

UNIT -I

Input Device

Input device is a device through which data and instruction are entered into computer system. An input devices converts the data and instructions into binary form that computer can understand. This transformation is performed by “Input interface”.

The data entered through input device can be some text, some graphical image or symbol, sound etc, depending on the form of the raw data the various input devices are available.

Some of the commonly input devices used are:-

1. Keyboard
2. Mouse
3. Joy stick
4. Track ball
5. Touch screen
6. Light Pen
7. Digitizer
8. Scanner
9. Speech Recognition Devices

1.Keyboard

Keyboard is an input device for entering data and instructions into a computer. Data is entered into the computer by pressing set of keys available with this device

Keyboard keys are arranged in 6 groups such as:

- 1. Alphanumeric keys:** - The alphanumeric keys are the collection of alphabets A-Z, numerals from 0-9 and punctuation marks that are arranged the same way on almost every keyboard.
- 2. Numeric keys:** - It is usually located on right side of keyboard and appears like a non-scientific calculator with ten digits (0-9) and arithmetic operators.
- 3. Function keys:** - The Function keys numbered from F1 to F12 are usually arranged in a first row at top of keyboard. Each function key performs different function depending upon the current application being run by user.
- 4. Cursor movement keys:** - These keys allows user to change the position of the cursor on the screen. Cursor movement keys move cursor up, down, left and right.
- 5. Special purpose keys:** - These keys perform special function i.e. insert, delete, print screen.
- 6. Modifier keys:** - These keys are used in conjunction with other keys. Modifier keys include keys such as Alt (Alternate), Shift and Ctrl (Control).

2. Mouse

Mouse is a pointing device that controls the position of the cursor on a computer screen without using keyboard. It is called pointing device because it is used to point and select option on screen. There are two or more depression switched on the top of mouse.

Types of Mouse: -

1) Mechanical mouse

It has rubber or metal ball on its underside that can roll in all directions. Mechanical sensors within mouse detect the direction the ball is rolling and move the screen pointer accordingly.

2) Optical mouse

It uses a laser to detect the mouse's movement. It responds more quickly and precisely than mechanical mouse.

Three simple techniques to use mouse: -

1) Clicking: - To click on something with the mouse means, to move the pointer to the item on the screen and to press and release the mouse button once.

2) Double clicking: - To double click on item means, to move the pointer to the item on the screen and to press and release the mouse button twice with quick succession.

3) Dragging: - To drag an item, user positions the mouse cursor over the item, then presses the mouse button and holds it down as you move mouse.

3. Joy stick

It is also a pointing device which is used to move cursor position on a monitor screen. It consists of a lever which moves in all directions and controls the movement of pointer. Lever has a spherical ball at its base. When the lever steers the cursor moves in the respective direction. Potentiometers are used to sense the movements. On most joysticks a button at top is provided to select the option.

E.g. It is commonly used with computer games, flight simulators and for controlling robots.

4. Track ball

Track ball is a pointing device that works like an upside-down mouse. The only difference is that the ball in case of the track ball is placed on the top along with the button of the trackball. The movement of cursor is controlled by movement of ball by the fingers.

Trackball is most commonly used in notebook or laptop instead of a mouse.

5. Touch Screen

Touch Screen is the most simple and easiest to learn of all input devices. It is also a pointing device by which users touch areas of the screen with their fingers to issue commands. Touch screen enables the users to choose from available options by simply touching with their fingers the desired icon or menu displayed on the screen.

E.g. A common application of touch screen is ATM's installed in banks.

6. Light Pen

Light pen is a pointing device which is used to select a displayed menu item or draw pictures on the monitor screen. It is connected by a cable to the display device. The light pen consists of a light sensing element (photo diode) at the tip of pen and a cable through which the signal is transmitted. When the screen is touched with the tip of pen, pen gets activated light spots are sensed and a signal sent to the system indicating the position.

E.g. Used for corrections in architectural designs.

7. Speech recognition system

These devices are used to recognize the voice and translate it into text using speech recognition system. Speech recognition software is loaded into the machine which gathers sound waves, removes unwanted noise and compares the incoming signal against a pattern stored in memory. If sound is similar or almost similar then the voice is translated into text otherwise it is ignored.

