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PC and Mac Education

The computers covered in these notes include a Dell Laptop and a MacBookPro.

by Mary Jo Fahey

Introduction to computer classes usually begin with terms that describe a computer's hardware and software. For this class, a practical lesson covering hardware includes a list of specs computer retailers such as Best Buy or Amazon use in their ads or on their sales floor.

Specs: Dell Latitude E6510
Ads for the Dell laptop (see note about Windows 7 at right) list the following specifications (specs):

Dell Latitude E6510 15.6" Laptop Notebook Windows 7 Pro Core i7-620M 2.66GHz/ 8GB RAM /SOLID STATE 120GB SSD HD DVD-RW +MS OFFICE

- The letters/numbers E6510 is the model number.
- Intel Core i7-620M 2.66GHz refers to the computer's microprocessor that is often referred to as the “brain” of the computer. 2.66GHz refers to the processor's speed.
- 8GB RAM Memory refers to RAM (random access memory), or the memory space inside the computer where programs operate while the computer is turned on. This power-dependent state is the reason you will need to save what you produce on a computer (examples: word processing documents or spreadsheets).

Abbreviations: KB (kilobyte), MB (megabyte), GB (gigabyte) and TB (terabyte)

- SOLID STATE 120GB SSD HD is a more permanent storage space inside a computer (compared to RAM memory). SSD HD is an abbreviation for solid state hard drive.

Specs: MacBookPro
Ads for the MacBookPro laptop list the following specifications (specs):

MacBookPro - 13.3-inch LED-backlit display with IPS technology, 2.9GHz dual-core sixth-gen Intel Core i5 processor, Intel Iris Graphics 550, 8GB of RAM, 256GB SSD configurable to 256GB, 512GB, or 1TB SSD

- LED-backlit display with IPS technology refers to the screen. Thin screens on laptops replaced large computer monitors (cathode ray tubes). Thin computer displays are sometimes called LCDs (liquid crystal displays). LED is an abbreviation for Light Emitting Diode and IPS is an abbreviation for In-plane switching.
- 2.9GHz dual-core sixth-gen Intel Core i5 processor refers to the computer’s microprocessor with 2.9GHz referring to the speed.
- Intel Iris Graphics 550 refers to extra processing (on a graphics card) in computers that are used for graphics applications or graphic-intensive games.
- 8GB Memory refers to RAM (random access memory).
• 256GB SSD configurable to 256GB, 512GB, or 1TB SSD refers to the computer’s hard drive.

**Operating Systems**

Operating system (OS) software controls computer hardware. The OS resides in ROM memory (read only memory), in RAM when the computer is turned on and on the hard drive. The operating systems for the computers we are covering include:

- Dell Latitude Notebook – Windows version 7
- MacBookPro – macOS Sierra (version 13)

Note: PC and Mac are microcomputers (vs. mainframe or minicomputer). All computers need an operating system. In the late 1960s, Bell Labs developed a famous operating system called Unix (for minis). Among computer people, Unix is well-respected for multitasking and multiuser functions. It has a reputation for being difficult to learn. A version called Linux was later developed for microcomputers.

**Computer Keyboard**

From their earliest introduction, computer keyboards were typewriter-like. Typewriters can be seen in films and television such as:

- *All the President’s Men* (1976) with Dustin Hoffman and Robert Redford.

Typewriters have a QWERTY layout (referring to the letters along the top left section of the keyboard) that has been used since 1873. The layout is used all over the world with minor variations. This layout, even on a small notebook/laptop computer, provides enough space for both hands and fast typing.

In spite of their long history, more than one computer magazine has predicted the end of notebook/laptop computing in favor of a tablet that relies on Web-based applications.

Tablet computers are designed to be held with both hands. Typing is accomplished with the thumbs. In 2013, a peer-reviewed scientific journal called *PLOS* (Public Library of Science) published an article about discomfort and task difficulty associated with tablet computing.

In February 2015, *WIRED* magazine predicted that in less than two years, your smartphone could be your only computer. In May 2015, Microsoft developer evangelist Jerry Nixon announced that Windows 10 would be the last

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2 “In Less Than Two Years, a Smartphone Could Be Your Only Computer,” Christina Bonnington,. *WIRED*, 02/10/2015, https://www.wired.com/2015/02/smartphone-only-computer/
version of Windows. Although Forbes magazine’s Gordon Kelly wrote that Windows is not going anywhere, in 2015, Intel announced 12,000 layoffs by mid 2017 and other articles published at the same time predict that smartphones will replace PCs. Discontinuing Windows represents a phase-out of the QWERTY keyboard and a phase-out of the QWERTY keyboard would lead to a phase-out of written language. Tablet screens range from 5 inches to 10 inches and they have a slimmed down operating system that usually does not support printers. Tablets are for watching videos, browsing the Internet, and reading e-mail. Developers are really focused on the smartphone. In 2017, WIRED reporter Elizabeth Stinson covered Google’s annual developer conference and said keyboards are fading into obscurity.

Voice-User Interface (VUI)
A voice-user interface (VUI) makes human interaction with computers possible through a voice/speech platform in order to initiate an automated service or process.

In January 2018, author Sam Lawson of ClickZ wrote an excellent report titled “The Past, Present, and Future of Speech Recognition Technology.” He says Amazon, Google, Apple, and Microsoft are the key players in western markets:

- Amazon platform: Alexa
- Google platform: Google Assistant
- Apple platform: Siri
- Microsoft platform: Cortana

Smartphone Owners Are Shoppers
Sam Lawson explains that tech giants seeking market share in the voice-user interface market are interested in conversational interactions that lead to purchases. In other words, the tech giants want consumers to spend more time shopping and less time reading and writing.

Problems With Voice-User Interfaces
One of the most glaring problems with voice-user interfaces are homonyms, or words that sound alike but have different meanings. Homonyms may either be homophones or homographs:

- Homophones: Words that sound the same but have different meanings and different spellings. Example: to, two, and too.
- Homographs: Words that are spelled the same but have different meanings. Example: left (past tense of leave) and left (opposite of right).

Smartphones Harm
There are numerous problems associated with smartphones in addition to the implications surrounding an elimination of the QWERTY keyboard and voice-user interface glitches with homonyms that include:

2 “Intel to lay off 11% of workforce in big shift from PCs,” Elizabeth Weise, USA TODAY, April 19, 2016, https://www.usatoday.com/story/tech/2016/04/19/intel-layoffs-12000-11/83242832/
7 Alan Cooper’s List of Homonyms, https://www.cooper.com/alan/homonym_list.html
8 List of Homographs, https://ipfs.io/ipfs/QmXoyipizW3WknFjnKL-wHCnL72vedxjQkDDP1mXWo6uco/wiki/List_of_English_homographs.html
• Biological harm due to constant exposure to a telephone receiver
In 2000, California’s Ecological Options Network produced a documentary called Public Exposure: DNA, Democracy and the Wireless Revolution. The film, available at YouTube, describes the dangers of chronic exposure to a telephone receiver, https://www.youtube.com/watch?v=IJbCa-MZwXM

It has been 18 years since Public Exposure was produced and two factors are important to understand:

a. Smartphones have replaced regular cell phones and addiction has developed (see: “Teen and adult addiction” below). The number of people who have adopted cell phones has increased and they are exposed for longer periods. In June 2017, The Pew Research Center published “10 facts about smartphones as the iPhone turns 10.” This article explains how the cell phone market has expanded.

b. The telephone receivers in the Public Exposure documentary are similar to the telephone receivers in smartphones and they are just as dangerous.

• Destruction of small businesses
Most independent small businesses have closed. Cell phone apps now threaten independently owned franchises. Meineke franchises are an example. Ninety-nine percent of Meineke businesses are franchises that cannot compete with sites such as Cars.com. Motels in the hospitality industry are a similar example. Franchise owners cannot compete with sites such as Trivago.com.

• Teen and adult smartphone addiction
Numerous scientific studies have examined smartphone addiction. Addiction in general is linked to dopamine receptor deficiency. Dopamine receptors are involved in brain chemistry as well as the renal system (fluid waste, or urinary system). Long term, dopamine receptor deficiency leads to renal failure. Below, you will find citations to articles that describe dopamine receptor deficiency.

A scientific study listed in the National Library of Medicine's PubMed/MEDLINE database includes a review of studies that have been published about addiction to cell phones. A “review” in a scientific journal is similar to a “roundup” in a regular consumer magazine. Writers who work in consumer magazine publishing often use this format to create balance by collecting information from a number of experts. Scientists who write a review usually assemble work that is already published in highly respected peer-reviewed publications. At a peer-reviewed publication, the editor does not decide what will be published. Instead, studies are submitted and the papers are sent to a group of the authors’ peers who make the decision.

In addition to the review article, be sure to read two articles that were published in 2015:

A. *Time* magazine's data from Deloitte (currently one of the world's Big Four accounting firms) that reveals the number of times people check their smartphones and how many Americans check smartphones while they dine in restaurants.

B. A Bank of America Consumer Mobility Report published in *The Huffington Post* revealing how many people sleep with their smartphones.

- **Teen depression**
  American psychologist Jean Twenge caused a stir recently because she's written a book that says teens who use smartphones feel depressed and lonely. When Jean's book was first published, she wrote an article for *The Atlantic* and was interviewed on National Public Radio. Her article is titled, “Have Smartphones Destroyed a Generation?” Slate magazine writer Lisa Guernsey responded with an interesting article titled, “Don’t Take Away Your Teen’s Phone.” Lisa's tag line, “Smartphones are linked to problems, but they haven’t ‘destroyed a generation,’” gives the impression that she disagrees with Jean. Instead, she agrees that the problem exists, and suggests that the problem is actually much bigger.

