Introduction to Computers Using

Windows XP/Vista/7

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"Introduction to Computer" has been written solely for use by the

Asian Community Center Computer Classes

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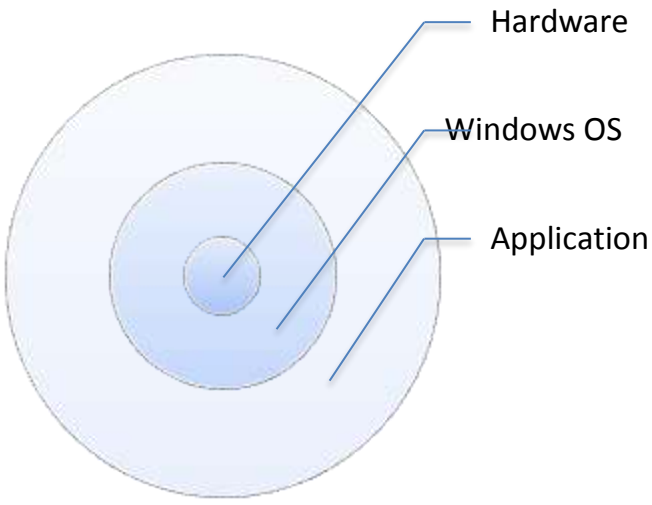
What is a PC?

The first mass marketed PC was the IBM-PC which appears way back in 1981. The acronym PC was coined by IBM for "Personal Computer". The term PC compatible related to compatible PC's from other manufactures that made PC's which ran the same software at the IBM-PC. The first PC's used an operating system called DOS (Disk Operating System) which was development by Microsoft. Today, Microsoft Windows is the pre-dominate operating system for most PC's.

The First PC

Operating System

An operating system (commonly abbreviated OS) is the software component of a computer system that is responsible for the management and coordination of activities and the sharing of the resources of the computer. The operating system acts as a host for application programs that are run on the machine. As a host, one of the purposes of an operating system is to handle the details of the operation of the hardware. This relieves application programs from having to manage these details and makes it easier to write applications. Almost all computers, including hand-held computers, desktop computers, supercomputers use an operating system of some type.



- The Windows Operating System lets you talk to the computer through **a** device called a Mouse and Keyboard.
- Uses only have to deal with the OS or application. The internal workings of the computer are hidden.

GUI – Graphic User Interface

Microsoft Windows was not the first OS that utilizes a graphical user interface or GUI. A GUI is a type of user interface which allows people to interact with electronic devices like computers, hand-held devices (MP3 Players, Portable Media Players, Gaming devices), household appliances and office equipment. A GUI offers graphical icons, and visual indicators as opposed to text-based interfaces, typed command labels or text navigation to fully represent the information and actions available to a user. The actions are usually performed through direct manipulation of the graphical elements using a mouse, touch pad or even touch screen device. In 1984, the Macintosh 128K was the first mass produces computer to have a GUI interface with a mouse. Prior to that time, very few computers have even seen a mouse.

Multi-tasking

Multi-tasking is a method by which multiple tasks, also known as processes, share common processing resources such as a CPU. In the case of a computer with a single CPU, only one task is said to be running at any point in time, meaning that the CPU is actively executing instructions for that task. Multitasking solves the problem by scheduling which task may be the one running at any given time, and when another waiting task gets a turn.

What is a bit? or What is a Byte?

In computer memory terms, the definition of a byte is a collection of eight bits. Unlike a bit that can hold the value of zero or one, a byte of memory can hold a value from 0-255.

On many computer systems, the Byte is the small unit of memory. With 0-255 combinations to work with, this can easy represent all the numbers and letters in the English alphabet. The method of coding that is most popular on PC architecture is known as ASCII (American Standard Code of Information Interchange).

For example:

01100001 binary represent a lower case “a” in the ASCII system.

How Big is My File? KB, MB, GB

A kilobyte (KB) is 1,024 bytes, not one thousand bytes as might be expected. This odd number results from the fact that computers use binary (base two) math, instead of a decimal (base ten) system.

Computer storage and memory is often measured in megabytes (MB). A medium-sized novel contains about 1MB of information. 1MB is 1,024 kilobytes, or 1,048,576 (1024x1024) bytes, not one million bytes. Again, this number results from the fact that computers use binary math.

Unit	**Abb.**	**Size**	**Equivalent**
Bit		1 bit	
Byte		8 bits	1 text character
Kilobyte	K	1,025 bytes	1/2 page of text
Megabyte	MB	1,048,576 bytes	500 page novel
Gigabyte	GB	1,024 Megabytes	1,000 books

Terabyte (TB) is 1,024GB; 1TB is about the same amount of information as all of the books in a large library, or roughly 1,610 CDs worth of data.

HARDWARE

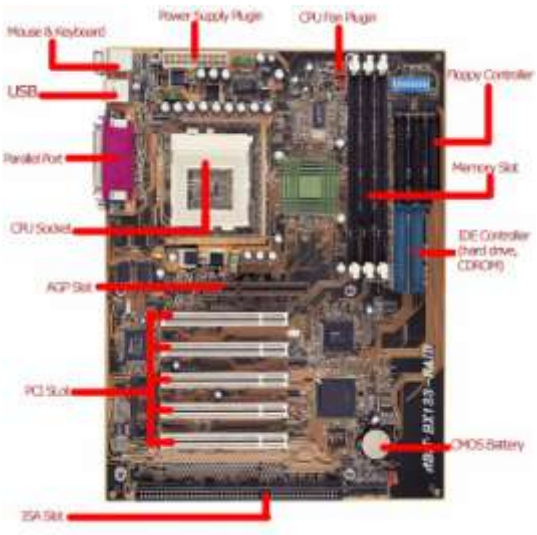
Hardware describes the physical or tangible parts a computer system; something you can see and touch. A typical system include the system unit, the monitor the keyboard, and the mouse, however some system may integrate the system unit and monitor into a single unit, like the iMac. Other components attach to the computer are called peripherals which may include external disk drives, speakers, scanner, webcam and printer.

Basic System Components

The System Unit

The system unit is the case that houses the processor and other supporting hardware of the PC. The system unit is available in all type of shape from large tower units to sleek low profile desktop units.

Motherboard



The motherboard is the most important part of the computer. It is the circuit board where all of the computer's components are linked together.

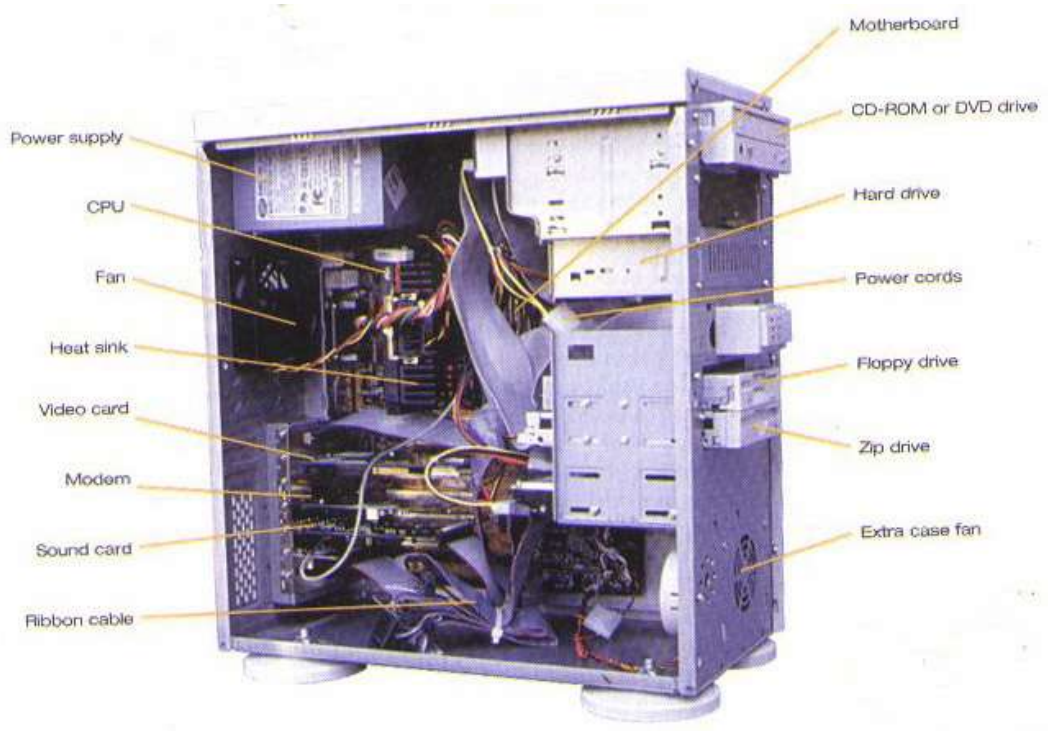
On the motherboard is the CPU or central processor unit. The CPU is the heart of the computer. It also has the slots for RAM memory and additional PCI slot for upgrading your computer such as graphic adapter, sound adapter, modem, firewire for video transfer, TV

card, etc. There is a wide range of device that can be added to the motherboard.

A PC is a general purpose tool built around a microprocessor. It has lots of different parts -- memory, a hard disk, a modem, etc. -- that work together. "General purpose" means that you can do many different things with a PC. You can use it to type documents, send e-mail, browse the Internet and play games.

Basic PC Components

Let's take a look at the main components of a typical desktop computer. Beside the motherboard, you have additional components need to complete the system unit. These include, power supply, CPU Fan, Graphic card, PCI bus, hard drive, floppy disk drive and CD/DVD drive.



Hard Drive (C: Drive)

The HDD (Hard Disk Drive) is a non-volatile memory storage device which store data magnetically on the fast moving rigid platter. Today's HDD are a sealed unit capable of storing several hundred Gigi-Bytes of data. A typical storage size for a hard drive is 160GB to 1TB (1,000GB). The hard

disk is located inside the CPU and is similar to a floppy disk. The only difference it that it cannot be removed. The HDD should have enough memory to stores all of the programs, data and files on the computer system.

The Hard Drive is like a file cabinet.

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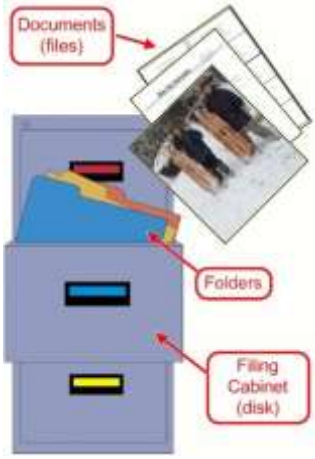
The Hard Drive stores all of the software on your system..



CPU or Central Processor Unit

The processor or CPU (Central Processor Unit) of the PC is the heart of the computer. It is a class of electronic devices known as a microprocessor which is a complete computation engine that is fabricated on a single chip. The first microprocessor was the Intel 4004, introduced in 1971. The 4004 was not very powerful -- all it could do was add and subtract, and it could only do that 4 bits at a time. But it was amazing that everything was on one chip.

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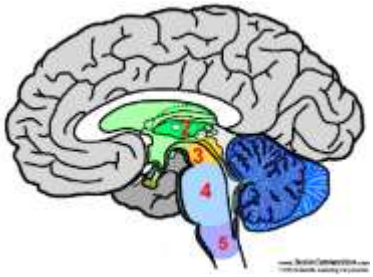

Intel Microprocessor

DVD ROM Drive

The **DVD** drive accept disc known as "Digital Versatile Disc" or "Digital Video Disc" .The **ROM** is short for Read Only Memory. Most DVDs are of the same dimensions as compact discs (CDs) but store more than six times as much data (4.7GB). This type of drive can both read CD or DVD disc. To be able to write onto a blank CD or DVD, you need a "Burner" drive. The main function of the DVD ROM is you load or run additional program applications on your system.

DVD RW Drive (Burner)

Short for DVD-ReWritable, a re-recordable DVD format similarto CD-RW or DVD+RW. A DVD Burner is able to write (burn) data on a DVD-RW disc which can be erased and recorded over numerous times without damaging the medium. A DVD-R or +R disc can only be burned once. Most computers will come with a DVD/CD burner, which will allow you to burn both CD and DVD format. With a burn you can backup your hard drive, create picture slide show or even DVD movies.

DVD+RW Disc

DVD-RW disc is a rewritable optical disc with equal storage capacity to a DVD-R and DVD+R, typically 4.7 GB. The format was developed by Pioneer in November 1999 and has been approved by the DVD Forum. However, they are less popular for computer use than DVD-R or DVD+R discs, because they are not suitable for permanent backup files (because non-rewritable media is significantly cheaper).

LCD Monitor or Display

The most important output device for your PC is the monitor which is used to display information on the screen.

Today's flat screen LCD (Liquid Crystal Display) monitors are becoming hot items as prices drops and technology improves. If you haven't made the leap from your old CRT (Cathode Ray Tube) screen yet, or you plan on upgrading your monitor anytime soon, this is for you.

In shopping for a monitor, you should purchase the largest screen you can afford. A good monitor can last much longer than the Desktop PC. Therefore it is a better investment to purchase the largest one you can afford. I would start with a 19" or even larger screen size.

Speakers

Computer speakers range widely in quality and in price. The computer speakers typically packaged with computer systems are small plastic boxes with mediocre sound quality. You can purchase more sophisticated computer speakers system that may have a 5.1 channels, meaning center, front left and right and rear left and right plus a subwoofer unit, to enhance bass output. These units usually include the power amplifiers and can produce sound equivalent to your home audio system.

MEMORY

Memory is the internal storage areas in the computer. The term identifies data storage that comes in the form of chips, and the word storage is used for the memory that exists on tapes or disks. Moreover, the term memory is usually used as shorthand for physical memory, which refers to the actual chips capable of holding data. Therefore, memory is both hardware and software.

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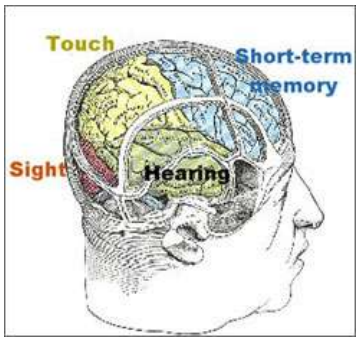


Random-Access Memory (RAM)

RAM (Random Access Memory) is a type of memory that can be accessed randomly and is the most common type of memory found in computers and other devices, such as printers RAM in the PC is temporary because it forgets everything when the computer is off. Programs are transferred here when you want to use a specific program or create or change data files, pictures, etc. Again when you are finished you must save you work back to the hard disk in order to preserve the changes.

- The Windows Operating System runs faster with more RAM.
- When an application doesn't have enough RAM, it swaps from the Hard Drive. This is known as "Virtual Memory"

Read-Only Memory (ROM)

ROM is computer memory on which data has been prerecorded by the manufacturer. Once data has been written on a ROM chip, it cannot be removed and can only be read. ROM retains its contents even when the computer is turned off. ROM is referred to as being nonvolatile. Most personal computers contain a small amount of ROM that stores critical programs boot or start the computer. I n addition, ROM is used extensively in calculators and peripheral devices such as laser printers, whose fonts are often stored in ROM.

PERIPHERALS

Any hardware device that is attached to your PC is known as Peripherals.

Printers

The two common printer types are Inkjet and Laser. Inkjet is the most common type of computer printer for the general consumer due to their low cost ($100 - $300), high quality of output, capability of printing in vivid color, and ease of use. The more expensive option for color printing is a color laser printer. They create high quality color graphics and photos, as well as sharp text, all at significantly faster rates: 25-35 pages per minute (ppm) for text and 5-25 ppm for graphics. There's a hefty price attached since color lasers go for $500 - $2,000.

