

## History of computer

**ABACUS:-** Invented during 100BC to 500BC . ABACUS was a first calculating device made of clay. There were some grooves on the clay board in which pebbles could be placed and moved side to side for simple calculation.

**BLAISE PASCAL:-** invented adding machine in France in 1642. Blaise Pascal was a great mathematician and physicist. His adding machine was able to perform add and subtract function of calculation.

**GOTTFRIED VON- LEIBNITZ:-** Invented multiplying machine in 1673. Leibnitz was a great German mathematician.

Leibnitz basically improved adding machine of Blaise Pascal . Multiplying machine of Leibnitz was able to perform add, subtract, multiply, divide function of simple calculation.

1833 Charles Babbage invented difference engine in England Charles Babbage was a mathematician and a scientist. difference engine of Charles Babbage was able to perform complex calculation up to 20 digits.

❖ Charles Babbage – proposed engine in 1863. analytical engine of Charles Babbage was just not the calculating device but it was able to make decisions regarding performing operations repeatedly and give a meaningful result. analytical engine became the milestone in the journey of computers as it was the first machine capable in analyzing the operations. Charles Babbage became the father of modern

computer because of his first analytical device and second device was differential engine.

## COMPUTER

What is Computer.

A computer is a programmable electronic device. It has the capacity of calculate arithmetical and logical calculation control all instruction and store data and programs with high speed and accuracy. it is designed by man to solve our day to day problems.

## FULL FORM OF COMPUTER

C- COMMONLY

O- OBEDIENT

M- MACHINE

P- PARTICULARLY

U- USER

T- TRADE

E- EDUCATION

R- RESEARCH INSTITUTIONS

## Generation of computer

There are five generation of computer

1. first generation of computer :-

during the period of 1940 to 1956 first generation of computers were developed.

The first generation computers used vacuum tubes .The operating of the first generation

Computers were very slow .they were very large in size. Machine language was used for programming , production of the heat was in large amount in the first generation computers.

Ex:- UNIVAC, EDVAC,ENIAC

2.Second generation of computers:-

During the period of 1956 to 1963second generation of computers were developed.

In this generation transistor were used in place of vacuum tubes. Second generation computers were small in size, faster, less heat generate, in comparison with the first generation computers.

Assembly language was used for programming .processing speed, storage capacity , use of the computer increased compared to the previous generation.

Ex:- IBM 1620 , IBM 7049 ,650 , 1401 ,7000 ,MARK III , etc.

3.Third generation computers:-

During the period of 1964 to 1971 third generation computers were developed. the third generation computers emerged with the development of IC .IC were used in place of transistor . Smaller in size, cheaper, more reliable, less heat generate in

comparison with second generation computers. high level language were for programming.

Ex:- IBM 360Series , Honeywell 200series etc.

#### 4. fourth generation computers:-

After 1971 the fourth generation computer were built . the fourth generation computers emerged with t he development of VLSI technology

.Microprocessor were used in place of IC . The fourth generation computers became more powerful, compact and affordable .As a result they give rise to personal computer revolution. For the first time in 1981 IBM introduce its computer for the home user.

Many high level language were developed in the fourth generation such as COBOL,FORTRAN , BASIC PASCAL and C language.

Ex:- IBM desktop PC ,HP laptop, Acer Notebook ,Mac book etc.

#### 5. Fifth generation of computer:-

Fifth generation of computer are in developmental stage which is based on the artificial intelligence. The goal of the fifth generation is to developed the device which could respond to natural language input and are capable of learning and self organization.

We can say that the fifth generation computers will have the power of human intelligence.

## **Classification of computer based on size and capability**

Based on size and capability computers are broadly classified into four types.

1. Minicomputer :- a mini computer is a medium sized computer . that is more powerful than a microcomputer. These computers are usually designed to serve multiple users simultaneously. They are more expensive than microcomputers.
2. Main frame computers:- Computers with large storage capacities and very high speed of processing(Compared to mini or microcomputers) are known as main frame Computers. They support a large Number of terminals for simultaneous use by a number of users like ATM transactions. They are also used as central host computers in distributed data processing system.
3. Micro computer:- A computer is the smallest general purpose processing system. The older pc started 8 bit processor with speed of 3.7 MB and current pc 64 bit processor with speed of 4.66gb. Microcomputer can be classified into 2 types .
  1. Desktops
  2. Portables
4. Supercomputer :- Supercomputers have extremely large storage capacity and computing

speeds which are many times Faster than the other computers. A supercomputer is measured in terms of tens of millions instructions per second an operation is made up of numerous instructions . The supercomputer is mainly used for large scale numerical problems in scientific and engineering disciplines such as weather analysis.