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(Caption) According to Deloitte (currently one of the world's Big Four accounting firms), on average, people in the U.S. across all age groups check their smartphones 46 times each day. Those between ages 18 and 24 check their phones 74 times each day. Deloitte also found that 81% of Americans spend time looking at their phones while dining out in restaurants.

(Caption) In 2017, American psychologist Jean Twenge caused a stir because she's written a book that says teens who use smartphones feel depressed and lonely.
Computer Power Button

Your PC or Mac will have a Power On button (action: press and hold) that is located on the edge of the keyboard. PCs, major appliances, avionics (aircraft, artificial satellites, and spacecraft), and communications, or medical equipment have self-test programs that initiate at power-on. This program, called Power-on Self-Test, or POST, is located in firmware, or ROM memory. The POST program is part of a pre-boot sequence that loads the computer's operating system into the computer's RAM memory. This process is called “bootimg” a computer. The word “boot” comes from the word “bootstrap” that dates back to the 19th century. The “bootstrap” was used to pull a pair of boots on. Early PCs and Macs were called microcomputers (instead of minicomputers or mainframe computers). The POST sequence used to be displayed as text on the monitor. On laptops, there is a graphic.

Notebook computers have a battery that lasts 7 to 9 hours. When you first set up your computer, you may need a power strip if your desk is not located near an AC power outlet. Battery recharging occurs automatically when you plug your notebook into an AC outlet.

Computer Touchpad

Touchpads are a modern replacement for a computer mouse that was introduced as a handheld pointing device on computers with a graphical user interface (vs. text-based DOS prompt that required a keyboard). Unlike a computer mouse that has left and right buttons, a touchpad has left and right regions. General movements include:

<table>
<thead>
<tr>
<th>Touchpad Movement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Click</td>
<td>press and release with a finger</td>
</tr>
<tr>
<td>Left single-click</td>
<td>click on the left of the Touchpad</td>
</tr>
<tr>
<td>Left double-click</td>
<td>clicking the pad two times in quick succession counts as a different gesture than two separate single clicks (e.g. selects an entire word in word processing).</td>
</tr>
<tr>
<td>Right-click</td>
<td>brings a menu with different options depending on the software</td>
</tr>
<tr>
<td>Drag and drop</td>
<td>pressing and holding on the pad, then moving without releasing.</td>
</tr>
</tbody>
</table>

USB Port

A Universal Serial Bus (USB) has become an industry standard for connecting cables used with peripheral devices such as external flash (or thumb) drives, printers, and digital cameras. There are usually 1 or 2 USB ports on a notebook computer. They are located along the edge of the machine.

Memory and Storage

Computer memory is considered to be hardware. When we covered the computer specs, RAM, or random access memory was listed as a feature in both a PC and a Mac (6 Gigabyte or Gb and 8 Gigabyte or Gb). This is the area of memory where a portion of the computer's operating system is loaded on startup as well as the application programs (when you launch or open them). RAM memory is erased when the computer is turned off (similar to a calculator). There is another type of memory the computer uses called ROM or Read Only Memory also called firmware. This area of memory holds the Power-On Self-Test program. ROM memory does not get erased when the computer is turned off. Computer manufacturers do not list ROM memory with the computer’s features because it is not accessible.

A disk drive is a hardware component that can read or write data. When you open a file you have saved, the data is read into RAM memory and when you save a file, data is written to the disk drive. The information is semi-permanent which means it will remain on the drive when the computer is turned off. Files can be erased when (a) Dragged to the Trash (Mac) or Recycle Bin (PC) (b) The Trash or Bin is emptied, see: https://en.wikipedia.org/wiki/Trash_(computing)
**DVD Player**

DVD Players on the Dell notebook and MacBookPro are controlled by DVD software. Windows 7 has a program called Windows Media Player and the Mac's software is simply called DVD Player.

**Printer**

Printers depend on small programs called drivers that need to be downloaded from the manufacturers Web site and installed in the computer's hard drive. This step will help the computer's operating system identify the device and control printing.

**Computer Accessories**

Notebook computers need to be carried in a computer bag with a luggage tag. The pockets in this bag might include accessories such as a flash drive for storing files, Goal Zero Luna LED Light, Olympus E-102 Headset, - OLY141567, Headset's long cord that plugs into computer's sound card.

**Application Programs (Apps)**

Computers need a combination of hardware and software to operate. We have covered mostly hardware and operating system software that controls the hardware. Applications are specialized programs that fall into various categories such as:

**Desk Accessories**
- Calendar
- Calculator

**Business Software (examples:)**
- Apple's Text Edit
- Windows NotePad
- Windows WordPad
- OpenOffice Word Processing (or Text Processor)
- OpenOffice Spreadsheet
- OpenOffice Presentation
- OpenOffice Drawing
- OpenOffice Database

**Computer Graphics**
- OpenOffice Drawing
- Apple Computer's Preview
- Adobe Photoshop
- Adobe Illustrator

**Communications**
- E-Mail (Web Browser Based)
- E-Mail (Client Software that resides on the hard drive)

**Web**
- Browser
- HTML Editor for Web page creation (user friendly)
- Text Editor for Web page creation (requires HTML tags)
- Public Server Software (e.g. X10hosting.com)
- FTP Software (may be built in to public server software such as X10hosting.com)

(Caption) In *Star Trek IV*, Scotty talked to a mouse and was frustrated that nothing happened (today's notebooks have Touchpads).

**Windows Taskbar Equivalent to Mac Dock**

PC notebook computers are described first with the hardware manufacturer and then by the version of Windows. For example, you could say, “I use an Dell notebook running Windows 7.” Alternatively, you could say, “I use a MacBook Pro running Sierra.”

In these versions of the operating system (OS) the screen has a graphic image that resembles a Desktop. In Windows, the area across the bottom of the screen is called the System Tray or Taskbar. On a Mac, this area is called the Dock. The icons in this area of the screen are clickable icons that start programs.

**Turning Off Your Computer**

Although the Power On button can be depressed and held down to turn off and reboot your computer, this method of powering down is only used when your computer freezes.

The proper way to turn off your computer involves a menu selection that is accomplished with your Touchpad. The steps in Windows 7: (1) open the Start Menu by clicking the Windows button on the bottom left corner of the screen (2) Select the Shut down button on the lower right-hand side.
Turning Off Your Computer (continued)

On a Mac, the main screen will have a Desktop menu across the top. There will be an Apple icon at the left edge. Select Shut Down… from this pull-down menu to turn off your computer. Similar to the PC, Sleep and Restart will be alternative options on this menu.

Macintosh and Windows Desktop

Operating System software was mentioned previously when we covered computer specs. The “OS” controls computer hardware including disk drives for storage. The original Apple computer used audio cassettes for storage and later, disks. At the point when personal computers had disks for storage the portion of the operating system that managed disks became a “disk operating system.” Before Macintosh and Windows PCs, Apple and PC computers ran text-based DOS software. As mentioned in the section about the computer power button, a small amount of the operating system resides in a permanent part of the computer memory called ROM, but most of it is located on a computer disk (today, a hard drive).

Today, text-based operating system software has been almost entirely replaced with OS systems that have a desktop metaphor. Apple has always referred to their Macintosh disk operating system as the Finder.

The original Finder and Windows desktop were very easy to understand because you could see your hard drive. In the images at right, you can see that the Mac hard drive is labeled Macintosh HD and the PC hard drive is labeled My Computer. Both desktops also had trash cans for throwing away files (Deletion is a separate step). Icons of the machine’s hard drive are no longer visible. For new users, it is important to understand the icon that is used to access the contents of your computer’s hard drive. On today’s machines, look for the following:

Start Button - In Windows 7, the Start button can be found in the bottom left of your screen. Microsoft uses the word Programs to refer to Application Programs.

Finder Icon - In all versions of the Mac OS, the Finder icon can be found at the bottom left of your screen. Apple uses the word Applications to refer to Application Programs.

Early machines could only load one application at a time. In contrast, today’s machines can have several applications open at once. Andy Hertzfeld, one of the main authors of the Macintosh system software, wrote an interesting article about the history of a program called Switcher (see the footnote on this page). One of the challenges for new users is to identify and manage what they have open on their computer.

Computer File Systems and Paths

In a text-based operating system, there is a main directory (or list) and subdirectories where files are stored. When the desktop metaphor was introduced, the computer hard drive icon replaced the main directory and folders replaced subdirectories. On a computer, the directory is hierarchical

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1 “Switcher,” by Andy Hertzfeld, Folklore, December 31, 2013. To access Andy’s story about Switcher, go to folklore.org and click on Andy’s name in the list of Characters. When his page appears, click on page 4 in his collection of stories and look for his article about Switcher.
and a comparison is often made to an inverted tree. The main directory is also called the “root directory.” On the text-based systems, the root was related to a lettering designation that referred to the physical disk. For example, the hard drive usually had a letter C designation. Drives can be partitioned with software and may contain more than one letter. Text-based systems also use the slash character as a directory separator (the concept of the slash originated with the Unix operating system). An expression known as the path name refers to a root directory and sequence of subdirectories that lead to a file. Unix systems use forward slashes and text-based DOS used back slashes. We still see these slashes in Web addresses. Paths exist in computers that use icons instead of text—they are just covered up.

