

Sandy Senior Center

Computer Basics



June 2011

Revision B

Introduction

Sandy Senior Center

Windows© Manual

This manual is designed to assist the student and instructor alike. The material in this manual has been gathered from several sources and placed in such a manner as to introduce the student to computers. This is the first of three courses designed to be taught in four classes, each two hours long. The manual is generated in color. This manual is also available on CD in PDF and html format. The PDF format can be read by the PDF Viewer provided on the CD. The html version can be read by your internet browser. The html version will look different than the document version. Feel free to print a color version but remember it costs 12 to 15 cents a page for the average color ink jet printer.

Acknowledgments

This manual was developed by Sandy Senior Center volunteer Jerry Stewart, and revised by Steve Livingston. Use of this manual is granted to all Salt Lake County Senior Centers under the provision that the acknowledgments section remain with the manual. Centers may change titles and pictures to tailor it for their Center. Students may print the manual for their use. All other use of this manual requires approval by Jerry Stewart.

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Overview

This course is designed to provide the fundamentals of understanding and use of a general-purpose digital computer. Without realizing it, we use special purpose computers every day. The electronic ignition in our cars, calculators, our digital watches and clocks, microwave ovens, TV sets, DVDs, stereos, games and even some toasters are examples of special purpose digital computers.

The course consists of four classes, each two hours long, once each week. Prior to each week's material will be a list of objectives that you should consider while you are reading the material. After you finish, go back and look at the objectives to see where you still need more information. Ask the instructor in class if the presentation material does not cover the subject adequately for you. The objectives are normally in three categories.

The first category is terms. It is necessary to know a lot of terms to allow communication between instructor and student. In many cases the words are familiar but used with a different meaning than we are accustomed. **An alphabetical list of terms is in Appendix 5.** We will try to help this learning process by giving examples of the objectives available in class. That way you can see and touch them. At times the instructor may go in-depth on certain objects and the facts may overwhelm you. Do not worry about this. In almost all cases you do not need to know the details, just like you do not need to know how the inside of a car engine works to drive a car. However, the background information will come back to you in the future when something goes wrong (like your engine overheating) and you are faced with something unexpected or new. At least you will be able to communicate your problem to the mechanic so the expert can fix it.

The second category will be tasks that you should be able to do on your computer.

The third category is things you should have some understanding about.

Another reason for the emphasis on terminology is the natural fear of the unknown. Most adults resist learning computers because of fear. Kids learn more easily because they have no fear doing something wrong and they are in the natural mode of learning. We no longer learn at the rate that we did as kids because we are out of practice **and** we hate to make mistakes. We just have to put up with our changed

learning rate. We can, however, resolve to not worry about mistakes and looking stupid in the classroom.

Rule one: there are no stupid questions, just stupid answers. This will happen often because the instructor is thinking in computer terms and you are asking the question in English. **Just keep asking until the instructor understands the question!**

Basic Computers Week 1 Objectives

Learn what the following terms mean:

- Hardware
- Software
- Portable computer
- Desktop computer
- Binary
- Power supply
- Motherboard
- Booting
- Hard drive
- Floppy drive
- CDR
- CDR/W
- RAM
- ROM
- CPU
- Display Device
- Input Device
 - Keyboard
 - Pointing Device
 - Mouse
 - Touch Pad
 - Touch Screen

Learn the basic parts of a computer

- Chassis
- Motherboard
- Processor, CPU
- Hard Drive
- Screen
- Keyboard
- Mouse, Touch Pad or Screen

Learn the purpose of the extra keys on the keyboard

Practice mouse skills by playing Solitaire

“Click”
“Drag”
“Double Click”

Hardware

When most people think of computers, they think of personal computers (also known as PCs) like the ones we will be using in this class or the big mainframe computers that are used by large businesses. As technology progresses, the difference between the personal computers and the big mainframe computers has become smaller and smaller. Today's PC's have much more capability than the mainframe computers of the 70's and 80's.

This course will expose you to the many uses of a computer. But first, let's get familiar with the terminology used in today's world of computing.

In the average personal computer of today the following components are usually packaged in one of two ways. In a **portable**, (called a laptop or notebook) they will be packaged all together in a single assembly. In a **desktop** (like in the lab) they will be divided in the following manner.

Computer case:

This is sometime called the: a. tower, b. CPU or c. computer

It contains most of the computer components including the CPU that we will describe during this course.

Input device: Most often a keyboard. The keyboard looks like an oversized typewriter keyboard and that is what it is. Modern keyboards have many extra keys that allow you to hit just one key in steady of holding down several keys at once. When equipped with a microphone and software, many computers will actually take dictation.

Pointing device: Mouse, trackball, stylus, touchpad or touchscreen

Display device: Normally a flat panel Liquid Crystal Display (LCD) or a Cathode Ray Tube (CRT) monitor

Other peripheral devices such as printers, scanners, external modems will be covered later.

Numbering systems

Most of us grew up only knowing the decimal system. That is we have ten single digits that we repeat (0,1,2,3,4,5,6,7,8,9). Since the first people who learned to count had ten fingers it evolved naturally. If we had 8 fingers we would probably

count in octal (0,1,2,3,4,5,6,7). The digital computer uses a binary system (0,1). This is because in early digital computers the devices used to store programs had two states, OFF and ON. These two states can be expressed as a punched hole or no hole, north or south magnetic directions, zero voltage or some voltage. You do not need to learn any of this type of math unless you plan to become a computer programmer who writes software. Because the first PCs used a group of 8 ones or zeros to do almost everything, they came up with a word (**byte**) that represented this. That is why almost all numbers about memory end in “byte”. Because most of the numbers in computers are large we use prefixes to reduce the number of places you have to write. For example 1 gigabyte is 1 billion bytes or 8 billion bits. Each one or zero in the group is called a bit just like in Morse code. **All you need to know is that the computer uses a binary system (zeros and ones) and that this generates new terms and very large numbers. All data stored in your computer is either a one or a zero. The computer takes care of converting it back into something you can recognize.** The appendix in the back provides a little more explanation if you are mathematically inclined.

Power supply

The power supply provides the many types of voltages needed by the components in the computer. The capacity of the power supply will vary from computer to computer depending on how much equipment is installed or expected to be installed. The power supply comes with standard connectors and voltages and if you need more power, you can replace the old one with a newer one with a higher rating. The power supply and fans are most often the items to fail and are designed for easy replacement. A surge protector for your computer will help protect against power supply failure and is a worthwhile investment.

Central Processing Unit and RAM Memory

The Central Processing Unit (CPU) is the device in your computer that determines what all the ones and zeros mean. It is the brain of the computer. The speed of this device is the primary factor in determining how fast your computer will be. It is also the most expensive device in your computer. The faster it is, the more your computer will cost.

The Random Access Memory (RAM) is the memory that the CPU uses to get the ones and zeros from the programs to do its job. Think of RAM as your short term memory. The hard drive, floppy drive, and Optical drive (CDR, CDR/W, CDROM) are all long term storage devices. Think of them as your long term memory. In a computer, these devices are used to store programs and data (ones and zeros) that you are currently not using. Random Access Memory) is very fast compared to these storage devices but has the disadvantage of only retaining the ones and zeros while the computer is powered on. **If the electricity goes off, everything in RAM is lost.**

Motherboard

The motherboard is where the CPU and memory is located. More electronic circuits are on the motherboard to accomplish other computer tasks. It is called a motherboard because most computers are designed with the option of adding additional components mounted on circuit cards. These circuit cards were called daughter boards and are plugged into the sockets on the motherboard. Today we refer to the daughter boards by the name of the socket on the motherboard and its function. New computers have more than one type of socket on the motherboard, each faster than its predecessor. This allows us to use old circuit cards in new computers. The names (actually abbreviations) of these sockets are ISA, EISA, PCI, AGP and Express PCI. You could buy an ISA or EISA or PCI MODEM card for your computer if you needed to connect your computer to the telephone.

Booting

Because everything in RAM is lost when you turn the power off, the computer uses some special memory that retains the ones and zeros to recover. Since this memory is expensive and slow, only enough is used to allow us to get the rest of the data we need transferred from our hard drive or other storage device to the RAM when the power is turned on. This process is called booting. The term is derived from the old expression of pulling yourself up by your own **bootstraps**. Depending on how fast your CPU and hard drive are, booting can take one or more minutes. More details will be provided later.

Power On System Test (POST)

When you turn on your computer, you should hear one beep (some computers use a double beep).

This says that the Read Only Memory (ROM) that is in your computer has performed several basic functions that must be done before you can load (boot-up) your operating system. The name of the program that is in the ROM is called the "BIOS", which stands for Basic Input Output System. All modern personal computers have this function. As long as your computer is working this is all you

have to know. If you hear more beeps or longer beeps than normal the computer will probably not work. The technician will know by the sounds what is broken. If you are interested there is more information in the appendix.

If you leave a diskette in the floppy drive (or a CD in the CD drive) that has an operating system on it, your computer will boot up to that OS instead of the operating system installed on your hard drive. The computers in this classroom all have a version of Microsoft Windows installed. Apple and McIntosh computers normally have a different type of operating system installed.

