

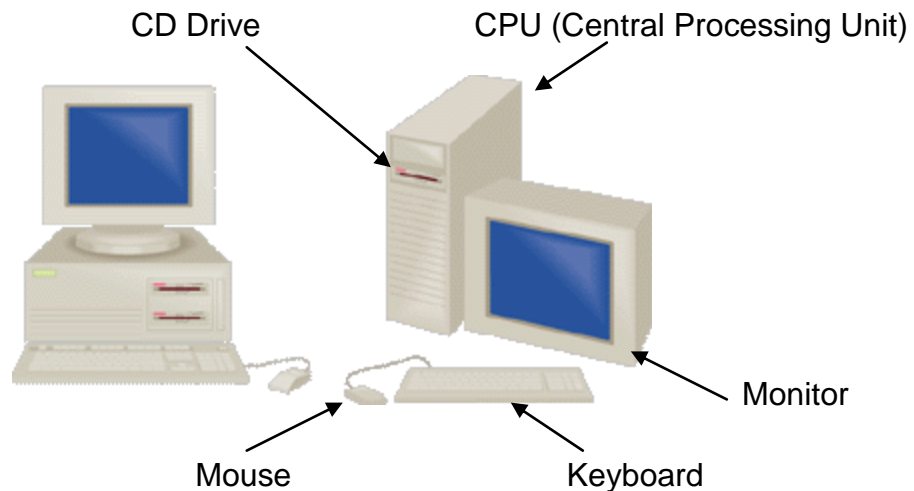
Introduction to Windows 7

Presented by Trinfo Café

Windows Workshop

Objective: To learn Basic Computer Skills.

The System Unit



CPU = Central Processing Unit

- Resides inside a box known as the system unit.
- The **Disk Drive**, located on the CPU is the location where disks or flash drives can be inserted in order to save or retrieve information on a computer.

Hardware Definitions: The parts of the PC you can actually touch

Output Devices

Output devices receive computer information and send it to the outside.
Examples include:

- Monitor - allows you to view information on a screen (work the computer is doing or work the computer has completed).

- Printer - allows you to view information on paper (the work the computer is doing or work the computer has completed). There are 2 kinds of printers:
 1. Impact printers – typically used to print to multi-form paper
 2. Non- impact printers – There are 2 kinds:
 - Laser – Laser printers offer highest – quality print and are usually faster and more expensive (camera ready)
 - Inkjet – Inkjet printers are generally slower but offer a decent high quality print and color printing at more affordable prices (not camera ready).
- Speakers - allows amplification of the computer volume

Input Devices

Input devices provide data to a system for use on the computer. Examples include:

- Keyboard – a tool used to communicate with the computer. It is similar to a typewriter, but also has computer specific keys (Page up/ Page down, Home/ End, Esc. Ctrl, etc).
- Mouse – another tool used to communicate with the computer. A mouse is necessary in Windows. A mouse should be moved upon a mouse pad (rough surface). A mouse may have 1, 2, or 3 buttons. Depending on the programs you require, you will typically use the left and the right mouse buttons.
 - Laptop computers often do not have a traditional mouse but they use touch pads or track balls or other means of control.
- Microphone – converts sound into an electrical signal. Used to record your voice or give voice commands. Can also communicate with others through computer programs that use microphones.

Processor

A specific chip inside the PC is referred to as the processor (or processing chip). It is the “brain” of the computer. It could be compared to a traffic cop, since it directs which instruction is performed next and determines where data and information should go. It also helps determine how fast information is processed.

The processing chip is referred to by a number (Pentium II, Pentium III, and now Pentium IV). The higher the number, the more powerful the PC and the more data it can transport at one time. Today you can typically purchase a Pentium IV PC. There is also Celeron and Xenon.

Computers can also have multi-core processors. This is when a computer has two or more independent processors, called “cores”. Multi-core processing is useful when you want to run several applications simultaneously. A **dual-core** processor allows two complete processing units (cores) to run in parallel on a single chip, virtually doubling processing capability without a comparable increase in power consumption. **Quad-core** processors have four separate processors and **hexa-core** processors have six.

Another advantage of multi-core processing is the speed in which one can multitask. Each core can run a different program, without much “slowdown”.

Another indication of power for the computer is its clock speed. This speed is measured in megahertz (cycles per second) or MHz (133 MHz, 266 MHz, 333 MHz). The faster (higher number) the MHz, the quicker the PC will complete its processing. Now you can get computers with a processor in GHz (gigahertz). A computer that has a 266 MHz processor can be said to have .266 GHz processor. A computer that has a 1 GHz processor can be said to have 1000 MHz processor.

*Computers today come with a 1 Terabyte hard drive, several GB of RAM, and even HDD (high definition display). HDD has significantly increased picture quality and clarity based on the resolution of the monitor.

Hard Drive:

This is the physical device (disk) inside the computer where software is stored. The hard drive can be compared to a filing cabinet since your programs and data files are stored in folders (or directories).

A standard hard drive today would store at least 20 GB of data and with newer machines, can store 120 GB or more of data. Today's software programs offer more options and functionality so they also require more storage space.

- 1 byte is 1 character of information (a letter or space or symbol)
- A kilobyte (KB) is about 1,000 bytes or characters (about 1 page of text)
- A megabyte is about 1,000,000 bytes or characters (about 500 pages of text).
- A gigabyte (GB) is about 1,000 megabytes or 1 billion bytes or characters (1.6 GB hard drive – 800 pages of text).
- 1 GB of data is about the equivalent of a pickup truck filled with paper and 2 GB is the equivalent of 66 feet of shelved books.
- A terabyte (TB) is about 1,000 gigabytes, 1 million megabytes, or 1 trillion bytes.