Speech recognition system is equipped with the following components:

a) Computer system with sound card

- b) Speech Recognition software
- c) Microphone

8) Scanner

“A scanner is an input device which translates paper documents into an electronic format, which can be stored in a computer.”

Input documents may be typed text, pictures, graphics or handwritten material. Scanner is helpful in preserving paper documents in electronic format.

Output Device

An output device is an electromechanical device which accepts data from a computer and translates them into a human acceptable form.

Output generated by output device classified into two types:

1) Soft-copy output – Output which is not produced on a paper is known as soft-copy output. They are temporary in nature.

2) Hard-copy output – Output which is produced on a paper is known as hard-copy output. They are permanent in nature.

Following is list of most commonly used output device.

- 1) Monitor
- 2) Printer
- 3) Plotter
- 4) Speaker

1) Monitor

Monitor is an output device which is used for producing soft-copy output. It is also known as VDU i.e. Visual Display Unit. It forms images from tiny dots, called pixels that are arranged in a rectangular form. The sharpness of the image depends upon the no. of the pixels.

On the basis of **volume** monitor is of two types-

a) Cathode-Ray Tube (CRT)

CRT's Screen display is made up of small picture elements called pixels. The smaller the pixels the better the image clarity or resolution. CRT is the large bulky sized monitor. It has high power requirement so it is not appropriate for portable devices.

A monochrome CRT contains single electron gun which emits beam of electrons. These electrons are attached towards positive phosphorous screen. When an electron strikes the screen it glows and emits light. A small area in which an electron strikes is known as pixel. To display a screen all the pixel are strike by electrons. Accelerating anode varies the speed of the electron and deflecting system changes the path of the electron.

In short

A heated cathode emits a high-speed electron beam onto phosphor-coated glass screen. Glass screen glows when they are struck by electron beam.

Advantages of CRT Monitors

- 1. It has better brightness.
- 2. It is cheaper in cost.
- 3. It is more durable.
- 4. It has better graphics and larger viewing angle (~180)

Disadvantages of CRT monitors

- 1. It bulky and large in size. It is large in size so occupies more space.
- 2. More power consumption.
- 3. It is not portable.

b) Flat- Panel Display

Flat panel monitors are thinner and lighter and commonly used with portable computer systems.

Following are Flat-Panel display:

1. Light emitting diode

LED contains multiple small bulbs. The contents are displayed by turning the bulbs “on” and “off”. Initially it was used only for simple digital displays like in calculator, digital watch, etc. At present it is also used in television, desktop PC, laptop, etc.

Advantages of LED

1. It is light in weight so, it can be used in portable devices.
2. It requires less power.
3. It is small in size.
4. Its viewing angle is larger compared to LCD.

Disadvantages of LED

1. It has low brightness but is better than LCD and plasma.
2. It is expensive compared to CRT.
3. It is difficult to maintain.

2. Liquid crystal display

LCD contains liquid crystals in between two plates of the screen. The plates are made by either glass or plastic. The front plate is transparent and the back plate is reflective. Liquid crystals are charged electronically to display the content.

Advantages of LCD

1. It is small in size.
2. It is light in weight.
3. It has low power requirements so, can be used in portable devices.
4. It is cheaper than LED

Disadvantages of LCD

1. It has low brightness.
2. It is expensive compared to CRT.
3. It requires viewing angle of almost 90.

Types of monitor on the basis of color display are:

1. Monochrome monitor

It is a single colored monitor. It can display only text and images of a single color against a contrasting background. The first monitor displayed text and images of light green color against black background.

2. Gray scale monitor

It can display 256 different variations of black and white color. It can also display video. The first television set was gray scale.

3. Color monitor

It can display 16-42 million colors. It uses 3 basic colors Red, Blue and Green. All the other colors are the combination of these colors. Color monitor is also known as RGB monitor.

2. Printers

Printers are the most popular output devices. They produce hard-copy output.

Printers are broadly classified into two categories:

a) Impact printer: -

Impact printers are those printers that print the characters by striking hammers or pins against ribbon onto paper. Impact printers are noisy printers.