BIOS

CMOS (complementary metal oxide semiconductor) is the physical description of the memory used in the original PCs to store the start up program. This is volatile memory and it uses a battery to retain the information stored in it. Computers today also use other types of non-volatile read/write memory in addition to the CMOS chip to provide the turn-on program. The program, which these devices provide, is called the BIOS (Basic Input Output System.) You can find out more in appendix 2. A battery like those found in your watch powers the CMOS chip. One reason for this is that the CMOS chip also contains a watch circuit in it. This is how the computer knows what time and date it is. The battery is normally good for two to three years. You can tell when the battery is weak because the time will either speed up or slow down as the battery power drops off. Part of the BIOS program does a power-on test.

Storage Devices

Traditionally a floppy drive has been used as a storage device. The last were diskettes 3 ½” square in a plastic case and stored 1.44 megabytes of data, older drives used diskettes that were 5.25 inches square and had a thin cardboard case and if you really go back in time, the disks were 8 inches square and really floppy. Inside each of these diskettes is a Mylar magnetic circular disk that the drive spins like a phonograph record. The Mylar material is like the tape you use in a tape recorder. A “head” like on your tape recorder, but much smaller, moves between the center of the disk to the outside of the disk in very small steps. Just like your tape recorder, data can be written or read from this head. Once the disk

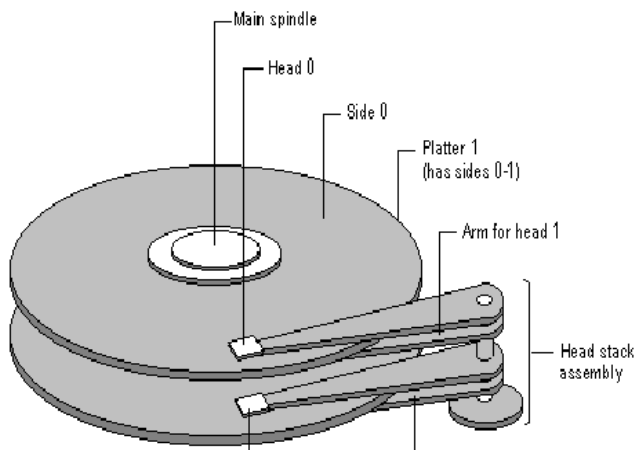
has made a complete revolution it has read or written all the data it can in that space, it then steps out a small amount and uses the next area. Each space it moves is called a track. The final result is series of concentric circles (tracks) on the disk with data installed. Originally, tape drives were used to store data. But when you wanted data that was stored at the end of a 15 inch reel, it would take several minutes to go there. By using a disk that spins very fast, you can move to any place on the disk in less than a tenth of a second and read or write data.

The only difference between the floppy drive and the hard drive is that the magnetic media on the hard drive is deposited on a temperature stabilized metal disk. This metal disk can be spun at much higher speeds than the floppy disk and because the metal does not expand and contract with temperature, the steps can be much smaller. The end result is that the hard drive can store thousands of times more data than the floppy disk and the data can be read or written much faster. A modern hard drive can transfer data off the disk at 133 to 300 megabits a second. It takes about ten seconds to read 1 megabit of data from a floppy.

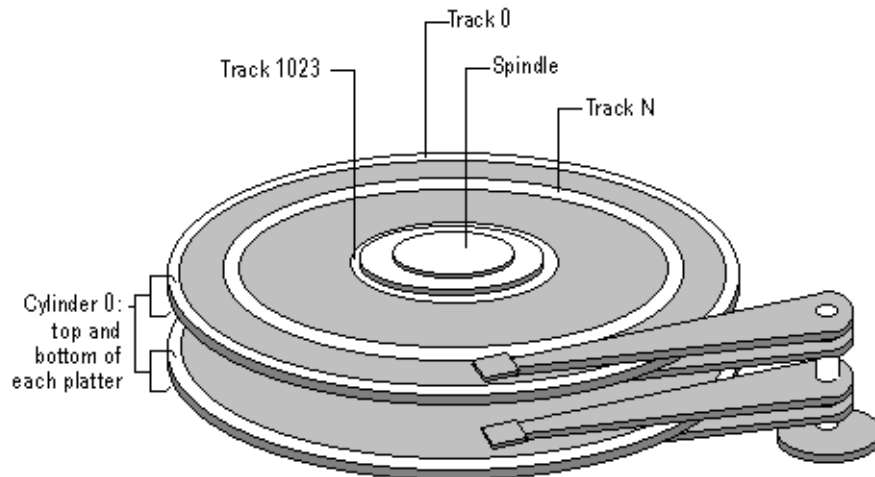
Hardware Terminology

Each disk consists of platters, rings on each side of each platter called tracks, and sections within each track called sectors. A sector is the smallest physical storage unit on a disk, almost always 512 bytes in size.

Figure 17.1 illustrates a hard disk with two platters. The remainder of this section describes the terms used on the figure.



Typical Hard Drive Construction



Concentric Tracks on Hard Drive

The Compact Disk Reader (CDR) has mostly replaced the floppy drive. The compact disk used in audio players and computers costs only pennies at the manufacturing level. A more proper name for most CDs is Compact Disk - Read Only Memory (CR-ROM). Your audio CDs and computer software CDs are of this type.

The CDR works like a hard drive except instead of using magnetic properties, it uses optical properties. The laser in the CDR shines on the compact disk and the head reads if there is a reflection or not (one or zero). A CDR/W (Compact Disk Reader/Writer) has a laser that is strong enough that it can "burn" a small spot on the disk. The cost of these devices has come down over the years and you see the CDR/W in most new computers. The CD used in computers is no different than those used in audio players, just the manner in which the data is encoded on the disk. A computer CDR or CDR/W can read and write audio to a CD if you have the correct software program. The CD is being replaced by the DVD which is a denser version of the CD and for the same size you can get 2500 megabytes or more of storage.

A new technology called the **flash drive** has replaced the floppy drive as a portable storage device. Every company has their own name for the flash drive like Travel Drive, Thumb Drive, San Disk, etc. Most of these interface with your computer via the Universal Serial Bus (USB) connector in your computer. I call it a flash drive because the storage is done using a technology called flash memory. Trade magazines are now indicating a new technology will soon be available that

is faster and denser than flash memory. It will still work the same through your USB port but will be faster and store more data for less money.

Keyboard

In addition to the standard typewriter keys, the computer keyboard will have extra keys to perform computer unique functions in addition to normal typewriter functions. For example, look at the keys in the lower right hand corner of the keyboard picture below or your computer keyboard. They look just like the keys on an old fashioned calculator or cash register. For programs that require you to enter a lot of numbers, this keypad is much faster than the ones on top of the typewriter keyboard. In early computers the keyboard sent the computer an eight bit serial data stream that represented the character that was pressed. For example the lower case "a" would be sent as 01000001 and the upper case "A" was sent as 01100001. The computer would recognize the ones and zeros in the serial data stream and print or display the character a or A. If you have a math background you could calculate that there are 256 combinations of ones and zeros for eight bits. For typing you only need 52 (2x26 for the alphabet) + 34 for all the punctuation and numbers. So the programmers assigned the rest to computer functions. Unless you want to be a computer programmer there is no need to know the details.

If you have used a typewriter you already know that you hold down the shift key and press a letter key and it will type in uppercase. The same is true for numbers and punctuation which actually show you the two possibilities on the key. Instead of having a keyboard with 256 keys on it, the computer people added **Control** (*ctrl*) and **Alternate** (*alt*) keys to the key board to change the key from its normal function to a special function that the computer understands. They work just like the shift key in that you hold down the control or alternate key while you press another key. Since it was hard for people to remember all of the special meanings, companies put out new keyboards that have extra keys that are labeled with the function it does. The example below has only the function keys (*F1-F12*) and some extra keys above the cursor keys.



Note:

In the modern computer keyboard the keyboard just sends the row and column numbers of the pressed key. A program in the computer looks up what key that is supposed to represent and uses it. This allows the same keyboard to be used for any language by just changing the characters painted on the keys. For example you can buy an English and Spanish keyboard that has both characters printed on the keys. When you run Windows in the Spanish mode the display will show Spanish characters. There are also programs that allow you to reprogram you keyboard in any layout you want.

The instructor will show you how to use the **cursor keys** in class. They allow you to move the cursor like you do with the mouse but much slower. On electric typewriters an extra key was added to cause the carriage to go back to the left side of the paper and go up one line. The key on the computer keyboard that does this is called the **Enter** key (**ent** on the keyboard above). When you are in the typing program it does the same thing. If you are in some other program it is used to make whatever you selected to happen. For example, if you are trying to double click on something and are having trouble clicking fast enough you can select with mouse and then press the **Enter** key and it will do the same as the double click.

