do the following to find the average price for the tulips:
  - 1. Click the **Bulbs** sheet tab to make that sheet active.
  - 2. In A12 type Tulips Average Price
  - 3. In B12 type =AVERAGEIF(F15:F42,"Tulips",D15:D42) The price is in column **D** so the sum range is **D15:D42**. This is just like **SUMIF** but it calculates the average of things that match the **what to look for criteria**.
- f. 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.

	Α	В	С	D
		Number in	Number of	Average
11	Bulbs Category	Stock	Categories	Price
12	Begonias			
13	Callas			
14	Daffodils			
15	Dahlias			
16	Gladiolus			
17	Tulips			
18				
		Number in	Number of	Average
19	Trees Category	Stock	Categories	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(** 



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** checkbox to keep **B12** active.

B12 should display the number 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.



Before copying the formula to **B13:B17**, you need to convert the ranges on the **Bulbs** worksheet to absolute references so when you fill the formula down the ranges on the **Bulbs** worksheet will not change (similar to what you did on page 355 of the textbook). To do that quickly, in the formula click the cell reference **F15** and then tap the **F4** key. The cell reference changes to **\$F\$15**. If you forget about the **F4** key, you can always just type the **\$** manually.

Do the same for cell references F42, A15, and A42.

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 cell reference to the criteria, A12, to change to A13 and then A14 and so on so there are no \$ in A12.

**4.** Point to the lower right corner of **B12** and the fill handle (little black cross) will appear. Drag down to **B17** and let up the mouse button. This copies (fills) the formulas. Note that if you double-click the fill handle the formula will be filled down automatically, without having to drag.

B12	▼ :	× ✓ f <sub>x</sub>	=SUMIF(E	=SUMIF(Bulbs!\$F\$15:\$F\$42,Summary!A12,Bulbs!\$A\$15:\$A\$42)						
4	Α	В	С	D	Е	F	G	Н		
11	Bulbs Category	Number in Stock	Number of Categories	Average Price						
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!**. So, the formula in **B20** should be



- 6. Fill the formula in **B20** down to **B24**.
- g. 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.
- h. In C20:C24 do the same for Trees.
- i. 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.
- j. In **D20:D24** do the same for **Trees**.
- k. With the Summary sheet active, tap Ctrl + p and set the worksheet to print in Portrait, all on one page, centered horizontally but not vertically and include a footer that contains the file name on the left and the sheet name on the right. Compare the preview with the key. Make needed corrections, print the worksheet, save the workbook and close it. Do not print the other worksheets.

#### 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 puts it this way:



**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.

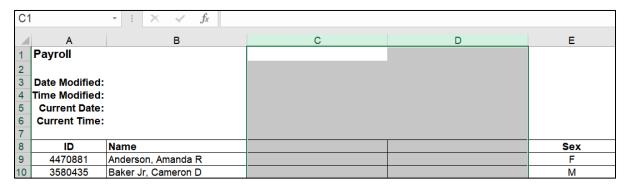
For this project you will calculate the regular and overtime pay for workers. In Project 5 you will gain experience with more complicated **IF** formulations.

- a. Open the workbook HW03-4 Payroll IF Original, which is one of the files you
  downloaded at the start of the term.
- Save the workbook to your Excel Files folder using the name HW03-4 HWID Payroll IF Done
- c. 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.
  - 2. 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 row8 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.

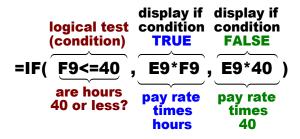


2. In cell C9, type Anderson. This is the last name of the first person on the list. Click the Enter checkbox ✓ to accept the typing and remain in cell C9.

- 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 **Anderson**. You can use the **IF** function to do that. Essentially, the **IF** function chooses between two alternatives. In this case, the alternatives are two different ways of calculating regular pay, depending on the hours worked.

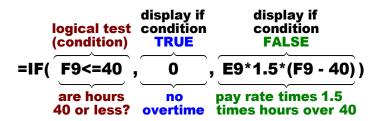
Here is the logic you need to use:

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



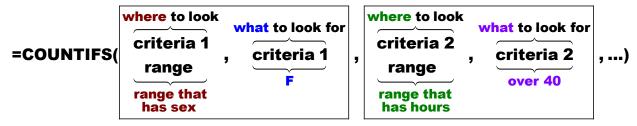
- 2. Check the result. Since Anderson worked 21 hours her regular pay will be her **Pay Rate** times her **Total Hours**, 6\*21 = 126.
- 3. Fill the formula in **G9** down to row **36**.
- **4.** Check the result for Baker, in **G10**. Baker worked 50 hours, which is 40 regular hours and 10 overtime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

- f. In **H9**, enter a formula to calculate the overtime pay for **Anderson**.
  - If Anderson worked 40 hours or less (**F9<=40**) then the overtime pay is **0** (she has not worked overtime so her overtime pay is 0).
  - If Anderson 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.



- Check the result. Since Anderson 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 Anderson.
- h. In **J9** type **=rank(i9,\$i\$9:\$i\$36)**. This will calculate Anderson's rank in terms of total pay. The **RANK** function compares the value in **I9** (Anderson'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**.
  - 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 19<sup>th</sup> 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. Since we are looking for a number of things we use COUNTIF. The form for COUNTIF is =COUNTIF(range, criteria) The range is "where to look" and the criteria is "what to look for". 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:

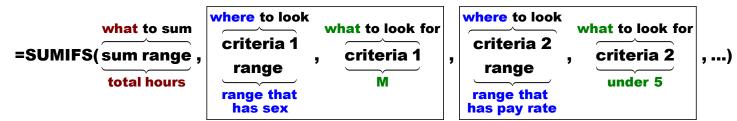


It is basically the **COUNTIF** function with two or more ranges and corresponding criteria. Again, remember to put the criteria inside quotation marks, as in "=F".<sup>7</sup>

I. 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"

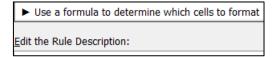
criteria 2 range: What kind of men do you want to include?

Those who have a certain Pay Rate, which is in E9:E36

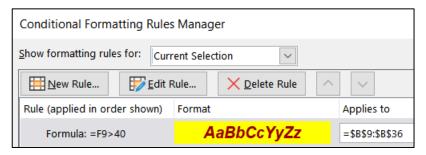
criteria 2: What should the Pay Rate be? Under 5, so use "<5"

<sup>&</sup>lt;sup>7</sup> 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 Mew Rule...
  - 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 Anderson) is greater than 40. If it is, apply a special format to B9; otherwise, leave the cell alone.
- 6. Click Format... 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 Anderson'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**, which has the **Pay Ranks**.
  - 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. Excel stores dates and times as a whole number representing the number of days since 1900-Jan-0, plus a fractional portion of a 24-hour day. This is called a serial date, or serial date-time. For example, 19 July 2019 at 9:35 am is stored as 43665.3999127315.

Be careful if you switch between Windows and Mac because, for historical reasons, Mac uses its starting date as 1904 rather than 1900. If you change the date system for a workbook that already contains dates, the dates will shift by four years and one day (1462 days taking Leap Years into account).

In Windows, if you want to change your dates to the 1904 version use **File**, **Options**, **Advanced**, **When calculating this workbook** and check the box next to **Use 1904 date system**. This is **NOT** recommended. <sup>8</sup>

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

- 1. Click **B3** and enter the current date. You can either type the date or tap **Ctrl +**; (that is, hold down the **Ctrl** key and tap the semicolon key) and then tap **Enter**. This is a static date, which means that it will stay at that value until you enter in a new one.
- 2. Click **B4** and enter the current time. You can either type the time or 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 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 and it 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**. To select non-adjacent cells, click the first cell, then hold down the **Ctrl** key and click the second cell. With the two cells selected, right-click, and select **Format Cells**.
- 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).

<sup>&</sup>lt;sup>8</sup> For more information see <a href="https://support.microsoft.com/en-us/help/214330/differences-between-the-1900-and-the-1904-date-system-in-excel">https://support.microsoft.com/en-us/help/214330/differences-between-the-1900-and-the-1904-date-system-in-excel</a>

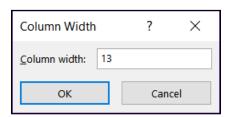
- 10. Click J3, right-click, and select Format Cells. Replace the text in the Type: box with #" people"\_) The # tells Excel to display the number without decimal places, the " people" says to display the word people, and the \_) says to leave one blank space on the right (so this lines up nicely with 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 four letters roll in the word Payroll.
  - 3. On the **Home** tab, in the **Font** group, click the launch dialog button (lower right corner of the **Font** group).
  - **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 **13**, make the word **people** bold and purple.
  - In 14, make the word women bold and red.
  - In **16**, 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 **SG38**). Then, change the width of column **I** to 13. To do that, point to the column letter **I**, right-click, select **Column Width...**, and type **13**.



- u. Tap Ctrl + p and set the worksheet to print in Landscape, all on one page, centered horizontally but not vertically and include a footer that contains the file name on the left and the sheet name on the right. Compare the preview with the key. Make needed corrections, print the worksheet, save the workbook but do NOT close it.
- v. Copy the **Payroll Data** worksheet and rename the new worksheet **Payroll Formulas**.
- w. Tap **Ctrl** + ` to display the formulas and **Autofit** the widths of the columns. Then, change the width of column **I** to **6**.
- x. Tap Ctrl + p and set the worksheet to print in Landscape, all on one page, centered horizontally but not vertically and include a footer that contains the file name on the left and the sheet name on the right, and without gridlines but with row and column headings showing. 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 6 homework papers in the following order:

**HW03-1 2A Tree Inventory** 

HW03-2 2B Weekly Sales Summary Worksheet

HW03-2 2B Weekly Sales Bonus Worksheet

**HW03-3 2G Inventory Summary Worksheet** 

**HW03-4 Payroll IF Data Worksheet** 

**HW03-4 Payroll IF Formulas Worksheet** 

- 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** Read the introductory material on page 459 in the textbook.

**Step 2 Activities** Turn on the computer and do the following:

**Project 3A:** Start at the top of page 461.

**Instead of Activity 3.01** step 1 do the following:

- 1. Navigate to your **Excel Files** folder and open **e03A\_Enterprise\_Fund**, which is one of the files you downloaded at the start of the term.
- Save the file in your Excel Files folder using the name Lastname\_Firstname\_3A\_Enterprise\_Fund
- **3.** Complete the rest of the Activities for this Project EXCEPT do **NOT** do steps 9 and 10 in **Activity 3.11** on page 473.
- 4. Return here when you have completed Project 3A on page 473.

Do NOT do GO! With Google Sheets

**Project 3B:** When you have completed Project 3A, start at the top of page 476.

**Instead of Activity 3.13** step 1 do the following:

- Navigate to your Excel Files folder and open e03B\_Tourism, which is one of the files you downloaded at the start of the term.
- 2. Save the file in your **Excel Files** folder using the name **Lastname\_Firstname\_3B\_Tourism**.
- **3.** Complete the rest of the Activities for this Project EXCEPT do **NOT** do steps 11 and 12 in **Activity 3.22** on page 494.
- **4. Return here** when you have completed Project 3B on page 494.

Do NOT do GO! With Google Sheets or GO! To Work

**Step 3 Homework** After you have completed Projects A and B return here, do the following additional activities, and turn them in for grading.

#### **HW04-1 Enterprise Fund (Based on Project 3A)**

**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 textbook and saved on page 473.
- b. Save the workbook to the **Excel Files** folder using the name **HW04-1 HWID 3A\_Enterprise\_Fund\_Done**
- c. Click the Expenditures Chart chartsheet. Tap Ctrl + p and set the chartsheet to print in Landscape and include a footer that contains the file name on the left and the sheet name on the right. Compare the preview with the key. Make needed corrections, print the chartsheet, save the workbook but do not close it.
- d. Click the Enterprise Fund Expenditures worksheet. Tap Ctrl + p and set the worksheet to print in Portrait, all on one page, centered horizontally but not vertically and include a footer that contains the file name on the left and the sheet name on the right. Compare the preview with the key. Make needed corrections, print the worksheet, save the workbook and close it.

### **HW04-2 Tourism Spending Projection (Based on Project 3B)**

**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 494.
- Save the workbook to the Excel Files folder using the name HW04-2 HWID 3B Tourism Done
- c. Click the **Expenditures** tab. The background picture makes the chart more interesting and visually pleasing but it may detract from clearly seeing the data. That is a problem with being cute: it sometimes makes it more difficult to see 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 paint bucket to show the Fill & Line choices.
  - **5.** Click the arrow to the left of **Fill** to show its options.
  - **6.** Make the **Transparency** 30%. Now you can better see the information on the chart. You still can see the picture but it is not so overpowering. Depending your printer, the transparency may not work correctly. If it does not, don't worry about it.

- d. Click in cell A1 to be sure the chart is not selected. Tap Ctrl + p and set the worksheet to print in Portrait, all on one page, centered horizontally but not vertically and include a footer that contains the file name on the left and the sheet name on the right. Compare the preview with the key. Make needed corrections, print the worksheet, save the workbook but do not close it.
- e. Click the **Advertising** tab. Tap **Ctrl + p** and set the worksheet to print in **Portrait**, all on **one page**, **centered horizontally** but not vertically and include a footer that contains the **file name** on the left and the **sheet name** on the right. Compare the preview with the key. Make needed corrections, print the worksheet, save the workbook and close it.

#### HW04-3 HLOOKUP Gradebook

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

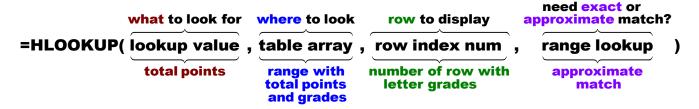
- a. Open the workbook **HW04-3 HLOOKUP Gradebook Original**, which is one of the files you downloaded at the start of the term.
- b. Save the workbook to your **Excel Files** folder using the name **HW04-3 HWID HLOOKUP Gradebook Done**.

At the end of each semester I assign letter grades based on the total number of points students earned on homework and exams. Here is the table I use:

	В	С	D	E	F	G	Н	1	J	K	L	M
5	Total Points	0	65	68	70	73	76	80	82	86	90	95
6	Comment	Ouch!	Study lots!	Study!	Fair	Ok	Not bad	Fine	Good	Pretty good	Very good	Great!
7	Grade	F	D	D+	C-	С	C+	B-	В	B+	Α-	Α

To assign a specific letter grade, I have Excel "look up" the total points in the above table and then display the corresponding letter grade. For this, I use one of Excel's **LOOKUP** functions.

The above table is horizontal so I use the **HLOOKUP** function. If the table were vertical I would use **VLOOKUP**. The **HLOOKUP** function has the following form:



- **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. For example, Aaron's total points is located in **J11**.
- table array is the range where the lookup value is to be looked up. In this
  case, it is C5:M7.

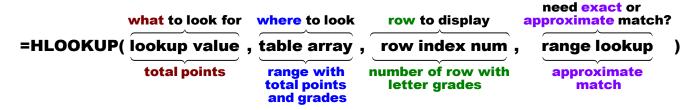
- row index number is the row number in the table from which the
  matching value will be displayed. In this example, it is row 3.
   Note that this is NOT the worksheet row number, which is 7. It is the row
  number within the table.
- range lookup is an optional parameter that specifies whether you 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 look for an **exact** match. If no exact match exists Excel will display **#N/A**. In this example, Aaron's total of 79 is not in the table so Excel would display the error message.

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

c. Click in **K11** and enter the **HLOOKUP** function for Aaron by filling in the parameters for Aaron.



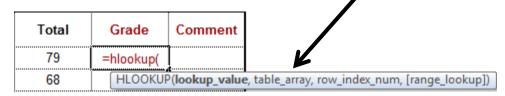
- lookup value is Aaron's total points in K11.
- **table array** is the range that contains the total points and letter grades. That is the range **C5:M7**.
- row index num is the number of the row in the table whose value you want displayed.
  - **Row 1** has the total points. Note that this is row **5** of the worksheet.
  - Row 2 has a comment on the grade. Note that this is row 6 of the worksheet.
  - **Row 3** has the letter grades. Note that this is row **7** of the worksheet.

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.

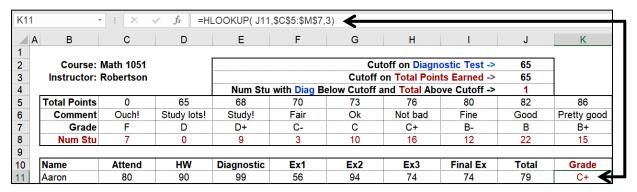


Now finish by typing j11,\$c\$5:\$m\$7,3)

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

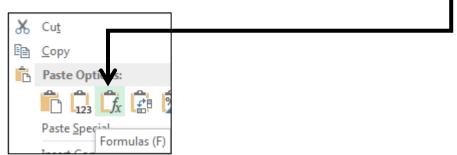
Click the **Enter** checkbox The grade **C+** appears in **K11** and the formula appears in the **Formula Bar**.

Note the absolute references (the dollar signs) in **\$c\$5:\$m\$7**. You need the dollar signs so that when you copy the formula for the other students the location of the table will remain constant.

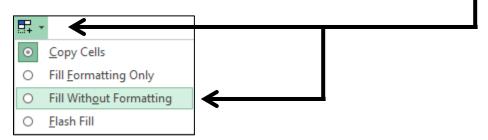


- d. To make this large worksheet easier to work with, split the screen by doing the following:
  - 1. Click **B17**.
  - On the View tab, in the Window group, click Split. This splits the screen into two parts. The top shows rows 1 through 16. The bottom shows the rest of the rows.
  - 3. With B17 still selected, tap the End key (just under Home) and then tap the down arrow. This will move the active cell to the last non-blank cell in column B (Zachary in B121). This same technique works moving to the last non-blank cell on the right (End then right arrow) or on the left (End then left arrow).

- e. Copy the formula in **K11** by doing the following:
  - 1. Click K11 and tap Ctrl + C to copy the cell.
  - 2. With K11 still active, hold down the **Shift** key and click cell K121. This selects the range K11:K121.
  - 3. Point to K11 again, right-click, and select Paste Options: Formulas (F).



A second way of duplicating the formula is to use the **Fill Handle**. Point to the lower right corner of **K11** and the fill handle (little black cross) will appear. Click the little black cross and drag down to **K121**. If you copy the formulas this way be sure to 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. It will look very similar to the formulas in column K.
- g. In **C8**, enter a formula that will display the number of students that earned the grade in **C7**. Give it a try. You want to count the number of students who earned the grade so you will use **COUNTIF**, which has the form:



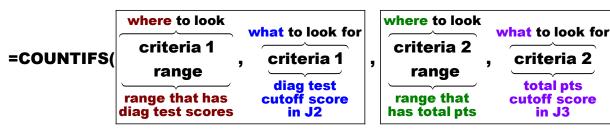
The **criteria** are located in row **7** so use a cell reference rather than typing the criteria inside quotation marks. Be sure to use absolute referencing where appropriate so you can duplicate the formula in **D8:M8**.<sup>9</sup>

Copy 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, I want to know how badly a student can do on the pretest and still pass the course.

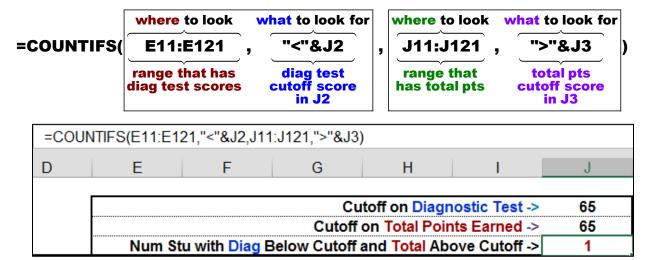
To do this, create a formula for **J4** that will display the number of students with diagnostic test scores below the diagnostic test cutoff score in **J2 AND** above the total points cutoff score in **J3**.

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:



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:



<sup>9</sup> Here is the formula for C8: =COUNTIF(\$K\$11:\$K\$121,C7)

You can see that out of 111 students only 1 who scored under 65 on the diagnostic test was able to earn at least 65 for a total and pass the course. I 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 time-wasting and money-wasting mistake.

On the Excel exam, I will not ask you to do something this complicated. I show it here so you can see what Excel is capable of doing and maybe use it on the job.

i. If the worksheet tabs at the bottom of the screen have disappeared, remove the split screen (View, Split). 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, Page Layout, Print Area, Set Print Area).

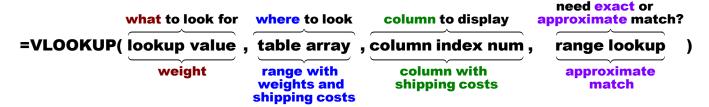
Tap Ctrl + p and set the worksheet to print in Landscape, all on one page, centered horizontally but not vertically and include a footer that contains the file name on the left and the sheet name on the right. Show the row and column headings. Compare the preview with the key. Make needed corrections, print the worksheet, save the workbook, and close it.

#### **HW04-4 VLOOKUP Shipping**

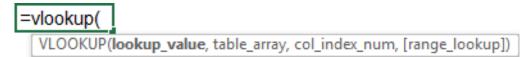
**Problem:** Given the weight of an item, how can you look up the corresponding shipping cost?

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

- a. Open the workbook **HW04-4 VLOOKUP Shipping Original**, which is one of the files you downloaded at the start of the term.
- b. Save the workbook to your **Excel Files** folder using the name **HW04-4 HWID VLOOKUP Shipping Done**
- c. For cells D10:D69, 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.



- 1. To make things easier with this large set of data, split the screen at row 20.
- 2. Click **D10** and type **=vlookup(** A screen tip will appear:



- **lookup\_value** is what you want to find, the weight. Type **c10**, (be sure to type the comma).
- table\_array is the vertical range where you want to look. It is the range
  that contains the Weights and Shipping costs. Type g10:h19, (be
  sure to type the comma).
- col\_index\_num is the number of the column in the table whose value you want displayed.

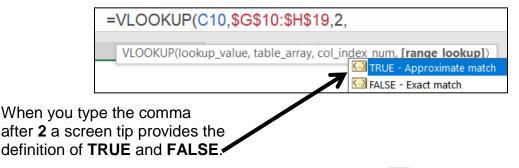
Column **G**, which is Column **1** in the table, contains the **Weights**.

Column **H**, which is Column **2** in the table, contains the corresponding **Shipping costs**. This is what you want to display so type **2**, (be sure to type the comma).

 [range\_lookup] tells Excel if you want an exact match or an approximate match.

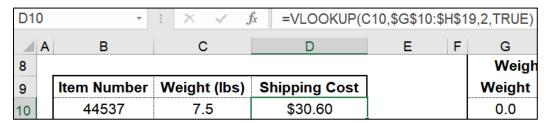
**FALSE** says to look for an **exact** match. If there is no exact match the error message **#N/A** will be displayed. This is **not** what you want because the weights are in tenths of a pound and the **table\_array Weights** are in whole pounds.

**TRUE** says that data in the first column of **table\_array** are in **ascending sort order**, which they are, 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 **C10** is **7.5** so Excel would choose the **Shipping Cost** for **7.0** (the next value below **7.5**). This is what you want.



- 3. Type true) and then click the Enter checkbox ✓ The cost is \$30.60.
- **4.** You are going to fill this formula down to row 69 so you must decide if you need absolute referencing (the \$ )

Put the \$ in the proper places, click the Enter checkbox, and then fill the D10 formula down to D69 and preserve the formatting. If you get an #N/A error then go back and check your absolute references, the \$.



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 **C10+0.99** for the **lookup\_value**. The formula would be:

=VLOOKUP(C10+0.99,\$G\$10:\$H\$19,2,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 shipping 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 Ibs and total shipping 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(C10:C69)

Text 2 will go inside quotation marks: " Ibs and total shipping cost is "

Calculation 2 finds the sum of all the shipping costs: SUM(D10:D69)

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

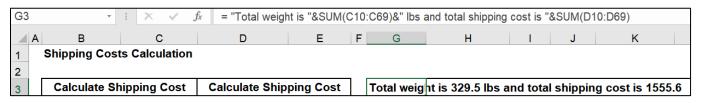
Type this formula into G3 and click the Enter checkbox

= "Total weight is "&SUM(C10:C69)&" lbs and total shipping cost is "&SUM(D10:D69)

Displays the text between quotation marks Total weight is,

then the **SUM** of **C10** through **C69** is displayed,

then the text between quotation marks **lbs and total shipping cost is** displays, then the **SUM** of **D10** through **D69** is displayed.



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

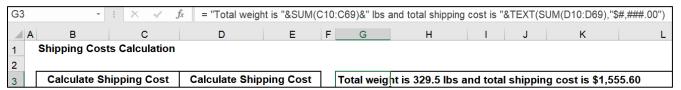
"m/d/yyyy" to display 12/31/2019

"ddd d mmm yyyy" to display Tue 31 Dec 2019

"\$#,###.00" to display \$1,555.60

The **value** you want to display is calculated by **SUM(D10:D69)** so that will be the **value** in the **TEXT** function. The format you want is currency so "\$#,###.00" will be the format.

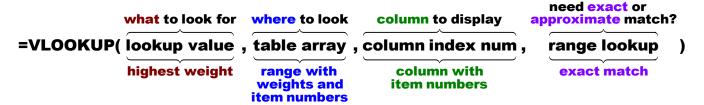
Modify the formula in **G3** by putting **SUM(D10:D69)** inside the **TEXT** function.



- 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 C10:C69. To find the Item Number you can use the VLOOKUP function. Unfortunately, Item Number is to the left of Weight in the table 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 J8, type Scratch Area and center and merge it across J8:L8.
  - In J9 type Weight, in K9 type Item Number, and in L9 type Shipping Cost.
  - 3. In J10, type =c10, in K10, type =b10 and in L10 type =d10
  - 4. Fill the formulas in J10:L10 down to J69:L69. This creates a new table where the Weight is to the left of the Item Number, which is required by VLOOKUP.
  - 5. To make the table easier to read, format it as shown below (to put in borders select the table, tap Ctrl + 1, and click Boarders tab):

	Т	J	K	L	N
7					
8			Scratch A	rea	
9		Weight	Item Number	Shipping Cost	
10		7.5	44537	\$30.60	
11		9.9	80680	\$33.00	
12		8.7	43913	\$31.80	
13		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:

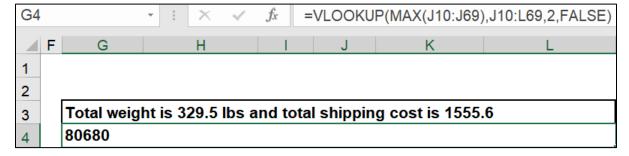


- lookup value is the highest Weight in J10:J69. To find that, use MAX.
- table array is the range that contains Weights and Item Numbers in the scratch area.
- column index num is the number of the column in the table whose value you want displayed.
  - Column **J**, which is Column **1** in the table, contains **Weights**Column **K**, which is Column **2** in the table, contains **Item Numbers**
- range lookup is TRUE or FALSE. Make your choice by noting that the Weights 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 <a></a>.

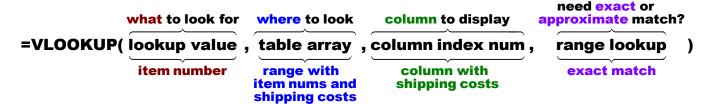


8. Use the Ampersand, &, to display this text to the left of 80680:

### Highest weight is for item number

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

- g. Enter a function in **C7** that will display the **Shipping Cost** for an item whose **Item Number** is entered in **B7**. You want to find a number in a vertical list so **VLOOKUP** is a good choice. Do the following:
  - 1. Enter 43913 in B7.
  - 2. In C7, enter a formula that will display the **Shipping Cost** for the item whose **Item Number** is in **B7**.



- lookup value is the Item Number in B7.
- table array is the range that contains Item Numbers and Shipping Costs. This is B10:D69.
- **column index num** is the number of the column in the table whose value you want displayed.
  - Column **B**, which is Column **1** in the table, contains **Item Numbers**Column **C**, which is Column **2** in the table, contains **Weights**Column **D**, which is Column **3** in the table, contains **Shipping Costs**
- 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

C7		¥	1 × ✓ ,	$\times$ $\checkmark$ $f_x$ =VLOOKUP(B7,B10:D				
4	АВ		С	D	Е	F	G	
1		<b>Shipping Cost</b>	s Calculation					
2						_		
3		Calculate Sh	ipping Cost	Calculate Shi		Total		
4		Given Iten	n Number	Given Item		Highe		
5		Choose	Shipping	Enter	Shipping	]		
6		Item Number	Cost	Weight	Cost			
7		43913	\$31.80					

i. Enter a function in E7 that will display the Shipping Cost for an item whose Weight is entered in D7. Give it a try by following the same process you did for the formula in C7. If you have difficulty, follow these steps:



- lookup value is the weight in D7. Type 1.1 in D7 as a test value.
- table array is the range that contains Weights and Shipping Costs.
   This is G10:H19.
- **column index num** is the number of the column in the table whose value you want displayed.

Column **G**, which is Column **1** in the table, contains **Weights**Column **H**, which is Column **2** in the table, 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 D7 need not be listed in G10:G19).

**TRUE** for approximate match **FALSE** for exact match

E7	→   :   ×								
	АВ	С	D	Е	F				
1	Shipping Cost	s Calculation							
2									
3	Calculate Sh	Calculate Shipping Cost							
4	Given Iten	n Number	Given Item Weight						
5	Choose	Shipping	Enter	Shipping					
6	Item Number	Cost	Weight	Cost					
7	43913	\$31.80	1.1	\$15.75					

The weight in **D7** 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.

h. Misspelled words can be embarrassing. <sup>10</sup> For example, a news headline read "Floods from the Mississippi may be prevented by putting big dames in the river." Here is a road sign from 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 aulaclty uesdnatnrd waht I was rdanieg. The phaonmneal pweor of the hmuan mnid. According to rscheearch it deosn't mttaer 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 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.

Click B7, 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 B19:B69.

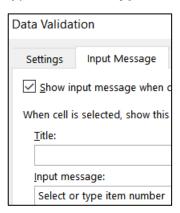
Settings

Validation criteria
Allow:
List
Data:
between
Source:
=b10:b69

Click the Settings tab and select List from the Allow: dropdown menu.

<sup>10</sup> Adapted from <a href="http://www.dummies.com/how-to/content/limit-data-entry-with-data-validation-in-excel-201.html">http://www.dummies.com/how-to/content/limit-data-entry-with-data-validation-in-excel-201.html</a>

- In the Source box, type the range where the Item Numbers are listed. That is type =b10:b69 (or 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 **B7** that message will appear to remind you of what type of data goes in **B7**.

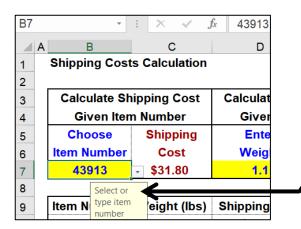
5. Click the Error Alert tab and, in the Error message box, type Item Number not found. Now, if you enter an Item Number that is not on the list of numbers in B10:B69 you will get an error message.

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**.



**Shipping Costs Calculation** 1 2 **Calculate Shipping Cost** Calc 3 Given Item Number G 4 Choose Shipping 5 **Item Number** Cost 6 #N/A 7 8 Select or Item N type item eight (lbs) Ship 9 number 10 Microsoft Excel 11 12 Item Number not found 13 Retry Cancel <u>H</u>elp

7. To see how data validation works, click **B7**, type **1**, and tap **Enter**.

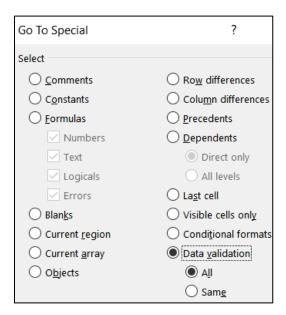
Here, you can click **Retry** or **Cancel**. Click **Cancel**.

8. When **B7** 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 **C7** will show **\$33.00**.

- j. Here is another type of validation rule. Set up things 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 **D7**, 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 **D7**, 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 (**B7** and **D7**).



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. Set the Print Area to B1:L18. Tap Ctrl + p and set the worksheet to print in Landscape, all on one page, centered horizontally but not vertically and include a footer that contains the file name on the left and the sheet name on the right. Print without gridlines but with the 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 6 homework papers in the following order:

HW04-1 3A Enterprise Fund Expenditures Chartsheet HW04-1 3A Enterprise Fund Expenditures Worksheet HW04-2 3B Tourism Spending Projection Worksheet HW04-2 3B Advertising Worksheet 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.

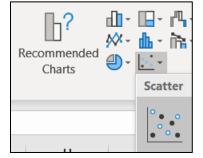
This Project will extend your knowledge of using Excel to make graphs and to help make decisions using **IF/THEN/ELSE** logic.

## **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, the water temperature, 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. On the same graph, you will also graph bottom water temperature versus distance from the river bank. Having two graphs on one grid will enable you to see the relation between depth and temperature.

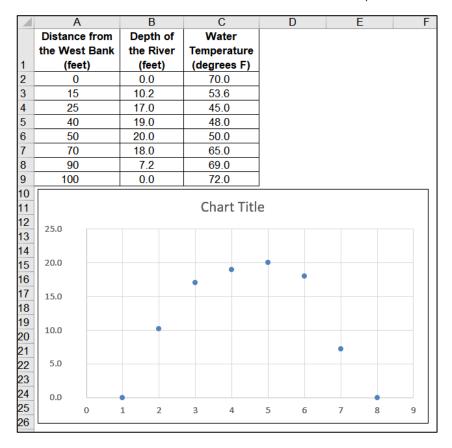
- a. Open the workbook **HW05-1 River Original**, which is one of the files you downloaded at the start of the term.
- b. Save the workbook to your **Excel Files** folder using the name **HW05-1 HWID River Done**.
- c. Graph the data by doing the following:
  - 1. Select cells B2:B9.
  - 2. On the **Insert** tab, in the **Charts** group, click **Scatter** and select **Scatter**.
  - 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.



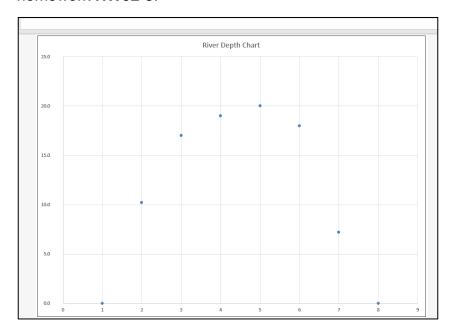
**4.** Click the button next to **New sheet**, type **River Depth Chart**, and click **OK**. The chart appears in its own chartsheet.

Note the difference between chartsheets and worksheets:

**Worksheets** contain cells with data and formulas, and *can* contain a chart.



**Chartsheets** do not have any cells and contain only a chart, as in homework **HW02-3**.



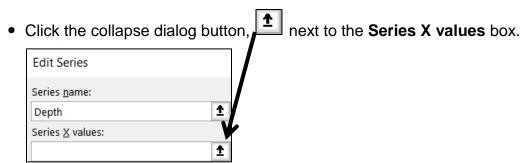
5. Be sure the chart is selected and then on the **Chart Tools Design** tab in the **Data** group (way over on the right), click **Select Data**.



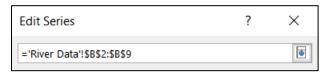
6. Under Legend Entries (Series), click Edit.



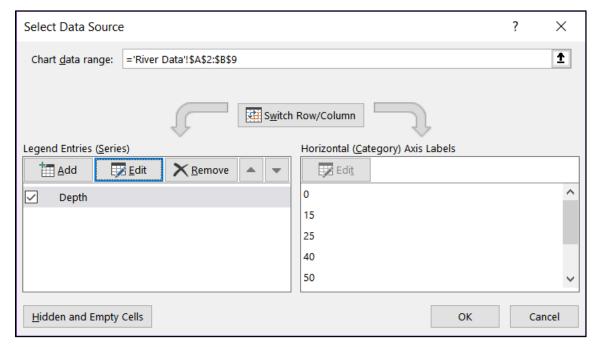
- 7. Fill in the **Edit Series** box as follows:
  - In the **Series name** box type **Depth**. This gives the data a name. In a bit, you will enter another series called **Temperature**.



 Click the River Data worksheet and select A2:A9, which contains the distance data. Notice how the location is inserted in the box:

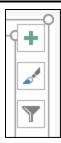


- Click the collapse dialog button again.
- 8. The Series Y values should already show the range B2:B9 in the River Data worksheet. Click OK.

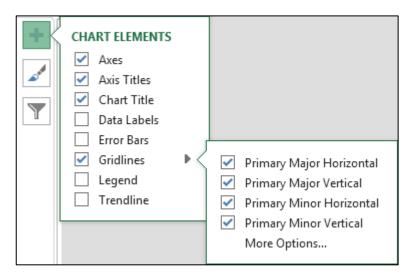


10. Click OK again.

- d. Format the chart as follows:
  - 1. Click in the chart so the chart elements icons are displayed in the upper right corner.

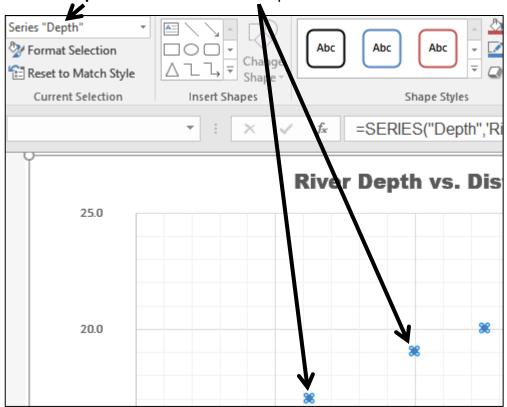


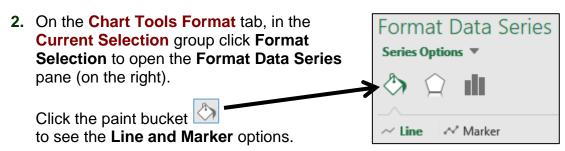
Open the **Chart Elements** menu by clicking the green cross. Insert checks as shown below:



- Click the Chart Title text box (it probably has the word Depth in it). Click the formula bar, and type River Depth vs. Distance From West Bank
   Tap Enter to update the title.
- 3. Using the same technique, change the Vertical Axis Title to Depth (feet) and the Horizontal Axis Title to Distance From West Bank (feet).
- 4. For each of the three titles, make the font 14 point Arial Black.

- 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". This selects the data points.



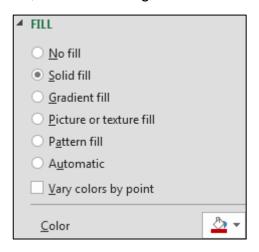


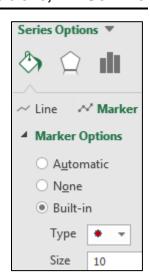
3. Click Marker, click the triangle next to Marker Options to open its menu, and then click the Built-in button.

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

Change the size to 10.

**4.** Click the **Fill** triangle to open its menu, click **Solid fill**, and then change the color to dark red.





- f. Change the background color of the chart by doing the following:
  - On the Chart Tools Format tab, in the Current Selection group, click the down arrow, select Chart Area, and then click Format Selection to open the Format Chart Area pane.
  - 2. If necessary, click the triangle to the left of **Fill** to show its menu and then click **Picture or texture fill**.

File...

Texture

Clipboard

Online...

•

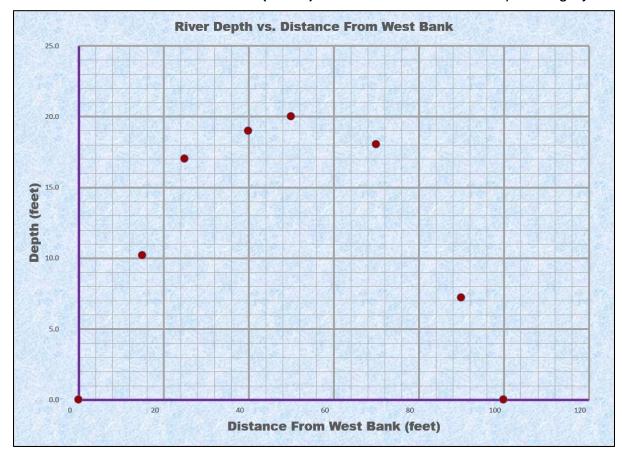
- 3. Click the down-arrow to the right of **Texture** and click the **Blue tissue paper** texture.
- q. Format the axes and gridlines as follows:
  - 1. On the Chart Tools Format tab, in the Current Selection group, click the down arrow, select Vertical (Value) Axis, and click Format Selection.
  - 3. Click the paint bucket and change the Line color to purple and make the width 3 pt.
  - 4. Follow the same procedure to format the **Horizontal (Value) Axis** line to 3 pt purple.

 On the Chart Tools Format tab, in the Current Selection group, click the down arrow, select Vertical (Value) Axis Major Gridlines, and click Format Selection.

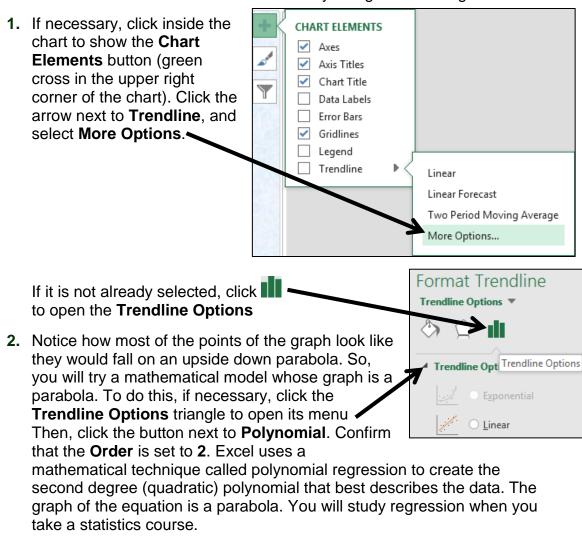
Click the paint can and change the **Color** to **dark gray** and the **Width** to **2** pt.



- **6.** Use the same procedure to make these changes:
  - Make the Vertical (Value) Axis Minor Gridlines 0.5 pt dark gray.
  - Make the Horizontal (Value) Axis Major Gridlines 2 pt dark gray.
  - Make the Horizontal (Value) Axis Minor Gridlines 0.5 pt dark gray.



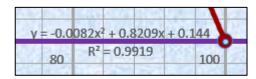
h. Have Excel calculate and insert a trend line by doing the following:



- 3. Check the box next to **Display Equation on chart**.
- **4.** 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.

The actual data points are represented by the red dots and the mathematical model calculated by Excel is represented by the trendline. The displayed R<sup>2</sup> value, 0.9919, indicates that the mathematical model fits the data very well.

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



6. Save your file.

Format Trendline

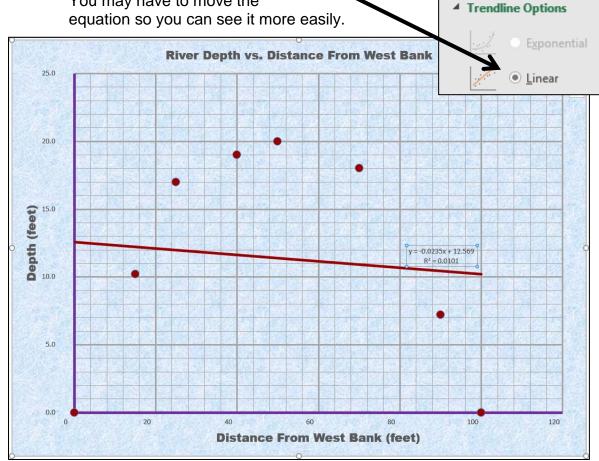
Trendline Options ▼

- Different mathematical models will fit the data more or less precisely. To see this, do the following:
  - 1. Make a copy of the River Depth Chart chartsheet. To do this, right-click the chartsheet name, select Move or Copy, click Create a copy, and click OK. Double-click the new chart name, River Depth Chart (2), type River Depth and Temp Chart, and then tap Enter.

2. Be sure Series "Depth" Trendline1 is selected and click Format Selection.

Change the **Trendline** to **Linear**.

You may have to move the equation so you can see it more easily.

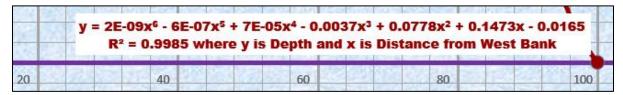


The shape of the trendline changed to a straight line, the mathematical model now has only two terms, and the R<sup>2</sup> value of 0.0101 indicates that this new model does not fit the data very well, which is obvious from the graph.

3. Change the **Trendline** 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 R<sup>2</sup> 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.

- 4. Click the equation text box.
  - Change the font to dark red 9 pt Arial Black
  - Make the fill of the text box white
  - Click inside the box and, just to the right of R<sup>2</sup> = 0.9919, type a space, and then type where y is Depth and x is Distance from West Bank



- j. Do the following to add a second graph that shows how bottom temperature varies from one side of the river to the other:
  - 1. Click anywhere in the River Depth and Temp Chart.
  - 2. On the Chart Tools Design tab in the Data group click Select Data.

Legend Entries

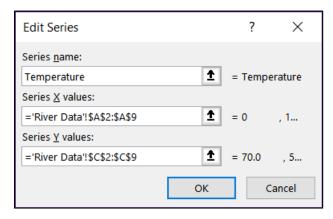
🛅 <u>A</u>dd



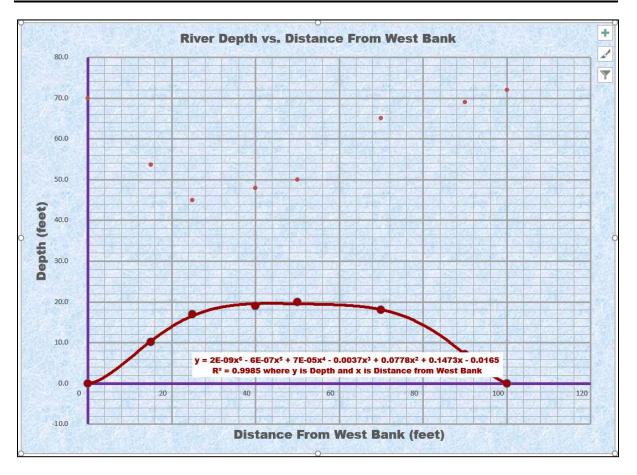
- 3. Click the Add button.
- 4. Fill in the boxes as follows:
  - For the **Series name** type **Temperature**.
  - Click the collapse dialog button, and next to the Series X values box.
  - Click the River Data worksheet and select A2:A9, which contains the distance data. Notice how the location is inserted in the box:



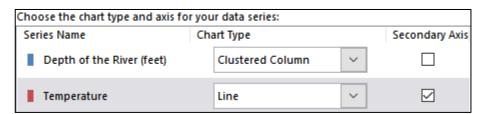
- Click the collapse dialog button again.
- For the **Series Y values**, follow the same procedure to select the **Temperature** data in **C2:C9** on the **River Data** worksheet.



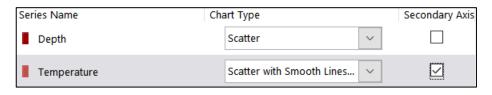
Click OK and then click OK again.



- k. Do the following to add a secondary vertical axis scale:
  - 1. On the Chart Tools Design tab in the Type group click Change Chart Type.
  - 2. At the bottom of the choices on the left, click Combo
  - 3. Put a check in the **Secondary Axis** box next to the right of **Temperature**.



Notice the graph types have automatically changed. Use the down arrows to select **Scatter** for the **Depth** and **Scatter with smooth line and markers** for the **Temperature**.



4. Click OK.

- 5. On the **Chart Tools Format** tab, in the **Current Selection** group select **Series "Temperature"** and click **Format Selection**.
- 6. Click the paint bucket, change the line color to blue and the Width to 3 pt.
- I. Format the vertical and horizontal axes as follows:
  - 1. On the **Chart Tools Format** tab, in the **Current Selection** group, select **Vertical (Value) Axis**, and click **Format Selection**.
  - 2. In the Format Axis pane on the right, click the Axis Options icon



- 3. If necessary, click the triangle to the left of menu. If necessary, under **Bounds** change the **Minimum** to **0** and the Maximum to **25**.
- **4.** If necessary, click the triangle to the left of Number to open its menu.

Number

- **5.** Under **Category**, select **Number** from the drop-down menu and set the number of decimal places to **0**.
- number of decimal places to 0.

  6. Format the vertical axis numbers to dark red 10 pt Arial Black.

  Category

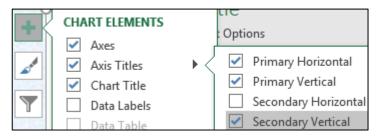
  Number

  Decimal places: 0
- 7. Repeat this process to change the Horizontal (Value) Axis Minimum to 0 and Maximum to 100. Also, under Number change the Category to Number with 0 decimal places. Format the axis numbers to 10 pt Arial Black. Leave the color as is.
- 8. Repeat this process to change the **Secondary Vertical (Value) Axis**Minimum to 0 and Maximum to 80. Also, under Number change the
  Category to Number with 0 decimal places. Format the secondary
  vertical axis numbers to blue 10 pt Arial Black.

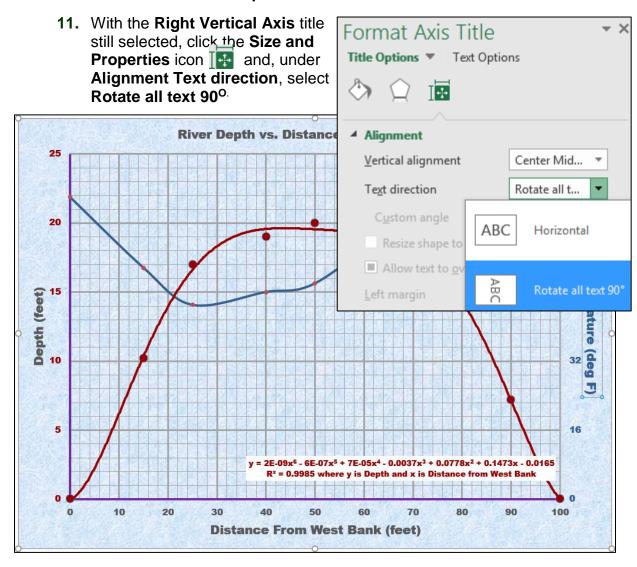
Notice that the right scale numbers shown do not line up with the major gridlines. It will make the graph look better if those numbers line up with the major gridlines. Since the right vertical axis scale goes from 0 to 80 and there are 5 major gridlines we divide 80 by 5 to get 16. Thus, change the **Major Units** to **16**.



 Click the Green Cross to open the Chart Elements menu, click the triangle to the right of Axis Titles, and put a check next to Secondary Vertical.