Characteristics of Impact Printers are following

- Less expensive
- Impact printers are very noisy
- Useful for bulk printing due to low cost
- There is physical contact with the paper to produce a pattern

b) Non-impact Printers

The printers that print the characters without striking against the ribbon and onto the paper are called Non-impact Printers.

Characteristics of Non-impact Printers

- Faster than impact printers.
- They are not noisy.
- High quality.
- Support many fonts and different character size.

Printers can be further classified into the different categories:-

a) Character Printer

- i. Dot Matrix Printer (Impact printer)
- ii. Daisy wheel Printer (Impact printer)
- iii. Inkjet printer (Non-impact printer)

b) Line Printer

- i. Drum printer (Impact printer)
- ii. Chain printer (Impact printer)

c) Page printer

- i. Laser printer (Non-impact printer)

1) Character printer prints only one character at a time. This types of printer is described as follows-

a) Dot matrix

Dot matrix is an impact printer and it prints one character at a time in the form of dots. Its speed is usually ranges from 30 to 550 characters per second (cps). Dot matrix is the cheapest and the noisiest printer and has a low print quality. It was 1st introduced by Centronics in 1970.

How it works

1. In this printer an inked ribbon between paper and the print head. The print head moves across the paper and goes on printing the information.
2. Uses tiny pins to hit an ink ribbon and the paper. 9 to 24 vertical column pins are contained in a rectangular print head.
3. When print head moves across the paper, pins are activated to form a dotted character image. When pins get activated they strike on paper along with ribbon. These printers can produce carbon copies along with the originals.

Advantages

1. Less-expensive.
2. Low per page cost.
3. Energy efficient.
4. Multipage forms can be printed on this printer.

Disadvantages:

1. Noisy
2. Low resolution
3. Limited fonts flexibility
4. Poor quality graphics output.

b. Daisy wheel printer

A daisy wheel printer is basically an impact printer consisting of a wheel and attached extensions on which molded metal characters are mounted. A daisy wheel printer produces letter quality print and it can't produce graphics output. Its speed is around 90 cps.

How it works

1. In Daisy wheel printer each petal of wheel has a character embossed on it.
2. A hammer presses the wheel against a ribbon which in turn makes an ink stain on the paper
3. A motor spins the wheel rapidly and when the desired character spins to the correct position, a print hammer strikes it to produce the output.

Advantages

1. Quality output is produced
2. The font of character can be easily changed
3. More reliable than DMP.

Disadvantages

1. Slower than DMP.
2. Produce noise while printing.
3. More expensive than DMP.

c. Inkjet printer

It is a non-impact printer producing a high quality print. Multipage forms cannot be printed by these printers. Its speed ranges from 40 to 300 characters per second with a resolution of from 300 dpi to 1200 dpi.

How it works

1. Print head having four ink cartridges moves.
2. Software instructs where to apply dots of ink, which color and what quantity to use.
3. Electrical pulses are sent to the resistors behind each nozzle.
4. Vapor bubbles of ink are formed by resistors and the ink is forced to the paper through nozzles.
5. A matrix of dots forms characters and pictures.

Advantages

1. High quality of printing.
2. More reliable.
3. Energy efficient.

Disadvantages

1. Expensive as cost per page is high.
2. Slow as compare to laser printer.

b) Line printers

Line printers are the impact printers and are used for producing high volume paper output. These printers print the complete line at a time so that's why they are called line printers. They are faster printers having speed in the range of 300 to 2500 lines per minute.

Types of line printers

a. Drum printers

Drum printers print one line at a time. It consists of a solid cylindrical drum with character embossed on its surface in the form of circular bands. Each band contains numerals, alphabets and special characters.

In addition to drum a set of hammer mounted in front of drum in manner that an inked ribbon and paper can be placed between hammers and the drum. It is very fast and also expensive. Its speed ranges from 300 to 2000 lines per minute.

How it works

1. The drum rotates rapidly and one revolution is required to print one line.
2. Character at print position is printed by activating the appropriate hammer, when character embossed on the band at print position passes below it.