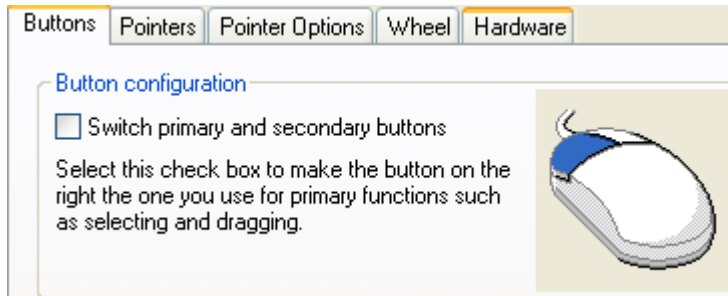
Display Device

The display devices in this classroom are Liquid Crystal Display (LCD) type monitors. Most High Definition TVs use either a LCD or Plasma display. The Cathode Ray Tube (CRT) was the standard for many years in computers and they were high quality versions of the CRT that were used in TV sets. Portable computers almost always use LCD to provide the monitor function. The quality of your monitor and video card determine how your display will look. If you look at the pictures in a newspaper with a magnifying glass you will be able to see little dots. The monitor works the same way. The more dots per inch you have the higher resolution you can have. A color picture is made up of dots of red, green and blue. Your TV set only has one resolution (unless you have one of the new High Definition TVs). Most video cards in today's computers can support multiple resolutions. One of the initial monitor standards was 640 by 480. That means 640 columns of pixels by 480 rows of pixels. A pixel is a single dot in a monochrome system and a group of three (red, blue, green) dots in a color system. When monitors got larger, the dots were beginning to be seen, as dots just like when looking at a newspaper with a magnifying glass. The monitors in the classroom are set at 1024 horizontal by 768 vertical.

Today, many hand held devices (Smart Phones, iPads, etc.) use touch sensitive screens to combine the user input with the display device.

Pointing Device

The pointing device is probably the most unusual item on the list. The early computers did not use pointing devices and everything was done by the keyboard (and still can be). The Apple computer company was responsible for making the pointing device popular on the personal computer by generating an Operating System that was graphic in nature rather than keyboard oriented. We will use a mouse in the classroom because it is the most common pointing device. Most portable computers use a touchpad or pointing stick to perform the same functions. Learning the use of the mouse is more a hand/eye coordination skill than knowledge. It will not come automatically and many hours of practice may be required to master the mouse. The purpose of the pointing device is to allow you to move the cursor quickly from one part of the display device screen to another quickly. Once there, an action can be taken by activating one of the switches on the mouse.



The switches on the mouse are called buttons and a personal computer mouse will have at least two buttons. Newer ones may have more buttons that do additional tasks. The **button on the left side of the mouse is used to select an action. The one on the right brings up a menu.** It is best to use the forefinger on the left button and the middle finger on the right button. The most common problem is that most people tend to rotate the mouse when they are trying to move it on the screen. Because of the way the mouse is designed you **must** keep the mouse square to your motion. This will be demonstrated in class. The next obstacle to overcome will be the double click. This is always done on the left mouse button. If you do not click fast enough nothing will happen. As mentioned above a single left click will select an action, where **the double click selects and then executes the action.** The speed at which you have to double click can be adjusted and if you need for the speed to be slowed down ask the instructor. **Another option is to left click once and then use the enter key on the keyboard to execute the action.** When you are in class you may want to do this when the instructor asks you to double click. We will teach the solitaire game so that you will have a less boring way to practice your mouse skills. Once you improve your mouse skills you will find that the double click is much faster.






If you have internet at home you can also go to one of the sites below:

<http://www.mouseprogram.com>

<http://www.instruction.greenriver.edu/esol/activities/mouse/mouseskills.htm>

The easy way to get to the above site is to search for "mouse skills" in your browser search box.

You can tell where the mouse is by looking for the cursor. The way the cursor looks will also tell you what is happening with the computer and the program you are running. The picture below shows five examples of what the mouse cursor can look like in certain conditions.

Help Select	
Working In Background	
Busy	
Precision Select	
Text Select	

Sometimes you will have two cursors on the screen at the same time. For example, in a word processing program you will have a straight line blinking cursor to tell you where the next character will be placed when you type and a Mouse cursor that looks like the “Text Select” cursor shown above. This cursor is sometimes called the I beam because it looks like a capital I or a steel I beam.

The next skill you will need to learn is how to ***drag*** the mouse. Instead of pressing and releasing the left button, you hold the button down and move the mouse. We will practice this skill using the games provided in Windows.

Basic Computers Week 2 Objectives

Learn the following terms:

- BIOS
- Operating System
- Program
- Single Click
- Double Click
- Drag
- Cursor
- Icon
- Enter Key

Be able to:

- Hold the mouse
- Move the mouse
- Open a program using the mouse
- Open a program using the keyboard
- Close a program
- Use the start menu
- Shut down a program
- Shut down the computer

Understand:

- How a mouse works

Learn about the program Note Pad

- Identify different cursors

Learn how to:

- Use the backspace key
- Use the delete key
- Use the tab key
- Add blank lines
- Set wrap functions
- Print work
- Save work to hard drive

BIOS

The Basic Input/Output System (BIOS) software is built into the PC, and is the first code run by a PC when powered on. The primary function of the BIOS is to set up the hardware and load and start an operating system. When the PC starts up, the first job for the BIOS is to initialize and identify system devices such as the video display card, keyboard and mouse, hard disk drive, optical disc drive and other hardware. The BIOS then locates software held on a peripheral device (designated as a 'boot device'), such as a hard disk or a CD/DVD, and loads and executes that software, giving it control of the PC. This process is known as *booting*, or booting up, which is short for bootstrapping. BIOS software is stored on a non-volatile read-only memory (ROM) chip built into the system on the motherboard.

Operating System

So, what is an operating system (also called OS)? Traditionally, it was the base program loaded on the computer that managed the storage devices connected to the computer and controlled the human input devices such as the keyboard and display device. It allows us to load other programs that perform the task we want the computer to do. **All you need to know** is which one you are currently using. When you turn your computer on, the computer will test itself and then start loading the operating system. While the OS is loading (this is called “booting”) the display will show the name of the operating system. Even though all operating systems do the same thing they will look different. This will cause confusion to the beginner when the system he is learning on is different than his own computer. We generally keep the latest released version of the Windows on our machines. These are Microsoft operating systems, the most common operating systems in use on home computers currently. Apple computers use a different operating system that is proprietary to Apple. Once you learn one system it is easier to adapt to another. A history of operating systems is included in appendix 4.

Programs

After the operating system is loaded you can start to run programs. **A program is the software that is loaded to perform a task.** Software is the ones and zeros that tell the computer what to do. Today’s operating systems come with many free programs and may be the main reason that you would upgrade to the latest

version. Even though these programs come with the operating system they are not really part of the operating system. A partial list of free programs that comes with Windows XP, Vista or Windows 7 is provided below. Many of the programs not listed are used to maintain your computer or provide adaptive services for persons who have disabilities:

Internet Explorer - a program, which allows you to browse on the Internet.
Outlook Express in XP and Windows Mail in Vista/Windows 7. These are email clients which allow you to send and receive email. There also many other email clients which may be provided by your internet provider that provide the same function.

Games - Solitaire, Free Cell, Hearts and Minesweeper.

Address Book - This program works with your email to store and maintain your contact list of email addresses.

Notepad - allows you to write notes and save or print them.

WordPad - More capability than Notepad. Good for writing letters and other basic word processing tasks.

Calculator - Can be used in a conventional mode like a simple calculator or as a scientific calculator.

Media player - plays audio CDs, MP3 CDs and DVDs.

Paint - a program that allows you to draw and paint on your computer screen. You can print whatever you draw.

Sound Recorder. Plug a microphone into your sound card and record audio notes in your own voice and save them on your computer.

Some computers also come with “bundled” software. This is software that you would normally have to buy separately. Software can be very expensive; so do not overlook what is provided when buying a new computer. Most of the time you will get “trial” software, this software has a limited lifetime and is there to entice you to buy their brand over some other brand. You should remove trial software after it expires to keep your computer from slowing down.

Some of the additional software programs found on the computers in this classroom are listed below

- Microsoft Live suite
 - Live Mail
 - Live Messenger
 - Live Photo Gallery

Oracle Open Office suite - This suite contains multiple programs that are designed to work with each other. These programs include a word processor, a spread sheet and presentation program.