RAM

Every computer comes with a certain amount of physical memory, usually referred to as main memory or *RAM*. *RAM* stands for random access memory. You can think of main memory as an array of boxes, each of which can hold a single byte of information. A computer that has 1 megabyte of memory, therefore, can hold approximately 1 million bytes (or characters) of information. A computer that has 1 gigabyte of memory can hold approximately 1 billion bytes of information, or 1,000 megabytes.

Memory

Memory can be compared to the “top of your desk”. It is the computer's workspace (where the work is being done on the computer) or desktop. Memory is also referred to as RAM and is measured in megabytes or MB (32 MB, 64 MB, 128 MB, 256 MB, 512 MB). Space on the hard disk is measured in gigabytes or GB (2 GB, 3GB, 4GB).

Generally, the more memory your computer has the better it will run. Windows XP requires at least 64 MB of RAM to run (128 MB recommended) and 1.5 GB of hard disk space.

CD – ROM Drive (Compact Disk read only memory)

The physical mechanism by which the computer reads information contained on a CD. CD – ROM's allow access to large amounts of data stored on CD's. This

data can include entire sets of encyclopedias, the world atlas and cool games. A CD can hold up to 400 times more the amount of data than a diskette can hold.

Also, the retrieval speed is much quicker on a CD drive. The technology is available to write information or data on CD's, but generally we only read data (ROM) from CD's.

CD – RW Drive

With this you can also read CD – ROMS but it is used to copy information onto the CD. RW means that it is Re-Writable. You can write data onto the disc multiple times.

DVD Drive (Digital Versatile/Video Disc)

This disc allows the recording of videos, including audio tracks, advanced menu systems, and still pictures. These discs can be played back later on many DVD players and computers with DVD-ROM drives.

Blu-ray Drive

This drive enables recording, rewriting and playback of high-definition videos (HD), as well as storing large amounts of data. The format offers more than five times the storage capacity of traditional DVD's and can hold up to 25GB on a single-layer disc and 50GB on a dual-layer disc.

Ports

A port is an interface on a computer to which you can connect a device. Personal computers have various types of ports:

1. Serial Port – used for connecting mouse, keyboard, monitor, and palm pilot, etc.
2. Universal Serial Bus (USB) – the newer generation of the Serial Port. Also connects MP3 players and cameras.
3. Printer Port – connects the printer to the computer.

4. Sony/Philips Digital Interface (S/PIDF) Port (or Optical Digital Output Port) – digitally transfers audio from one component to another. Digital transference, as opposed to analogue transmission, is immune to noise.
5. High-Definition Multimedia Interface (HDMI) Port – connects the monitor to compatible digital audio/video devices such as high-definition televisions.

External storage devices

- USB Flash Drive – removable and rewritable storage devices. They are smaller, faster, and have thousands of times more capacity than floppy disks or CD-ROM's. These portable flash drives can be easily plugged into a USB port. All types of files can be stored on this, such as audio files, word documents, and PowerPoint presentations.
- External Hard Drive – connects to your computer with a simple USB cable. Used to store your valuable data and add a considerable level of safety and security. Since external hard drives are located outside the computer, they allow you to keep a backup copy of all your important files.

Using the Keyboard

The keyboard is an input device; some of its most important features are the following:

| Key | What will do for you |
|-----------------------|--|
| Esc | The escape Key function is to get you out of problems. If you find yourself in an unfamiliar menu or dialog box when using Windows, pressing Esc backs you out. |
| Enter | By pressing this key, you add a line to your text and place the insertion point in it. You can also use it to complete a command if you are selecting from a menu or dialog box. This key can also be used to give the OK to Windows so it will accept the information you have entered in a dialog box or edit box. |
| Num Lock | By pressing this key, the numeric key pad (area with keys with numbers on the right had side of the keyboard) is activated. Press it again if you want to use the directional arrows and other cursor movement keys located in the numeric keypad. |
| ← ↑ → ↓ | By pressing this arrow keys, the insertion point moves in the appropriate direction. |
| Ctrl (Control) | Pressing the Ctrl key in combination with other keys you can take lots of shortcuts. Example: pressing the Ctrl key + the S key saves the file you are working on. |
| Shift | This key, like its predecessor on the old typewriter, changes lowercase to uppercase letters. This key can be used in combination wit the Ctrl key to create key combinations to perform specific functions. Also used to type the symbols on the top row of your keyboard. |
| Caps Lock | When you press this key, you can type in all uppercase letters without having to hold the Shift key |
| Tab | When you are writing text pressing this key, it moves the insertion point to the next field when filing a form or working with a database. |
| Backspace | This key deletes text to the left when pressed. |

| | |
|---------------|--|
| Delete | This key deletes text to the right when pressed. |
|---------------|--|

Using the Mouse

- The mouse is a hand-held pointing device used to enter information into your computer
- The pointer, usually shown as a white small arrow on the screen, will follow the movements you choose to do with the mouse. Move the mouse to the right, the pointer will move to the right of the screen, etc.