Advantages

1. They can be used to produce multiple copies by using carbon paper.
2. It is very fast.

Disadvantages

1. Expensive
2. Noisy while operation.
3. Cannot produce different sizes of print and graphics.

b. Chain printer

Chain/band printers are line printers which print one line at a time. It consists of a metallic chain on which all the characters of the character set supported by printer is embossed. A character set may have 48, 64, or 96 characters. Its speed ranges from 400 to 3000 line per minute.

How it works

Chain rotates rapidly and a character at print position is printed by activating the appropriate hammer, which is embossed on the chain pass below it.

Advantages

1. Fast than drum printers
2. Chain or chain printer can be easily changed. This allows the use of different font with same printer.

Disadvantage

1. It does not have ability to print graphics such as charts and graphs.
2. Slower as compare to laser printer.

3) Page printer

Page printer is a very high speed non impact printer and prints the entire page at a time. The quality of these printers is the best quality but there cost is much higher.

Laser printer

Laser printers are page printers which print one page at a time. The main components of laser printers are a laser beam source, multi-sided mirror, a drum and a toner. Laser printer produces very high quality output. Its print speed ranges from 4 to 12 pages per minute in case of low speed laser printer and 500 to 1000 pages per minute in case of high speed laser printer. It has resolution 600 dpi.

How it works

1. Paper is fed and the drum rotates.
2. A laser beam conveys information from the computer to a rotating mirror and thus an image is created on the drum.
3. The charges on the drum are ionized and the toner sticks to the drum.
4. Toner is transferred from drum to paper.
5. Heat is applied to fuse the toner on the paper.

Unit-1

Generation of Computers

Computers were developed in different phases known as generations of computer. Depending upon the technologies used the development of electronic computers can be divided into five generations.

S.N.	Generation & Description
1	First Generation The period of first generation: 1946-1959. Vacuum tube based.
2	Second Generation The period of second generation: 1959-1965. Transistor based.
3	Third Generation The period of third generation: 1965-1971. Integrated Circuit based.
4	Fourth Generation The period of fourth generation: 1971-1980. VLSI microprocessor based.
5	Fifth Generation The period of fifth generation : 1980-onwards. ULSI microprocessor based

1. First generation

The duration lasted from 1946-1959 was based on **vacuum tubes**. Because thousands of such bulbs were used, the computers were very large and generate a large amount of heat, causing many problems in temperature regulation. **Magnetic drums** were used for memory purpose and instruction and data was given through **punch cards**. Computer were operated manually and instruction given in **machine language**.

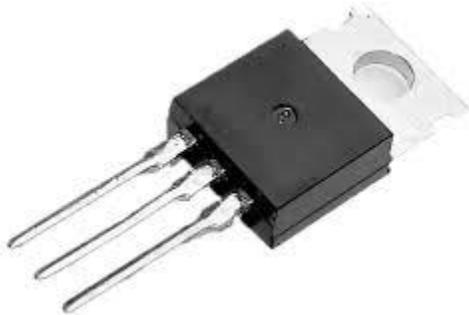
E.g. – UNIVAC (Universal automatic computer), ENIAC (Electronic Numerical Integrator And Calculator) , Mark I etc.



2. Second Generation

The period of this generation is from 1959 to 1964. During this period transistors were used and they were cheaper, consumed less power, more compact in size and faster than vacuum tubes. The problem of heat maintenance was solved and size of computer reduced, while speed and reliability were increased. In this generation, magnetic cores were used as primary memory and magnetic tape and magnetic disks as secondary storage devices. In this generation assembly language and high level programming language like FORTRAN, COBOL was used.

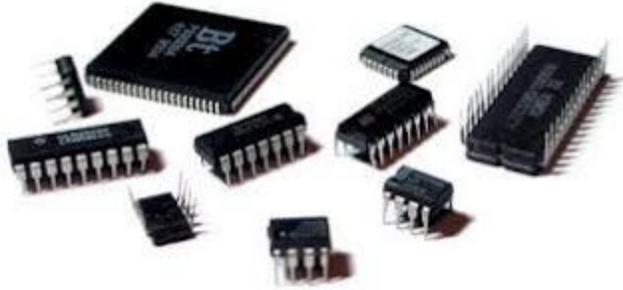
E.g. – IBM-1400 series, IBM-1600 series, UNIVAC III etc.