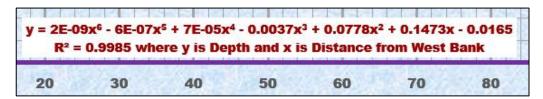


10. Click the **Right Vertical Axis** title and type **Bottom Temperature (deg F)**. Make the font **blue 14 pt Arial Black**.



The two graphs clearly show that the depth and temperature are inversely related. That is, as you go from the shore to the middle of the river the depth increases while the temperature decreases.

- m. Color code the graphs, equation, and labels to make it easier to distinguish them by doing the following:
  - 1. Click the title and change it to River Depth and Bottom Temperature vs. Distance From West Bank
  - 2. In the title, select the word **Depth** and make its color **dark red**.
  - 3. In the title, select the **Bottom Temperature** and make its color **blue**
  - 4. Make the color of the Left Vertical Axis title Depth (feet) dark red.
  - **5.** Center the equation text box just above the horizontal axis.



n. Tap Ctrl + p and set the River Depth and Temp Chart chartsheet to print in Landscape and include footer that contains the file name on the left and the sheet name on the right. Compare the preview with the key. Make needed corrections, print the worksheet, 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 **SG56**.

- a. Open the workbook **HW05-2 Loans IF Original**, which is one of the files you downloaded at the start of the term.
- b. Save the workbook using the name HW05-2 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:

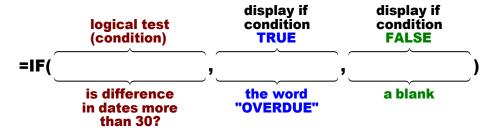
Logical test — how will Excel choose between the two possibilities (to display the word OVERDUE or to display a blank)? The difference of Today's Date and the Due Date must be greater than 30. Write this inequality as you would in algebra using cell references instead of variables.

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 Excel will think it is a special function or a named range and not know what to do with it.

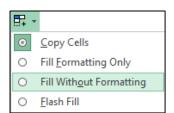
Value if false — if the Logical test is false, what should be displayed?

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).

In the space below, write the **IF** statement for **D6**:



1. 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.



	Α	В	С	D								
1		L	oan Paymo	ents								
2	-											
3	Today's Date:	13 Jul										
4												
				Loans more								
				than 30 days								
5	Loan	Due Date	Amount	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:



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.

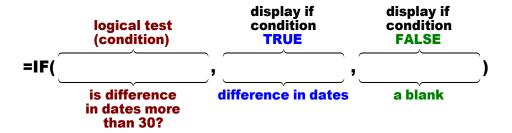
To tell Excel to keep **B3** the same use an **absolute reference**. So, in **D6** change **B3** to **B\$3**. The **\$** to the left of **3** means to keep that row number constant (**absolute**) when you fill down. Note that you also could use **\$B\$3** but since you are not copying left or right the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

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

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

- 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 in dates by subtracting them.

In the space below, write the **IF** statement for **E6**:



- 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. Tap Ctrl + p and set the Loan Formulas worksheet to print in Landscape, all on one page, centered horizontally but not vertically and include a footer that contains the file name on the left and the sheet name on the right. Show the row and column headings. Compare the preview with the key. Make needed corrections, print the 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 downloaded at the start of the term.
- Save the workbook as HW05-3 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).

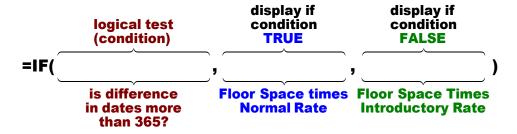
To help you write the complete **IF** function, fill in the following three parts:

**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)?

In the space below, write the **IF** statement for **D9**:



- 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\*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\*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**, 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.

	Α	В				
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.

```
=countif( | COUNTIF(range, criteria)
```

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. 11
- **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. 12 =sumif( SUMIF(range, criteria, [sum\_range])
  - 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.
  - 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.
- h. Tap Ctrl + p and set the worksheet to print in Portrait, all on one page, centered horizontally but not vertically and include a footer that contains the file name on the left and the sheet name on the right. 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 **6**.
- k. Tap Ctrl + p and set the worksheet to print in Portrait, all on one page, centered horizontally but not vertically and include a footer that contains the file name on the left and the sheet name on the right. Show the gridlines and row and column headings. Compare the preview with the key. Make needed corrections, print the worksheet, save the workbook, and close it.

<sup>12</sup> The formula is =SUMIF(D9:D12,">8000",D9:D12)

<sup>&</sup>lt;sup>11</sup> The formula is =COUNTIF(D9:D12,">8000")

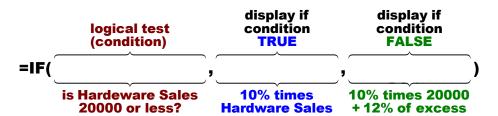
### **HW05-4 Commission IF**

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

- a. Open the workbook **HW05-4 Commission IF Original**, which is one of the files you downloaded at the start of the term.
- b. Save the workbook using the name HW05-4 HWID Commission IF Done
- c. In **D4**, enter a formula that will calculate Sherri's hardware commission. Use the following rules to construct the formula:
  - If an employee sells up to \$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, which is \$1,350.
  - 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, which is \$2,000 + \$360 = \$2,360.

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 \$20,000 or less 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 **SG54**.

In the space below, write the **IF** statement for **D4**:



- 1. Type the formula in **D4** and tap **Enter**.
- 2. Check the result. Sherri's Hardware Sales were 23000. So, her commission should be 10%\*20000 + 12%\*3000 = 2360.
- 3. Click A9 and split the screen (View, Window, Split). Scroll so you can see row 75 in the bottom pane.
- 8 Monica 75 Taylor
- **4.** Fill **D4** down to row **80**. Check the result for Mary in **D5**. Her Hardware Sales were 13500 so her commission should be 10%\*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.

Follow the directions below to do this calculation using "nested" **IF** formulas; that is, one **IF** formula inside another. You use nested **IF** logic in your daily life. For example, when you approach a traffic signal while 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

When you write your Excel formula, you will use the cell reference for **Total Commission** (**F4** for Sherri) rather than the words, and commas instead of **THEN** and **ELSE**. If your version of Excel has the **IFS** function you could use that instead of nested **IFs**, but the logic will be the same.

Do the following:

- 1. Type your 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, which is 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, which is 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, which is 10,970.24.

Here is the formula:

- 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 (**Data, What-If, Goal Seek**). 13

Click **B6** and insert a comment that says **Used Goal Seek here** (if you forgot how, see page SG51).

9	livial y	Ψ	Douglas F Robertson:
6	Lawrence	\$	28,200.00 Used Goal Seek here.
_	Dan de	Φ.	75 400 00 4

- 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.<sup>14</sup>
- k. Format the worksheet so that it looks like the following:

A	Α	С		D		Е		F		G			
1	MicroMania, Inc., Sales and Earnings Summary												
2													
			Hardware		Software		Hardware		Software		Total		Total
3	Employee		Sales		Sales	0	ommission	-	Commission	Commission			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.
- For **Row 1**, center the title across the table, and make it bold, italic, 16 pt.

<sup>&</sup>lt;sup>13</sup> The answer is \$28,200.00

<sup>&</sup>lt;sup>14</sup> 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.

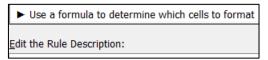
- For **Row 3**, bold the cells. To make the text wrap where you want, use a manual line break. For example, in **B3** place the insertion point to the left of the **S** in **Sales** and tap **Alt + Enter**. This places **Sales** below **Hardware**.
- For Row 3 through Row 82, use Format Cells and the 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, 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.
- I. 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.
  - 4. Tap Ctrl + p and set the worksheet to print in Landscape, all on one page, centered horizontally but not vertically and include a footer that contains the file name on the left and the sheet name on the right. Compare the preview with the key. Make needed corrections, print the worksheet, save the workbook, and 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 downloaded at the start of the term.
- b. Save the workbook using the name **HW05-5 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 an 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...**



- 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.

	Α	В	С		D		Е	F	G	Н	I
1						Н	ome Va	alues			
2		Num	Address	E	stimated Value	F	Property Tax	Lot Size (acre)	Cable TV Hookup	Small Lot with Cable	Small Lot
3			1457 Via Colinas	\$	252,467	\$	1,969.00	0.80	Yes	Cable	OI Cable
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. 15
  - 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. <sup>16</sup>

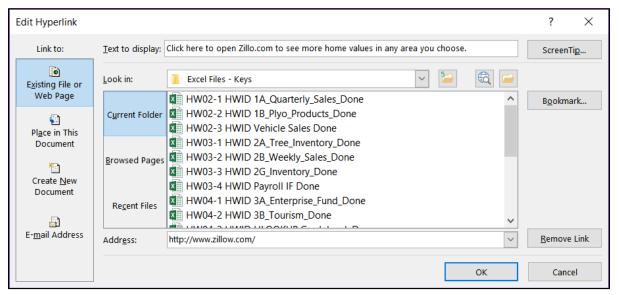
<sup>&</sup>lt;sup>15</sup> You are counting the number of houses based on a condition so use **COUNTIF**.

<sup>&</sup>lt;sup>16</sup> You are counting the number of houses based on two conditions so use COUNTIFS.

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.



- 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 Zillow.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 box, in the Address box, type the URL for Zillow: <a href="http://www.zillow.com/">http://www.zillow.com/</a>



- **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.



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 Zillow will show you its estimated value. Here is what you will see if you type 1600 Pennsylvania Ave NW, Washington, DC 20006. This is the White House, valued at about \$400 million.



**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.

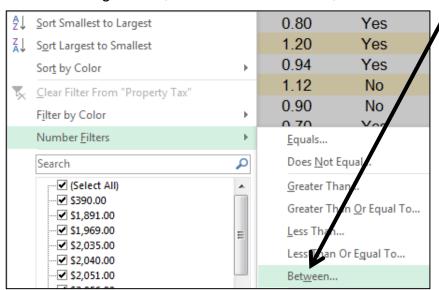
- g. In Project 1 you used **Boolean Operators** in searching for files that contained specific words. Those operators, **AND**, **OR**, and **NOT** can be used in **IF** functions. To see how this works, do the following:
  - Click H3. You want to create a formula that will determine which homes have 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 the Cable TV Hookup is Yes. 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 ✓.

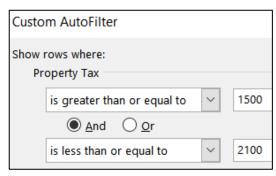
Here, the **OR** function requires that **either** condition be met. That is, **F3**, the **Lot Size**, must be **less than 1** OR **G3**, **Cable TV Hookup**, must be **Yes**. If both are not true then the condition is not true.

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 that does not match. But, the Cable TV Hookup is Yes and that does match. 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.

										Small Lot	
			Estin	nated	F	roperty	1	Lot Size	Cable TV	with	<b>Small Lot</b>
Nur -	Address	~	Va	lue 🕝		Tax	₩.	(acre) 🕝	Hooku <sub>l</sub> -	Cable -	or Cabl -
1 1457	Via Colinas	,	\$ 25	2,467	\$	1,969.	00	0.80	Yes	Yes	Yes
4 23 F	ourth Street	;	\$ 24	2,467	\$	2,051.	00	1.12	No		
5 3579	Lake Avenue	• (	\$ 25	2,467	\$	2,056.	00	0.90	No		Yes
6 1458	3 Via Colinas	,	\$ 26	0,890	\$	2,035.	00	0.70	Yes	Yes	Yes
9 3580	Lake Avenue	9 (	\$ 26	2,890	\$	1,891.	00	1.05	No		
11 3581	Lake Avenue		\$ 31	1,582	\$	2,051.	00	0.88	Yes	Yes	Yes
12 21 F	ourth Street	,	\$ 27	5,456	\$	2,040.	00	0.60	Yes	Yes	Yes
15 22 F	ourth Street	,	\$ 26	3,578	\$	1,969.	00	0.82	Yes	Yes	Yes

 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).

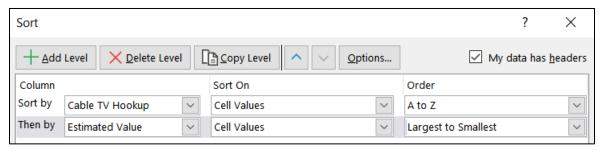
							;	Small Lot	
		E	stimated	F	Property	Lot Size	Cable TV	with	<b>Small Lot</b>
Nur -	Address	~	Value 🕝		Tax 🗷	(acre) 🕝	Hooku <sub>l</sub> -	Cable -	or Cabl -
1 1457 V	/ia Colinas	\$	252,467	\$	1,969.00	0.80	Yes	Yes	Yes
4 23 Fou	rth Street	\$	242,467	\$	2,051.00	1.12	No		
5 3579 L	ake Avenue	\$	252,467	\$	2,056.00	0.90	No		Yes
6 1458 V	/ia Colinas	\$	260,890	\$	2,035.00	0.70	Yes	Yes	Yes
9 3580 L	ake Avenue	\$	262,890	\$	1,891.00	1.05	No		
11 3581 L	ake Avenue	\$	311,582	\$	2,051.00	0.88	Yes	Yes	Yes
12 21 Fou	rth Street	\$	275,456	\$	2,040.00	0.60	Yes	Yes	Yes
15 22 Fou	rth Street	\$	263,578	\$	1,969.00	0.82	Yes	Yes	Yes

- j. Set the Print Area to be B1:I26. Tap Ctrl + p and set the Values Original worksheet to print in Portrait, all on one page, centered horizontally but not vertically and include a footer that contains the file name on the left and the sheet name on the right. Include row and column headings. Compare the preview with the key. Make needed corrections, print the worksheet, save the workbook, and 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.
  - 2. Remove the filters so all rows show.
  - 3. Select rows 2:17 (be sure to select the entire rows by clicking the row numbers on the left).

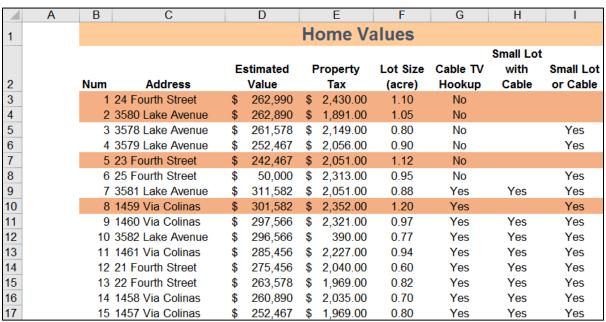
**4.** On the **Home** tab, in the **Editing** group, click **Sort & Filter**, and then select **Custom Sort**.

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 + Add Level. 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.



Notice that the **Num** column is still in order but the numbers are assigned to different houses. 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. Copy the Values Sorted worksheet and make the new name Values Sorted Formulas.
  - 2. Tap Ctrl + ` to display the formulas and Autofit the widths.
  - 3. Change the width of column C to 19, D to 9, and E, F, and G to 4.
  - 4. Set the Print Area to be B1:I25. Tap Ctrl + p and set the Values Sorted Formulas worksheet to print in Landscape, all on one page, centered horizontally but not vertically. Make the left and right margins 0.25 inch. Include a footer that contains the file name on the left and the sheet name on the right. Include gridlines and row and column headings. Compare the preview with the key. Make needed corrections, print the worksheet, save the workbook, and 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	Туре	UntsTaken	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		

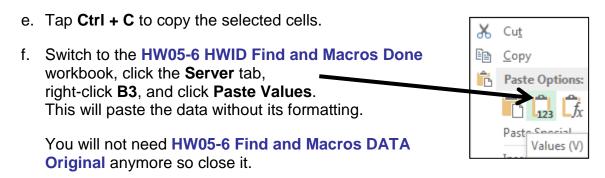
For each student, I need to place the last name and first name in separate cells so I can access each individually. In HW03-4 Payroll IF (page SG56) you did just that by using the Flash Fill feature in the Data Tools group on the Data tab. That was quick and easy and is fine if you occasionally need to break up data strings. However, every semester I have to set up a gradebook for each of the 8 sections of the 2 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.

- a. Open the workbook HW05-6 Find and Macros Original, which is one of the files you downloaded at the start of the term. This is a simplified version of my gradebook for CI 1871 section 1.
- b. Save the workbook using the name HW05-6 HWID Find and Macros Done.
- c. Open the workbook **HW05-6 Find and Macros DATA Original**, which is one of the files you downloaded 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.

- d. 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 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.

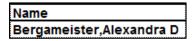
    Tapping Enter will select the range.

    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.



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).



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:

To see how this works, do the following:

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

V.	3		•	:	×	~	$f_x$	=	FIND(","	,C3)
4		S			Т		U		V	W
1									Scratch A	rea
2	Email			Firs	st name	Las	t name		Comma	Space
3									13	

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

2. The **First Name** consists of the characters between the comma and the space. Use **FIND** to find the position of the space.

In W3 type =find(" ",c3) and click the Enter checkbox.

For **Bergameister,Alexandra D** the space is the 23<sup>rd</sup> character from the left so **23** will be displayed. If there were no space in **C3**, then **#VALUE!** would have been displayed.

Note that the **FIND** function does not help you "find" something in a range. For that you would use one of the **LOOKUP** functions (see page **SG65**).

h. Use the **LEFT** function to display in **U3** the **Last name**. It has the form:

#### =LEFT(text,num chars)

You are looking in the cell that contains the student name and want to display the characters up to the comma.

The position of the comma is in V3 so the number of characters for the first name is V3 - 1. That is, 13 - 1 = 12 for **Bergameister**.

In **U3** type =left(c3,v3-1) and click the **Enter** checkbox Since the value in **V3** is 13, this will pick off the first 12 characters in **C3**. **Bergameister** will be displayed.

U	3		<b>T</b>	i	×	<b>/</b>	$f_x$	=[	_EFT(C	3,V3-1)
4		S			Т		U		V	W
1									Scratch A	Area
2	Email			Firs	t name	Las	t name		Comma	Space
3							gameis	ter	13	23

i. The **First Name** consists of the characters between the comma at position 13 and the space at position 23.



The **MID** function can be used to display text in the **mid**dle 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.

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. <sup>17</sup>

- 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. 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	0	Р	Q	R	S	Т	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

\_

<sup>&</sup>lt;sup>17</sup> This is too complicated to ask you to do on a test. I show it here so you can see what Excel is capable of.

<sup>&</sup>lt;sup>18</sup> The formula is **=U3&", "&T3** 

- I. 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.
  - **4.** Click in the box and type **=isformula(a1)** The **ISFORMULA** function is **TRUE** if the cell contains a formula (that is, it 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	0	Р	Q	R	S	Т	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	<b>Computer Science</b>	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	0	Р	Q	R	S	Т	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	<b>Computer Science</b>	0	Timothy	Biff		
Bing, William	3263672	CLA	Sophomore	Pre Business	bing3263@umn.edu	William	Bing		

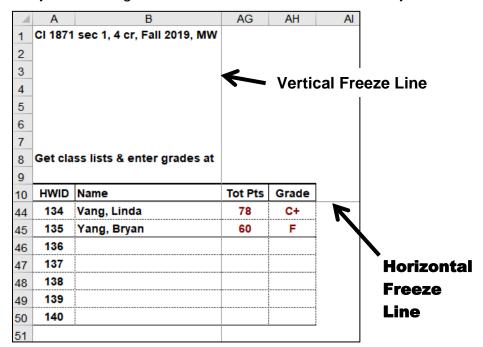
The **#VALUE!** errors have disappeared.

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:

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**. Notice we are leaving off the rows that have no data and so show errors.
  - 2. Click the **Sec 1** worksheet tab, click **B11**, and use **Paste Special** to paste the values only. To save you lots of 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, the **Sec 1** worksheet has both raw data and formulas. As you did before, set up a conditional format that will make the font **red** for 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 <u>rows above</u> 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 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**.



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, for **AF11** 

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

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:

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 **<** 



g. In **AG11**, enter a formula that will calculate the total points for each student. 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:

Total points = 25% \* Excel exam score + 20% \* Word exam score + 35% \* Final exam score + 20% \* 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.

Now, add the **ROUND** and **IF** functions as you did for the homework score and type your formula in cell AG11.19 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. You are looking up a letter grade in a horizontal table so use **HLOOKUP**. Remember to use absolute references, \$, where appropriate.

Use an **IF** function to display a blank if the student name is blank.20

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

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

<sup>&</sup>lt;sup>19</sup> The formula is =IF(B11="","",ROUND((\$O\$5\*O11+\$P\$5\*P11+\$Q\$5\*Q11+\$AF\$9\*AF11)/100,0))

<sup>&</sup>lt;sup>20</sup> The formula is **=IF(B11="","",HLOOKUP(AG11,\$U\$1:\$AE\$2,2))** 

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.

The formula is **=or(\$k11="NOL",\$k11="W")** 

Note that a \$ is needed to the left of **K11** to ensure that Excel only checks column **K**, where the grade code is located. If you leave off the \$ the formula will still work but only the cells in column **A** will be shaded.

- 5. Set the format to gray fill.
- u. 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. Think of them as mini-apps. While very useful, macros have the potential to completely mess up a worksheet so it is a good idea to make a backup copy of the workbook before constructing macros.

To see how macros work, do the following:

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

	Α	В	С	D	E	F	G	Н	- 1
46	136	Apple, Ben	1234567	CLA	Senior	Biology	appl0001@umn.edu	Ben	Apple

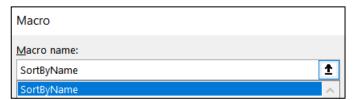
3. If the **Developer** tab is not showing, click the **File** tab, click **Options**, click **Customize Ribbon**, and put a check in the box next to **Developer**. Then, click **OK**.

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.

10	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**.



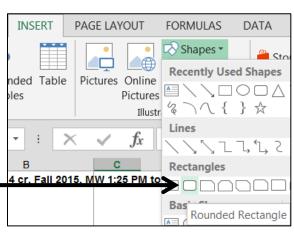
The new macro is listed. To see what the code looks like, click Edit.

**Sub** 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.

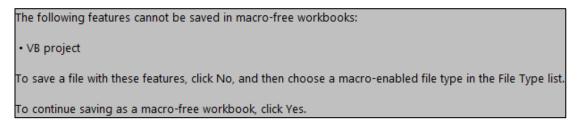
- 15. Tap Alt + Q to close the Visual Basic window.
- v. Follow a similar procedure to create a macro called **SortByHWID** that sorts the data by the **HWID** in column **A**.
- w. To create buttons that you can click to run the macros, do the following:
  - On the Insert tab, in the Illustrations group, click Shapes and click Rounded Rectangle.

The curser 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**.
- 1 CI 1871 sec 1, 4 cr, I 2 Sort By Name
- 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:



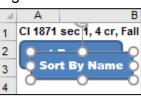
This says that you cannot save a file that has macros (Visual Basic subroutines) unless you save it as a macro-enabled file. If you click Yes the file will be saved without the macros. DON'T DO THAT!

- 17. Click **No** and the **Save As** dialog box will open.
- **18.** Navigate to your **Excel Files** 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.
- x. 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.





CI 1871 sec 1, 4 cr, F

Sort By Name

Sort By HWID

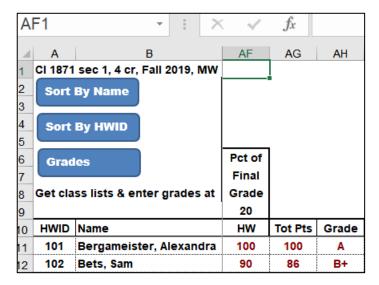
2

3

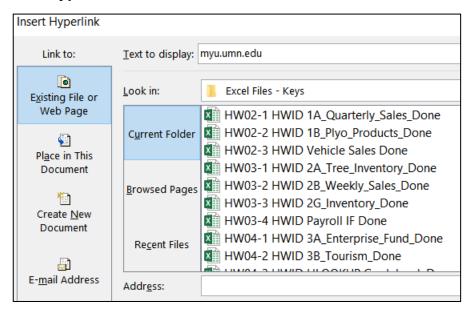
4

5

- **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 **Grades** button to make **AF1** active.



- y. As a reminder of 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 this URL in the Address box at the bottom: https://myu.umn.edu
- Click OK. The hyperlink is created and the style for the URL is automatically set to Hyperlink (underlined blue text).

8		Get cla	ss lists & enter grades at
9		myu.um	<u>n.edu</u>
10	0	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 the click the **Remove Link** button.

- z. Enter formulas that summarize the total points for students in different colleges and at different academic levels by doing the following:
  - 1. In D3, 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. Be sure to use \$ where appropriate. <sup>21</sup>
  - 2. In E3, 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. <sup>22</sup>
  - 3. Fill down the formulas in D3:E3 and preserve the formatting.
  - **4.** In **H3**, enter a formula that will display the number of **Freshmen**.
  - **5.** In **I3** (that is eye three not 13), enter a formula that will display the average total points of **Freshmen** in the gradebook.
  - **6.** Fill down the formulas in **H3:I3** and preserve the formatting.
- za. 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 2019 at 11:06 AM**. Merge **G1:I1** and right align.
- zb. 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**).
- zc. Hide columns **C:F** (select the columns, right-click, select **Hide**). Also hide columns **L:AC**.

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<sup>&</sup>lt;sup>21</sup> The formula is **=COUNTIF(\$D\$11:\$D\$50,C3)** 

<sup>&</sup>lt;sup>22</sup> The formula is **=AVERAGEIF(\$D\$11:\$D\$50,C3,\$AG\$11:\$AG\$50)** 

- zd. Tap Ctrl + p and set the worksheet to print in Landscape, all on one page. centered horizontally but not vertically and include a footer that contains the file name on the left and the sheet name on the right. Set all margins to 0.25 inch. Print 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.
- ze. Click the Server worksheet. Tap Ctrl + ` to display the formulas. Set the print area to T1:W8.
- zf. Tap Ctrl + p and set the worksheet to print in Landscape, all on one page, centered horizontally but not vertically and include a footer that contains the file name on the left and the sheet name on the right. Set all margins to 0.25 inch. Print 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.

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

1. Put your 9 homework papers in the following order:

**HW05-1 River Chartsheet Modified** 

**HW05-2 Loans IF Formulas** 

HW05-3 Rent IF Worksheet

**HW05-3 Rent IF Formulas Worksheet** 

**HW05-4 Commission IF** 

**HW05-5 Sorting Values Filtered Worksheet** 

**HW05-5 Sorting Values Formulas Worksheet** 

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** For this project, there are no textbook activities.

**Step 3 Homework** Review for the Excel exam. The 90 minute exam will be closed book and notes but you may use one 8.5 inch by 11 inch sheet of notes, both sides. The notes may be typed, hand written, scanned, whatever. Your notes sheet will be collected when you hand in the exam so be sure to put your name and HWID on it.

## **HW06-1 Sample Exam Questions for Excel**

**Problem:** How can you do well on the Excel exam?

Go back through projects 2 through 5 and be sure you know how to do the activities in both the textbook and this Study Guide. You do not have to re-do them all, just skim them and, if you think you have forgotten how to do something, read through the material on that objective and make notes on your notes sheet.

After reviewing the textbook activities, do the following sample exam questions.

As you go through the sample questions, if you get stuck on something or forget something write that down on your notes sheet. That will be a great help when you take the real exam. **Go through these sample questions several times!** 

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, recall 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:

	Α	В	С	D	E	
1	=vlookup(					
2	VLOOKUP( <b>lookup_value</b> , table_array, col_index_num, [range_lookup])					
_						

The screen tips should help jog your memory. Here, it shows that you must enter:

- lookup\_value (the cell reference of the thing you are looking for, e.g. A4)
- table\_array (the range of cells where you are looking, e.g., C5:D12)
- **col\_index\_num** (the number of the column in the **table\_array** that contains the thing you want to display, e.g., **2**)
- [range\_lookup] (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. The square brackets [ ] mean this is optional. It is assumed to be TRUE if you leave it out)

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 **SG70**. If the list is horizontal, use **HLOOKUP**. See **SG65**.

Example: =VLOOKUP(B6,B9:D68,3,FALSE) from HW04-4

### =IF(logical test, display if true, display if false)

Used to choose between two things based on a logical test. See SG56.

Example: =IF(F9<=40,E9\*F9,E9\*40) from HW03-4

If there is more than one condition, use **IFS** (**SG49**) or nested **IF**s (**SG101**).

#### **=COUNTIF(where to look, what to look for)**

Used to find the **number** of things that match the **what to look for** criteria. Criteria must be inside quotes. See **SG57**.

Example: =COUNTIF(\$F\$9:\$F\$36,">40") from HW03-4

If there is more than one condition, use **COUNTIFS** (**SG57**).

#### =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 must be inside quotes. See **SG51**.

Example: =SUMIF(F15:F42,"Tulips",A15:A42) from HW03-3

If there is more than one condition, use **SUMIFS** (**SG51**).

#### =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 must be inside quotes. See **SG52**.

Example: =AVERAGEIF(Bulbs!\$F\$15:\$F\$42,Summary!A12,Bulbs!\$D\$15:\$D\$42) from HW03-3

If there is more than one condition, use **AVERAGEIFS**.

### **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 box. Then, choose **Conditional Formatting**, **Manage Rules**, **New Rule**, Type the condition that describes what you want to find and then choose a format. See **SG59**.

#### Example from **HW03-4**:



Projects HW03-4 and HW04-4 use many of the above functions so going through those projects again will be good preparation for the Excel exam.

The key for these practice questions is in the Excel Files folder in the file
HW06-1b HWID Excel Practice Questions KEY Original

#### Do the following:

- a. Go to the Excel Files folder and open the Word document HW06-0 Notes Sheet for CI 1871 Excel Exam Original, which is one of the files you downloaded at the start of the term.
- c. Replace LastName, FirstName HWID with your information.
- b. Save the document to your **Excel Files** folder using the name **HW06-0 Notes Sheet for CI 1871 Excel Exam Done**.

You may want to print this file and then close it. Then, write on the printout as you go through the following sample questions. Or, keep it open while you do the sample questions, type your notes on it, and then print it. You will hand in this sheet when you finish the exam.

- d. Open the workbook **HW06-1a Excel Practice Questions Original**, which is one of the files you downloaded at the start of the term.
- e. Save the workbook to your **Excel Files** folder using the name **HW06-1b HWID Excel Practice Questions Done**.
- f. Click the **Sales Data** worksheet tab and do the following:

If you get stuck, look up the question in "How to Solve Sample Exam Questions for Excel" starting on page SG132 of this Study Guide.

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.

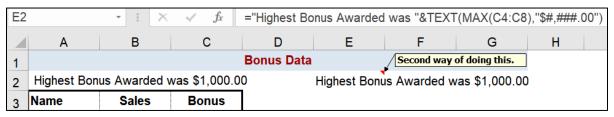
This formula and all the others you construct must work if the data change. In other words, you cannot simply figure out the sum on your calculator and then type in the answer.

3. In C18, insert a formula that finds the average of the values in C4:C15.

- **4.** In **D4**, enter a formula that will calculate the commission for Adams. If her total sales are below \$5,000, the commission is \$9,000 plus 8% of her 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**.
- 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. 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 one decimal place is shown.
- 8. In F4, display the word Great if Adams' 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. 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.
- **10.** Create a conditional format so that the names and department of the people in the **Marketing Department** whose commissions are over \$9,600 have a yellow fill.
- 11. In **D22**, enter a formula that will display the number of commissions that are over \$9,600 for people in the **Marketing Department**.
- 12. In D1, enter a formula that will automatically display the date and time the worksheet is printed. The format should look like Printed on Tue 9 July 2019 at 11:50 AM.
- **13.** Change the value in **C4** so that Kathy Adam's **% of Total Sales** is exactly **25.00**.
- 14. Change the widths of all the columns to 12.
- **15.** Merge **D1:F1** and right align it.
- **16.** Center and wrap the text in **D21**.
- 17. Center **D19:D22**.
- 18. Set the Print Area to A1:F23.
- 19. Tap Ctrl + p and set the worksheet to print in Landscape, all on one page, centered horizontally but not vertically with 1 inch margins. Include a footer that contains the file name on the left and the sheet name on the right. Show gridlines and row and column headings. Compare the preview with the key. Make needed corrections, print the worksheet, save the workbook, but do not close it.
- g. 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**.



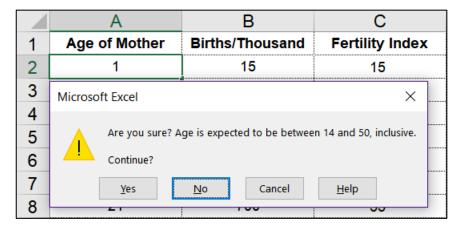
- 3. Use the data in A4:A15 for the horizontal axis.
- **4.** Type your four-character **HWID** as the **Chart Title**.
- 5. Type Total Sales for the Vertical Axis Title.
- 6. Type People for the Horizontal Axis Title.
- 7. Display the **Data Labels** and make their font Arial Black and red.
- 8. Do 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. Move the picture so it is just under the title,
- **10.** Make the font of the title, axes labels, and axes values Arial Black.
- 11. 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. Have the callout point to **Adams** data label.
- **12.** Change the background of the chart parchment texture.
- 13. Tap Ctrl + p and set the Column Chart chartsheet to print in Landscape and include a footer that contains the file name on the left and the sheet name on the right. Compare the preview with the key. Make needed corrections, print the chartsheet, save the workbook, but do not close it.
- h. Click the **Bonus Data** worksheet. Remember, the **SOLUTIONS** to these questions start on page **SG132** of this Study Guide.
  - 1. Click A1 and make the text bold and red, center the text across columns A:G, and make the fill light blue.
  - Enter a formula in C4 that will display the bonus for the sales value in B4. Use the data table in B10:G12. Fill the formula down to C8 and preserve the formatting.
  - 3. Sort the rows of data by **Bonus** in decreasing order.
  - **4.** Create a conditional format that will make the **Names**, **Sales**, and **Bonuses** bold red and the background of the cell light green if the bonus for a person is between \$300 and \$900.
  - 5. In A2, display this: Highest Bonus Awarded was \$x,xxx.00, where xxx is the largest value in C4:C8. If necessary, merge A2:D2 so all the characters can be seen. The key on page SG139 shows two ways of doing this:



- **6.** Create a **Column Sparkline** in **C9** that references **C4:C8**. Make the color orange.
- 7. In cell E3, enter a formula that shows the average of the Total Sales on the Sales Data worksheet. Format E3 so that it displays Average of Total Sales is \$x,xxx.00.
- **8.** Make a copy of 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.
- **10.** Hide rows **5** and **6**.
- 11. Zoom the screen to 200%.
- 12. Tap Ctrl + p and set the Bonus Data Two worksheet to print in Landscape, all on one page, centered horizontally but not vertically and include a footer that contains the file name on the left and the sheet name on the right. Include gridlines and row and column headings. Compare the preview with the key. Make needed corrections, print the worksheet, save the workbook, and close it.
- i. Make the **Sort Data** tab active and do the following:
  - 1. Delete Row 8 (it has red text).
  - 2. Delete Column C (it has blue text).
  - 3. Sort the data by **Class** in ascending order (A to Z) and, within **Class** by **Trend** in descending order (Largest to Smallest).
  - 4. Filter the data in A1:D33 so that only rows with Class to C or T are showing.
- j. Click the **Births Data** worksheet tab. Remember, the **SOLUTIONS** to these questions begin on page **SG132** of this Study Guide.
  - 1. Split the screen just below row 9 and then scroll the bottom half of the screen down so you can see row 28.

9	22	802	36
28	49	30	1

2. Set up **Data Validation** for **A2:A28**. The ages should be whole numbers between 14 and 50, inclusive. If an error occurs, have a **Warning** message display the text **Are you sure? Age is expected to be between 14 and 50, inclusive.** Here is what should happen if you type 1 in **A2**.



- 3. Create an XY Scatter plot of the data in columns A and B. Do not connect the points by a smooth line.
- 4. Move the chart to its own chartsheet called **Births Chart**.
- 5. Make the Chart Title Live Births Per Thousand Women vs. Age Make the font 14 pt Arial Black.
- 6. Make the Horizontal Axis title Age (years) Make the font 12 pt Arial Black.
- 7. Make the Vertical Axis Title Live Births Per Thousand Women Make the font 12 pt Arial Black.
- 8. Show the Major and Minor gridlines for both axes.
- **9.** Make the data points square, green, and 8 point width.
- 10. Add a Trendline that is a degree 5 polynomial. Display the equation and R squared value. Make its font 10 pt Arial Black. Make the fill color pink. Make the trendline solid, red, and 3 pt width.
- 11. Make the color of the **Plot** area pink.
- **12.** Make the horizontal and vertical axes 4 point width and dark blue and the numbers Arial Black.
- **13.** Make the major gridlines 2 point width and dark gray.
- **14.** Do not display the minor gridlines.
- **15.** Scale the horizontal axis so that it starts at **12** and ends at **52** and make the interval between major grid lines 4.
- **16.** Add a second set of data markers using **Age** for the horizontal (X) axis and **Fertility Index** for the vertical axis (Y). Use **Index** for the **Series name**.
- **17.** Move the equation and **R** squared value text box so it is just above the horizontal axis.

- **18.** Add a **Thought Bubble: Clout 1** callout that points to the data gap between ages 25 and 29. Insert the text **Data unavailable**
- 19. Arrange the sheet tabs alphabetically left to right.

Births Chart | Births Data | Bonus Data | Bonus Data Two | Column Chart | Sales Data | Sort Data

20. Tap Ctrl + p and set the Births Chart chartsheet to print in Landscape and include a footer that contains the file name on the left and the sheet name on the right. Compare the preview with the key. Make needed corrections, print the chartsheet, save the workbook, 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:

**HW06-1 Sales Data Worksheet** 

**HW06-1 Column Chartsheet** 

**HW06-1 Bonus Data Two Worksheet** 

**HW06-1 Births Chartsheet** 

- **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 KEY 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.

## **How to Solve Sample Exam Questions for Excel**

I hope the following brief explanations are helpful as you study for the Excel exam.

## **Sales Data worksheet – Solutions**

**f1**. Question **f1** is on page **SG127**. Here is how to solve it:

Click the number for row **7**, drag down to row **8**, right-click, and select **Insert**. Then, type the new data.

- **f2.** You are finding a total of numbers so use **SUM**. Type **=sum(**, drag down from **C4** through **C15**, type **)**, and the tap **Enter**.
- **f3.** Do the same as for **f2** but replace the word **SUM** with **AVERAGE**.
- **f4.** You are entering a formula that displays one of two things. That is, the formula will choose between

Choice 1: \$9,000 plus 8% of total sales.

Choice 2: \$9,400 plus 12% of the total sales that are above \$5,000.

The formula makes the choice by seeing if total sales are below 5000. So, the condition is **C4<5000**. Type **=IF(C4<5000**,

If the condition is true, display Choice 1, which is \$9,000 plus 8% of her total sales. Since total sales are in C4, add this to the formula 9000+8%\*C4, to get =IF(C4<5000,9000+8%\*C4,

If the condition is false, display Choice 2, which is \$9,400 plus 12% of the total sales that are above \$5,000. To find the total sales that are above 5000 subtract C4-5000 (for Adams this will be 5644-5000, which is 644). Then, take 12% of that. Note that you must use parentheses so the computer does the subtraction first and then multiplies by 12%. That is, 12%\*(C4-5000). Finally, add 9400 to this to get 9400+12%\*(C4-5000). Thus, the final formula is

=IF(C4<5000,9000+8%\*C4,9400+12%\*(C4-5000))

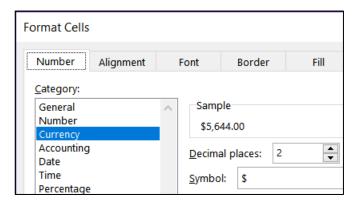
Tap **Enter**.

To fill the formula, click **D4**, drag down to **D15**, and tap **Ctrl + D**. Or, use the Fill Handle by pointing to the lower right corner of **D4** (so the little black cross appears), and drag down to **D15**.

f5. To find the percentage that something is of a whole, divide that something by the whole. That gives a decimal. Multiply by 100 to convert the decimal into a percent. For Adams, her total sales are in C4 and the sum of the total sales for all employees is in C17. So, type =C4/C17\*100

You are going to fill this formula down to row 15. You want the **C4** to change to **C5**, and then to **C6** and so on. But, you want **C17** to always remain **C17** so you must use an absolute reference (the \$ signs). Thus the formula is =**C4/\$C\$17\*100**. To fill the formula, click **E4**, drag down to **E15**, and tap **Ctrl + D**.

**f6.** Select **C4:D20**, right-click, **Format Cells**, **Number** tab, **Currency**. Be sure the **Symbol** is \$ and **Decimal places 2**.



f7. Select E4:E15, right-click, Format Cells, Number tab, Number, Decimal places 1. Note that since we multiplied by 100 in the formula we do not use the percentage format. If you did, Adams would show 716.6%.

**f8.** You need to display one of three words depending on the value in **C4**. Since there are three choices you need two **IF** statements, one nested inside the other.

First, check to see if **Total Sales** are over 8000. That is, **=IF(C4>8000** 

If that is true, display "Great".=IF(C4>8000,"Great"

If it is not true, check to see if **C4** is over 6000.

If that is true, display "Good". IF(C4>8000,"Great",IF(C4>6000,"Good"

If that is not true display the word "Poor" =IF(C4>8000,"Great",IF(C4>6000,"Good","Poor"))

Or, you could do it in the reverse order like this:

=IF(C4<=6000,"Poor",IF(C4<8000,"Good","Great"))

Or, you could do it this way:

=IF(C4>8000, "Great", IF(C4<6000, "Poor", "Good"))

If your version of Excel has the **IFS** function, you could use that instead of the nested **IFs**. In that case, the formula would be:

```
=IFS(C4>8000, "Great", C4>6000, "Good", C4<=6000, "Poor")
```

Note that on the key I put in all four of these formulas so you could see how they work. Fill down in the usual way.

**f9.** You want to find a sum of **Total Sales** for people who meet a certain condition (**Commissions** are over \$9,800). So, use **SUMIF**.

The range to look in to see if the condition is met is **D4:D15**. So, you have **=SUMIF(D4:D15** 

The condition is >9800. So you have **=SUMIF(D4:D15,">9800"** Note the quotation marks on the condition. This is different than when using **IF**.

You want to sum the **Total Sales**, which are in **C4:C15**. So, you have **=SUMIF(D4:D15,">9800",C4:C15)** 

**f10.** For conditional formats, first select the cells that are to be formatted. Here, you want the names formatted so select **A4:B15**.

Click Conditional Formatting, New Rule, Use a formula to determine which cells to format.

The employee must meet two criteria: **Department** (column **B**) is **Marketing**, and **Commission** (column **D**) is over **9600**. So, use the **AND** function: **=AND(\$B4="Marketing",\$D4>9600)** The \$ are needed because you want two columns formatted. Also, notice that here you do not put in the range **B4:B15** but only **B4.** Same goes for column **D**. For Conditional Formatting, you put in the rule for the first person and Excel does it for all the people that you have selected in **A4:B15**. This seems strange to me but that is how Conditional Formatting is set up.

Finally, click the **Format** button, click **Fill**, and click **yellow**. Click **OK** a couple of times to close the conditional formatting dialog box.

**f11.** You are to display the number of things based on two criteria so use **COUNTIFS**.

The first condition is that the **Commission** (in column **D**) must be over 9600. So, you have **=COUNTIFS(D4:D15,">9600"** 

The second condition is that the department is **Marketing** (in column **B**). So you have **COUNTIFS(D4:D15,">9600",B4:B15,"Marketing")** 

Note that in each case the condition must be inside quotation marks.

**f12.** To have the date and time update automatically, **NOW()**. Do NOT use **DATE** since that is used when you need to take three separate values and combine them to form a date (not very useful).

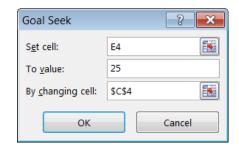
Once you have entered **=NOW()** click the green check. The date is stored as the number of days it is after January 1900. The time is stored as a fractional portion of a 24 hour day. So, if the date and time are 9 July 2019 at 11:50 AM, the number will be 43655.49313.

To format the date and time, right-click, **Format Cells**, **Number** tab, and **Custom**. The phrase **Printed on** must be in quotes since it is text. Then, enter the code for the day (**ddd**), the date (**d**), the month (**mmm**), the year (**yyyy**), the word " at " and the hour (h) a colon, the minutes (mm) and am/pm so Excel uses our normal 12 hour clock rather than military time. This is "**Printed on** " **ddd d mmm yyyy" at "h:mm am/pm** 

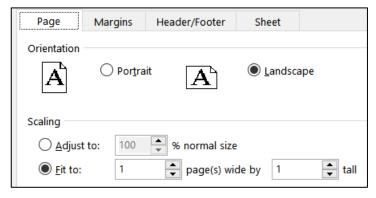
f13. Use Data, Forecast, What-If, Goal Seek to get the exact value.

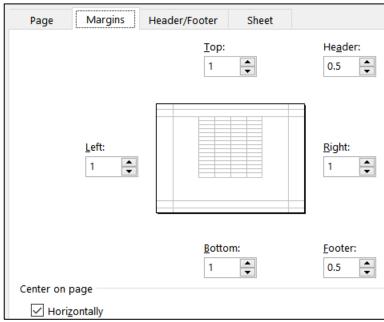
The answer is **24370.6624489115**.

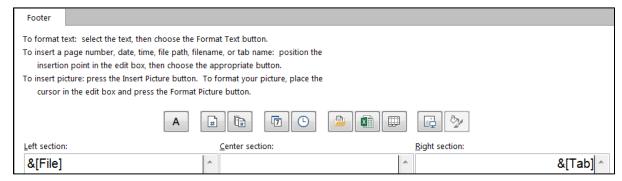
**f14.** Select the entire worksheet, point to column heading **A**, right-click, select **Column width**, and enter **12**.

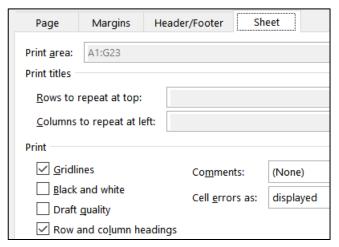


- f15. Select D1:F1, click Merge and Center, then click Right align.
- f16. Select D21, click Center align, click Wrap text.
- f17. Select D19:D22 and click Center align.
- **f18.** Select **A1:F23**. On the **Page Layout** tab, in the **Page Setup** group, click the **Print Area** down arrow, and click **Set Print Area**.
- **f19.** Tap **Ctrl** + **p**, click **Page Setup**, and make the settings look like these:







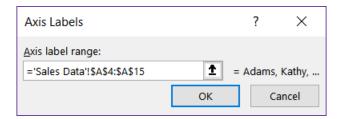


## Column Chart Chartsheet - Solutions

- g1. Select C4:C15. Click the Insert tab and select 2-D column.
- g2. Do NOT copy and paste the chart into a new worksheet. Click Chart Tools Design Location, Move Chart. and type the name Column Chart. This creates a new chartsheet that contains only the chart and no cells.
- g3. Click Chart Tools Design, Select Data, Horizontal (Category) Axis

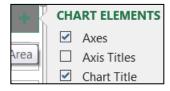
  Labels Edit. Click to collapse the dialog, switch to the Sales Data

  worksheet, select A4:A15, and click again.



Click **OK** and click **OK** again.

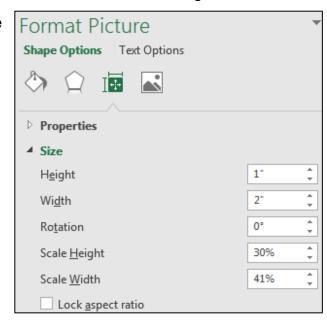
g4. Remember, the green cross allows you to put in many different chart elements. Put a check next to **Chart Title**, if necessary. With Chart Title selected, type your HWID.



- **g5.** Click the green cross and put a check next to **Axis Titles**. If necessary, click the vertical axis title so select it. Type **Total Sales** and tap **Enter**.
- **g6.** Click the horizontal axis title and type **People** and tap **Enter**.
- g7. Click the green cross and put a check next to Data Labels. Then, on the Chart Tools Format tab, way over on the left, click the down arrow and select Series 1 Data Labels to select them.

With the **Data Labels** selected, click the **Home** tab and change the font.

- **g8.** Click the green cross and be sure **Legend** is NOT checked.
- g9. Click anywhere in the Chart Area. Click Insert, Illustrations, Pictures, and then navigate to any picture on your computer. On the Picture Tools Format tab in the Size group, click the launch dialog button to open the Format Picture pane. Be sure to uncheck Lock aspect ratio so you can change each dimension separately. Then, enter 1 in the Height box and 2 in the Width box.



- **g10.** Click the title to select it and, on the Home tab, in the Font group, select Arial Black. Repeat for the axes titles and values.
- g11. Click Insert, Illustrations, Shapes, Callouts. Drag to open the callout. Type the text and then format the font. To point to the Adams column, grab the little orange circle at the end of the point and drag it to the desired position.
- **g12.** On the **Chart Tools Format** tab, way over on the left, click the down arrow, select **Chart** area, and click **Format selection**. Click the paint bucket and under **Fill** click **Picture or texture fill**. Click the down arrow to the right of **Texture** and select **Parchment**.
- **g13.** Set up to print as usual.

#### **Bonus Data worksheet - Solutions**

- h1. To center across cells, select A1:G1 and click Home, Alignment, Merge and Center.
- **h2.** The sales and bonus data are in **B10:G12**. This is a horizontal table so use **HLOOKUP**.

You want to look up the value in **B4** so use **=HLOOKUP(B4** 

You want to lookup that value in the horizontal table **B10:G12** so use **=HLOOKUP(B4,\$B\$10:\$G\$12** Note the use of absolute references (the \$). This is because when you fill down this formula you want the location of the table to remain constant, which is what the \$ do.

When the value of **B4** is found in row 1 of the table, you want to display the value in row 3, so use **=HLOOKUP(B4,\$B\$10:\$G\$12,3** 

**#** -

Copy Cells

Fill Formatting Only

Since you do not need an exact match, type **TRUE** as the last parameter, **=HLOOKUP(B4,\$B\$10:\$G\$12,3,TRUE)**. **TRUE** is the default so you can leave it off if you wish.

When you fill down, to preserve the formatting be sure to select **Fill Without formatting** from the **Auto Fill Options**.

h3. Be sure you select all the data in each row and not just the data in column **C**. That is, click the number for row **4** and drag down to row **8** to select those five

rows and then **Home**, **Editing**, **Sort & Filter**, **Custom Sort**. Under **Sort by**, select **Column C** and **Largest to smallest**, and then click **OK**.

h4. Select the cells you want to format. That is, select A4:C8. Then Home, Styles, Conditional Formatting, New Rule, Use a formula to determine which cells to format. There are basically two conditions, less than 900 and also greater than 300. Use AND for the condition, like this: =and(\$c4<900,\$c4>300). Notice the use of the \$ because you have selected more than one column and you want all three to have the format.