**Folders**

Folder icons exist on computers with desktops, but they really function as subdirectories. New users who use folders instead of subdirectories will need to pay attention to the location of their files. Folder windows on the Mac, when open, have a path-like notation across the bottom of the window that shows what is called “nesting,” or folders within folders. You can also see a hierarchical list of where a folder is located if you hold down the Control Key and press on the name of the folder (top of window) when it is open. In OS version 10 (most known as OSX), Apple also introduced the “All My Files” Command that can be accessed with the Finder icon at the left end of the Dock (to access a list regardless of Folder location). Folder content can be sorted alphabetically if you click on the bar containing the word “Name.” Each of the other bars will also respond to a Click action for finding a file (e.g. by Date or by Kind).

**Managing Folders**

Folders open with a double click. Besides understanding how your folders are “nested,” you will need to learn how to close, minimize and maximize folder windows (I don’t maximize windows because I cannot see the Dock or the Taskbar in this mode). The images on this page contain buttons you can use to manage folders.

To create a new Folder in Windows 7, press and hold down the right side of your Touchpad. This action will display a drop down menu where your pointer is located. Select New and then select Folder. The keyboard shortcut for this action is Ctrl+Shift+N. A Click on the name with the left side of your Touchpad will select the name so that you type a new name.

To create a new Folder on a Mac notebook, Press and Hold the Finder icon to view Finder software options. Next, select New Folder from this menu. New folders that you create will be named Untitled Folder. To change this name, move your pointer over Untitled Folder. Next, Click, Press and then release. When you see the text box turn color, you can type a new name.

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(Caption) Buttons in the upper left corner of a Macintosh window include: Close (Red), Minimize (Yellow, reduce to a tiny icon in the Dock) and Maximize (Green, full screen) Note: You cannot see the Mac Dock in full screen mode. To leave Full Screen mode in Sierra (and Windows 7), the “F11” key when in full-screen mode, toggles between full screen and normal mode.

(Caption) Buttons in the upper left corner of a Windows 7 window include: Close (Red X), Maximize (full screen) and Minimize (Reduce to a button in the Taskbar) . Note: I avoid full screen mode on Windows and Mac computers because I cannot see the Dock or the Taskbar. To leave Full Screen mode in Windows 7 (and Sierra), the ”F11” key when in full-screen mode, toggles between full screen and normal mode.

To Memorize New Material, I Re-Read 3 Times

Whenever I need to memorize new material, I re-read (books and/or manuals) three times. I take detailed notes during the first read and then re-read my notes at least twice. I usually use a highlighter or ink with an alternate color during cycle 2 and 3. By the third read cycle, I can see and understand information that seemed difficult during the first read. After the third read, I usually do not understand 100%, but there are also times when I do.

Note taking is tedious, and you will feel like you want to quit. Persevere.
Class #1: Getting Started

Class participants will need a computer and accessories for use in a space suited for instruction. Power strips will be needed as well as a white erase board on wheels with a dry eraser and markers. Class participants should be encouraged to form a Computer Special Interest Group (SIG), also called a User's Group.

An instructor can assist participants as they set up a Google e-mail account. Decide whether Yahoo e-mail accounts should be set up. Google Calendar will be needed instead of the Calendar in Windows 7 that is very small. In contrast, the Google Calendar allows typed entrees for organizing schedules and events.

Exercise #1: Turn on the computer.

Exercise #2: Open a text editing software program (e.g. NotePad in Windows or Text Edit on the Mac). Type your name and hotel room number and save the document on the computer desktop.

Notes: To save a document, select Save from the File Pull-Down menu. In the dialog box that follows, type room_numbers_00_00_18 (entering the month and date) into the field labeled Save. Press on the Drop Down menu labeled Where and select the Desktop.

I often save a backup version of a file with the word backup added to the filename. To do this, you will need to use Save As from the File Pull Down menu instead of Save.

When you select Save As, a Save As dialog box will appear. Click on the filename you have used. You will notice a blinking cursor. A cursor provides a visual clue where your typing will be created. It can also be moved with the arrow keys. Move the cursor to the space after the underscore just before the date. Type backup and another underscore character. If you are not familiar with a keyboard, you will need to hold down the Shift key to access the underscore character. When you have finished, click on the Save button.

If you are working on a project with an original file version and a backup, you can update the original file by deleting the word backup in

(Caption) When you first start to use the Touchpad on your notebook computer and you look at the screen, you will notice what is called a pointer or cursor that moves. On a graphical user interface such as the Desktop, this cursor is used to select and move elements.

Inside a text processor, the cursor that moves looks like a capital I. And, when you position this cursor in a line of text and click, the cursor becomes a blinking line for inserting or deleting keyboard input.

Practice: Move Desktop Icons With Your Pointer

If you have never used a Touchpad on a computer notebook, you will need to practice. Once you have a feeling for how the Pointer responds to your finger movement on the Touchpad, the next step is to try moving one or more icons on your Desktop.

First, move the Pointer to an icon you would like to move. With one finger, press and hold down a left section of your Touchpad. At the same time Click on an icon once and do not let go. Move the icon. This action is called a Press and Drag.

To move more than one icon at once, first, with one finger, press and hold down a left section of your Touchpad. At the same time, draw an imaginary lasso to do a multiple select. When you are done, you will notice the icons are highlighted. This means they are selected. Next, without clicking, press and hold your pointer on one of the selected icons and move it. When you move more than one selected icon, they will move together.

Multiple selection can also be accomplished with the Shift + Click. With one finger, press and hold down the Shift Key on your keyboard. Click once on a group of icons one-at-a-time. Each new Click adds to your selection. When you move more than one selected icon, they will move together.

1 (Globalindustrial.com) Rolling Magnetic Dry Erase Whiteboard - Double Sided Reversible - 96 x 40, $230.95
2 (Globalindustrial.com) Global IndustrialTM Dry Erase Marker Set, Pack of 4, $3.95
3 (Globalindustrial.com) EXPO® Eraser Dry Erase, $3.18
the filename. Select Save As from the File Pull Down menu. Click in the filename. Move the cursor immediately after the p in backup. Press the Delete key on your keyboard until you have erased the word backup. Leave an underscore. When you click on Save, a dialog box will be displayed that asks if you want to Replace the file with the same name. Click on Replace to complete this step.

**Exercise #3:** Exit the text editing software and re-open your practice document (a Double Click Opens a file).

**Notes:** To exit the program, select Quit at the bottom of the first Pull-Down menu.

**Exercise #4:** Create a folder on your computer’s desktop.

To create a folder in Windows 7, hold down the Ctrl, Shift, and N keys at the same time (Also: click on the folder name and create a unique name using your keyboard).

**Exercise #5:** Turn off your computer.

**Exercise #6:** Turn on the computer and turn it off for practice.

**Homework:** Create a new text document in the text editing software that comes with your computer. Type all of the team members’ names and their hotel room numbers. Save the document in the folder you created on your computer’s desktop. Write down any questions you have about this task and we will review the steps at the beginning of the next class.

**Class #2: Copy, Paste and Cut**

Copy and Paste and Cut are commands that can be used in most programs.

**Exercise #1:** Turn on the computer.

**Exercise #2:** Open the Calculator in Windows 7: Select the Windows Start button, and then type “Calc” in the Search Box at the bottom, or look for it in the Accessories Folder. On the Mac, click on the Launchpad icon in the Dock (it has a rocket on it). You will see a Calculator on the screen that follows. Click it open.

Use your Touchpad to move your computer pointer to the keys and multiply two, two-digit numbers.

Copy this number by selecting the Copy Command from the Edit Pull-Down menu. Notice the shortcut on the menu - (Command + C).

**Exercise #3:** Open a text editing software program.

(Caption) The simplest text editor to use in Windows is called NotePad. It was first released as an MS-DOS program in 1983, and has been included in all versions of Microsoft Windows since Windows 1.0 in 1985. To open NotePad, click on Start button (Windows logo) in the Taskbar at the bottom of the desktop to show the Start menu. Click on Programs or All Programs to show a menu of installed programs in Windows. Click on the Accessories folder to expand it. Select NotePad to open the program.

(Caption) Text Edit is a very simple text editor that is available on the Mac. To open the program, click on the Finder icon in the Dock and select Applications. In the window that opens, look for Text Edit and Double Click the icon.

**Caution: Icons That Touch a Folder Will Disappear**

As you are moving icons on your Desktop, try not to let them touch Folders. This action is called a Drag and Drop which means it is a quick method of moving an icon into a Folder. Unless this shortcut is intended, the icon may seem to just disappear.

If this happens accidentally, click open the Folder and move your icon back to the Desktop.

To move a window on the Mac or PC Desktop, you will need to Press and Drag on the title bar at the top (Note: On the Mac, the Desktop is also called the “Finder”).

A YouTube video from FreeWeb Teacher provides steps for Re-sizing windows. The video covers PCs (the action is the same on Mac) and the narrator uses the expression Mouse (which is now a Touchpad), see: https://www.youtube.com/watch?v=e3XntupxxtA
Paste the number you copied by selecting Paste from the Edit Pull-Down menu. Notice the shortcut on the menu - (Command + V).

**Exercise #4:** Clear the Calculator’s memory. Try a Copy/Paste of a different number from the text editing program to the Calculator (this works on a Mac and may work on a PC).

**Exercise #5:** We will experiment with the Cut Command in your text editor.

You will need to create sample text with your keyboard, or paste in a number from your Calculator. To cut (or delete) text with the Cut Command, you will first need to select the text. This is accomplished by dragging over the text to select it. This step is called a Drag Select. The text will be highlighted and it will stay highlighted as long as you do not click. To cut what you have selected, select the Cut Command from the Edit Pull Down menu. Notice the shortcut on the menu - (Command + X).