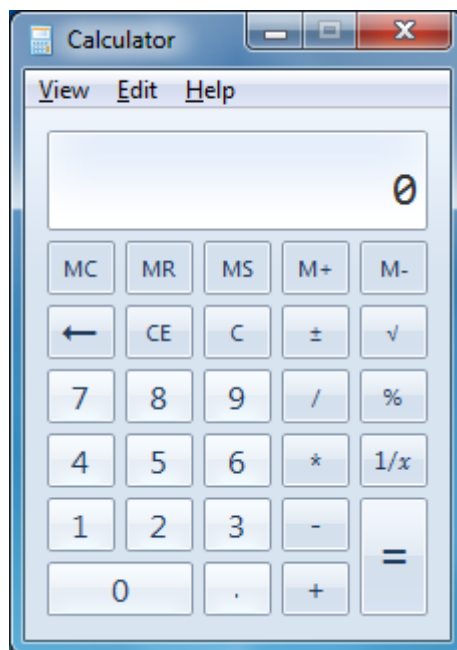
| Mouse Action | Effect |
|---------------|--|
| Click | Clicking is the most common mouse action. Clicking means that using your mouse you point at an object on the computer screen and then press and quickly release the mouse button (normally the left button). |
| Double- Click | To double-click is to press the left button two times in rapid succession without moving the mouse between clicks. This action is used to open icons or programs. |
| Right Click | A Right Click or secondary click is to press and release the right button of the mouse. This action often brings up context menus. |
| Drag | In order to drag an object on the screen, you must first point and click and hold down the left button and move the mouse to the position where you want it. |

Practice

- Open the Calculator Program. Start – programs – accessories – calculator
- Use the mouse to click 2, then click +, then click 3. When you click =, you will see the answer.
- Click “C” to clear the calculator (start over).
- Do some more simple math such as $10 / 2$ (10 divided by 2) and $3 * 5$ (3 times 5).
- Instead of clicking the buttons with your mouse, you can use the number keys on the right-hand side of the keyboard. This group of keys is called the NUMERIC PAD. If it isn't working, press the key labeled Num Lock.

- You can click the “C” button to clear, or instead, press the key labeled “Esc” (the Escape key; this is in the upper left corner of the keyboard).
- Notice that you can minimize or close the Calculator program just as you would any other window. However, you cannot maximize this window.
 - Open the Edit, View, and Help menus on the Calculator.

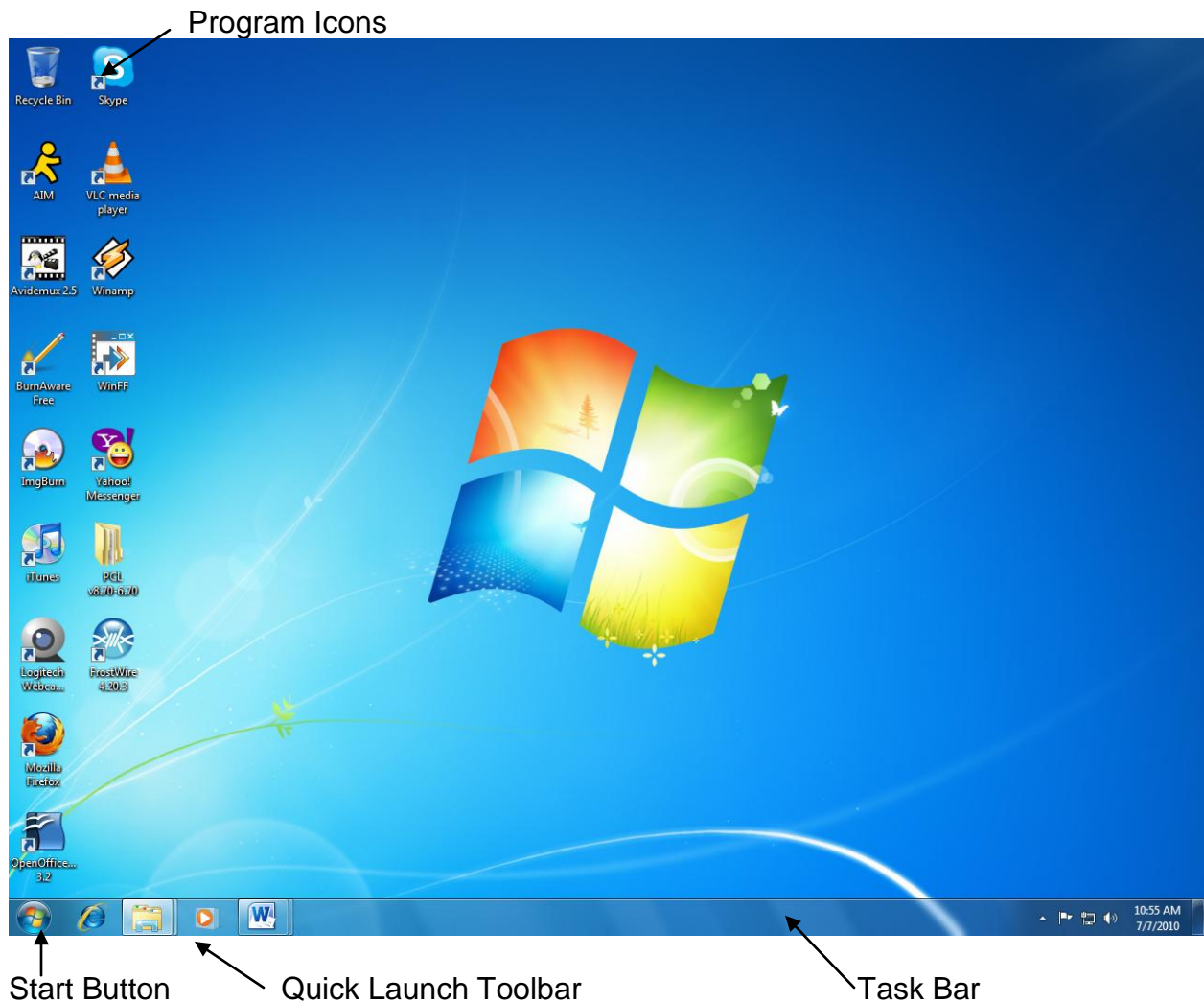
When you are finished practicing with the Calculator, close the program by clicking the Close button, which is the ‘x’ located at the top right corner.