Third generation

In this generation the integrated circuits (IC) were used. Integrated circuits contain many electronic components on a single chip like register, transistor and capacitor. Hence size of computer became very small with better performance and reliability. Many popular high level language were developed in third generations like PASCAL, C etc.

E.g. – IBM 360 series, IBM 370 series, UNIVAC 1108 etc.



Fourth generation

The Integrated circuits were more developed in fourth generation. Computer used LSI (large scale integration) and VLSI (very large scale integration) circuit that made them more powerful, compact, reliable, and affordable. Portable computer were developed for individuals for personal use at home. Hard disk and optical disk was developed in fourth generation.

E.g. – IBM-3033, Osborne I, Star 1000 etc.



Fifth generation

This generation is started from 1981 and still continued; VLSI technology becomes ULSI (Ultra Large Scale integration) technology, resulting in production of microprocessors chips, having ten million electronic component.

E.g. – IBM notebooks, Pentium PCs etc.

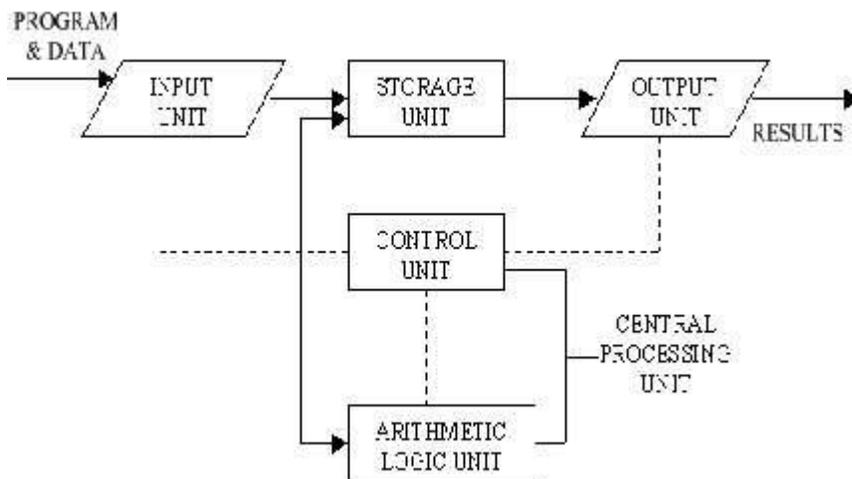


Unit -1

Block Diagram of Computer

A computer can process data, pictures, sound and graphics. They can solve highly complicated problems quickly and accurately. A computer performs basically five major computer operations or functions. These are

- 1) it accepts data or instructions by way of input,
- 2) it stores data,
- 3) it can process data as required by the user,
- 4) it gives results in the form of output, and
- 5) it controls all operations inside a computer.



1. Input unit : This is the process of entering data and programs in to the computer system. Since computer is an electronic machine like any other machine which takes as inputs raw data and performs some processing giving out processed data. Therefore, the input unit takes data from us to the computer in an organized manner for processing.

2. Storage unit : The process of saving data and instructions permanently is known as storage unit . Data has to be fed into the system before the actual processing starts. It is because the processing speed of Central Processing Unit (CPU) is so fast that the data has to be provided to CPU with the same speed. Therefore the data is first stored in the storage unit for faster access and processing. This storage unit or the primary storage of the computer system is designed to do the above functionality. It provides space for storing data and instructions.

3. Output unit : This is the process of producing results from the data for getting useful information. Similarly the output produced by the computer after processing must also be kept somewhere inside the computer before being given to you in human readable form. Again the output is also stored inside the computer for further processing.