Another popular printer is the All-In-One or Multifunction printer which combine printing, scanning, copying and faxing all in one machine. These printers are cheaper than buying separate stand-alone devices, take up less space and need only one connector cable and one power outlet. One disadvantage is that if your printer stops working, so does your fax, scanner or copier.

Scanners/Fax

A scanner is a device that optically scans images, printed text, handwriting, or an object, and converts it to a digital image. Common examples found in offices are variations of the desktop (or flatbed) scanner where the document is placed on a glass window for scanning. Many scanners also double as a copier and fax machine. Some can even act as a printer. These are called all-in-one printers (scan, fax, copy, email).

Flash Drive (Thumb Drive)

A Flash drive is a storage device that uses flash memory rather than conventional spinning platters to store data. Unlike USB flash drives and memory cards, flash drives tend to physically imitate conventional hard drives in size, shape, and interface so that they may act as a replacement for hard drives. With nothing

being mechanically driven in a flash drive, the name may be seen as a misnomer.

WebCam

A webcam is the video capture device connected to your computer typically through a USB port. The main uses for a webcam is to upload video to a web site such as Youtube.com or perform real time video phone call or conferencing between another person or groups on the internet using Skpe or AOL Instant Messenger. The most popular brand of webcam is from Logitech.

WD My Passport Pocket Drive

External Pocket Hard Drive

The most popular peripheral on the computer market today is the small portable external hard drive. These drives hold a lot more information that a Flash Drive because unlike flash drive there is an actual hard drive inside.

The reason they are popular is because they are relatively inexpensive and hold the same amount of data as your computer internal hard drive. Therefore, they can be used to backup everything on your computer. In fact, most units include an easy to use backup software and well as a way to secure you data.

Software

There are two main types of software, system and application. System software control the operations of the computer such as operating sytem and drivers to control devices connected to the computer.

Application software is used by people to accomplish a specific task. This is the main reason why we use the computer.

Examples of application software are word processing, database, spreadsheet, graphics, internet browser and games.

In terms of licensing, most software is classified into these groups:

Commercial Software

This is what most people purchase at a retail store. It is the most resistive copyright, but this group is the most popular.

Public Domain Software

Sometime called Open Source because it has no copyright - no one owns the right to control who can make copies of the software.
Free to use or make copies of. Can be copied, used in other programs, or changed by anyone.

Freeware

Has a copyright - someone owns the right to determine who can make copies of the software.
Free to use and make copies of. Can only give away exact copies of the software. Can not be changed or used in another program without the copyright holder's permission.

Shareware or Trialware

Has a copyright.
This software can be used for a set period of time or uses before paying for it.
It can be a demo - which limits some major features like the Save command.
You can only give away exact copies of the software. Can not be changed or used in another program without the copyright holder's permission.

Quiz

1) **Which is the purpose for an Operating System?**
   a. An interface between you and the computer.
   b. Manages the resource of the computer.
   c. Act as a host for all applications.
   d. It is a GUI (Graphical User Interface)
   e. All of the above.

2) **Which of these are Hardware?**
   a. CPU
   b. Keyboard
   c. Mouse
   d. CD ROM
   e. Windows Vista
   f. Microsoft Word

3) **Which of these are Software?**
   a. CPU
   b. Keyboard
   c. Mouse
   d. Microsoft Windows 7
   e. Nortons Anti-Virus.
   f. Web Brower.

4) **Which of these affect the speed of the computer?**
   a. Larger hard drive.
   b. Increase the RAM.
   c. Size of the System Unit.

d. Speed of the CPU.

e. Wireless Keyboard.

5) What happened to RAM memory when the computer is turn off?

a. It saves your files.

b. Your files are deleted.

c. It is volatile (erased).

d. Much faster that the hard drive.

6) How many bits are in a byte?

a. 1

b. 8

c. 16

7) All data you create is stored permanently your:

a. RAM

b. ROM

c. Hard Drive

d. Flash Drive

e. Personal Folder

8) Which of the following are input device?

a. Mouse

b. Printer

c. Speaker

d. Keyboard

e. Monitor.

f. WebCam

THE BASICS

Nowadays there is great variety of operating systems, such as Windows Vista, Windows XP, Windows NT, Linux, etc. We are going to work with Microsoft's Windows XP and Vista operating systems. The operating system is indispensable for the computer; without it the computer could not work.

The main function of any operating system is being an intermediary between us and the physical parts of the computer (screen, keyboard, hard disk, printer,...), making it easier to handle.

For example, there is no need for us to know exactly in what part of the hard disk we have saved a certain document we created, the operating systems takes care of it.

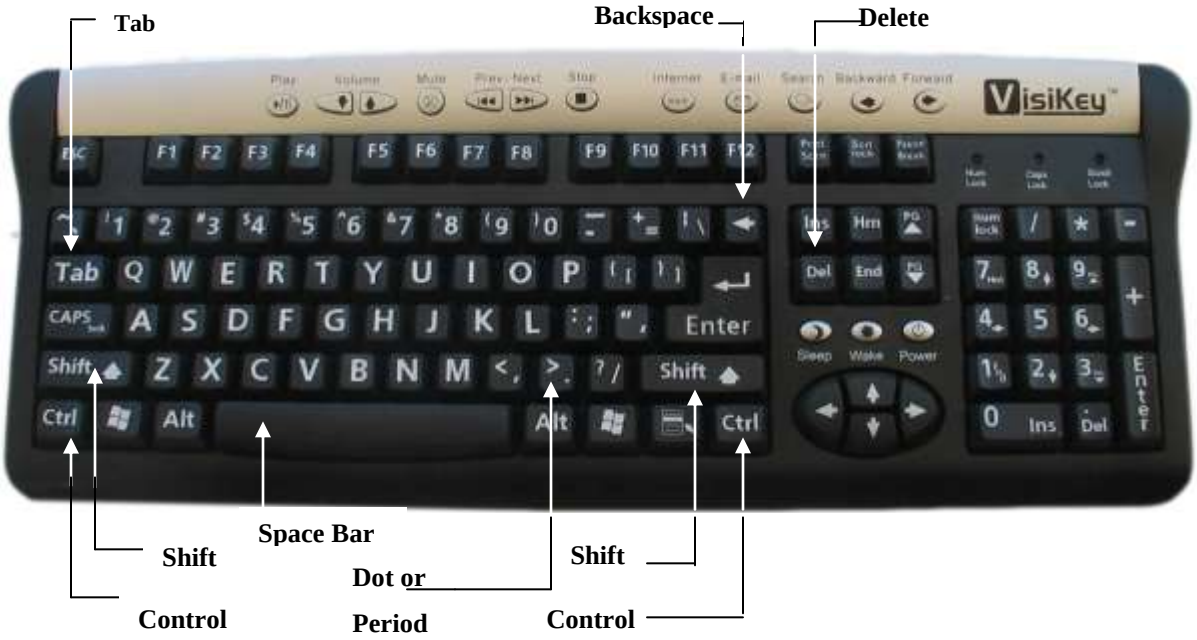
Let Turn if On

All computers will have devices (peripherals) attached to it that should be switched on before you switch the Base Unit on. You should switch these on first so that the system will recognize them as it progresses through the "Boot-Up" process. Usually these peripheral include monitor, printer, scanners, etc.

Do Not Turn it Off!

NEVER just turn the power switch OFF on system unit. You must do the proper "Shut-Down" from the Windows **Start Menu**. We will cover this in the Windows section.

THE KEYBOARD



T he arrangement of characters on a QWERTY keyboard was designed in 1868 by Christopher Sholes, the inventor of the typewriter. According to popular myth, Sholes arranged the keys in their odd fashion to prevent jamming on mechanical typewriters by separating commonly used letter combinations.

Basic Keys

Enter – completes and action or creates a new paragraph in text editing. Move the cursor down one line to add extra space between paragraphs. Confirm entry into a test form.

Space Bar – blank spaces

Shift – The two Shift keys work like they do on a typewriter. To type a capital letter, hold down one of the Shift keys while you type. Shift keys also give you the upper set of characters on the top row of keys.

CapsLock - makes and all the letters upper case (capital). CapsLock will NOT however, give you the upper set of characters on other keys.

(!@#$%^&*()_+)

Escape (Esc) - is used to back out of situations. Occasionally you find yourself in a place you don't want to be; Esc will often get you out of the situation without doing any damage.

Enter - is used mostly to signal that you have finished typing a paragraph or some data in a form. You do not use the **Enter key** to end each line of

typing (as people used to do when using a typewriter). In word processing it is mainly new to create a new line.

Tab –indent to a set amount of spaces rather than having to use repetitive spaces. Tabs are typically used in word processing to create tables or columns.

Arrow Keys

The arrow keys moves the cursor up, down, left or right in text editing mode. There are two sets of arrows. The second sets of arrows are on the numeric keypad when **Num Lock** is off.

Numeric Keypad/ Edit

When Num Lock is on, this act as a numeric key pad for inputting numbers. When Num Lock is off, the keypad move the text cursor.

Home move the cursor to the beginning of the line.

End – move the cursor to the end of line.

PgUp – moves the page up.

PgDn – moves the page down.

DEL or DELETE - Deletes the character at cursor and/or characters to the right of the cursor and all highlighted (or selected) text.

BKSP or BACKSPACE - Deletes the character to the left of cursor and all highlighted text.

TAB - Moves the cursor five spaces to the right (number of spaces are usually adjustable). Tab moves to the next field in a form or table (Shift-Tab for previous field).

ARROW KEYS - Moves the cursor around document without changing text. Sometime if can be use to advance to the next field or menu item on a list box.

Control Key

Ctrl – control key is used in conjunction with other keys to perform a special operation.

 **Window (logo) Key** – Window shortcuts

Displays the Start Menu

+ E – opens Windows Explorer (Computer)

+ D – toggles between minimize and restore.

+ M – minimize all windows.

Alt key – another command modifiers similar to the **Ctrl key**.

Ctrl + Home – go to the beginning of the document

Ctrl+End - go to the end of the document

Alt + F4 – close a windows

Function Keys – Shortcut command. **F1 to F12**.

F1 will open a contextual Help menu in most applications. Other software may use the other function keys differently. Before the mouse, this was more commonly used.

Prt Scr (Print Screen) - Sends the current screen to the printer. Ctrl+Prt Scrn – capture the current screen to the clipboard.

If you know the
entire keyboard shortcuts,
there is no need to ever touch
the mouse!

THE MOUSE

The standard mouse for Windows XP is a 3 button mouse. For the right-handed person, the left button is the main button. This can be reversed for the left-handed individuals.

The Touch Pad replaces the mouse on most laptop computer. Instead of moving the mouse, you just use your fingers.

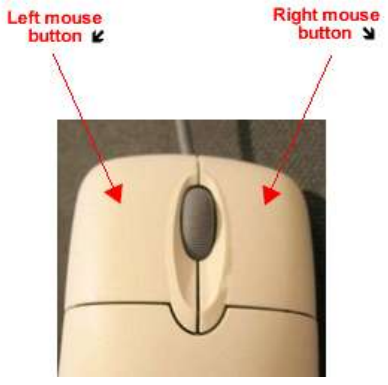
The left button is the most used because with it we select objects, drag and drop, open, close programs, etc.

The middle button or the scroll wheel is used to scroll up and down. Sometimes for it to take effect we need to click on what we want to scroll up and down.

The right button is used to open a shortcut or alternate menu, which relates to the object you click on. This is known as a "context sensitive menu".

Pointing the Mouse

When you point with the mouse, you should always remember that the tip of the arrow is the spot at which you are pointing.



The Mouse Click

For a right-handed individual, the left mouse button is the main button to use in the Windows operating system. This is the most used button to select items from a menu and launch programs. Typical thing to click on are: command button, menu, icons, radio button and hypertext.

Dragging

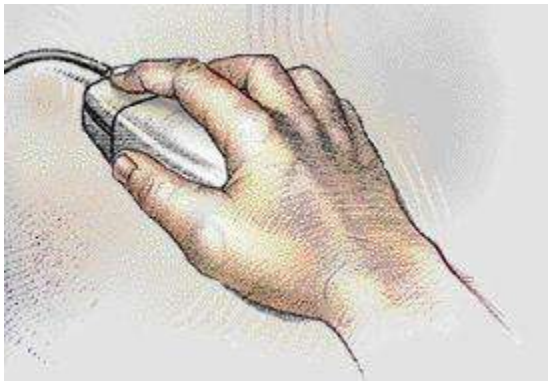
Dragging is used to select several objects at the same time. To Drag, you simply hold down left button down while you are move the mouse pointer. When you let go of the mouse button, this is called a **Drop**. Thus the term, **"Drag and Drop"**. This is an important concept you muse master in performing many Windows task.

Double-click

This is used to execute the desired programs associated with the icons.
Mouse Over: Sometime additional information about the button or icon will appear simply by positioning the mouse over it with no clicking.

Scroll Wheel/Button

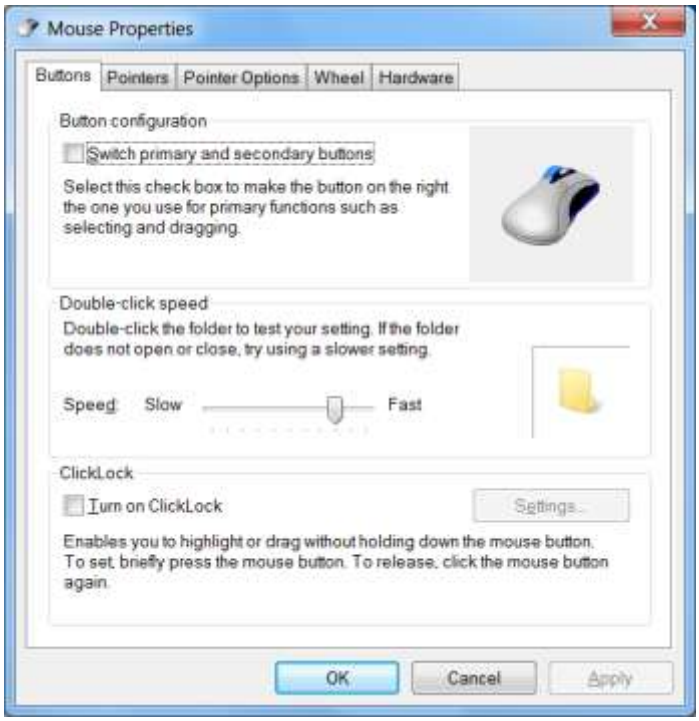
The middle scroll button functions in two ways. As a wheel you can scroll up and down a page by rolling to button up or down. The second method is to click on it like a button. This will create the Anchor on your page. Click the Scroll Button the place the anchor on the page. Move the mouse up or down away from the Anchor will cause the page to scroll up or down.



Mouse Tip for Seniors

Rest the heel of your hand on the table in front of the mouse. Hold the mouse between thumb and ring and little fingers. Use only the thumb and the fourth fingers to move the body of the mouse.

Are You Left Handed?



1. Click on the **Start Button**
2. Click **Control Panel** on the right pane.
3. Change view to **Category**. (Upper right side of screen)
4. Double-click on **Mouse**.
5. The menu on the right should appear.
6. If you are left handed you can check the box: **Awitch the primary and secondary buttons**.