Foxit PDF reader

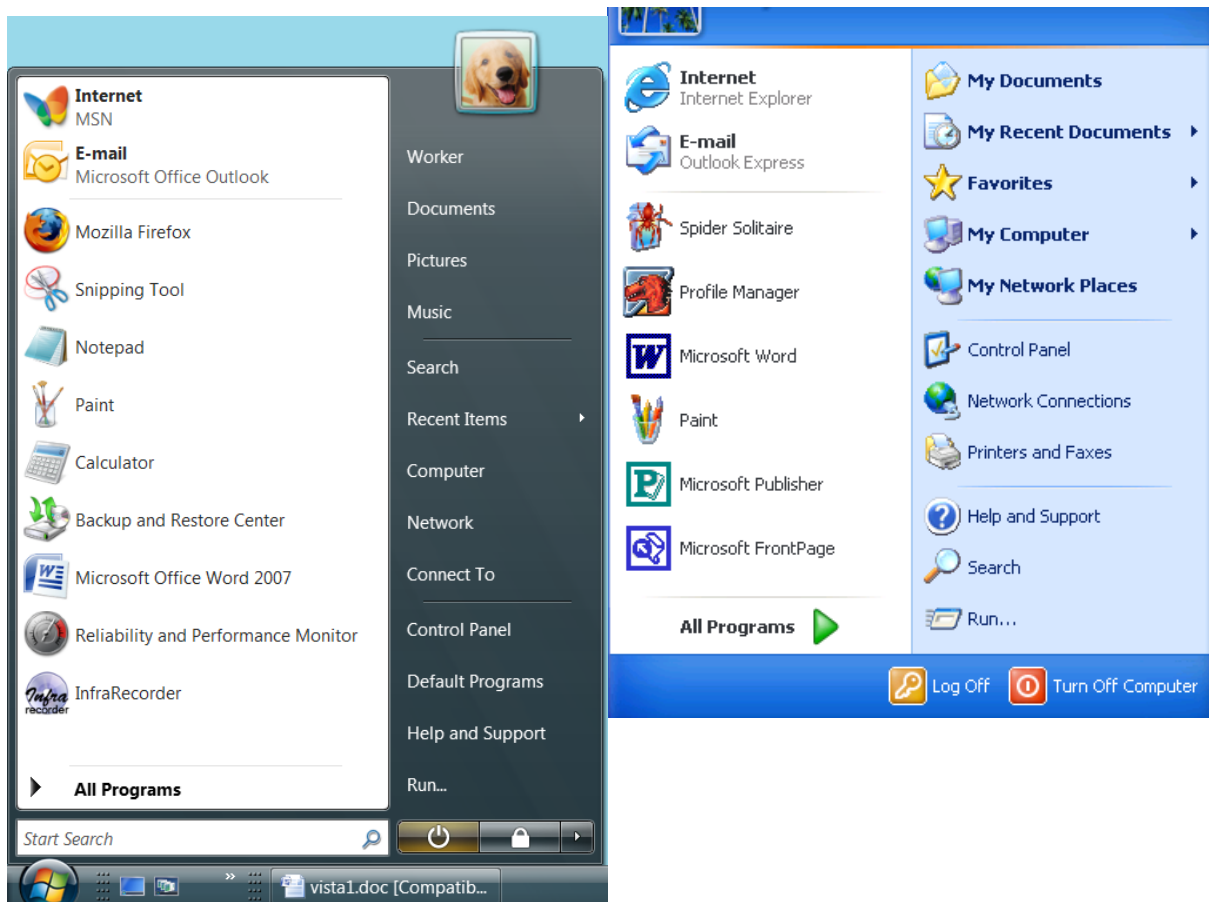
Comodo anti-virus protection

IrfanView image presentation and editing tool

Oracle VirtualBox virtual machine tool, enables Windows XP

Running Programs


There are several ways to start (or run) a program. If no one has installed icons on your desktop you can follow the procedures listed below. If there is an icon for the program you want to run, just double click on the icon. Make sure your cursor is on the icon, not the name below the icon. **If you have problems with double clicking, you can single click on the icon, then press the enter key.**



On the Left is the Windows Vista or Windows 7 Start Menu and on the right is the Windows XP start menu. Both start menus can be configured to be a single column like was used in Windows 95 through Windows 2000.

1. Left Click on *START* button (start icon in Vista/Windows 7) on the bottom left of the screen:
2. Move the mouse cursor up the menu and to the line that says **All Programs**. Windows 7 requires that you click on **All Programs**. The menu should now increase in size and show you a list of programs.
3. Move the cursor to the new menu and then down to the program you want to run. Some programs may be included within a **Folder**. Select and click on the folder to find those program names.
4. Click on the program name.

NOTE: In Windows 7 or Vista you can skip steps 2 and 3 and just type the first 2 or 3 letters of the program name in the search block at the bottom. Windows will give you a list of programs that start with those letters.


If you see an arrow ► next to a line on the menu (Windows XP) or the folder icon  (Windows 7), it means that there is another level of menus below the main menu. Some programs will have several levels of menus.

Button icons: Many programs will have small square icons with a symbol inside the icon. These icons are called buttons and activate specific functions. Below are the buttons on the top right side of the program window.



Minimize Button: The first button with the _ is used to reduce the window to a button on the task bar.

Maximize Button: Notice the middle icon in the above figure shows a full screen. To enlarge any window so that it fills up the screen click on the middle button with a single window in it.

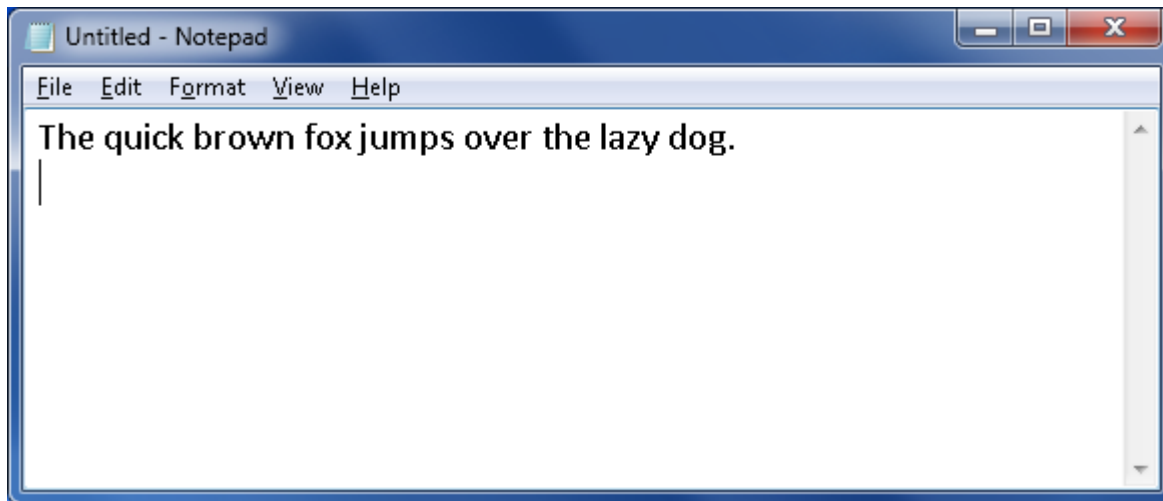
This button changes to a **Restore Down** button  when you are in a full window display. If you have your window expanded so that it is the same size or

larger than the full screen display you can tell which mode you are in by looking at the middle button. It always tells you which mode you can switch **“to”**, therefore you are in the opposite mode.

Notepad

Last week you were shown how to use the program **solitaire** to play a card game on your computer. This week we will use the program Notepad to generate notes or quick letters. This program lets your computer work like an electric typewriter. To get to this program click on the **START** button and then on **All Programs**. Another menu will come up. Click on **Accessories** and then **Notepad**. If you have Windows 7 or Vista you can type “no” in the search box then click on **NotePad**. If you have XP you can just hover the mouse pointer over the folder **Accessories** and that menu will pop up.

The instructor will use both methods until you are comfortable finding Notepad.



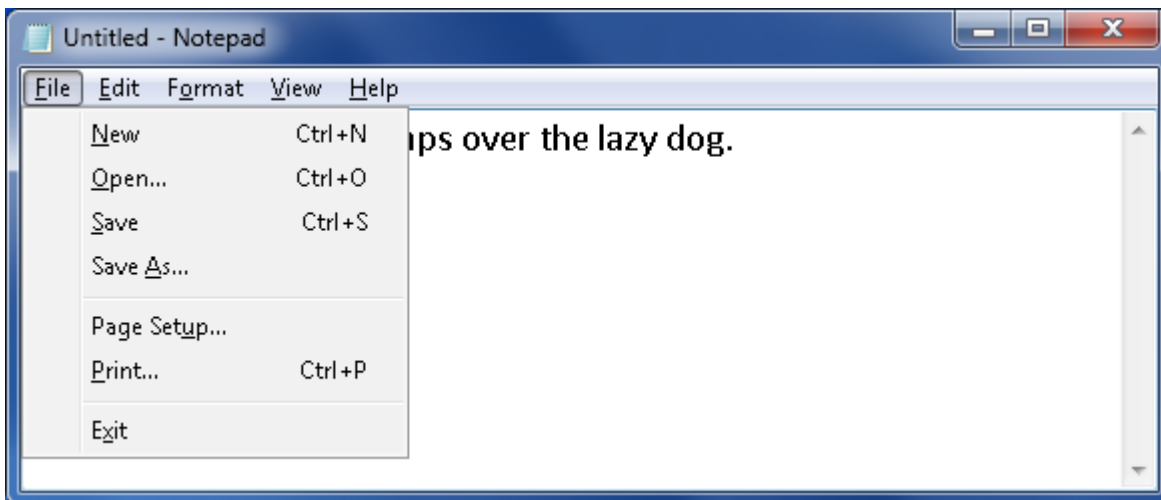
If you have done everything correctly you should have a large version of the picture above, not including the text. When you see the blinking cursor, you can start typing just like an electric typewriter. If you make a mistake in your typing you can correct it several ways. If you realize immediately, you can press the backspace and it will erase the character to the left of the blinking cursor. In the keyboard shown in the text, this key is labeled **bksp**, some keyboards just have a left facing arrow on the key. If you do not catch the mistake right away you must move the cursor from where it is to where the mistake is. If your mouse skills are good, you can move the mouse cursor to where the error is and left click. This will

move the blinking cursor to the same location. If you do not have far to go it will be easier to use the cursor keys at the bottom right of your keyboard.