Name	Sales	Bonus
Maren	\$38,200	\$1,000
Sue	\$30,123	\$800
Melissa	\$25,821	\$600
Elana	\$22,054	\$400
Kathy	\$17,866	\$200

**h5.** Here are two ways of doing this:

Method I: Since you are looking for the highest number in C4:C8 use =MAX(C4:C8). This gives you the number \$1,000. To format the cell right-click, select Format Cells, click the Number tab, click Custom and type "Highest Bonus Awarded was "\$#,###.00 The part inside quotes is text that will be displayed exactly as written. To the right of the quote shows the format for the number: The \$ indicates currency, the # indicates numbers (you cannot use x's here), the comma indicates that it should be put there if the value is over one thousand, the period shows the decimal point, and the 00 shows that zeros should be displayed if needed. If you see ######## displayed, select A2:D2 and click Merge & Center, and then Align Left.

Method II: This method uses the & to connect (concatenate) the text Highest Bonus Awarded was with the number 1000. So, use ="Highest Bonus Awarded was "&TEXT(MAX(C4:C8),"\$#,###.00") The TEXT function must be used to show Excel how to format the number. If you do it this way you will not have to use Merge & Center to see the result.

- h6. Click C9. On the Insert tab, in the Sparklines group, click Column Sparkline. For the Data Range enter C4:C8, for the Location enter C9. Then click Sparkline Tools Design Style, Sparkline color, and select Orange.
- h7. Click E3, type =, click the Sales Data worksheet, click C18, tap Enter. The formula will look like this: ='Sales Data'!C18 This says go to the Sales Data worksheet and display the contents of cell C18.

Right-click E3, Format Cells, Number tab, Custom, type "Average of Total Sales is "\$#,###.00

Select E3:G3, Home, Alignment, Merge & Center, Align Left.

- h8. Right-click the Bonus Data worksheet tab and select More or Copy. Put a check next to Create a copy and click OK. Double-click the new tab name, Bonus Data (2), type Bonus Data Two, and tap Enter.
- h9. To freeze panes, click the cell that is just below and to the right of the rows and columns you want to always keep on the screen. Since you want rows 1, 2, and 3 and column A click B4. Then on the View tab, in the Window group, click the Freeze Panes down arrow and then select Freeze Panes. The frozen cells are indicated by the black line between rows 3 and 4 and between columns A and B.
- **h10.** Click the number for row **5** and drag down to row number **6**. Right-click, select **Hide**.
- h11. On the View tab, in the Zoom group, click Zoom, click 200%, and click OK.
- **h12.** Set up print as usual.

#### **Sort Data worksheet - Solutions**

- i1. Click the number for row 8, right-click, and select **Delete**. Row 9 becomes row 8. This gets rid of the entire row and not just the data in a row.
- i2. Click the letter for column **C** (**Height**), right-click, and select **Delete**. Column **D** becomes column **C**.
- i3. Click the number for row 1 and drag down to the number for row 33. This selects all the data in those rows and not just the data in a particular column. On the Home tab, in the Editing group, select Sort & Filter, Custom Sort. Be sure My data has headers is checked. Under Sort by, select Class and A to Z, click Add Level, select Trend and Largest to Smallest. Click OK.
- i4. Select A1:D1. On the Home tab, in the Editing group, select Sort & Filter and click Filter. Click the Class down arrow and click Select All (to deselect everything) and then click C and T. Click OK.

	Α	В	С	D
1	Level -	Trend 🔻	Width -	Class 🖫
5	1	9	7	С
6	5	5	85	С
7	2	3	111	С
8	2	3	111	С
22	5	5	7	T
22 23 24 25	5	5	7	Т
24	1	4	114	Т
25	2	3	111	Т

## **Births Data worksheet - Solutions**

- j1. Click the number for row 10 and on the View tab, in the Window group, click Split. Scroll the bottom part of the screen so row 28 shows.
- **j2.** Select **A2:A28**. Since the screen is split, rather than scrolling it will be faster to click **A2**, hold down **Shift**, and click **A28**.

On the **Data** tab, in the **Data Tools** group, click the **Data Validation** down arrow and select **Data Validation**. On the **Settings** tab, under **Allow**, select **Whole number**. Under **Data** select **between**, under **Minimum** enter **14**, and under **Maximum** enter **50**. Click the **Error Alert** tab and under **Style** select **Warning**, and under **Error message** type **Are you sure? Age** is **expected to be between 14 and 50, inclusive.** Click **OK**.

In cell **A2**, type **1** to check if the warning comes up. Click cancel and the **1** will return to its original value.

- j3. Select A2:B28. On the Insert tab, in the Charts group, select XY Scatter.
- **j4.** On the **Chart Tools Design** tab, in the **Location** group, click **Move Chart**. Next to **New sheet**, type **Births Chart**, and click **OK**.
- j5. Click the green cross and put a check next to Chart Title, if necessary. On the Chart Tools Format tab, in the upper left corner, click the down arrow and select Chart Title, Type Live Births Per Thousand Women vs. Age. Change the font size and type.
- j6. Do the same for the Horizontal (Category) Axis Title and type Age (years). Change the font size and type.
- j7. Do the same for the Vertical Axis Title and type Live Births Per Thousand Women. Change the font size and type.

j8.	Click the green cross, click	✓ Gridlines ► <	Primary Major Horizontal
	the triangle to the right of	Legend	✓ Primary Major Vertical
	Gridlines and put a check	Trendline	✓ Primary Minor Horizontal
	next to each box.		✓ Primary Minor Vertical

j9. On the Chart Tools Format tab, in the upper left corner, click the down arrow and select Series 1. This selects the data points. Just under that click Format Selection to open the Format Data Series pane. Click the paint bucket and click Marker and then Marker options.

To the right of **Type**, select square, to the right of **Size**, select 8 pt. Click the triangle next to **Fill**, click **Solid fill**, and select green.

j10. Click the green cross, click the arrow to the right of Trendline and select More Options to open the Format Trendline Pane. Click the little column graph, click Polynomial and set the Order to 5. Put checks next to Display Equation and Display R-squared. Select those on the chart and, on the Home tab, make the font 12 pt Arial Black and the fill color white. Drag it up so it is centered just below the title.

Click the **Trendline** to select it. Click the paint bucket, click the **Dash Type** down arrow, select the **solid line**, change the **Width** to **3**, and the color to red.

- j11. In the upper left corner select **Plot Area** from the drop-down menu and click **Format Selection** to open the **Format Plot Area** pane. Click the paint bucket, click **Fill**, click **Solid fill** and select pink as the **Color**.
- j12. In the upper left corner select Horizontal (Value) Axis from the drop-down menu and click Format Selection to open the Format Axis pane. Click the paint bucket and then Line if necessary. Set the width to 4 pt and the color to dark blue and the numbers Arial Black. Repeat for the Vertical (Value) Axis.
- j13. In the upper left corner select Horizontal (Value) Axis Major Gridlines from the drop-down menu and click Format Selection to open the Format Major Gridlines pane. Click the paint bucket and then Line if necessary. Set the Width to 2 pt and the Color to gray. Do the same for the Vertical (Value) Axis Major Gridlines.
- j14. In the upper left corner select Horizontal (Value) Axis Minor Gridlines from the drop-down menu and click Format Selection to open the Format Minor Gridlines pane. Click No line. Do the same for the Vertical (Value) Axis Minor Gridlines.
- j15. In the upper left corner select Horizontal (Value) Axis from the dropdown menu and click Format Selection to open the Format Axis pane.
  - Click the little column graph , click **Axis Options** and set the **Minimum** to **12** and the **Maximum** to **52**. Set **Units Major** to **4** (no need to set the **Minor** units since the minor gridlines are not showing).
- **j16.** Click the **Chart Tools Design** tab, click **Select Data**, and click the **Add** button to open the **Edit Series** dialog box. For **Series name** type **Index**.

For Series X values, click the collapse dialog button **1**, click the **Births Data** worksheet tab, select **A2:A28**, and click the collapse dialog button again.

Edit Series

Series name:

Series X values:

Series Y values:

='Births Data'!\$A\$2:\$A\$28

='Births Data'!\$C\$2:\$C\$28

Index

₾

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For **Series Y values**, click the collapse dialog button, click the **Births Data** worksheet, select **C2:C28**, and click the collapse dialog button again.

Click **OK**. Click **OK** again.

- **j17.** Select the text box and drag it under the title.
- j18. Click anywhere in the chart. On the Insert tab, in the Illustrations group, click the Shapes down arrow and, near the bottom, select the Thought Bubble callout. Drag the tiny cross to open the callout and enter the text. Grab the tiny orange circle and drag it to the data gap.
- **j19.** Click each tab and drag it into position.
- **j20.** Set up print as usual.

## 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

Materials: At the exam I will give you a handout with the guestions on it and a USB

drive that has the files you will need. You will save your modified files to

this USB drive. You will not print anything.

Notes: All exams will be closed book and notes but you may use one 8.5 inch

by 11 inch sheet of notes, both sides, typed, hand written, scanned, or whatever. Your notes sheet will be collected when you hand in the exam so be sure to put your name and HWID on it. The exam room printer will be disabled during the exam time so be sure you print your notes sheet

before you enter the classroom.

Use the Word file **HW06-0 Notes Sheet for CI 1871 Excel Exam Done**, which you saved on page **SG127**, as your notes sheet.

What to Bring to the exam: Your student photo ID, your notes sheet, and a pen or pencil. I will provide everything else.

The Excel exam is timed. 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: <a href="http://www.oit.umn.edu/computerlabs/">http://www.oit.umn.edu/computerlabs/</a>

#### **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 you pencil, turn off your cell phone, 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. Your own log in will not work.
- 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**.

- Take out your notes sheet.
- 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. The 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 (except for your one sheet), 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 up your exam paper, notes sheet, and USB drive. 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 and USB drive 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** Read the introductory material on page 103 of the textbook.

**Step 2 Activities** Turn on the computer and do the following:

**Project 1A:** Start at the top of page 105.

**Instead of Activity 1.01** step 1 do the following:

 Open a blank Word document and save it to your Word Files folder using the name Lastname\_Firstname\_1A\_Flyer

We are not going to use sub folders (e.g., Word Chapter 1). You will put all your Word files in the Word Files folder so you can see them all at once.

- 2. Complete the rest of the Activities for this Project EXCEPT do **NOT** do steps 7 and 8 in **Activity 1.16** on page 123.
- 3. Return here when you have completed Project 1A on page 123.

Do NOT do GO! With Google Docs

**Project 1B:** When you have completed Project 1A, start at the top of page 127.

**Instead of Activity 1.17** step 1 do the following:

- 1. Navigate to your **Word Files** folder and open **w01B\_Programs**, which is one of the files you downloaded at the start of the term.
- Save the file in your Word Files folder using the name Lastname\_Firstname\_1B\_Programs
- **3.** Complete the rest of the Activities for this Project EXCEPT do **NOT** do steps 5 and 6 in **Activity 1.29** on page 146.
- **4. Return here** when you have completed Project 1B on page 146.

Do NOT do GO! With Google Docs or GO! To Work

**Step 3 Homework** After you have completed Projects A and B return here, do the following additional activities, and turn them in for grading.

Quick WordArt Drop

Document Property

Cap ₹

Parts ▼

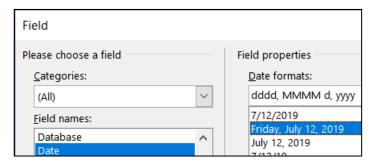
<u>AutoText</u>

Field...

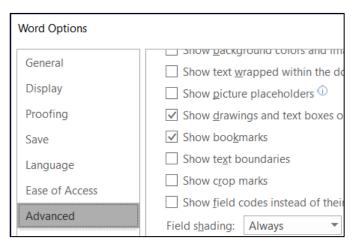
### **HW07-1 Flyer (Based on Project 1A)**

**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 123.
- Save the document in the Word Files folder using the name HW07-1 HWID 1A\_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 go to the bottom of the document.
  - 2. Tap Enter and type Today's Date: and then a space.
  - 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, month, 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 Field shading down arrow, and select Always.



**8.** Click **OK**. The date now appears with a shaded background. However, the shading will not appear on the printed copy.

Today's Date: Friday, July 12, 2019

**9.** Tap **Alt + F9** to view the actual field code:



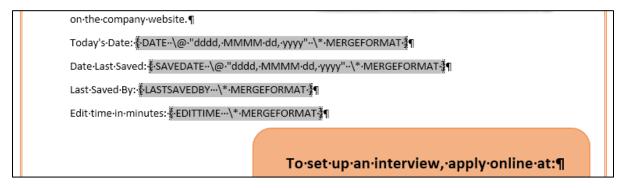
To show the results of the field codes, you would tap **Alt + F9** again. But, **do not do that yet**. **Alt + F9** is called a toggle because it switches (toggles) between two things.

**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 text box so that it does not cover the field codes.

Date Last Saved: SAVEDATE

Last Saved By: LASTSAVEDBY

Edit time in minutes: EDITTIME

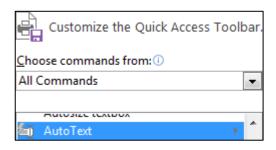


d. You are going to add a footer that contains the file name for every Word document you save. Here is a quick way of doing that using Word's **AutoText** feature. First, you will add **AutoText** to the **Quick Access Toolbar**.



- 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 appears in the Quick Access Toolbar.
- 8. Click OK.
- e. To add an entry to the **AutoText** gallery, do the following:
  - 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.

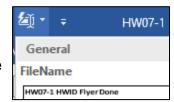


- 2. In the Quick Access Toolbar, click AutoText, and then click Save Selection to AutoText Gallery.
- 3. Type **FileName** in the Name box of the **Create New Building Block** dialog box.



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 it is really the field code that will change if you change the file name.

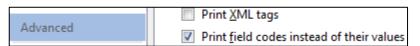
- f. Do the following to insert the **AutoText** entry:
  - Double-click anywhere in the body of the document to close the Header/Footer window and then tap Ctrl + End to place the insertion point at the end of the document.
  - 2. Click the **AutoText** button on the **Quick Access Toolbar** and select **FileName**. The file name field code is inserted.
  - 3. Tap Ctrl + z to undo the insertion so you do not have two file names listed.

g. You can have Word insert the file name field code directly into the footer without having to open the footer first. To do that, 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 (now it is there twice). If necessary, adjust the size of the orange text box so the file names in the footer are 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.
  - 1. Click the File tab, click Options, click Advanced, scroll down to the Print group, and click in the box next to Print field codes instead of their values.



- 2. Click OK.
- i. Tap **Ctrl + p** and compare the preview with the key. Notice the field codes print but the shading does not. Make needed corrections and print the document.

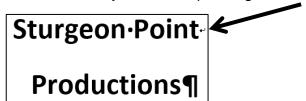
# You **NEVER** have to print in color.

- j. Now, turn off printing the field codes by unchecking the box you just checked.
  - Click 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 to remove the check.
  - 2. Click OK.
  - 3. Tap Alt + F9 to view the results 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 (Based on Project 1B)**

**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 146.
- Save the document in the Word Files folder using the name HW07-2 HWID 1B\_Programs\_Done
- c. Do the following to 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 called a manual line break. It is indicated by a little left-pointing arrow



This means the two lines are still considered a single paragraph. If you had tapped **Enter** the two lines would be considered separate paragraphs.

- 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 any illustration to select it and then click Insert.

If Online Pictures does not open, you can insert one from your computer. To do this, on the **Insert** tab, in the **Illustrations** group, click Pictures. Navigate to your Word Files folder and double-click HW07-2 Movie Camera Original.

- e. Modify the image by doing the following.
  - 1. If necessary, remove the text box at the bottom. To do this, click the text anywhere and then click the edge of the text box and tap **Delete**.

**Text Wrapping** 

1.88

100 %

2. Click the image and then, on the **Picture**Tools Format tab, in the **Size** group, click the launch dialog button [ (lower right corner) to open the **Layout** dialog box. Click the **Size** tab, if necessary.

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 (this known as the aspect ratio). 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). Remove the check and change both the height and width to 1.2 inches. Click **OK**.

- 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.
- **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.

Layout Options X

In Line with Text

With Text Wrapping

In Front of Text

Layout

Position

Absolute

Relative

Absolute

Relative

Rotation:

Height:

Heiaht

Width

Rotate

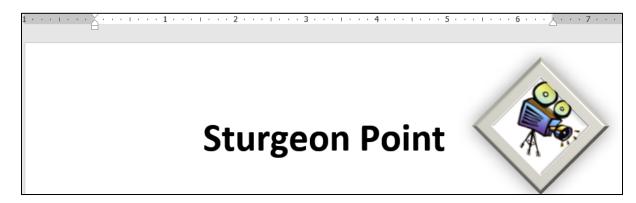
Scale

To get an exact rotation, on the **Picture Tools Format** tab, in the **Arrange** group, click **Rotate**, and select **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.

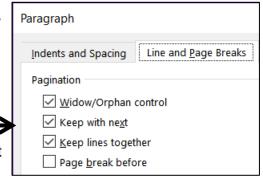


**7.** Drag the picture to the upper right corner of the window.



- f. Scroll down so you can see the break between pages 1 and 2. Notice how the second list is split between the two pages. If possible, it is a good idea to keep all 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:
  - Select the first bulleted list and, on the Home tab, in the Paragraph group, click the Bullet icon down arrow, 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 Goldy 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.
- Tap Ctrl + p and compare the preview with the key.
   Make needed corrections, print page 1 only, save the document and close it.

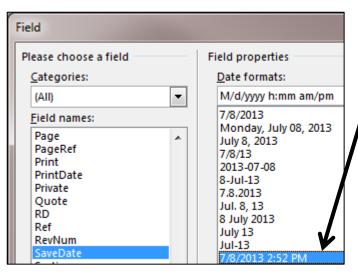


🙉 Documentaries

#### HW07-3 Agenda

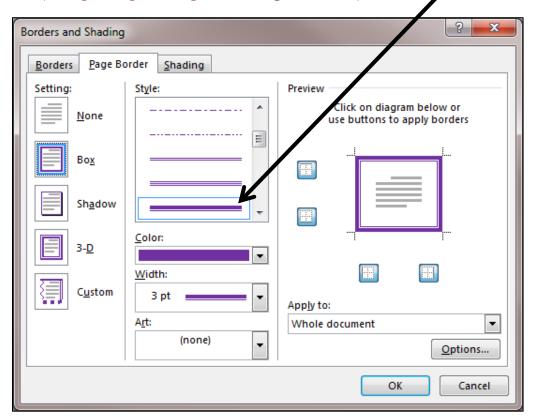
**Problem:** How can you create a draft agenda for a club meeting?

- Open the document HW07-3 Agenda Original, which is one of the files you
  downloaded at the start of the term.
- b. Save the document in the **Word Files** folder using the name **HW07-3 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.



- **5.** Click OK and then close the footer.
- 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 fundraising 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.

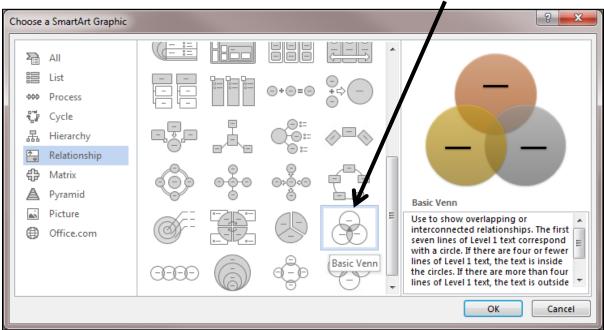
- j. Do the following to change the outline level of the lines from Treasurer's report through Other new business so that they are subordinate to New Business.
  - 1. Select those lines.
  - 2. On the **Home** tab, in the **Paragraph** group, click the **Increase Indent** button, . Notice how the numbers of the selected lines are automatically changed to letters.
    - 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
    - Old Business
    - 3. Reading of minutes
    - 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.
- 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

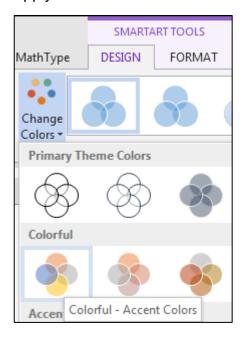
Notice how the items are automatically given letters and the letters of following items are changed.

- a. Treasurer's report
- b. Big brother and big sister project
- Food Shelf donations
- d. Tax program
- 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.

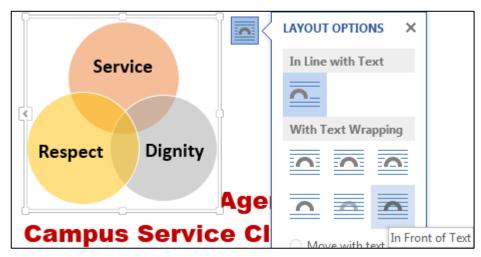


- **4.** In the top circle, type **Service**; in the left circle, type **Respect**; in the right circle, type **Dignity**.
- 5. Apply a Colorful theme.



- 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 + p** 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 downloaded at the start of the term.
- Save the document in the Word Files folder using the name HW07-4 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. With the image selected, change the **Wrap Text** to **In Front of Text** and move the logo so it is in the upper left corner of the page.
  - 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 the pink A.



7. Move the **Word Art** to the top center of the document.

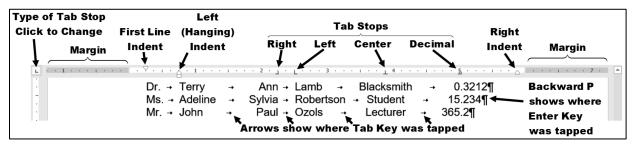


e. Change the tab settings on the first 7 lines of the memo. Keep this in mind:

**Page Margins** are the amounts of blank white space at each side of the page (left and right, top and bottom).

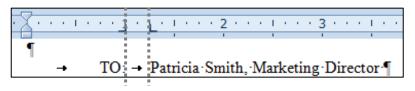
**Paragraph Indents** are the little triangles that show where the first line, the left edge, and the right edge of a paragraph are located.

**Tab Stops** are locations where you want text to line up. When you tap the **Tab** key the text moves to line up with a tab stop.



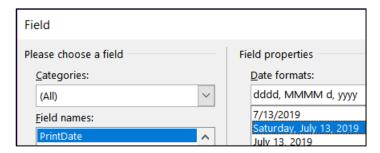
In the above, notice how the

- middle names (Ann, Sylvia, Paul) are lined up on the right;
- last names (Lamb, Robertson, Ozols) are lined up on the **left**;
- occupations (Blacksmith, Student, Lecturer) are lined up in their middles:
- numbers are lined up on their decimal points.
- 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.



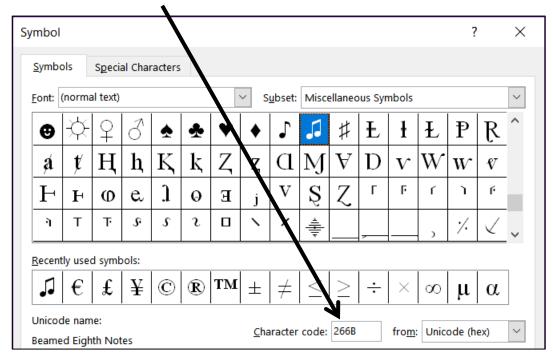
Remember, the **Tab stops** are the little markers on the ruler and showing where the text will be aligned while the **Tabs** are the little arrows that show where the **Tab** key was tapped to move the text in the body of the document.

- 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 0**, **0000** because you have not yet printed the document. When you print it the proper date will appear.
- → DATE: → XXX, XXX 00, 0000¶
- 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.
- 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.
  - 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 accidently 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...**.

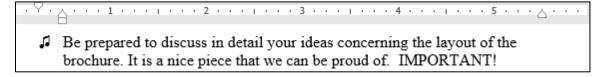
**13.** Select the two paragraphs you just worked on and use your **mouse** to slide the indent markers on the ruler as follows:

First line indent 

to 0.25 inch

**Left indent** (handing 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,

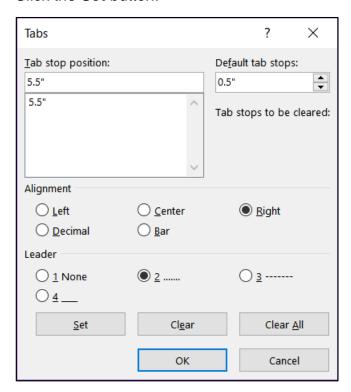
Click the **Tabs...** button,

Type **5.5** in the **Tab stop position** box,

Click **Right** in the **Alignment** group,

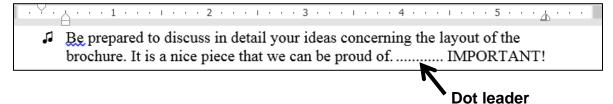
Click 2.... in the Leader group,

Click the **Set** button.



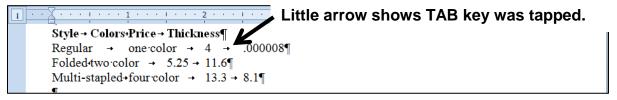
15. Click OK.

**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.
  - 1. The items are separated by a comma and a space. Replace the comma and space by a **TAB**. 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 replacemets will be made. When asked if you want to continue from the top of the document, click No.



**2.** On the ruler, insert the following tab stops:

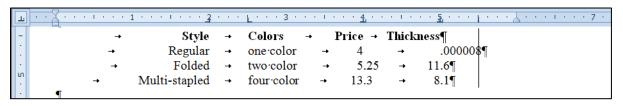
Right tab stop at 2 inches

Left tab stop at 2.5 inches

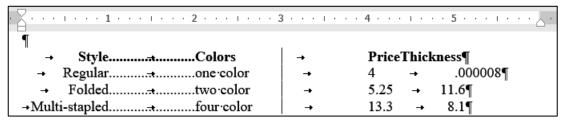
Decimal tab stops at 4 and 5 inches.

Bar tab stop at 5.5 inches.

3. Click at the left of each line and tap the **TAB** key to right align the first word of each line.



- j. Changing the locations of the tab stops is easy. To see how this works, do the following for the above list:
  - 1. Select the four lines you just worked on.
  - 2. Move the right tab stop to 1 inch (click it and drag to the left).
  - **3.** 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).
  - **4.** 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.
  - **5.** Move the bar tab to 3 inches.



- **6.** Select only the line with the titles and change the decimal tab at 5 inches to a left tab at 4.75 inches.
- I. 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.
- Decimals lined up
  Thickness
  .000008
  11.6
  8.1

- 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.

Price

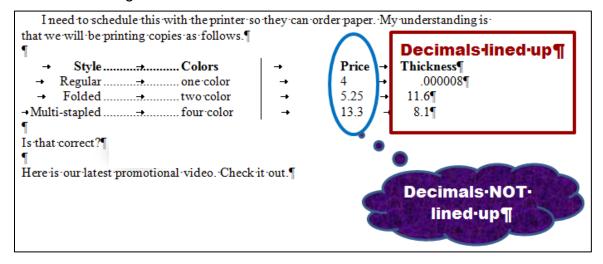
5.25

13.3

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.





- m. When you fill out a form or write a paper for publication you typically are given a limit on the number of words or characters you may use. Word has a feature to help you determine this.
  - 1. Be sure nothing is selected and, on the **Review** tab, in the **Proofing** group, click **Word Count**. You should see that this document has **about** 159 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 video on designing a brochure by doing the following:
  - 1. Move to the end of the document and tap **Enter**.
  - 2. On the **Insert** tab, in the **Media** group, click **Online Video**.
  - **3.** Type **designing a brochure** in the search box next to **You Tube**.
  - 4. Tap Enter.
  - 5. Click one of the videos.



- 6. Click Insert.
- 7. Make the height of the video 3 inches and position it so it is just below the last sentence of the document. Click the video to see how it works.

- o. Insert a motivational shape by doing the following:
  - Just to the right of Is that correct?, on the Insert tab, in the Shapes group, under Basic Shapes, select Smiley Face.
  - 2. Drag the cross to open the smiley face.
  - 3. Make the height and width 0.5 inch.
  - 4. Apply the **Preset 10 Shape Effect**.
  - **5.** Make the fill color **red**.
  - **6.** Change the **Wrap Text** to **In Front of Text** and move the shape so it is centered on the line.
- o. Tap **Ctrl + p** 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 1A Flyer With Field Codes Showing** 

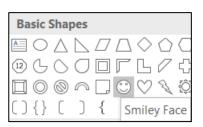
HW07-2 1B Programs (page 1 only)

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 Letters and Tables

**Step 1 Read** Read the introductory material on page 169 of the textbook.

Step 2 Activities Turn on the computer and do the following:

**Project 2A:** Start at the top of page 171.

Instead of Activity 2.01 step 1 do the following:

- 1. Navigate to your **Word Files** folder and open **w02A\_Experience**, which is one of the files you downloaded at the start of the term.
- Save the file in your Word Files folder using the name Lastname\_Firstname\_2A\_Resume
- 3. To save time, instead of typing the text shown in several places in the textbook you may copy the text from the file HW08-1 Resume Extra Text Original and paste it in the locations described in the textbook:

```
Page 173, Activity 2.02, Step 2
Page 173, Activity 2.02, Step 3
Page 176, Activity 2.03, Step 11
Page 179, Activity 2.06, Step 4
```

- Complete the rest of the Activities for this Project EXCEPT do NOT do steps 17 and 18 in Activity 2.10 on page 186.
- 5. Do NOT do Activity 2.11 on pages 186-187.
- **6. Return here** when you have completed Project 2A on page 185.

Do NOT do GO! With Google Docs

**Project 2B:** When you have completed Project 2A, start at the top of page 191.

**Instead of Activity 2.12** step 1 do the following:

- Open a blank Word document and save it to your Word Files folder using the name Lastname\_Firstname\_2B\_Cover\_Letter
- 2. Complete the rest of the Activities for this Project EXCEPT do **NOT** do steps 8 and 9 in **Activity 2.20** on page 206.
- 3. Do NOT do Activities 2.21 through 2.24 on pages 206-211.
- 4. Return here when you have completed Project 2B on page 206.

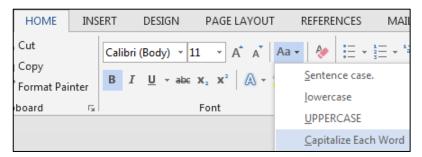
Do NOT do GO! With Google Docs or GO! To Work

**Step 3 Homework** After you have completed Projects A and B return here, do the following additional activities, and turn them in for grading.

### **HW08-1 Resume (Based on Project 2A)**

**Problem:** How can you create a professional looking resume?

- a. Open the document **Lastname\_Firstname\_2A\_Resume**, which you created while following the directions in the textbook and saved on page 185.
- b. Save the document to your Word Files folder using the name HW08-1 HWID 2A\_Resume\_Done
- c. Make the following modifications.
  - 1. On the **Table Tools Layout** tab, in the **Table** group, if necessary, 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. Tap **Ctrl + p** and compare the preview with the key. Make needed corrections, print the document, save it, and close it.

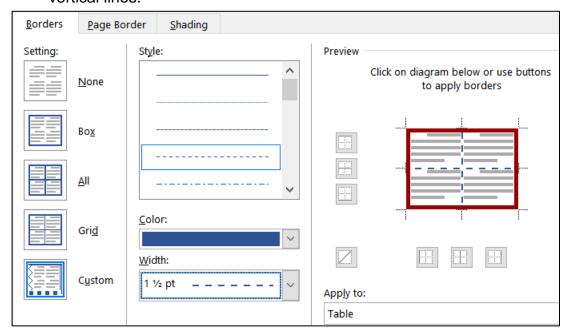
### **HW08-2 Cover Letter (Based on Project 2B)**

**Problem:** How can you create a cover letter that will catch the attention of the reader?

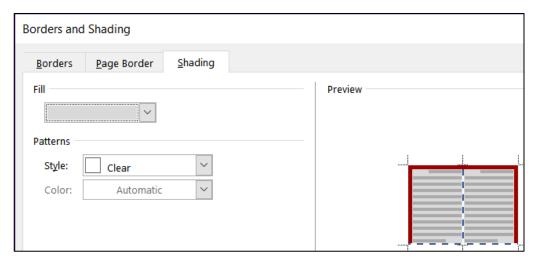
- a. Open the document Lastname\_Firstname\_2B\_Cover\_Letter, which you created while following the directions in the textbook and saved on page 206.
- Save the document to your Word Files folder using the name HW08-2 HWID 2B\_Cover\_Letter\_Done
- c. Modify the table in this document by doing the following:
  - 1. Select the first row of the table.
  - 2. Right-click and select Insert, Insert Rows Above.



- 3. In the new top row, type **Program** in the left cell and **Duty** in the right.
- **4.** Select the entire table. On the **Home** tab, in the **Paragraph** group, click the down arrow next to the border icon and select Borders and Shading...
- 5. Click so you can change individual cell borders without affecting others.
- **6.** Under **Color**, select **red**. Under **Width**, select **3 pt**. In the **Preview** section, **click** on the four borders of the table.
- Under Style, select dashed. Under Color, select blue. Under Width, select 1 pt. In the Preview section, click on the inside horizontal and vertical lines.



- 8. Click OK.
- **9.** Select row 1. On the **Home** tab, in the **Paragraph** group, click the down arrow next to the border icon and select **Borders and Shading**.
- 10. Click the **Shading** tab and select gray for the **Fill**.



- 11. Select column 1 and shade the background a light gray.
- d. Tap **Ctrl + p** and compare the preview with the key. Make needed corrections, print the document, save it, and close it.
- e. 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 **Twitter**, **Instagram**, **Facebook**, and **LinkedIn**. Here are two links with some good information:

http://jobsearch.about.com/od/networking/a/socialmedia.htm

http://www.cehd.umn.edu/career/networking/social/default.html

# HW08-3 Bill of Rights<sup>23</sup>

**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.

<sup>&</sup>lt;sup>23</sup> Adapted from <a href="http://www.archives.gov/exhibits/charters/charters.html">http://www.archives.gov/exhibits/charters/charters.html</a>

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**.

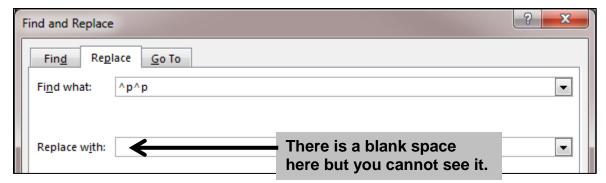
The amendments are necessarily brief and were designed to be applicable for centuries to come. It is the duty of the U.S. Supreme Court to interpret those rights in light of our current society. This is not easy. For example, the second amendment says "A well-regulated Militia, being necessary to the 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
  downloaded at the start of the term.
- Save the document in the Word Files folder using the name HW08-3 HWID Bill of Rights Done
- c. Insert a footer that contains the name of the file.

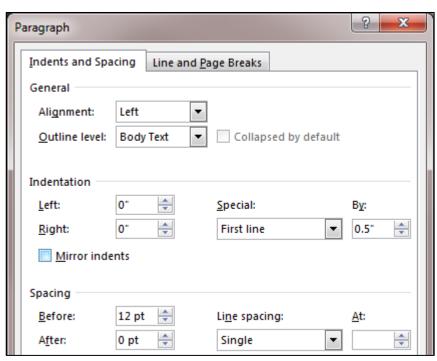
This copy of the **Bill of Rights** was received as a forwarded email. Instead of employing word wrap, the email program inserted paragraph marks at the end of each line. Your task is to reformat the document by removing the paragraph marks, restoring word wrap, and formatting the document to make it 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:
  - Open the Find and Replace dialog box 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 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 special **\***

- **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 that **0.5**" shows in the **By** box (if not, type it in). This will indent the first line of each selected paragraph.



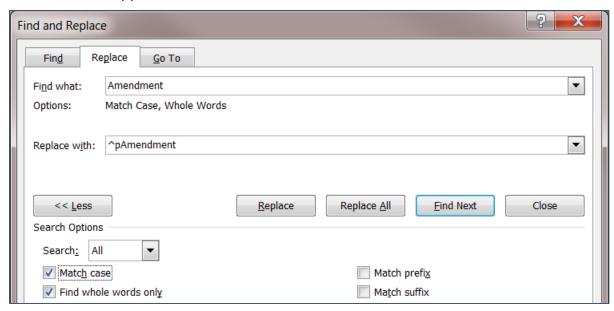
4. Click OK.

- 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

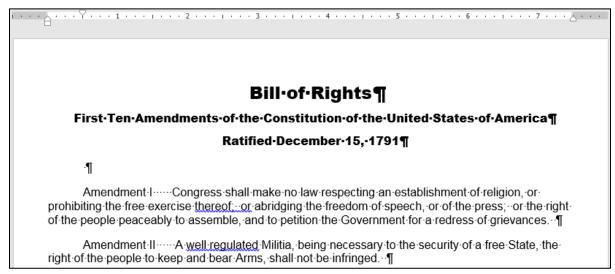
With the insertion point still in the **Find What** box, click the **Match case** box to ensure that words like **amendment** (lowercase **a**) will not match the criteria.

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.

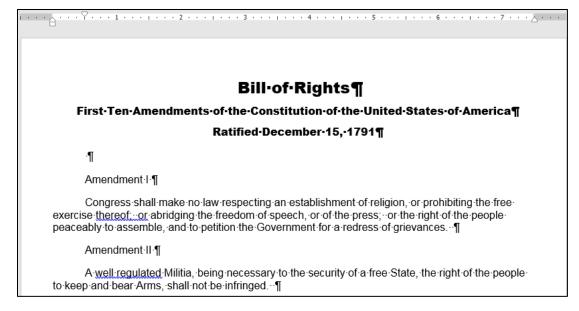
3. In the Replace With box, type **^pAmendment**. The **^p** is equivalent to tapping the **Enter** key before each occurrence of **Amendment** so they will appear on their own lines.



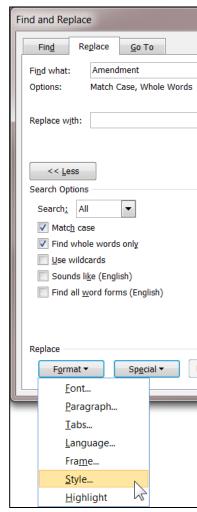
**4.** Click **Replace All**. There should be 10 replacements. Click **OK**.



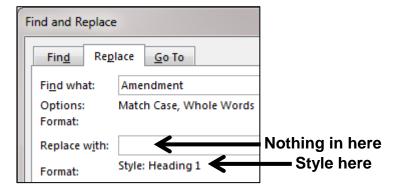
- 5. In the Find What box, type six spaces (tap the Spacebar 6 times). If necessary, uncheck the Match case and Find whole words only boxes.
- 6. In the Replace With box, type a single paragraph code: ^p
- 7. Click Replace All. There should be 10 replacements. Click OK.



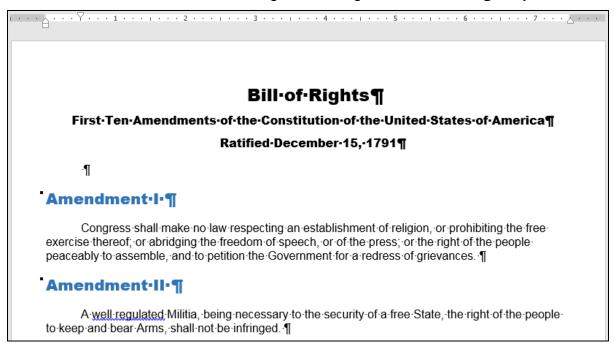
- Use Replace to change all occurrences of two spaces to one space. To do that, put two spaces in the Find What box, one space in the Replace With box, and click Replace all. There should be 16 replacements. Click OK.
- j. Apply a heading style to each line that contains the word **Amendment** by doing the following:
  - 1. In the Find What box, type Amendment
  - With the insertion point still in the Find What box, make sure the Match case and Find whole words only boxes are checked.
  - 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.

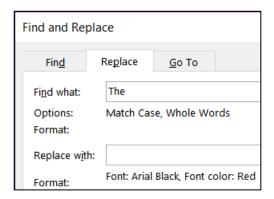


- 6. Click OK.
- Click Replace All. There should be 10 replacements. Click OK.
   All the amendment headings are changed to the Heading 1 style.



- k. To see how replace works within paragraphs, tell Word to find only words that exactly match **The** by doing the following:
  - 1. Tap **Ctrl + Home** to move to the top of the document.
  - 2. In the Find What box, type The Confirm that the Find whole words only 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.
  - 3. Click in the **Replace With** box and delete any text. Click **No Formatting** to remove the reference to the **Heading 1** style.
  - **4.** In the lower left corner of the **Find and Replace** window, click **Format** and select **Font**.

5. Change the font to red Arial Black. Click OK.



- **6.** Click **Replace All**. There should be 3 changes. Click **OK** and then close **Find and Replace**.
- 7. Save the document but do not close it.
- I. Excel sometimes can be used to help edit text for Word documents. To see how this works, do the following:
  - Navigate to your Word Files folder. Right-click the file name HW08-3 List of 1789 Senators Original and select Open with Adobe Acrobat.



Do **NOT** double-click the file icon. If you do, it may open in a web browser and will not be useful to us).

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 these names at the end of the Bill of Rights document and in the form **FirstName LastName**.

As will be explained on page 258 in **Activity 3.14** 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, but that conversion usually is not perfect. For this project we need only a small part of the file so we will use copy and paste.

2. Scroll to page 2 and select the lines with the names of the senators as of March 4, 1789 (Bassett through Wingate).

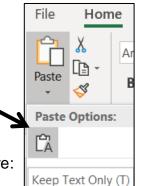
FIRST CONGRESS MARCH 4, 1789, TO MARCH 3, 1791						
Start of Initial						
Senate Se	ervice Name/Party	End of Service	Rank			
* * * 1789	* * *					
March 4	Bassett, Richard (Anti-Admin/Pro-Admin-DE)	March 3, 1793	1			
	Butler, Pierce (Pro-Admin/Anti-Admin/R-SC)	October 25, 1796	2			
	(Served again 1802)					
	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			
	Maclay, 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**. As you can see, all the data are in **A1:A23**.
- 6. Delete the following so all rows have the same structure:
  - In row 1, delete March 4 <space>
  - Delete the entire row 3 (Served again 1802). Now, Carroll, Charles 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.

	Α	В	С
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

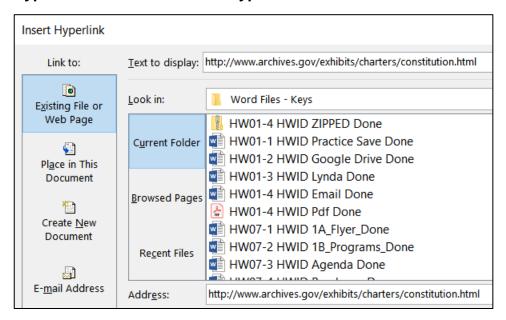
- 11. In D1 enter a formula to concatenate FirstName space LastName.<sup>24</sup>
- 12. Fill the formula down to row 21.
- **13.** Copy **D1:D21**.
- 14. Switch back to HW08-3 HWID Bill of Rights Done
- **15.** Tap **Ctrl + End** to go to the end of the document.
- 16. Tap Enter.
- 17. Type Names of 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 HWID Bill of Rights Done but do not close it.
- **22.** Close **Excel** without saving, and close **Adobe Acrobat**.
- 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 all on one line:

The Constitution may be viewed at http://www.archives.gov/exhibits/charters/constitution.html

2. Remove the first line indent, if necessary.

<sup>&</sup>lt;sup>24</sup> 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.

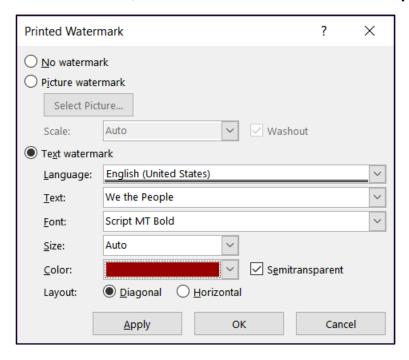
4. Click OK. The hyperlink is created and the style for the web address is automatically set to Hyperlink (underlined blue text). Point to the hyperlink and a screen tip will appear.



5. Hold down the **Ctrl** key and click the hyperlink. Your web browser will open and take you to the web site.



- 6. Right-click the image of the Bill of Rights and select Copy Image.
- 7. Close the web browser.
- 8. Paste the image 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.
  - On the Design tab, in the Page Background group, click the Watermark down arrow 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 + p** and compare the preview with the key. Make needed corrections, print **page 2 only**, save the document and close it.

#### HW08-4 Park

**Problem:** How can you create an eye-catching memo that includes tables?

- a. Open the document **HW08-4 Park Original**, which is one of the files you downloaded at the start of the term.
- Save the document in the Word Files folder using the name HW08-4 HWID Park Done.
- c. Insert a footer that contains the name of the file.
- d. To the right of **DATE** in line 3, enter the **Date** field code. Use the format **Day**, **Month Date**, **Year**.
- e. Select the five lines starting with *Days, Open, Closes* through *Sunday...* 
  - 1. Set the left and first line indents to 0.5"
  - 2. 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.
  - **3.** 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 top row and first column are shaded.

There is no top and left border in the top left cell.

The text is centered within the cells.

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).

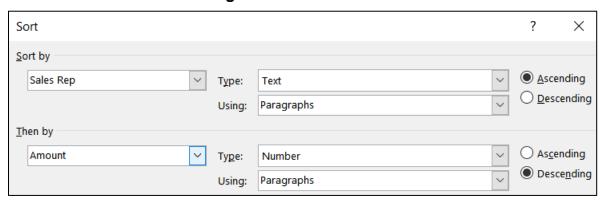
	Ave	One Day	Season Pass
Toddler	3 & under	Free	Free
Junior	4 to 11	\$19	\$89
Adult	12 to 59	\$39	\$129
Senior	60+	\$29	\$99

h. Tap **Ctrl + p** 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, sort the data, and format the table?

- a. Open the document HW08-5 Sales Original, which is one of the files you
  downloaded at the start of the term.
- Save the document in the Word Files folder using the name HW08-5 HWID Sales Done.
- c. Insert a footer that contains the name of the file.
- d. Select the lines starting at **Date** and all the way down to the last line of data. Convert the data to a table.
- e. With the table selected, on the **Table Tools Layout** tab, in the **Cell Size** group, select the **AutoFit** down arrow, and select **AutoFit Contents**.
- f. Format the table so numbers and dates are aligned on the right and headings are centered.
- g. With the table still selected, on the **Home** tab, in the **Paragraph** group, click the **Sort** button. Be sure **Header row** is selected in the **My list has** area. Sort the data by **Date** in **Ascending** order.
- h. Click **OK**. The table should be sorted by the dates in the first column.
- i. Sort the table again, but this time by Sales Rep and, within Sales Rep, by Amount by doing the following:
  - 1. Select the entire table and, on the **Home** tab, in the **Paragraph** group, click the **Sort** button.
  - 2. Be sure **Header row** is selected in the **My list has** area. 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.



Click OK. The data are sorted by Sales Rep, in alphabetical order and, for each Sales Rep, the data are listed by amount from largest to smallest.

Date	Product	Amount	Sales Rep	Points
29 Jan	Savings	6,300	Betsey	44
12 Jan	Savings	6,000	Betsey	42
16 Jan	Certificate	5,000	Betsey	400
26 Jan	Certificate	150	Betsey	120
13 Jan	Certificate	5,000	Carolyn	200
22 Jan	Credit	2,000	Carolyn	16
30 Jan	Savings	1,450	Carolyn	10

- j. Calculate the sum of the **Amounts** and the average of the **Points** by doing the following:
  - 1. Click in the lower right cell and tap the **Tab** key. This inserts a new row.
  - 2. In the cell at the bottom of the **Amount** column, type **Sum** = and a space.
  - 3. On the **Table Tools Layout** tab, in the **Data** group, click the **Formula** button. Notice the formula **=SUM(ABOVE)** shows. This means that the sum of the numbers above the cell will be calculated.

Within these Word formulas, you can use positional arguments to indicate which numbers you would like summed. These include **LEFT**, **RIGHT**, **ABOVE**, and **BELOW**.

- 4. Click OK. The sum should be 115,950.
- **5.** In the cell at the bottom of the **Points** column, type **Ave** = and a space.
- **6.** On the **Table Tools Layout** tab, in the **Data** group, click the **Formula** button. Delete the formula that is there and type **=average(above)**.
- 7. Click **OK**. The average should be **281.88**.

If the numbers change, you will have to update the formulas manually. It is not automatic like in Excel.

8. In the last cell of the **Amounts** column, change **700** to **750**. Select the cell with the **Sum** in it and tap the **F9** key. This updates the selected fields. The cell should now show **Sum** = **116.000**.

I	6 Jan	Auto Loan	750	Sharon	177
			Sum = 116,000		Ave = 281.88

- k. Format the table borders by doing the following:
  - 1. Center the table on the page.
  - 2. Bold the column titles.
  - **3.** Put a heavy (3 pt width) red border around the outside of the entire table and a light (1 pt width) red dashed border on each cell on the inside.

**4.** Put a red 3 pt width double line border between the column headings and the data.

#### Sales Record for January for First National Bank

Date	Product	Amount	Sales Rep	Points
29 Jan	Savings	6,300	Betsey	44
	Savings	6,000	Betsey	42

5. Remove part of the border on the two cells in the last row, as shown below. You will have to select the cells whose borders you want modified and then open **Borders and Shading** and change the borders individually.

5 Jan   Savings	1,000	Sharon	70
6 Jan   Auto Loan	750	Sharon	177
	Sum = 116,000		Ave = 281.88

I. Tap **Ctrl + p** and compare the preview with the key. Make needed corrections, print the document, save it, and 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 from an Excel workbook.

- a. Open the document HW08-6 Infections Memo Original, which is one of the files you downloaded at the start of the term.
- Save the document in the Word Files folder as HW08-6 Infections Memo Done
- c. Insert a footer that contains the name of the file.
- d. Replace <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).
- e. Replace **<creation 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 **Alt + F9**.

To: Infectious Diseases Foundation

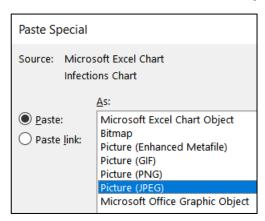
From: { USERNAME \\* MERGEFORMAT }{ USERADDRESS \\* MERGEFORMAT }

Date: { CREATEDATE \@ "dddd, MMMM d, yyyy" \\* MERGEFORMAT }

Re: Data you requested

To hide the field codes tap **Alt + F9** again.

- f. Copy information from an Excel workbook and paste it into the memo by doing the following:
  - Open the Excel file HW08-6 Infections Data Original, which is one of the files you downloaded 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 data as a 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.
  - Switch to Word and, on the Home tab, in the Clipboard group, click the Paste down arrow, select Paste Special, and select Picture (JPEG).