The Windows Desktop

Desktop: The metaphor used to portray file systems.

- Consists of pictures called Icons that show cabinets, files, folders, and various types of documents.
- You can arrange the icons on the electronic desktop just as you can arrange real objects on a real desktop- moving them around, putting one on top of another, reshuffling them, and throwing them away.



Icons: A small picture that represents an object or program.

- Click once – CLICK – to SELECT an icon
- Click twice – DOUBLE CLICK – to OPEN something
 - Or you may click once and then press enter on your keyboard

Task Buttons



↑
 this is the task bar with the *task buttons*

In the center section of the taskbar you will see one button for each program that your system is currently running, and one for every folder that's currently open on your desktop. This collection of buttons (known as task buttons) not only provides a running status report on your working environment, it gives you a quick means of switching from one folder or application to the next: Whenever you click a task button, Windows immediately activates the associated window or program. You can click the task button a second time to minimize the window you just activated.

Contents of a Window:

The “My Computer” window contains some icons that represent DEVICES and other icons that represent FOLDERS.

Icons can also represent FILES or PROGRAMS.

Devices Things inside the computer or connected to it. These include the CD-ROM DRIVE (usually D:\), and other things.

Folders Containers, like a paper file folder. They can contain files, and programs, and other folders, sometimes called DIRECTORIES.

Files and Folders Files are located inside a folder. A file is a complete chunk of information stored on the computer, or on a disk. Even a program is stored as one main file – but it may need other files to work.

Programs These do the real work on a computer. If you want to draw, you open a drawing program. If you want to write a letter, you open a word processing program. Also called APPLICATIONS

The Task Bar

- The Windows taskbar is a blue bar with the word "Start" at the left end. It is usually located at the bottom of the desktop, but you can move it elsewhere.
- The taskbar usually stays onscreen all the time, regardless of whether you're looking at the desktop or at an application program. It tells you which programs are currently running, which folder windows are open, and in most cases, what time it is.
- It also gives you access to a list of options known as the Start menu, which you can use to launch programs, find files, and shut down your computer.

The Quick Launch Toolbar



It's located immediately to the right of the Start button.

- You can click the leftmost button in order to minimize all open programs and show the desktop.
- The first and last buttons start different web browsers, Internet Explorer and Mozilla Firefox (Mozilla Firefox may or may not be shown).

- The third button opens Windows Media Player, which you can use to play media such as songs or videos.
- If you run your mouse over a program in the task bar that is running, it will show you a **preview** of the window, meaning it will show you what the program looks like.

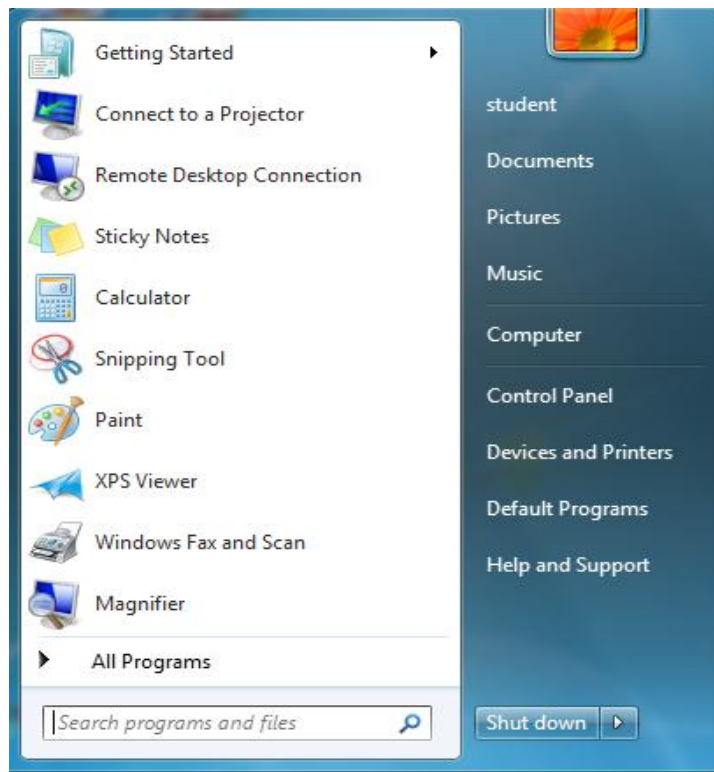


Start Button:

Function: The Start menu gives you access to programs, documents, Web sites, and tools for changing the Windows settings; and provides an entry point into Windows' built-in Help program.

Click Here to Begin → 

Menu Options:



- In the left column of the Start menu, different programs are displayed. Usually there are two programs at the top separated by a faint gray line from all the other programs displayed. These programs are a web browser—such as Mozilla Firefox—and an e-mail server—such as MS Outlook.
- In the right column of the menu, you will see many handy shortcuts such as ‘Documents’, where you can access all files and documents you have saved in your computer, as well as ‘Pictures’, ‘Music’, etc. All of these are very useful when you’re trying to find a quick way to access your personal files.
- You can also quickly get a glimpse of the last documents that you opened by going to ‘Recent Documents’ on the right column of the menu.
- There’s also the Control Panel, which helps you adjust personal settings on your computer, such as users, passwords, mouse pointers, etc. You can also install and test a new printer on the ‘printers and fax’ button, and do some other processes as well.

From the Start menu, you can also access some basic applications that help you in creating different types of documents.

• **Word Processing**

Word Processing is like using a typewriter, only slicker. Word Processing applications enable you to type, edit, format, view and print documents, such as letters, memos, and proposals. You can also create professional looking documents using advanced formatting features, such as tables, graphics, and columns.