Double-click Speed

1. Click on the **Start Button**
2. Click **Control Panel** on the right pane.
3. Change view to **Category**. (Upper ight side of screen)
4. Double-click on **Mouse**.
5. The menu on the right should appear.
6. Drag the slide bar to adjust the speed. Test in the folder icon in the box. If you can not open the folder, slide the bar to the left and re-test.

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Exercise 1

1.1 Mouse Over

1. Move the mouse over desktop icon.
2. Watch the color change.
3. Move the mouse over icons on the bottom of the screen. What happens?

1.2 Selecting and De-Selecting

4. Click on any desktop icon.
5. Watch the color change.
6. Click on an open area of the desktop

7. Watch the color change back.
8. Repeat Step 1 to 4 for all icons.

1.3 Practice your mouse skills on the Internet

http://www.mouseprogram.com/

http://www.pbclibrary.org/mousing/intro.htm

http://www.seniornet.org/howto/mouseexercises/dragpractice1.html

http://www.instruction.greenriver.edu/Avery/activities/mouse/MouseSkills.htm

1.4 Practice your mouse skills.

1. Insert **Student CD**, into one of the CD/DVD drive.
2. Double-Click on Computer.
3. Double- Click on **CD Drive (E: or F).**
4. Double-Click to launch **MouseX** program on your student CD.
5. Go through all 50 mouse exercises.

1.5 Dragging (Move an Icon)

1. Click on one of the desktop icons and hold the left button.
2. Move the mouse to a different location.
3. Release the mouse button.

Turning off your computer properly

You should never physically press the power button on your computer system unit or laptop to shut the computer off. Always use the shutdown button from the Windows Start Menu.

1.6 Shutdown

1. Click on the **Start Button**
2. Click on the **Shutdown Button** on the lower right of the start menu. Note: Vista users must select the **Shutdown Options ▸.**

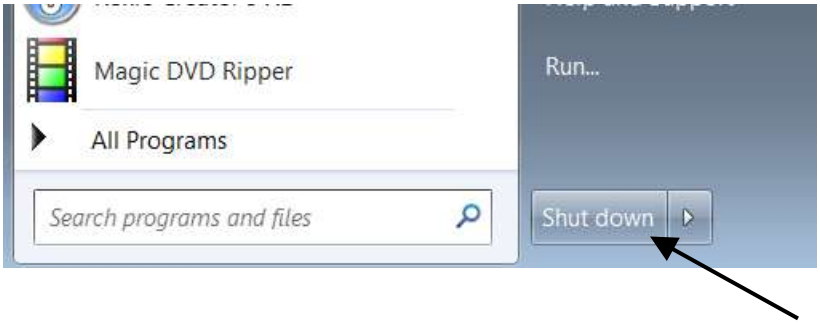
Optional Quick Shutdown (Windows 7)

You can perform a quicker Shutdown by using these keyboard combinations:

Windows Key →[Enter]

OR

Alt+F4+[Enter]



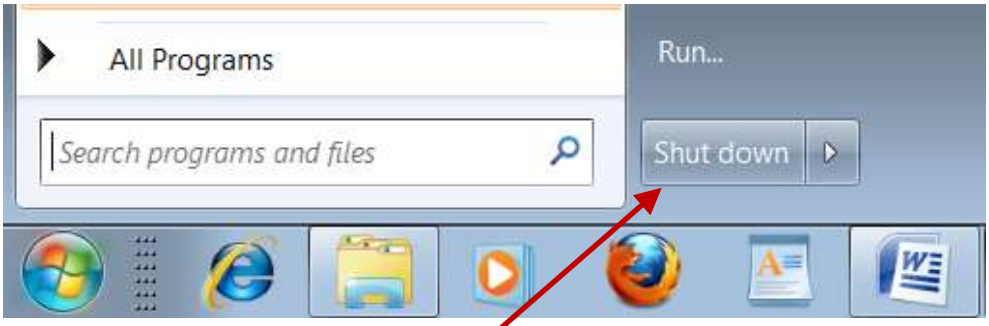
When you're done using your computer, it's important to turn it off properly to ensure that your data is saved and to help keep your computer more secure. Improper shutdown can damage your hard drive.

Use the Power button on the Start menu

To turn off your computer, click the **Start** button, and then click the Power button in the lower right corner of the Start menu. The Power button normally looks like this:

XP Shut Down

Vista Shut Down



Windows 7 Shut Down

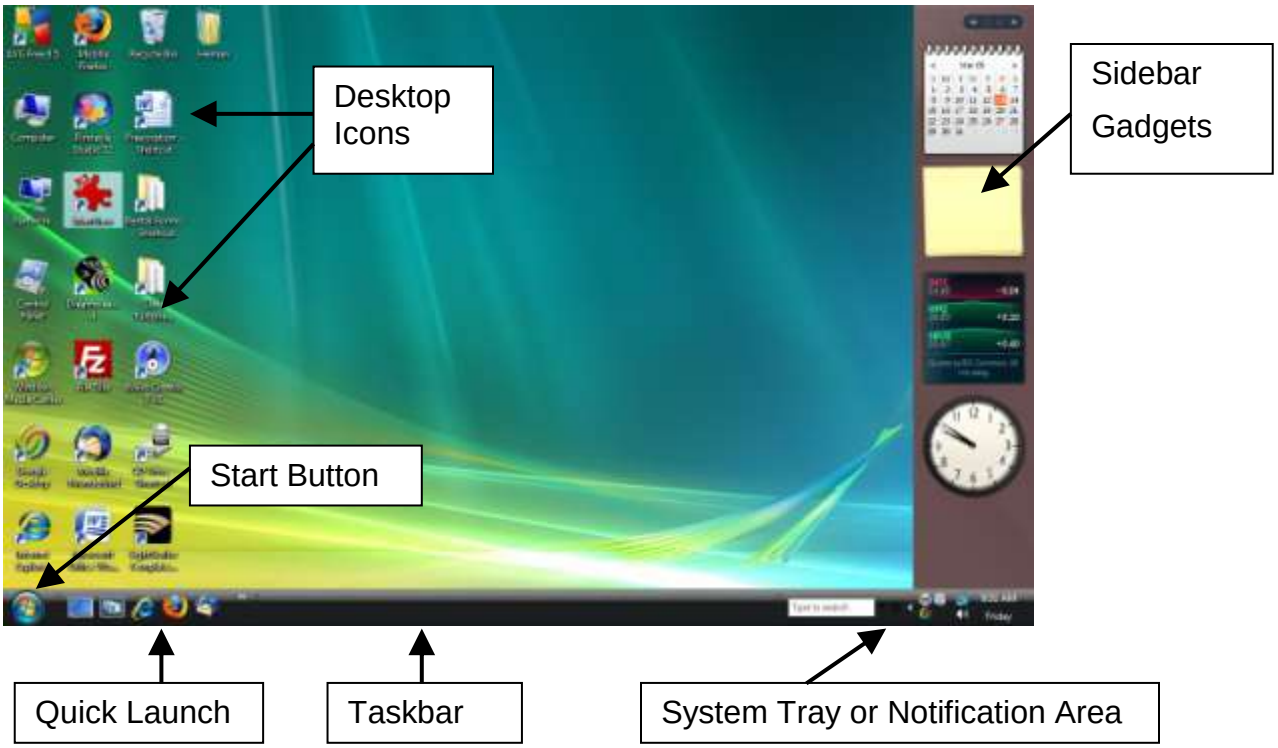
Notes:

FIRST LOOK AT WINDOWS

Logon Screen

After powering on your system, the logon screen will be your first screen. When you first setup your Vista operating system, you will be asked to add users to the system. Every user on your computer will have their own logon icon.

The Desktop



The first thing you'll notice (if you installed Windows yourself fresh) is the lack of desktop icons. In the illustration below, I actually had to add some desktop icons to make them appear. Normally, they wouldn't be there.

In Vista, the Start Menu is different, the System Tray hides unused icons, and windows will "stack" similar windows when you start filling up the Taskbar. At first, I found this feature annoying but grew to love it. I can have 20 Internet Explorer windows open at once and only have one tab on the Taskbar for Internet Explorer. What an interface improver!

Icons -= An Icon represent a programs or files. When you install a new program, an Icons it created on the desktop. Icons can also be created by the user as a "Shortcut" to programs, folders or files.

Vista/7 Start Button

XP Start Button

Start Button – The Start Button is the starting point for launching almost every program on your computer.

System Tray – The system tray allows you to set preferences to commonly accessed task and programs on your computer. Besides showing the clock, utilities type programs (Anti-Virus, Firewall, etc) usually shows up in the System Tray.

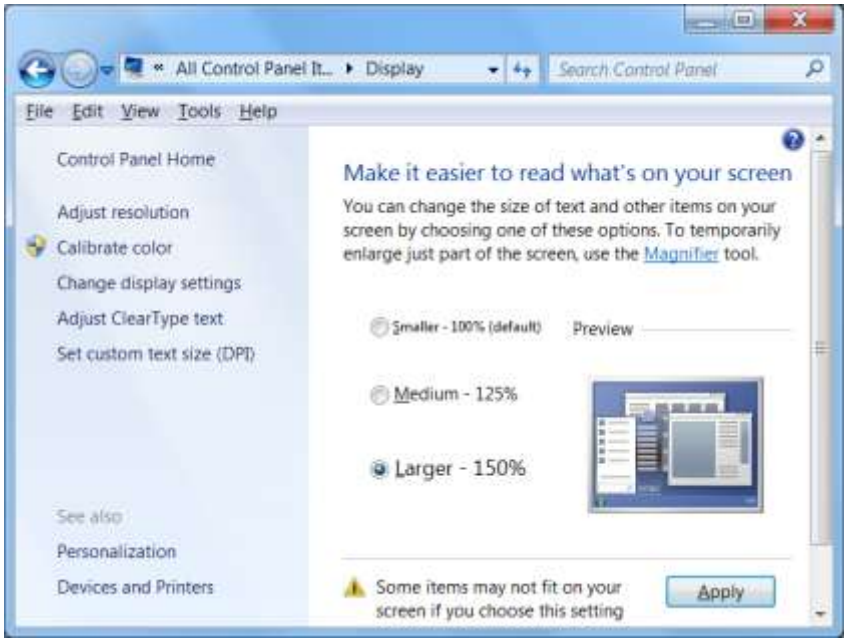
Taskbar – The bar show all active applications running on your system. It can be used to launch and monitor all of applications. This concept was first introduced on Windows 95.

Visually Impaired

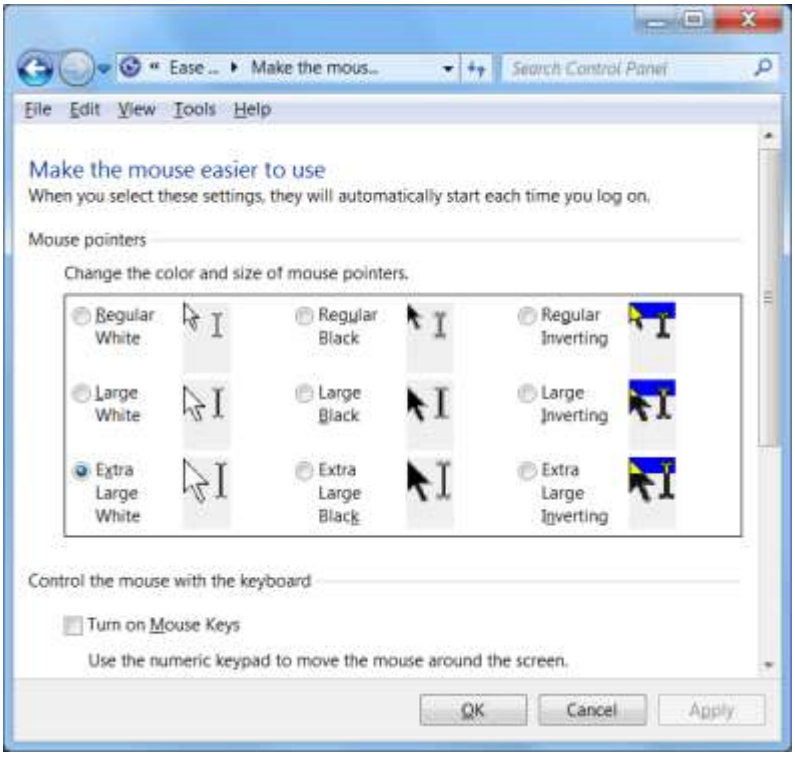
Window has new features under the "Ease if Access Center" for visual or physically handicapped individuals.

Right-click on an empty area of the desktop and select personalize to access these settings. The radio buttons allow you to only make one choice.

Make your Window's text large:



Make the Mouse Arrow more visible:



The Start Menu

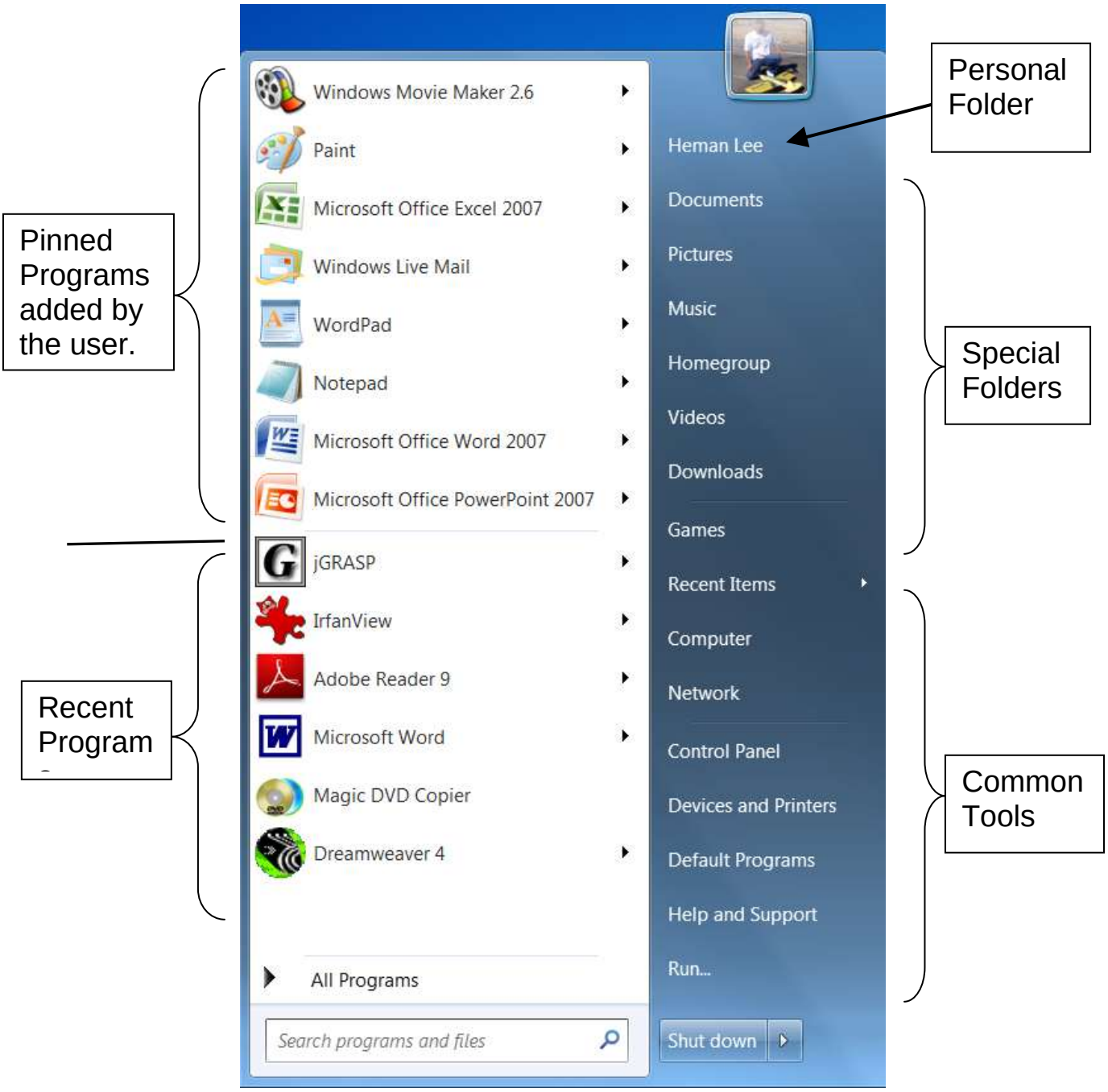


Figure 2 – Windows 7 Start Menu

The Start Menu is the first place you will see the most dramatic change in the Windows Vista interface. You have 2 columns in the new Start Menu.