This inserts the chart as a picture that cannot be altered. If you had wanted the user to be able to edit the chart, you would have chosen **Microsoft Excel Chart Object**. That is NOT what we want.

- g. 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.** Change the **Width** to 5 inches. The height should automatically change to 3.62 inches.
  - 4. Click the edge of the chart and drag it so that it is just to the right of the table.
  - 5. Close Excel.

- h. Insert a video by doing the following:
  - 1. Tap **Ctrl + End** to move to the bottom of the document
  - 2. On the **Insert** tab, in the **Media** group, click **Online Video**.
  - 3. In the box next to You Tube, type What You Need To Know About Infectious Disease
  - 4. Tap Enter.
  - 5. Select one of the videos and tap Enter. I chose this one:



- 6. Make the width of the video 4 inches and move it under the chart.
- i. Tap **Ctrl + p** 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 6 homework papers in the following order:

HW08-1 2A Resume

HW08-2 2B Cover Letter

HW08-3 Bill of Rights (page 2 only)

HW08-4 Park

HW08-5 Sales

**HW08-6 Infections Memo** 

- 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** Read the introductory material on page 235 of the textbook.

**Step 2 Activities** Turn on the computer and do the following:

**Project 3A:** Start at the top of page 237.

Instead of Activity 3.01 steps 1 through 6 do the following:

- 1. Navigate to your **Word Files** folder and open **w03A\_Quantative\_Technology**, which is one of the files you downloaded at the start of the term.
- 2. Save the file in your **Word Files** folder using the name Lastname\_Firstname\_3A\_Quantative\_Technology
- Start on at Activity 3.02 on page 238 and do the rest of the Activities for this Project EXCEPT do NOT do Activity 3.12 or 3.13 or 3.14 on pages 251-258. Save your file after completing step 8 of Activity 3.11.
- 4. Return here when you have completed Project 3A on page 251.

Do NOT do GO! With Google Docs

**Project 3B:** When you have completed Project 3A, start at the top of page 262.

**Instead of Activity 3.15** step 1 do the following:

- 1. Navigate to your **Word Files** folder and open **w03B\_Environment\_Newsletter**, which is one of the files you downloaded at the start of the term.
- Save the file in your Word Files folder using the name Lastname\_Firstname\_3B\_Environment\_Newsletter
- **3.** Complete the rest of the Activities for this Project EXCEPT do **NOT** do steps 13 and 14 in **Activity 3.26** on page 279.
- **4.** Do **NOT** do **Activities 3.27** or **3.28** or **3.29** on pages 280-284.
- **5. Return here** when you have completed Project 3B on page 279.

Do NOT do GO! With Google Docs or GO! To Work

**Step 3 Homework** After you have completed Projects A and B return here, do the following additional activities, and turn them in for grading.

#### **HW09-1 Research Paper (Based on Project 3A)**

**Problem:** How can you create a short research paper?

- a. Open the document Lastname\_Firstname\_3A\_Quantitative\_Technology, which you created while following the directions in the textbook and saved on page 251.
- b. Save the document to your **Word Files** folder using the name **HW09-1 HWID 3A\_Quantitative\_Technology\_Done**
- c. Tap **Ctrl** + **p** and compare the preview with the key. Make needed corrections, print **page 4 only**, save the document and close it.

#### HW09-2 Newsletter (Based on Project 3B)

**Problem:** How can you create a newsletter?

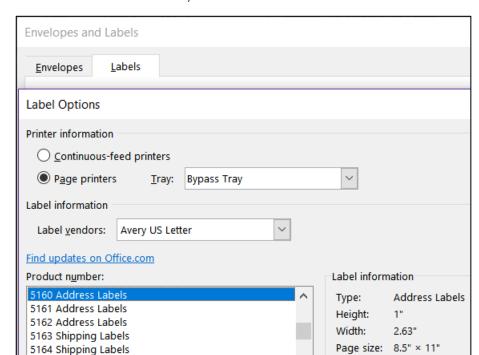
- a. Open the document Lastname\_Firstname\_3B\_Environment\_Newsletter, which you created while following the directions in the textbook and saved on page 279.
- Save the document to your Word Files folder using the name HW09-2 HWID 3B Environment Newsletter Done
- c. Tap **Ctrl + p** and compare the 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, select Avery US Letter.



3. Under Product number, select 5160 Address Labels.

Notice under **Printer information**, **Page printers** is checked and Bypass Tray is shown. That assumes you will insert blank label sheets one at a time in the Bypass Tray. If you want to print several sheets you can select Continuous-feed printers. You will fix this later for use in the classroom printer.

**4.** Click **OK**. In the **Address** box, type the following using your **HWID**:

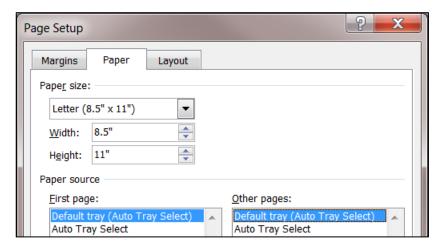
Joe College HWID Room 203 Bailey Hall, St. Paul Campus Campus mail code: 6017 651-555-1234 coll001@umn.edu

- 5. Click **New Document**. A new document with the mailing labels is produced.
- 6. On the **Table Tools Design** tab, in the **Table Styles** group, click **Table Grid**. If you were printing real labels you would not want the grid lines to show but since you will be printing on regular paper the grid lines will indicate where the label edges are.



b. Save the **New Document** in the **Word Files** folder using the name **HW09-3 HWID Home Address Labels Done** 

- c. Print the document on regular paper by doing the following:
  - On the Layout tab, in the Page Setup group, click the launch 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.

d. Tap **Ctrl + p** and compare the preview with the key. Make needed corrections, print the document, save it, and close it. Don't worry if the right vertical gridline does not show.

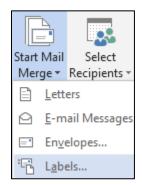
#### **HW09-4 Name Tag Labels**

**Problem:** How can you create individual name tags?

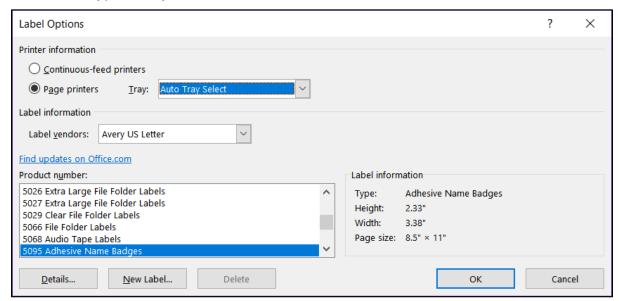
In this project you will create labels to be used as name tags at a college orientation session.

- a. Create the blank labels.
  - 1. Start Word.
  - 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. Be sure the Label vendor is **Avery US Letter**. Select the **5095 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.



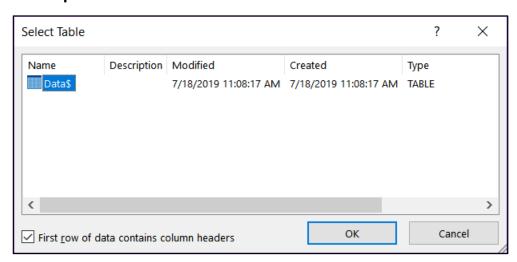
- 5. Click OK.
- Save the document to your Word Files folder using the name HW09-4 HWID Name Tag MAIN Done

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:
  - 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.

	Α	В	С	D	Е	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	Shakespare	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.
- 6. Click OK.
- 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

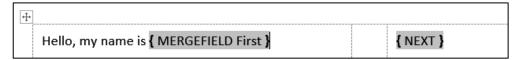




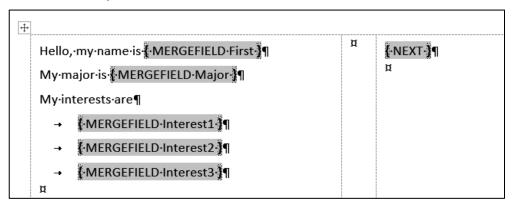
4. Click Preview Results to see what the merge will look like.



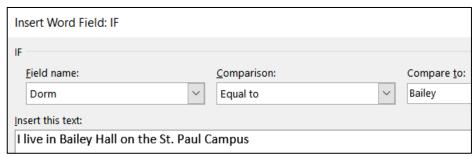
5. Tap Alt + F9 to see the actual field codes.



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.

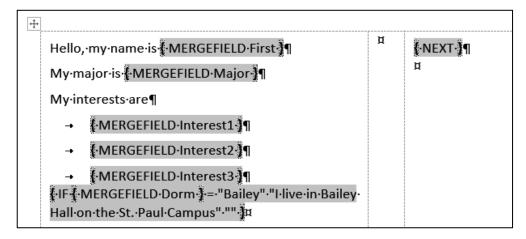


- e. In the data file some of the **Dorm** information is missing and the campus of the dorm not included in the data. Word can use an **IF/THEN/ELSE** structure similar to the one in Excel to help with a situation like that.
  - 1. Click in the blank line at the bottom of the first cell. On the **Mailings** tab, in the **Write & Insert Fields** group, click **Rules** and select **If...Then...Else**.
  - 3. Set the dialog as follows. Leave the **Otherwise insert this text** box blank.



This 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.



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","")

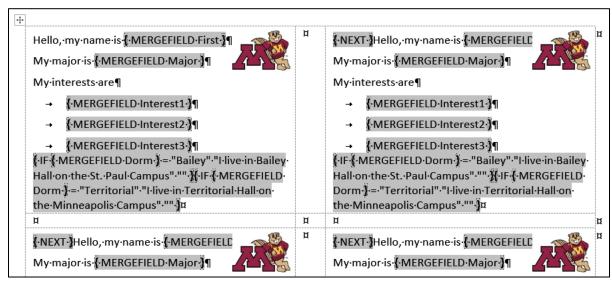
Word: { IF { MERGEFIELD Dorm } = "Bailey" "I live in Bailey Hall on the St. Paul Campus" "" }

**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**.

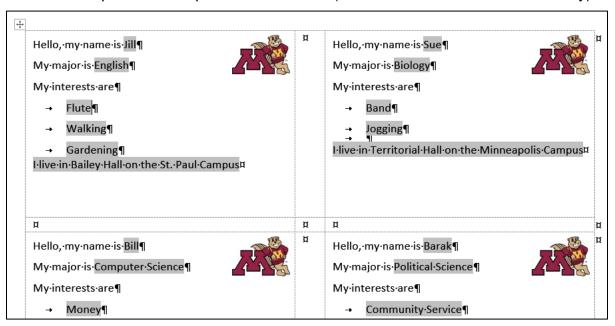
```
(·IF (·MERGEFIELD·Dorm·) = ·"Bailey" ·"I·live·in·Bailey·
Hall·on·the·St.·Paul·Campus" ·"" · ( IF (·MERGEFIELD·
Dorm ) = ·"Territorial" ·"I·live·in·Territorial·Hall·on·
the·Minneapolis · Campus" ·"" · ↓ ¤
```

- 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 **Goldy** (**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).



- h. Print the labels by doing the following:
  - On the Mailings tab, in the Finish group, click Finish & Merge, and select Edit Individual Documents. This will send the output to a new Word file that you can edit if you need to. Click OK.
  - 2. On the **Table Tools Design** tab, in the **Table Styles** group, click **Table Grid** so you can see the gridlines. Again, if you were actually printing labels you would not want to show the gridlines.
  - 3. Tap Ctrl + p and compare the preview with the key. Make needed corrections, print the document, save it, and close it.

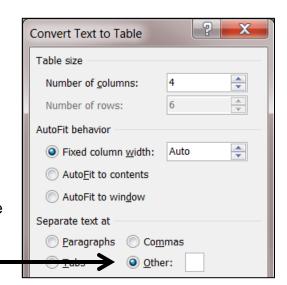
Next time you open the document, Word will ask if you want to insert the data from the file that contains the data. Click **Yes**.

#### **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 120 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 downloaded at the start of the term. This contains the names and email addresses of the people to whom you wish to send the letter.
- Save the document to your Word Files folder using the name HW09-5 HWID Thank DATA Done.
- c. Convert the paragraphs into a table:
  - 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:
  - Apply a colorful style of your choice to the table (Table Tools Design, Table Styles).
  - Adjust the table so the rows are exactly 0.3 inches high (Table Tools Layout, Cell Size, Height).
  - 4. Autofit the columns.
  - 5. Center the text vertically and horizontally within the rows (Table Tools Layout, Alignment, Align Center).
  - 6. Center the table on the page.
  - 7. Sort the data by **Priority** in descending order and then, within **Priority**, by **Last** in ascending order.

8. 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	Priority
Joyce	Banch		3
Doug	Robertson	droberts@umn.edu	3
Sue	Sherro	sher001@umn.edu	2
Kathy	Osterberg	oste001@umn.edu	1
Alan	Samek	same001@umn.edu	1

- e. Insert a footer that contains the name of the file.
- f. Tap **Ctrl + p** 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 downloaded 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 HWID**Thank MAIN Done
- i. Insert a footer that contains the name of the file.
- j. In the big paragraph, select **Community Fund Drive** and create a hyperlink to its web site. The Web address is <a href="http://www1.umn.edu/cfd">http://www1.umn.edu/cfd</a> 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 in the data file.
- I. 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 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.
  - 2. On the Mailings tab, in the Write & Insert Fields group, click the Insert Merge Field down arrow, 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.

**4.** Tap **Alt + F9** to see the field codes:

### { SKIPIF { MERGEFIELD Email } = "" }I Gave to the Community Fund Drive

#### { MERGEFIELD First }:

When you send in your contribution to the { HYPERLINK

"http://www1.umn.edu/cfd" \o "CFD Web site home page" }, 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:

#### { MERGEFIELD First } { MERGEFIELD Last }

Notice the **SKIPIF**, the three **MERGEFIELD** codes and the **HYPERLINK** code.

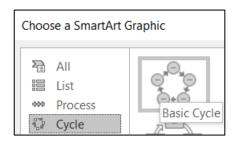
- 5. Tap Alt + F9 again hide the field codes.
- n. Save and close the file HW09-5 HWID Thank MAIN Done.

o. Open the file you just closed, HW09-5 HWID Thank MAIN Done. You will get a caution message asking if you want to place the data from HW09-5 HWID Thank DATA Done into your file.



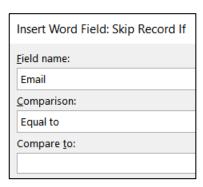
Click **Yes** to attach the data to the main file.

- p. 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

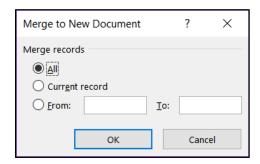


- 4. Click OK.
- 5. In the first four bullets, type the following: I help him, He helps her, She helps them, They help me. Delete any other bullets so you have only four.
- 6. On the SmartArt Tools Design tab, in the SmartArt Styles group, click **Change Colors** and choose a colorful design (your choice).
- 7. Change all fonts in the **SmartArt** object to 16 pt Arial Black.
- 8. Click outside the **SmartArt** box to deselect it.
- q. To tell Word to skip data records that are missing the email address, do the following:
  - 1. Tap **Ctrl + Home** to move to the top of the document.
  - 2. On the Mailings tab, in the Write & Insert Fields group, click Rules.
  - 3. Select Skip Record If.

**4.** In the **Field name** box, select **Email**. Leave the other two boxes as they are.



- r. Tap **Ctrl + p** and compare the preview with the key. Make needed corrections, print the document and save it but **do NOT close** it.
- s. 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.

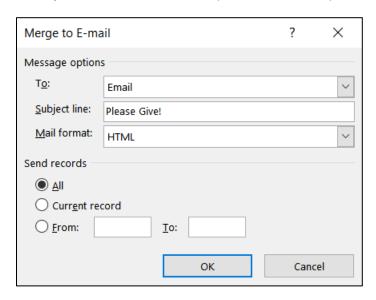


Be sure the **All** button is checked, and then click **OK**. This will produce a new document that contains a letter for each of the people listed in the data document. The new document will have the name **Letters1**.

Scroll through the new document and you should see 4 letters, one each to **Doug**, **Sue**, **Kathy**, and **Alan**. Notice that a letter to Joyce is not there because her email is missing and you used SKIPIF. To save paper, **do NOT print** the document. Close the document **without** saving it.

t. 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.

u. Close HW09-5 HWID Thank MAIN Done.

#### 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 downloaded at the start of the term.
- 2. Save the document to the Word Files folder using the name HW09-6 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).

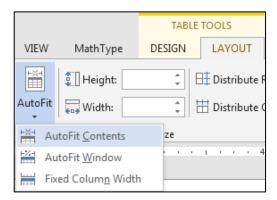
=IF(A2="Mr.", "Male", IF(OR(A2="Ms.", A2="Miss", A2="Mrs."), "Female", "Unknown"))

**6.** Fill the formula in **H2** down to **H39**.

H2		: × v	- f <sub>x</sub> =	IF(A2="Mr."	,"Male",IF(C	R(A2="Ms.	",A2="Miss'	',A2="Mrs."	),"Female","	Unknown"))
	Α	В	С	D	Е	F	G	Н	1	J
1	Title	LastName	FirstName	Address	City	State	Zip	Sex		
2	Mr.	Anderson	Eric	619 4th St.	Robbinsda	AZ	85375	Male		
3	Ms.	Arias	Jennifer	1522 Colle	Syosset	NY	11791	Female		
4	Miss	Aure	Sue	601 West 1	Renton	WA	98059	Female		

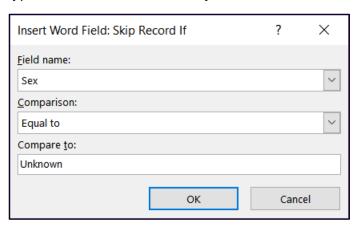
If it is important, you could eyeball the data and manually enter the sex of the **Unknown** people, if possible. For example, Dr. Alexander Ayu most likely is a man so you could type **Male** in **H5**. However, Terry Bagha could be either male or female so you are out of luck there. With 50 names cleaning 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 HWID IF Merge DATA Done
- **10.** Save the Excel file using the name **HW09-6 HWID IF Sex Added Done** and then close it.

- 1. Open the document HW09-6 IF Merge MAIN Original, which is one of the files you downloaded at the start of the term.
- 2. Save the document to the **Word Files** folder using the name HW09-6 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 an Existing List. Navigate to your Word Files folder and double-click HW09-6 HWID IF Merge DATA Done.
- 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:
  - 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.

- Repeat the process but 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. Tap Alt + F9 to view the codes.

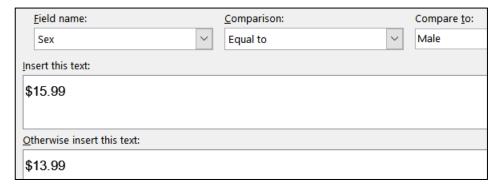
Thank you for your interest in our magazines. As a new customer I would like to offer you a special deal on { IF { MERGEFIELD Sex } = "Male" "Sports Illustrated" "" }{ IF { MERGEFIELD Sex } = "Female" "Ms. Magazine" "" }. Your special yearly rate is Price. The shipping and handling charge would be Shipping.

Take a moment to look at the field codes. For example:

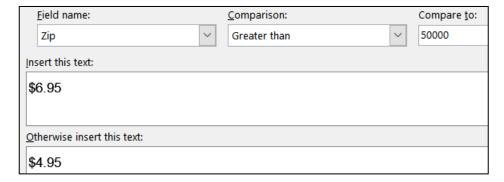
```
{ IF { MERGEFIELD Sex } = "Male" "Sports Illustrated" "" }
```

You can edit the field parameters as if they were text. For example, if you wanted to change **Sports Illustrated** to **Newsweek**, you would delete **Sports Illustrated** and type **Newsweek** in its place.

- 9. Tap Alt + F9 again to hide the codes.
- **10.** The prices of the two magazines are different. Sports Illustrated costs \$15.99 while Ms. Magazine costs \$13.99. Follow the same procedure as above to replace the red word **Price** with the following:



11. In the same way, replace the red word **Shipping** with the following:



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. Scroll down a bit and notice that **Ayu**, **Bagha**, **Baker**, **Baltz**, and others were skipped because their sex is unknown.

- f. Close the newly merged document without printing or saving it.
- g. 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.
  - Tap Ctrl + p 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. Click OK.
  - **6.** If the field codes are still displayed, tap **Alt + F9** so the results are displayed rather than the codes.
- h. Save the document and exit Word.

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

**1.** Put your 7 homework papers in the following order:

**HW09-1 3A Quantitative Technology (Works Cited page 4)** 

**HW09-2 3B Environment Newsletter** 

**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.

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, linked 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**

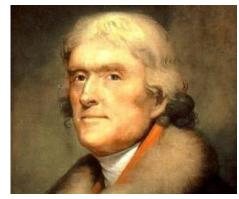
**Problem:** How can you create character formats that can be changed throughout a document by changing one occurrence?

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 everywhere in the document.

To see how this works, you will carry out some character style modifications on an excerpt from the Declaration of Independence. 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"<sup>26</sup>. 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.

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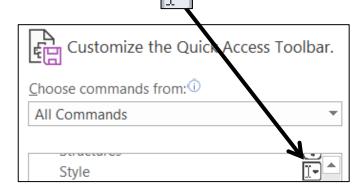
<sup>&</sup>lt;sup>25</sup> Text is adapted from <a href="http://www.archives.gov/national-archives-experience/charters/declaration.html">http://www.archives.gov/national-archives-experience/charters/declaration.html</a>

While he espoused equality, Jefferson himself owned slaves, as did 11 other presidents at one time. 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.

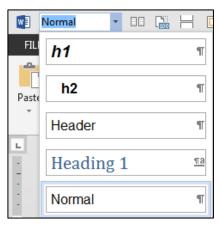
- a. Start the process of formatting the document by doing the following:
  - Open the document HW10-1 Character Styles and Declaration
     Original, which is one of the files you downloaded at the start of the term.
  - 2. Save the document in the **Word Files** folder using the name HW10-1 HWID Character 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.



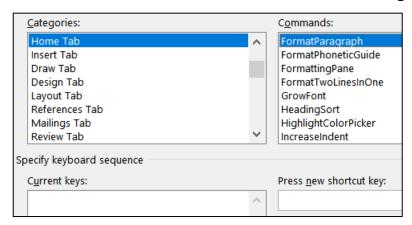
- b. On page **SG147**, in **HW07-1 Flyer**, you learned how to modify the **Quick Access Toolbar** by placing the **AutoText** icon on it. In this project you will be working a lot with styles so it will be helpful to add the **Styles** icon. Do the following:
  - 1. Click the File tab, click Options, 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:

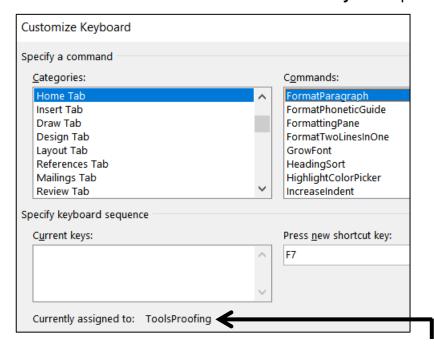


- c. Word allows you to assign keyboard shortcuts to most commands. Using the keyboard often is quicker than selecting with the mouse. Do the following:
  - Click the File tab, click Options, click Customize Ribbon, and finally click Customize just to the right of Keyboard shortcuts. Here, you can select a command and then assign a shortcut key. Let's assign the F7 key to open the paragraph dialog box.
  - 2. Under **Categories**, scroll down and 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 box.

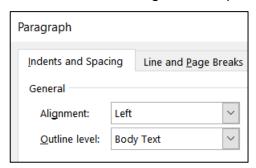
4. Click in the box under Press new shortcut key and tap the F7 key.



Word indicates the **F7** key currently is assigned to **ToolsProofing**.

- **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 box will open.

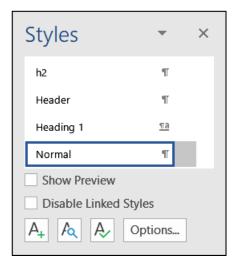


- 9. Click Cancel.
- 10. Follow the same procedure to assign Ctrl + 9 to the Go Back command (All Commands, GoBack). The Go Back command tells Word to move the insertion point to its previous location. If you execute the command again, Word moves the insertion point back to the next previous location. 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 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.



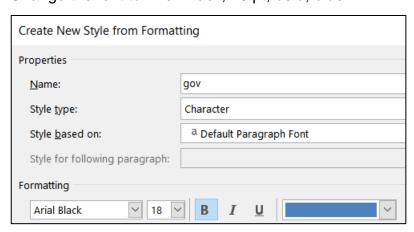
3. Click the **New Style** button at the bottom left of the pane. A

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 Arial Black, 18 pt, bold, blue.



4. Click **OK**. The new style, **gov**, will appear in the list of styles.

The little letter,  $\mathbf{a}$ , to the right of **gov** indicates that this is a character style. The other styles, like **Normal**, have a little paragraph mark  $\mathbf{f}$  showing that these are paragraph styles (discussed later).

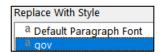
- e. Apply the new character style to all occurrences of the word **Government** throughout the document. You could do this manually by looking for and then selecting each occurrence of **Government** and making the changes individually, but that would be time consuming. Here is a faster way:
  - 1. 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 More >> is showing, click it to display the advanced options of the **Replace** feature. If the **Less** button << Less 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.

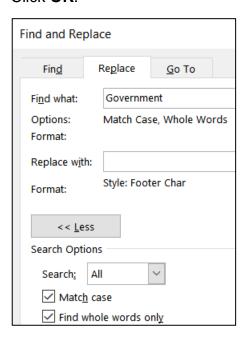
- 5. Click the **Find whole words only** box. This will ensure that words like **Governments** (it has an **s** on the end) will not match the criteria.
- **6.** Click in the **Replace With** box and clear any text so that the box is blank.
- **7.** At the bottom of the **Find and Replace** dialog box, 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).

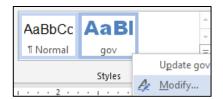




8. Click OK.



- 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:
  - 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 + p and compare the preview with the key. Make needed corrections, print page 1 only, save the document, and close it.

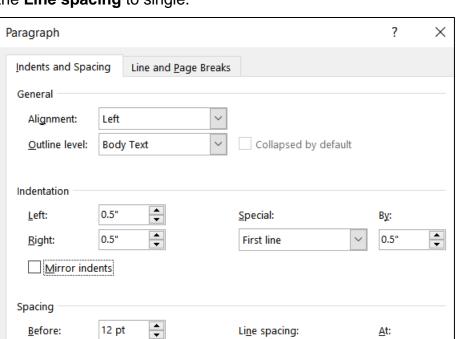
#### **HW10-2 Paragraph Styles**

**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 downloaded at the start of the term.
  - 2. Save the document in the **Word Files** folder using the name HW10-2 HWID Paragraph Styles Done.
  - 3. Open the Styles and Formatting pane.
  - **4.** On the Home tab, in the Styles group, click the launch dialog button to show 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 paragraph with the title, 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.

After:

0 pt

**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.

Single

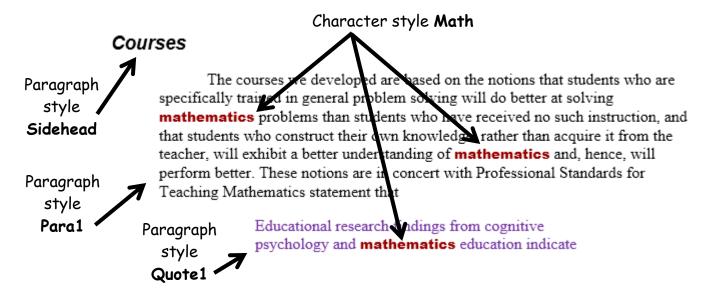
Be sure the Style type is set to Paragraph.

- 11. Click **OK**. A new paragraph style called **Para1** appears in the **Styles** pane and in the **Quick Styles Gallery**.
- 12. 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.** Put a check in the box next to **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).
- 7. Put a check in the box next to **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.
- 8. Click OK.
- **9.** With the insertion point still in the word **Courses**, open the **Styles** dialog box. Create a new style called **Sidehead** that has the characteristics you just set for this paragraph.
- **10.** 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**.
- 11. 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.
- **12.** Apply the **normal** style. 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.
- 13. Click **OK**.
- **14.** With the insertion point still in the paragraph, open the **Styles** dialog box. Create a new style called **Quote1** that has the characteristics you just set for this paragraph.
- 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 downloaded at the start of the term. Then, click the Insert button.
  - 3. Click anywhere in the paragraph under **Typical Class** sidehead and select all the text below it. Apply the **Para1** style to this text.
  - **4.** Apply the **Sidehead** style to the blue 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 purple.
- 7. Modify the **Normal** style so that is 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.



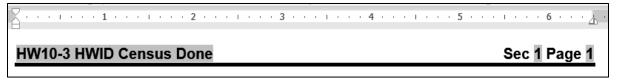
- e. Insert a footer that contains the name of the file.
- f. Tap Ctrl + p and compare the preview with the key. Make needed corrections, and then Print page 1 only, save the document ,and then close it.

#### 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 downloaded at the start of the term.
- b. Save the document in the **Word Files** folder using the name **HW10-3 HWID Census Done**.

- c. Insert a **HEADER** that contains the following:
  - On the left, insert a field with the name of the file.
  - On the **Home** tab, in the **Styles** group, click the dialog box launcher to open the **Styles** pane. Modify the **Header** style so that it is bold and the paragraph is underlined with a 3 pt width border. Remove the center tab stop located at 3.25 inches.
  - On the right, type the word Sec and a space, insert the automatic section number (Insert, Quick Parts, Field, Section). Then type a space the word Page, a space, and insert the automatic page number.



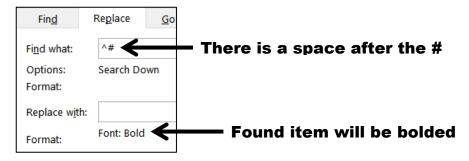
d. In the numbered list at the bottom of the first page, convert the spaces after the numbers into periods followed by tabs. You could do this by hand for each of the ten paragraphs but using the Replace feature is more illustrative.

You cannot simply replace the space with 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:

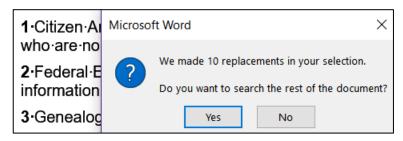
- **1.** Select the numbered paragraphs.
- 2. Tap Ctrl + h to open the Replace dialog box.
- 3. In the Find what box, type ^# and tap the Spacebar. The ^# represents any single digit so Word will "find" a digit followed by a space. You can see a list of special symbols by clicking Special at the bottom of the dialog box.



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.

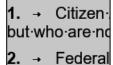


5. Now, change the bold spaces to **^t** by doing the following:

With the ten numbered paragraphs still selected, in the **Find what** box, enter a single space and tap **Ctrl + b**.

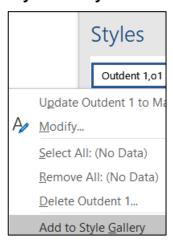
In the **Replace with** box, enter .^t. Be sure to type the period to the left of ^t.

**6.** Click **Replace All**. There will be 10 replacements. Click **No** when asked if you want to search the rest of the document. Notice the spaces have been replaced with the tab arrows.



information·on

- 7. Remove the bold from all the numbered paragraphs.
- 8. Apply the style **Outdent 1** to all the lines and add **Outdent 1** to the **Quick Style Gallery**.

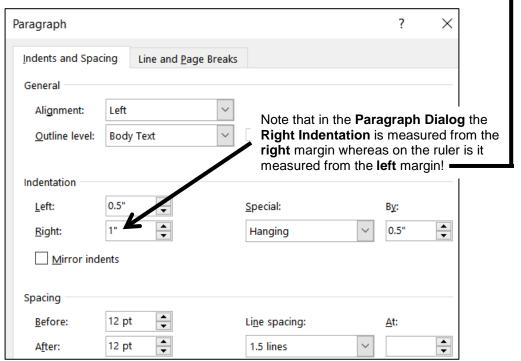


- e. The last two paragraphs of the document have been set to have indentations and red bold italic text. Remove all the formatting and create a new style by doing the following:
  - 1. Select the last two paragraphs.
  - 2. If necessary, on the **Home** tab, in the **Styles** group, click the dialog box launcher to open the **Styles** pane.
  - Scroll to the top and 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 Archives rents microfilm ...). 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 up pointing 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.

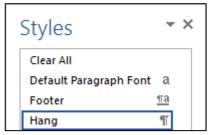
Rental·<u>The</u>·National·Archives·rents·microfilm·copies·of·historical·records·to·libraries·and·individuals.·These·copies·are·of·Federal·population·census·

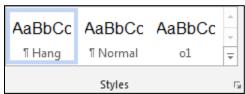
- **6.** Point to the triangle on the right side of the ruler  $\triangle$  and drag it to the 5.5 inch mark. This sets the right indent 5.5 inches from the **left** margin.
- 7. Right-click anywhere in the second to last paragraph and select Paragraph to open its dialog box. In the Spacing section type 12 in the Before box. This puts 12 points of space before (above) the paragraph. Type 12 in the After box. This puts 12 points of space after (below) the paragraph. 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 box, 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.

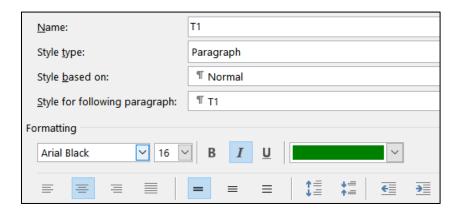




- 12. Apply the style **Hang** to the last paragraph by clicking anywhere in the last paragraph and then, on the **Home** tab, in the **Styles** group, click **Hang** (or, click **Hang** in the **Styles** pane).
- f. Create a new style for the titles of the last two paragraphs.
  - 1. Make this a character style called **Emphasize1** with the font 11 pt, Arial Black, italic, and blue.
  - 2. 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.
  - **3.** 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. If necessary, click the **Styles** dialog box launcher to open the **Styles** pane. 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 **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, italic, and red.
  - There is a 3 pt wide red border around the paragraph.
- i. Tap **Ctrl + Home** to move to the top of the document. Create a new paragraph style called **T1** that has these characteristics:
  - The font is 16 pt Arial Black, italic, and green.
  - Center the paragraph
  - · No space before



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** (that is, hold down the **Shift** key and, with the **Shift** key held down, tap the **Enter** key on the numeric keypad). The little arrows + indicate where the line breaks are.



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 up 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:

The Status Bar is located at the bottom of the document window.



This one shows the location of the insertion point (PAGE 2), the section number (1), that we are on page 2 of a total of 3, that the document has 714 words, a button for page proofing, and that Track Changes are off. Your Status Bar will be different.

Right-click the Status Bar to see its options:



A check means the item is shown on the Status Bar. You can set your Status Bar as you wish but for this project be sure the first three items are checked.

The difference between **Formatted Page Number** and **Page Number** will be explained in **HW10-5**.

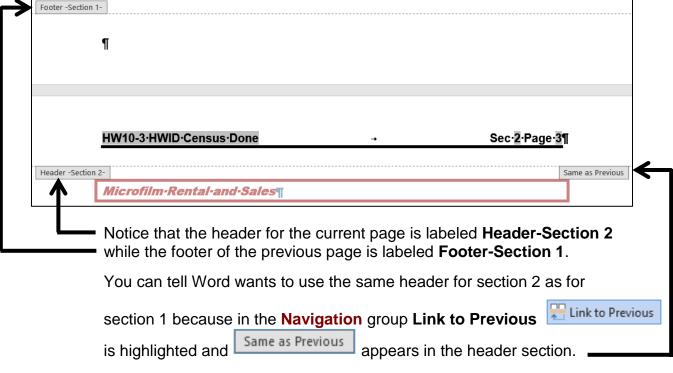
m. Move the insertion point to the left of the heading Microfilm Rental and Sales. On the Layout tab, in the Page Setup group, click Breaks and in the Section Breaks section select Next Page.

A **Next Page** section break is like a page break but it also creates a new section to which you can apply different characteristics.

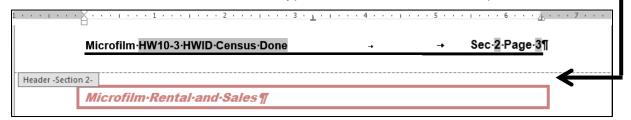
Notice that the **Status Bar** now shows the insertion point is on **PAGE 3** and in **Section 2**. The header also shows this information.



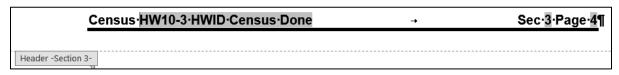
- n. Insert a new header for this section by doing the following:
  - 1. Double-click in the header area.



- 2. To be able to insert a different header for this section, click the **Link to Previous** button to turn it **off**. **Same as Previous** disappears.
- 3. To the left of the file name, type **Microfilm** and a blank space.

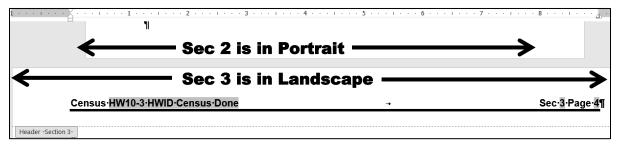


- 4. Close the **Header**.
- Move the insertion point to the bottom of the document and insert another next page section break. The Status Bar and Header both show the insertion point is in section 3 and on page 4.
- p. Change the header of the new section.
  - 1. Double-click in the **Header** area 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 **Layout** tab, in the **Page Setup** group, click **Orientation** and select **Landscape**.
    - Scroll up a few lines to see that the previous section remains in portrait (vertical) while the new section is changed to landscape (sideways).
  - 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.



- **3.** Close the Header.
- 4. 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 downloaded at the start of the term. This is a photo of a census record from 1910.
- **5.** If necessary, change to **Normal** the style of the paragraph that contains the graphic.
- r. 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. There is only one page in this section.
  - **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.

Page Border <u>B</u>orders Shading Setting: Preview Style: Click on diagram below or use bu None to apply borders Box Shadow 5 4 1 Color: 3-<u>D</u> Automatic Width: C<u>u</u>stom 10 pt Apply to: Art: This section  $\Diamond$   $\Diamond$   $\Diamond$   $\Diamond$   $\Diamond$ 

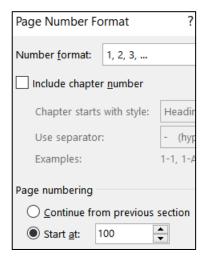
5. Confirm that under **Setting**, the Box icon is selected.

### 6. Click OK.

- s. 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 HW10-5. 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.

- t. Change every occurrence of the word **National** to the **Emphasize1** style by doing the following:
  - 1. Tap Ctrl + h to open the Find and Replace dialog box.

In the Find what box, type National

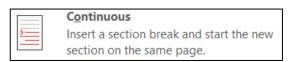
Put a check mark next to **Match case** so **national** will not be changed.

Put a check mark next to **Find whole words only** so **Nationalized** will not be changed.

In the **Replace with** box, clear any text, click the **Format** down arrow, select **Style**, and select **Emphasize1**.

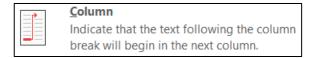


- **2.** Click **Replace All**. There should be 5 replacements (**NOT** 7).
- u. Sometimes displaying text in multiple columns makes a document easier to read because the reader's eyes do not have to track so far from the end of a line to the start of the next line. Do the following to make part of this 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 Layout tab, in the Page Setup group, click Breaks and select Continuous under Section Breaks.

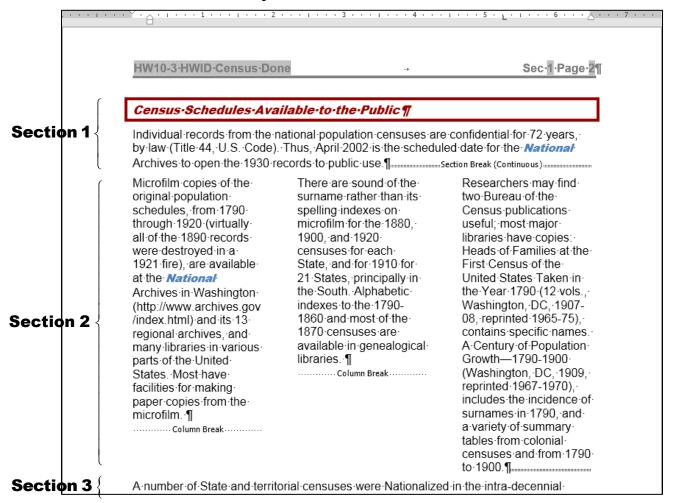


- 3. Insert another continuous section break at the start of the paragraph that begins A number of State and territorial...
- **4.** Click anywhere between the two continuous section breaks. The status bar should show PAGE: 2 Section: 2
- 5. On the Layout tab, in the Page Setup group, click Columns and select 3.

- **6.** Click to the left of the first word in the paragraph that begins **There are sound...**.
- 7. On the **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.



v. Tap Ctrl + p and compare the preview with the key. Make needed corrections, print pages 1, 2, and 100 only, save the document, and then close it.

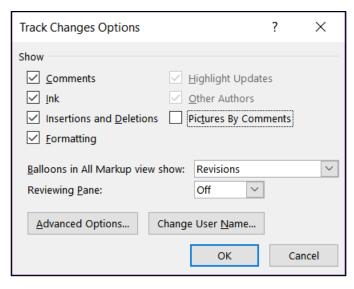
## **HW10-4 Track Changes**

**Problem:** How can several people collaborate on and edit a document and allow everyone to see the changes made by each individual?

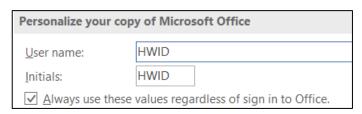
If you are working on a group project you may need to make changes to documents that were written by other group members. The person who writes the original draft is referred to as the **author**. The others who read the document and suggest changes are referred to as the **reviewers**.

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 poverty<sup>27</sup>

- a. Set up the document by doing the following:
  - 1. Open the document HW10-4 Track Changes Original.
  - Save the document to your Word Files folder using the name HW10-4 HWID Track Changes Done-part a
  - **3.** On the **Review** tab, in the **Tracking** group, click the launch dialog button. Make the settings match the following:



Click **Change User Name** Set the **User name** and **Initials** to your HWID. Check **Always use these values...** 

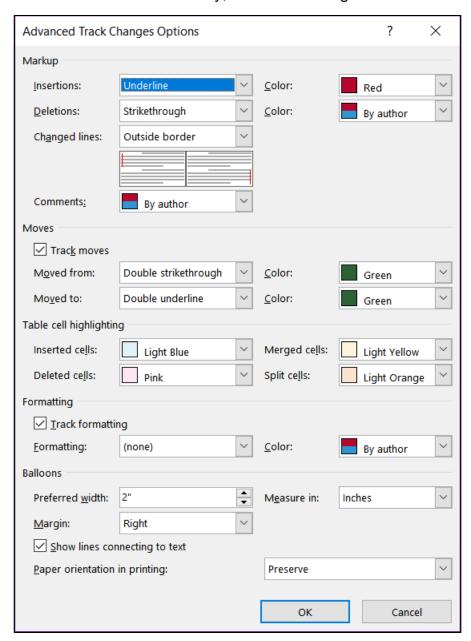


4. Click OK.

<sup>&</sup>lt;sup>27</sup> 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:

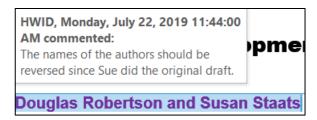


- 2. Click **OK** and click **OK** again.
- 3. On the **Review** tab, in the **Tracking** group, be sure **All Markup** is showing. If not, select it from the drop-down menu.
- 4. Select the author's names (**Douglas Robertson and Susan Staats**)
- **5.** On the **Review** tab, in the **Comments** group, click **New Comment**. The screen is redrawn with the selected text highlighted and a balloon on the right.

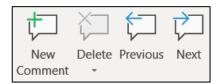
6. Type the following in the balloon: The names of the authors should be reversed since Sue did the original draft.

International Development Issues through Algebra	
Douglas Robertson and Susan Staats	HWID The names of the authors
University of Minnesota	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.



- 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** a selected comment, move to the **Previous** comment, or 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, reject, or modify the changes.

- 1. If **Track Changes: Off** shows in the Status Bar, click it to turn it on. Or, on the **Review** tab, in the **Tracking** group, click **Track Changes**.
- 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.

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

The lines that have changes (added text, deleted 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 <a href="http://www.un.org/millenniumgoals/">http://www.un.org/millenniumgoals/</a>.

Cut the text. Track changes notes the deleted text on the right side.

HWID
Deleted: Insert Figure 1
About Here¶
¶
Figure 1: Millennium
Development Goals. The
assessment targets are
available at
http://www.un.org/millenniu
mgoals/ .¶

**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.

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/.

- d. You can choose to view your document 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 down-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 + p 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 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?

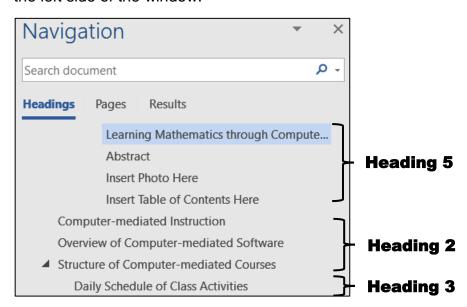
The following book chapter on computer-mediated mathematics courses serves as the basis for this assignment:

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 **HW10-5a Large Document Original**, which is one of the files you downloaded at the start of the term.
- Save the document to the Word Files folder using the name HW10-5 HWIDf Large Document Done

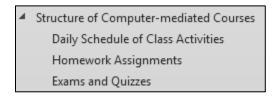
The page numbers in your document might not exactly match those described here due to different computer and printer setups.

- c. One way to move quickly through a document is to use the **Navigation Pane**, which displays a list of headings and subheadings in the document. When you click a heading in the **Navigation Pane** Word jumps to that heading in the document, displays it at the top of the window, and highlights the heading in the **Navigation Pane**. Do the following:
  - 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 window.



The outline entries are automatically generated using built-in styles called **Heading 1**, **Heading 2**, **Heading 3**, etc. For example, I applied the following styles to various parts of this book chapter:

- 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 I applied Heading 5 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.



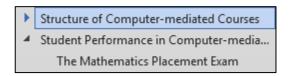
This illustrates how a good outline of a paper can be helpful later on as the paper grows and details are filled in.

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.



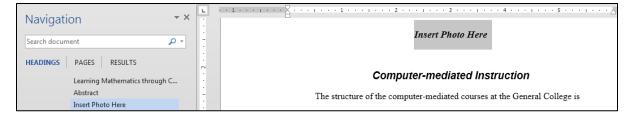
- 3. In the Navigation Pane, click Structure of Computer-mediated Courses. The insertion point will jump to that section of the document.
- 4. Click the arrow on the left of Structure of Computer-mediated Courses. The down-pointing arrow turns into a right-pointing arrow, and the subheadings of Structure of Computer-mediated Courses are hidden.



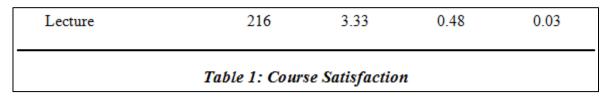
You can use the **arrows** to collapse or expand any section that you wish. In a large document, collapsing and expanding selected levels can make it easier to see the parts of the document you are working on.

**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 room 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 **HW10-5b 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**.
  - Navigate to your Word Files folder and then double-click the file HW10-5c Table 1 Original, which is one of the files you downloaded 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**).



6. Move the insertion point to Insert Table 2 Here. Follow the same procedure as you did for Table 1 to insert the file HW10-5d Table 2 Original, which is one of the files you downloaded 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 HW10-5e Graph Word Original, which is one of the files you downloaded at the start of the term. Change the style of the caption to Heading 5. Center the figure on the page. If the caption is on the next page, set them to be on the same page (select the line with the figure, then do Paragraph, Line and Page Breaks, and Keep with next).
- f. Word offers two ways to enter equations.
  - Use an equation editor such as MathType. This is an app you must purchase and install in Word. If you are a STEM major and will be typing a lot of equations this is a good investment because it is fast and efficient, once you learn it.
  - 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 red text **QuadraticFormulaHere**.
  - 2. Delete the red 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.

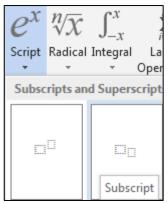


**4.** It will be easier if you change the magnification to 200% by repeatedly clicking the plus symbol on the **Status Bar** in the lower right corner of the window.



5. Click the **Script** down arrow and select **Subscript**.

This opens up the **Equation Tools Design** tab.



This inserts a template where you can enter the values. In the larger box, type  $\mathbf{x}$  and in the smaller box type  $\mathbf{1,2}$ 

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  $\pm$
- 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.

$$x_{1,2} = \frac{-b \pm \sqrt{b^2}}{\text{constant}}$$

- 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  $5x^2 3x + 1 = 0$ . The line should look like the following:

"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 SG234.

You cannot simply type the page numbers because as parts of the document are added or deleted the page numbers will change. Word has a way of creating page references that will automatically update each time the document is saved or printed.

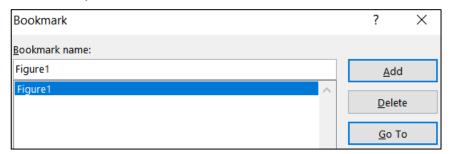
Do the following:

- 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, Figure1 and Figure\_1 are fine but Figure 1 is not.
- 4. Click Add. The dialog box closes automatically. This creates a hidden bookmark at this location. If you want to see where bookmarks are, click the File tab, click Options, click Advanced, scroll down to Show document content, and put a check next to Show bookmarks.

If they enclose text, bookmarks will show as gray brackets: **[Figure 1]**If no text was selected when you created the bookmark, a gray I beam I will show.

To go to a specific bookmark, open the **Bookmark** dialog box, click the bookmark you want, and click **Go To**.



To delete a bookmark, open the **Bookmark** dialog box, click the bookmark you want, and click **Delete**.

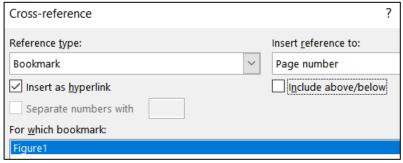
- 5. Set up a bookmark for Table 1: Course Satisfaction.
- **6.** Be sure the **Show/Hide** feature is off. Use the **Find** feature to locate the blue text **page xx** near the top of the document (about page 3). You want to replace **xx** with the page number where the reference can be found.
- 7. Delete xx. Then, on the **Insert** tab, in the **Links** group, click **Cross-reference**.
- **8.** 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

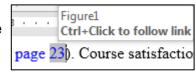


**9.** Click **Insert** and close the dialog box. The page number, **23**, is inserted.

difference in course choice (see the graph on page 23). Course satisfaction slightly favors

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.



