CLASS – VII   **SUBJECT – COMPUTER APPLICATION**

PHASE - 2   **CHAPTER -1   Computer Hardware and Software**

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** Children are requested to go through the notes thoroughly and write down the notes in your copies and also follow the videos upload in the school YouTube channel ***

THE COMPUTER SYSTEM

The computer is called system because it is a group of integrated parts that work together to give the desired output.

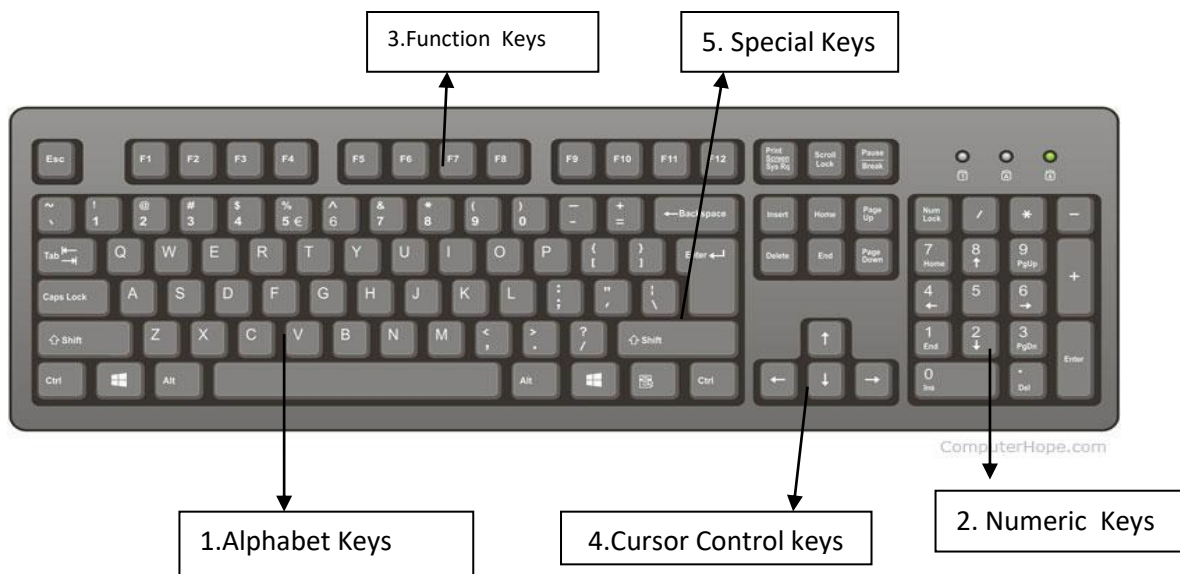It works on the principle of INPUT – PROCESS – OUTPUT cycle.

(Go through the video given to understand it)
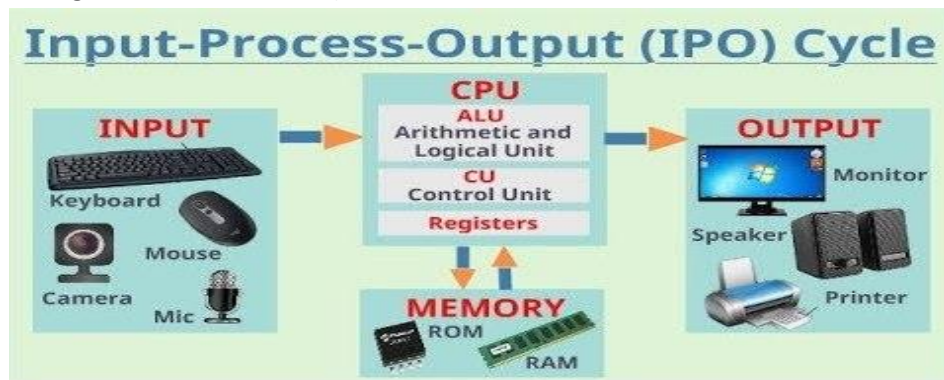
INPUT DEVICES

1. Keyboard

It is a primary input device with five types of keys as shown in the figure

2. The Mouse - It is also called pointing device ,which is used to give command to the computer.

Scroll Mouse

3. Joystick – It is a pointing device used to play computer games. It contains trackball which helps in the movement of the cursor and   number of buttons which are used to perform different task such as firing the target etc.