Everything on the Start Menu is customizable, so if you want to change the icons or the way it looks, it's possible. On the left hand side, you see icons for the Internet and E-mail. Below this is a list of the most recently used applications, then the "All Programs" menu, which list of the application loaded on your hard drive.

XP Start Menu

On the right hand side, you see the icons which you previously accessed through desktop icons such as your Personal Folders and Computer. Then there are some common tools, control panel and help. Control panel allow you to further customize the look of the Windows environment.

Is XP's Start menu all that different?

Open a Windows

The main function of any operating system is being an intermediary between us and the physical parts of the computer (screen, keyboard, hard disk, printer,...), making it easier to handle.

For example, there is no need for us to know exactly in what part of the hard disk we have saved a certain document we created, the operating systems takes care of it.

Double-Click = Open

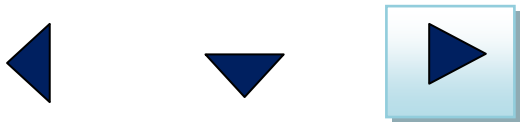
Double-Clicking on the Icon is the most popular way to open a window. Please take the time to master this skill.

Indicators

Look out for these indicators. The computer is trying to tell you something. Sometimes thing are hidden because there is not enough room to display it on the screen.

List Box Launcher

You will see these types of arrow throughout Vista/7. The orientation of the arrow usually point to the direction that the list box menu will appear.



Hide/Unhide

This chevron usually hides or unhides a menu or pane.

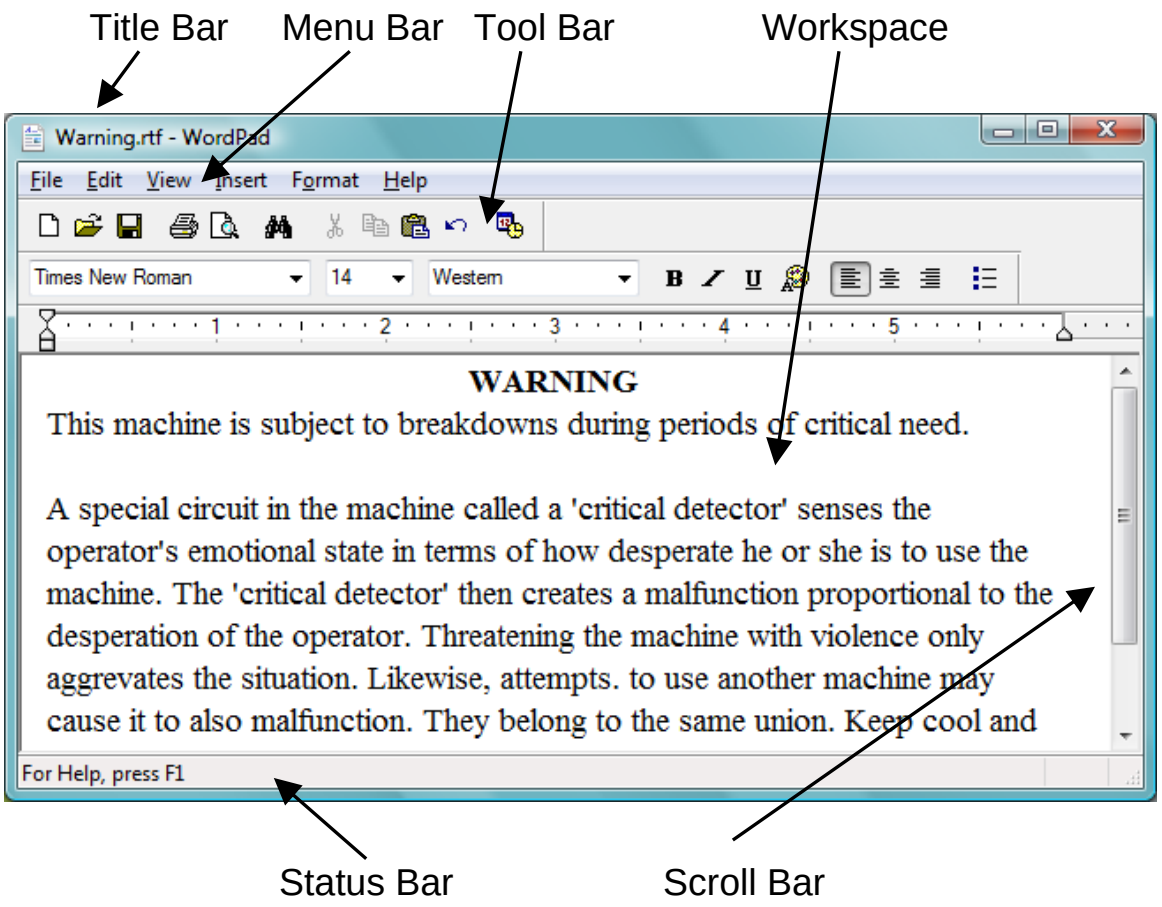
More…

This double chevron expands hidden area of a menu usually because it there is not enough room to display it or just to make it more simple. Click on it to display a list box or drop down menu.

Sort Indicator

 Ascending or descending sort.

Element of a Window



The Title bar

The title bar contains the name of the program you are working on and in some cases the name of the opened document will appears. In the top right corner we can find the minimize, maximize/restore, and close buttons.

Menu bar

List the entire command category for an application in the form of "Drop Down Menus". In most applications, this is known as the *File Menu*. In newer Microsoft applications, this has been replaced by the *Ribbon Menu.*

Tool bar

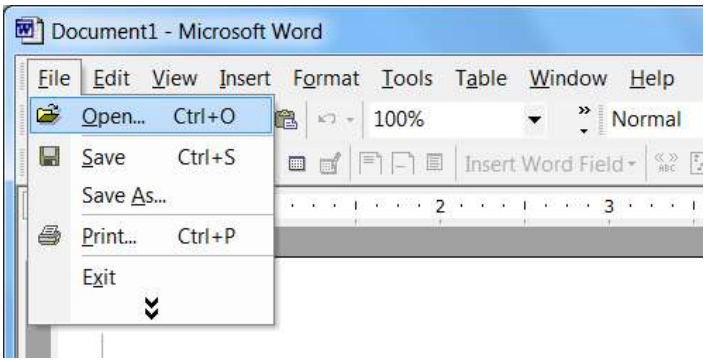
Contain commonly used tools usually in a form of icons or buttons for an application. For WordPad, common tools are New, Open, Save and Print.

The Drop-Down Menu

Most applications use the drop down menu to present you with a list of options to choose from. The list looks like a window shade being pulled

down. To see the drop down list, just select the category on the menu bar. In most application, the drop-down menu represents all of the commands available while the tool bar only shows to most popular tools. Thus, the most experience computer user doesn't ever have to refer to the manual.

The example below reveals the options under File:



Notice the >> indicator, meaning there is more commands on the menu that is hidden. Lick in the >> indicator to reveal the reast.

The Ribbon Menu

The new Ribbon Menu in ***Microsoft Office Word 2007*** combines all the feature of both *Menu bar* and *Tool bar*. Tools button are categorized into different tabs. Within a tab, tools are further grouped into sections like Clipboard, Font, Paragraph and Style.

Workspace

The workspace is the area of the window where you do your work. It is different for every application. The workspace in WordPad allows you to type and save your document where as the workspace in Internet Explorer display web pages from the internet.

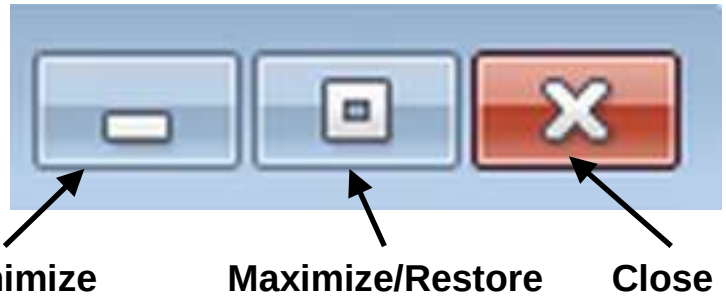
Status bar

It's the bar at the very bottom of the screen. I may show active information such as page number, number lock status or memory size.

The Window Control Box

The Windows control box is a series of three buttons on the top right-hand corner of a window that are used to minimize, maximize, restore down and close the window.

What is the purpose of the Windows Control Box? It allows you to manipulate the look of multiply windows, so that you can work on more that one task at a time.

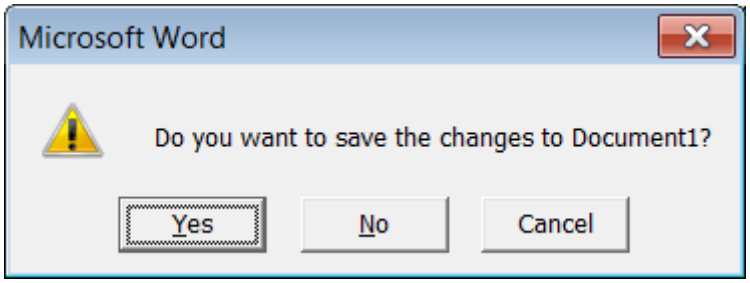


The **Minimize** button shrinks the window it turns it into a button located in the Windows task bar. The program still remains in RAM.

The **Maximize** amplifies the size of the window to fill the whole screen. In this state for borders disappear and the user can not perform any resizing of the window.

From the **Maximize** state, the button will change to **Restore Down**, allowing you to return the window to its original state.

The **Close** button closes the window. The program is released from RAM memory. Therefore, if you make any changes to a document, you will be asked if you wish to **Save** the changes before closing. The default is **Yes**.



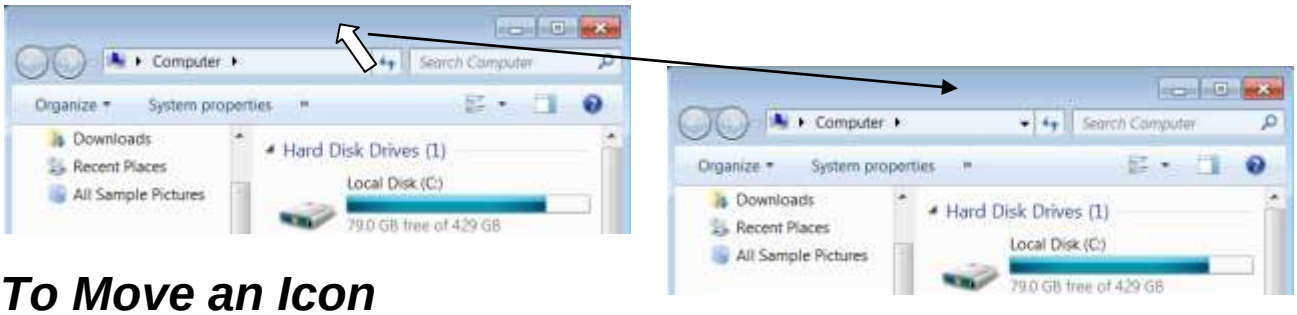
Pointer Shapes

Normal Select	
Help Select	
Busy	
Working in background	
Precision Select (Draw Shape)	
Text Select (I-Beam)	
Unavailable	
Vertical Resize	
Horizontal Resize	
Diagonal Resize 1	
Diagonal Resize 2	
Move Object	
Hyper Link Select	

The old hourglass symbol for busy is gone in Vista and 7.

To Move a Window

Position the mouse pointer on the windows **title bar**. Hold down the left button while you drag the window to another location on the desktop.