Text can also be deleted with the Delete Key on your keyboard. To use this key, click to insert a cursor after the last letter you would like to delete. Next, press the Delete Key on your keyboard until you have deleted the characters you would like to remove.

**Homework:** Practice using the Copy, Paste and Cut Commands.

**Apple Dominates the Premium PC Market**

According to The NPD Group (8th largest market research firm), Apple has dominated the premium PC market, having a 91 percent market share for PCs priced at more than $1,000. Co-founder Steve Jobs left the company for 12 years.

**Class #3: Enabling a WiFi Connection**

WiFi is an expression that refers to wireless networking that connects computers to the Internet. Recent versions of Windows have an icon in the Taskbar. Windows 7 requires settings in the Control Panel. First, go to the Start Menu and select Control Panel. Next, Click the Network and Internet category and then select Networking and Sharing Center. Next, Click on the Change adapter settings link in the left navigation pane. Right-click on the Wi-Fi adapter and select Enable. A Windows 7 user named Josh Shoemaker created a very

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helpful YouTube video that shows these step (published on Jun 28, 2015 and titled, “How to enable wireless internet connection for windows 7: Vista, HP, Dell, Toshiba”), see: https://www.youtube.com/watch?v=wjAlnUGxoLI

Class #4: Using the Internet Explorer Web Browser
Internet Explorer is a Web browsing software program that is made by Microsoft. The steps to open this browser include:

1. Open the Control Panel. ...
2. Click "Programs" and then "Default Programs."
3. Click "Set your default programs." ...
4. Select "Internet Explorer" from the list of programs. ...
5. Click the "Set this program as default" button.
6. Launch Internet Explorer by accessing the Programs folder using the Start button (as you have learned)

The expression surfing the Web refers to navigation through the World Wide Web or Internet, usually by typing a Web address and then clicking with your Touchpad. Try typing the following URL (address of a World Wide Web page) in the browser and press Enter:

www.yahoo.com
www.bbc.com
www.npr.org
articles.x10.mx

Navigate the page by clicking with your left Touchpad button.

Homework: Surf the Web.

Class #5: Set Up an E-Mail Account
Go to Google.com or Yahoo.com (or both) and set up an e-mail account.

Note: A Special Interest Group (SIG) or User's Group meeting/event may be needed to assist new users.

Write down any questions you have about this task and we will review the steps at the beginning of the next class.

Class #6: File Formats and Filename Extensions
A computer file format refers to the way information is encoded for storage. Some computer file formats are open standards (in the public domain) and some are proprietary (or licensed).

Software programs that can save files write a filename extension at the end of the filename that provides a clue about the file's format. A file extension is typically three letters delimited from the filename with a period.

In the Windows and Mac operating systems, the filename extensions are not visible unless you make them visible.

Note: In the following group of exercises, participants will open Microsoft Paint, create a project following a YouTube 14

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**Today's Operating Systems and Apps Are Bloated**

It's harder for beginners to learn about computers today because operating systems and application programs are bloated. Thirty years ago, memory and other hardware was expensive and programs were smaller. Even for advanced users, today's application programs have large, complex menus that are difficult to use. People who buy proprietary software that is licensed often purchase upgrades. People (usually corporations) that can afford to pay for upgrades save files that cannot be opened with older versions. Microsoft Word is an example. For years, Word saved files that ended in .doc (see: “File Formats and Filename Extensions”). When Microsoft introduced a new version in 2007, the program saved files with a .docx extension that the older Microsoft Word would not recognize. Fortunately, the Word Processing component of Apache OpenOffice, an open-source business suite, reads .docx files.

**Google When You Are Stuck**

This is jumping ahead a little because Web browsing has not been thoroughly covered (you will need to practice browsing). If you need step-by-step instructions on how to turn a function on or off in Windows, the Google search engine can help you find posts written by computer people. For example, if you would like steps for displaying files as a list with the filename extensions visible, type the following question into Google:

How do I display my files as a list with filename extensions visible in Windows 7?

When I did this, the following information was displayed:

1. Click the Start menu. ...
2. Type "folder options" (without the quotes).
3. A dialog box with the title "Folder Options" will appear.
4. Click to uncheck the box for "Hide extensions for known file types".
5. Click the "OK" button at the bottom of the dialog box.

Here's another example:

What file formats are supported in OpenOffice word processor?

When I did this, the following link was displayed:


This page contains a very valuable list of file formats that can be opened and saved in OpenOffice.
video by Atle Solholm (published on Dec 11, 2013) and save the project 5 times in the following file formats using the Save As Command: Windows bitmap (BMP), JPEG, GIF, PNG, and single-page TIFF format.

**Exercise #1:** Turn on the computer.

**Exercise #2:** Open the Internet Explorer browser.

**Exercise #3:** Access Atle Solholm's video by typing the following address into the browser:

www.youtube.com/watch?v=b59MvaRm1xA

**Exercise #4:** Watch Atle Solholm's video.

**Exercise #5:** Open Windows Paint and try the steps presented by Atle Solholm (or, some of your own).

Click the Start button in the lower left-hand corner of the Desktop. In the Start menu, click All Programs, then Accessories, then click the Paint program.

**Exercise #6:** When you have completed your project, select Save As from the File Pull Down menu. Re-Save your file in the folder you created on your Desktop previously (p. 9) five times using the different file types listed above.

**Exercise #7:** When you have saved your files, exit out of Microsoft Paint by selecting Exit from File Pull Down menu.

**Exercise #8:** Click to open the folder you created on your Desktop.

**Exercise #9:** To view your files as a list with filename extensions visible in Windows 7,

1. Click the Start menu ...
2. Type "folder options" (without the quotes).
3. A dialog box with the title "Folder Options" will appear.
4. Click to uncheck the box for "Hide extensions for known file types".
5. Click the "OK" button at the bottom of the dialog box.
6. Look for and identify the filename extensions.

**Homework:** Use Google to research information about the file formats supported by OpenOffice, see: “Use Google to Find Wikipedia Pages” at right.

**Class #7: Create a SunRise/SunDown Calendar**

The Web site www.sunrisesunset.com provides calendars that contain location-based SunRise and SunDown that can be captured saved on your computer. Steps include:

**Exercise #1:** Turn on the computer.
Exercise #2: Open the Internet Explorer browser.

Exercise #3: Access the http://www.sunrisesunset.com Web site by typing the address into the browser.

Exercise #4: Click on page links to find your location (State and City).

Exercise #5: Click to select a month and year on the Pull Down menu.

Exercise #6: Click to select calendar options and then click on the button labeled Make Calendar.

Exercise #7: The calendar will appear in a browser window.

Exercise #8: On the Dell Latitude notebook (or any PC), press the Print Screen key to send an image of the calendar to an area of the computer’s memory called the Clipboard.

On a Mac, press Command + Shift + 3 simultaneously to capture a screen. This image will appear on the Mac Desktop, but will need to be renamed. Click once on the name until you see a color change and a box around the filename. Use your keyboard to rename the file. Examples:

dec_2018
nov_2018

Exercise #10: On the Dell, open Microsoft Paint if you do not already have it open. Select Paste from the Edit Pull Down menu.

Exercise #11: Select Save As from the File Pull-Down menu and create a filename that reflects the content and save the files(s) Save the file in the folder you created on the desktop.

Examples:

dec_2018
nov_2018

Homework: Create a new Folder on your Desktop. Make and save calendars for 12 months.

Class #8: Create a Spreadsheet (Case #1, Sheet #1)

Note: This class can be held after an OpenOffice Installfest event. The OpenOffice site suggests running Apache OpenOffice to ensure that an installation is successful. In Windows, it will appear on the Programs sub-menu of the Start menu. On the Mac, the program can be accessed by first clicking on the Finder icon at the extreme left edge of the Dock (that has a blue and white face), clicking on Applications in the Favorites list along the left edge of the

(Caption) SIGGRAPH (Special Interest Group on Computer GRAPHics and Interactive Techniques) is the annual conference on computer graphics (CG) organized by the ACM (Association for Computing Machinery). SIGGRAPH has been held annually in cities across North America since 1974. Tens of thousands of computer professionals attend and a second yearly conference has been created in Asia.

OpenOffice Installfest

An OpenOffice Installfest would be a helpful SIG meeting for new users (similar to the Installfest organized by the Linux User's Group at Rutger's described on the previous page).

(Caption) OpenOffice software and documentation is available at https://www.openoffice.org (available for PC and Mac).

(Caption) Dell notebook keyboard showing the location of the Print and Print Screen keys. The Print Screen key sends whatever is on the screen to a portion of RAM memory called the Clipboard (the Paste Command will paste whatever is on the Clipboard).

On a Mac, Command Key + Shift Key + 3 simultaneously. This sends a screen capture to the Desktop as a .PNG file.
screen. Once it is installed, locate OpenOffice in the list and open it with a Double Click.

A Visicalc electronic spreadsheet program was introduced for the Apple II computer in 1979 by developers Dan Bricklin and Bob Frankston. This is considered a milestone because the Apple II was a personal computer. Although number crunching programs existed on larger minicomputers and mainframes, most people were creating spreadsheets on 12 column ledger paper (13 columns including a column for totals). In 1983, Lotus Development Corporation bumped Visicalc from the market with the introduction of Lotus 1-2-3 that combined a spreadsheet with database functionality (e.g. alphabetical sorting) and graphical charts. In the late 1990s, Microsoft bumped Lotus 1-2-3 with the success of their spreadsheet called Microsoft Excel.