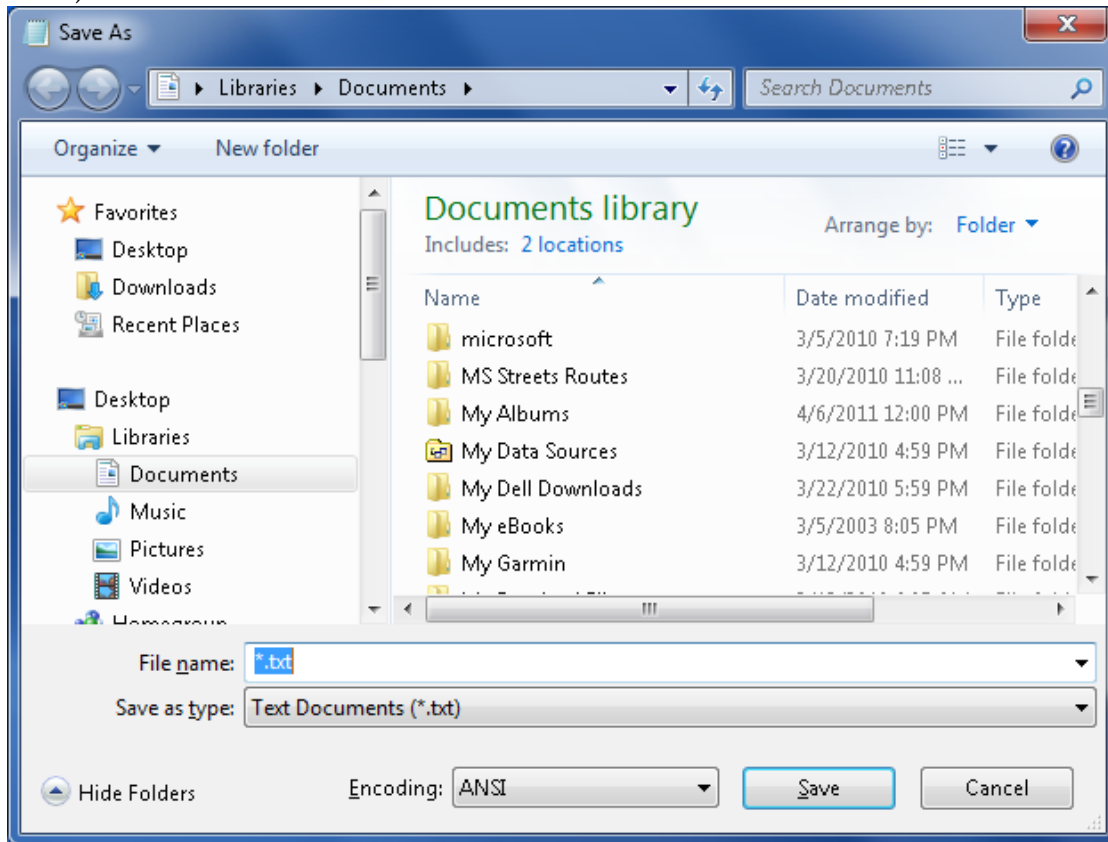
One of the most confusing items to new computer users is that you cannot get the blinking cursor to go to a blank space on the workspace. This is because the blinking cursor can only go where there is a typed character in memory. In addition to the printing characters there are “hidden characters” in the workspace. The space between letters, the tab character, the carriage return and line feed are examples. The last two are generated when you press the Enter key. The tab character automatically jumps a number of spaces that are preset (8). In a full word processor you can set size and multiple tab stops.

When you have the note written just like you want, you will move the mouse to the file menu and left click. The menu shown below will appear and you can click on **Print...** to print your work.

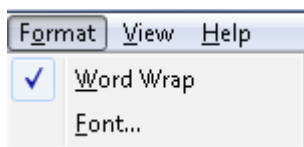


If you want to save your work you would click on the **Save As** line. It will bring up a dialogue box similar to below. (*It will look different if you are not using Windows 7*). The top box shows you where the document will be saved unless you change the location (Library / Documents). The bottom box that says File name currently has ***.txt** in it. This is where you type to change it to the name you want. If you use

the same name twice in the same location it will ask you if you want to replace your old file. The program will automatically add the correct extension (txt in this case).



The Notepad program does have one nice feature that is unique to computers and that is the wrap feature. When the Word Wrap feature is checked as shown below, the text will automatically “wrap” back to the beginning of the screen when you get to the end of the screen. If you change the screen size the typing automatically adjusts to the screen size to show all of the text possible. If the word wrap is off, you will just have one continuous line of text unless you add carriage returns (enter key) where needed. You may see this when you receive emails.



Basic Computers Week 3 Objectives

Learn the following terms:

- Text attribute
- Windows ribbon display
- Font
- Text select
- Cut
- Copy
- Paste

Learn about My Documents

Learn how to use Word Pad

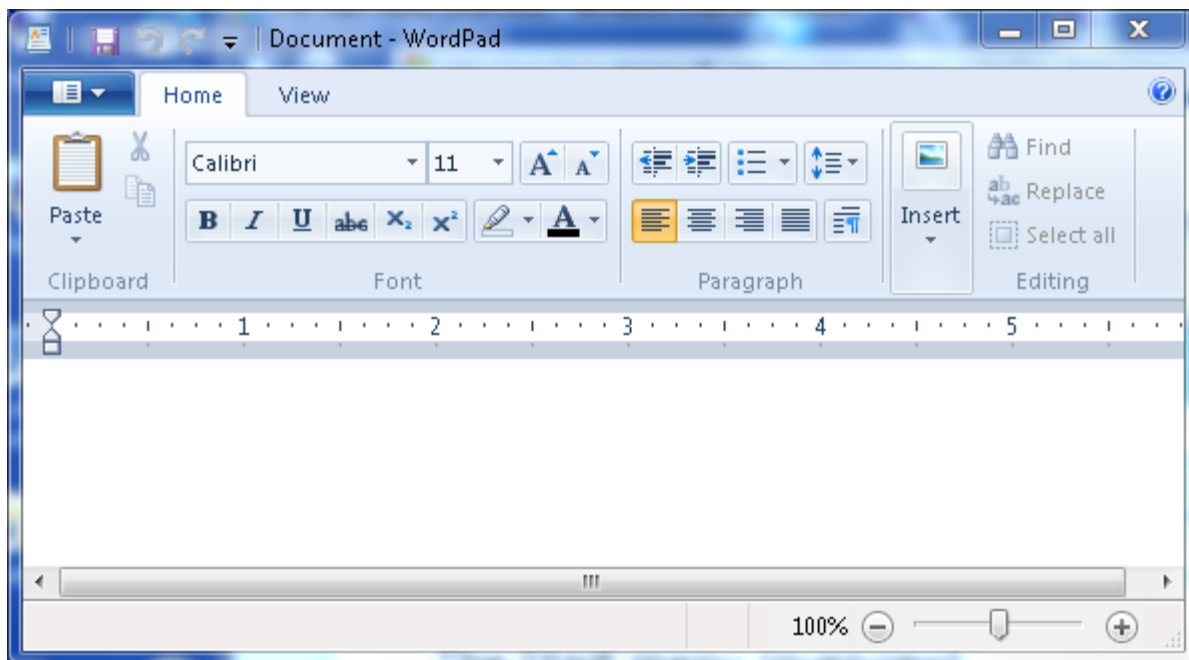
- Select text
- Change font and size
- Change text attribute
- Copy or move text from one location to another
- Save document to specified location and name

Learn the differences between editors and word processor programs

Notepad, Word Pad, Open Office

WordPad


The functions covered in Notepad are available in WordPad also. This section will show you some more features available in WordPad that places it into the word processing category. To get to this program click on the **START** button and then on **All Programs**. Another menu will come up. Click on **Accessories** and then **WordPad**. If you have Windows 7 or Vista you can type “wo” in the search box then click on **WordPad**. If you have XP you can just hover the mouse pointer over the folder **Accessories** and that menu will pop up




Text Attributes

Unlike a typewriter, a word processor will let you change the size, shape, and color of the typed letters. A full fledged word processor will do much more. This can be done while you are typing or after you are finished.

The first thing you should notice is that there are many more items shown on the display underneath the **Menu Bar**. This presentation is known as the Windows Ribbon display. The items are separated into groups: Clipboard, Font, Paragraph, etc. Within each group are icons that perform related functions.

In the picture above, the first box in the Font group says Calibri. This is a font. The later electric typewriters had font balls or wheels that you could change to change the shape and size of the typed words. Here, we just click the  icon to

the right of the word Calibri and choose the font we want. If we click the  to the


right of the next entry (it will be a number) it will allow us to choose the text size.


For instance:

This sentence was written using the Bookman Old Style font at size 12.

This sentence is written using Arial size 10.

This sentence was written in Edwardian Script size 22.

The **B** *I* and U symbols below the font/size selectors allow you to make your characters **bold**, *italic* or underlined. The  icons allow you to change the

color or **background** of the typed letters. In the Paragraph group, the icons  allow you to align the text left, center, right or justify it respectively.

Icons in the Insert group will allow you put in the current date and time or insert pictures from a file like we have used in this manual. Many of these features will be demonstrated in class.

When you select one of these text attributes, everything typed from that point on will take on that (those) attribute(s). That is, if you select ***bold italics all text you type after that will show up bolded and in italics***. If you turn off those attributes, the text goes back to normal.