MS Word
Coral Word Perfect
MuitiMate

• **Spreadsheet**

Spreadsheets typically are rows and columns of numbers and formulas. Spreadsheet programs enable you to organize, manipulate, analyze and chart numerical data. For example, you can create charts, solve “what-if” problems, conduct statistical analyses of data and perform a variety of other activities. Spreadsheets are often used for summaries, forecasts, and budgets.

MS Excel
Lotus

- **Desktop Publishing**

Desktop Publishing software is used for specific arrangement of text on the page (newspapers, newsletters, brochures, etc)

MS Publisher

Harvard Graphics

Adobe PageMaker

- **Graphics Software** – used for basic/ detailed drawing, scanning or technical design (architecture, gardening)

- **Multimedia Software** – computer graphics mixed with sound (Disney animation)

- **Utility Software** – designed to help the computer accomplish some task (virus protection, system resource checking, scandisk, etc).

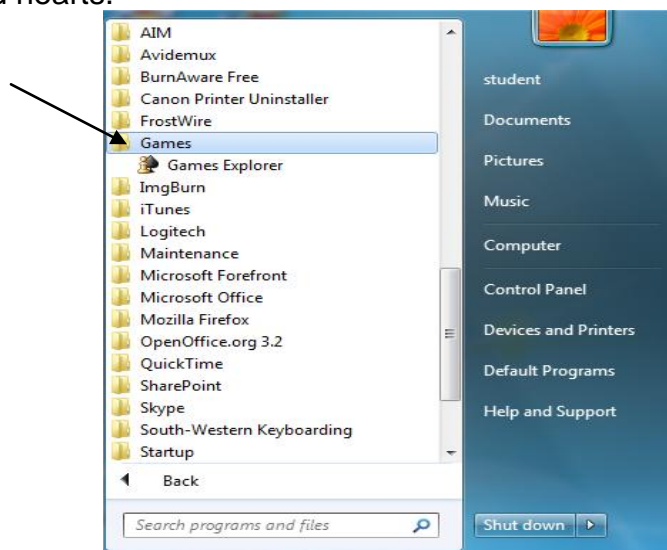
***Keep in mind that Trinfo offers classes for Microsoft Word I & II, Microsoft Excel I & II, and Powerpoint.**

Programs:

Program Groups: This will change according to your computer. People choose how to customize the programs on their own computer

Accessories: This is standard on Windows XP. Some programs in here will be the Calculator and the Notepad. The calculator is available at any time if you need one while using the computer. The Notepad works as a very basic word processing unit and doesn't perform anything fancy such as MS Word.

Games: This is also standard on Windows XP. There are numerous games that can be played on the computers. Most of them are card games such as solitaire, FreeCell, and hearts.







Windows:

The window is the portion of the screen that shows you the program you are in.

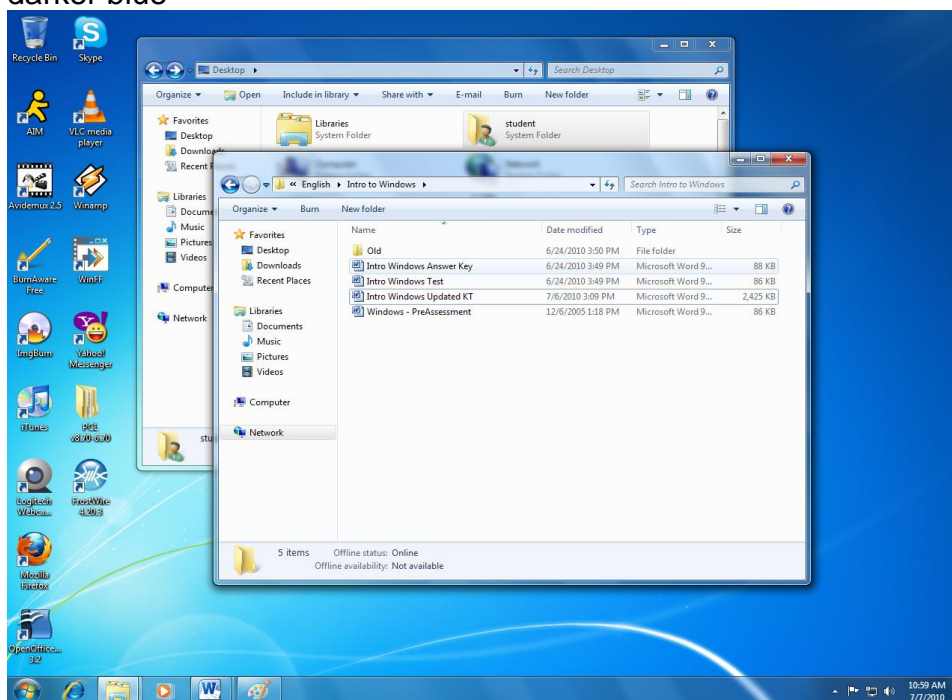
- These buttons are in the upper right-hand corner of almost every window:



1. MAXIMIZE  enlarges the window to fill the whole screen.
2. RESTORE  takes a maximized window back down to its smaller size.
3. MINIMIZE  sends the window to the TASKBAR, where it becomes an inactive button.
4. CLOSE BOX  closes the window.
5. RESIZE a window: GRAB an edge of the window frame with the cursor, and DRAG the edge to make the window larger or smaller. (To grab, put the cursor on the edge and hold down the left mouse button. To drag, keep holding the button and move the mouse).