Spreadsheet programs are so versatile, we will need three imaginary case studies to demonstrate spreadsheet functionality in the OpenOffice version:

**Imaginary Case Study #1:** You are a purchasing manager for a security company that needs to buy clothing for six new staff members. Your company buys business attire for all new recruits and you need two spreadsheets:

Spreadsheet #1: This spreadsheet will be used to list each person's name and a location where they will be assigned. Columns you have planned include Last Name, First Name and Location. Spreadsheets can sort alphabetically.

Spreadsheet #2: This spreadsheet will be used to record clothing purchases. Columns you have planned include quantity, a description of a clothing item, and a price. The spreadsheet's built-in math functions will provide totals.

**Imaginary Case Study #2:** You are an economist who wants to chart cumulative inflation from 1910 to 2015. You have Tim McMahon's data from inflationdata.com and you would like to see the data converted to a line graph and a bar chart.

**Imaginary Case Study #3:** You are a doctor who wants to make a presentation about the Ketogenic Diet that consists of 5% carbohydrate, 20% protein and 75% fat. You know that a spreadsheet program can convert numerical data into graphical charts and you would like to see these numbers presented as a pie chart.

**Exercise #1:** Turn on the computer.

**Exercise #2:** Click open the OpenOffice software (if necessary, review details at the top of this page).

**Exercise #3:** Locate your arrow keys on the keyboard. Press each key a couple of times and watch what happens to the OpenOffice Calc version of a cursor. Notice also the
columns have letters and the rows have numbers.

**Exercise #4:** Move your cursor into the cells shown at right and enter the data. To add bold facing to the spreadsheet title and column headings, select the cell and click on the letter B in Styles and Formatting above the spreadsheet.

**Exercise #5:** Notice the very top of your spreadsheet is labeled Untitled 1 OpenOffice Calc. Save the spreadsheet to your Desktop. First select Save from the File Pull Down menu. In the dialog box that follows, and name it new_staff_07_22_18.

Note: Later, you can move your spreadsheet to a Folder you have previously created.

**Exercise #6:** To sort the list of names alphabetically by last name, we will first need to select cells A4 through C9. To begin, position your cursor in A4, press and hold down the left corner of your Touchpad and drag in the position of C9. The cells between A4 and C9 will be shaded as shown in the image at right. This action is called a Drag Select. Do not click off of the selection or the shading will disappear which means the cells will no longer be selected. If you accidentally click and de-select the cells, repeat the steps.

**Exercise #7:** With your cells selected, open the Sort dialog box by selecting Sort from the Data Pull Down menu.

We want the names in alphabetical order (ascending meaning the beginning of the alphabet first) and we need to indicate that the sort needs to be by Last Name.

In the Sort dialog box, select Malone from the options in the Sort by Drop Down menu because Malone is one of the Last Names.

We need to communicate not to include the column labels. To do this, click on Options and remove the check from the box labeled Range contains column labels. When you Click OK, the names will be sorted.

**Homework:** Review the information presented in this class and rehearse the steps.

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**Determining What Programs You Have Open**

The Dock and Taskbar contain clues concerning what software you have open. In Windows 7, applications use the extreme upper left corner of the application window for the software icon. In Mac Sierra, the name of the software app that is currently active can be seen in the menu at the top of the screen.
Class #9: Create a Spreadsheet (Case #1, Sheet #2)

Exercise #1: Turn on the computer.

Exercise #2: Click open the OpenOffice software and enter the data at right.

You can widen columns by selecting the line that divides the lettering at the top of columns and drag. To drag, press and hold a left corner of your Touchpad while you move the line.

Exercise #3: The quantity for each of the items is 3 except for the Wiloughby bags. The quantity for the bags is 6

We will add a 3 in the Qty. column at the top and then use Copy/Paste.

Enter the 3 at the top of the column now.

Next, place the cursor over the 3 and select Copy from the Edit Pull Down menu (or use the shortcut Command + C).

Next, Drag Select the cells where you would like the number copied and select Paste from the Edit Pull Down menu (or use the Shortcut Command + V).

Click on the extra 3 that this step produced between the Mens’ and Womens’ items and Press the Delete key on your keyboard.

Next, type a 6 in the Qty cell to the left of Wiloughby bags.

Exercise #4: Notice that there are decimals in some of the prices and a few whole numbers.

Drag Select the numbers in the Price column and keep going until the cell for the Total is selected.

With your numbers selected, select Cells from the Format Pull Down menu.

In the dialog box that follows, select Currency from the options labeled Category and select the first Currency option with two numbers after the decimal in the box labeled Format. When you Click OK, your numbers will be reformatted. If you see any numeric hash marks instead of numbers, widen the column.

Exercise #5: We need a few edits in our spreadsheet.

We need to add a column for Vendor.
shown at right. Most of the clothes are from Land’s End so we can use the Copy/Paste Command.

Our Price column is really a unit price. We need another new column called Extension that will contain each unit price times the quantity.

With the cursor anywhere in the Price column, select Columns from the Insert Pull Down menu. A new column will be inserted to the left. Label this “Vendor” as shown.

Note: Rows can be added with a similar command from the Insert Pull Down menu. New rows are added above the position of your cursor.

Add the word “Extension” as a label to the right of Price.

We will need to create a formula in cell E5 to multiply the Quantity by the Unit Price.

Position your cursor in cell E5.

Formulas are created with cell positions in the following format:

=A5*D5

Note: Use the Shift Key to access a multiplication symbol above the 8 key.

We will use the Copy/Paste Command you have already learned.

With your cursor still positioned on E5, select Copy from the Edit Pull Down menu.

Move your cursor to E6 and Drag Select down to row 22 (opposite the Wiloughby bag).

Select Paste from the Edit Pull Down menu. You will need to use the Delete key to remove the 0s that were added with the Copy/Paste Command.

Extra Note: To delete the contents of more than one cell, first Drag Select. Besides the Delete Key, you can also delete using the Cut Command on the Edit Pull Down menu, or the Delete Contents Command on the Edit Pull Down menu.

**Exercise #6:** We need a page total. This number will be in cell E24 opposite the word Total.
Begin by adding the following first portion of the SUM formula:

=SUM(

Drag Select the range of numbers you would like to add, type a right parentheses and Press Enter. The SUM formula calculates the total for the range you supplied and a total will appear.

**Exercise #7:** Suppose your boss tells you that instead of six new staff members (three men and three women), the company will hire twelve new people (six men and six women).

This means the quantities on your spreadsheet need to change.

Begin by typing a 6 over the first number 3 in the Qty. column. OpenOffice Calc will alert you that you are adding data to a cell that already contains data. The dialog box will ask you if you really want to replace the existing data. Click Yes.

Next, select Copy from the Edit Pull Down menu, position your cursor in the cell immediately below, Drag Select a range where you see 3s and select Paste from the Edit Pull Down menu.

Use the Delete key to remove the extra number and type a 12 next to the Wiloughby bag.

Notice that your spreadsheet was automatically updated.

**Homework:** Review the information presented in this class and rehearse the steps.

**Class #10: Create a Spreadsheet (Case #2)**

If you notice on Tim McMahon's line graph, numeric plot points skip years. We will not use all of the year increments that appear on Tim's graph. Our graph will include 10 year increments instead of 5.

**Exercise #1:** Turn on the computer.

**Exercise #2:** Click open the OpenOffice software and open a spreadsheet

**Exercise #3:** For this project, we will need to enter data across rows instead of down columns. Beginning in the first row in Cell A1, enter 1910. Click the Right Arrow key instead of Enter. This will enter your number and move the cursor at the same time. Enter years in 10 year increments

**(Caption)** Warning box displayed when you make changes in your data in OpenOffice Calc.

**(Caption)** Author Tim McMahon's data from his article titled “Cumulative Inflation Since 1913” (June 18, 2015) on the Inflationdata.com Web site (https://inflationdata.com). This data is used in imaginary Case Study #2.

**(Caption)** OpenOffice Calc version of Author Tim McMahon's data. Note: Notice that inflation was zero in 1913. Tim McMahon's site does not mention conspiracy theory authors Eustace Mullins and G. Edward Griffin who have written about the Federal Reserve Act of 1913.

**Create a Book Index With a Spreadsheet**

Index entries can be typed in a sheet in any order and then sorted using the spreadsheet's Sort Command. To save your index as a text file, select Save As from the File Pull Down menu. In the Save As Type Drop Down menu, select “Text CSV.” You will need to open your text file in Text Edit (Mac) or NotePaf (Windows).
(e.g. 1920, 1930, 1940). Even though we are adding 10 year increments, we will add Tim’s data for 2015 which is a 5 year increment at the end.

In the second row, add the following percentages for cumulative inflation. Do not type the dates in parentheses. They are here for your reference:

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1910</td>
</tr>
<tr>
<td>97.96</td>
<td>1920</td>
</tr>
<tr>
<td>64.29</td>
<td>1930</td>
</tr>
<tr>
<td>43.88</td>
<td>1940</td>
</tr>
<tr>
<td>155.1</td>
<td>1950</td>
</tr>
<tr>
<td>204.08</td>
<td>1960</td>
</tr>
<tr>
<td>306.12</td>
<td>1970</td>
</tr>
<tr>
<td>780.61</td>
<td>1980</td>
</tr>
<tr>
<td>1265.31</td>
<td>1990</td>
</tr>
<tr>
<td>1675.51</td>
<td>2000</td>
</tr>
<tr>
<td>2136.52</td>
<td>2010</td>
</tr>
<tr>
<td>2326.58</td>
<td>2015</td>
</tr>
</tbody>
</table>

**Exercise #4:** Save your spreadsheet on your Desktop using the name:

```
tim_mcmahon_data_07_22_18
```

There are several steps involved in creating a line chart. As a result, it would be a good idea to save the spreadsheet in another file. Select Save As and name the second version:

```
tim_mcmahon_data_graph_ver_07_22_18
```

Notes: It is ok to save your file with the date you created it (instead of 7/22/18).