Selecting Text

You can also change the attributes of text that has already been typed. You do so by **SELECTING** the text and then applying the attribute(s) to it. There are two ways to select text:

1. Keyboard method:
 - a. Position the typing cursor, the blinking vertical bar, at the beginning (or end) of the text to be selected
 - b. Hold down one of the <Shift> keys
 - c. Use the cursor movement keys (arrows, home, end, page up, page down) to highlight the text
2. Mouse method:
 - a. Position the mouse cursor (the I-beam), at the beginning (or end) of the text to be selected
 - b. Hold down the left mouse button
 - c. Using mouse movements, drag the mouse cursor across the text to highlight it.
3. **In both cases, the selected text will be highlighted in blue**
4. The selected text has to be contiguous and only one block of text can be selected at a time

CAUTION: Any, and every, action you take will be applied to the selected text until the selection is de-selected. This includes if you type any character on the keyboard, the entire selected block will be replaced by the character you typed.

5. To de-select text, move the typing cursor with the cursor movement keys WITHOUT having the <Shift> pressed, or, using the mouse, click anywhere in the document.

Cut, Copy, Paste

Selecting is also used to move or copy text from one location to another. With some text selected, the Clipboard options of Cut and Copy are made available.

- Cut - to remove the selected text and place it in the clipboard
- Copy - to copy the selected text into the clipboard, leaving the original untouched.

The clipboard is a memory location into which text, or any computer object actually, can be temporarily stored until it is needed. It is used exclusively by the Cut or Copy and Paste functions. It is globally accessible by the current user during the current computer session. This means text, or a picture or a folder or a program can be cut or copied into the clipboard and later pasted to any other document or location you desire. This feature will be demonstrated in class.

Basic Computers Week 4 Objectives

Learn the following Terms:

- MODEM
- ISP
- DSL
- Broadband
- POP3 /SMTP email
- Web mail
- Username
- TCP/IP

Learn the different type of email systems

Use Outlook Express, or Windows Live Mail to:

- Send Mail
- Receive Mail
- Delete Mail
- Use Address Book

Learn some of the programs that come free with Windows

- Paint
- Calculator
- Outlook Express
- Internet Explorer
- Address book

Modem

The MODEM is the electronic device between the computer and the internet. The name is a contraction of the functions it performs. It can be internal or external to your computer. The original Modems were dial up Modems and used the telephone line and automatically dialed a number to connect you to the internet or mail server. Many computers have this type of modem built in internally. Since the telephone line from your home to the telephone office is analog and will not accept “ones and zeros” the modem converts ones and zeros into audio tones (this is called MODulation) sends them over the telephone line to a modem on another computer which changes them back to “ones and zeros” (this is called DEModulation). As the speed of modems has increased over the years the sound that you can hear on the phone line is so fast that it just sounds like noise. If your software is setup to let you hear the modem while it is “handshaking” you will be able to hear the different tones in addition to the final sound. Handshaking is the term that is used to describe what the modem does when it first connects to another modem. Both start at the highest rate (56k) and check the error rate, make corrections to the level of tones and keep trying until an error free connection is made. The final rate is dependent upon the quality of telephone lines and equipment between the two modems. Consider yourself extremely lucky if you get more than 49 kilobits per second. More common today are the DSL, Cable and Wireless Modems. They accomplish the same tasks as described above, but have a much faster speed capability and can be used simultaneously with the basic service. DSL uses your telephone line and Cable uses your cable TV service. There are two types of wireless modems. One uses cell phone frequencies that connect to your cell phone provider and the other uses a dedicated frequency that belongs to your Internet service provider.

Internet Service Provider

An Internet Service Provider (ISP) is a company that has equipment to connect to the Internet also known as the World Wide Web. Computer users can connect to an ISP by various means. The least expensive is via the telephone using a dial up MODEM as described above. If you are primarily going to use the internet for email and occasional visits to your bank, weather site, hobby site, etc. this is the least expensive method. This is called dial-up service. You are on the internet only when you dial and connect to the ISP. The disadvantage of this type of service is

that it ties up your telephone line. If you need more speed or do not want to tie up your telephone while you are on the internet, you can go to a DSL MODEM which also requires special equipment at the telephone office for which you will be charged a monthly fee. In areas where the telephone company cannot provide DSL service you can find ISPs that have wireless or satellite service. The local cable TV company can also provide you with fast internet service. All internet services faster than dial-up are called broadband service.

If you do not travel a lot or want to get on the internet while traveling then a local ISP will normally give you better service and reduce the spam and viruses exposure. If you have a portable PC and want to connect no matter where you are the national ISPs will have local telephone numbers in most major cities. Another alternate is to use a local ISP and find an “internet café” or hotel where you can plug your computer (or wireless) and connect to the internet. Many of these connections are now free or included in your room charge. For example, many Starbuck coffee houses and McDonalds restaurants provide this service. In Cancun Mexico you can go to the local Walmart, Costco or Sams Club and connect to the internet.

A local ISP will provide you with local email service called **POP-3** (Post Office Protocol version 3). They get the mail off the internet and store it locally until you connect to them. The mail is transferred to your local hard drive when you check your email. You do not even have to get on the internet to send and receive mail because they take care of it. You will have to use a email program to get this type of email.

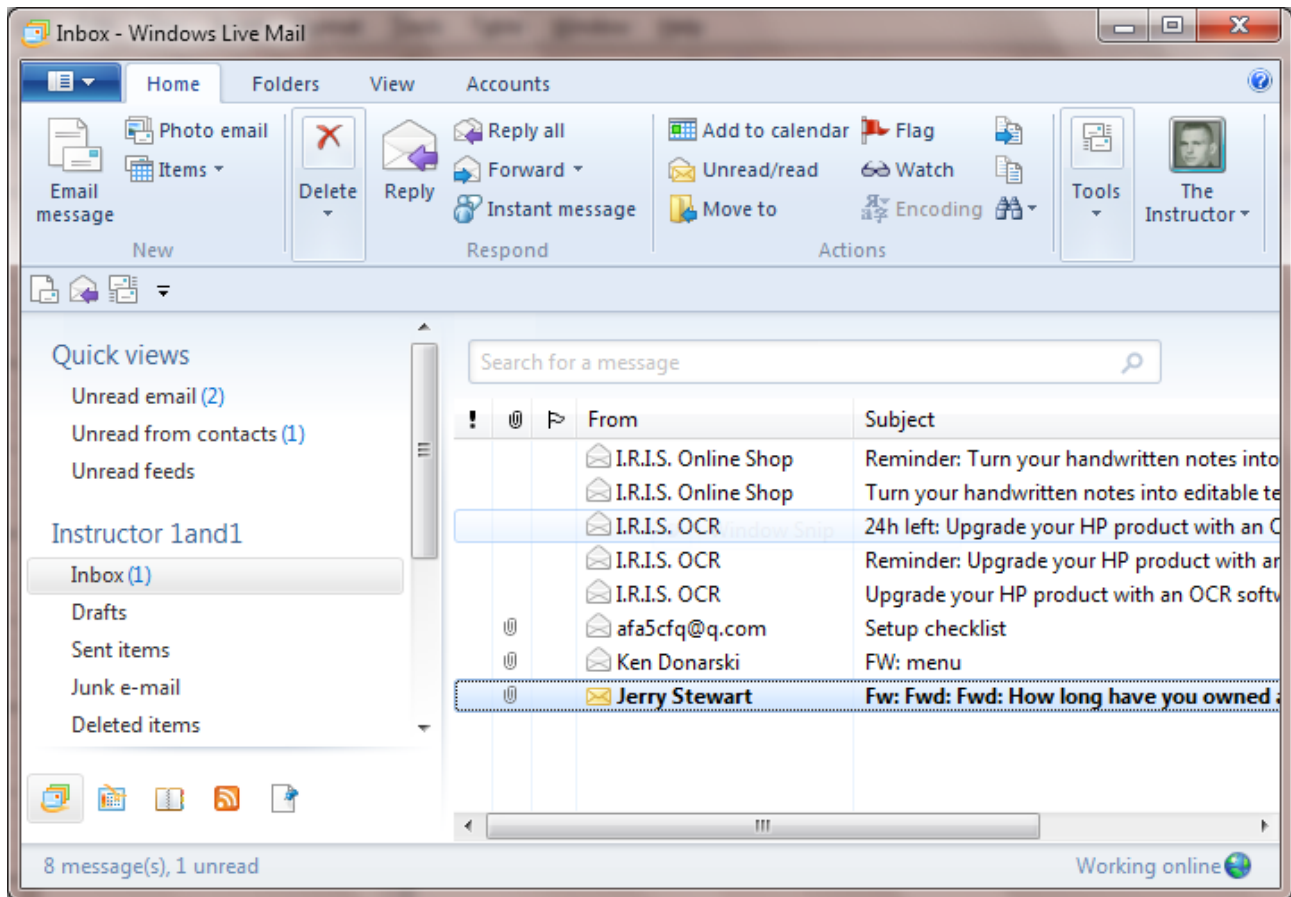
National Internet Service Providers (ISPs) like AOL, Qwest, Comcast, Yahoo, Google and Hotmail, (hotmail is now called Windows Live Mail) store your email on the internet and you read, write and edit your email over the internet using your internet browser. This type of email is called **HTTP** (hyper text transport protocol) or web mail. Web mail being on the internet means that you can get and send email no matter where you are. This used to be a major advantage of the national ISPs. Now, most all local ISPs also provide web mail access to your local POP3 service, thus providing you with the advantages of both systems. Windows comes with an internet browser called Internet Explorer. There are also free Internet Browser like Firefox and Chrome. There are other types of email that large companies use but are not applicable to home users.