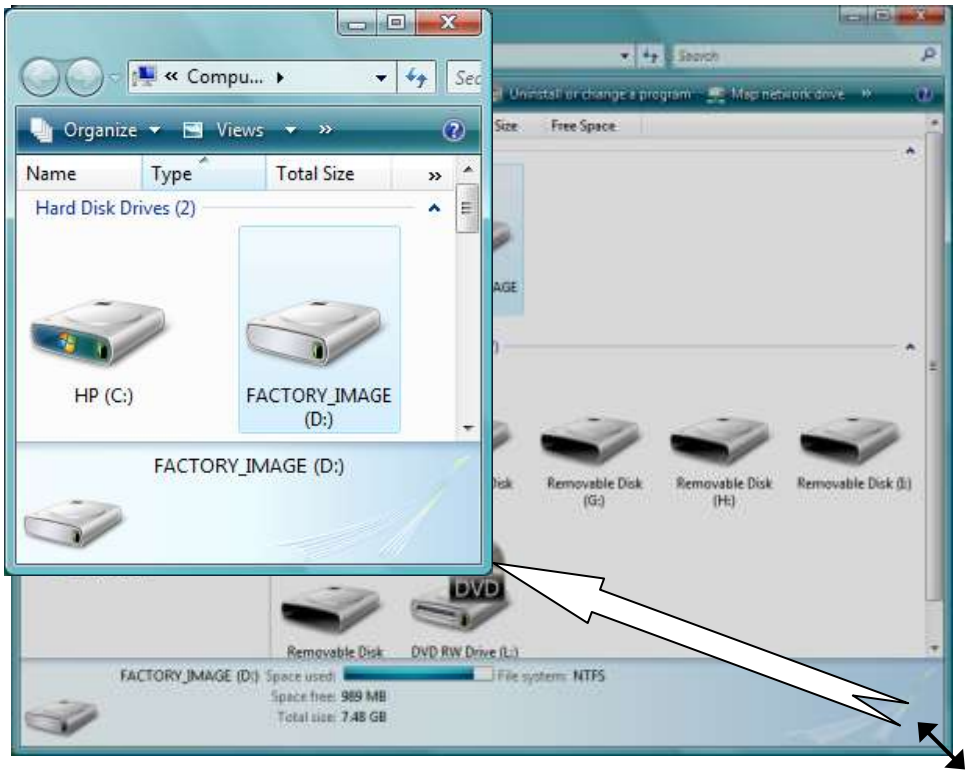
To Move an Icon

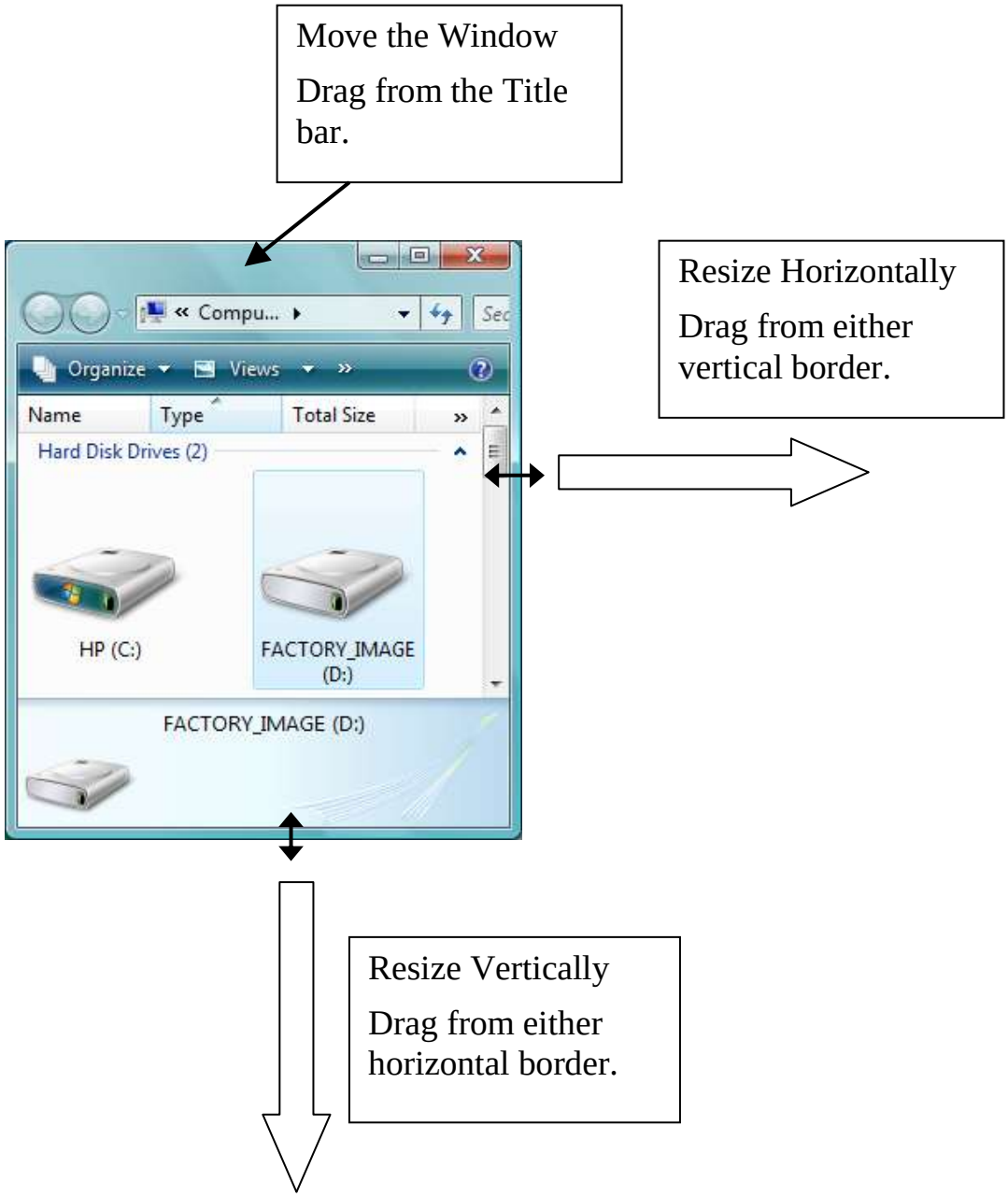
Position the mouse pointer on the icon and drag and drop to a new location.

To Resize a Windows:

Position the mouse pointer on the window border you wish to size.

When the mouse pointer changes to a double arrow, drag the border to the desired size. You can resize either horizontally or vertically. Hint: Place the mouse on the corner and you can resize both horizontally and vertically at the same time.





Exercise 2 – Windows Control Box

2.1 Maximize/Minimize, Restore

1. Click on the **Start Menu**.
2. Click **My Computer** (XP) or **Computer** (Vista/7)
3. Maximize and Restore Down the window.

2.1 Windows Control – Resize a Windows Vertically & Horizontally

1. Move the mouse pointer to the windows vertical border until the pointer become a double arrow.
2. Hold down the mouse left button while you drag the mouse to the left.
3. When you release the mouse button the window is resized small.
4. Move the mouse pointer to a horizontal border and resize it smaller.
5. Repeat the exercise until you are comfortable in resizing vertically and horizontally.

2.3 Resize a Windows Diagonally

1. Move the mouse pointer to the corner border. The pointer become a diagonal double arrow.
2. Hold down the mouse left button while you drag the mouse to resize smaller or larger..

2.4 Scroll a Window

1. Open **Internet Explorer**
2. Drag the verticalscroll box up and down.
3. Click the up scroll arrow or down scroll arrow
4. Click above and below the scroll box.
5. Use the scroll wheel.

2.5 Close

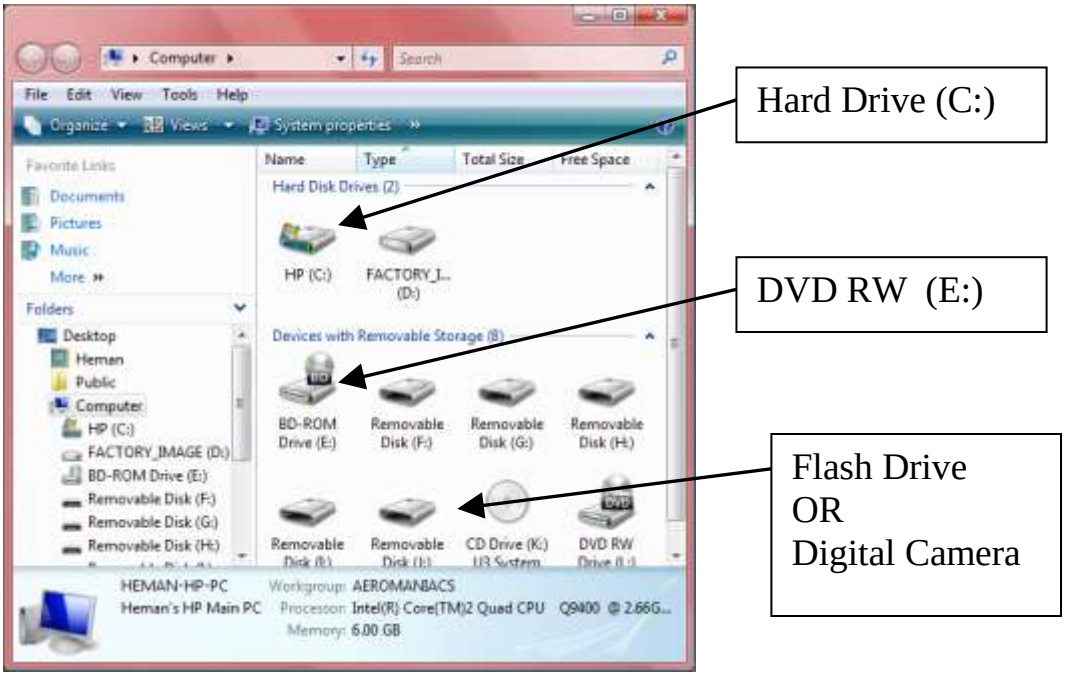
Click on the  in the upper right corner of the window.

2.6 Shutdown PC

1. Before you shutdown,  close all programs.
2. Click the **Start Menu.**
3. Click on **Shutdown Button**. In Vista, click on the ▶, then select **Shutdown** from the menu.

Computer

On the Desktop, open **My Computer or Computer (Vista)**



Windows Explorer is the program that allows you to see file, folder and devices on the computer. (ie Floppy Disk, Hard Disk, Flash Drive, SD Memory Card, etc.) Each physical device is assign a Drive letter name (A:, B: C:, etc).

You automatically access Windows Explorer every time you open, browse or save a file to a device, drive or folder

Exercise: Access Drives, CD and Removable Memory

From the Start Menu

1. Click on the Start Menu.
2. Go to the top of the second column and select Computer folder.

From the Desktop

1. Locate the Computer icon on the desktop.
2. Double-Click on it.

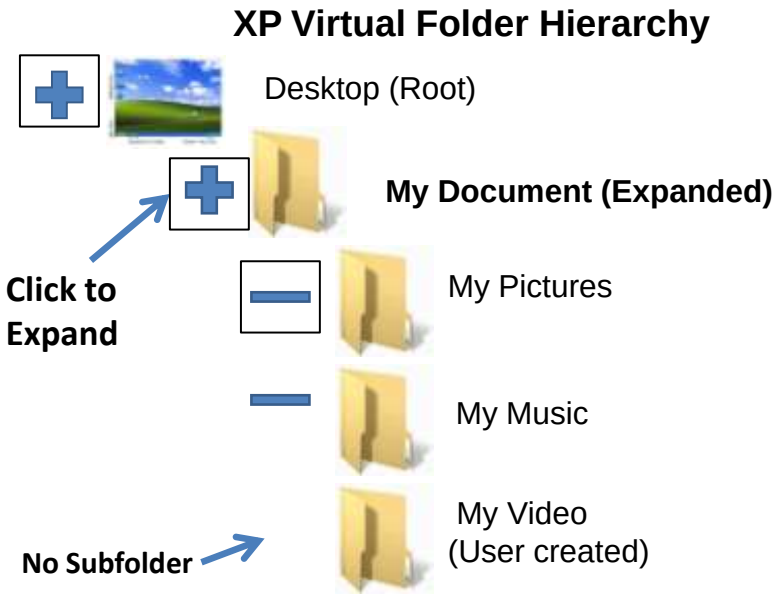
Windows File Structure

Where are my files?

In Windows XP, you have your **My Document** folder which is on C: drive. Everything you create, word processing, spreadsheet, picture, video, etc is in this folder. In Windows Vista/7, the **My Document** folder is replaced by your ***personal folder*** which your user logon name. This is the same for Windows 7 with an added concept known a Libraries for organizing your files which we will touch on later.

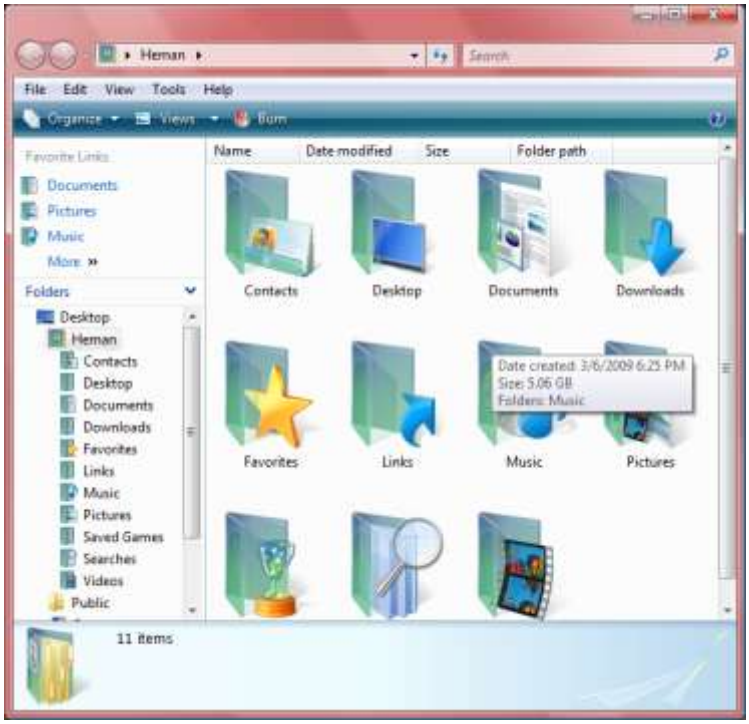
My Document (XP)

By Default, your **My Document** folder is on C: drive. Everything you create, word processing, spreadsheet, picture, video, etc is in this folder. In Windows Vista, the My Document folder is replaced by your users logon name.



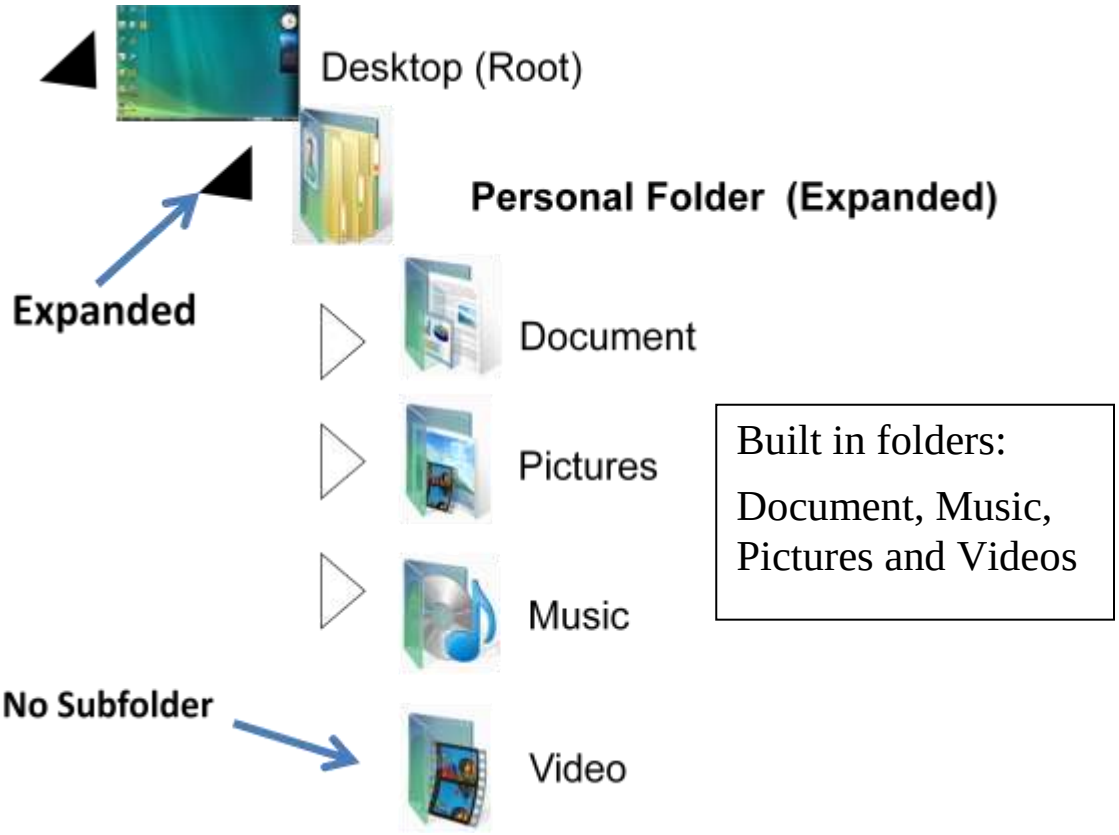
Your Personal Folder (Vista/7)

Vista has renamed the Windows XP "My Document" folder to what they call your personal folder. The name of this folder is your logon name. If you logon to the computer as "Steve" then you personal folder is called "Steve".



Vista Personal Folder

Vista has built-in default folders to organize you document, picture and video. These are known as "Special Folders".



Exercise Access for Personal Folder

From the Start Menu

1. Click on the **Start Button**.
2. Go to the top of the second column and select **Student** or the top item on the list.