4. Scanner – It is used to convert a text or image into digital format and can be stored in the computer's memory.

5. Microphone – It is an input device that takes sound or speech as input and stores in computer's memory.

6. Web Camera - It is used to capture still images and videos and sends the captured images to the computer.
Laptops have inbuilt cameras fixed at the top of it, in case of computers we need to attach using a cable

(Go through all the input device such as   Joystick, Scanner, Light pen, Web camera, Bar code reader and Touchpad explained in page no 10 & 11)

THE PROCESSING UNIT – C P U
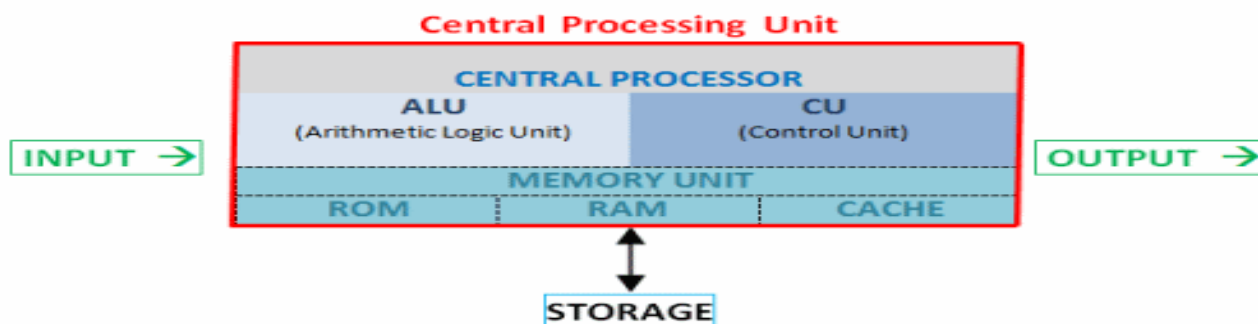
Control Unit –
- It sends command signals to the other components of the computer system.
- It control and coordinates various operations.
- It controls the flow of data in the computer

Arithmetic and Logical Unit
- It performs all the arithmetical operations such as +,- * etc
- It performs all the logical operations such as decision making using AND ,OR ,NOT
- It performs comparisons like >,<,= etc

Memory Unit
- It consists of RAM and ROM.
- RAM contains the data that is to be used currently.
- ROM contains some information and instruction that cannot be changed.**(Read about Ram and Rom given in the book page 13 and 14 , which is already explained in class VI)**

OUTPUT DEVICES

1. Monitor – It has a screen in the front which is used to display the output, also known as **Visual Display Unit.** The output shown in the monitor is called **Soft Copy.** Many types of monitors are available. The basic three are discussed here (Diagrams on pg no 15) .

	CRT	LCD	PLASMA
Technology	Contains a picture tube called CRT	Consists of two plates of glass with a gas in between	Contains electrically charged ionized gas to produce images
Size	They are limited to about 40 inch screen size	They are limited to 13 inch to 65 inch	They can be of large size of 150 inch
Life span	Longer life Span than LCD or PLASMA	Can have life span of 30,000hrs-60,000hrs	It gets faded but last for 30,000hrs
Power consumption	High power consumption	Low power consumption	High power consumption
Cost	Low	High	High
Weight	Bulky and heavy	Flat and low weight	Heavy weight

2. Printer – It is an output device that is used for printing the output on paper. The output given by printer is called **Hard Copy**. There are two types of Printer –Impact Printers and Non Impact Printers

|	**Impact Printers**	**Non- Impact Printers**
1	It prints characters or images by striking the print hammer or wheel on the paper	It prints characters without any direct contact with the paper.
2	It uses inked ribbon for printing	It uses toner or cartridge for printing
3	It generates noise during printing	It does not generate noise during printing.
4	Its printing quality is low	Its printing quality is good.
5	Example – dot matrix and daisy wheel printer	Examples -Inkjet printer , Laser printer and Plotters

MEMORY DEVICES

The devices that are used to store the documents and other contents for future use .