TCP/IP Address

When you sign up with an Internet Service Provider, they provide you with a TCP/IP address. This is like a telephone number. To connect to a web site you enter their address and when they reply they send the reply to your TCP/IP address. Although you could put in the actual number, your ISP has a look up computer that translates the www.websitename.com into a number and does this automatically. In case of a dial-up service your address is temporary and you will receive a new one each time you dial up. The ISP keeps track of your temporary number and lets you connect to the internet or local email address with the temporary number. If you have one of the broadband services like DSL, you have a permanent TCP/IP address as long as you have that service.

Email Programs

Windows XP provides a free email program called Outlook Express. Vista provided Windows Mail. Windows 7 did not include an email program but Microsoft does provide a free program that does both POP3 and HTTP mail called Windows Live Mail. You must download and install this program if you want to use POP3 or want to read your old email when you are not on the internet. There is a program called Outlook contained in the Microsoft office suite which also does email which has more capabilities and does not look like Outlook Express. We will demonstrate both POP3 email and HTTP program in class. Your ISP may provide you with their own program or you can use any of the many free email programs. To get to Web email accounts you can use a internet browser or a email program that supports HTTP mail in addition to POP3 mail. A window like the one below will come up when you open Windows Live Mail.

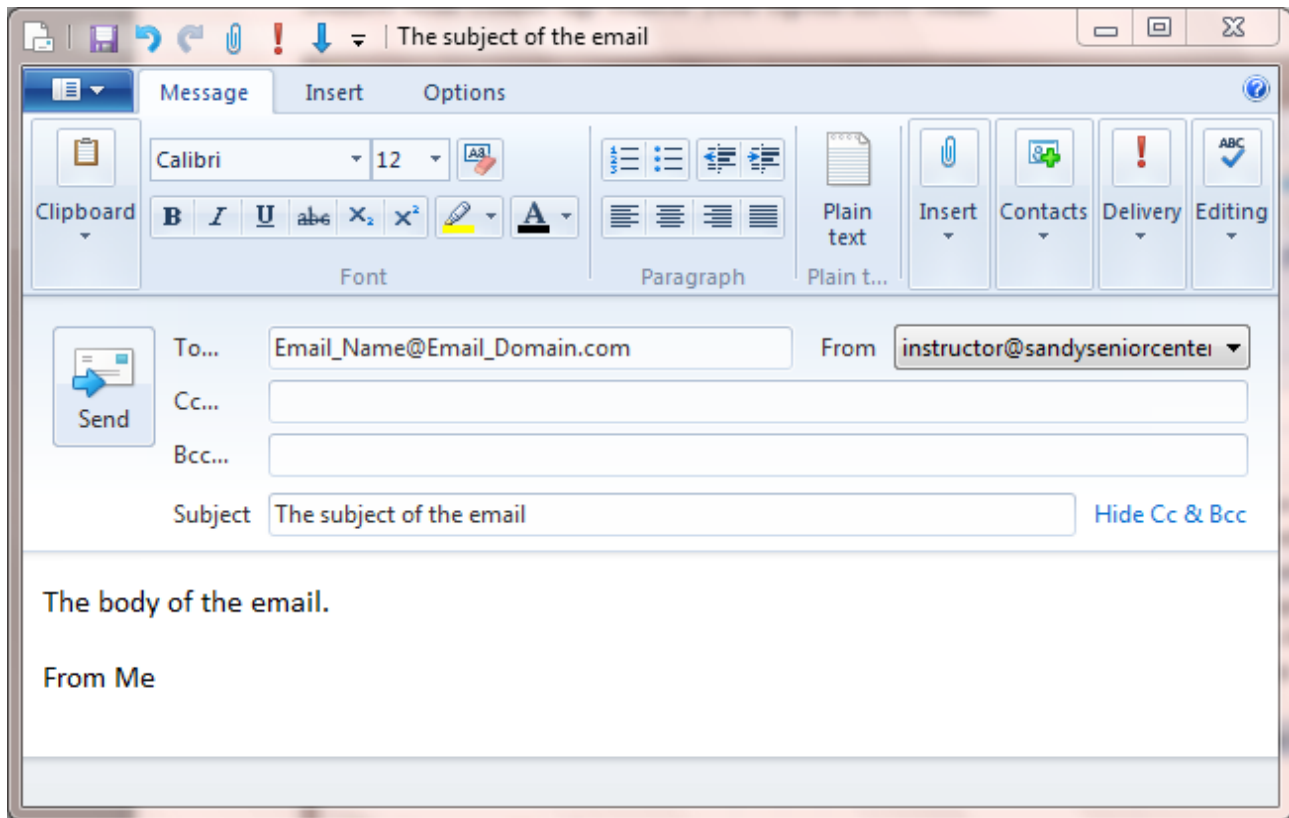


Notice that the example shows one unread mail in your inbox. To read your email all you have to do is double click on the specific email message in your inbox. This will bring a window up that lets you read your email. On that windows tool bar you will see a delete icon . If you click on that icon it will put the email



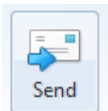
in the deleted items folder.

In the upper left hand corner in the “New” group you will see an icon that is labeled Email message. If you click on this icon and it will bring up a program similar to notepad and WordPad into which you can write or paste in your email.



You type in the work space just like you did in WordPad using the same icons and tools. When you finish you will type in an email address of the person you want to send the email. You should always enter a subject so that when the other person sees the email he knows if it is ok to open.

The **To...** label is a shortcut to the address book. The address book allows you to type in addresses only once and then select them later when you want to send to that person. This is handy because if you make any error in typing the email address it will not be delivered. Once you finish your email you click on the Send icon and the email will be sent.



Although Outlook Express and other email programs can be setup to use http mail, you can use your internet browser to go to the site and run the email program on the site itself. For example, if you have a Yahoo mail account, you type www.yahoo.com in your browser window and click on the mail button on the

main web page. You will then have to enter your email username and email password.

Email address

The format of an email address is as follows: username@ispname

The username is the name you select when you sign up with an ISP. It is best not to use your real name or common names. The people who send spam have dictionaries of common names that they try when they are sending spam. Use something like golf2bad as a user name. Adding numbers and punctuation helps. The ISP name will be the address of the ISP on the internet. Examples are aol.com, msn.com, networld.com, aros.net. The @ symbol between the username and ISP name means that it is an email address.

Appendix 1 - Math

The following information is to provide background only. Unless you plan to write software in the future, you will have little need for the details in this section. However, when you start buying equipment and you see memory and hard drives list one number and the computer uses another, you will not be as confused as you would be without this background. Digital personal computers are based upon binary logic. While humans count by ten, computers count by two. This means that only two states are required, one or zero. The RAM we talked about earlier works by storing either a voltage like 5 volts or zero voltage (well almost zero). Magnetic devices like the floppy disk and the hard disk orient the molecules either north-to-south or south-to-north. So, when we read these devices, all we have to determine is, if a one or a zero was stored, not the exact value. This is why digital/binary storage is more reliable than analog storage like audio on magnetic tapes. To represent a number like 254 in binary takes 8 digits (11111110 - ones and zeros) and that is why you hear such large numbers when talking about computer memory. Just imagine how many ones and zeros would be required to store the number 1 million. Let's look at some examples.

Base 2 Binary	Base 10 Decimal	Base 8 Octal	Base 16 Hexadecimal	
0	0	0	0	
1	1	1	1	
10	2	2	2	
11	3	3	3	
100	4	4	4	
101	5	5	5	
110	6	6	6	
111	7	7	7	
1000	8	10	8	
1001	9	11	9	
1010	10	12	A	
1011	11	13	B	

1100	12	14	C	
1101	13	15	D	
1110	14	16	E	
1111	15	17	F	
10000	16	20	10	

Because writing down or remembering binary numbers would be difficult, most people who write software use either octal or hexadecimal numbering systems to write down binary numbers. For example the binary number **10011110** is **9E** in hexadecimal. The term byte refers to 8 bits of memory, the original size of digital words in personal computers (there is even a “nibble”, a four bit word). The size of the word has increased over the years and is currently 64 bits wide but we still refer to memory size in 8 bit wide groups. The term byte and the use of these different numbering systems is why one kilobyte of memory actually means 2^{10} (1024) times 8 or 8192 bits in decimal form.

Actually, it is not important that computer users understand the mechanics of the math or numbering system used by the people who write software or build computers. But when you see two different numbers for the same device you will realize that the numbering system is the cause, not an error in the document.

Since only ones and zeros can be stored in memory, software programmers have generated conventions that are standardized to represent other symbols. One such convention is called ASCII and describes how letters and punctuations are stored in memory. It uses 8 bits (one byte), to store each symbol. Eight bits allows 256 different symbols to be represented (2^8). In decimal form, the letters a-z equals 97-122 and A-Z equals 65-90. This is probably why the term byte remains popular. A document with 1024 characters would require 1 kilobyte of memory. The standard CD used in computers stores 650 megabytes of data. That would be 650 million characters or about 260 thousand pages of an average book. By using data compression (more tricks with math) they can put over a million pages of data on a single CD.