4. Central Processing Unit (CPU) :The ALU and the CU of a computer system are jointly known as the central processing unit. It is just like brain that takes all major decisions, makes all sorts of calculations

and directs different parts of the computer functions by activating and controlling the operations. The CPU further uses these components-

a) Arithmetic and Logic Unit

After you enter data through the input device it is stored in the primary storage unit. The actual processing of the data and instruction are performed by Arithmetic Logical Unit. The major operations performed by the ALU are addition, subtraction, multiplication, division, logic and comparison. Data is transferred to ALU from storage unit when required. After processing the output is returned back to storage unit for further processing or getting stored.

b) Control Unit

The next component of cpu is the Control Unit, which acts like the supervisor seeing that things are done in proper fashion. control unit is responsible for coordinating various operations using time signal. The control unit determines the sequence in which computer programs and instructions are executed. Things like processing of programs stored in the main memory, interpretation of the instructions and issuing of signals for other units of the computer to execute them. It also acts as a switch board operator when several users access the computer simultaneously. Thereby it coordinates the activities of computer's peripheral equipment as they perform the input and output.

Hardware, Software, Firmware

Hardware: Hardware refers to the physical elements of a computer. This is also sometime called the machinery or the equipment of the computer. Without the creation of hardware to perform tasks directed by software via the central processing unit, software would be useless.

Examples of hardware in a computer are the keyboard, the monitor, the mouse and the central processing unit.

Software: Software, commonly known as programs, consists of all the instructions that tell the hardware how to perform a task. These instructions come from a software developer in the form that will be accepted by the *platform* that they are based on.

For example, a program that is designed for the Windows operating system will only work for that specific operating system. Compatibility of software will vary as the design of the software and the operating system differ.

Software is capable of performing many tasks, as opposed to hardware which can only perform mechanical tasks that they are designed for. Software provides the means for accomplishing many different tasks with the same basic hardware.

computer systems divide software systems into two major classes

System Software: It helps run the computer hardware and computer system itself. System software includes operating systems, device drivers, diagnostic tools and more. System software is almost always pre-installed on your computer.

Application Software: It allows users to accomplish one or more tasks. It includes word processing, web browsing and almost any other task for which you might install software.

Software is generally created (written) in a high-level programming language, one that is readable by people. These high-level instructions are converted into "machine language" instructions, represented in binary code, before the hardware can "run the code". When you install software, it is generally already in this machine language, binary form.

Firmware: Firmware refers to the software which is built on the Hardware to make the running perfect like the system BIOS etc. It is a very specific, low-level program for the hardware that allows it to accomplish some specific task. Firmware programs are (relatively) permanent, i.e., difficult or impossible to change. From the higher-level view of software, firmware is just part of the hardware, although it provides some functionality beyond that of simple hardware. Firmware is part of devices (or device components) such as a video card, sound card, disk drive and even the motherboard..

Windows

Windows is a collection of programs known as an *operating system* (OS) that controls a PC (personal computer). First produced by Microsoft in November 1985, it has been frequently updated since, as computer memory has got bigger, as processing chips have got faster

Features of Windows

- Allows the user to interact with the computer (through the keyboard, mouse, microphone, etc.).
- Controls the storage of data (images, files, music).
- Controls hardware attached to the computer such as webcams, scanners and printers.
- Helps to open and close programs (word processors, games, photo editors, etc.), and gives them part of the computer's memory to allow them to work.
- Controls what access to a computer different users have and the computer's security.
- Deals with errors and user instructions, and issues simple error messages.
- Promotes multitasking by allowing the user to do several things on the computer at once – for example, watch a video while writing a letter.

Main Components of Windows

. The main components of the Windows Operating System are the following:

Desktop It is the very first screen that you will see once the windows start. Here you will see “My Computer”, “My Documents”, “Start Menu”, “Recycle Bin”, and the shortcuts of any applications that you might have created.

Taskbar At the bottom, you will see a row which is known as the taskbar. It has the currently running applications”.

Start Menu This is located in the bottom left corner of Windows OS GUI. This is the place where the user can search for any setting and for any application for their use. Users can uninstall or repair applications from the control panel. The user can do a lot of activities just by searching through the start menu.

My Computer When you double click on “My Computer” menu, it will let you navigate between your different computer drives and the control panel tools. You can see and manage the contents that are inside your drive.