Active/ Inactive:

- The window where the action is – that's the ACTIVE WINDOW.
- If other windows are open, they are all INACTIVE.
- The active window is always on top.
- The title bar of the active window will be a different color from all the other title bars.
- On the Taskbar, the gray button for the active window looks pushed in, or darker blue

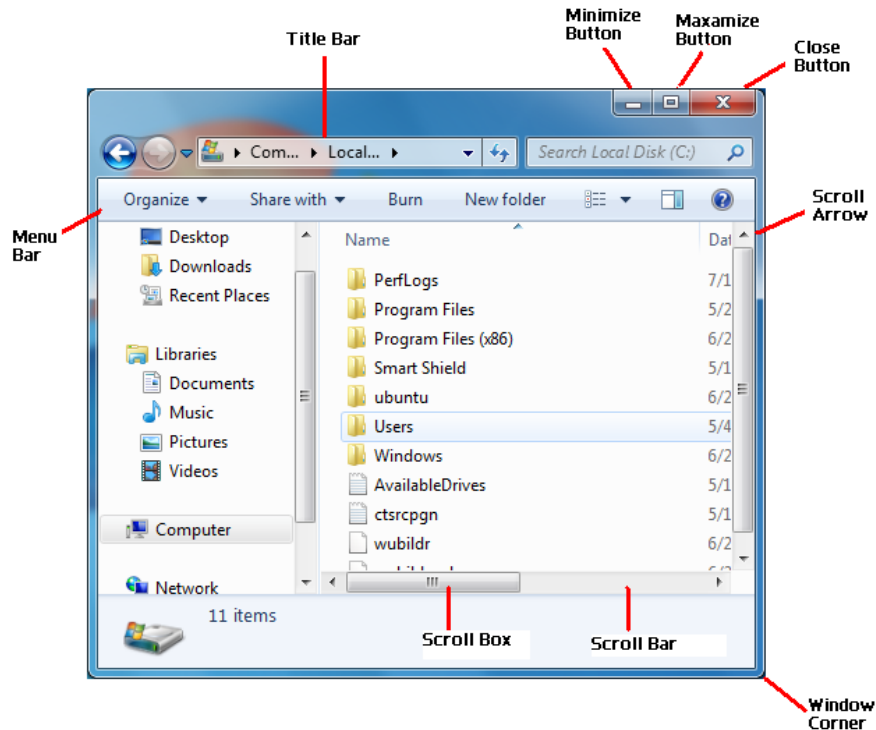


Snap Feature:

- With the new Windows 7, you can now view two windows side by side.
 - First, drag one window to one side of the screen, pushing it off the screen and drop it when you see a window outline appear. It will “snap” into place
 - Next, drag the window you want to compare it with to the opposite side of the screen, pushing it off the screen and dropping it. This one will also “snap” into place.
- You can also maximize a window by dragging it to the top of the screen and dropping it. This window will “snap” into place just like the others.


Practice:

- OPEN the “Internet Explorer” window.
- CLOSE it with the Close button (upper right-hand corner of the window)
- Practice opening (double click) and closing this window by using the icon on the desktop.
- Open the “My Computer” window from the desktop
- MAXIMIZE the “My Computer” window, and then RESTORE the window.
- Open the “My Computer” window. Also open the “C:\” window.
- On the Taskbar, click the “My Computer” button once. This changes the “My Computer” window to the active window.
- On the Taskbar, click the “C:\” button once. This changes the “C:\” window to the active window.
- Practice switching between the two windows using the Taskbar buttons.
- Click once on the inactive window. This is another way to switch – to make that one the active window.
- Practice switching between the two windows by clicking on the window.
- Practice viewing 2 windows side by side using the snap feature. Drag one window to one side and the other to the opposite side. Also try maximizing using the snap feature by dragging and dropping a window at the top of the screen.



*** To move windows around the desktop: **DRAG** the space right above the **Title Bar**

Volume

You can regulate the volume by clicking the  button in right side of the taskbar, next to the time display. A rectangular window will pop up. You can then move the volume bar up or down according to your preferences. You can also click the **Mixer** button to bring up the volume control for the system sounds as well as any media player applications that are running. You can also access the mixer by right clicking the speaker icon and selecting **Open Volume Mixer**. Lastly, you can also regulate the volume by going to Control Panel and selecting **Sounds**.



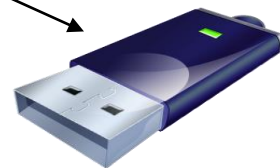
Loading a CD

Whenever you insert a CD into the Disk Drive, you should wait for the computer to automatically recognize and play its contents. If it's an audio CD, then the music should automatically play within a few seconds of inserting it. If necessary, a window will pop up asking you to choose what action to do with the CD. You should choose to 'Play Audio CD Using Windows Media Player'. This window will come up. You can choose to maximize the window or leave it this size.



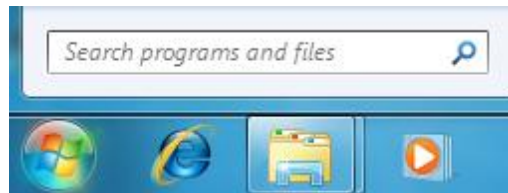
USB Drives


If you own a USB Drive (Also known as **Flash Drive**), you can store all kinds of documents on it. You should insert the flash drive into a USB Port, usually located at the front or back of the CPU. You should wait until the computer detects the drive and its contents. Usually a balloon will show up on the lower right corner—next to the time display—letting you know that the drive is ready to be used. Once this balloon pops up, you can then access your flash drive by going to 'My Computer'. Usually the Flash Drive will be named the F: Drive (Removable Drive).



Performing a Search

- If you want to open a file but don't remember its location, you can search for it. First, click the **Start Button**. Right above the start button, there is a bar that says "Search programs and files".