## **Classification of computer based working technology**

Based on work computers are broadly divided in to three types.

1. Analog computer:- Analog computer measure continuous data. It operates on inputs of continuously varying electrical voltage.it measure the input rather than output.

Ex:- Analog clock , speedometer

2. Digital computer:- A digital computer measure not continuous data . It operates essentially by counting. All quantities are expressed as discrete digits or numbers computations are done with numerical digits. They come in various size starting from pocket size to large systems occupying big rooms. Most of the computer available today are digital.

3.HYbride Computer:- Hybride computer combines feature of both Analog and digital computers. In this

computer some calculation are done in Analog portion of the computer and some portion are done in the digital portion of it.

### Parts of computer

1.Hardware

2.Software

### HARDWARE

All the electronics physical components of a computer .which we can see and touch are called hardware.

Ex:- key board ,mouse, CPU , monitor

Hardware is divided in to three parts.

1.Input device

2.output device

3.processing device

### INPUT DEVICE

Input devices are devices that are used to put data or instruction into the computer .

Ex:- keyboard ,Mouse, Joystick, scanner, light pen ,BCR ,OCR, MICR, OMR etc.

### KEY BOARD

A keyboard is an input device which is used to put data or information in the computer .

There are three types of keyboard .

1. Standard keyboard(84 to 108 keys)
2. Multimedia keyboard (108 to 132 keys)
3. Wireless keyboardz

A keyboard has generally different buttons

1. Alphabetical keys (A to Z) :- These keys are used to type letters.
2. Number keys (0 to 9) :- these keys are used to input number .
3. Function keys ( F1 to F12) :- These keys are used to perform some special works.
4. Arrow keys:- these keys are used to move the cursor Up, Down, left and right.
5. Special purpose key
  1. Enter key :- This key is used to go to next line.
  2. Backspace key ;- this key is used to delete the text from right side direction.
  3. Delete key ;- this key is used to delete the text from left side direction and selected text.
  4. Caps Lock key ;- this key is used to types letters in capital .When it is on we can write in capital.
  5. Tab key :- this key is used to leave space.
  6. Shift key :- this key is used to press upper sign  
Of a key

7. CTRL and ALT keys :- these keys are special keys used to perform shortcut given according to software.
8. Pause break key:- this key when pressed together with windows key open system properties.
9. Print screen key:- this key when pressed capture the appearing screen of the computer .
10. Home key ;- this key is used to go to the beginning of the page .
11. End key:- This key is used to go to the end of the page .
12. Page up/Down key:- This key is used to move the cursor up and down .
13. Scroll Lock key :- This key is used to lock the scroll bar .
14. Num lock key :- This key is used to type the numerical data .which key is given at the right side of the keyboard this key should be kept.

## **MOUSE**

A mouse is an input device. it is used to point and select the items on the computers screen .a mouse generally has two button and a scroll wheel in the centre of two button.

1. Right button :- right button single click is used to see the properties of any program , file ,audio, video and image.
2. Scroll wheel :- The scroll wheel is used to move the vertical scroll bar up and down.

3. Left button:- Left button single click is used to point and select the item on the computer screen whereas left button double click quickly is used to open any program, file, folder, song ,and image etc.

Types of mouse.

1. Two button mouse
2. Three button mouse
3. Track ball mouse
4. Normal mouse:- Ball mouse , scroll mouse
5. Optical mouse:- It has a red light in it
6. Wireless mouse

### **JOYSTICK**

A joystick is an input device consisting of a stick that is attached to a base .The stick moves and controls the movement of a pointer .It is used for playing video game.

### **LIGHT PEN**

A Light pen is also an input device and is shaped like a pen .It allows the user to draw or point to the object on the screen .The tip of light pen has a light sensitive detector.

### **SCANNER**

A scanner is an input device that is used for converting printed documents or photos in to electronics formats .Capture picture and text from paper and makes their digital copy that can be saved on the computer . There are various type of

scanner such as flatbed scanner, handheld scanner etc. The most commonly used scanner is flatbed scanner.

## MICR

(Magnetic ink character reader)

An MICR is a input device used to read characters printed in a special font using magnetic ink. Banks make the use of MICR process to cheques .In cheque details such as the branch code ,cheque number are printed at the bottom using magnetic Ink.

## BCR :- Bar Code Reader

A bar code reader is a input device used to read barcodes .It is used in shops to Quickly input the information of a product in to the computer.

## OCR :- Optical Character Reader

An OCR is a input device that scan or goes through The text character by character .It analyses the scanned character recognize it and produces the electronic and digital copy.

## OMR :- Optical Mark Reader

An OMR is a input device used to recognize mark on specially printed form sheet.It then the transmit this information to the computer special sheet are used for testing the students and quickly processing the result using OMR.