From the Desktop

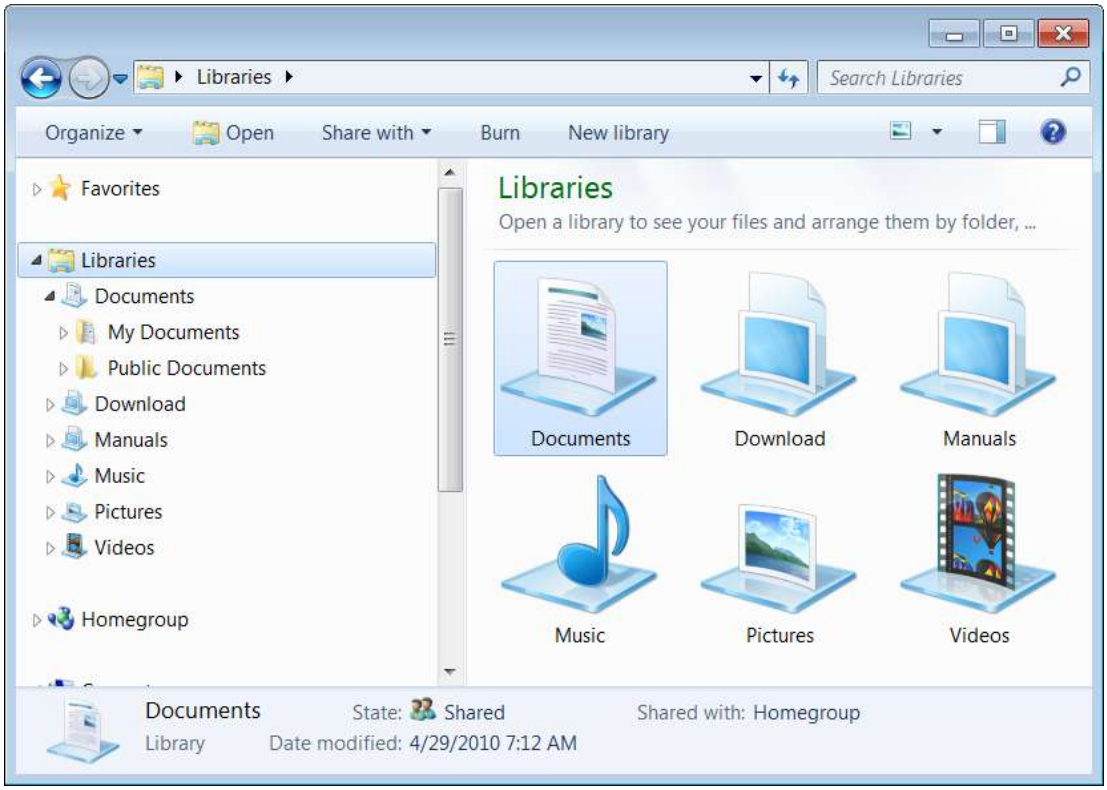
1. Locate the Personal folder (Student) icon on the desktop.
2. Double-Click on it.

Go to Windows Built-in Folders

Go to Document, Picture and Music folder.

Windows 7 Libraries

You will notice that the folder pane is different. Instead of showing the folder hierarchy, Window 7 uses a new folder concept called Libraries.

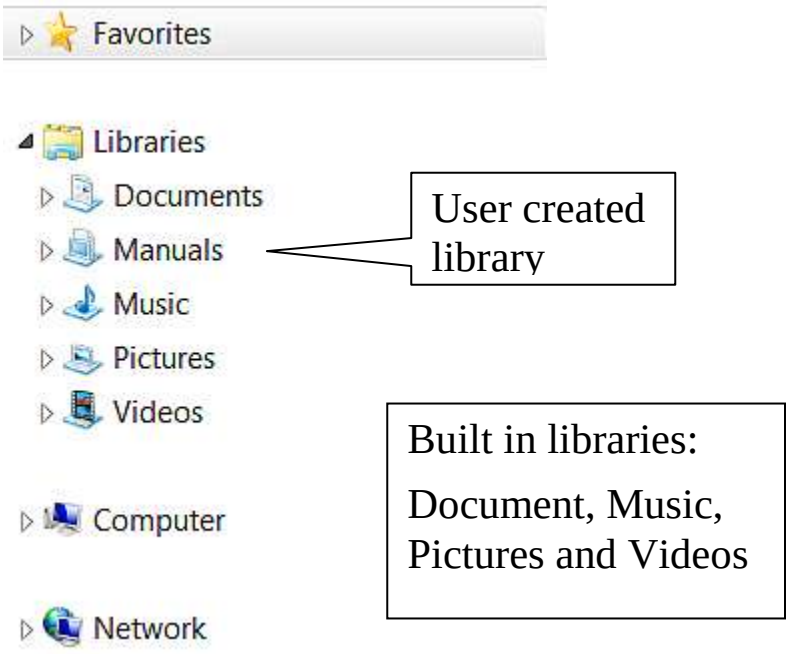


Libraries

A Library can be treated like a folder with a group of subfolders inside it, and can also pull some nifty tricks all of its own. The important thing to remember is this: the subfolders are not actually stored in the library. They are just made to seem as though they are. Each library has some default contents, but you can change these, and also create new libraries if you wish. Libraries are user-defined collections of content. By including folders in Libraries, the user is telling Windows where his important data is located. The system will index folders, to enable fast searching and stacking based on file properties.

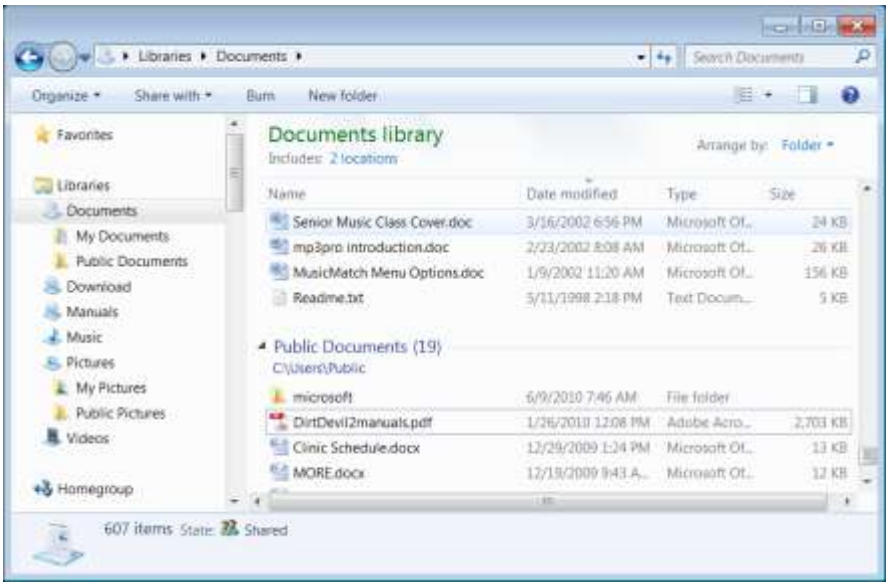
As soon as you start Windows Explorer, you will the pre-configured Libraries; Document, Music, Pictures and Video. Unlike folders, libraries content of folders included in a Library can be added or deleted without effecting the actual file or folder. By default, the preconfigued Document Libraries includes only the user's My Document folder and Public Document folder, Picture Library contains the My Picture folder and Public Picture folder and so forth.

In the example below, you will see a newly created Library called Manuals. You can create any number of Libraries to organize for folders.



Built-in Libraries

The folder hierarchy in the navigation pane is different. You have 4 main categories: Favorite, Libraries, Computer and Network. The Library contains all of the user folders: Document, Music, Pictures and Video. Under each user folder you have **My** folder or **Public** folders. For example, under Pictures is My Pictures and Public Pictures.



Exercise 3 - Games

Computer Games - Solitaire

1. Open **Start Menu**
2. Click on **All Programs**
3. Click on **Games>Solitaire**
4. Go to Help for instructions

Solitaire: rules and basics

The Object

Build four stacks of cards, one for each suit, in ascending order, from ace to king.

The Table

Windows solitaire is played with a single deck of 52 cards. The game begins with 28 cards arranged into seven columns. The first column contains one card, the second has two cards, and so on. The top card in each column is face up, the rest are face down.

Four Home stacks are positioned at the upper-right corner. This is where you build the piles needed to win.

How to play

Each Home stack must start with an ace. If you don't have any, you'll have to move cards between columns until you uncover one.

You can't move cards between columns at random, however. Columns must be built in descending order, from king to ace. So you can place a 10 on a jack, but not on a 3.

As an added twist, cards in columns must also alternate red and black.

You aren't limited to moving single cards. You can also move sequentially organized runs of cards between columns. Just click the deepest card in the run and drag them all to another column.

If you run out of moves, you'll have to draw more cards by clicking the deck in the upper-left corner. If the deck runs out, click its outline on the table to reshuffle it.

You can move a card to the Home stack either by dragging it or by double-clicking it.

Scoring

Under Standard scoring, you receive five points for moving a card from the deck to a column, and 10 points for each card added to a Home stack.

If a game takes more than 30 seconds, you also receive bonus points based on the time it takes to finish. The bonus formula: 700,000 divided by total game time in seconds. Thus, the highest possible Standard score is 24,113!

(To change the scoring system, click the Game menu, and then click Options.)

Hints and tips

Ask for hints. Stuck? Press H to have Windows light up the cards you should play next. For beginners, it's also a good way to learn the game.

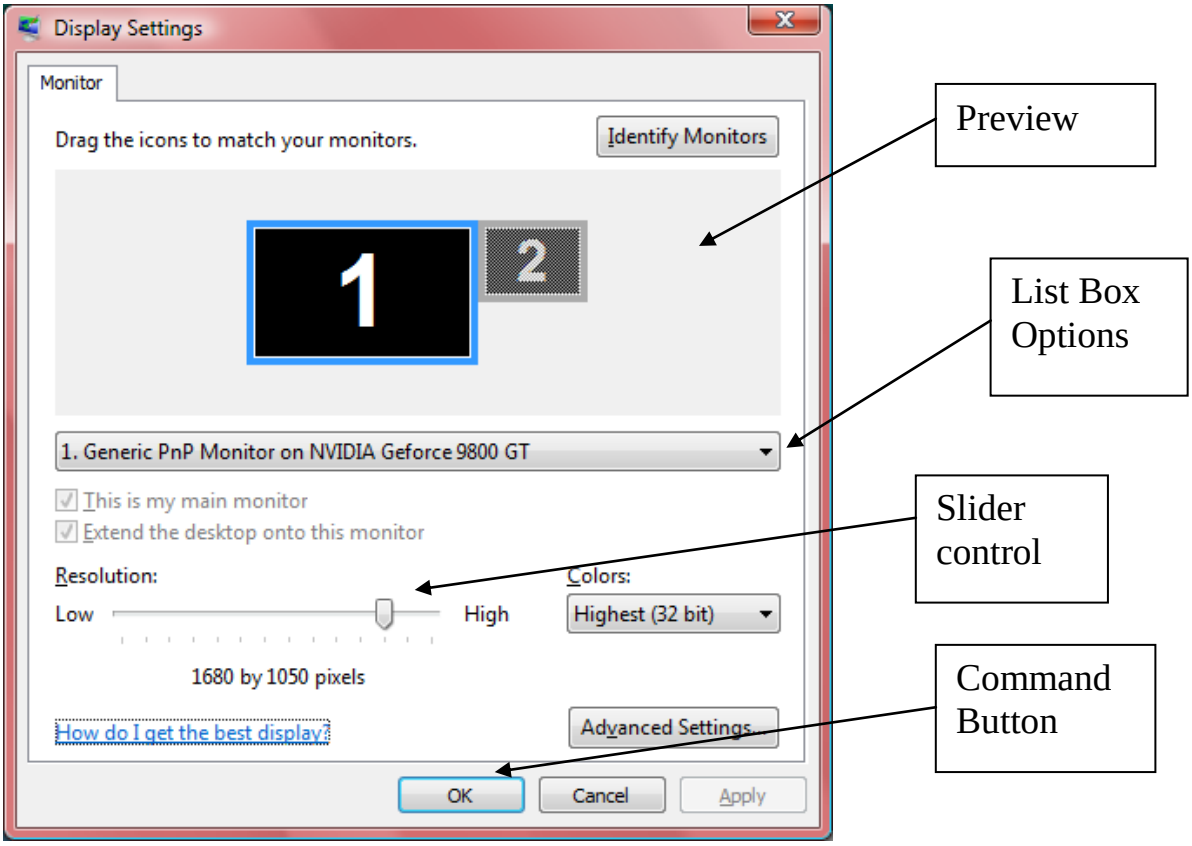
Keep runs even. Runs are the stacks of visible cards you create in the columns. Don't let anyone run get too far ahead of the others if you can help it. Having one particularly long run makes it difficult to make other moves.

Leave no card unturned. The more face-down cards in a column, the better it is to work at revealing those cards first. It will increase your odds of making plays.

Dialog Box

Properties

Throughout the Windows operating system you will come around many type of dialog boxes. Some will appear when you want to change the Properties of something. For example the dialog box below allows you the change the default setting for the display screen on your computer. You click on one of the command buttons after you make the changes. These are either: **OK**, **Cancel** or **Apply**.

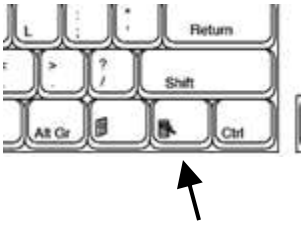


Command Buttons and Dialog Box

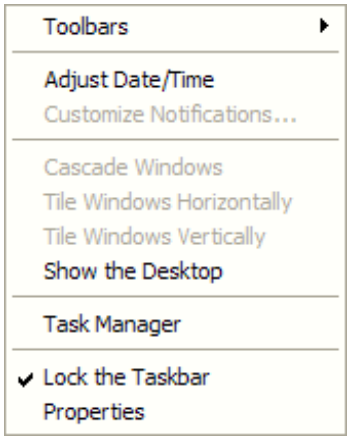
When you are done make changes, you need to confirm this using the command buttons on the bottom of the box. In other case we are making changes to the Display Screen. After make the changes the command is either **Yes**, **Cancel** or **Apply**. These are typical command on most Properties dialog boxes. Press the Command Button **"OK**" to confirm your changes or "**Cancel" to** abort any changes. Click **"Apply"** to see changes without have to leave the dialog box.

Right-Click

The Right-Click launches a *"context sensitive shortcut menu"*. Context sensitive means that the menu relates to the object you click on. Right-click on the time/data area of the notification area will launch this menu:



The Windows Application Key will do the same thing.



Exercise 4 – Shortcut Menu

4.1 Dialog Box, List Box, tabs and Command Buttons

1. **Right-click** on an open area of the desktop.
2. Select **Properties**(XP) or **Personalize** (Vista/7) from the context menu.
3. Click **Screen Saver**.
4. Under Screen saver, click on the ▼ to launch a drop-down list box
5. Change Screensaver wait time.
6. Change Desktop Background.
7. Change Display setting.
8. Click **OK** to save or **Cancel** to abort.