You can then look up a file by typing in all or part of the file name into the search bar and clicking on the magnifying glass . You can also do the same to find documents, music, videos, pictures, etc.

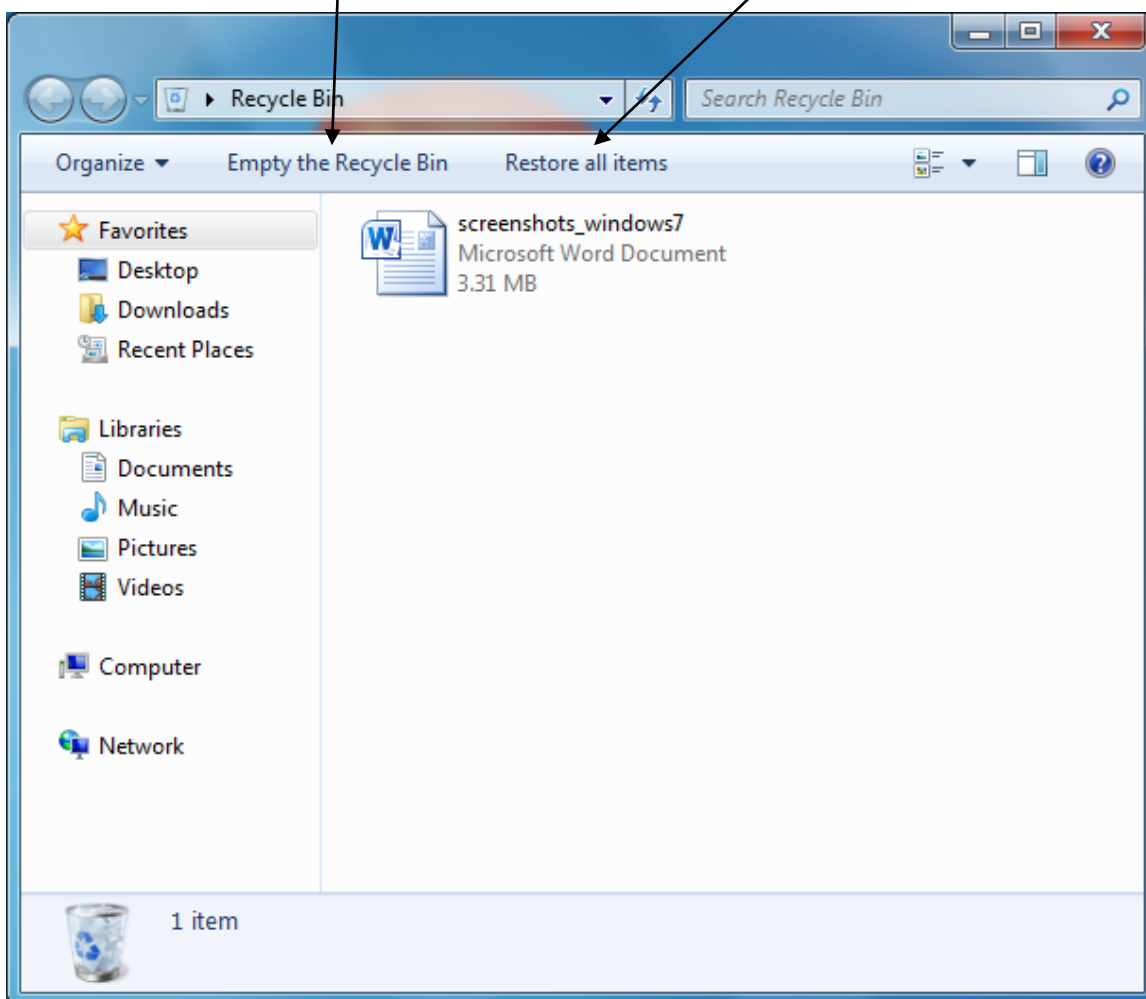
RECYCLE BIN:



Used to delete files, programs, or documents that you want to get rid of. Once information is put into the recycle bin, it is still retrievable until completely deleted from it.

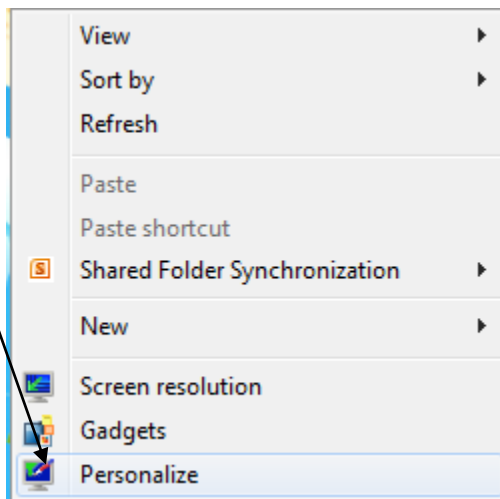
Once you have already deleted a file, you can delete it permanently from your computer by going to the 'Recycle Bin', located as an icon on the desktop, selecting the documents that you want to delete, right clicking it and selecting delete. You can also delete everything in the recycle bin at once by clicking on

'Empty the Recycle Bin'. You can also choose to restore all erased items to their original location by selecting them and then clicking on **'Restore All items'**. This will bring the items you had deleted to the folder where they were previously stored.