Generally, when you work with any application program, you need to Save frequently. I have also mentioned my technique for creating a backup version by adding the word backup to the filename with the Save As Command. It is also a good idea to move copies of important files to one or more Flash drives (also called Thumb drives). There has been a huge movement in the computer industry to move application programs and data online. Another large group prefers to control their applications and data (cloud computing) vs. data sovereignty).


(Caption) Data entry for Case Study #2

To a certain extent, this is history repeating itself. Microcomputers became popular with department managers who did not want to rely on data center managers who ran large mainframe computers. Mainframes had “dumb terminals” that did not have any computing power (very similar to today's smartphones).

**Exercise #5:** Working in your spreadsheet that contains "graph ver" in the name, you will need to select the data to be graphed. Begin by moving the cursor to Cell A1. Drag select all of the data.

**Exercise #6:** To begin a chart, select Chart from the Insert Pull Down menu and a Chart Wizard dialog box will appear. The Line Graph is not the default selection and the chart will look strange. Select Line from the box labeled “Choose a Chart Type” and select “Points and Lines” from among the options. The chart will still look odd because settings need to be adjusted. Click on the Next button to select a new page of the Chart Wizard dialog box.

If you selected the data properly, the Data Range displayed will be correct.

On the page that follows, select “Data Series in Rows” and click to place a check mark in the box labeled “First Row as Label.” When you do this, you will see a transformation in your graph.

On the Chart Wizard page labeled “Choose titles, legend and grid settings,” type the following text into the fields that follow:

- **Tim McMahon's Data** (Title)
- **Percent Cumulative Inflation from 1910 to 2015** (Subtitle)
- **Year** (X Axis)
- **Percent Cumulative Inflation** (Y Axis)

Next, uncheck the box labeled “Display Legend” and click Finish.

Re-Save your spreadsheet.

Note: At any time, if you make a mistake, use the Undo Command or, close the file without saving.

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**Software Wizard or Setup Assistant**

Thirty or more years ago, computer screens contained text-based commands. The Xerox Alto is the first computer with an operating system based on a graphical user interface (GUI). The GUI acronym is pronounced “gooey” and the graphics evolved into a desktop metaphor. Today, most computers have a GUI interface.

In programs that run on a computer with a GUI interface, commands often display dialog boxes containing fields, drop down menus, radio buttons and check boxes. These components are user friendly elements to help users navigate a program. When a particular action is complex, the dialog box is presented as a Wizard program with several pages.

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(Caption) Jekyll Island Club on Jekyll Island, Georgia. Jekyll Island is a Sea Island, a chain of tidal and barrier islands on the Atlantic Ocean coast of South Carolina, Georgia and Florida. The club was formed in 1886 by the Astors, Rockefellers, Goulds, Morgans (and others) and incorporated to become a private winter hunting retreat.

In November 1910, Nelson Aldrich (1841-1915), leader of the Republican Party in the Senate from 1881 to 1911, met secretly with executives representing the banks of J.P. Morgan, Rockefeller, and Kuhn, Loeb & Co. at Jekyll Island (details about the meeting were revealed in the 1930s):

- Frank A. Vanderlip, president of the National City Bank of New York, associated with the Rockefellers.
- Henry Davison, senior partner of J.P. Morgan Company
- Charles D. Norton, president of the First National Bank of New York;

Paul Warburg of Kuhn, Loeb, & Co. directed the proceedings and wrote the primary features of what would be called the Aldrich Plan that later became the Federal Reserve.
Class #11: Create a Spreadsheet (Case #3)

If you recall, for this case study, you are a doctor who wants to make a presentation about the Ketogenic Diet that consists of 5% carbohydrate, 20% protein and 75% fat. A pie chart, that is divided into slices to illustrate numerical proportion, is a perfect chart for this project. All pie charts represent a whole amount that equals 100%.

Exercise #1: Turn on the computer.

Exercise #2: Click open the OpenOffice software and open a spreadsheet.

Exercise #3: For this project, we will need to enter data across rows instead of down columns. Beginning in the first row in Cell A1, enter Carb, then Protein and then Fat.

In the second row, add the following percentages:

- 5%
- 20%
- 75%

Note: If your percentages are showing a decimal point and two 0s, select Cells from the Format Pull Down menu. In the dialog box that follows, select the Percent option that does not contain a decimal.

Exercise #4: Save your spreadsheet on your Desktop using the name:

```
ketogenic_diet_07_22_18
```

There are several steps involved in creating a pie chart. As a result, it would be good idea to save the spreadsheet in another file. Select Save As and name the second version:

```
ketogenic_diet_graph_ver_07_22_18
```

Notes: It is ok to save your file with the date you created it (instead of 7/22/18).

Exercise #5: Working in your spreadsheet that contains "graph ver" in the name, you will need to select the data to be graphed. Begin by moving the cursor to Cell A1. Drag select all of the data.

Exercise #6: To begin a chart, select Chart from the Insert Pull Down menu and a Chart
Wizard dialog box will appear. A Bar Chart is the default selection and you will need to change settings. Select Pie from the box labeled “Choose a Chart Type” and select “Normal” from among the options. The pie chart will look plain and labels will be needed. Click on the Next button to select a new page of the Chart Wizard dialog box.

If you selected the data properly, the Data Range displayed will be correct.

On the page that follows, make sure “Data Series in Rows” and “First Row as Label” are selected.

On the Chart Wizard page labeled “Choose titles, legend and grid settings,” type the following text into the field that follows:

Ketogenic Diet (Title)

Next, keep the box labeled “Display Legend” selected, click to select the “Bottom” radio button and click Finish.

Re-Save your spreadsheet.

Exercise #7:
The pie chart produced for Case Study #3 was easy to create, but the chart does not contain any percentages. The pie chart needs to be edited.

Double click the pie chart. In the dialog box that follows click on the “Options” tab at the top.

Press and drag the wheel that is shown to rotate the pie chart approximately 90 degrees to the right.

Exercise #8:
Percentage labels can be added with a text tool that can be found at the bottom of the screen (look for a capital T). To create text, a bounding box needs to be created by pressing and dragging diagonally (see screens on the previous page).

Note: If you need to use a chart in a presentation, use the directions for a screen capture in Class #7 and crop the image in MS Paint (Class #6).

Class #12: PDF File: From Print to Web Browsers
One of the industries hit hardest by a rapid introduction of personal computers was typesetting produced on mini-computers such as Linotype, Compugraphics and Agfa that cost as much as $90,000 or more.

(Class) The Ketogenic Diet is an important subject in the film …First Do No Harm (1997) produced and directed by Jim Abrahams with Meryl Streep, Fred Ward and Seth Adkins. A full version of the film is available at YouTube, https://www.youtube.com/watch?v=xY9ZMGK5Hbs

Meryl Streep plays Lori Reimuller whose son Robbie has epilepsy. Robbie does not respond to drugs and the medical staff at the hospital want him to undergo surgery that involves the removal of the top of his skull. In the film, Lori Reimuller finds a book about the Ketogenic Diet in the library written by Johns Hopkins staff John M. Freeman M.D., Zahava Turner RD CSP LDN and James E. Rubenstein M.D. When she shows the book to the medical staff at her hospital, they still press for surgery. Much of the film follows Lori Reimuller’s challenges getting her son out of the hospital so they can go to Baltimore where Johns Hopkins staff has been using the Ketogenic Diet since the 1920s. At the end of the film, Lori, with the help of a physician friend who is also a pilot, manages to take Robbie to see the medical staff at Johns Hopkins. He begins the Ketogenic Diet and he responds in about a week.

The film and the published book do not explain why the Ketogenic Diet works. There are dozens of scientific papers in the National Library of Medicine's PubMed/Medline databast that make a connectin between parasites and epilepsy. Examples include tapeworm (Taenia), roundworms called Ascaris and Toxocara spp, and a protozoan parasite called Toxoplasma gondii. The most startling study that I have come across is a study published in The Journal of Pathology and Bacteriology in 1951 that says doctors have known about a connection beteen Ascarisis (infection with an Ascaris roundworm) and Jacksonian convulsions since 1831.

Parasites need carbohydrates to survive. As you can see from the percentages, the Ketogenic Diet has a small amount of carbohydrate. Without food, parasites die. The human liver can covert fat to an efficient fuel called ketones that the parasites cannot use.

Printed communication is a collaboration between a graphic designer and a writer. Prior to the introduction of the Macintosh, writers produced copy on typewriters and delivered manuscript pages to print professionals. The pages were marked with directions for professional typesetters who understood typography. These companies employed specialists who were skilled at running high-end minicomputers and sold pages of photographic paper containing high resolution type for hundreds of dollars. The output then had to be cut up and pasted on boards called mechanicals in departments called print production.

A blog called 99designs contains an interesting story about Steve Jobs' interest in typography. Writer Alex Bigman says Steve Jobs may have owed the success of Apple to a Trappist monk calligrapher, Father Robert Palladino, whom he met during the year he studied at Reed College in Oregon. Alex explains that according to Jobs, Palladino’s work at the campus calligraphy studio taught him some valuable lessons about the importance of aesthetics and design—the elements considered to have given Apple its edge over PCs.