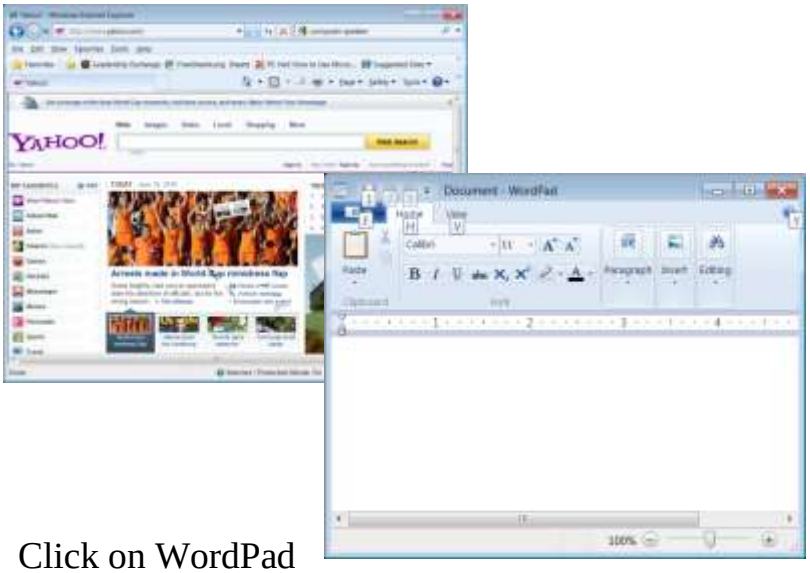
4.1 Access a CD

1. Click on the **Start Menu.**
2. Click **My Computer or Computer**
3. Insert your student CD into one of the CD Drives.
4. Watch the icon change in the My Computer windows.
5. Double-Click on the **CD icon**.
6. View the contents of the **CD**.

Exercise 5 – Active Windows

1. Launch Internet Explorer first then launch WordPad.

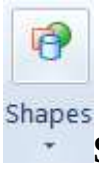
Resize and move the windows to look like this (part of the windows overlapping the other):



2. Click on WordPad
3. Click on Internet Explorer
4. Click on back WordPad.
   What do you see?

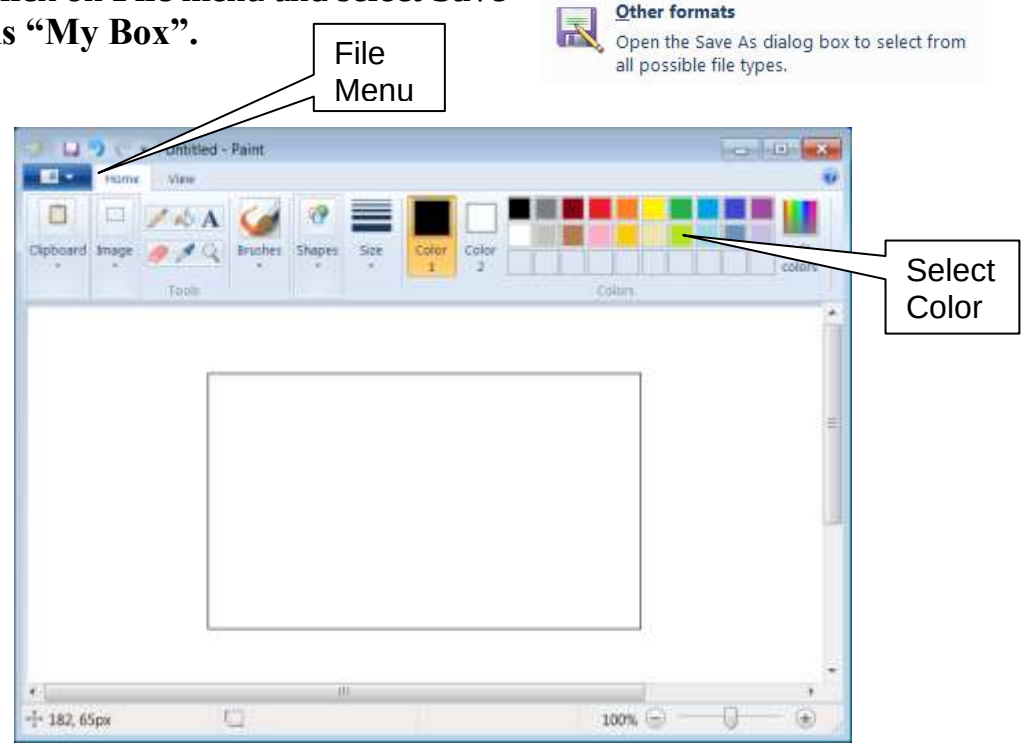
Exercise 6 – Paint

6.1 Exercise – Draw an object

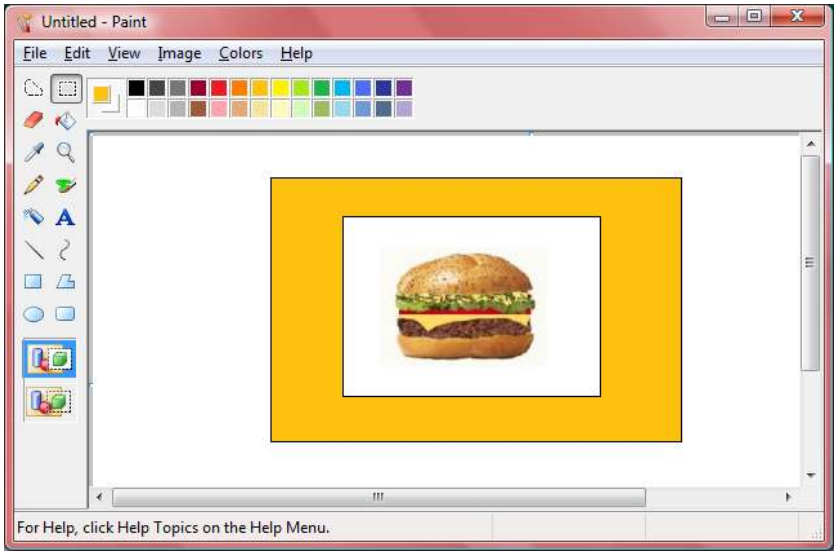
1. Click on the 

Shape button then select the rectangle.
2. Start in the upper left corner and drag to the lower right corner.

3. Select a color, the click on the **Paint Bucket** button in the tool section.
4. Fill the area inside the box by click inside the box.
5. Drag the selection tool around the image.
6. Click on **File** menu and select **Save As "My Box".**



Windows 7 Paint Ribbon Menu



Windows Vista Paint

Exercise 7 – Launch Multiply Programs

7.1 Launch Multiply Programs from Start Menu

1. Click on **All Programs**.
2. Click on **Accessories**
3. Click on **WordPad**.
4. Click on **Accessories.**
5. Click on **Calculator.**
6. Click on **Accessories.**
7. Click on **Paint.**
8. Resize and arrange window, so that all are visible.

7.2 Exercise Copy & Paste

1. Find an image on the internet.
1. Right-click on the image and select **Copy**.
2. Click on the Paint windows.
3. Click on the **Edit** menu and select **Paste**.
4. Drag the image to the center of the work area.

Basic Text Editing

Word processing is the most fundamental of all software you will need to learn. The WordPad software is included on most Windows version of Windows including Vista. This is a good starting point before attempting to master more advance word processing software such as Office Word 2007.

Exercise 1 – WordPad

Learn basic text editing using keyboard and mouse editing functions.

Open WordPad;

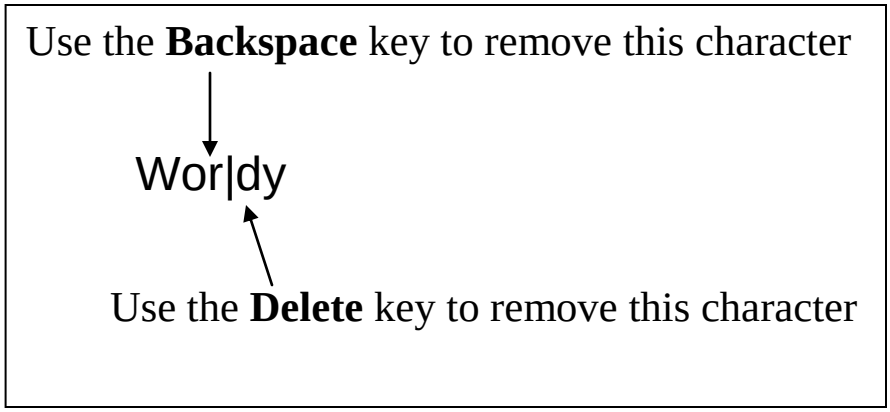
Deleting Characters

There are several ways to delete or remove text that you have written

Use the **Backspace** key to delete characters ***to the left*** of the cursor

Use the **Delete** key to delete characters to the right of the cursor

Move the **I-Beam** next to the letter you want to delete and click one time. This will move the cursor to that location. For example, move the I-Beam between the **"r"** and the **"d"** as in the following example, and click one time. Your blinking cursor will now be located there.



Move the Insertion Point

Home – Beginning of current line
End – End of current line
Ctrl+Home - Beginning of document
Ctrl+End – End of document
Ctrl+Right Arrow – Next word
Ctrl_Left Arrow – Previous word

Selecting Text by Dragging

Drag the area by defining it in a diagonal box
Anchor, Shift, End to define the area

Selecting Text by Clicking

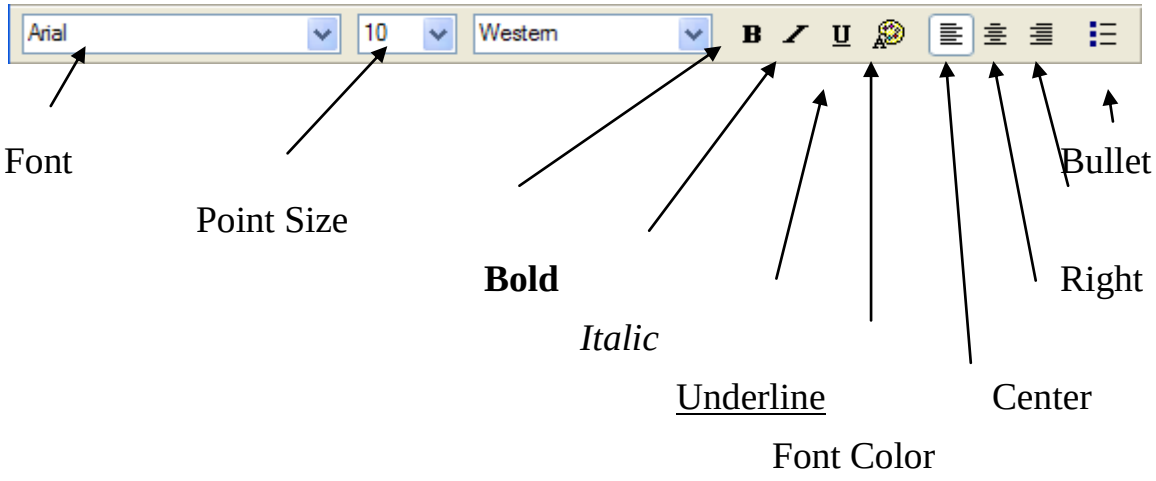
Double clidk – select a word
Triple click – selects a paragraph

Cut, Copy, Move and Paste

Other Selection Shortcut Keys

Ctrl+A – selects the whole document
Ctrl+X – Cut
Ctrl+C – Copy
Ctrl+V – Paste
Ctrl+Z – Undo last edit

The Format Toolbar



Character Formatting

Character formatting will change the appearance of your text or characters. You may select from over 70 font types, make your characters as large or small as you want by changing the font size, apply **bold**, *italic*, underlining,

This text is **bold**

This text is underlined

This text is *italic*

This text is ***bold underlined and italic***

Fonts, sizing and appearance features may be selected before or after you type your text.

Exercise: Change Character Font

1. Open the file: **Warning.rtf**
2. Select the word **WARNING** using one of the following methods:
3. Click and drag over the word or double-click on the word.
4. Select font type Comic Sans MS, size 48, Bold, Italics
5. Place the cursor in the word WARNING, click the Center Alignment tool.
6. Select **"This machine is subject to breakdowns during periods of critical need."**
7. Select the font type and size of your choice
   Make the first line Centered, Bold and Underlined.

WARNING

This machine is subject to breakdowns during periods of critical need.

A special circuit in the machine called a 'critical detector' senses the operator's emotional state in terms of how desperate he or she is to use the machine. The 'critical detector' then creates a malfunction proportional to the desperation of the operator. Threatening the machine with violence only aggravates the situation. Likewise, attempts. to use another machine may cause it to also malfunction. They belong to the same union. Keep cool and say nice things to the machine, because nothing else

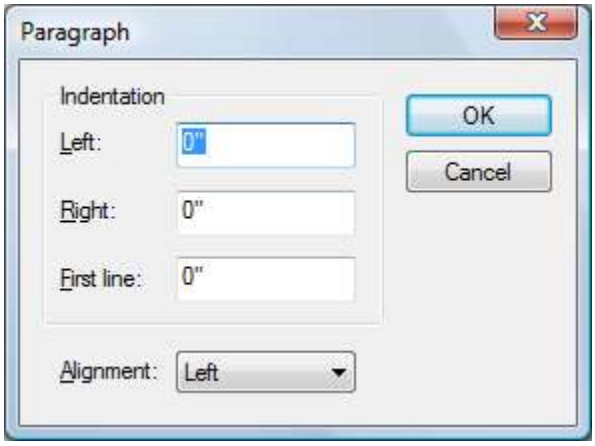
WordPad - Paragraph Formatting

Positioning paragraphs on the page

Margins determine the overall width of the main text area; in other words, the space between the text and the edge of the page.

Indentation determines the distance of the paragraph from either the left or right margins.

Exercise: Create a paragraph indented on both sides

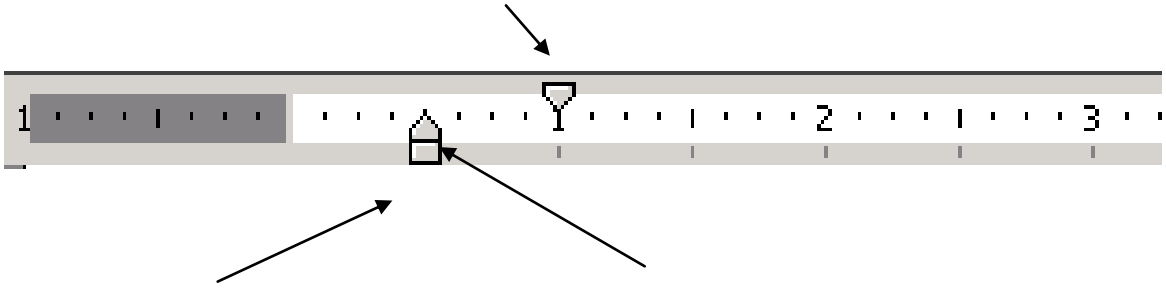


1. Open **Warning.rtf**
2. With your cursor in the second paragraph, select Format Paragraph
3. Change Indentation Left to **1.0**
4. Change Indentation right to **1.0**

Using Ruler Tabs

Another way to indent is to use the ***Triangle Markers*** on the ruler.

The Top triangle will indent the first line of a paragraph



The **Bottom** triangle will indent all lines *after* the first line.

The **Rectangle** will indent the entire paragraph.

Exercise: Use Ruler Tabs

Try using the ruler tabs with the paragraphs in your open file.

1. Create a Hanging Paragraph
2. Create a "First Line" Paragraph
3. Create a paragraph indented on both the right and left sides by approximately 1.5 inches

The File Menu

The File Menu is usually the first menu in most application. Common task relating the file management can be performed with the File Menu.

New

Open new blank documents

Open

Open an existing document to work on.

Close

Close current document.

Save

Save current document to the same location.

Save As

Save current document with a new file name or location.

Print

Send document to the printer.