1. Hard Disk -
- It is the main storage space of a computer.
- Whenever we use the save option it is saved in the hard disk of the computer.
- If we need more memory space we can use external Hard disk also.
- It is divided into different drives to have a memory space distribution.

Given below are the hard disk drives of my computer.
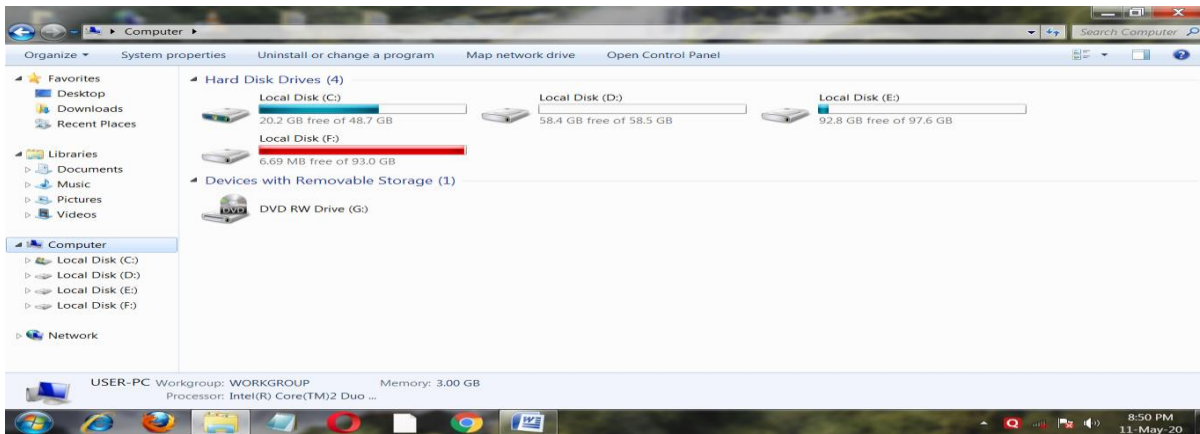
2. Compact Disc -
It is a circular plastic disc encased within a highly reflective material. It can hold around 700MB of data.
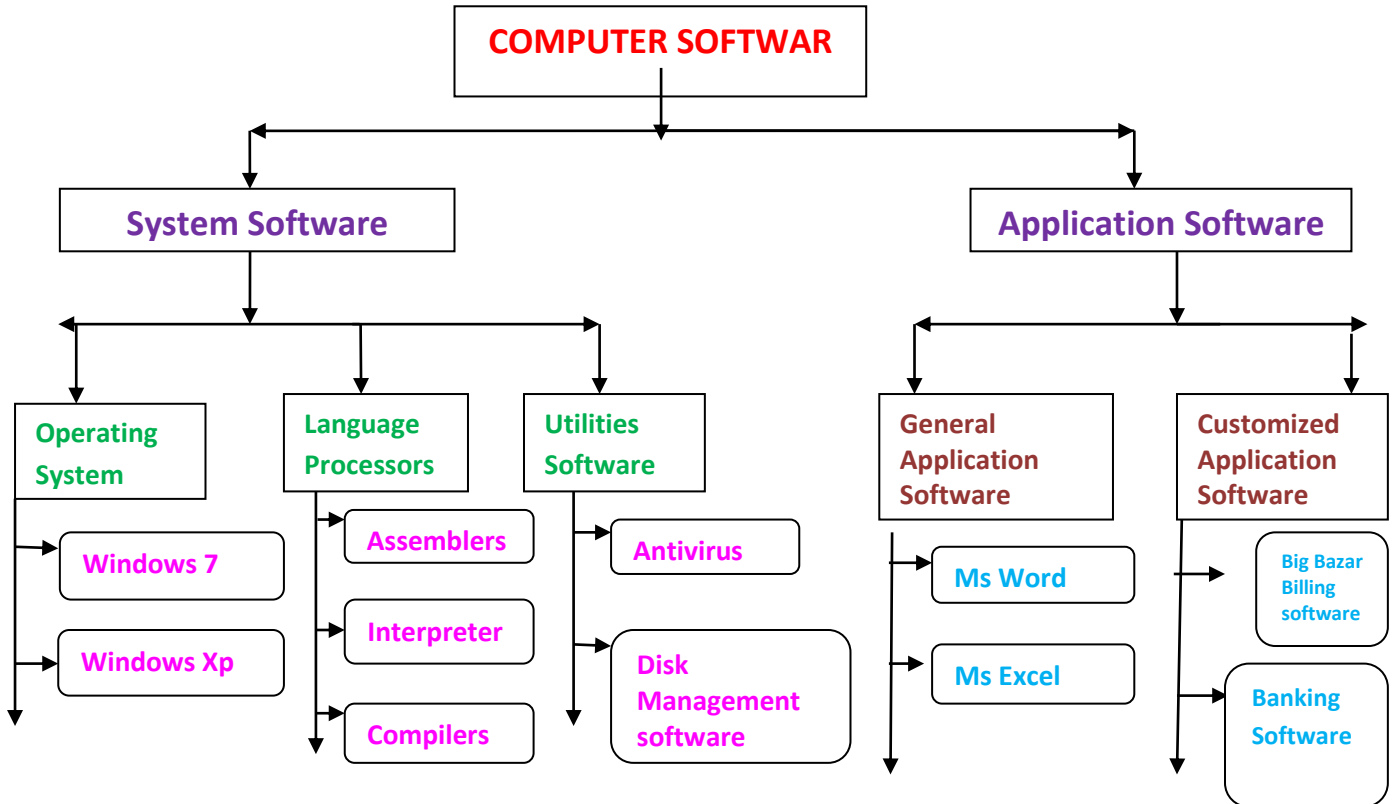
- **CD- ROM**- We can only read the data written in this
- **CD-R** – We can write only once and read as many times
- **CD – RW** – We can both read and write again and again.