- **10.** Two lines down locate the blue text **page yy**. 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:
  - 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 **Layout** tab, in the **Page Setup** group, click the **Breaks** button and select **Section Breaks**, **Next page**.

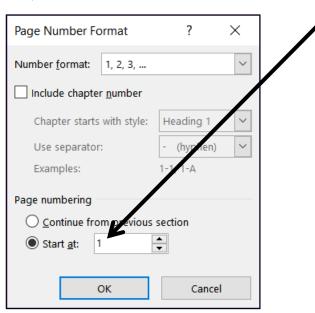
Now, the **Abstract** section starts at the top of page 2. The **Status Bar** will show **PAGE 2 SECTION 2**.

- 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.
- Move the insertion point to the left of the heading Works Cited near the end of the document and insert a next page section break. The Status Bar will show PAGE 32 SECTION 5.
- 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 corner of the window. The page number is 4, which is not what you want. This is because the title page, abstract, and Table of Contents are all counted as pages. 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 Section: 4 Page 4 of 35

**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.

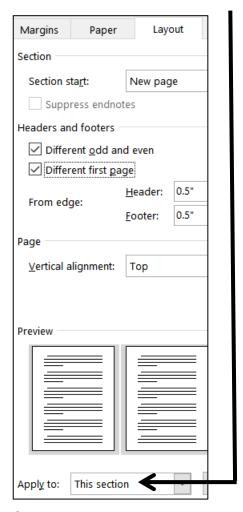
**SECTION: 4** means the insertion point is in the fourth section of the document.

**PAGE:** 4 of 35 means the insertion point is in the "real" 4<sup>th</sup> 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 Layout tab, in the Page Setup group, click the dialog box launcher to open the Page Setup dialog box.

Click the **Layout** tab, click the check boxes next to **Different odd and even** and **Different first page**. In the drop-down menu next to **Apply to**, be sure **This section** is selected.



- 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 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.

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.

Line

Centered

**Body Text** 

**Body Text** 

Level 1

Level 2

Level 3

Level 4

General

Alignment:

Indentation

<u>L</u>eft:

Outline level:

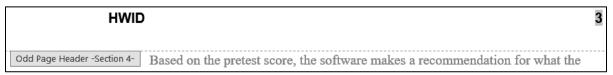
 Scroll down and click in the Even Page Header -Section 4 in the header area, deselect the Link to Previous button and remove the center tab stop.

Insert field codes so that the automatic page number is displayed on the left and the file name is displayed on the right.



 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 HWID on the left and the automatic page number on the right.

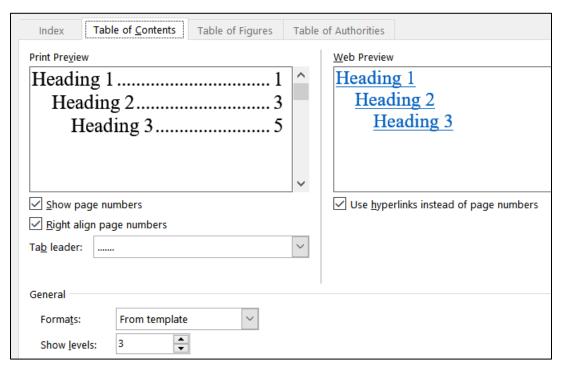


- **7.** Close the Header and Footer area.
- k. Add a **Table of Contents** by doing the following:
  - Move the insertion point to the left of the heading Insert Table of Contents Here.
  - 2. Replace the text with the words **Table of Contents** and tap **Enter**.
  - **3.** Change the style of the 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 between the margins.
  - 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**.

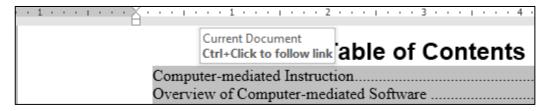
**6.** Click in the blank line just under **Table of Contents**.

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 **Homework Assignments** section.

- I. An index is helpful in a large document 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:

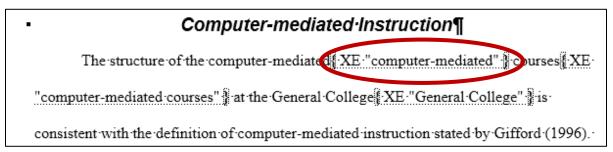
1. Move the insertion point to the left of the heading **Computer-mediated Instruction**.

If the hidden codes are not showing, on the **Home** tab, in the **Paragraph** group, click the **Show/Hide** button

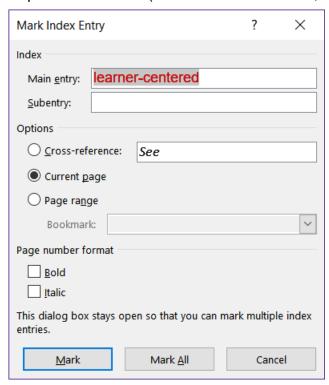
This will display the paragraph marks,  $\P$ , tabs  $\rightarrow$ , spaces,  $\cdot$ , and other document marks such as index codes.

The first index code look like this: { XE "computer-mediated" }

The prefix **XE** stands for inde**X** 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.
- 3. Tap Alt + Shift + x (or choose References, Index, Mark Entry).



The selected word appears in the **Main entry** box.

Mark

Mark <u>A</u>ll

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.

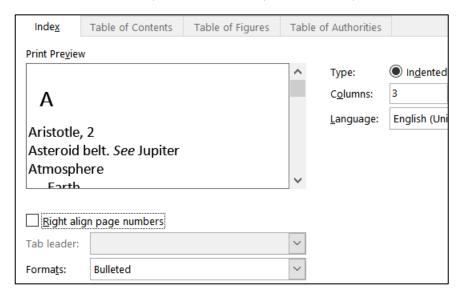
learner-centered{ XE "learner-centered" }

The **Mark Index Entry** dialog box stays open so you can mark more entries.

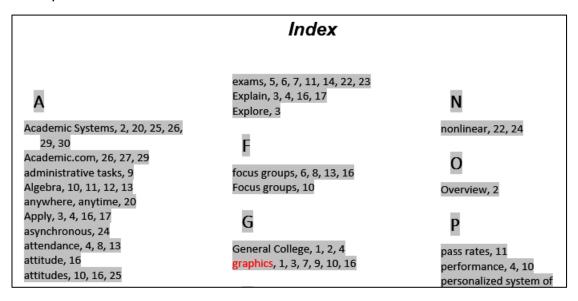
- 5. Move four lines down and select graphics (it is in red). Click anywhere in the Mark Index Entry dialog box and then click Mark All. This will mark every occurrence of graphics in the document. Note that this will NOT mark graphic or graphical. That is one of the drawbacks of the Mark All button—variations 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.
  - Move the insertion point to the heading Insert Index Here at the bottom of the document.
  - 2. Replace the text **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 **Insert Index**.

In the **Columns** box, change the number of columns to 3.

In the **Formats** box, click the arrow, scroll down, and select **Bulleted**.



**6.** 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:

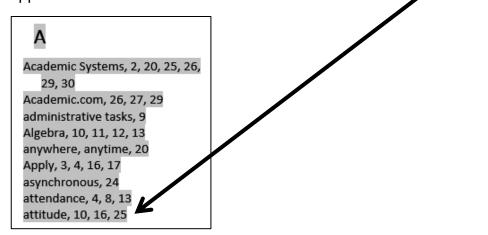
- 1. Tap **Ctrl + Home** to move to the top of the document.
- 2. Turn on the **Show/Hide** feature by clicking the **Show/Hide** button 1.
- 3. Tap Ctrl + h to open the Find and Replace dialog box.

In the Find what box type: XE "Evaluates

In the Replace with box type: XE "Evaluate

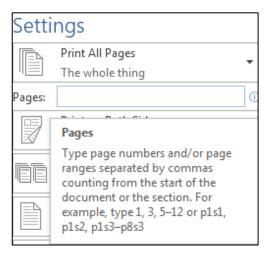
- 4. Click **Replace All**. Word replaces all the index entries that contain **Evaluates** with **Evaluate** (there should be three replacements). Word does not change the text of the document, only the index entry codes.
- 5. Click OK.
- Repeat the process changing the index entries for attitudes to 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, click anywhere in the index, right-click, and select **Update Field**. You could also choose **References**, **Index**, **Update Index**. or tap **F9**. Now, only **attitude** appears in the index.



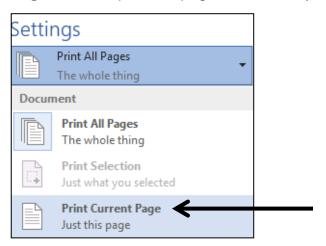
There are several other similar situations (e.g., focus groups & Focus groups, and math placement & mathematics placement) but, to save time, you can leave those alone.

- o. 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 Pages 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 formatted page 7 (real page 11) 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 that contains **Table 1** (probably page 14) and the **Index**.
- p. 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 only)
HW10-2 Paragraph Styles (page 1 only)
HW10-3 Census (page 1)
HW10-3 Census (page 2)
HW10-3 Census Sample Page (page 100)
HW10-4 Track Changes (page 1 only)
HW10-5 Large Document Table of Contents (section 3)
HW10-5 Large Document Equations (page 7)
HW10-5 Large Document Table 1 (page 14)
HW10-5 Large Document Index (page 32)
```

- 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.

# **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 may 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 files generated are in your Word Files folder and have the word KEY in their names.

The printed keys are on page SG370.

After reviewing the textbook activities, do the following sample exam questions.

# **General Word Operations**

- a. Open the **Word document Notes Sheet for CI 1871 Word Exam Original**, which is one of the files you downloaded at the start of the term.
- b. Replace **Lastname**, **Firstname HWID** with your information.
- c. Save the document to your **Word Files** folder using the name **Notes Sheet for CI 1871 Word Exam Done**.

You may want to print this file and then close it. Then, write on the printout as you go through the following sample questions. Or, keep it open while you do the sample questions, type your notes on it, and then print it. You will hand in this sheet when you finish the exam.

- d. Open the **Word document Sample-a Exam Questions Original**, which is one of the files you downloaded at the start of the term.
- e. Save the file to your **Word Files** folder using the name **Sample-b Exam Questions Done**

## f. 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 and also, at the end of the document, to the paragraph containing the word Index.

If you get stuck, look up the question in "How to Solve the Sample Exam Questions for Word" starting on page SG262 of this Study Guide.

2. Modify the h1 style so that the font color is **purple**, the font size is 16, the paragraph is **center** aligned and there is a 3 pt purple **border** around the paragraph.

#### g. **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 Goldy (HW07-2 UM Logo Original) anywhere in the first paragraph. Change the height to 0.5 inch and the width to 1 inch. Position the picture as shown below:

#### Part 1

This study analyzes the citation patterns in an algebra writing assignment completed by students in two sections of college algebra, one that used iPads throughout the semester and one that did not.

Students in the iPad section did not information source more than even though available apps were closely linked to course content. Open-ended assignments are a useful tool in iPad initiatives to gauge student interest in new learning technologies.

#### h. Part 2

TABS and INDENTS are VERY important. See page SG158 for more details.

- 1. For the heading, **Part 2**, insert a page break so **Part 2** appears at the top of the next page.
- **2.** For the 3 lettered items under **Part 2**, **use the ruler** to do the following:
  - Set the left indent to 1.5 inches.
  - Set the first line indent to 1 inch.
  - Set the right indent to 6 inches.

#### i. Part 3

- 1. Double space the paragraph that begins with **DOUBLE SPACE THIS PARAGRAPH**.
- 2. Set the line and page breaks so that the side head **Part 3** and the four lines below it always appear on the same page.
- 3. Under Part 3a, click in the phrase SIDE HEAD ONE. Create a new paragraph style called s1 that makes the font Arial Black, 14 point, blue, and the paragraph centered.
  - Apply this style to **SIDE HEAD ONE**.
- **4.** Find the phrase **SIDE HEAD TWO** and apply the **s1** paragraph style.
- 5. Create a new **character** style called **e1** that makes font **Arial**, **12** pt, **bold**, *italic*, **underlined**, and **red**.

6. Apply style e1 to all occurrences of the word Disk. Words like disk and Diskette should not have the style applied. There should be 3 replacements.

#### Part 2

- a. This is the first lettered item. It contains the word Diskette, which should NOT have the style e1 applied to it.
- This is the second lettered item. It contains the word disk, which should NOT have the style e1 applied to it.
- This is the third lettered item. It contains the word <u>Disk</u>, which should have the style e1 applied to it.

A few universities have introduced iPads, which do not have a <u>Disk</u>, within a wide range of undergraduate classes. Pepperdine University, for example, conducted a three term experimental <u>Disk</u> comparison of iPad- and non-iPad-using classes use across discipline including calculus, business, nutrition, and religion.

7. Under Part 3c, at the end of the phrase Vertex form of the quadratic function: construct this formula  $f(x) = (x - h_1)^2 + k_1$ 

Note that the default font of the equation is Cambria Math and not Arial like the rest of the document. To change the font, Word Help says to select the text, right-click, choose font, and select the one you want. That does not work! Leave the font as it is. You can change the font if you use the app MathType. However, changing the font size and applying bold do work in the usual ways.

## j. Part 4

- 1. Select the phrase **Part 4** and insert a bookmark called **Part4**.
- 2. Break up the paragraph which begins **BREAKUP THIS PARAGRAPH**. Make the breaks just before **(a)**, just before **(b)**, and just before **(c)**.
- 3. Set the line and page breaks so that the side head **Part 4** and the four lines below it always appear on the same page.
- 4. 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.

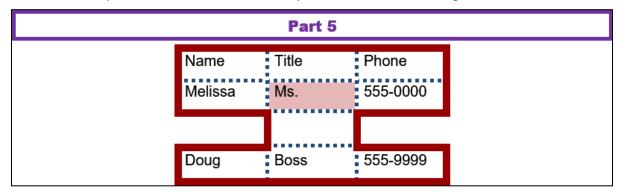
Use the **Tab** key to make these paragraphs look as follows:

Part 4			
BREAK UP THIS PARAGRAPH			
(a)	SKINNY	0.0025	
(b)	REALLY PORTLY	82.1	
(c)	SOMEWHERE IN BETWEEN	177	

5. Insert a footnote mark to the right of the word **SKINNY**. The text of the footnote should be **By skinny**, we mean really thin.

#### k. Part 5

- Convert the four paragraphs under Part 5 to a table. Format the table as follows:
  - The outside border should be solid red 6 pt.
  - The inside lines should be **dotted blue 3** pt.
- 2. Make the fill color **pink** of the cell that contains the word **Ms**.
- 3. Insert a new row between the rows for **Doug** and **Melissa**.
- 4. Delete the row for Noah.
- Make the height of all the rows 0.3 inch and the width of all the columns 1 inch.
- **6.** Center the table on the page.
- 7. Adjust the borders so that they look like the following:

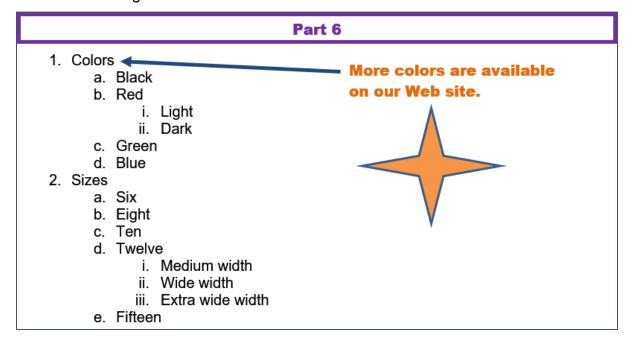


#### Part 6

1. Use the **Multilevel List** feature on the 16 lines under **Part 6** to make them look like the following:

# Part 6 1) Colors a) Black b) Red i) Light ii) Dark c) Green d) Blue Sizes a) Six b) Eight c) Ten d) Twelve i) Medium width ii) Wide width iii) Extra wide width e) Fifteen

- 2. Insert a text box next to the heading Part 6 and 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.
- 3. Insert an **arrow** pointing from the text box to the word **Colors** in the outline. Make the weight of the arrow 3 pt and the color blue.
- **4.** Insert an orange four-pointed star with a blue outline under the text box.
- 5. Arrange the items as shown below:



#### m. Table of Contents

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. Go to the top of the document, click in the blank line below Table of Contents, and insert a Table of Contents. Construct the table using the first two heading levels only in the Distinctive format, show page numbers, right align the page numbers, and make them have a dot leader.
- Click just to the left of the heading Part 1 and insert a next page section break so that the heading Part 1 appears on the next page and in the new section 2.

#### n. Cross Reference

Just after the second paragraph of the document, find the phrase **Part 4 is on page XX of this document**. Replace the **XX** with the automatic page number cross-reference to the **Part4** bookmark. Make the page number red **bold**.

#### o. Headers

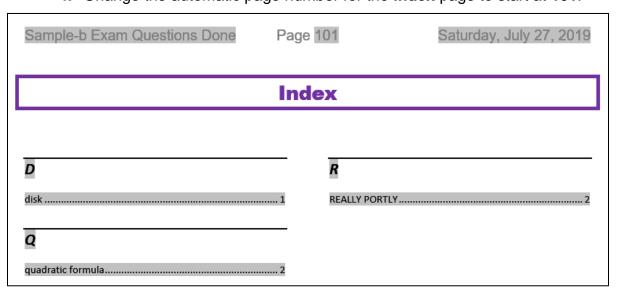
Set up the **headers** for section 2 as follows (be sure to deselect **Link to Previous**):

- 1. Set the layout for section 2 so that it has a different **First Page Header**, and different **Even** and **Odd page headers**.
- 2. First Page Header contains the filename on the left, the word Page, a space, and the automatic page number in the middle, and the date the file was last saved on the right in the format Day, Month Date, Year.
- 3. Even Page Header contains the word Page, a space, and the automatic page number on the left and the word Sec, a space, and the automatic section number on the right.
- **4. Odd Page Header** contains your **HWID** on the left and the word **Page**, a space, and the automatic page number on the right.

### p. **Index**

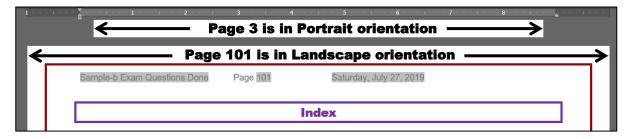
Set up and insert an **Index** by doing the following:

- Mark the following as index entries: disk, quadratic function, and REALLY PORTLY.
- 2. Move to the end of the document. Insert a **next page section break** so the word **Index** is on the next page.
- 3. Move to the end of the document and tap **Enter**. Be sure to turn off the **Show/Hide** codes so the page numbers will be correct.
  - Insert an **index**. Use the **Modern** format, **two** columns, **right** align page numbers, and a **dot** leader.
- **4.** Change the automatic page number for the **Index** page to start at **101**.



**5.** For the page that contains the word **Index** and the index itself, make the orientation **Landscape**. All other pages should remain in **Portrait** mode.

**6.** Place a **3** pt **red** border around the page that contains the **Index**. No other pages should have that border.



q. Tap **Ctrl + p** and compare the preview with the key. Make needed corrections. Do not print it. Save the document and close it.

# **Graphics and Other Stuff**

- Start Word, open a new blank document, and save the file in your Word Files folder as Sample-c Graphics and Other Stuff Done
- b. Type Practice Questions for Word Exam and tap Enter. Then type This file provides practice with graphics, tap Enter, and type and columns. Then tap Enter.
- c. Change the **Normal** style so the font is **12 pt Arial Bold**.
- d. Sections and Columns:
  - 1. Insert the text from the file w02B\_Cover\_Letter\_Text, which is one of the files you downloaded at the start of the term
  - **2.** Correct the spelling and grammar.
  - **3.** Put the text from I can be accessible... through In addition, I have... in three column format so it looks like the following:

With a permanent position as my ultimate goal, I hope to use the Florida Port Community College Career Center to secure a temporary job.

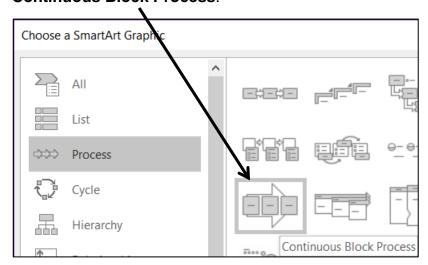
I can be accessible for a flexible number of days or hours and am willing to work in a diversity of businesses or organizations. As my resume illustrates I have exceptional computer skills. I am a honor student at FPCC and have outstanding references.

In addition, I have parttime work experience as a software tester, where I perform the following computer activities.

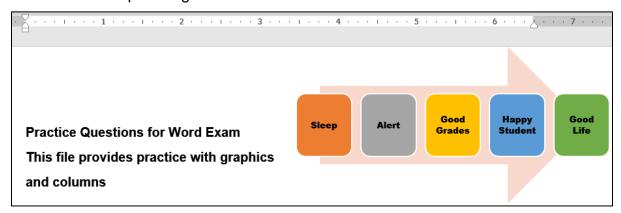
I am available for the purpose of an interview at your convenience. You can contact me by email at jgarcia@alcona.net or by telephone at (727) 555-0347.

#### e. SmartArt

 Move to the top of the document and insert a SmartArt object Process, Continuous Block Process.

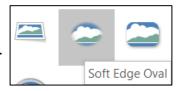


- 2. Enter the following phrases, one in each text box: Sleep, Alert, Good Grades, Happy Student, Good Life.
- **3.** Make the object **4** inches wide and **2** inches high.
- 4. Change the colors to Colorful.
- 5. Change the font to 8 pt Arial Black and make the color black.
- **6.** Move the object to the upper right corner of the page so it just touches the top and right side.



## f. Picture

- 1. Move to the top of the document and insert the picture w01A\_Bird, which is one of the files you downloaded at the start of the term.
- 2. Change the height AND width to 2 inches so the picture is square.
- 3. Apply the Soft Edge Oval style.
- **4.** Rotate the picture 45 degrees clockwise.
- **5.** Move the picture to the lower right corner of the document.



- g. Move to the end of the document, just after the phone number. Insert as a table the data in B2:F10 from the Data tab of the Excel file Sample-d Education and Earnings Original.
- h. Insert a screen shot of your **Word Files** folder. Make both the height and width 1.5 inches. Place a black border around it and move it to the bottom center of the document.
- Save the document and close it.

# **Sorting**

- a. Open the file Sample-e Table Sort DATA Original, which is one of the files you downloaded at the start of the term. You will use this file in this section on sorting and on the next two sections on Mail Merge and Mailing Labels (hence the word DATA in the file name).
- Save the document to your Word Files folder using the name Sample-f Table Sort DATA Done
- c. Convert the text into a table.
- d. Autofit the column widths.
- e. Make the background of the document White Marble.
  - t 6.
- f. Make the table style **Grid Table 5 Dark Accent 6**.



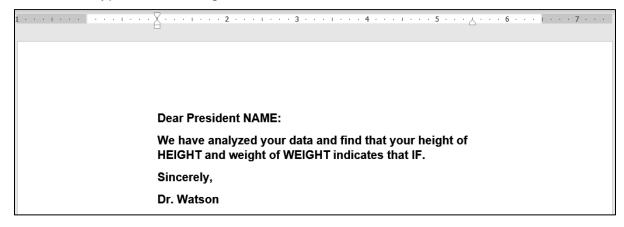
- g. Sort the data in the table by **State** in **Descending** order (**Z to A**) and, within **State**, by **LastName** in **Ascending** order (**A to Z**).
- h. Center the table horizontally on the page.



Save the file and close it.

# **Mail Merge**

- a. Create a Mail Merge **MAIN** document by doing the following:
  - Start Word, open a new blank document, and save the file in your Word Files folder as Sample-g Merge MAIN Done
  - 2. Change the **Normal** style of the document so that the font is **12** pt **Arial bold** and the left and right indents are set to **1** inch.
  - **3.** Type the following letter:



- **4.** Convert the document to a mail merge **letters** document.
- 5. Select **Sample-f Table Sort DATA Done** as the data source.
- **6.** Set the mail merge to skip data where the **height** field is empty.
- 7. In place of the word **NAME** insert the merge field code **LastName**.
- 8. In place of the word **HEIGHT** insert the merge field code **Height**.
- 9. In place of the word **WEIGHT** insert the merge field code **Weight**.
- 10. In place of the word IF insert a field so that if Weight is over 200 Word will display you need to lose a few pounds. Otherwise, Word should display you are in good shape.
- 11. Tap Alt + F9 to see the merge codes:

```
{ SKIPIF { MERGEFIELD Height } = "" } Dear President { MERGEFIELD LastName }:

We have analyzed your data and find that your height of { MERGEFIELD Height } and weight of { MERGEFIELD Weight } indicates that { IF { MERGEFIELD Weight } > 200 "you need to lose a few pounds" "you are in good shape" }