Practice the following in WordPad:

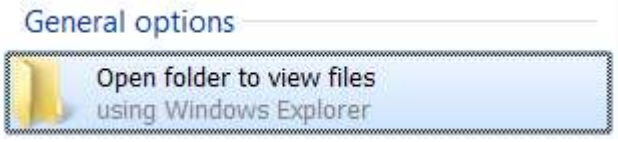
1. **Word Wrap** – Type a paragraph (more than one line). Watch the sentence automatically wrap to the next line.
2. **I-Beam** – Click in the middle of the sentence to relocate the insertion point (Flashing Cursor).
3. **Selecting** – Double click on any word. Triple-Click anywhere in the paragraph
4. **Contiguous Selection** – Place the IP at the beginner of your selection. Hold down the **SHIFT** key while clicking on the end of your selection.
5. **Dragging.** – Drag across a word to select it. Drag across 2 word. Drag the whole paragraph.
6. **Line Selection –** Place the I-beam on the left margin area just left of the first word on any line. Look the IP changing to a right angle arrow ⇗.
7. **De-selecting** – Click on any white area.

Skills to Work On At Home

1. Use keyboard arrow to move the **I-Beam.**
2. Use the **Delete** key to delete a character.
3. Use the **Backspace** key to delete a character.
4. **Double-click** to select a word.
5. Drag the mouse to select more than one word.

WordPad Exercise

1. Practice WordPad exercises on the ***Student CD***.
    a. Insert CD in CD/DVD drive
    b. On AutoPlay screen, select:



    c. Locate Folder: ***WordPad Exercise***
    d. Open **Exercise #1 - #4.**

Note: If ***AutoPlay*** does not display, open ***Computer*** and locate ***DVD drive (E:or F:)***

Access Student CD using AutoPlay

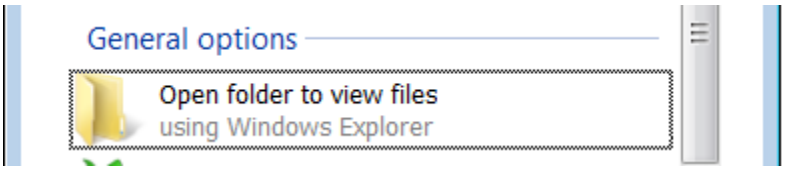
The AutoPlay is a feature introduced in Windows XP, examines newly discovered removable media (CD, DVD, Flash Drive) and devices and, based on content such as pictures, music or video files, launches an appropriate application to play or display the content.

For example, when you insert a DVD movie into the DVD drive, it will play it using Windows Media Play. Or, when you connect a Digital Camera, it you ask you to import it into your Picture Gallery or folder.

AutoPlay can be configured by the user to associate favorite applications to start automatically with the media is inserted.

Access Student CD with AutoPlay

If you wish to use the AutoPlay to access file on the CD, choose "Open folder to view files" will take you directly to Windows Explorer.



Manually Without AutoPlay

I prefer that students first access the CD manually, so they would have an understanding where files and folders are located win Windows.

1. Click on Computer either from the Desktop or from the Right pane of the Start Menu. Any new media such as a CD inserted in the drive will be assigned and drive letter (D:, F:, G:…).after the last Hard Drive.

Homework

1. Practice **WordPad Exercise #6 - #10** on the *Student CD*.
2. Practice writing a simple letter.

(today's date) ***[enter]***

[enter]

Name***[enter]***

Address***[enter]***

City, State Zip***[enter]***

[enter]

[enter]

[enter]

Dear Volunteer Instructor: ***[enter]***

[enter]

I just wanted to take a moment to write to you to express my thanks for the extra efforts you gave in the ***__(course name)__*** course that you recently instructed. …..

[enter]

You stand head and shoulders above others in the facilitation field and I appreciate the time you took to care. Once again, thank you for an outstanding job!

[enter] 4 times

Sincerely,

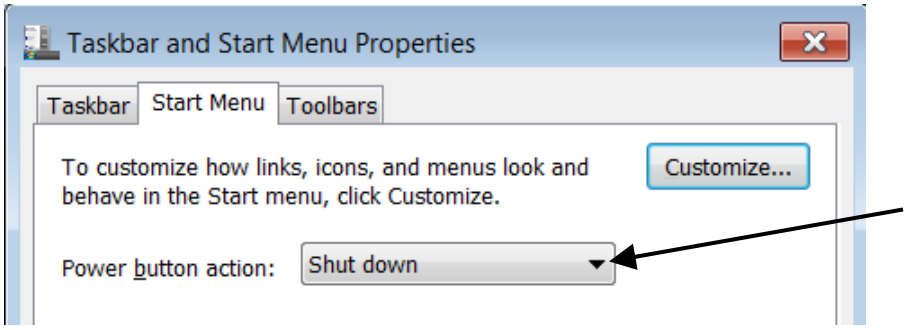
[enter] 3 times

[Your name]

Windows 7 Only

Change the what the Power Button does

1. Click on the **Start Menu.**
2. **Right-Click** on the Power Button.
3. Select ***Properties.***



Optional Quick Shutdown (Windows 7)

Now you can perform this quick shutdown sequence:

 **Windows Key ➔[Enter]**

OR

Alt+F4+[Enter]

HOW TO FIX VISTA'S SHUTDOWN BUTTON

On Vista the default power button on the Start menu does not shutdown your computer, it only puts your computer into sleep mode. However, this can be easily changed in **Power Options** in the **Control Panel**

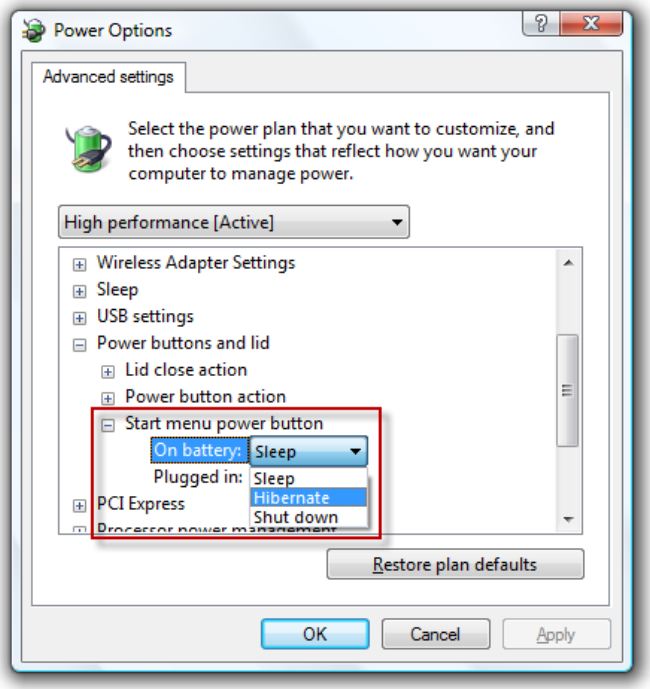
In Vista you will find no less than 7 options for turning off your computer or putting it into one of several "standby" modes which is accessed by the small arrow at the bottom of the Start menu right of the **Lock button**.

This problem is fixed in Windows 7. You can easily change the button simply by a right-click on the button or the taskbar.

Open **Control Panel**. In Classic View, open the **Power Option** icon:

1. Now, click on the power plan currently in use and go to Change Plan Settings and then to Advanced Power Settings.

2. Click the "**+**" sign next to Power buttons and lids and then do the same next to Start menu and power buttons, select the **shutdown option**.



Note: Only will work on the active setting. Lid mean when you close a Laptop computer.

Quiz

1. **On a right-handed mouse, the primary button is the:**
    a. Right Button
    b. Middle Button
    c. Left Button
    d. Scroll Button
2. **What is the Active Windows?**

3. **How do I make a window active?**

4. **Every Windows has 4 bars. What are they?**

5. **What is a dialog box?**

6. **Where do I click to access the CD drive?**

7. **What is an I-beam?**

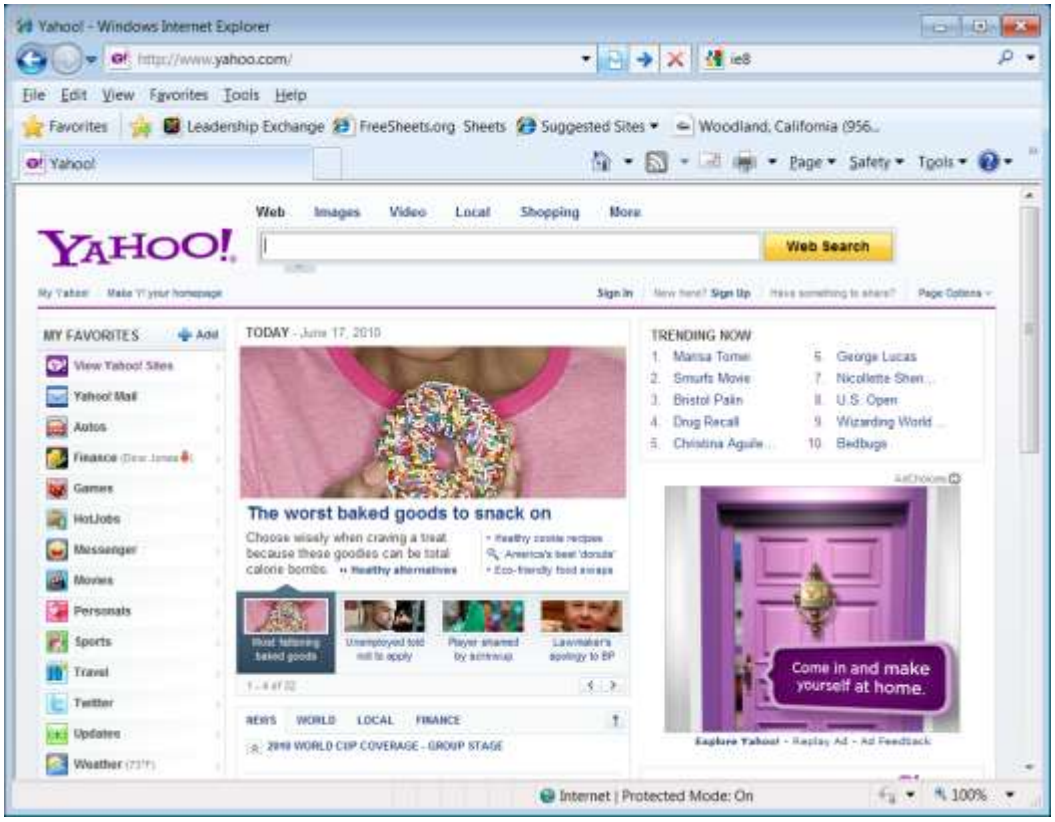
8. **What is an Insertion Point?**

Internet Basics

To navigate the Internet sometimes referred to as the World Wide Web , you need a software know as a "web browser". To locate information and resources on the Web, you need to know it URL (Uniform Resource Locator)

Microsoft web browser was first release with Windows 98 with not additional charge. The latest release of Internet Explorer for Window XP, Vista and 7 is version 8.

So let us take a quick look at IE8:



Exercise: URL

Type the following URLs in the address box:

1. http://www.**yahoo.com**
2. http://**gooddaysacramento.com**
3. http://www.**bing.com**
4. http://www.**accsv.org**
5. http://www.**google.com**

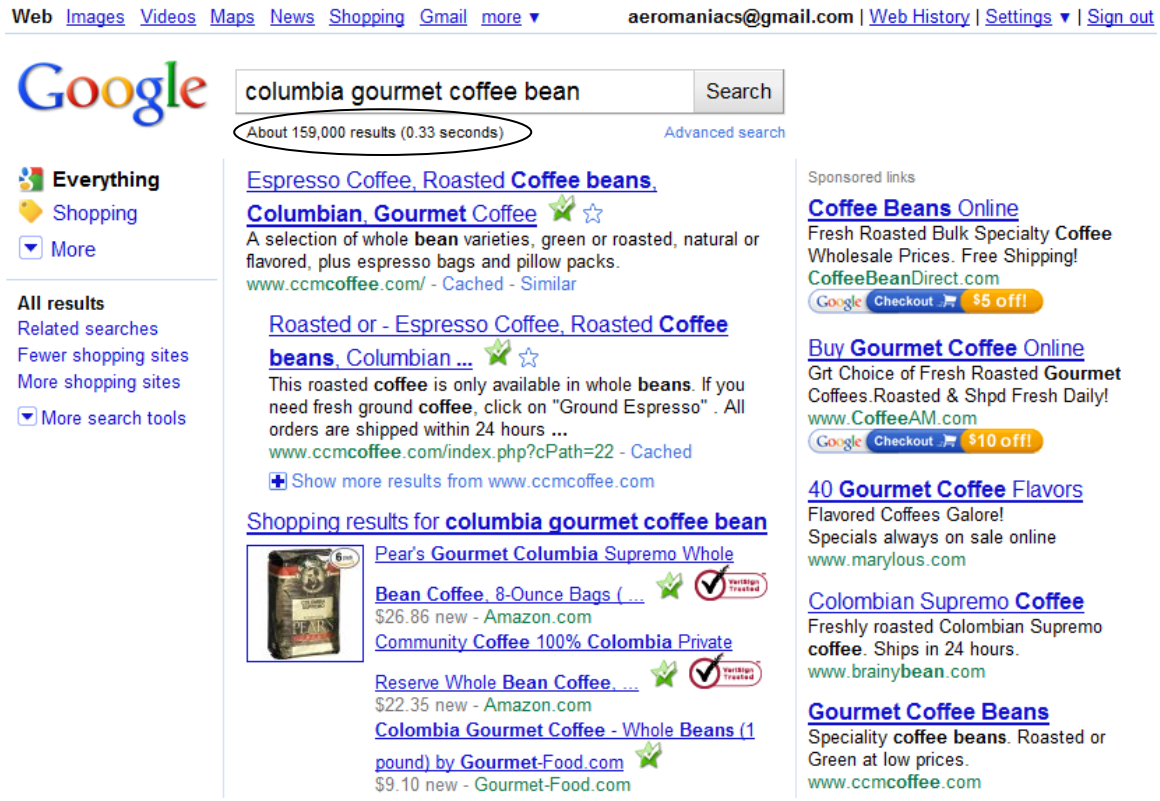
Google It

BASIC SEARCH

Doing a search on Google is easy. Simply type one or more search terms (the words or phrase that best describe the information you want to find) into the search box and hit the 'Enter' key or click on the Google Search button.

SEARCH RESULT

The goal is to list the least amount of results. Not all result results are actual valid hits. The "Sponsored links" result that appear on the third column of the page are paid advertisement.



SEARCH TIPS

Narrow your Search Result

Choosing the right search terms is the key to finding the information you need.

Capitalization

Google searches are NOT case sensitive. All letters, regardless of how you type them, will be understood as lower case. For example, searches for george washington, George Washington, and gEoRgE wAsHiNgToN will all return the same results.

Default "AND" queries

By default, Google only returns pages that include all of your search terms. There is no need to include **"AND"** between terms. Keep in mind that the order in which the terms are typed will affect the search results. To restrict a search further, just include more terms. For example, to plan a vacation to Hawaii, simply type **vacation hawaii**.

Using OR

The OR operator, for which you may also use | (vertical bar), applies to the search terms immediately adjacent to it. The first and second examples will find pages that include either "Tahiti" or "Hawaii" or both terms, but not pages that contain neither "Tahiti" nor "Hawaii."

•[Tahiti OR Hawaii]

•[Tahiti | Hawaii]

*The * Operator*

Use *, an asterisk character, known as a wildcard, to match one or more words in a phrase (enclosed in quotes).

For example, **["Google * my life"]** tells Google to find pages containing a phrase that starts with "Google" followed by one or more words, followed by "my life." Phrases that fit the bill include: "Google changed my life," "Google runs my life," and "Google is my life."

["Google * my life"]

Notes