Apple's Laserwriter was introduced on March 1, 1985. Suddenly, graphic designers could create a layout in page layout software and see what it would look like on a printed page. With a laser cartridge and a ream of copy paper they could experiment. When they were happy with their design, they could send a digital file to a linotype service bureau that charged less than $10. In spite of the creative and cost benefits, it took about 5 years to take hold. Similar to the slide rule, the large minicomputer typesetters disappeared almost overnight. Most artists choose Mac computers. There were a few exemptions. Industrial designers need PCs because their software is not available on the Mac platform.

In 1985, when Apple's Laserwriter was introduced, it contained a microprocessor that was faster than the Mac. The Mac Plus had an 8 MHz 68000 processor and the Laserwriter had a 12 MHz 68000 processor. Today's computers are much faster. For example, Apple's MacBook Pro has a 2.9GHz dual-core sixth-gen Intel Core i5 processor.

The PDF (Portable Document Format) file, that may or may not contain Postscript, was developed by Adobe Systems. The file format was introduced in 1993 and remained proprietary until July 1, 2008.

PDF files have been important for printing high resolution documents (200 dpi or more). Today, PDF files can:

- Can be written with OpenOffice Word Processor


- Can be viewed in a Web browser
- Can be sent to FedEx Office via e-mail (for printing)

**Class #13: Create a Web Site With Weebly**
The Weebly Web site builder is an online HTML editor that will require an e-mail account. Ideas for Web sites that I dowsed include:

- Web site for your housing co-op with pages that describe projects and a contact page with members' contact information (including a housing co-op coordinator and 2 chefs).

- Computer SIG that has monthly meetings and special events such as an OpenOffice Installfest (e.g. in the Royal Fern Hall at Broward County's Fern Forest Nature Center that seats 175 people and costs $50/hour no minimum). Note: Royal Fern Hall is popular on weekends for weddings. As a result, an Installfest would need to be planned during the week.

**IMPORTANT NOTE:** As I'm writing this, I realize how important it will be to form a Computer SIG. I taught Intro to the Mac at Pratt Institute's School of Professional Studies on Saturdays from 9:00 a.m. to 12 p.m. and the course was semester length (14 weeks). The class included simple programs such as a text editor, MacPaint, and the Mac Operating System. This means that you will need to study/practice on your own and share information at SIG meetings, or SIG meeting intensives. In the 1980s, in New York City, employees at large companies formed user groups that met at lunch. I met a woman who told me that her company called their group “keystroking.” Larger SIG meetings may be events reserved for guest speakers (e.g. advanced users).

**Exercise #1:** Turn on the computer.

**Exercise #2:**
Click open your Web browser, go to Weebly.com. On the Weebly site, click to select Website (and not a merchant site). On the screen that follows, type your name and e-mail. You can now proceed to build a free site by clicking on “Create a New Site.”

You will be asked to type a Name for your site. The Name will later become part of a Free Site's Web address.

The “Create a New Site” button takes you to a gallery with themes available to help you create your site. The minitures or thumbnails are sample templates. The samples are organized into categories such as business, portfolio, personal, event, blog and other. The templates will contain page elements that reflect a category.
I chose the first template in the Event category (2017 Annual Vue Conference) because it is a small site. Customization will require you to delete placeholder elements and some of the templates are very large.

Exercise #3: Once you have made a decision about a theme, expand it to full screen site with a click. This will display a Preview of your site. Next, click on the “Start Editing” button at the top of the screen.

Exercise #4: When you click the “Start Editing,” Weebly will build your site. The dialog box that follows is a pitch for a fee-based domain name.

Weebly offers 2 free sites with an e-mail address as long as you don't mind “weebly” in the URL (web address). The company is also a domain name registrar which is a company that manages the reservation of Internet domain names. This will require a payment. When you create your site, you will be offered a chance to buy a domain name (a pitch). There will also be repeated offers that may make Web site creation confusing. If you know you do not want to Upgrade, close these dialog boxes. Realize that there is also an “Upgrade” button in the Web site builder in case you would like to purchase a domain.

When you close the box that contains a pitch for a domain name, you will be in the Web Builder. Notice the word "Build" is highlighted in the options at the top of the screen. With your Touchpad, slide your selection arrow horizontally and notice there are Web site building tools along the left edge of the screen.

The two important options at the top of the screen are Build and Pages. Build is related to the page you are working on and Pages allows you to access other
pages in the template. The changes you can make are somewhat limited. For example, you can change the name of a page (an important function), hide pages (possibly important), and turn a page header on or off. You can also add or delete pages.

At this point, the easiest method to approach site building is to look through the placeholder text and images. Text can be replaced by typing over the placeholder content and existing images can be replaced with free-of-rights photos. The more placeholder elements you can change and use, the less you will need the site builder tools.

If you are creating content “on the fly” and without a plan, be prepared to delete several placeholder page elements to get your project started (and on the Web). Later, if you need text or images, you can use the Site Builder tools.

Exercise #5:
2017 ANNUAL VUE CONFERENCE is in all caps. Although I can change this Site Title, I cannot change the type to mixed case. When I click on this title, a bounding box appears around the type and text tools appear over the box. I can change the size with the plus and minus signs. Leading cannot be adjusted. If I make the type smaller, I can pull VUE CONFERENCE up on the same line as 2017 ANNUAL. I will Drag Select the Title and click on the minus sign once. I can then click to insert a text cursor in front of the V in VUE and press the Delete key.

Exercise #6:
In general, there is no Save command in Weebly (there are a few Save buttons). At this point, you should Publish your site so your changes are preserved. Publishing means your site is available on the Web. When you click the blue Publish button, you will need to create a “Subdomain” which is the name for a Weebly address that contains the word Weebly (this could have been done in the dialog box I’ve called the “pitch,” but that was a little early.

Click on the Publish button. In the dialog box that follows, enter the Name of the site in the field provided and click on the

(Caption) Theme Preview page that appears when you click on the Edit Site button. The type in the Site Title is large and it is all caps. The type cannot be changed to mixed case, but can be made smaller. However, placement of the Title is limited. The Subtitle, containing the Date and Location is also limited. From a technical standpoint, Weebly is an amazing Site Creation tool, but designers may not be happy with the type.

(Caption) Smaller Site Title in the Build section of the Site Builder with tools showing. The text is still placeholder text.

(Caption) Text change in the Site Title in the Build section of the Site. The Date and Location text box is not needed and can be deleted with a click on the small X in the upper right corner as shown. All page elements have small X boxes that can be used to Delete. Notice the text bounding box turned red and a warning box appeared (a confirmation is needed).
Search button. A Subdomain for a Free site will appear at the bottom of this dialog box. Click Choose. Seconds later, your site will be available on the Web. Weebly will display a dialog box that says your Subdomain Setup is complete. Click Done. A second dialog box will display your new Web address. To view the site, click on your new Web address.

When you are not in Weebly, Internet Explorer offers keyboard shortcuts to open a new window, as well as tabbed browsing for when you want to load multiple sites in a single window. In the browser in Windows 7, hold the "Shift" key down while you click the browser button in your Task Bar.

In the Mac Safari Web browser, select New Tab from the File Pull Down menu. Use this browser window to view your new site.

Exercise #7: The Web site, built for this project, is intended for a New Users' Group and it is small. It really only needs two pages: a Home page and a Contact page. We can delete the other pages (that can be added back if needed)

For this step, you need to click on Pages at the top of the screen and move your selection arrow with your Touchpad in order to see the panel at the left edge of the screen. The panel will be labeled Pages and it will contain buttons that correspond to the pages of the site. We do not need the About page, or the RSVP page. To delete these pages, click on the About page and then click on the Delete button at the bottom of the panel. A confirmation dialog box will be displayed and you will need to confirm.

Note: As I worked on this Weebly went into what I call a hiccup. The site has a "Loading" spiral displayed in the middle of the screen. I've learned it's not serious. I just wait for it to stop. If I've made several changes, I Publish the site. When the "Loading" spiral stopped, the site's About and RSVP buttons (in the site's Navigation Bar) were gone. The site's Navigation Bar is at the bottom of the screen. On a notebook computer, you might need to scroll slightly to see it.
Note: The blue circle that contains a lightbulb in the lower right corner of the screen contains a list of steps for site builders. You don’t need to use it and it will not be on your completed site.

**Exercise #8:**

The site's Page Headers are in the site's Navigation Bar and the Header still says VUE CON 2017. Click directly into this text, select it, and change it to NEW USERS’ SIG.

**Exercise #9:**

If you scroll the Home page on the site at this point, you will see a large number of placeholder page elements. If you pass your Touchpad pointer over these items, you will see that they all have boxes around them. Each of the boxes has an X in the upper right corner. When you pass your Touchpad pointer over the X, the box outline and the X turn red. We saw the red X when we removed the Date and Location text box (Caption on page 28). At this point, you will need to decide if you want to use any of the page elements.

I’ve decided to keep the “WHAT IS VUE CONFERENCE?” section that includes three text boxes, a spacer box and a photo box. I will delete the Learn More button.

I will also delete the entire “Event Speakers” section, the “WHAT WILL YOU LEARN?” section, the “See the Schedule” button, as well as the “Purchase Your Ticket” section including the Purchase Now button.

The following copy is replacement text for the Home page:

**First Text Box, same type**

What is a Special Interest Group?

**Second Text Box, same type**

Accelerating computer education

**Third Text Box, same type**

Formed in 2018, the New Users’ SIG is a South Florida-based special interest group that helps new computer users accelerate the pace of their computer education. This is accomplished with monthly meetings that are open to all who would like to attend. The New Users’ SIG also sponsors larger events for guest speakers,
panel discussions, and small trade show/conferences.