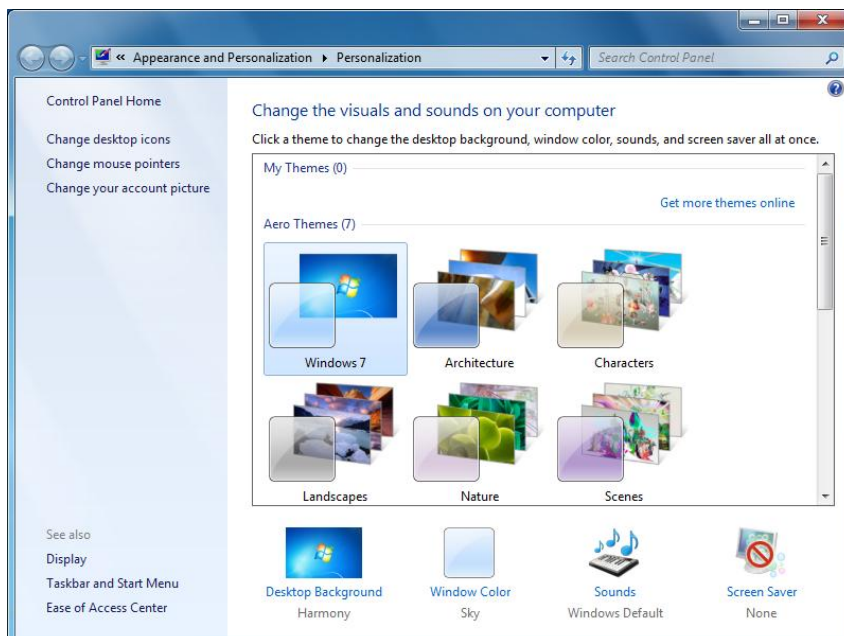


Changing the Desktop's settings

- Put mouse pointer in an empty spot on the desktop and click **right** mouse button.
- Choose **Personalize**.



Changing the Background, Screen Saver, Appearance, and Settings



The **Themes** section of this window allows you to use a preset theme which includes a background, screen saver, etc. The **Desktop** section of this window allows you to choose wallpaper with a pattern or picture of your choosing for your desktop. The **Screen Saver** section lets you select a picture or pattern that will be automatically shown

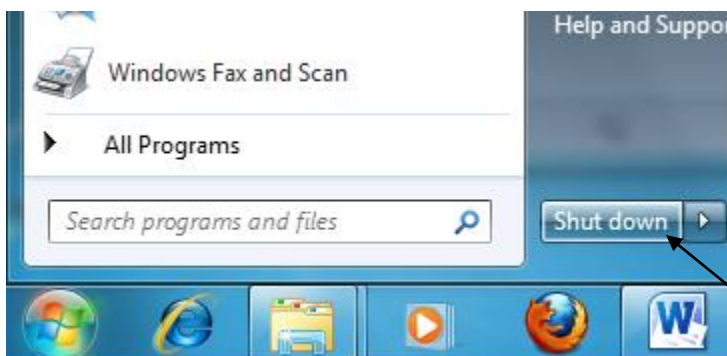
when Windows detects a defined period of inactivity. The **Window Color** category allows you to change the color of the window borders, start menu and task bar. The **Sounds** section allows you to configure the sounds of the computer.

Shutdown

Step 1: Closing All Programs

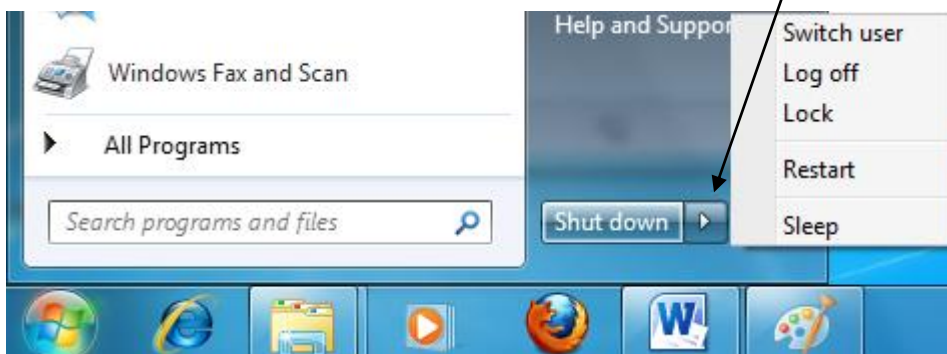
Before you shut down Windows, save any documents you are working on and close all applications. Use the File, save command to save a document. Use the File, Exit command to exit any applications. You should not see any program buttons in the title bar.

Step 2: Select the Shut down Command



To select this command, click the Start button and then select Shut Down. The computer will then shut itself off. If you click the arrow button next to the shut down command another small menu will appear next to it.

Step 3: Other Options



With this menu, you can switch user accounts, log off the current user account, lock the computer, restart the computer, or put the computer to sleep.

Troubleshooting Tips

- Depending in the problem, before packing up your PC and sending it out or bringing it to a computer shop for repair, you might want to try the following:
 1. Turn the computer off
 2. Wait about a minute
 3. Turn the computer back on

Many times, this procedure will resolve your problem, especially if it was a software related problem. When you turn the computer back on again, it starts fresh. This does not always work, but it is a good first try.

- Check you cable connections
- If you must bring the computer in for repair, shop around (unless you are under warranty). Hourly rates will vary.

Things to remember:

- Do not keep a PC by a window where the sun comes through. Do not keep a PC in a closed-in space where it will possibly become too warm or have no airflow, this may lead to the computer overheating.

Viruses

- Use a virus protection program always. Norton AntiVirus and McAfee Virus protection are both good ones. Before installing a disk or program, you should run the software through your virus protection program.

NOTE: It is a good idea to fill out the registration cards for your virus program. This will keep you up to date on new releases, since new viruses are written everyday. Typically, you will be able to download updates off the virus company website for up to one year or some pre-determined length of time.