Sincerely,

Dr. Watson
```

12. Tap Alt + F9 again to hide the merge codes.

b. Merge the files to a new document. It will contain all the individual letters, except for **Harrison** and **Jefferson** because their **Heights** are missing.

If you show the paragraph marks (click ) and, on the View tab in the Views group, click the Web Layout button, you should see the following:

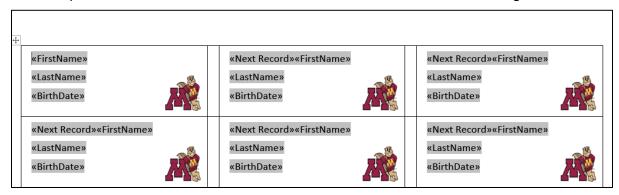
Dear·President·Arthur:¶		
We·have·analyzed·your·data·and·find·that·your·height·of·66·and·weight·of·231·indicates·that·you·need·to·lose·a·few· pounds¶		
Sincerely,¶		
Dr.·Watson Section Break (Next Page)		
Dear-President-Coolidge:¶		
We·have·analyzed·your·data·and·find·that·your·height·of·71·and·weight·of·211·indicates·that·you·need·to·lose·a·few· pounds¶		
Sincerely,¶		
Dr.·Watson Section Break (Next Page)		
Dear-President-Madison:¶		
We·have·analyzed·your·data·and·find·that·your·height·of·64·and·weight·of·176·indicates·that·you·are·in·good·shape¶		
Sincerely,¶		
Dr.·Watson Section Break (Next Page)		

- c. Save the new document as **Sample-h Merge PRINTED Done**
- d. Close and save all open documents.

# **Mailing Labels**

- a. Start Word, open a new blank document, and save the file in your **Word Files** folder as **Sample-i Merge Labels Done**
- b. Create mailing labels using the Avery US Letter 5160 Address Labels product number.
- c. Use the file **Sample-f Table Sort DATA Done** as the data source.
- d. Apply the **Table Grid** style to the table.
- e. Center the table on the page.
- f. Include on each label on separate lines FirstName, LastName, and BirthDate of each person.
- g. Insert the picture **HW07-2 UM Logo Original**, which is one of the files you downloaded at the start of the term.
- h. Make the picture height and width 0.5 inch and move it to the lower right corner of each label.

i. Update all the labels. The document should look like the following:



- j. Merge the files to a new document. Save the document as **Sample-j Merge Labels PRINTED Done**
- k. Save and close all open documents and exit 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.

The keys for these files are on page SG370

# How to Solve the Sample Exam Questions for Word

I hope the following brief explanations are helpful as you study for the Word exam.

# **General Word Operations - Solutions**

## f. Heading style

**f1.** Question **f1** is on page **SG251**. Here is how to solve it:

Click in the heading **Part 1**. On the **Home** tab, in the **Styles** group, click the launch dialog button wer right corner of the group). Click the style labeled **h1**. Repeat for **Part 2** through **Part 6** headings and the **Index**.

Another way to do this is to tap **Ctrl + h** to open the **Find/Replace** box. In the **Find what** box type **Part** 

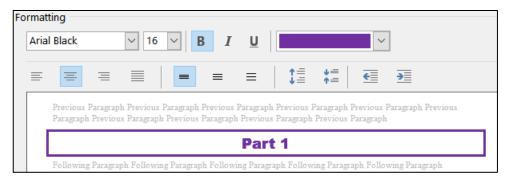
Click More >> and check Match case and Find whole words only.

Click in the **Replace with** box, click the **Format** down arrow, and select **Style**. Scroll to the style labeled **h1** and click it.

Click the **Find Next** button to find **Part 1**. Click **Replace**. Repeat this for all the other headings and Index. There should be 10 replacements. This is very useful if you have a large document. You could also click **Replace All** if you are **SURE** there are no other instances of **Part** in the document (NOT true for this document!).



**f2.** On the **Home** tab, in the **Styles** group, click the launch dialog button. Right-click the style labeled **h1** and select **Modify**. Change the font color to purple, the font size to 16, and click the **Align Center** icon. Click **Format** down arrow, select **Border**, and make the border 3 pt purple.



## g. Part 1

- g1. Select the two paragraphs, right-click, and select Paragraph. Under Spacing Before (above), set the size to 24 pt. Under Spacing After (below), set the size to 12 pt.
- **g2.** On the **Insert** tab, in the **Illustrations** group, click **Pictures**. Navigate to **HW07-2 UM Logo Original** and click **Insert**.

Click the picture to select it. On the **Picture Tools Format** tab, in the **Size** group, click the launch dialog button

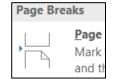
In the **Scale** group uncheck **Lock aspect ratio**. In the **Height** group enter 0.5". In the **Width** group enter 1".

On the **Picture Tools Format** tab, in the **Arrange** group, click **Wrap Text** and select **Tight**.

Use your mouse to position the picture as shown.

#### h. Part 2

h1. Click to the left of the P in Part. On the Layout tab, in the Page Setup group, click the Breaks down arrow. Under Page Breaks (NOT Section Breaks) click Page.



With Text Wrapping

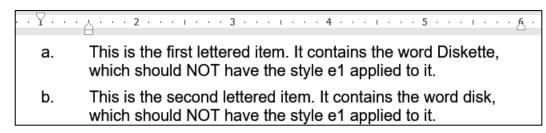
Or, tap Ctrl + Enter on the numeric keypad.

**h2.** Select the three paragraphs.

On the ruler, drag the **left** indent marker  $\widehat{\Box}$  to 1.5 inches.

On the ruler, drag the **first line** indent marker  $\nabla$  to 1 inch.

On the ruler, drag the **right** paragraph indent marker to 6 inches.

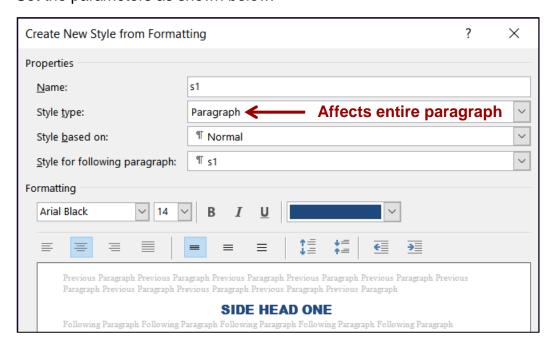


#### i. Part 3

- i1. Select the paragraph, right-click, and select **Paragraph**. In the **Line spacing** area, click the down arrow and select **Double**.
- i2. Select the five lines starting at Part 3. Right-click, select Paragraph, click the Line and Page Breaks tab, and check Keep with next and Keep lines together.
- i3. On the **Home** tab, in the **Styles** group, click the launch dialog button

  At the bottom, click the **New Style** button.

  Set the parameters as shown below:



Notice how this **Paragraph** style affects the entire paragraph and not just some of the characters. To change selected characters only, use a **Character** style.

**i4.** Click anywhere in the phrase **SIDE HEAD TWO** and then click the **s1** style.

i5. On the Home tab, in the Styles group, click the launch dialog button.

At the bottom, click the **New Style** button.

Set the parameters as shown below:

Create New Style from Formatting			
Properties			
<u>N</u> ame:	e1		
Style <u>t</u> ype:	Character		
Style <u>b</u> ased on:	<sup>a</sup> Default Paragraph Font		
Style for following paragraph:			
Formatting			
Arial V 12 V B I U			

i6. Click at the top of the document.Tap Ctrl + h to open Find/Replace.

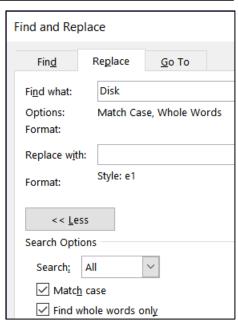
In the Find what box type Disk.

Check the **Match case** and **Find whole** words only boxes.

Click in the **Replace with** box, click the **Format** down arrow, and select **Style**. Scroll down to **e1**, select it, and tap **OK**.

Click **Replace All**. There should be 3 replacements.

i7. Click at the end of the phrase and, on the Insert tab, in the Symbols group, click the Equation down arrow, and select Insert New Equation).



This opens the **Equation Tools** tab and inserts a box where you can type the equation.

Vertex form of the quadratic function. Type equation here.

Type f(x) = a

On the **Equation Tools** tab, in the **Structures** group, click the **Script** down arrow and select superscript to show  $f(x) = a^{\text{constant}}$ 

Click in the large box. On the **Equation Tools** tab, in the **Structures** aroup, click the **Bracket** down arrow and select parentheses to show f(x) = a(x)

Click in the large box and type **x** - to show  $f(x) = a(x - 1)^{-1}$ 

On the **Equation Tools** tab, in the **Structures** group, click the **Script** down arrow and select subscript to show f(x) = a(x - |x|)

Click in the large box and type **h**. Click in the small box and type **1** to show  $f(x) = a(x - h_1)^{\square}$ 

Click in the exponent box and type **2** to show  $f(x) = a(x - h_1)^2$ 

Tap the right arrow key to move out of the exponent box and type + to show  $f(x) = a(x - h_1)^2 +$ 

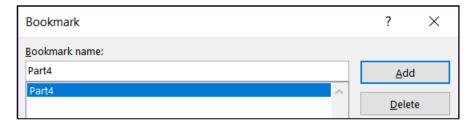
On the **Equation Tools** tab, in the **Structures** group, click the **Script** down arrow and select subscript to show  $f(x) = a(x - h_1)^2 + []$ 

In the large box type **k** and in the small box type **1** to show  $f(x) = a(x - h_1)^2 + k_1$ 

## j. Part 4

j1. Select the phrase Part 4 and, on the Insert tab, in the Links group, click Bookmark.

In the **Bookmark name** box type **Part4** and click **Add**.



Close the **Bookmark** dialog box. You cannot see the bookmark code unless you click the **File** tab, click **Options**, click **Advanced**, scroll down to **Show Document Content**, and check **Show** bookmarks. The brackets indicate the bookmark.



**j2.** Click to the left of the parenthesis in **(a)** and tap **Enter**. Do the same for **(b)**, and **(c)**.

- j3. Select the four lines from Part 4 through (b), right-click, select Paragraph, click the Line and Page Breaks tab, and check Keep lines together. You do not need to click the line with (c) because that does not have to be on the same page at the line with Part 5.
- j4. Select the three paragraphs.

On the left side of the ruler, point to the **Tab Type** box. A screen tip will tell you what kind of tab stop is active.

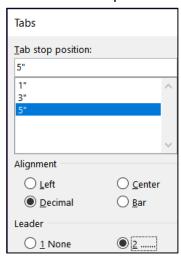
Be sure the tab type is **Left** and click the ruler at the **1** inch mark.

Click the **Tab Type** box once to make the type a **center** tab stop and then click the ruler at the **3** inch mark.

Click the **Tab Type** box twice to make the type a decimal tab stop and then click the ruler at the 5 inch mark.

Double-click the decimal tab stop to open the **Tab** dialog box.

Click the 5" stop. Under Leader, click the bullet to the left of 2...



Click **Set** and then **OK**.

Now, set the tab stops by doing the following:

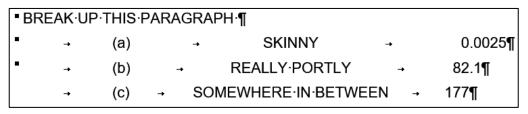
Click to the left of (a) and tap the Tab key.

Click to the left of **SKINNY** and tap the **Tab** key.

Click to the left of **0.0025** and tap the Tab key.

Repeat this for (b) and (c).

To see where the **Tab** key was tapped, click the **Show/Hide** button



**j5.** Click to the right of the **Y** in **SKINNY** and, on the **References** tab, in the **Footnotes** group, click **Insert Footnote**. Then, type the text.

#### k. Part 5

**k1.** Select the four paragraphs. On the **Insert** tab, in the **Tables** group, click the **Table** down arrow, and select **Convert Text to Table**. Click **OK**.

Select the table and, on the **Home** tab, in the **Paragraph** group, click the **Borders** down arrow and select **Borders and Shading**.

Select **red** for the color.

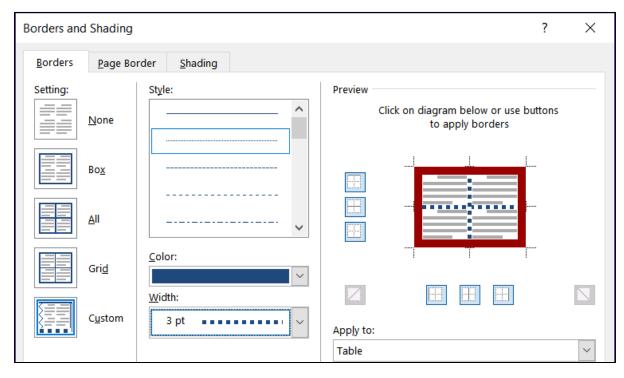
Select 6 pt for the Width.

Click **Box**. That will apply the border to the outside of the table.

Click **Custom** so you can change each border individually.

Select dotted for the **Style**, blue for the **Color**, and **3** for the **Weight**.

Click the inside borders to make them blue and dotted.



Click OK.

**k2.** Select the cell that contains the word **Ms.** 

Select the table and, on the **Home** tab, in the **Paragraph** group, click the **Borders** down arrow and select **Borders and Shading**.

Click the **Shading** tab. Be sure the **Apply to** box shows **Cell** so only the selected cell will be changed.

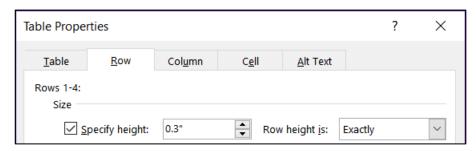
From the **Fill** menu, select **pink** and then click **OK**.

Or, you could select the cell, click the paint bucket, and select the color.

- **k3.** Select the bottom row, right-click, click **Insert**, and select **Insert Rows Above**.
- **k4.** Select the row that contains **Noah**, right-click, and click **Delete Rows**.

k5. Select the table, right-click, and select Table Properties.

Click the **Row** tab, click the check box next to **Specify height**, type **0.3**" in the box, and select **Exactly** from the **Row height is** drop-down menu.



Follow a similar procedure to set the width of all the columns to 1 inch.

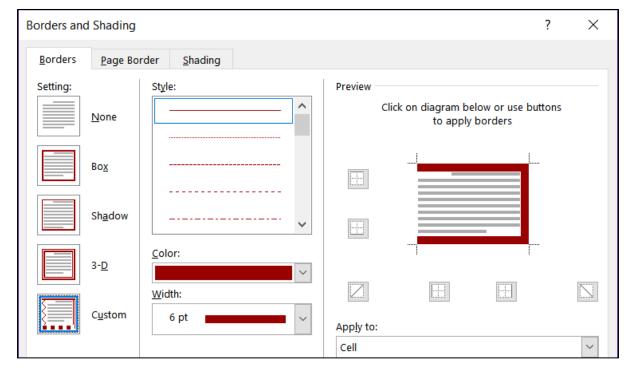
- **k6.** Select the table and, on the **Home** tab, in the **Paragraph** group, click the **Center Align** button.
- **k7.** Adjusting the borders will take several steps.

Select the blank cell under Melissa and, on the **Home** tab, in the **Paragraph** group, click the **Borders** down arrow, and select **Borders** and **Shading**.

Be sure the **Apply to** box says **Cell**.

Make the **Style** a solid line, the color **red**, and the width **6** pt.

Click the **Custom** box so you can independently change each border and click the edges of the box so it looks as indicated.



Repeat the procedure for the blank box under 555-0000.

#### I. Part 6

i1. Select the 16 lines and, on the **Home** tab, in the **Paragraph** group, click the **Multilevel** list down arrow, and select the list with Arabic numerals, letters, and Roman numerals.



This puts all the lines at the same level.

Select the lines **Black** through **Blue** and, on the **Home** tab, in the **Paragraph** group, click the **Increase Indent** button. This will make those line subordinate to the word **Colors**.



Select the lines that contain **Light** and **Dark** and click the **Increase Indent** button again. This will make those lines subordinate to the word **Red**.

Repeat the process for the **Sizes**.

i2. On the Insert tab, in the Text group, click the Text Box down arrow and select Draw Text box. Inside the box, type More colors are available on our Web site. Select the text and change the color and font type.

Click the edge of the text box and on the **Design Tools Format** tab, in the **Shape Styles** group, select **Shape Outline** and click **No Outline**.

Click the edge of the text box and on the **Design Tools Format** tab, in the **Shape Styles** group, select **Shape Fill** and click **No Fill**.

**i3.** On the **Insert** tab, in the **Illustrations** group, click the **Shapes** down arrow and select **Arrow**. Drag from the text box to the word **Colors**.

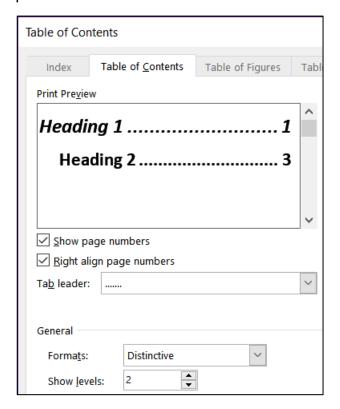
With the arrow still selected, on the **Design Tools Format** tab, in the **Shape Styles** group, select **Shape Outline** and click the **blue color** box and make the **Weight 3 pt**.

- i4. On the Insert tab, in the Illustrations group, click the Shapes down arrow and, under Stars and Banners, click the four pointed star. Drag to form the star. With the star still selected, on the Design Tools Format tab, in the Shape Styles group, select Shape Fill and click orange.
- **i5.** Use your mouse to position the text box and star.

## m. Table of Contents

m1. Click in the phrase BREAKUP THIS PARAGRAPH, right-click, select Paragraph and, on the Indents and Spacing tab under General, select Level 2 from the Outline level drop-down menu.

m2. On the References tab, in the Table of Contents group, click the Table of Contents down arrow, and select Custom Table of Contents. Set the parameters as follows:



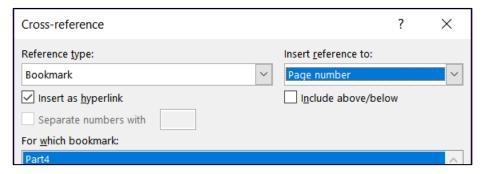
Click OK.

m3. Click just to the left of the heading Part 1 and, on the Layout tab, in the Page Setup group, click the Breaks down arrow and, under Section Breaks, click Next Page.

#### n. Cross Reference

Select XX and, on the **Insert** tab, in the **Links** group, click **Cross-reference**.

Set the parameters as follows and then click **Insert**:



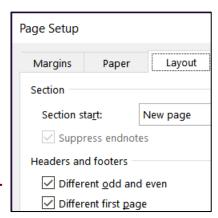
#### o. Headers

O1. Be sure the insertion point is in section 2. On the Layout tab, in the Page Setup group, click the launch dialog button.

Click the Layout tab.

In the **Headers and footers** group, put checks next to **Different odd and even** and **Different first page**.

o2. On the Insert tab, in the Header & Footer group, click the Header down arrow and select Blank. Or, simply click in the Header area of the document.



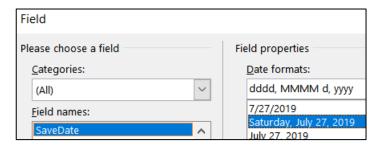
On the **Insert** tab, in the **Text** group, click the **Quick Parts** down arrow and select **Field**.

Under Field names, select FileName, and click OK.

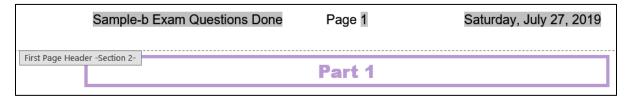
Tap the **Tab** key, type **Page** and a space.

On the **Insert** tab, in the **Text** group, click the **Quick Parts** down arrow and select **Field**.

Under Field names, select **SaveDate** and, under **Field properties**, select the format **dddd, MMMM d, yyyy**.



Click OK.



- **o3.** Follow a similar procedure for the **Even Page Header**.
- **o4.** Follow a similar procedure for the **Odd Page Header**.

#### p. Index

**p1.** Find and select the word **Disk**.

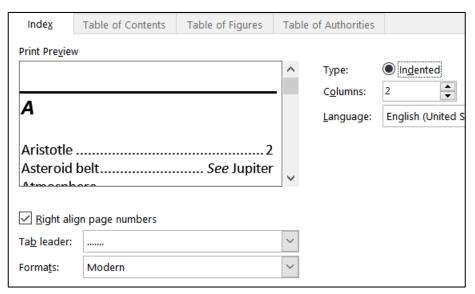
On the References tab, in the Index group, click Mark Entry.

At the bottom of the **Mark Index Entry** dialog box, click **Mark**. This will insert an index entry.

b. → This is the second lettered item. It contains the word disk \( \)
 XE "disk" \( \), which should NOT have the style \( \)
 e1 applied to \( \)

Repeat the procedure for **Distance Formula**, and **REALLY PORTLY** 

- **p2.** Move to the end of the document and click to the left of the word Index.
  - On the **Layout** tab, in the **Page Setup** group, click the **Breaks** down arrow and select **next page section break**.
- **p3.** Move to the end of the document. On the **References** tab, in the **Index** group, click **Insert index**. Make the dialog box look like the following:

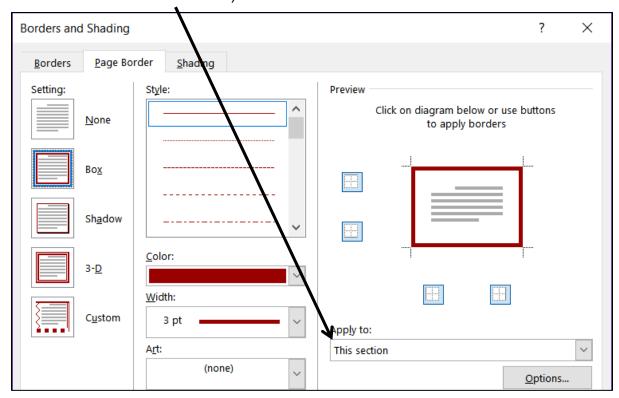


P4. While still at the end of the document, on the Insert tab, in the Header & Footer group, click the Page Number down arrow and select Format Page Numbers.

At the bottom of the dialog box, click **Start at** and type **101**. Click **OK**.

p5. Select the line with the word Index and the index itself. On the Layout tab, in the Page Setup group, click the launch dialog button. On the Margins tab, in the Orientation group, click Landscape. Be sure the Apply to box shows Selected sections so only the Index page will be in landscape.

**p6.** With the paragraphs still selected, on the **Design** tab, in the **Page Background** group, click the **Page Borders** down arrow, and click the **Page Border** tab. Set it up to look like the following (be sure **Apply to** shows **This section**).



Click OK.

# **Graphics and Other Stuff - Solutions**

#### c. Change Style

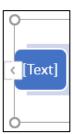
On the **Home** tab, in the **Styles** group, click the launch dialog button. Right-click **Normal** in the list and click **Modify**. Change the font to 12 pt Arial Bold.

#### d. Sections and Columns

- d1. On the Insert tab, in the Text group, click the Object down arrow and select Text from File. Navigate to your Word Files folder and doubleclick w02B\_Cover\_Letter\_Text.
- **d2.** Right-click those words that are underlined in red and select the correct spelling. Fix the grammar of phrases underlined in blue.
- d3. Select the text. On the Layout tab, in the Page Setup group, click the Columns down arrow and select Three. This will put a continuous section break before and after the selected text and display the text in three columns. If the columns do not look as shown, place the insertion point where you want a new column to start and, on the Layout tab, in the Page Setup group, click the Breaks down arrow, and choose Column.

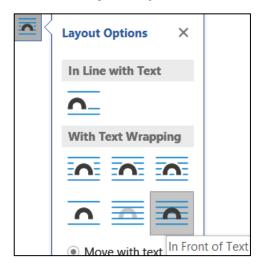
#### e. SmartArt

- e1. On the Insert tab, in the Illustrations group, click SmartArt. Click Process and then Continuous Block Process. Click OK.
- **e2.** Click the left pointing arrow.



Type the phrase in each box. To add a box, tap **Enter**.

- **e3.** On the **SmartArt Tools Format** tab, in the **Size** group, enter 4 inches and 2 inches.
- **e4.** On the **SmartArt Tools Design** tab, click the **Change Colors** down arrow and select a colorful icon.
- **e5.** Click an edge of the object and, on the **Home** tab, change the font, color, and size.
- **e6.** Click the **Layout Options** button and select **In Front of Text**.

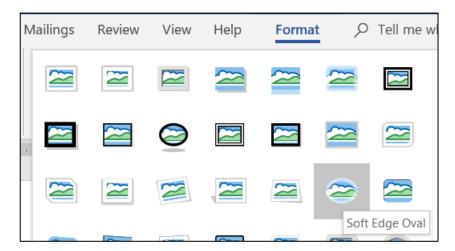


Then, drag the object into position.

#### f. Picture

- **f1.** Move to the top and, on the **Insert** tab, in the **Illustrations** group, click **Pictures**. Navigate to your **Word Files** folder and double-click the picture of the bird.
- **f2.** With the picture selected, on the **Picture Tools Format** tab, in the **Size** group, click the launch dialog button. Remove the check next to **Lock Aspect Ratio** and type 2 in the height and weight boxes.

**f3.** With the picture selected, on the **Picture Tools Format** tab, in the **Picture Styles** group, click the **More** down arrow and select **Soft Edge Oval**.

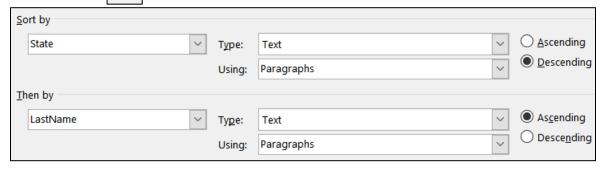


- **f4.** With the picture selected, on the **Picture Tools Format** tab, in the **Arrange** group, click the **Rotate** down arrow and select **More Rotation Options**. In the **Rotate** group, enter **90**.
- **f5.** With the picture selected, click the **Layout Options** button and select In **Front of Text**. Then, drag the object into position.
- g. Open the Excel file, select B2:F10 on the Data tab, and copy. Switch back to your Word document, move to the line just after the phone number, and paste.
- h. On the **Insert** tab, in the **Illustrations** group, click the **Screenshot** down arrow and click on the image of your **Word Files** folder. With the screen shot selected, on the **Picture Tools Format** tab, in the **Picture Styles** group, click the **Picture Border** down arrow and select black. With the screenshot selected, click the **Layout Options** button and select In **Front of Text**. Then, drag the object into position.

# **Sorting – Solutions**

- c. Select the paragraphs and, on the **Insert** tab, in the **Tables** group, click the **Table** down arrow and select **Convert Text to Table**. Click **OK**.
- d. Select the table and, on the **Table Tools Layout** tab, in the **Cell Size** group, click the **AutoFit** down arrow and select **AutoFit Contents**.
- e. On the **Design** tab, in the **Page Background** group, click the **Page Color** down arrow and select **Fill Effects**. Click the **Texture** tab and click **White Marble**.
- f. On the **Table Tools Design** tab, in the **Table Styles** group, click the **More** down arrow and select **Grid Table 5 Dark Accent 6**.

g. Select the table and, on the **Home** tab, in the **Paragraph** group, click the sort button Set the parameters as follows:



Click OK.

h. Select the table. On the **Home** tab, in the **Paragraph** group, click the **Center Align** button. Since the entire table is selected, **Center Align** centers the table rather than the text in the individual cells.

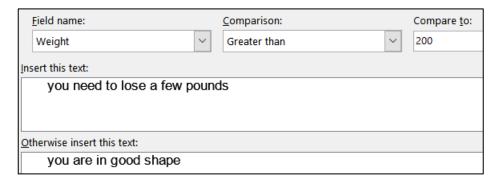
# **Mail Merge – Solutions**

- **a2.** On the **Home** tab, in the **Styles** group, right-click the **Normal** style icon and select **Modify**. Change the font to 12 pt Arial bold. Click the **Format** down arrow and select **Paragraph**. Set the left and right indents to 1 inch.
- a4. On the Mailings tab, in the Start Mail Merge group, click the Start Mail Merge down arrow and select Letters.
- a5. On the Mailings tab, in the Start Mail Merge group, click the Select Recipients down arrow and select Use an Existing List. Navigate to your Word Files folder and double-click Sample-f Table Sort DATA Done.
- a6. On the Mailings tab, in the Write & Insert Fields group, click the Rules down arrow and select Skip Record If. In the Field name box, select Height. In the Comparison box, select Equal to. Leave the Compare to box empty.



**a7.** Select the word **NAME**. On the **Mailings** tab, in the **Write & Insert Fields** group, click the **Insert Merge Field** down arrow and select **LastName**.

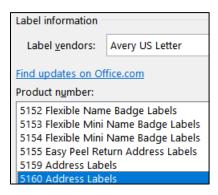
- a8. Repeat the process for Height.
- a9. Repeat the process for Weight.
- a10. Select the word **IF**. On the **Mailings** tab, in the **Write & Insert Fields** group, click the **Rules** down arrow and select **If...Then...Else**. Fill in the boxes as follows:



b. On the Mailings tab, in the Finish group, click the Finish & Merge down arrow, and select Edit Individual Documents. Click OK to create the new merged document.

# **Mailing Labels - Solutions**

b. On the Mailings tab, in the Start Mail Merge group, click the Start Mail Merge down arrow and select Labels. In the Label vendors box, select Avery US Letter. In the Product number box, select 5160 Address Labels.



Tap OK.

- c. On the **Mailings** tab, in the **Start Mail Merge** group, click the **Select Recipients** down arrow and select **Sample-f Table Sort DATA Done**
- d. Select the table. On the **Table Tools Design** tab, in the **Table Styles** group, click **Table Grid**. If these were real labels you would not do this.
- e. With the table selected, on the **Home** tab, in the **Paragraph** group, click the **Center Align** button.
- f. On the Mailings tab, in the Write & Insert Fields group, click the Insert Merge Field down arrow, select FirstName, and tap Enter. Do the same for LastName, and BirthDate.

- g. On the **Insert** tab, in the **Illustrations** group, click **Pictures**. Navigate to your **Word Files** folder and double-click the picture of **Goldy**.
- h. With Goldy selected, on the **Picture Tools Format** tab, in the **Size** group, click the launch dialog button. Uncheck the box to the left of **Lock aspect ratio**. Type 0.5 in the **Height** and **Width** boxes. Click **OK**. Click the **Layout Options** button and select **In Front of Text**. Drag the picture to the lower right corner of the cell.
- i. On the Mailings tab, in the Write & Insert Fields group, click Update Labels.
- j. On the **Mailings** tab, in the **Finish** group, click the **Finish & Merge** down arrow and select **Edit Individual Documents**. Click **OK**.

## 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 (see page **SG143**.

**Date:** Check your syllabus for the exact date and time.

Length: 90 minutes

Materials: At the exam I will give you a handout with the questions on it and a USB

drive that has the files you will need. You will save your modified files to

this USB drive. You will not print anything.

**Notes:** All exams will be closed book and notes but you may use one 8.5 inch

by 11 inch sheet of notes, both sides, typed, hand written, scanned, or whatever. Your notes sheet will be collected when you hand in the exam so be sure to put your name and HWID on it. The exam room printer will be disabled during the exam time so be sure you print your notes sheet

before you enter the classroom.

Use the Word file Notes Sheet for CI 1871 Word Exam Original, which

you saved on page SG251, as your notes sheet.

What to Bring to the exam: Your student photo ID, your notes sheet, and a pen or pencil. I will provide everything else.

# Project 11 PowerPoint Chapter 1: Getting Started

**Step 1 Read** Read the introductory material on pages 743-745 of the textbook.

**Step 2 Activities** Turn on the computer and do the following:

**Project 1A:** Start at the top of page 747.

Instead of Activity 1.01 step 5 (page 749) do the following:

1. In the upper right corner of your screen, click the red **Close X** to close PowerPoint. Do **NOT** save your file.

We are not going to use sub folders (e.g., PowerPoint Chapter 1). You will put all your files in the PowerPoint Files folder so you can see them all at once.

- 2. Navigate to your **PowerPoint Files** folder and open **p01A\_KWT\_Overview**, which is one of the files you downloaded at the start of the term.
- Save the file in your PowerPoint Files folder using the name LastName\_FirstName\_1A\_KWT\_Overview
- 4. Do NOT do steps 8 and 9 in Activity 1.14 on page 766. Do NOT do Activities 1.15 through 1.16 on pages 767-769.
- **5. Return here** when you have completed Project 1A on page 766.

Do NOT do GO! With Google Slides

**Project 1B:** When you have completed Project 1A, start at the top of page 773.

**Instead of Activity 1.17** step 1 do the following:

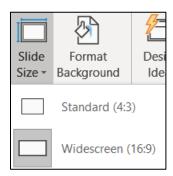
- 1. Navigate to your **PowerPoint Files** folder and open **p01B\_Seattle**, which is one of the files you downloaded at the start of the term.
- Save the file in your Word Files folder using the name Lastname\_Firstname\_1B\_Seattle
- 3. Do NOT do steps 8 and 9 of Activity 1.33 on page 790.
- 4. Return here when you have completed Project 1B on page 790.

Do NOT do GO! With Google Slides or GO! To Work

## **HW11-1 Overview (Based on Project 1A)**

**Problem:** How can you create an electronic presentation suitable for large audiences?

- a. Open the presentation **Lastname\_Firstname\_1A\_KWT\_Overview**, which you created while following the directions in the textbook and saved on page 766.
- Save the document to your **PowerPoint Files** folder using the name HW11-1 HWID 1A KWT Overview Done
- c. On the **Design** tab, in the **Customize** group, click **Slide Size**.

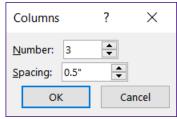


Notice that this slide is set to **Widescreen** format, that is, a **16 to 9** ratio of width to height. **Standard** dimensions have a **4 to 3** ratio of width to height. Most of the presentations are in **Widescreen** but feel free to change the ratio to **Standard** if you wish.

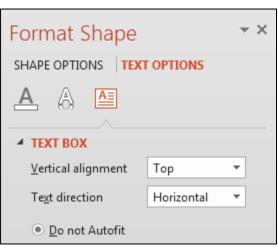
- d. To make the text easier to read, in **Slide 5** change the paragraph to three columns by doing the following:
  - 1. On Slide 5, About Our Company, click anywhere in the bottom text box.
  - 2. On the **Home** tab, in the **Paragraph** group, click the **Align Text** down arrow and select **More 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. Print a handout by doing the following:



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.

You **NEVER** have to print in color.

## 1. Tap Ctrl + p.

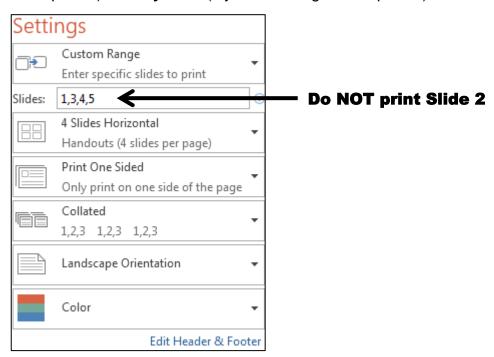
In the box next to **Slides**, type 1,3,4,5 (we do not want slide 2 printed).

From the drop-down menu, select Landscape Orientation.

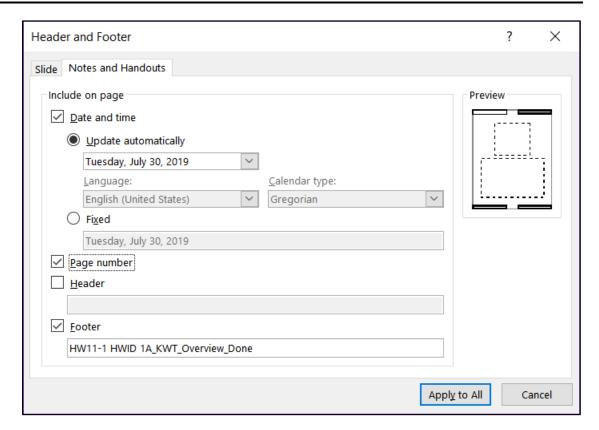
Click the down arrow next to Full Page Slides and select 4 Slides Horizontal.



From the drop-down menu, select **Color** (if you are using a black and white printer) or **Grayscale** (if you are using a color printer).



- 2. Click Edit Header & Footer and then click the Notes and Handouts tab. Set up the handout as follows:
  - Include the Date and time, updated automatically. From the dropdown menu, choose the format that shows Day, Month Date, Year.
  - No header.
  - Include the page number.
  - Include the name of the file in the footer. Unlike Excel and Word,
     PowerPoint does not have an automatic way of inserting the file name
     so you must insert it manually. You can either type it or, before you tap
     Ctrl + p you could tap F12, Ctrl + c, Esc. That will put the file name on
     the clipboard. Then, when you open the Header and Footer dialog box
     you can paste the name in the Footer box.



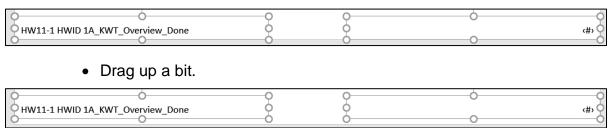
**3.** Click **Apply to All** and compare the preview with the key.

Depending on your printer, the bottom edge of the footer may be partially cut off, like this:



If that happens, you can do the following to fix it:

- Tap the Esc key to cancel printing.
- On the View tab, in the Master Views group, click Handout Master.
- Click on an edge of the text box that contains the file name, hold down the Shift key, and click on an edge of the text box that contains the page number. This selects them both.



- On the Handout Master tab, in the Close group, click Close Master View.
- **4.** Tap **Ctrl** + **p** and compare the preview with the key. Make needed corrections, print the handout, save the presentation, and close it.

## **HW11-2 Seattle Itinerary (Based on Project 1B)**

**Problem:** How can you edit and format a presentation and include custom transitions between slides?

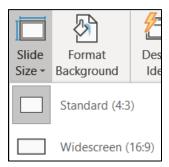
- a. Open the presentation Lastname\_Firstname\_1B\_Seattle, which you created while following the directions in the textbook and saved on page 790.
- Save the document to your PowerPoint Files folder using the name HW11-2 HWID 1B Seattle Done
- c. Tap Ctrl + p and set up to print a handout as follows:
  - Has slides 1, 3, 4, 5, 6, and 7 (do not print slide 2).
  - Six slides horizontal per page.
  - Portrait orientation.
  - Color, if using a black and white printer or grayscale, if using a color printer.
  - Date, updated automatically, in the format Day, Month Date, Year.
  - Page number but no header.
  - 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.

## HW11-3 Bird

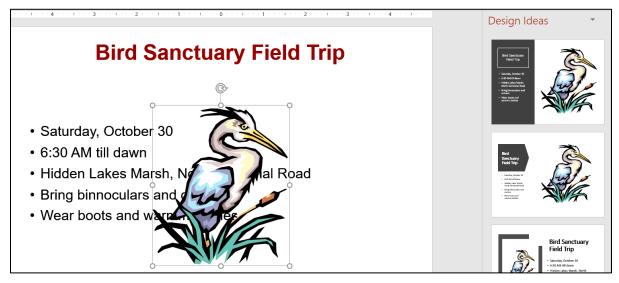
**Problem:** How can you add graphics to a PowerPoint presentation and then edit them?

- a. Open the presentation **HW11-3 Bird Original**, which is one of the files you downloaded at the start of the term.
- Save the presentation in the PowerPoint Files folder using the name HW11-3 HWID Bird Done
- c. On the **Design** tab, in the **Customize** group, click **Slide Size** down arrow.



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.

- d. Start <u>Word</u> and open the file <u>HW11-3 Bird Graphic WORD Original</u>, which is one of the files you downloaded 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.
- e. Select the picture of the bird, copy it, and then close Word.
- f. Switch to **PowerPoint** and paste the picture.



If the **Design Ideas** pane opens, close it.

- 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** to open its pane.

Format Picture

Picture Corrections

Picture Color
Color Saturation
Presets
Saturation
Color Tone
Presets
Temperature
Recolor
Reset

Picture Transparency

2. Click the **Picture** icon and then click the arrow next to **Picture Color**.

**3.** To the right of **Recolor**, click the down arrow and select **Washout**.



The picture now is much lighter, washed out like faded jeans.

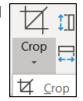
- 4. Click the Size and Properties buttor
- **5.** Put a check in the **Lock aspect ratio** box so that when you change one of the dimensions the other dimensions will change in the same ratio—if you don't do this the picture will be distorted when you change either the height or the width.
- 6. Change the height to 6".

7. Center the bird on the slide. You can do this by eye or, on the Picture Tools Format tab, in the Arrange group, click the Align down arrow and select Align Center. It is also sometimes useful to display gridlines. To do that, 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 circle 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 the **Crop** down arrow to turn on the cropping feature.



3. Move the cursor to the bottom left cropping handle, L press and hold the mouse button, and drag up and right until you just reach the shoulder of the bird. Then, let up on the mouse button



- **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 a blank area of the **Slide** and right-click. Choose **Format Background** to open its pane.
  - 2. If necessary, click the arrow next to **Fill** to display its options 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. Tap **Ctrl + p** and set up to print a handout as follows:
  - Has both slides.
  - Two slides per page.
  - Portrait orientation.
  - Color, if using a black and white printer or grayscale, if using a color printer.
  - Date, updated automatically, in the format Day, Month Date, Year.
  - Page number but no header.
  - 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 1A KWY Overview (slides 1,3,4,5)
HW11-2 1B Seattle Itinerary (slides 1,3,4,5,6,7)
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** Read the introductory material on page 813 of the textbook.

**Step 2 Activities** Turn on the computer and do the following:

Project 2A: Start at the top of page 815.

Instead of Activity 2.01 step 1 do the following:

- Navigate to your PowerPoint Files folder and open p02A\_Safety, which is one of the files you downloaded at the start of the term.
- 2. Save the file in your **PowerPoint Files** folder using the name **LastName\_FirstName\_2A\_Safety**
- 3. Do NOT do steps 8 and 9 in Activity 2.21 on page 838.
- **4. Return here** when you have completed Project 2A on page 838.

Do NOT do GO! With Google

**Project 2B:** When you have completed Project 2A, start at the top of page 843.

Instead of Activity 2.22 step 1 do the following:

- 1. Navigate to your **PowerPoint Files** folder and open **p02B\_Celebrations**, which is one of the files you downloaded at the start of the term.
- 2. Save the file in your **PowerPoint Files** folder using the name **Lastname Firstname 2B Celebrations**
- **3.** Complete the rest of the Activities for this Project EXCEPT do **NOT** do steps 6 and 7 in **Activity 2.34** on page 854.
- Do NOT do Activity 2.35 on pages 854-855.
- **5. Return here** when you have completed Project 2B on page 854.

Do NOT do GO! With Google Slides or GO! To Work

**Step 3 Homework** After you have completed Projects A and B for this Chapter, return here, do the problems listed below, and turn them in for grading.

### **HW12-1 Safety**

**Problem:** How can lists, pictures, text boxes, and shapes be added to a PowerPoint presentation?

- a. Open the presentation **Lastname\_Firstname\_2A\_Safety**, which you created while following the directions in the textbook and saved on page 838.
- b. Save the document to your **PowerPoint Files** folder using the name HW12-1 HWID 2A\_Safety\_Done
- c. For the first slide, change the font color to red and the background color to white. This will save a lot of ink.
- d. Tap Ctrl + p and set up to print a handout as follows:
  - Has all six slides.
  - Six slides horizontal per page.
  - Portrait orientation.
  - Color, if using a black and white printer or grayscale, if using a color printer.
  - Date, updated automatically, in the format Day, Month Date, Year.
  - Page number but no header.
  - 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.

#### **HW12-2 Celebrations**

**Problem:** How can specially formatted artwork be created and added to a PowerPoint presentation?

- a. Open the presentation Lastname\_Firstname\_2B\_Celebrations, which you
  created while following the directions in the textbook and saved on page 854.
- Save the document to your PowerPoint Files folder using the name HW12-2 HWID 2B\_Celebrations\_Done
- c. Tap **Ctrl + p** and set up to print a handout as follows:
  - Has slides 3, 4, 5 only.
  - Three slides per page.
  - Portrait orientation.
  - Color, if using a black and white printer or grayscale, if using a color printer.
  - Date, updated automatically, in the format Day, Month Date, Year.
  - Page number but no header.
  - 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.

#### **HW12-3 Graphics and Sound**

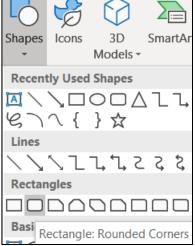
**Problem:** How can graphics sound be added to a PowerPoint presentation?

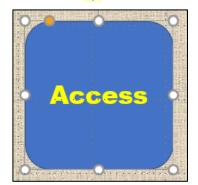
a. Start PowerPoint and open a blank presentation. Change the slide layout to

Blank (Home, Slides, Layout, Blank).

- b. 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).
- c. Save the document to your **PowerPoint Files** folder as HW12-3 HWID Graphics and Sound Done
- d. Add some drawing objects by doing the following:
  - 1. If the ruler or gridlines are not showing, turn them on (View, Show, Ruler, Gridlines).
  - 2. On the **Insert** tab, in the **Illustrations** group, click the **Shapes** down arrow and choose **Rectangle**: Rounded Corners. The mouse pointer will turn into a cross +
  - 3. 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".
  - 4. Click in the square and type Access.
  - **5.** 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 be 2 inches high and 3 inches wide and contain the words Hard Work. You can use the Format Painter as you did in Word and Excel to copy the text formatting quickly. The oval should be 1.5 inches high and 3.5 inches wide and contain the word **Excellence**.
- 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 Connector: Elbow.







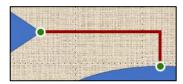
2. Move the mouse pointer, which is now a cross, to the middle of the right side of the square and then click and drag to the right and down to connect to the top center of the diamond and release the mouse button.



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 **red**.

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 locations. The ends will be green dots when the connections are correct.

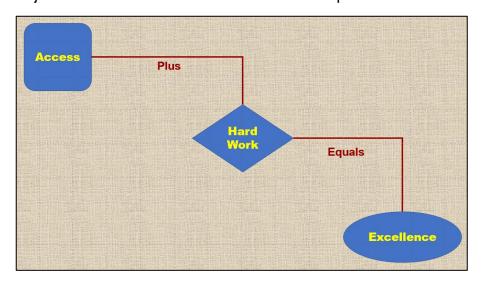


f. Add some text boxes by doing the following:

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.

- 1. On the **Insert** tab, in the **Text** group, click **Text Box**.
- 2. Draw a text box. Make the height 0.5 inch and the width 2. Type Plus in the box. Make the font Arial, red, 24 pt, and bold. Use Ctrl + d to duplicate the Plus box 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:
  - 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 downloaded at the start of the term.
  - 2. Click Insert.
  - 3. Make the photo height 3.5".
  - **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 downloaded 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.
  - 8. The background of the image covers up the slide background. You can remove the background, if you wish, by doing the following (*this is a bit tricky so it is optional*):
    - With the image still selected, on the Picture Tools Format tab, in the Adjust group, click Remove Background. This makes the part of the image look magenta. That is the part which will be removed. Notice that it cuts off part of Goldy and the large M.



- On the Picture Tools Background Removal tab, in the Refine group, click Mark Areas to Keep. This will produce a little white pencil. Now the tricky part. Click those areas of Goldy and the M that you want to keep. It takes some trial and error. Clicking at various points removes the magenta in blocks, which are not obvious!
- On the Background Removal tab, click Keep Changes and the texture background will show through.

- h. Add sound clips to this slide. Since you are a U of M student you have access to a huge number of free video and audio files that can be downloaded and used as you wish.
  - Open your web browser, and type the following in the address box: https://it.umn.edu/stock-content-0
  - 2. Scroll down a bit to see:

### **Stock Content Sites**

<u>VideoBlocks:</u> 100,000+ clips of stock video, Adobe After Effects templates, motion backgrounds and more.

AudioBlocks: Royalty-free production music, sound effects, and loops.

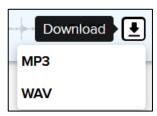
**GraphicStock**: Royalty-free photos, vectors, illustrations & other design elements.

- 3. Click AudioBlocks.
- 4. Click Sound Effects.
- **5.** In the search box type **applause** and tap **Enter**.