The term SIG was first used in 1961 by the Association for Computer Machinery (ACM) that was founded in 1947 and based in New York City. As of 2011, ACM had more than 100,000 members with chapters in 56 countries. Most colleges and universities with computer science departments have ACM chapters. There are also advanced high schools with ACM chapters. SIGGRAPH (Special Interest Group on Computer GRAPHics and Interactive Techniques) is an ACM SIG. SIGGRAPH’s annual conference on computer graphics (CG) has been held annually in cities across North America since 1974. Tens of thousands of computer professionals attend and a second yearly conference had been created in Asia.

Exercise #10:
The photo on the Home page next to the new copy is a cityscape. We need a photo of either computer people or South Florida. Photos can be replaced with free-of-rights photos accessed with a click on the box that holds the existing photo. There are photos available for sale (usually about $5) and you will need to pay attention to whether you are searching photos for sale, or, free-of-rights photos that are free.

To begin, click on the placeholder photo. A dialog box will appear. Click on the first blue button labeled “Edit Image.”

In the dialog box that follows, click on the Search button at the top. A new, blue-tinted dialog box will appear with a field labeled “Search for Images.” You will need to do key word searches and browse available photos. With the Free Photos tab selected, I typed in “South Florida” and more than 50 pages of photos were returned. I dowsed each row and obtained a “Yes” response on an image of a Great White Egret. Note: Most tropical birds in South Florida are artificial. This one is not.

Exercise #11:
A caption for the photo is a helpful exercise to demonstrate how to add new text. You will need one of the text tools in in the

(Caption) Home page with new copy and a free-of-rights photo.

(Caption) Screen showing the text tools at the top left of the screen. The text tool with the capital T is for headlines and the other tool is for body text. Caption text is small and the body text tool is appropriate.

(Caption) Screen showing a new text box for the caption text under the photo.

(Caption) Screen showing a new caption under the photo.
panel along the left edge of the screen. The text tool with the capital T is for headlines and the other tool is for body text. Caption text is small and the body text tool is appropriate.

Press and hold down the left edge of your Touchpad and simultaneously click and drag the body text button and move it under the photo. Release the left edge of your Touchpad when the text button is under the photo. This action is called a Drag and Drop.

If your Drag and Drop was successful, a text box will appear containing the words, “Click here to edit.”

Click to select “Click here to edit” and type (Caption) Great White Egret.

Re-Publish your site to preserve your changes.

**Exercise #12:**

The name of the Contact page needs to be changed to Information.

To accomplish this, you will need to first Click on Pages at the top of the screen. Use your Touchpad to make a horizontal motion with the pointer to reveal the tools at the left edge of the screen. Notice that the left panel is labeled Home.

Click on the small left pointing arrow head to the left of the word Home to step back a level. This action will reveal buttons for the Home page and the Contact page. If necessary, click alternately on these two buttons to understand the layers in this tool box. To return to the level with both buttons, you will need to continue to use the small left pointing arrow head.

When you are ready, click on the text label on the Contact button and type Information.

**Exercise #13:**

In this exercise, we will practice how to Log Out and then Log In. To leave the Web Site Builder and return to the Weebly Owner's Page, click on the X at the extreme upper left of the screen.

On the Weebly Owner's Page, you can press on the down arrow next to your name and select Logout. A “Come Back Soon” message will be displayed.
Close the browser page that contains the “Come Back Soon” message. Create another tabbed browser page and use it to return to the Weebly.com site. To do this, you will need to type Weebly.com in the Web address bar.

The Weebly Home page will be displayed when you go to Weebly.com. Click on Log in. On the screen that follows, enter your e-mail address and password. This step will take you to the Weebly Owner's page.

**Exercise #14:**
In this exercise, we will be editing content on the new Information page beginning with the page title.

If you are not presently Logged In, do that now. On the Weebly Owner's page, click Edit Site.

In the Web Site Builder, click on Pages at the top of the screen. Move your fingers across the Touchpad to reveal the toolbox along the left edge of the screen. If you have not yet changed the name of the Contact button, click on the word contact and type Information.

Click on the Information button and then click on the text box containing the word Contact in the Page Title. Drag Select this text and type Information.

**Exercise #15:**
In this exercise, we will be removing two placeholder page elements. Using the technique you learned previously, delete the spacer box above the existing text box that contains a placeholder address. Further down the page, delete the text box that contains: Have a Question? and the button that is labeled Get in Touch.

Next, click in the placeholder text box that contains the address 123 Sesame Street, Drag Select all three lines and select the Left Align text tool. Left Align is one of 4 options for aligning text. The icon has a down arrow head indicating a Drop Down menu.

Drag Select the existing text and replace it with the following content (Note: Text can be dragged selected and copied from a PDF file. This will not work across two pages, but partial Copy/Paste actions will be less time consuming than typing).
**Contact and E-mail:**
Mary Jo Fahey
maryjofahey@tds.net

**Monthly Meetings, November to March**

Caldwell Pavilion  
Snyder Park  
Fort Lauderdale  
3299 SW 4th Ave  
Fort Lauderdale, FL  
Phone: (954) 828-4585

or

Atala Corporate Shelter  
Tradewinds Park  
3600 W Sample Rd.  
Coconut Creek, FL 33066  
South Entrance  
Phone: (954) 357-8870

**Monthly Meetings, April to October**

Royal Fern Hall  
Fern Forest Nature Center  
201 S Lyons Rd.  
Coconut Creek, FL 33063  
Phone: (954) 357-5198

The heading should be boldfaced type that is highlighted with a magenta color as shown. If boldfacing did not carry over from a Copy/Paste in the PDF, Drag Select the headings and click on the B in the text tools provided. With the headings selected, you can select a dark magenta from among the text color options that drop down when you click and press on color menu available under the icon that has a capital A with a line under it.

Note: If your Copy/Paste inserted too much space between paragraphs, click to insert your text cursor in these spaces and press the Delete Key.

Re-Publish to preserve these changes.

**Exercise #16:**
In this exercise, we will edit the existing placeholder map to reflect one of the monthly meeting locations.

(Caption) Royal Fern Hall, Fern Forest, Coconut Creek, FL, Maximum Capacity 175, auditorium-style seating (no tables), With Tables: 120 for a sit-down event, Parking Spaces: 90, plus four designated handicapped spaces, chairs, tables, buffet counter, stove/oven (for reheating purposes only), refrigerator. Note: A Wi-Fi Mesh Network would be needed.

(Caption) Screen showing the beginning of the map editing step. The text for the address to Fern Forest Nature Center is Drag Selected and Copied.

(Caption) Screen showing the next map editing step. A click on the map displays a dialog box where the new address will be pasted.
First, Copy the address for Fern Forest Nature Center as shown in the image on the previous page.

Click on the map and a map dialog box will appear. With a Paste Command, use the address you have copied to replace the address in the box.

When you click off the dialog box, the map will be updated. There are controls in the dialog box to adjust the size and position of the map as well as Zoom.

In case you want to add additional maps, there is a Map Tool in the tool box when you click the Build option at the top of the screen. The action that is used is similar to the text we added for the photo caption. You would drag the Map Tool button into a location where you would like an additional map.

**Exercise #17:**

In this exercise, we will be adding References.

First, you will need to drag a text box like the one we used to create a caption for the Great White Egret photo and place it under the map.

Use Copy/Paste to insert the following text.

Add boldfacing and dark magenta to the word References.

**References**

Solar Powered WiFi - Part 1  
https://www.youtube.com/watch?v=Tdsf-W6D2L8

Solar Powered WiFi Part 2  
https://www.youtube.com/watch?v=3Vbix7VOi94

BMW’s wireless car charging pad arrives this summer  
Jon Fingas, 05.13.18  

Wireless charging: the key to unlocking an electric vehicle revolution  
By David Roberts, May 24, 2016,  
https://www.vox.com/2016/5/24/11677684/wireless-charging-electric-vehicles
How To Build A Low-Cost “Wi-Fi Mesh Network” For Emergency Communication
By David Lumb, 10.25.13
A community in Brooklyn is pioneering a simple, low-cost solution to the “last mile” connectivity gaps that telcos can’t (or won’t) bridge.

(Wikipedia) Wireless mesh network
https://en.wikipedia.org/wiki/Wireless_mesh_network

(Wikipedia) Municipal wireless network
https://en.wikipedia.org/wiki/Municipal_wireless_network

Exercise #18:
In this exercise, we will be adding links to:
• An e-mail address
• Publications listed in the References

As shown in an image on the previous page, to add a link to an e-mail address, you will need to first Copy the e-mail address.

Next, click on the text box containing the e-mail address and select the Link Tool in the text tools provided.

In the dialog box that follows, you will need to click to select the field labeled E-mail. On the screen that follows, paste the e-mail address into the field containing name@domain.com in light gray.

When you click off of the dialog box, the Web Builder will apply an e-mail link. The text color will change to orange. Active links in a browser window launch e-mail client software.

The next step is to apply links to the URLs (Web addresses) in the References section.

Click on the text box you added to contain the References and copy the Web address for the YouTube video titled “Solar Powered WiFi, Part 1.”

Next, click on the Link Tool in the text tools provided. In the dialog box that
follows, select Website URL to indicate the type of link.

On the next page of the dialog box that follows, paste the Web address of the YouTube video into the field labeled Insert URL that has http://www.google.com in light gray as an example.

When you click off of the dialog box, the Web Builder will apply an Website link. The text color will change to orange.

Continue to use the Link Tool to apply links to all of the Web addresses in the Reference section.

Re-Publish to preserve these changes.

When Weebly is done publishing your site, you will see a dialog box that says “Website Published!” Your Subdomain URL will be on this dialog box. Click your URL to look at your site. Navigate to the Information page using the Information button and try your links.