3. DVD (DIGITAL VERSATILE DISC)
- It is also circular in shape but can store more data than CD up to 4.7 GB.
- We can both read and write the data again and again.
- DVDs are costlier than CDs.
- They need to keep carefully any sketch mark on it may destroy the data.

4. PENDRIVES –
- Data can be easily stored, modified and transferred.
- Easy to carry and manage
- Huge storage capacity of 32GB and more

COMPUTER SOFTWAR

System Software

- **Operating System**
  - Windows 7
  - Windows Xp

- **Language Processors**
  - Assemblers
  - Interpreter
  - Compilers

- **Utilities Software**
  - Antivirus
  - Disk Management software

Application Software

- **General Application Software**
  - Ms Word
  - Ms Excel

- **Customized Application Software**
  - Big Bazar Billing software
  - Banking Software

DIFFERENCE BETWEEN SYSTEM SOFTWARE AND APPLICATION SOFTWARE

	System Software	Application Software
1	It manages all the peripherals devices attached to it and gives a platform to application software	It performs a specific task for which it is been designed
2	Essential for the proper functioning of a system	Not essential but are user dependent
3	Runs in the background ,when the system starts till the end	Runs in the fore ground ,when the user requires
4	Developed using languages like c and c++ and assembly language	Developed using languages like java ,python and c++