Point to one of the items and click the white arrow to play the sound.



7. Click the download icon and select MP3<sup>28</sup>.



- **8.** A dialog box will appear allowing you to **Open** or **Save** the file. Click the button next to **Save File** and then click **OK**. The file will be downloaded to your Downloads folder as an MP3 file.
- 9. Close your browser.

If you are doing this in our computer classroom or a public computer lab the speakers will be disabled so you cannot add a sound clip. It might work if you use headphones.

If not, skip to part j below.

<sup>&</sup>lt;sup>28</sup> **MP3** (also known as **MPEG-3**) is the designation for a group of audio and video coding standards agreed upon by the **M**oving **P**icture **E**xperts **G**roup (**MPEG**). It was released in 1993.

- 10. On the Insert tab, in the Media group, click the Audio down arrow and select Audio on My PC. Navigate to the location where your audio file was downloaded and double-click its name. The file will be inserted.
- **11.** Drag the speaker icon to the center bottom of the slide.
- **12.** Click the play arrow to hear a preview.
- 13. On the Audio Tools Playback tab, in the Audio Options group, from the Start box select Automatically and then put a check next to Hide During Show.
- 14. Follow the same procedure to insert the file HW12-3 Audio Tracks Original.mp3, which is one of the files you downloaded at the start of the term.
- **15.** Drag the speaker icon so it is next to the first audio icon.
- 16. On the Audio Tools Playback tab, in the Audio Options group, from the Start box select When Clicked On but DO NOT click Hide During Show.
- **17.** 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.
- **18.** Tap the **Esc** key to end the slide show.
- c. Tap **Ctrl + p** and set up to print a handout as follows:
  - Has the one slide.
  - One slide per page.
  - Landscape orientation.
  - Color, if using a black and white printer or grayscale, if using a color printer.
  - Date, updated automatically, in the format Day, Month Date, Year.
  - Page number but no header.
  - 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.



You can fix that like you did on page **SG284**.

If necessary, tap **Ctrl + p** again and compare the preview with the key. Make needed corrections, print the handout, save the presentation, and close it.

#### **HW12-4 Poster**

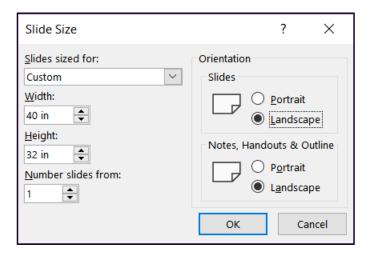
**Problem:** How can a PowerPoint presentation be transformed into a very large poster suitable for display at a research conference?

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.



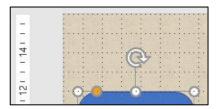
In this project, you will create a large poster by modifying one of your previous PowerPoint presentations. More information, useful tips, and some nice templates can be found at <a href="http://www.writing.engr.psu.edu/posters.html">http://www.writing.engr.psu.edu/posters.html</a> One of their templates is included in your **PowerPoint Files** folder under the name **HW12-4 PowerPoint Poster Template Original** 

- a. Open the presentation HW12-3 HWID Graphics and Sound Done, which you created for HW12-3.
- Save the presentation to your PowerPoint Files folder using the name HW12-4 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 at about 12 inches on the vertical ruler. Notice how the connector lines stay attached to the shapes.



Move the **Excellence** oval so its bottom is at about 10 inches.

- **8.** Resize Goldy to be 3 inches high and 4 inches wide. Move the image to the upper right corner of the slide.
- **9.** Make the height of the photo 8 inches and the width 12 inches. Move it to the lower left corner.
- 10. Right-click one of the red connectors and select Format Shape to open that pane. Click the paint bucket and Line and change the Width to 20 pt. Click the other connector and change its Width 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. Adjust the text box size so the text is all on one line and in the upper left of the slide.
- 13. Insert a text box at the top of the slide under the word **College** and type **Presented by HWID** (use your HWID). Make the text purple Arial Black and 88 pt. Adjust the text box as shown below:

# **General College University of MN**



### **Presented by HWID**

14. Insert another text box above the photo and enter the following text in bold 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 downloaded 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.

Make the text box 8 inches high and 15 inches wide.

**15.** Just below **Goldy**, enter this text in bold 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.

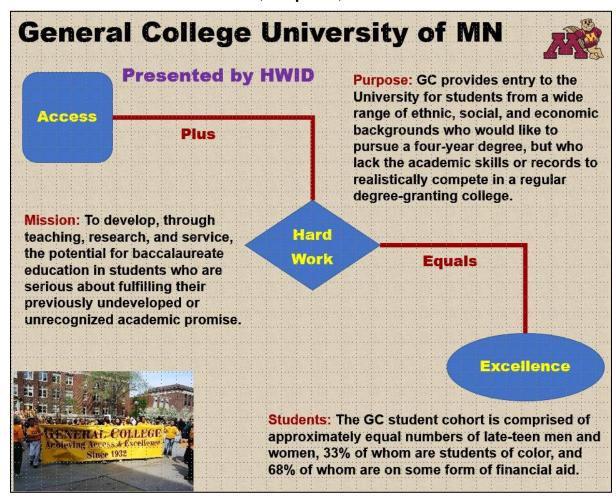
Make the text box 9 inches high and 17 inches wide.

**16.** Just below **Excellence**, enter this text in bold 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.

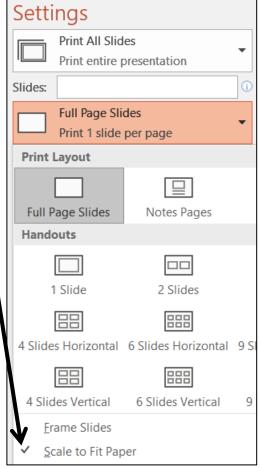
Make the text box 5 inches high and 23 inches wide.

17. Make the titles Mission:, Purpose:, and Students: red.



- 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 + p to open Print Preview.
  - 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 or **grayscale** if you are using a color printer.
  - 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 <a href="http://it.umn.edu/services/all/academic-technology-spaces/computer-labs/large-format/">http://it.umn.edu/services/all/academic-technology-spaces/computer-labs/large-format/</a>



If you are a CEHD student you can have your poster printed for free by emailing it to cehd104@umn.edu. Poster must be in **PDF** format (see page **SG28**) and be no wider than 42 inches. For more information call the CEHD Dean's office at 612-626-9252 or drop by 104 Burton Hall.

**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 2A Safety HW12-2 2B Celebrations 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** Read the introductory material on page 877 of the textbook.

**Step 2 Activities** Turn on the computer and do the following:

Project 3A: Start at the top of page 879.

Instead of Activity 3.01 step 1 do the following:

- Navigate to your PowerPoint Files folder and open p03A\_Trails, which is one of the files you downloaded at the start of the term.
- 2. Save the file in your **PowerPoint Files** folder using the name **LastName\_FirstName\_3A\_Trails**
- 3. Do **NOT** do steps 10 and 11 in **Activity 3.17** on page 900.
- **4. Return here** when you have completed Project 3A on page 900.

Do NOT do GO! With Google
Do NOT do Project 3B

**Step 3 Homework** After you have completed Project A **ONLY** for this Chapter, return here, do the problems listed below, and turn them in for grading.

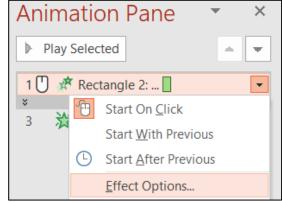
### **HW13-1 Trails (Based on Project 3A)**

**Problem:** How can customizable backgrounds, themes, and animations be added to a PowerPoint presentation?

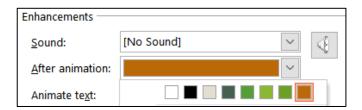
- a. Open the presentation **Lastname\_Firstname\_3A\_Trails**, which you created while following the directions in the textbook and saved on page 900.
- Save the presentation to your PowerPoint Files folder using the name HW13-1 HWID 3A\_Trails\_Done

c. 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.
- 2. Select the three bullets.
- 3. In the Animation Pane, click the Rectangle down arrow and select Effect Options.



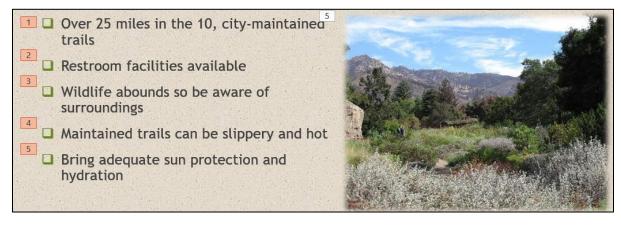
4. Click the After animation down arrow and select the color brown.



- 5. Click the **Animate text** down arrow 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.



- d. Tap **Ctrl + p** and set up to print a handout as follows:
  - Has all six slides.
  - Six slides horizontal per page.
  - Portrait orientation.
  - Color, if using a black and white printer or grayscale, if using a color printer.
  - Date, updated automatically, in the format Day, Month Date, Year.
  - Page number but no header.
  - Name of the file in the footer.

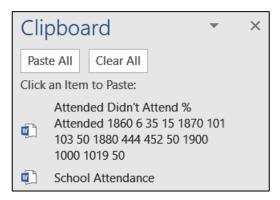
Compare the preview with the key. Make needed corrections, print the handout, save the presentation, and close it.

#### **HW13-2 Import from Word and Excel Documents**

**Problem:** How can tables and charts created in Word or Excel be inserted into a PowerPoint presentation?

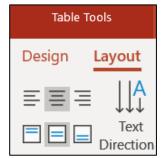
I asked you to **skip Project 3B** in the textbook because it showed you how to create tables and charts from within PowerPoint. You already know how to do that in Word and Excel so all you really need to learn is how to import them into PowerPoint. In this exercise, you will copy a table from a Word document and a range of cells from an Excel workbook and paste them into a PowerPoint presentation. In HW13-3 you will import a chart from Excel.

- a. Open the <u>Word</u> document HW13-2a Word School Attendance Table Original, which is one of the files you downloaded 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.
- b. 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 when you make your selection.

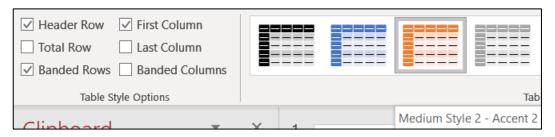


- **5.** Copy the table.
- **6.** Minimize Word but do NOT exit Word.
- b. Do the following to paste the Word items you just copied into PowerPoint.
  - 1. Start PowerPoint and change the layout of the first slide to **Blank**.
  - 2. Save the presentation to your **PowerPoint Files** folder using the name HW13-2d HWID Import from Word and Excel Done.
  - 3. On the **Home** tab, in the **Clipboard** group, click the **Clipboard** dialog box launcher to open the **Clipboard** pane.

- 4. In the Clipboard pane, click the title School Attendance to insert it.
- **5.** Change the font to 36 pt Arial Black. Move the title so it is near the top center of the slide.
- **6.** Click in a blank area of the slide to deselect the title.
- 7. In the Clipboard pane, click Attended Didn't Attend... to insert the table.
- **8.** 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.
- 9. Make the font 24 pt Arial.
- **10.** Move the table to the center for the slide.
- Center the text in each cell both vertically and horizontally. Center the table on the slide (Table Tools Layout tab, Alignment, Center Horizontally, Center Vertically).

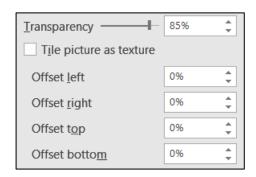


12. Apply a table style of your choice. I checked **Header Row**, **First Column**, and **Banded Rows** and **Medium Style 2 – Accent 2**.



- **13.** With the table still selected, on the **Animations** tab, in the **Animation** group, click the **Add Animation** down arrow, and select **More Entrance Effects**.
- 14. Click Bounce (under Exciting) and then click OK.
- **15.** On the **Animations** tab, in the **Timing** group, click the **Start** down arrow and select **With Previous**. This will automatically start the animation when the slide show begins.
- c. Open the <u>Excel</u> workbook <u>HW13-2b</u> Excel Education Rates Table Original, which is one of the files you downloaded at the start of the term. It is in your <u>PowerPoint Files</u> 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. If necessary, click Clear All to get rid of the old items that were copied.
  - 3. Click cell A1 and tap Ctrl + c to copy the title, Education Rates by State.
  - **4.** Select cells **B2:H12**. Tap **Ctrl + c** to copy the table.
  - **5.** 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. Open the Clipboard pane and click the title Education Rates by State 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 **Fly In** animation (under **Basic**) and set it to start **After Previous** so it will enter when this slide opens.
  - 5. Click in a blank area of the slide to deselect the title.
  - 6. In the Clipboard pane, click the table State High School... to insert it.
  - Make the width of the table 9 inches and the height 3 inches (Table Tools Layout, Table Size). Be sure to choose Table Size and not Cell Size.
  - **8.** Make the font 20 pt Arial Black.
  - 9. Center the table on the slide.
  - 10. Do a Google search for an education symbol. Pick one, copy it, and insert it as the background of the slide with 85% transparency. On the Format Background pane, set all four Offsets to 0%.



- **11.** Animate the entrance of the table using **Fade** (under **Subtle**) and set it to start **After Previous** with a 1 second delay.
- **12.** Close the **Clipboard** pane.
- **13.** Make the transition to this slide **Fall Over** (under **Exciting**).
- e. When importing information from Word or Excel, it is sometimes better to take screen shots, especially if complex formatting is involved and you will not need to make changes to the data while in PowerPoint. Do the following:
  - 1. Insert a new slide. Use the **Blank** layout.
  - Open the <u>Excel</u> workbook <u>HW13-2c</u> Excel Current Literacy Rates Original, which is one of the files you downloaded at the start of the term. It is in your <u>PowerPoint Files</u> folder.
  - 3. Use the **Snipping Tool** to take a screenshot of cells **B2:F11**.
  - 4. Copy the map. FYI, to create the map I selected B4:C10 and, on the Insert tab, in the Charts group, I clicked the Maps down arrow and selected the map icon.
  - **5.** Copy the images of the girl reading and the books.
  - 6. Paste the screenshot of the table into the PowerPoint blank slide.
  - **7.** Make the height 4 inches and the width 6 inches. Move the screenshot to the upper left corner of the slide.

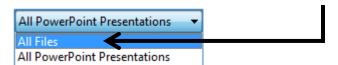
- **8.** Paste the map, make the size 4 inches by 7 inches, and drag it to the lower right corner of the slide.
- **9.** Paste the image of the girl reading, make the size 3 inches by 3 inches, and drag it to the lower left of the slide.
- **10.** Paste the image of the books, make the size 3 inches by 4 inches, and drag it to the upper right of the slide.
- **11.** Set animations to begin when the slide starts in the order Chart, Map, Girl, Books, entering automatically one after the other using the **Fade** animation with a one second delay between each.
- **12.** Tap **F5** to play your presentation.
- d. Tap Ctrl + p and set up to print a handout as follows:
  - Has all three slides.
  - Three slides per page.
  - Portrait orientation.
  - Color, if using a black and white printer or grayscale, if using a color printer.
  - Date, updated automatically, in the format Day, Month Date, Year.
  - Page number but no header.
  - 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. 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 the word document HW10-5 Large Document as the basis for PowerPoint slides. I have copied that TOC to a Word file called HW13-3b TOC Original.
  - 1. Start PowerPoint and choose the **Blank** layout.
  - 2. Save the presentation to your **PowerPoint Files** folder using the name HW13-3a HWID Integration Done
  - 3. Tap Ctrl + O, click Browse, and navigate to your PowerPoint Files folder. At the bottom right of the dialog box, click the All PowerPoint Presentations down arrow and select All Files.



Double-click the Word file HW13-3b TOC Original.

Wisp

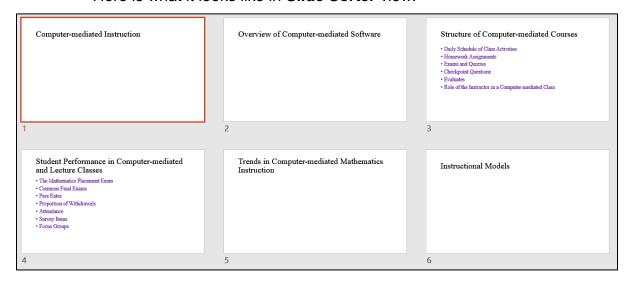
Each line of the Word document is formatted using the built-in styles

Heading 1 and Heading 2. The lines that were formatted with style

Heading 1 are transformed into a new PowerPoint slide; the lines that were

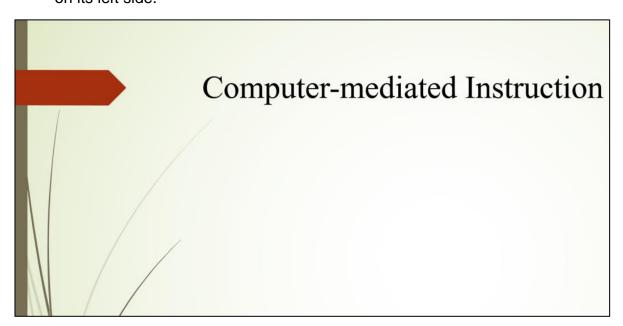
formatted with style Heading 2 appear as subheadings within the slides.

Here is what it looks like in Slide Sorter view.

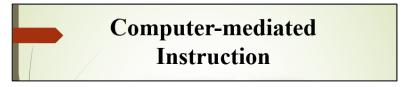


- b. Set up the slides by doing the following:
  - 1. Switch to normal view and select all the slides (click in the thumbnails on the left and tap Ctrl + a).
  - 2. On the **Home** tab, in the **Slides** group, click the **Layout** down arrow and select **Title only**.
  - 3. On the **Design** tab, in the **Themes** group, in the lower right, click the **More** button and apply the **Wisp** theme.

Notice that it has a little red right-pointing arrow on its left side.



- c. Do the following to set up Slide 1 (Computer-mediated Instruction).
  - 1. Click **Slide 1** and make the title 60 pt bold with center alignment so it looks like this:



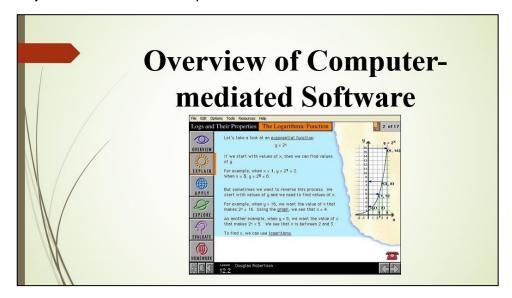
- 2. Minimize PowerPoint and open the **PowerPoint Files** folder. Double-click the <u>Word</u> file HW13-3c Large Doc PPT Original, which is one of the files you downloaded at the start of the term. Even though it is a Word file it is in the **PowerPoint Files** folder. Navigate to the **Abstract** page and copy to the clipboard the photo of the computer classroom. Then close Word.
- **3.** Switch to <u>PowerPoint</u>. Be sure the title is not selected. Paste the photo into **Slide 1**. If the Design Ideas pane opens, close it.
- **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 4.5". 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 the Picture Effects down arrow and select Soft Edges, 50 Point.



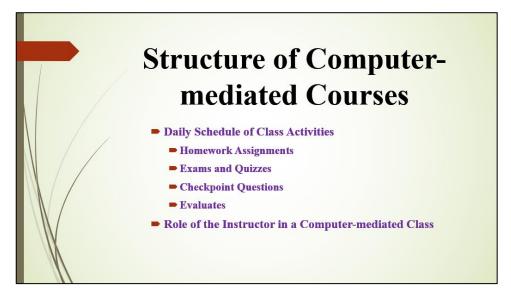
**6.** Position the title and picture as shown below:



- d. Do the following to insert a graphic into Slide 2 (Overview of Computer-mediated Software).
  - 1. Click **Slide 2** and make the title 60 pt bold with center alignment.
  - 2. Click on a blank area of the slide to be sure the title is not selected. On the **Insert** tab, in the **Images** group, click **Pictures**.
  - Navigate to your PowerPoint Files folder and double-click the file HW13-3d Math Sample Original.jpg, which is one of the files you downloaded at the start of the term. The graphic will be inserted.
  - **4.** Make the height of the picture 4.4".
  - 5. Put a black border around the picture (Picture Tools Format, Picture Styles, Picture Border).
  - **6.** Adjust the location of the picture so that **Slide 2** looks like this:



- e. Adjust and animate the bullets on **Slide 3 (Structure of Computer-mediated Courses)** by doing the following:
  - 1. Click **Slide 3** and make the title 60 pt bold with center alignment.
  - 2. Click the text box that contains the bullets and make the font 24 pt bold.
  - 3. Make the four bullets Homework Assignments, Exams and Quizzes, Checkpoint Questions, and Evaluates subordinate to Daily Schedule of Class Activities. Adjust the text box so it looks like the following:



- **4.** On the **Animations** tab, in the **Advanced Animation** group, click **Animation Pane** to display it on the right side of the screen.
- **5.** Click the border of the text box that contains all the bullets. Set the bullets to enter using the **Appear** animation.

Daily

2

3

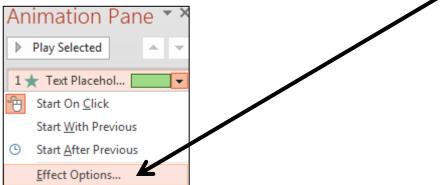
4

5

6. Notice that the four sub-bullets are set to enter when Daily Schedule of Class Activities enters (they all have the number 1 next to them). To make each individual bullet enter on its own mouse click, click the edge of the text box to select all the bullets and then, on the Animations tab, in the Timing group, set the Start box to On Click.

Now, all the entrance numbers are different, ranging from 1 through 6.

7. In the Animation Pane, click the down arrow and select Effect Options.



- 8. In the After animation box, choose the color orange and, in the Animate text box, select All at once. This will cause the color of a bulleted line to change to orange when the next bullet enters. This keeps the information on the screen and helps to focus the audience on the bullet that just entered.
- 9. Click OK.
- 10. 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.
- f. Delete Slide 4 (Student Performance in Computer-mediated Courses and Lecture Classes).
- g. Add a video to the new **Slide 4** (**Trends in Computer-mediated Mathematics Instruction**) by doing the following:
  - 1. Make the new **Slide 4** active, change the title to **Quadratic Transformations**, and make the title 60 pt bold with center alignment.
  - 2. Animate the title using the **Bounce** entrance (click the **More** button, click **More Entrance Effects**, scroll down to **Exciting**, click **Bounce**). Set the animation to enter by letter (use **Effect Options**) and set the **Start** box to **After Previous**. Then, deselect the title.
  - 3. On the Insert tab, in the Media group, click Video and select Video on my PC. Double-click HW13-3e 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. The two faces look like parabolas (quadratic functions). It appears that the face on the right is reproduced by the face on the left through a quadratic transformation. 29

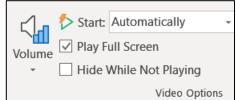
<sup>29</sup> If you are interested in the project, see Staats, S., Ernst, D., Berken, S. & Robertson, D., 2015. Investigating the mathematics of inaccessible objects: Algebra videos with iPads. Chapter for M. Meletiou-Mavrotheris, K. Mavrou & E. Paparistodemou (Eds). Integrating touch-enabled and mobile devices into contemporary mathematics education. IGI Global.

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 4 seconds and the red slider so that the video ends at about 27 seconds.

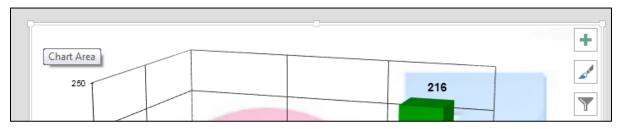


Click OK.

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.



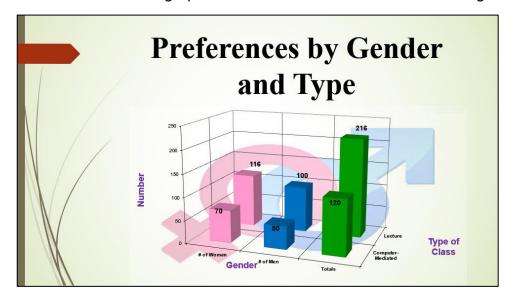
- 7. Make the height of the image 4 inches, center it under the title, and move it to just below the title.
- 8. Click the **Slide Show** button to start the presentation from this slide and watch the video. Tap **Esc** to exit the presentation.
- h. Do the following to insert a graph from Excel into **Slide 5 (Instructional Models)**.
  - Display Slide 5 and change the title to Preferences by Gender and Type, and make the title 60 pt bold with center alignment. Then, deselect the title.
  - 2. Minimize PowerPoint and open the PowerPoint Files folder. Double-click the <u>Excel</u> file, HW13-3f Gender Graph Original, which is one of the files you downloaded 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.



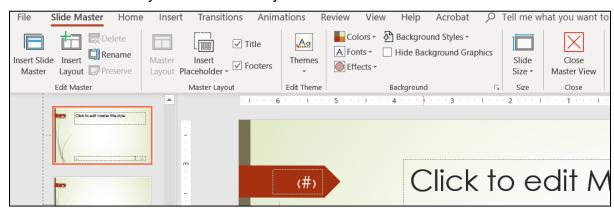
Tap **Ctrl** + **c** to copy the graph and then close Excel.

- **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 the columns one at a time. To select a single column, click it, wait a second, and then click it again. Then, on the Chart Tools Format tab, in the Shape Styles group, click the Shape Fill down arrow and select the color.

- 7. Make the height of the chart 5" (Chart Tools Format, on the left select Chart Area, and then, over on the right, change the Height to 5).
- 8. Position the title and graph so that the slide looks like the following:



- i. 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 a **Master Slide**, similar to what you did when fixing printing on page **SG284**. 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.
  - On the View tab, in the Master Views group, click Slide Master. This
    displays a new tab called Slide Master and displays the Master Slide
    and many different slide layouts.



3. Click the Insert tab and look 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, as you did on page SG295 (this is optional).
- **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 text box to the upper left 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.

American

Mathematical

- 10. On the Slide Master tab, in the Close group, click Close Master View.
- j. Tap **F5** to run the slide show and marvel at your work. Notice that each slide has the slide number and the image of Goldy.
- k. Tap **Ctrl + p** and set up to print a handout as follows:
  - Has all five slides.
  - Six slides horizontal per page.
  - Portrait orientation.
  - Color, if using a black and white printer or grayscale, if using a color printer.
  - Date, updated automatically, in the format Day, Month Date, Year.
  - Page number but no header.
  - 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. Exit Word and Excel.

Align Left

Align Center

Align Right

Align Top

### 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, by Johnny Hart, that I downloaded from <a href="http://www.tcj.com/johnny-hart-to-appear-b-c/hart-9/">http://www.tcj.com/johnny-hart-to-appear-b-c/hart-9/</a>

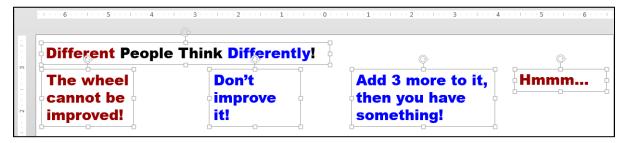


I used the **Snipping Tool** to copy the characters and pasted them in the slide. I wanted the text to be more readable so I typed it into text boxes and made the font Arial Black. Finally, I added animations and sounds. To get some experience with this sort of process, do the following:

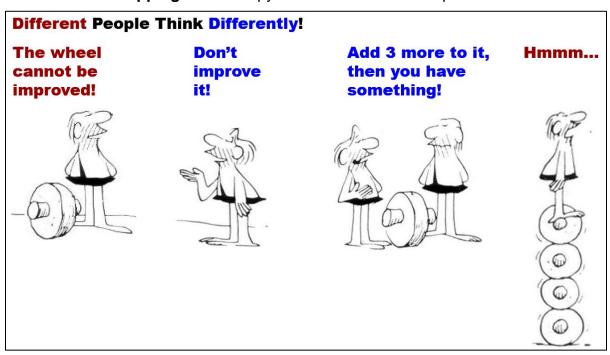
a. Open a new blank PowerPoint presentation and set the **Layout** to **Blank**. Save the presentation to your **PowerPoint Files** folder using the name **HW13-4a HWID Communication Done** 

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**, **Arrange**, **Align**, **Align Top**.

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.

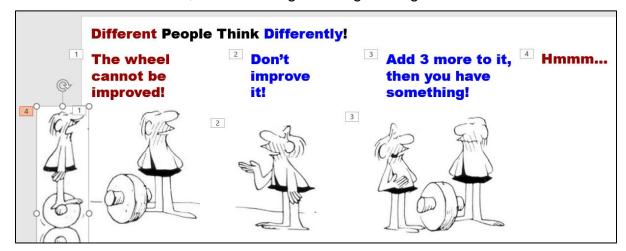


- c. In your **PowerPoint Files** folder, double-click the JPEG file **HW13-4b Communication Image Original**. It may help to magnify the image by using the **Display size tool** at the top center of the window. Make the image as large as you can while keeping the quality at an acceptable level. If you make the image too large it will become pixelated and not look good.
- d. Use the **Snipping Tool** to copy the BC characters and paste them as shown:

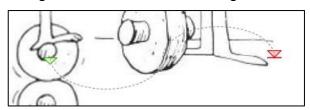


- e. Insert animations by doing the following:
  - 1. Select the box with the text **The wheel cannot be improved!** and the image under it.
  - 2. On the **Animations** tab, in the **Advanced Animation** group, click **Animation Pane**.
  - 3. On the **Animations** tab, in the **Animation** group, click **Fade**.
  - 4. Set the text box 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.

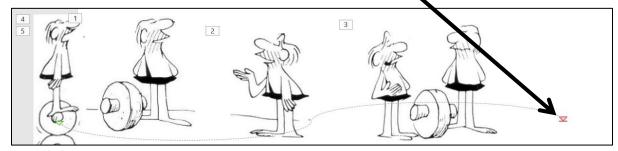
7. I wanted to have the last image appear on the left and travel across the screen until it is under Hmmm... To do this, drag the image under Hmmm... way over to the left and out of the slide. PowerPoint may resist you doing that so you may have to drag the image to the left, let up on the mouse button, 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 the **Add Animation** down arrow 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:
  - On the Insert tab, in the Media group, click the Audio down arrow, select Audio on my PC, and double-click HW13-4c Indy Car Pass Original, which is one of the files you downloaded at the start of the semester.
  - 2. Drag the little speaker icon down so it is below the images.
  - On the Audio Tools Playback tab, put a check in the Hide During Show box.
  - 4. On the Audio Tools Playback tab, select Start: Automatically.

- 5. Click the down arrow next to HW13-4c Ind... HW13-4c Ind...
- **6.** Deselect the speaker icon.



- 7. On the Insert tab, in the Media group, click the Audio down arrow, select Audio on my PC, and click HW13-4d Hmmm Original, which is one of the files you downloaded at the start of the semester.
- 8. On the Audio Tools Playback tab, put a check in the Hide During Show box.
- 9. On the Audio Tools Playback tab, select Start: Automatically.
- g. Tap **F5** to run the slide show and check that everything is working properly.
- h. So that I can see your animations, print the slide by doing the following:
  - Open a new Word document and save it using the name HW13-4e 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 + p and compare the preview with the key (they should be close, but not necessarily exact). Make needed corrections, print the document, save the document and close Word.
  - **6.** Close PowerPoint and save the presentation.

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.

#### **HW13-5 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, follow the directions in the email, or go to <a href="https://srt.umn.edu/blue">https://srt.umn.edu/blue</a>

The evaluation is only available until the last day of the semester so you must complete it by then.

a. 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 four-character HWID, the date, and the name of this homework problem HW13-5 Course Evaluation and type the words I accessed the course evaluation web site.
- c. Save the document using the name **HW13-5 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:

HW13-1 3A Trails

**HW13-2 Import from Word and Excel** 

**HW13-3 Integration** 

HW13-4 (Mis)-communication

**HW13-5 Course Evaluation** 

- 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**, and **PowerPoint**. As was the case with the Excel and Word exams, these sample PowerPoint 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 may 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 file Sample-a PowerPoint Questions KEY is in your PowerPoint Files folder.

The printed key is on page SG378.

- a. Start PowerPoint and open a new blank document.
- b. Save the presentation using the name Sample-a PowerPoint Questions Done.
- c. Slide 1
  - 1. Change the layout to **Blank**.

If you get stuck, look up the question in "How to solve the Sample Exam Questions for PowerPoint" starting on page SG327 of this Study Guide.

- Insert a WordArt object using the Fill Orange, Accent 2, Outline –
   Accent 2 motif. Type the following text: PowerPoint Sample Exam
   Questions.
- **3.** Make the text fill **purple**.
- 4. Make the font of the **WordArt** object **Arial** and the size **48** pt.
- **5.** Modify the text effect of the **WordArt** object so that it has the **Deflate Bottom** transform.



- **6.** Move the **WordArt** object to the top center of the slide.
- Have the WordArt object enter automatically when the slide show begins. Use the Fly In animation.
- 8. Insert a **text box** and, on separate lines, type your **FirstName**, **LastName**, **HWID**, **Major**, **Hometown**, and the **date**.
- 9. Make the font 24 pt Arial Black.
- **10.** Make the **space before** each line **12** pt.
- 11. Animate the six lines of text you just typed so that they enter one at a time, in order, each time the mouse is clicked. Use the Fly In animation.
- **12.** Set the animation so that each of the **6 lines of text is dimmed** to **purple** when the next bulleted line of text appears.

- **13. Insert** the photo **Sample-b PowerPoint Balloons Original**, which is one of the files you downloaded at the start of the term.
- 14. Change the **height** of the photo to 3 inches and the width to 5 inches.
- **15. Crop** the bottom of the photo so that the trees are not visible.
- **16.** Place a **red border** around the photo and make the border weight **6** pt.
- 17. Insert an oval. Make the height 4.6 inches and the width 7 inches.
- **18.** Make the fill texture of the oval **Bouquet** texture and the border **6** pt **red**.
- **19.** Send the oval **behind** the photo. **Center** the picture inside the oval.

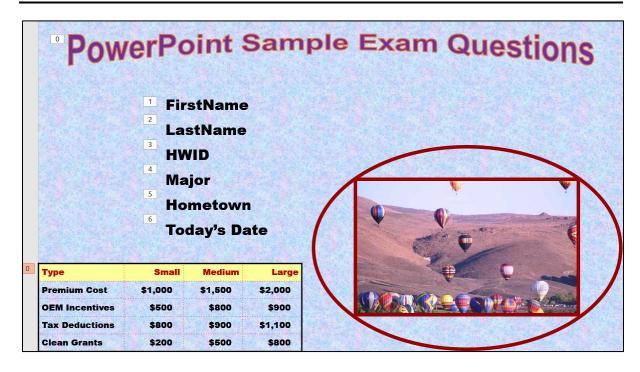


- **20. Group** the photo and the oval so they act as one object when moved.
- **21. Move** the Photo/Oval to the **lower right corner** of the slide.
- 22. Set the background for this slide only to **Bouquet** texture fill.
- 23. In the **PowerPoint Files** folder, double-click the **Word** file **Sample-c PowerPoint Table Original** to open it.

Copy the table.

Paste the table into the **PowerPoint** slide, keeping the **source formatting** of the table.

- **24.** Make the width of the table 6 inches and the height 2 inches.
- **25.** Change the font to 14 pt Arial Black and right align the three columns on the right.
- **26.** Move the table to the **lower left corner** of the slide.
- 27. Have the table enter with the **Swivel** animation **automatically** when the slide show begins. **Swivel** is under the **Subtle** category. Set the **Duration** (speed) to **Medium** (2.0).



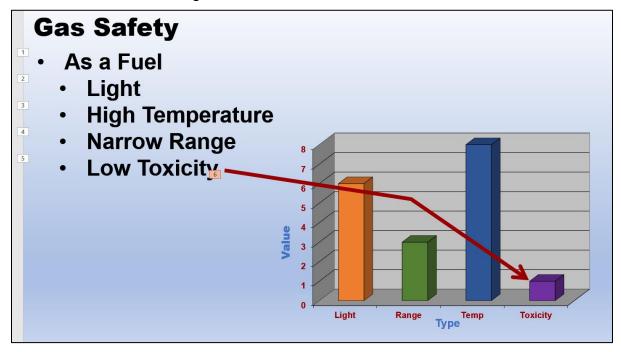
#### d. Slide 2

- 1. Insert a new blank slide.
- 2. Insert a text box, type **Gas Safety**. Make the font **40** pt **Arial Black**. Move the title to the **upper left corner** of the slide.
- 3. Insert a **text box**. Type the following on separate lines:

As a Fuel Light Narrow Range High Temperature Low Toxicity

- 4. Change the text to 36 pt Arial.
- 5. Convert these five lines of text to a **bulleted list**.
- **6.** Make the last four bullets subordinate to the first bullet, **As a Fuel**.
- 7. Move the line **High Temperature** so that it is between **As a Fuel** and **Light**.
- 8. Move the list so that it is under the title.
- **9. Animate** all the bullets so they enter one at a time when the mouse is clicked. Use the **Fly In** animation.
- **10.** Make each bulleted line **dim to orange** when the next bullet appears.
- 11. Open the <u>Excel</u> workbook Sample-d PowerPoint Chart Original, which is one of the files you downloaded at the start of the term.
- **12.** Copy the chart and paste it into this slide.
- **13.** Make the **height** of the chart **5** inches and the **width 8** inches.

- 14. Move the chart to the lower right corner of the slide.
- 15. Make the font color on both axes 14 pt bold red Arial.
- **16.** Make the font on both axes labels (Value and Type) **18** pt blue.
- 17. Insert a **straight line** and an **arrow** as shown below. Make their **weight 6** pt and color **red**.
- **18.** Arrange the line and arrow as shown below.
- **19. Group** the line and arrow.
- 20. Animate the grouped line and arrow so the group enters when the mouse is clicked after the last bullet enters. Use the Spiral In animation (under Exciting).
- 21. Make the background of this slide **Gradient** fill.

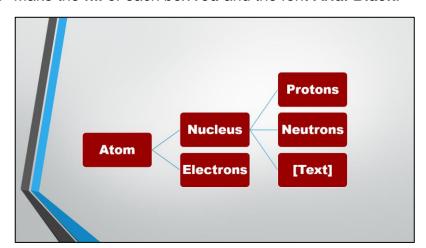


## e. Slide 3

- 1. Insert a new blank slide.
- 2. Make the **Theme** of this slide **only Parallax**.



- Insert a SmartArt object that uses the Hierarchy category and Horizontal Hierarchy subcategory.
- **4.** Adjust the connection lines as shown below so that the three boxes on the right are connected to the top middle box.
- 5. Add the text shown below.



6. Make the fill of each box red and the font Arial Black.

- f. Use the **Shape** transition when moving from slide 2 to slide 3.
- g. Click **Slide 1** and then view the slide show. A printed handout is shown on page **SG378**.

# How to Solve the Sample Exam Questions for PowerPoint

#### c. Slide 1

- **c1.** Question **c1** is on page **SG323**. Here is how to answer it:
  - On the **Home** tab, in the **Slides** group, click the **Layout** down arrow and select **Blank**.
- c2. On the Insert tab, in the Text group, click the WordArt down arrow and select Fill Orange, Accent 2, Outline Accent 2



Type PowerPoint Sample Exam Questions

- **c3.** Select the text and, on the **Drawing Tools Format** tab, in the **WordArt Styles** group, click the **Text Fill** down arrow and select purple.
- **c4.** On the **Home** tab, in the **Font** group, select **Arial** and **48** pt.
- **c5.** On the **Drawing Tools Format** tab, in the **WordArt Styles** group, click the **Text Effects** down arrow, click **Transform**, and select **Deflate Bottom**.

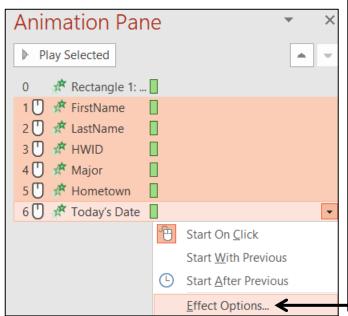


- **c6.** Drag the object to the **top center** of the slide.
- **c7.** On the **Animations** tab, in the **Animation** group, click **Fly In**.

On the **Animations** tab, in the **Advanced Animation** group, click **Animation Pane**. The Animation pane will open on the right.

On the **Animations** tab, in the **Timing** group, click the **Start** down arrow and select **With Previous**.

- **c8.** On the **Insert** tab, in the **Text** group, click **Text Box**, move the cursor to anywhere on the slide, and drag the mouse to draw a text box. Then, type the six lines of text, one per line.
- **c9.** Select the text you just typed and, on the **Home** tab, in the **Font** group, select **24** pt. and **Arial Black**.
- **c10.** With the text still selected, right-click, select **Paragraph** and, in the **Spacing** group set **Before** to **12** pt. Click **OK**.
- c11. With the text still selected, on the **Animations** tab, in the **Animation** group, click **Fly In**. Notice that the little numbers just to the left of each word are all set to 1. This means they will all enter at the same time so you need to change this.
  - On the **Animations** tab, in the **Timing** group, click the **Start** down arrow and select **On Click**. Now the little numbers show 1, 2, 3, 4, 5, 6, which means they will come in one at a time each time you click the mouse.
- **c12.** With the text still selected, in the **Animation Pane**, click the down arrow to the right of **6 Date** and select **Effect Options**.



On the **Effect** tab, in the **Enhancements** group, click the **After animation** down arrow and select **purple**. Click **OK**.

- c13. On the Insert tab, in the Images group, click Pictures. Navigate to your PowerPoint Files folder, click Sample-b PowerPoint Balloons Original and click Insert.
- **c14.** On the **Picture Tools Format** tab, in the **Size** group, click the launch dialog button to show the **Format Picture** pane.
  - Uncheck **Lock aspect ratio** so you can change the height and width independently.
  - Type **3** in the **height** box and **5** in the **width** box.
- c15. On the **Picture Tools Format** tab, in the **Size** group, click the **Crop** down arrow and select **Crop**. Drag the bottom middle size handle up until the trees are no longer visible. Click outside the photo.

**c16.** With the picture selected, on the **Picture Tools Format** tab, in the **Picture Styles** group, click the **Picture border** down arrow and select red.

With the picture still selected, on the **Picture Tools Format** tab, in the **Picture Styles** group, click the **Picture border** down arrow, click **Weight**, and select 6 pt.

**c17.** On the **Insert** tab, in the **Illustrations** group, click the **Shapes** down arrow and select oval.

Move the cursor to a blank spot on the slide and drag the mouse.

On the **Drawing Tools Format** tab, in the **Size** group, change the **height** to **4.6** and the **width** to **7**.

**c18.** On the **Drawing Tools Format** tab, in the **Shape Styles** group, click the **Shape Fill** down arrow, click **Texture**, and select **Bouquet**.

With the oval still selected, on the **Drawing Tools Format** tab, in the **Shape Styles** group, click the **Shape Outline** down arrow and select **red**.

With the oval still selected, on the **Drawing Tools Format** tab, in the **Shape Styles** group, click the **Shape Outline** down arrow, click **weight**, and select **6** pt.

**c19.** Right-click the oval, click **Send to Back** and select **Send to Back**.

Click the picture, hold down the **Shift** key, and click the oval. This selects both of them.

On the **Drawing tools Format** tab, in the **Arrange** group, click the **Align** down arrow, and select **Align Center**.

- **c20.** With the picture and oval still selected, right-click, click **Group** and select **Group**.
- **c21.** Drag the Photo/Oval group to the **lower right corner** of the slide.
- **c22.** In a blank part of the slide, right-click, and select **Format Background**.

In the Format Background pane, click Picture or texture fill.

To the right of **Texture**, click the down arrow and select **Bouquet**.

**c23.** In the **PowerPoint Files** folder, double-click the Word file **Sample-c PowerPoint Table Original** to open it.

Select the table, tap **Ctrl + c** to copy it, switch to PowerPoint, and click in a blank spot on the slide.

Paste

**~**33

Paste Options:

New

Slide ▼

Keep Source Formatting (K

Section

ρS

On the **Home** tab, in the **Clipboard** group, click the **Paste** down arrow and select **Keep Source Formatting (K)**.

- **c24.** With the table selected, on the **Table Tools Layout** tab, in the **Table Size** group, type **6** in the **width** box and **2** in the **height** box.
- **c25.** With the table selected, on the **Table Tools Layout** tab, in the **Font** group change the font type and size.

Select the three columns on the right. In the **Paragraph** group, click the **Right Align** button.

- **c26.** With the table still selected, drag it to the **lower left corner** of the slide.
- c27. With the table still selected, on the **Animations** tab, in the **Animation** group, click the **More** button to open the **Animation** menu.

Click More Entrance Effects.

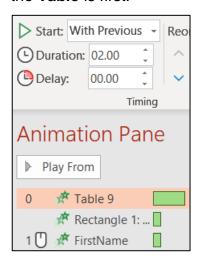
In the **Subtle** group, click **Swivel** and then **OK**.

On the **Animations** tab, in the **Advanced Animation** group, click **Animation Pane** to open it.

Select the **Start** box down arrow and select **With Previous**.

Type **2** in the **Duration** box.

In the **Timing** group, click the up arrow under **Reorder Animation** until the **Table** is first.



Tap **F5** to start the slide show. The **WordArt** and the **Table** should automatically appear. As you click the mouse, the bulleted items should appear, and then dim to purple when the mouse is clicked again.

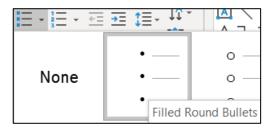
#### d. Slide 2

- **d1.** On the **Home** tab, in the **Slides** group, click the **New Slide** down arrow and select **Blank**.
- d2. On the Insert tab, in the Text group, click Text Box, move the cursor to anywhere on the slide, and drag the mouse to draw a text box. Then, type Gas Safety.

Select the text and, on the **Home** tab, in the **Font** group, make the font **40** pt **Arial Black**.

Select the text box and drag it to the **upper left corner** of the slide.

- **d3.** On the **Insert** tab, in the **Text** group, click **Text Box**, move the cursor to anywhere on the slide, and drag the mouse to draw a text box. Then, type the phrases.
- **d4.** Select the text and, on the **Home** tab, in the **Font** group, change the text to **36** pt **Arial**.
- **d5.** With the text still selected, on the **Home** tab, in the **Paragraph** group, click the **Bullets** down arrow and select **Filled Round Bullets**.



- **d6.** Select the last four bullets and, on the **Home** tab, in the **Paragraph** group, click the **Increase List Level** button
- d7. Click the bullet next to **High Temperature** and drag it up two lines.
- **d8.** Click the text box outline and drag the list so that it is under the title. Make the text box wider if necessary.
- **d9.** With the text still selected, on the **Animations** tab, in the **Animation** group, click **Fly In**. Notice that the little numbers just to the left of each word are all set to 1. This means they will all enter at the same time so you need to change this.
  - On the **Animations** tab, in the **Timing** group, click the **Start** down arrow and select **On Click**. Now the little numbers show 1, 2, 3, 4, 5, which means they will come in one at a time each time you click the mouse.