Appendix 2 - BIOS

The first functions of the BIOS are to initialize the video card and test memory. If everything is working properly you will hear a single beep in about a second, then you will see a number on your screen that is counting up to the amount of RAM that is installed in your machine. Shortly thereafter, you should see a screen that shows the hardware that the "BIOS" found on your machine. A typical list would show that a 3.5 inch floppy drive, the type of hard drive you have, CDROM, video card, modem, sound card, etc.

If the hardware is not all working properly or if a key component is missing, then you will hear several beeps. This assumes that the power supply, Central Processing Unit (CPU) and the first portion of your memory are working. No beeps means they are not. There are presently three major BIOS manufactures. They are Award, AMI and Phoenix. Each BIOS manufacturer has their code for what the beeps represent. Technicians who work with computers can recognize these codes and use the code to troubleshoot. If you are interested, there are sites on the Internet that list these codes.

In addition to checking the hardware for basic responses it performs three other tasks. If you do not stop the boot up process, the BIOS stores the information of what it found in temporary memory. The operating system will examine this memory during the boot up cycle and use this information to configure itself to use all of the hardware that is available.

Second, it will allow you to modify the factory setting to improve performance or to adjust for new hardware. While the BIOS is busy checking the memory and hardware installed, it will display a message of which key you can press to stop the cycle and enter the BIOS program. The delete key, the F1 and F2 keys are common selections. Press the appropriate key and the first of several screens of data will appear. You will have to use the keyboard keys to navigate through the data and screens, as the mouse will not be working yet. The first screen will normally have the information necessary to allow you to add a second hard drive, CDROM or floppy. Items like MODEMS, sound cards, monitors, scanners and printers do not need changes in the BIOS. The settings that the factory installed are called the default setting. These provide all of the basic functions but may not be optimized if you have added hardware.

The last task the BIOS does, is to look at the storage device designated as the "boot device" and loads the operating system program into random access memory (RAM). The BIOS can be setup to look only at the hard drive, or it can be set to look in several devices in a specific sequence and use the first one that has a valid program. Many computers are set up to look at the floppy drive, then look

at the hard drive. If your computer is set up this way, you will be able to see the light on the floppy drive come on for a second, and the sound of the drive looking for a diskette before it goes to the hard drive. This is one of the settings that you can change in the BIOS.

Appendix 3 – Saving Data

If you are in a program that you have entered data, you can save that data by the following procedures. Look at the top of your program and find the menu bar. The first menu item will be “File”.

Click on “File”.

Move the cursor down and click on “Save As”

A Window will open and provide you with options. Change the options as desired and type in a file name in the block provided.

The window will open up with the same options that were used the last time you used the “Save As” command. If the last person to save used “My Documents” then that location would be shown in the “Save In” box of the window. If the last person to use the computer saved their file in the “My Documents” folder on the hard drive, then “My Documents” would be shown in the “Save In” box. If this is the case and you want to save on a flash drive you can select this option by clicking on the ▼ symbol next to the “Save In” box and it will display a list of storage devices. Select the flash drive that you have plugged in and it will appear in the “Save In” box.

Click on the Save button in the lower right hand corner.

The “Save” icon is a shortcut used to save a file which you have opened and modified and now want to save with the modifications. This command replaces the old copy with the new version using the same name. There are no options and it stores the file in the last location used in the “Save As” command using the original name of the file. More people have lost files because of this command than any other reason.

If you want to save both copies, you must use the “Save As” command and use a different name or location. Neither Windows nor any other operating system will allow you to use the same name in the same folder or location.

Appendix 4 – The History of Microsoft Operating Systems

Microsoft was the operating systems provided by IBM when they first entered the personal computers market in the 1980's. Prior to that, the most common operating systems for personal computers were CPM (Control Program for Microprocessors) and the Apple operating system. Microsoft called their operating system DOS short for Disk Operating System. They went through several updates of this system, ending with version 6.22. This was a text based, keyboard only system. Microsoft began offering a graphics based operating system in the early 1990s they called it Windows to compete with the Apple graphic operating system loaded on McIntosh computers. This graphics based operating system has gone through several updates.

The versions through Windows 3.11 had the same basic look with new features being added each year. Windows 95 began the next new look. Windows 95A (1996), Windows 95B (1997), Windows 98 (1998), Windows 98SE (1999) and Window ME (2000) are all updates of the original 1995 code. The same commands used in Windows 95 will work in all later versions. For that matter, many of the DOS commands that were first introduced in 1980 will still work in Windows. Together, all of the versions from Windows 95 through Windows ME are sometimes referred to as Windows 9x.

A network version of Windows primarily used in an office environment was called NT. It looks similar to Windows 9x but the software code has some basic differences related to security and networking. The security provisions prevented many games and some second source programs that would work under Windows 9x from working with Windows NT. Windows 2000 was supposed to combine the reliability and security of NT with the flexibility of Windows 9x. When this objective was not met from the home user aspect, Microsoft released Windows ME version of Windows 98.

In 2001 Microsoft released an OS called Windows XP (home and professional versions). Windows XP was about as different from Windows 95 thru Windows 2000 as Windows 95 was to Windows 3.1. It uses a new code base that is similar to NT and does require more advanced hardware than the previous Windows systems. Some of the old programs will run under XP, but you should check the compatibility list before you try. Vista was released in February of 2007 and looks a lot like XP but has many additional features.

Another operating system that is used on PCs is called Linux. It is similar to the Unix operating system that is found on large mainframe computers. People who work on mainframe computers at work or school often use it. This is because the commands are the same or similar to UNIX. Linux is also popular as the operating system for network controllers for Internet service providers because of its excellent stability. The operating systems itself is free and can be downloaded from the Internet. IBM and HP and other manufactures will now provide their equipment with either Windows or Linux. Another free operating system is BSD (Berkley Software Distribution) which is compatible with Linux. The only disadvantage of using Linux is the lack of current availability of special purpose programs. There are many free word processor, spreadsheet, database, Internet browsers, email and other common office task programs available for Linux and BSD. OS2 was an operating system that IBM offered for a while on their systems which is no longer supported.

Appendix 5 – Terms

Application: This is another name for a program.

Click or Left Click: Pressing and releasing the left mouse button in a short period of time. This selects the item under the cursor. This assumes the mouse has been set up for a right-handed person. The keys can be reversed to make it easier for a left-handed person.

Close: To quit or exit a program or to remove a file from a program. On the program bar in the upper right hand corner is an icon with an X on it. This is the close button for that program.

Cursor or pointer: A graphic symbol that shows the location of the data entry point in a program or your desktop. The cursor changes size and shape depending on what is happening. An arrowhead is the default symbol when the desktop is displayed.

Desktop: This is the work area, which fills your monitor screen when you boot up in Windows. It normally will have several icons and a task bar displayed.

Double Click: Pressing and releasing the left mouse button twice in a short period of time. This performs the same function as a Left Click (select) and then pressing the *Enter* key.

Dragging: This is the procedure for moving or copying an object from one place to another on the screen with the mouse. You press the left mouse key and keep it pressed until you have moved the cursor (or icon) to the desired location.

File: A collections of ones and zeros stored on a storage device like your hard drive that has been given a name. Programs can be a single file or a collection of files depending on how large and complex the program is. When you create a letter, or picture or data of any kind, the program you are using will let you save that data in a file.

Folder: There are thousands of files on your computer. To make it easier to find a file, the computer has “Folders” which lets you group files together under a specific name. This is similar to using cardboard folders or index dividers in a file cabinet. Computers have an additional advantage over file cabinets, in that it is

easy to create multiples layers of folders. For example the top folder could be called Correspondence; it could contain folders called Bills, personal, business, children, etc.

Icons: A small graphic image that appears on your desktop that represents a shortcut to a program file or location. The icon will also have a name underneath providing an additional hint of its function.

Menu: A list of commands and or options you can select.

Open: To start a program or load a file into a program.

Right Click: Same as left click except the button is on the right side of the mouse. The right click will bring up a menu. The choices on the menu can be selected by using the Left Click.

Run or Execute: To start a program.

Save: To store the information that you have entered in a file on a storage device. If you do not save your information, it will be gone when you leave the program that you are in.

Scroll bar: On the right side and/or along the bottom of some windows is a slider with arrows at each end. This appears when the size of the window and the resolution of the screen is not large enough to show the whole display. The arrows allow the screen to be moved to display what is currently hidden.

Start Button: The button that will display the main menu for Windows.

Software: Another name for a program. More specifically, software is program code (ones and zeros) that is loaded into volatile Random Access Memory. Firmware is program code that is loaded into non-volatile RAM. Your BIOS is a firmware program. It stays when you turn off the power. The programs you load from a diskette, CD or hard drive are software programs and they must be reloaded the next time you power up your computer.

Taskbar: At the bottom of the screen (normal location) will be the taskbar that tells you what programs are running and provides a starting menu. As software is loaded onto your machine, icons may be added to your taskbar to provide

additional shortcuts. On the right corner of the task bar, the current time will be displayed.

Title Bar: The bar at the top of the window that contains the name of the program you are running and some button icons.

Window: The area of the desktop that displays the program that you are running.