Recycle Bin When you delete an item from any of your drives by making use of “delete” button or even by simply clicking right clicking and selecting “delete” option, it is not deleted completely, instead, it is moved to “Recycle Bin” folder of Windows. You can recover your content if you have deleted it by mistake from here or if you choose to delete the items from here, it will get deleted permanently. Should you wish to delete the item in first go itself without moving it to recycle bin, you can use the key “Shift+Del”

Unit-1

Windows Accessories

Windows comes with several accessories, built-in programs that are extremely useful for completing every day tasks.

Frequently Used Windows Accessories

Program	Description
Calculator	Performs arithmetic calculations
Command Prompt	Executes MS-DOS commands
Internet Explorer	Displays web (HTML) pages
Notepad	Creates, edits, and displays text only documents
Paint	Creates and edits bitmap pictures
Snipping Tool	Captures different parts of the screen
Sound Recorder	Creates and plays digital sound files
Sticky Notes	Creates color notes on the screen
Windows DVD Maker	Burns pictures and videos to DVDs
Windows Fax and Scan	Sends and receives faxes or scanned pictures and documents
Windows Live Messenger	Sends and receives instant messages to online contacts; you need to download the program from the web (http://download.live.com)
Windows Live Mail	Provides e-mail, newsgroup, and directory services; you need to download the program from the web (http://download.live.com)

Windows Live Movie Maker	Creates movies using audio and video files; you need to download the program from the web (http://download.live.com)
Windows Live Photo Gallery	Views, edits, organizes, and shares photos and videos; you need to download the program from the web (http://download.live.com)
Windows Media Player	Plays sound, music, and video
WordPad	Creates, edits, and displays text, Rich Text Format, and Word documents

File and Folders

File: A file is the common storage unit in a computer. All programs and data are contained in a file, and the computer reads and writes files. Files are identified by a short "extension" following a period at the end of their name.

For example, ABC.JPG is a JPEG image, ABC.DOC is a Microsoft Word document file, and ABC.EXE is an executable application in Windows

Folder: A folder is a container for storing programs and files, similar to a folder in a file cabinet. A folder holds one or more files, and a folder can be empty until it is filled. A folder can also contain other folders, and there can be many levels of folders within folders. Folders within a folder are technically known as "subfolders."

Folders provide a method for organizing files. A folder contains paper documents in a file cabinet. So, files that contain text are often called documents.

Folders are also called "directories," and they are created on the hard drive (HD) when the operating system and applications are installed. Files are always stored in folders. In fact, even the computer's desktop is a special kind of folder that displays its contents across the screen. Just as a file cabinet contains several folders, each containing related documents with dividers grouping related folders together, so the Windows file hierarchy allows you to organize your files in folders, and then place folders in other folders.

Windows 7 comes with four libraries: Documents, Pictures, Music, and Videos. Libraries are special folders that catalog folders and files in a central location. A library includes and displays folders that are stored in different locations on your computer, Homegroup, or network

Window Explorer

The windows explorer are powerful easy-to-use tools for working with files consistently across Windows 7. Explorers give you more information and control while simplifying how you work with your files. Each Explorer window includes the following elements:

- **Back and Forward buttons.** Use to navigate between previously viewed folders.

- **Address bar.** Use to navigate directly to a different location, including local and network disks, folders, and web locations.
- **Search box.** Use to perform instant searches, which show only those files that match what you typed in the Search box for the current folder and any of its subfolders.
- **Toolbar/Command bar.** Use to perform file related commands. Toolbar/Command bars display only the task buttons that are appropriate for the files being displayed. There are two consistent buttons on every Toolbar/Command bar: Organize and Views.
- **Navigation pane.** Use to display common folders, such as Favorites, Libraries, HomeGroup (a shared network), Computer, and Network, using a Folder list tree structure.
- **Libraries.** Use to access common folders, such as Documents, Music, Pictures, and Videos. A library is a collection of files and folders linked from different locations, including your computer, HomeGroup, or network, into a central place. A file or folder can be stored in one location, yet linked to a library for easy access. For example, your My Documents folder located in your personal folder (the one with your account name) is linked to the Documents library.