- **d10.** With the text still selected, in the **Animation Pane**, click the down arrow to the right of **5 Low Toxicity** and select **Effect Options**.
  - On the **Effect** tab, in the **Enhancements** group, click the **After animation** down arrow and select **orange**. Click **OK**.
- **d11.** Navigate to the **PowerPoint Files** folder and double-click the Excel workbook **Sample-d PowerPoint Chart Original**, which is one of the files you downloaded at the start of the term.
- d12. With the chart selected, tap Ctrl + c to copy it.Switch to PowerPoint, click in an empty part of the slide, and tap Ctrl + v.
- **d13.** On the **Chart Tools Format** tab, in the **Size** group, change the **height** of the chart to **5** inches and the **width** to **7** inches.
- d14. Click the chart box and drag it to the lower right corner of the slide.
- **d15.** Click the vertical axis to select it and, on the **Home** tab, in the **Font** group, select **14** pt **bold red Arial**.
  - Repeat this for the horizontal axis.

- **d16.** Select each label and change the font to **18** pt **blue**.
- **d17.** On the **Insert** tab, in the **Illustrations** group, click the **Shapes** down arrow and select the straight line.

Click in an empty part of the slide, click and drag to draw the line.

With the line still selected, on the **Drawing Tools Format** tab, in the **Shape Styles** group, click the **Shape Outline** down arrow, select **Weight** and then **6** pt. Select red for the color.

Repeat the process for an arrow.

- **d18.** Click the line and move it to the proper position. Do the same for the arrow.
- **d19.** Click the line, hold down the **Shift** key, and click the arrow to select them both. Right-click, select **Group**, and select **Group** again.
- **d20.** With the group selected, on the **Animations** tab, in the **Animation** group, click the **More** button, , to open its menu.

Click More Entrance Effects.

Scroll down to the **Exciting** group, click **Spiral In**, and click **OK**.

d21. Right-click in a blank area of the slide and select Format Background.

In the Format Background pane, click Gradient fill. You can leave the options as they are.

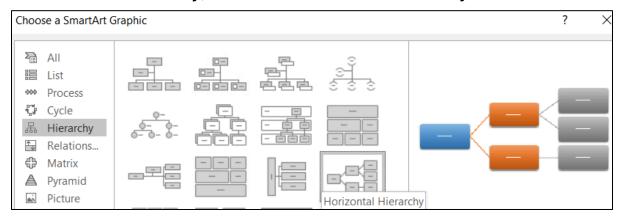
#### e. Slide 3

- **e1.** On the **Home** tab, in the **Slides** group, click the **New Slide** down arrow and select **Blank**.
- **e2.** On the **Design** tab, in the **Themes** group, click the **More** button, right-click **Parallax**, and select **Apply to Selected Slides**.



e3. On the **Insert** tab, in the **Illustrations** group, click **SmartArt**.

Click **Hierarchy**, and then click **Horizontal Hierarchy**.



Click OK.

**e4.** First, you need to delete the third **Text Box** in the right column. To do that, click the box edge to select it and tap the **Del** key.

Now, insert a new **Text Box** that is connected to the top box in the middle column. To do that, right-click an edge of the bottom **Text Box** in the right column, click the **Add Shape** arrow, and select **Add Shape After**.



- e5. Enter these words into the Text Boxes: Atom, Nucleus, Electrons, Protons, Neutrons, Sub-Atomic.
- **e6.** Select the six **Text Boxes** by clicking on the edge of the **Atom Text Box**, holding down the **Shift** key, and clicking the edges of the other five **Text Boxes**.

On the **SmartArt Tools Format** tab, in the **Shape Styles** group, click the **Shape Fill** down arrow, and select **red**.

With the **Text Boxes** still selected, on the **Home** tab, in the **Font** group, change the font to **Arial Black**.

- **f.** On the **Transitions** tab, in the **Transition to This Slide** group, click **Shape**.
- **g.** Tap the **F5** key to play 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**

This project is extra credit. You may hand in the printed output at the final exam and points earned will be added to your Homework score when final grades are calculated.

Access will NOT be covered on the final exam.

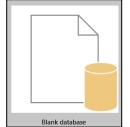
**Step 1 Read** Read the introductory material on page 519 of the textbook.

**Step 2 Activities** Turn on the computer and do the following:

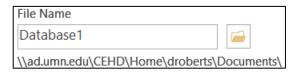
Project 1A: Start at the top of page 521.

**Instead of Activity 1.02** step 2 (page 523) do the following:





2. Locate the **Browse folder**, which is just to the right of the **File Name** box.



Click the Browse folder and navigate to your Access Files folder.

We are not going to use sub folders (e.g., Access Chapter 1). You will put all your Access files in the Access Files folder so you can see them all at once.

- 3. In the File Name box, type LastName\_FirstName\_1A\_Advising, where LastName is YOUR last name and FirstName is YOUR first name.
- 4. Click OK.
- 5. Click Create.

When you open a database you might get the following Security Warning:



- Complete the rest of the Activities for this Project EXCEPT do NOT do steps 3 and 4 in Activity 1.17 on page 553.
- 7. Return here when you have completed Project 1A on page 553.

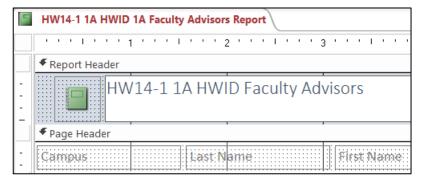
Do NOT do GO! With Google
Do NOT do Project 1B

**Step 3 Homework** After you have completed Project A **ONLY** return here, do the following additional activities, and turn them in for grading as **extra credit**.

## **HW14-1 Advising Database (Based on Project 1A)**

**Problem:** How can a database be designed and populated with data?

- a. Open the database **Lastname\_Firstname\_1A\_Advising**, which you created while following the directions in the textbook and saved on page 553.
- b. Do the following to save the database under a new name:
  - Click the File tab and click Save As.
  - 2. Be sure Save Database As is selected.
  - 3. Click Save As.
  - 4. Navigate to your Access Files folder.
  - 5. In the File name box type HW14-1 HWID 1A\_Advising\_Done.
  - **6.** Click **Save**. If you get a security warning click **Enable Content**.
- c. Do the following to print the query, which you saved on page 547:
  - Right-click LastName FirstName 1A All Students Query, select Rename, and replace the name with HW14-1 1A HWID All Students Query.
  - 2. Open the query.
  - 3. Choose File, Print, Print Preview and compare the preview with the key. Make needed corrections, save the query, and print it.
  - **4.** Close the query.
- d. Do the following to print the report, which you saved on page 552:
  - 1. Rename Lastname Firstname 1A Faculty Advisors Report as HW14-1 1A HWID 1A Faculty Advisors Report.
  - **2.** Open the report.
  - 3. Switch to Design View.
  - 4. In the Report Header box, change the text to HW14-1 1A HWID Faculty Advisors.



- **5.** Switch the **View** to **Print Preview** and compare the preview with the key. Make needed corrections, save the report, and print it.
- a. Exit Access.

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

1. Put your 2 homework papers in the following order:

HW14-1 1A All Students Query HW14-1 1A Faculty Advisors Report

- **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 at the final exam.

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

# **Project 15**

# **Access Chapter 2: Sort and Query a Database**

This project is extra credit. You may hand in the printed output at the final exam and points earned will be added to your Homework score when final grades are calculated.

Access will NOT be covered on the final exam.

**Step 1 Read** Read the introductory material on page 595 of the textbook.

Step 2 Activities Turn on the computer and do the following:

**Project 2A:** Start at the top of page 597.

Instead of Activity 2.01 step 1 do the following:

- Navigate to your Access Files folder and open a02A\_Instructors\_Courses, which is one of the files you downloaded at the start of the term
- 2. Save the file in your **Access Files** folder using the name **LastName\_FirstName\_2A\_Instructors\_Courses**
- **3.** Complete the rest of the Activities for this Project EXCEPT do **NOT** do steps 9 and 10 in **Activity 2.16** on page 619.
- 4. Return here when you have completed Project 2A on page 618.

Do NOT do GO! With Google

**Project 2B:** When you have completed Project 2A, start at the top of page 623.

Instead of Activity 2.17 step 1 do the following:

- Navigate to your Access Files folder and open a02B\_Athletes\_Scholarships, which is one of the files you downloaded at the start of the term.
- 2. Save the file in your Access Files folder using the name LastName\_FirstName\_2B\_Athletes\_Scholarships
- 3. Complete the activities through **Activity 2.24** on page 632.
- 4. Return here when you have completed Activity 2.24 on page 632.

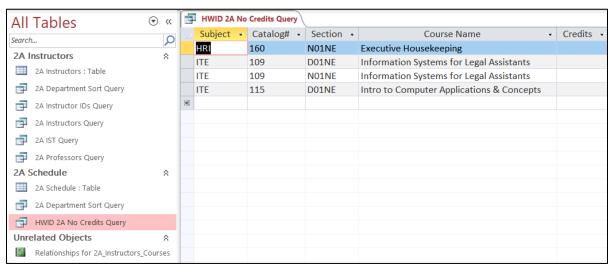
Do NOT do GO! With Google or GO! To Work

**Step 3 Homework** After you have completed Projects A and B, return here, do the problems listed below, and turn them in for grading as **extra credit**.

## **HW15-1 Instructors and Courses (Based on Project 2A)**

**Problem:** How can separate databases be linked and information extracted from each to answer questions concerning the data?

- a. Open the database Lastname\_Firstname\_2A\_Instructors\_Courses, which you
  created while following the directions in the textbook and saved on page 618.
- Save the database to your Access Files folder using the name HW15-1 HWID 2A\_Instructors\_Courses\_Done
- c. Take a screen shot that shows you did all the queries by doing the following:
  - 1. Change the name of the 2A No Credits Query, which you saved on page 618, to HWID 2A No Credits Query.
  - 2. Open HWID 2A No Credits Query.
  - 3. While in **Datasheet** view, use the **Snipping Tool** to take a screen shot that includes the **Navigation pane** and the **2A No Credits Query**.



- **4.** Open a blank Word document, type **HW15-1 2A Queries, HWID**, and tap **Enter**.
- **5.** Paste the screen shot you just made.
- Save the Word document as HW15-1 HWID 2A Queries Done to your Access Files folder.
- 7. In the footer, insert fields for the file name and the date it was saved.
- 8. Tap Ctrl + p and compare the preview with the key. Make needed corrections, print the document, save it, and close it.
- d. Exit Access.

## **HW15-2 Athletes Scholarships (Based on Project 2B)**

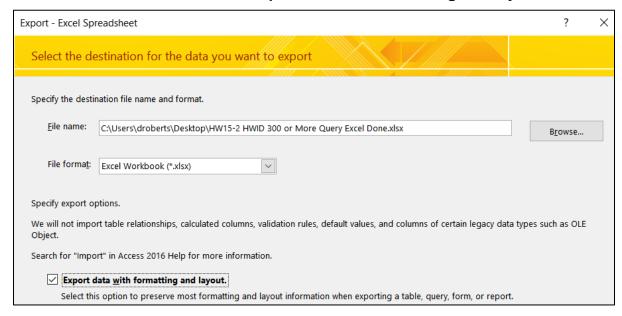
**Problem:** How can complex queries be designed and applied to linked databases in order to answer specific questions?

- a. Open the database Lastname\_Firstname\_2B\_Athletes\_Scholarships, which
  you created while following the directions in the textbook and saved on page 632.
- Save the database to your Access Files folder using the name HW15-2 HWID 2B Athletes Scholarships Done
- c. Open **2B Tennis OR Swimming Query**, which you created while following the directions in the textbook and saved on page 631.

Rename the query HWID 2B Tennis OR Swimming Query.

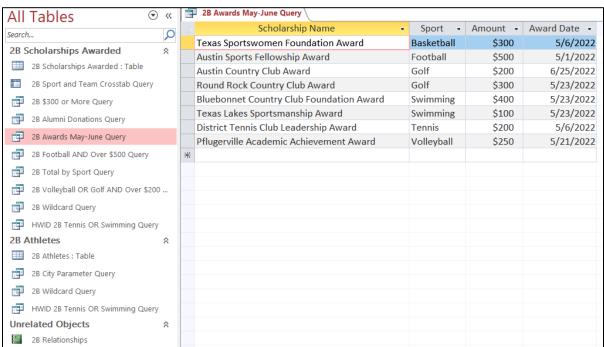
Choose **File**, **Print**, **Print Preview** and compare the preview with the key. Make needed corrections, save the query, and print it.

- d. The textbook showed you how to import data from an Excel worksheet into an Access table. Data may also be exported from an Access table or query to an Excel worksheet using the **Export** command. To see how this works, export one of your queries to an Excel worksheet by doing the following:
  - 1. Open **2B \$300** or **More Query**, which you created while following the directions in the textbook and saved on page 627.
  - 2. On the External Data tab, in the Export group, click Excel.
  - Click the Browse button, navigate to your Access Files folder, and save the workbook using the name HW15-2 HWID 300 or More Query Excel Done.
  - 4. Click Save.
  - 5. Check the box next to **Export data with formatting and layout**.



6. Click **OK**. Click **Close** without checking the save steps box.

- e. Print the Excel workbook you just created.
  - Open the Excel workbook HW15-2 HWID 300 or More Query Excel Done.
  - 2. Autofit the columns.
  - **3.** Insert a footer that contains the file name in the left section and the date in the right section. Fit all the columns on one page.
  - **4.** Tap **Ctrl + p** and compare the preview with the key. Make needed corrections, print, save the workbook, and close it and exit Excel.
- f. Take a screen shot that shows you did all the queries by doing the following:
  - 1. Open 2B Awards May-June Query, which you saved on page 618.
  - While in Datasheet view, use the Snipping Tool to take a screen shot that includes the Navigation pane and the 2B Awards May-June Query.



- 3. Open a blank Word document, type HW15-2 HWID 2B Athletes Scholarships Queries and tap Enter.
- 4. Paste the screen shot you just made.
- Save the Word document as HW15-2 HWID 2B Athletes Scholarships Queries Done to your Access Files folder.
- 6. In the footer, insert fields for the file name and the date it was saved.
- 7. Tap Ctrl + p and compare the preview with the key. Make needed corrections, print the document, save it, and close it.
- g. Exit Access.

## Why use Access?<sup>30</sup>

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 or 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 169 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.

<sup>&</sup>lt;sup>30</sup> Adapted from http://www.opengatesw.net/ms-access-tutorials/What-Is-Microsoft-Access-Used-For.htm

# **Step 4 Submit** You now are ready to submit your **EXTRA CREDIT** homework for grading.

1. Put your 4 homework papers in the following order:

HW15-1 2A Queries HW15-2 2B Tennis OR Swimming Query HW15-2 300 or More Query Exported to Excel HW15-2 2B Athletes Scholarships Queries

- 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.

# 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:** All exams will be closed book and notes but you may use one 8.5 inch

by 11 inch sheet of notes, both sides, typed, hand written, scanned, or whatever. Since you will have to cram notes for all three applications onto one sheet you will have to think carefully about what you want to include. Your notes sheet will be collected when you hand in the exam so be sure to put your name and HWID on it. The exam room printer will be disabled during the exam time so be sure you print your notes sheet **before** you enter the classroom.

Open the Word file **Notes Sheet for CI 1871 Final Exam Original**, which is one of the files you copied at the start of the semester. Use that sheet to record your notes on **Excel**, **Word**, and **PowerPoint**. You will hand in this sheet when you finish the exam.

The final exam will be more difficult than the Excel and Word exams because it will cover all three applications, **Excel**, **Word**, and **PowerPoint** and it will be longer. The questions will be similar to the Excel and Word exam questions in length, scope, and level of difficulty.

#### Access will not be covered on the final exam.

The order of the questions on the final exam is **PowerPoint**, **Word**, **Excel**, but **you can do them in any order you wish**. The Excel formulas are the very last part of the exam and will be the most difficult for most students so be sure to leave enough time for them (or, do them first).

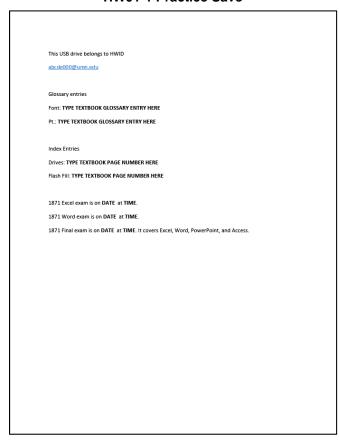
Be sure to go through the **Sample Exam Questions** for **Excel**, **Word**, and **PowerPoint** several times. You have not done Excel for three months and those formulas are the most difficult part of the course so be sure to spend extra study time on Excel.

The ground rules for taking the final are the same as for the Excel and Word exams (see page **SG143**). Be sure to bring your **U** of **M** student **ID** and a pencil or pen.

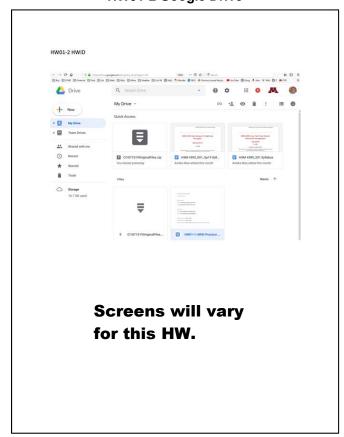
You should go through the Excel, Word, and PowerPoint, sample questions several times so you can do the procedures quickly and accurately.

# **Keys for Homework Projects Fall 2019**

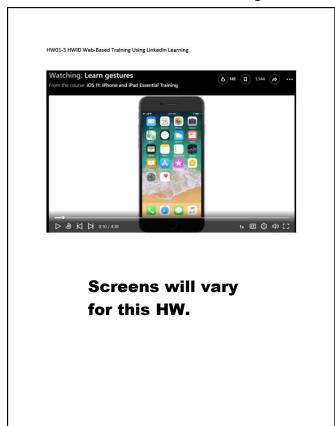
**HW01-1 Practice Save** 



**HW01-2 Google Drive** 



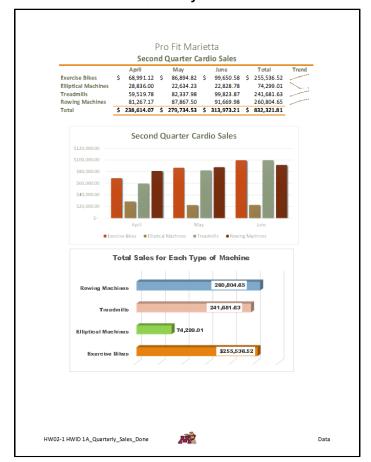
**HW01-3 Web-Based Training** 



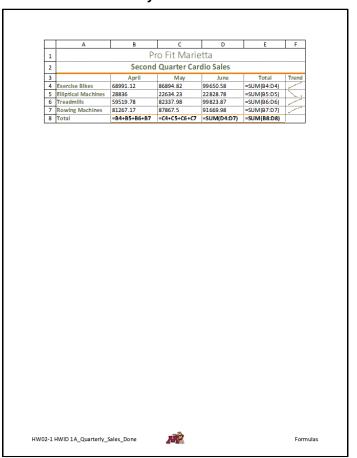
**HW01-4 PDF Files** 



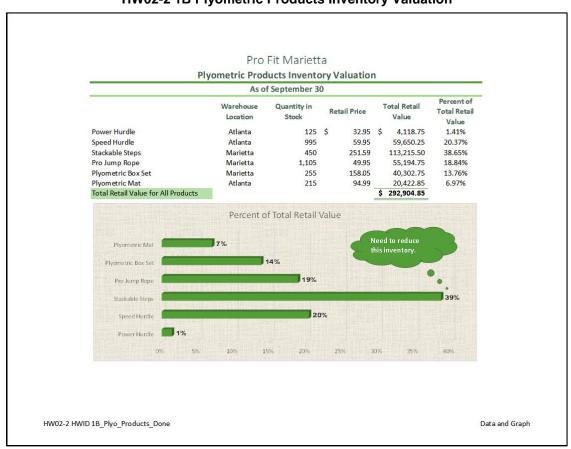
#### HW02-1 1A Quarterly Sales Worksheet



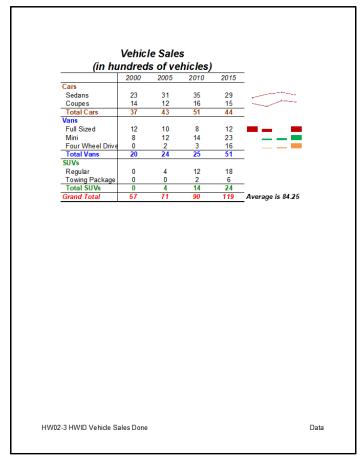
#### HW02-1 1A Quarterly Sales Formulas Worksheet



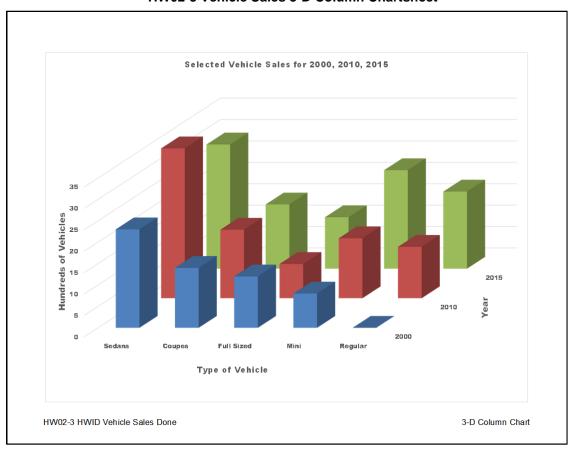
**HW02-2 1B Plyometric Products Inventory Valuation** 



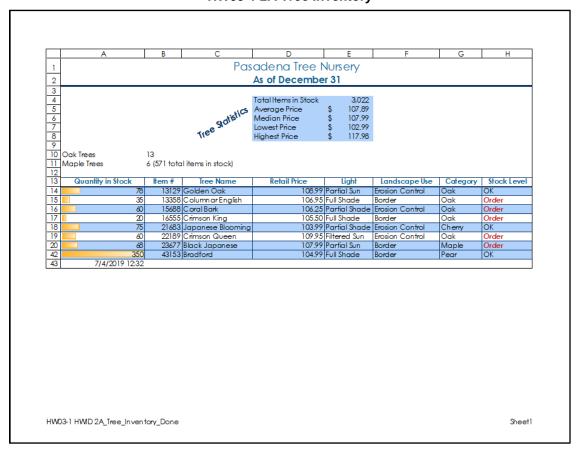
#### **HW02-3 Vehicle Sales Data Worksheet**



HW02-3 Vehicle Sales 3-D Column Chartsheet

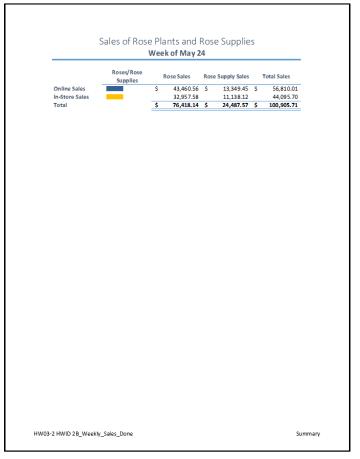


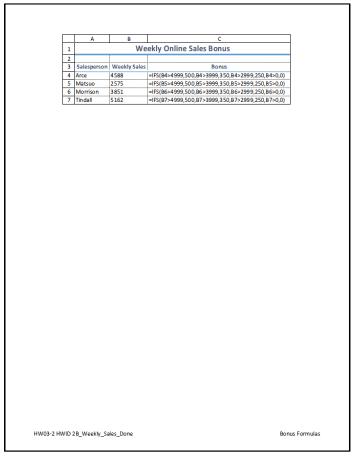
#### HW03-1 2A Tree Inventory



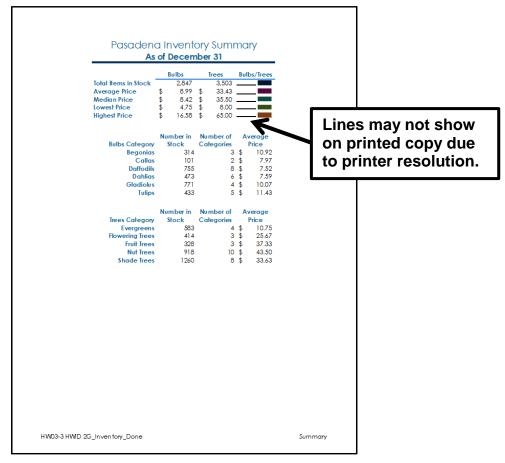
## HW03-2 2B Weekly Sales Summary Worksheet

#### HW03-2 2B Weekly Sales Bonus Worksheet Formulas

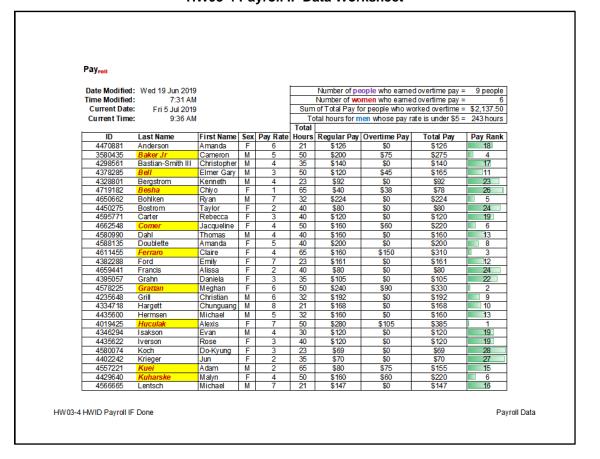




#### HW03-3 2G Inventory Summary Worksheet



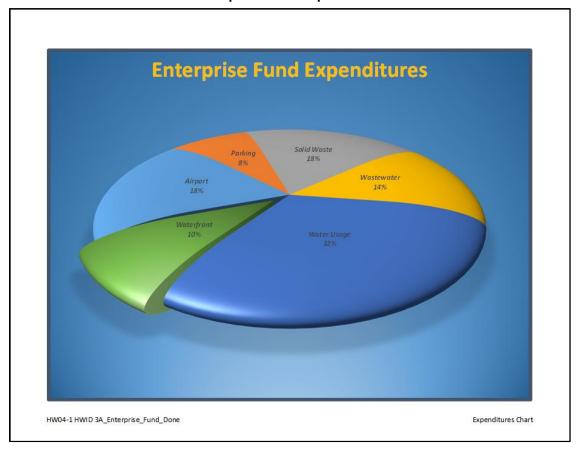
#### **HW03-4 Payroll IF Data Worksheet**



# **HW03-4 Payroll IF Formulas Worksheet**

	A	В	C	D	E	F	G	Н		J
1	Pay <sub>roll</sub>	-			_					-
2										
3	Date Modified									=COUNTIF(\$F\$9:\$F\$36,">40")
5	Current Date	I: 0.31319444444444 : =NOW()	4							=COUNTIFS(F9:F36,">40",D9:D36,"=F") =SUMIF(F9:F36.">40",I9:I36)
6	Current Time	: =NOW()							ite is under \$5 =	=SUMIFS(F9:F36,D9:D36,"=M",E9:E36,"<5")
7 8	ID	Last Name	First Name	ē av	Pay Rate	Total	Regular Pay	Overtime Pay	Total Pay	Pay Rank
9	4470881	Anderson	Amanda	F	6	21	=IF(F9<=40,E9*F9,E9*40)	=IF(F9<40,0,E9*1.5*(F9-40))	=G9+H9	=RANK(19,SIS9:SIS36)
10	3580435	Baker Jr	Cameron	M		50	=IF(F10<=40,E10*F10,E10*40)	=IF(F10<40,0,E10*1.5*(F10-40))	=G10+H10	■RANK(110,SIS9:SIS36)
	4298561 4378285	Bastian-Smith III Bell	Christopher Elmer Gary	M	3	35 50	=IF(F11<=40,E11*F11,E11*40) =IF(F12<=40,E12*F12,E12*40)	=IF(F11<40,0,E11*1.5*(F11-40)) =IF(F12<40,0,E12*1.5*(F12-40))	=G11+H11 =G12+H12	=RANK(I11,SIS9.SIS36) =RANK(I12,SIS9.SIS36)
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(I13,SIS9.SIS36)
	4719182	Besha	Chiyo	F		65	=IF(F14<=40,E14*F14,E14*40)	=IF(F14<40,0,E14*1.5*(F14-40))	=G14+H14	=RANK(I14,SI\$9:SI\$36)
	4650662 4450275	Bohlken Bostrom	Ryan Taylor	M F	7	32 40	=IF(F15<=40,E15*F15,E15*40) =IF(F16<=40,E16*F16,E16*40)	=IF(F15<40,0,E15*1.5*(F15-40)) =IF(F16<40,0,E16*1.5*(F16-40))	=G15+H15 =G16+H16	=RANK(I15,SIS9-SIS36) =RANK(I16,SIS9-SIS36)
17	4595771	Carter	Rebecca	F	3	40	=IF(F17<=40,E17*F17,E17*40)	=IF(F17<40,0,E17*1.5*(F17-40))	=G17+H17	=RANK(I17,SI\$9.SI\$36)
	4662548	Comer	Jacqueline	F M	4	50	=IF(F18<=40,E18*F18,E18*40)	=IF(F18<40,0,E18*1.5*(F18-40))	=G18+H18	■RANK(#18,SIS9:SIS36)
19 20	4580990 4588135	Dahl Doublette	Thomas Amanda	F	5	40 40	=IF(F19<=40,E19*F19,E19*40) =IF(F20<=40,E20*F20,E20*40)	=IF(F19<40,0,E19*1.5*(F19-40)) =IF(F20<40.0.E20*1.5*(F20-40))	=G19+H19 =G20+H20	=RANK(I19,SIS9.SIS36) =RANK(I20,SIS9.SIS36)
21	4611455	Ferraro	Claire	F	4	65	=IF(F21<=40,E21*F21,E21*40)	=IF(F21<40,0,E21*1.5*(F21-40))	=G21+H21	=RANK(121,\$I\$9:\$I\$36)
	4382288 4659441	Ford	Emily Alissa	F	7	23	=IF(F22<=40,E22*F22,E22*40)	=IF(F22<40,0,E22*1.5*(F22-40)) =IF(F23<40,0,E23*1.5*(F23-40))	=G22+H22 =G23+H23	=RANK(122,\$I\$9.\$I\$36) =RANK(123,\$I\$9.\$I\$36)
	4395057	Francis Grahn	Daniela	F		35	=IF(F23<=40,E23*F23,E23*40) =IF(F24<=40,E24*F24,E24*40)	=IF(F24<40,0,E24*1.5*(F24-40))	=G23+H23 =G24+H24	=RANK((23,\$159:\$1536) =RANK((24,\$159:\$1536)
25	4578225	Grattan	Meghan	F	6	50	=IF(F25<=40,E25*F25,E25*40)	=IF(F25<40,0,E25*1.5*(F25-40))	=G25+H25	■RANK (125,\$I\$9.\$I\$36)
	4235648 4334718	Grill	Christian	M	6	32 21	=IF(F26<=40,E26*F26,E26*40)	=IF(F26<40,0,E26*1.5*(F26-40))	=G26+H26	=RANK((26,SIS)9:SIS36) =RANK((27,SIS9:SIS36)
	4435600	Hargett Hermsen	Chunguang Michael	M		32	=IF(F27<=40,E27*F27,E27*40) =IF(F28<=40,E28*F28,E28*40)	=IF(F27<40,0,E27*1.5*(F27-40)) =IF(F28<40.0.E28*1.5*(F28-40))	=G27+H27 =G28+H28	=RANK((27,5159:51536) =RANK((28,5159:51536)
	4019425	Huculak	Alexis	F		50	=IF(F29<=40,E29*F29,E29*40)	=IF(F29<40,0,E29*1.5*(F29-40))	=G29+H29	#RANK(129,\$1\$9:\$1\$36)
	4346294 4435622	Isakson Iverson	Evan Rose	M	4	30 40	=IF(F30<=40,E30*F30,E30*40) =IF(F31<=40,E31*F31,E31*40)	=IF(F30<40,0,E30*1.5*(F30-40)) =IF(F31<40,0,E31*1.5*(F31-40))	=G30+H30 =G31+H31	=RANK(I30,SI\$9,SI\$36) =RANK(I31,SI\$9,SI\$36)
	4580074	Koch	Do-Kyung	F	3	23	=IF(F32<=40,E32*F32,E32*40)	=IF(F32<40,0,E31*1.5*(F31*40))	=G31+H31 =G32+H32	=RANK((32,SIS9:SIS36)
	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(I33,SIS9:SIS36)
	4557221 4429640	Kuei Kuharske	Adam Malyn	M		65 50	=IF(F34<=40,E34*F34,E34*40) =IF(F35<=40,E35*F35,E35*40)	=IF(F34<40,0,E34*1.5*(F34-40)) =IF(F35<40,0,E35*1.5*(F35-40))	=G34+H34 =G35+H35	#RANK((34,SIS9:SIS36) = #RANK((35,SIS9:SIS36)
	4566665	Lentsch	Michael	M		21	=IF(F36<=40,E36*F36,E36*40)	=IF(F36<40,0,E36*1.5*(F36-40))	=G36+H36	=RANK(138,SIS9,SIS36)
HWO	3-4 HWID Payro	il IF Done								Payroli Formul

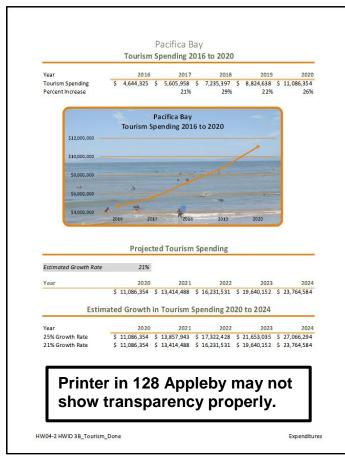
**HW04-1 3A Enterprise Fund Expenditures Chartsheet** 



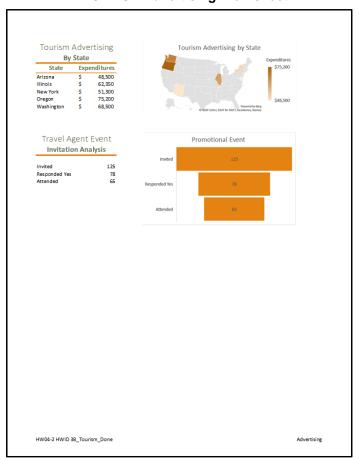
HW04-1 3A Enterprise Fund Expenditures Worksheet

	Pacifica		
E	nterprise Fund E		
	Recommended Ad	Justments	
	Originally Proposed	Adjusted	% of Total Fund Expenditures
Alrport	\$ 17,610,810		18.12%
Parking	6,824,865	7,897,526	7.90%
Solld Waste	18,695,222	17,845,287	
Wastewater	12,657,765	13,985,695	13.99% 32.36%
Water Usage Waterfront	30,457,903 10,976,843	32,356,236 9,794,189	9.79%
	\$ 97,223,408		3.7376
W04-1 HWID 3A_Enterprise_Fund_D	Done		Enterprise Fund Expenditure

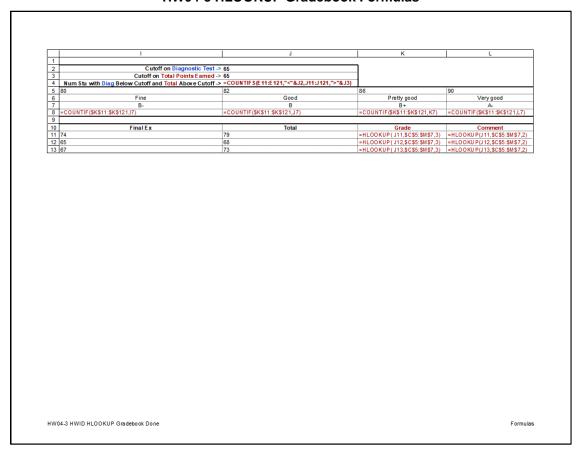
### **HW04-2 3B Tourism Spending Projection Worksheet**



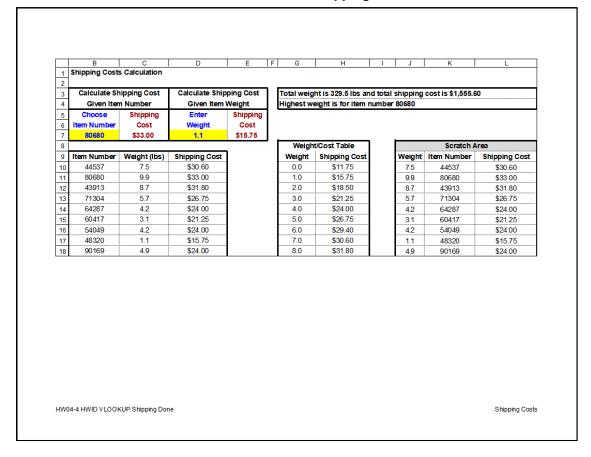
#### HW04-2 3B Advertising Worksheet



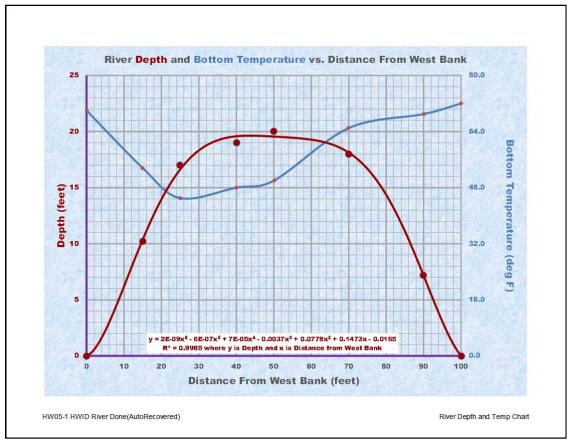
#### **HW04-3 HLOOKUP Gradebook Formulas**



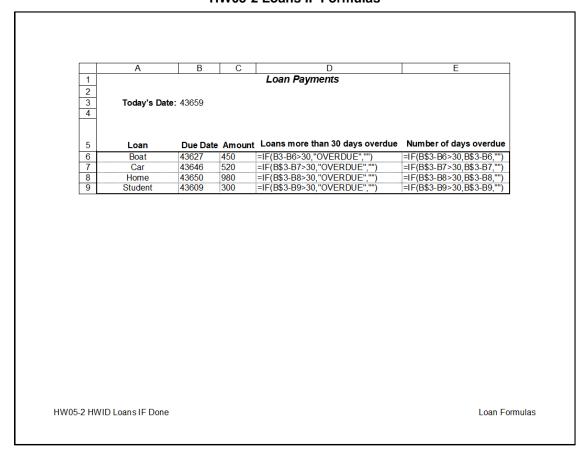
## **HW04-4 VLOOKUP Shipping Data**



#### **HW05-1 River Chartsheet Modified**



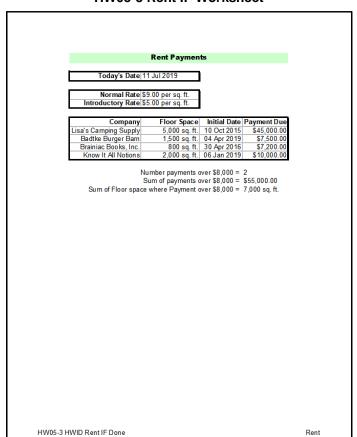
**HW05-2 Loans IF Formulas** 



Rent Formulas

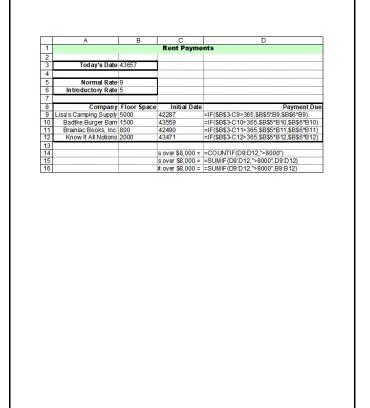
Sales Data

#### **HW05-3 Rent IF Worksheet**



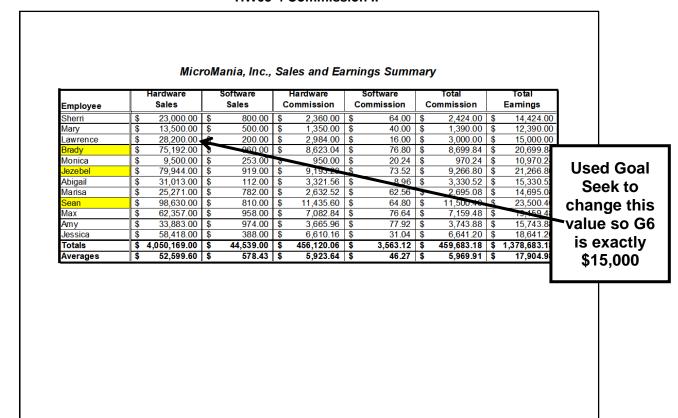
HW05-4 HWID Commission IF Done

#### **HW05-3 Rent IF Formulas Worksheet**

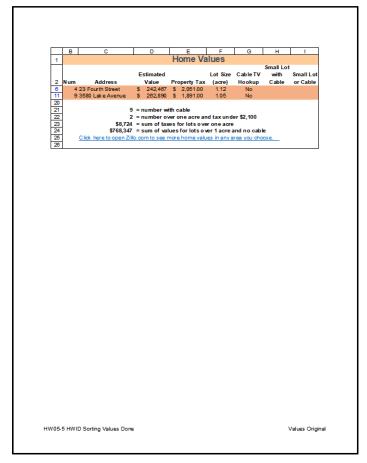


**HW05-4 Commission IF** 

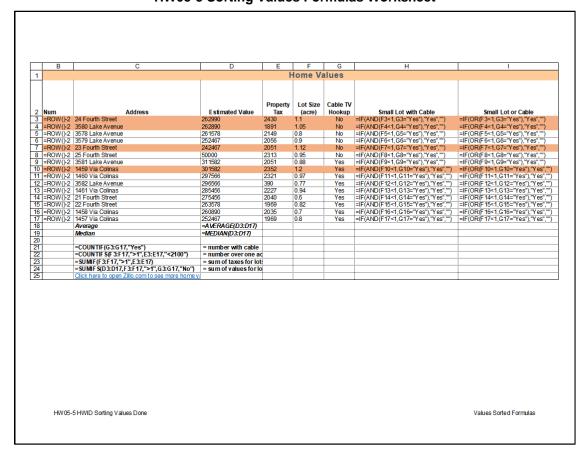
HW05-3 HWID Rent IF Done



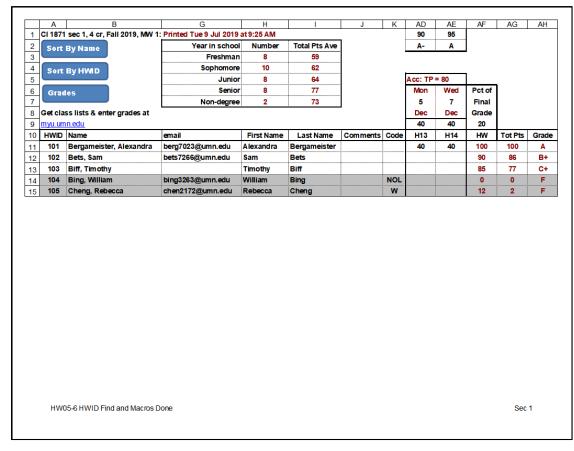
#### **HW05-5 Sorting Values Filtered Worksheet**



**HW05-5 Sorting Values Formulas Worksheet** 



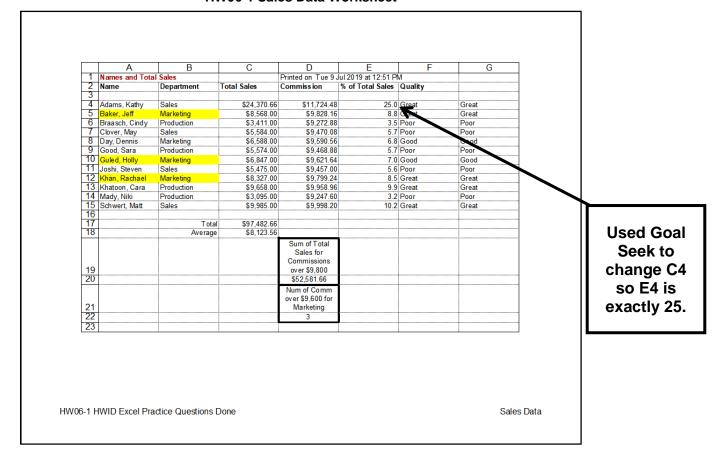
#### HW05-6 Find and Macros Sec 1 Worksheet



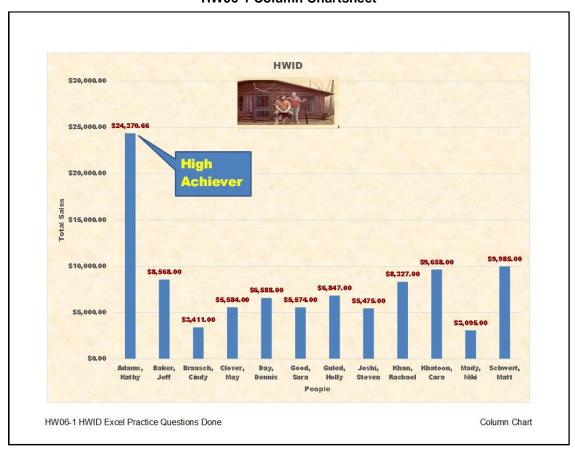
#### **HW05-6 Find and Macros Server Worksheet**

	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)
	=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)

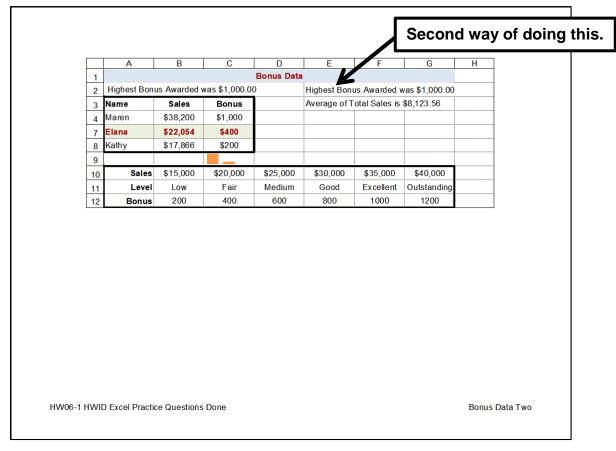
#### **HW06-1 Sales Data Worksheet**



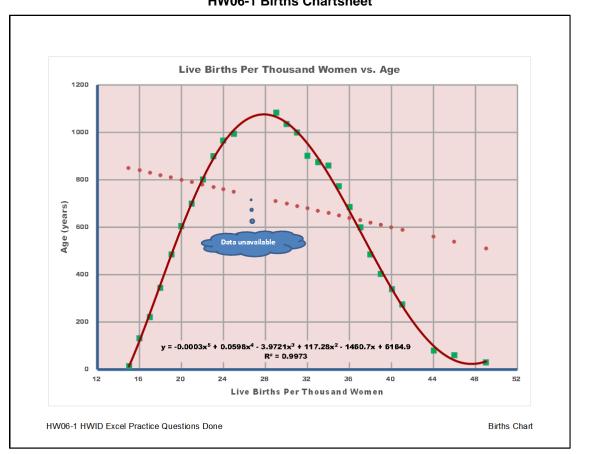
**HW06-1 Column Chartsheet** 



#### **HW06-1 Bonus Data Two Worksheet**



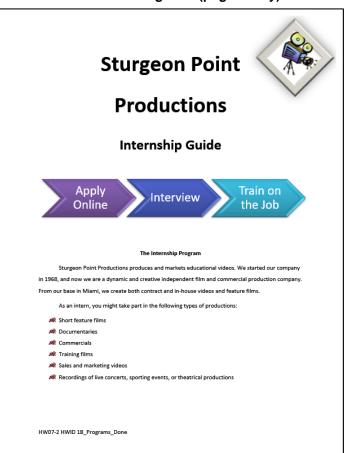
**HW06-1 Births Chartsheet** 



#### HW07-1 1A Flyer With Field Codes Showing



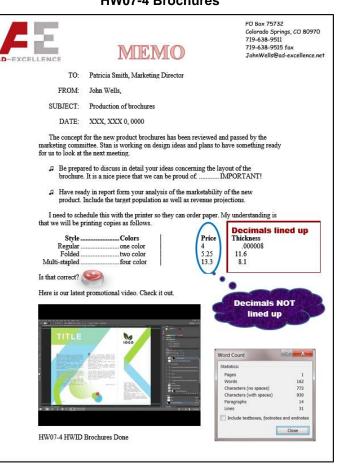
#### HW07-2 1B Programs (page 1 only)



#### HW07-3 Agenda



#### **HW07-4 Brochures**



#### HW08-1 2A Resume

# Josh Hayes (727) 555-0313 rn Lane, St. Petersburg, FL 33713 Technology writing and editing position in the robotics industry, using research and advanced editing skills to communicate with customers. Objective Two years' experience in robotics lab for Aerospace Instruction Team Excellent interpersonal and communications skills Proficiency using Microsoft Office and page layout and design software · Fluency in spoken and written Spanish Experience Assistant Executive Editor, Tech Today Newsletter, St. Petersburg, FL Write and edit articles for popular college technology newslette Responsible for photo editing, cropping, and resizing photos for newsletter • Winner of Top College Technology Publication Award Instructional Lab Assistant, University of South Florida, Tampa, FL July 2018 to June 2020 Assisted robotics professors with sophisticated experiments Set up robotics practice sessions for Aerospace Instruction Team College Assistant, Florida Port Community College, St. Petersburg, FL July 2016 to June 2018 In Aerospace Department, helped students with homework, explained assignments, organized materials for professors Set up robotics lab assignments for students University of South Florida, Tampa FL Bachelor of Science, Mechanical Engineering, June 2020 Florida Port Community College, St. Petersburg, FL Associate of Arts, Journalism, June 2018 Elected to Pi Tau Sigma, honor society for mechanical engineers Qualified for Dean's List, six semesters Student Mentor, helped other students in engineering programs Honors And Activities

#### HW08-2 2B Cover Letter

#### Jennifer Garcia

1776 Bay Cliff Drive, Tampa, FL 33602 (727) 555-0347 Jgarcia@alcona.net

May 12, 2020

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 Fort Community College.

With a permanent position as my 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

Sincerely,

Jennifer Garcia

Enclosur

HW08-2 HWID Cover Letter Done

#### HW08-3 Bill of Rights (page 2 only)

#### **Amendment VII**

HW08-1 HWID Resume Done

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 Elisworth
Jonathan Elmer
William Few
William Grayson
James Gunn
John Henry
Raiph Izard
William S. Johnson
John Langdon
Richard Henry Lee
William Maclay
Robert Morris
William Paterson
George Read
Fernillip John Schuyler
Caleb Strong
Paine Wingate

HW08-3 HWID Bill of Rights Done



#### HW08-4 Park

MEMO TO: Dana Brothers, Vice President, Marketing

FROM: Valerie Fai

DATE: Tuesday, July 16, 2019

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	Close
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:
d Tts	52" tall	Drive alone
Speed Go-Karts	16 years old	Drive with a passenger
<b>S</b> 8	40" tall	Ride as a passenger
e s	44" tall	Drive alone
Bumper Boats	14 years old	Drive with a passenger
₩	32" tall	Ride as a passenger
≒≝	10 years old	Play without parent/guardian
liniatu e Golf	No age limit	Play with parent/guardian
<u>a</u>	5 years old	Play with 12+ year old companion

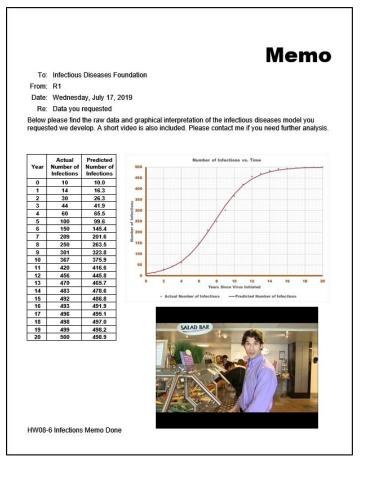
HW08-4 HWID Park Done

#### HW08-5 Sales

# Sales Record for January for First National Bank Date Product Amount Sales Rep Points 6,300 Betsey 6,000 Betsey 5,000 Betsey 150 Betsey 5,000 Carolyn 29 Jan | Savings 44 400 120 200 16 10 1750 145 12 Jan | Savings | 16 Jan | Certificate | 13 Jan | Certificate | 14 Jan | Certificate | 14 Jan | Certificate | 15 5,000 | Carolyn 2,000 | Carolyn 1,450 | Carolyn 5,000 | Diane 4,500 | Diane 1,500 | Diane 600 | Diane 5,000 2,500 1,200 5,000 Jonell Jonell Jonell Pam 1650 5,000 4,000 3,000 250 28 300 240 30 40 300 6,000 5,000 1,000 800 15,000 5,000 1,750 6,500 5,600 Paula Paula Rhonda Rhonda 5,000 Rhonda 1,750 Rhonda 6,500 Richard 5,600 Richard 2,000 Richard 500 Richard 1,600 Sharon 1,000 Sharon 750 Sharon 5 Jan Savings 6 Jan Auto Loan Sum = 116,000

HW08-5 HWID Sales Done

#### **HW08-6 Infections Memo**



#### HW09-1 3A Quantitative Technology (Works Cited page 4)

#### Foster 4

#### Works Cited

 ${\sf Glaser, John\,P., and\,Claudia\,Salzberg.}\ The\, {\it Strategic\,Application\,of\,Information\,Technology\,in\,Health\,Care}$ 

Ogden, Cynthia L. NCH5 Data Brief Number 82. 15 January 2012. Web. 17 January 2021.

Organizations. San Francisco: Jossey-Bass, 2011. Print.

Topol, Eric J. The Creative Destruction of Medicine. New York: Basic Books, 2012. Print.

HW09-1 HWID 3A\_Quantitative\_Technology\_Done

# age 4) HW09-2 3B Environment Newsletter



#### **University Medical Center Goes Green**

Volume 1, Number 1

January 202

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.

#### DEENER LANDSCADING

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 noncompostable 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 HWID 3B\_Environment\_Newsletter\_Done

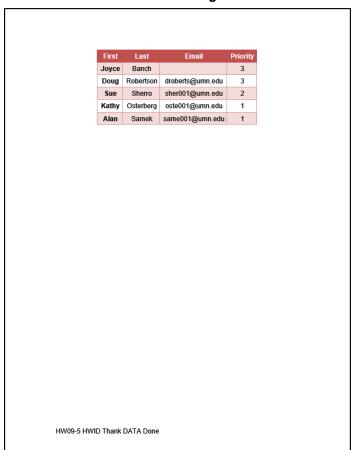
#### **HW09-3 Home Address Labels**

loe College HWID	Joe College HWID	Joe College HWID
Room 203 Bailey Hall, St. Paul	Room 203 Bailey Hall, St. Paul	Room 203 Bailey Hall, St. Paul
Campus	Campus	Campus
Campus mail code: 6017	Campus mail code: 6017	Campus mail code: 6017
651-555-1234	651-555-1234	651-555-1234
Joe College HWID	Joe College HWID	Joe College HWID
Room 203 Bailey Hall, St. Paul	Room 203 Bailey Hall, St. Paul	Room 203 Bailey Hall, St. Paul
Campus	Campus	Campus
Campus mail code: 6017	Campus mail code: 6017	Campus mail code: 6017
651-555-1234	651-555-1234	651-555-1234
loe College HWID	Joe College HWID	Joe College HWID
Room 203 Bailey Hall, St. Paul	Room 203 Bailey Hall, St. Paul	Room 203 Bailey Hall, St. Paul
Campus	Campus	Campus
Campus mail code: 6017	Campus mail code: 6017	Campus mail code: 6017
551-555-1234	651-555-1234	651-555-1234
loe College HWID	Joe College HWID	Joe College HWID
Room 203 Bailey Hall, St. Paul	Room 203 Bailey Hall, St. Paul	Room 203 Bailey Hall, St. Paul
Campus	Campus	Campus
Campus mail code: 6017	Campus mail code: 6017	Campus mail code: 6017
551-555-1234	651-555-1234	651-555-1234
loe College HWID	Joe College HWID	Joe College HWID
Room 203 Bailey Hall, St. Paul	Room 203 Bailey Hall, St. Paul	Room 203 Bailey Hall, St. Paul
Campus	Campus	Campus
Campus mail code: 6017	Campus mail code: 6017	Campus mail code: 6017
651-555-1234	651-555-1234	651-555-1234
Joe College HWID	Joe College HWID	Joe College HWID
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Campus	Campus	Campus
Campus mail code: 6017	Campus mail code: 6017	Campus mail code: 6017
651-555-1234	651-555-1234	651-555-1234
Joe College HWID	Joe College HWID	Joe College HWID
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Campus	Campus	Campus
Campus mail code: 6017	Campus mail code: 6017	Campus mail code: 6017
651-555-1234	651-555-1234	651-555-1234
loe College HWID	Joe College HWID	Joe College HWID
Room 203 Bailey Hall, St. Paul	Room 203 Bailey Hall, St. Paul	Room 203 Bailey Hall, St. Paul
Campus	Campus	Campus
Campus mail code: 6017	Campus mail code: 6017	Campus mail code: 6017
551-555-1234	651-555-1234	651-555-1234
Joe College HWID	Joe College HWID	Joe College HWID
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Campus	Campus	Campus
Campus mail code: 6017	Campus mail code: 6017	Campus mail code: 6017
551-555-1234	651-555-1234	651-555-1234
loe College HWID	Joe College HWID	Joe College HWID
Room 203 Bailey Hall, St. Paul	Room 203 Bailey Hall, St. Paul	Room 203 Bailey Hall, St. Paul
Campus	Campus	Campus
Campus mail code: 6017	Campus mail code: 6017	Campus mail code: 6017
551-555-1234	651-555-1234	651-555-1234

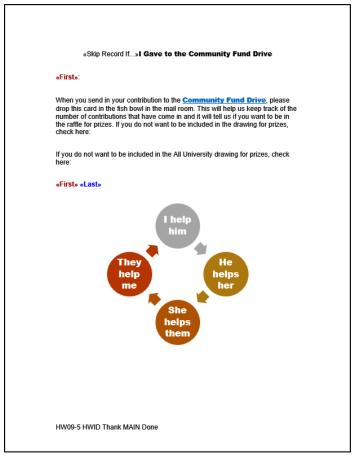
# **HW09-4 Name Tag Labels**

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 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
Hello, my name is My major is My interests are	Hello, my name is My major is My interests are

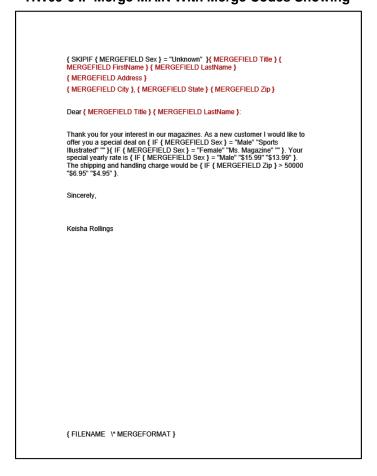
#### **HW09-5 Thank Merge DATA**



#### **HW09-5 Thank Merge MAIN**



#### HW09-6 IF Merge MAIN With Merge Codes Showing



#### 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 manking requires that they should declare the causes which impel them to the properties.

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, Liberly 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**. Iaying 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 HWID Character Styles Done

#### HW10-3 Census (page 1)

HW10-3 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:hh

- 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
- 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
- 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

#### HW10-2 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,

#### 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 HWID Paragraph Styles Done

#### HW10-3 Census (page 2)

HW10-3 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.

original population schedules, from 1790 through 1920 (virtually all of the 1890 records were destroyed in a 1921 fire), are available at 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 copies of the

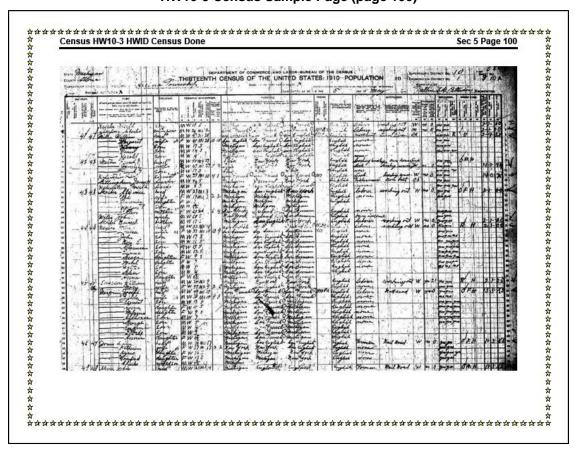
There are sound of the sumame rather than its spelling indexes on microfilm for the 1880, 1900, and 1920 censuses for each State, and for 1910 for 21 States, principally in the South. Alphabetic indexes to the 1790-1860 and most of the 1870 censuses are available in genealogical libraries.

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.

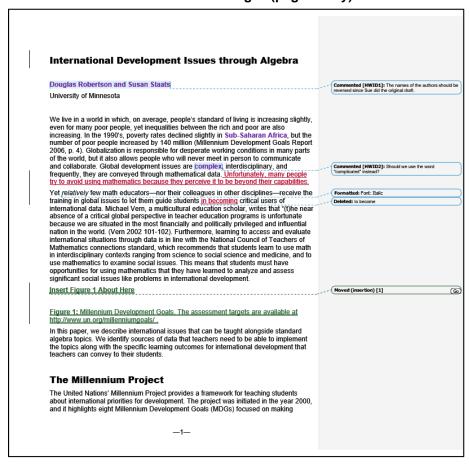
A number of State and territorial censuses were Nationalized in the intra-decennial years, particularly in the 19th century. See Henry J. Dubester, An Annotated Bibliography of Censuses Taken After the Year 1790, by States and Territories of the United States (Washington, DC, 1948, reprinted 1969 and 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)



#### HW10-4 Track Changes (page 1 only)



#### **HW10-5 Large Document Table of Contents (section 3)**

# 

The page numbers on these four pages may be different from yours due to computer and printer setups.

Print pages that contain

Table of Contents
Equations
Table 1
Index

#### **HW10-5 Large Document Equations (page 7)**

WID

#### 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  $5x^2 - 3x + 1 = 0$ ."

Checkpoint questions also promote student-student interaction, which makes a computer-mediated course feel more like a regular class rather than an open lab. If a student is having difficulty, the instructor provides feedback to point the student in the

#### HW10-5 Large Document Table 1 (page 14)

3.39, p = 0.001.			= 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			

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. The results, shown in Table 2, indicated significant differences in the activities that contributed most to student learning according to a chi-square test, (3, N=580)=51.1, p<0.001. Computer-mediated students indicated that using the software was the primary

#### **HW10-5 Large Document Index (page 32)**

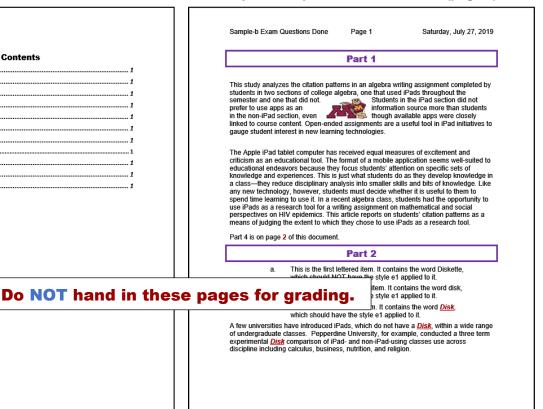
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Here, quad refers to the number of sides of a square, which has 2 dimensions.

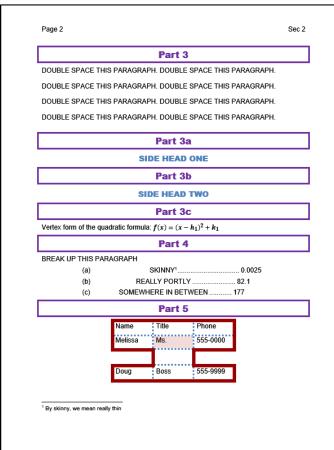
#### **Key for Sample-b Exam Questions TOC**

# Table of Contents Part 1 1 Part 2 1 Part 3 1 Part 3b 1 Part 3c 1 Part 4 1 BREAK UP THIS PARAGRAPH 1 Part 5 1 Part 6 1 Index 1

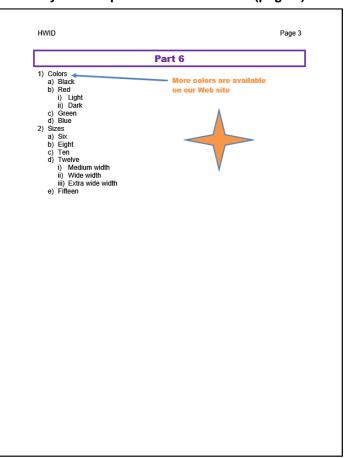
#### **Key for Sample-b Exam Questions (page 1)**



# Key for Sample-b Exam Questions (page 2)



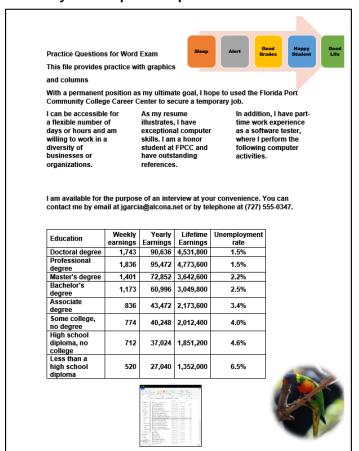
#### **Key for Sample-b Exam Questions (page 3)**



#### **Key for Sample-b Exam Questions (page 101)**

Sample-b Exam Questions Done	Page 101	Saturday, July 27, 2019
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#### Key for Sample-c Graphics and Other Stuff



# Key for Sample-e Table Sort



#### **Key for Sample-f Merge MAIN Codes Showing**

# { SKIPIF { MERGEFIELD Height } = "" }Dear President {

MERGEFIELD LastName }:

We have analyzed your data and find that your height of { MERGEFIELD Height } and weight of { MERGEFIELD Weight } indicates that { IF { MERGEFIELD Weight } > 200 "you need to lose a few pounds" "you are in good shape" }

Sincerely.

Dr. Watson

#### Key for Sample-g Merge PRINTED (page 1 of 41)

Dear President Arthur:

We have analyzed your data and find that your height of 66 and weight of 231 indicates that you need to lose a

Sincerely.

Dr. Watson

# Do NOT hand in these pages for grading.

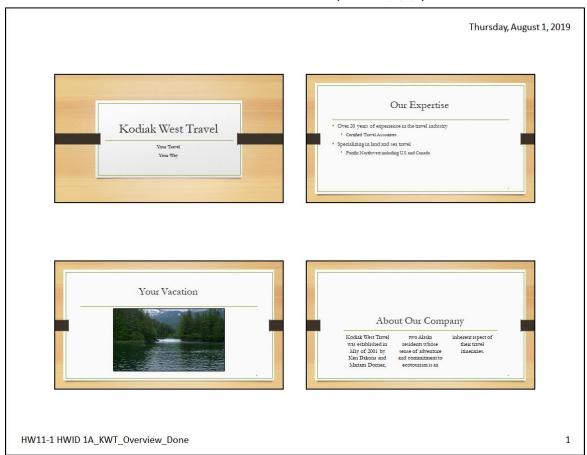
#### **Key for Sample-h Merge Labels**

#### «FirstName» «Next Record»«FirstName» «Next Record»«FirstName» «LastName» «LastName» «LastName» «BirthDate» «BirthDate» «BirthDate» «Next Record»«FirstName» «Next Record»«FirstName» «Next Record»«FirstName» «BirthDate» «BirthDate» «Next Record»«FirstName» «Next Record»«FirstName» «Next Record»«FirstName» «LastName» «LastName» «LastName» «BirthDate» «BirthDate» «BirthDate» «Next Record» «FirstName» «Next Record»«FirstName» «Next Record»«FirstName» «LastName» «LastName» «LastName» «BirthDate» «BirthDate» «BirthDate» «Next Record»«FirstName» «Next Record»«FirstName» «Next Record»«FirstName» «LastName» «LastName» «LastName» «BirthDate» «BirthDate» «BirthDate» «Next Record»«FirstName» «Next Record»«FirstName» «Next Record»«FirstName» «LastName» «LastName» «LastName» «BirthDate» «BirthDate» «BirthDate» «Next Record»«FirstName» «Next Record»«FirstName» «Next Record»«FirstName» «LastName» «LastName» «LastName» «BirthDate» «BirthDate» «BirthDate» «Next Record»«FirstName» «Next Record»«FirstName» «Next Record»«FirstName» «LastName» «LastName» «LastName» «BirthDate» «BirthDate» «BirthDate» «Next Record»«FirstName» «Next Record»«FirstName» «Next Record»«FirstName» «LastName» «LastName» «BirthDate» «BirthDate» «BirthDate» «Next Record»«FirstName» «Next Record»«FirstName» «Next Record»«FirstName» «LastName» «LastName» «LastName» «BirthDate» «BirthDate» «BirthDate»

# **Key for Sample-i Merge Labels PRINTED (page 1)**

Chester		Calvin		William	
Arthur	- 1%	Coolidge	-15	Harrison	- 18
Oct 5, 1829		Jul 4, 1872		Feb 9, 1773	7.5
Thomas		James		James	
Jefferson	- 19	Madison		Monroe	- 19
Apr 13, 1743	乙學	Mar 16, 1751		Apr 28, 1758	7.7
Zachary		John		George	
Taylor	-8	Tyler	-8	Washington	- 19
Nov 24, 1784		Mar 29, 1790		Feb 22, 1732	
Woodrow		Dwight		Lyndon	
Wilson	-8	Eisenhower	-8	Johnson	-8
Dec 28, 1856		Oct 14, 1890		Jan 4, 1916	7.7
James		James		Ulysses	
Buchanan	-8	Garfield	-8	Grant	-8
Apr 23, 1791		Nov 19, 1831		Apr 27, 1822	
Warren		Benjamin		Rutherford	
Harding	-8	Harrison	-8	Hayes	-9
Nov 2, 1865		Aug 20, 1833		Oct 4, 1822	
William		William		Martin	
McKinley	-8	Taft	-8	Buren	-8
Jan 29, 1843		Sep 15, 1857		Dec 5, 1782	1
Millard		Theodore		Franklin	
Fillmore	-8	Roosevelt	- B	Roosevelt	- 5
Jan 7, 1800		Oct 27, 1858		Jan 30, 1882	1
Grover		Franklin		Andrew	
Cleveland	-B	Pierce	-8	Jackson	- 15
Mar 18, 1837		Nov 23, 1804	1	Mar 15, 1767	1.1
Andrew		James		Gerald	
Johnson	- 1%	Polk	- 1%	Ford	- 15
Dec 29, 1808		Nov 2, 1795		Jun 6, 1923	100

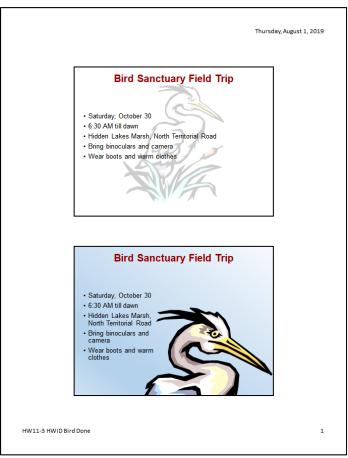
#### **HW11-1 1A KWY Overview (slides 1,3,4,5)**



#### HW11-2 1B Seattle Itinerary (slides 1,3,4,5,6,7)



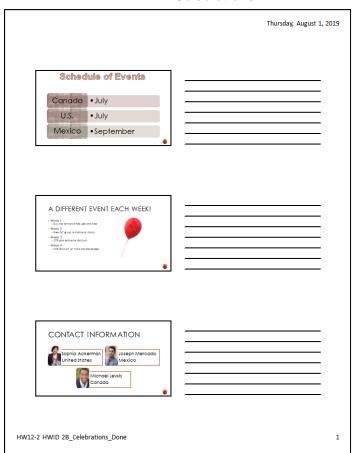
#### HW11-3 Bird



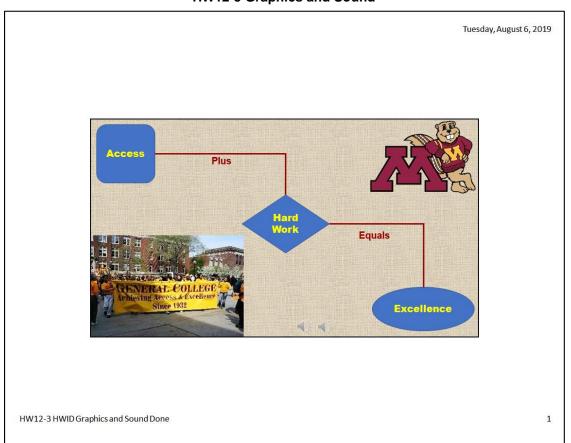
# HW12-1 2A Safety

# Injury Prevention—Protect Guests Sensation Park Sensitive for finance and sense and

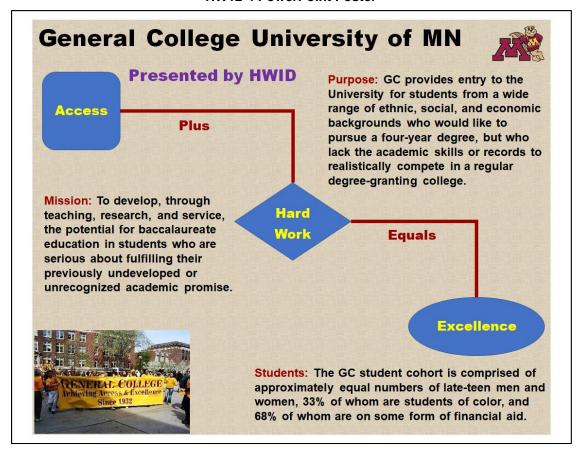
#### HW12-2 2B Celebrations



**HW12-3 Graphics and Sound** 



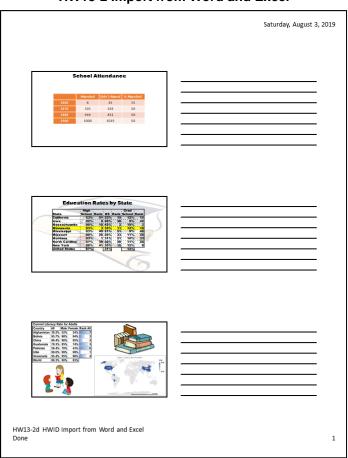
#### **HW12-4 PowerPoint Poster**



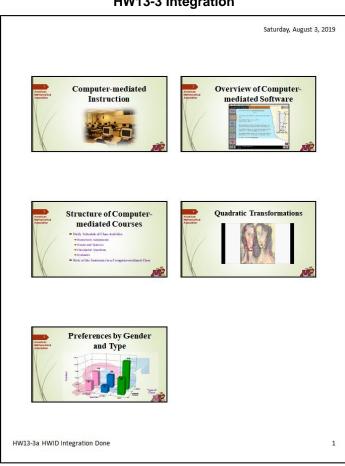
#### HW13-1 3A Trails



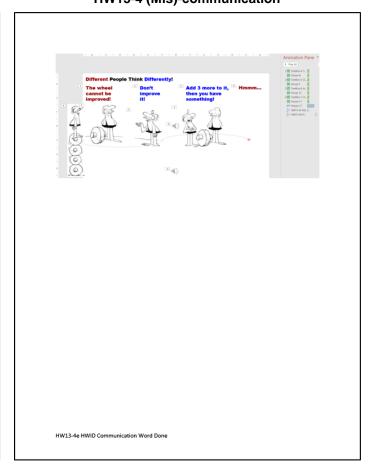
# **HW13-2 Import from Word and Excel**



#### **HW13-3 Integration**



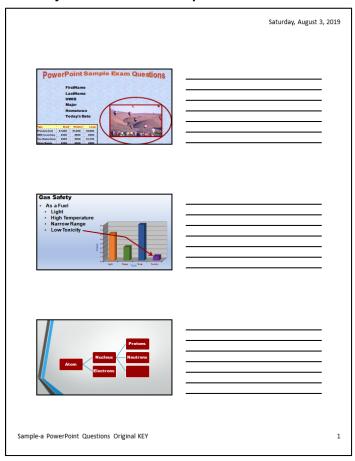
# HW13-4 (Mis)-communication



# **HW13-5 Course Evaluation**

HWID
Today's date
HW13-5 Course Evaluation
I accessed the course evaluation web site.

# **Key for PowerPoint Sample Exam Questions**



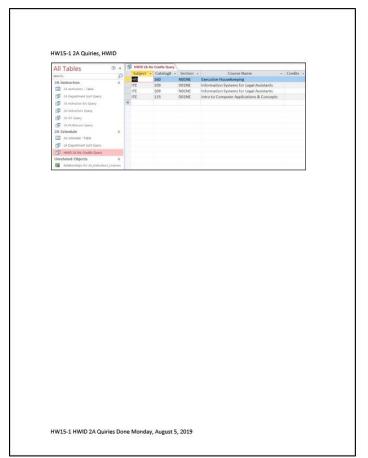
#### HW14-1 1A All Students Query

# HW14-1 1A HWID All Students Query 8/5/2019 Phone Student ID (512) 555-7550 1023045 (512) 555-2017 2034834 (512) 555-0717 2345677 Last Name First Name Email jfresch@tlcc.edu ltelfer@tlcc.edu Jenna Larry Ingram Vohra McElaney Wall jingram@tlcc.edu avohra@tlcc.edu cmcelaney@tlcc.edu wwall@tlcc.edu Ashwin Cleta (512) 555-0302 2349535 (512) 555-0305 2583697 (512) 555-2329 3128456 WenLi asnyder@ticc.edu (512) 555-9120 3456689 asnyder@ticc.edu (512) 555-2320 3456689 scaputo@tic.edu (512) 555-2330 3458632 cthomas@tic.edu (512) 555-0301 3569325 creid@tic.edu (512) 555-0301 3569325 creid@tic.edu (512) 555-9360 3586943 ahernandes@tic.edu (512) 555-9360 3586943 ralexander@tic.edu (512) 555-1018 3852938 crguyen@tic.edu (512) 555-1018 3852938 crguyen@tic.edu (512) 555-1018 3856930 cbradley@tic.edu (512) 555-034 4352683 altarnonio@tic.edu (512) 555-314 4352683 altarnonio@tic.edu (512) 555-314 4352683 Thomas Reid Stavish Hernandez Alexander Morris Carla Joseph Anna Rebekah ralexander@ticc.edu amorris@ticc.edu cnguyen@ticc.edu cbradley@ticc.edu Morris Atonye amorris@ttc.edu (512) 555-1018 3852938 Nguyen Cong conguyen@ttc.edu (512) 555-1004 3856930 Bradley Christine cbradley@ttc.edu (512) 555-2013 4352863 DiArtonio Avelina adiantonio@ttc.edu (512) 555-2013 4719238 Alvarez Eliza eawharez@ttc.edu (512) 555-204 4789302 Furfy Jama jrufry@ttc.edu (512) 555-204 4789304 Parkhill James jparkhill@ttc.edu (512) 555-2323 4852384 Kakaulian Anastasia akakaulan@ttc.edu (512) 555-2015 5820384 Kakaulian Anastasia akakaulan@ttc.edu (512) 555-2015 5850305 5849320 Soltan Reza rsokan@ttc.edu (512) 555-3045 285030 5849320 Campbell Daria dcampbell@ttc.edu (512) 555-1016 5860300

#### **HW14-1 1A Faculty Advisors Report**

Campus	Last Name	First Name	Email	
Northwest	Abromsky	Alexandru	aabromsky@tlcc.edu	
Northwest	Bell	Dora	dbe ll@t lcc.e du	
Northeast	Betancourt	Charles	cbetancouret@tlcc.edu	
Northeast	Bowman	Nuzhut	nbowman@tlcc.edu	
Southwest	Briggs	Luis	lbriggs@tlcc.edu	
Southe ast	Capelle	Arturo	acapelle@tlcc.edu	
Southwest	Friend	Gyula	gfriend@tlcc.edu	
Southe ast	Gilmore	Teshome	tgilmore@tlcc.edu	
Southwest	Goldani	ZsuZsa	zgoldani@tlcc.edu	
Southe ast	Hackett	Jessica	jhackett@tlcc.edu	
Southe ast	Haq	Mark	mhaq@tlcc.edu	
Northwest	Hart-Rodriguez	Melanie	mrodriguez@tlcc.edu	
Southe ast	Hasenfeld	Larthia	lhasenfeld@tlcc.edu	
Northwest	Holland	Timothy-John	tjholland@tlcc.edu	
Southe ast	Kilbride	Thea	tkilbride@tlcc.edu	
Northeast	Kubzansky	Amy	akubzansky@tlcc.edu	
Southe ast	Lang	Phillippe	plang@tlcc.edu	
Southwest	Michaels	Payne	pmichaels@tlcc.edu	
Northwest	Ong	Joel	jong@tlcc.edu	
Northeast	Saguy	Vilma	vsaguy@tlcc.edu	
Southe ast	Sideris	Dana	dsideris@tlcc.edu	
Southe ast	Soja	Binit	bsoja@t lcc.e du	]
Southwest	Suh	Kingston	ksuh@tlcc.edu	
Southwest	Sweeney	Megan	msweeney1@tlcc.edu	
Northwest	Szulkin	Martin	mszulkin@tlcc.edu	
Northeast	Torres	Robert	rtorres@tlcc.edu	]
Southwest	Treiman	Roger	rtreiman@capcc c.edu	
Northwest	Villareal	Jose Luis	jlvillareal@tlcc.edu	
Northwest	Wazir	Paul	pwazir@tlcc.edu	
				_

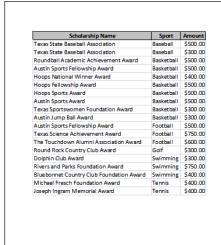
#### HW15-1 2A Queries



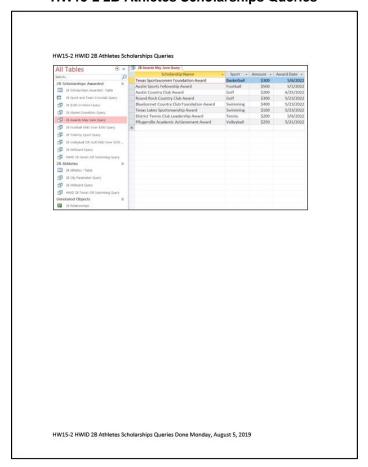
#### HW15-2 2B Tennis OR Swimming Query



#### HW15-2 300 or More Query Exported to Excel



HW15-2 2B Athletes Scholarships Queries



HW15-2 HWID 300 or More Query Excel Done

8/5/2019

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