## WEB CAMERA

A web Camera is an input device .It is used to capture the still image and videos. It is also used in video conferencing where people from anywhere on the globe.

### MICROPHONE

A microphone is an input device .This is used to record music, sound, voice etc

### PROCESSING DEVICE

**CPU:- (Central processing unit)**It is the brain of computer. its controls the working of the entire computer system like read write and executes program instructions.

CPU is divided in to three units based on the work.

**ALU:- (Arithmetical and logical unit)** It is responsible For doing all the arithmetical calculations and logical comparison .The data and instructions are sent from the input area of the memory to the ALU .the processing takes place here and the result are sent back to the memory again .

**CU:- (Control Unit )** it is sends command signals to the other components of the computer system. It controls and coordinates the various operation which takes place in the computer .

### Computer memory

Computer has a part in which it stores data and information. This part is called computer memory.

there are two type of computer memory.

1.Primary memory :- the main memory of a computer is also known as primary memory Or internal memory of the computer. The CPU directly stores and retrieves information from here. primary memory divided in to two parts

1. RAM
2. ROM

RAM (Random Access Memory)

It is a primary memory .in this memory

We can read and write .It is also known as volatile and temporary memory because the data store in RAM get erased when we switch off the computer .RAM controls the performance of the machine to a large extent. The further capacity of a RAM is that ,it can process more data and manipulates .the storage capacity of a RAM is 128,256,512MB,1,2,4,16 GB and more.

There are two types of RAM .

1. SRAM
2. DRAM

ROM (Read only Memory)

It is a special type of memory whose contents can only be read. it is a permanent memory or non-volatile memory.so the contents of ROM are not lost even when the computer is switch off. It is normally used to store the manufacture's

instructions at the time of manufacturing the computer. ROM is used for storing a special piece of software known as BIOS. it helps in loading the operating system when the computer is switch on. there are three types of ROM.

1. PROM
2. EPROM
3. EEPROM

### Secondary Memory

A secondary Memory is also called auxiliary External and backup Memory. It is used for storing programs, data and other information. it has much larger capacity than the primary memory. The secondary is non –volatile memory and is used for permanent storage of data .

### Hard disk

A hard disk is the main secondary storage device . a hard disk consist of a spindle that holds one or more disk is called plotters .

A hard disk can store several Gb of data and is used for storing applications and files for a user .it is fixed inside the CPU tower. It is non –volatile storage device .the rotating speed of a hard disk is 7200 RPM.

### FLOPPY DISK

A floppy disk is a circular disk and is made up of small plastic coated with magnetic material and is enclosed

in a square plastic case. Floppy disk come in different sizes like

8" , 5' / 4" , 3' / 2" in diameter floppy disk are portable but have less storage capacity .The storage capacity of a 3' / 2" of floppy disk is 1.44MB and 5' / 4" has 3.22MB .

### CD ( Compact disk )

Compact disk are known as optical storage device .A compact disk can store approximately 700MB of data .A laser beam is used for storing data in the disk like computer software including games multimedia application ,image, video etc.

Compact disk are available in three forms

- 1.CD-R ( compact disk –recordable)
- 2.CD-ROM ( compact disk read only memory)
- 3.CD-R/W (compact disk – Rewritable)

### DVD ( Digital video / versatile disk )

It is physically similar to that of CD. It is also an optical storage device. Laser beam is used to store and read the data .a DVD can store much more data than the CD . A single sided DVD can store about 4.7 GB of data .it store data in both sides . it can hold over 9 GB of data. DVD is also available in three form.

- 1.DVD –R
- 2.DVD-ROM
- 3.DVD-R/W

## BLUE RAY DISK

The name blue ray disk is derived from the blue violet laser beam that is used to read and write from the disk with their high storage capacity . it can store 50 GB of data .

## PEN DRIVE

A pen drive is the latest storage device that is small in size and can be carried easily . it is a USB device. It can be used transfer the data from one computer to another computer quickly .the storage capacity of a pen drive is 1,2,4,8,16,32 GB and more.

## OUTPUT DEVICE

Output devices are devices through which we get information from the computer as a result.

Ex:- monitor, speaker, printer ,plotter

### Monitor

The monitor is output device .it displays wide variety of information on the screen . the output displayed by computer is known as soft copy . the monitor also displays the Software which is loaded in to the computer system. There are different type of monitor available in the market .

- 1.CRT (Cathode ray tube)
- 2.LCD (Liquid crystal display)
- 3.LED (Light emitting diode /(Liquid edit dot)

4.TFT(Thin Film transistor)

5.PLASMA

## Speaker & Headphone

These are output device and are used to play and listen to music, voice sound ,from the computer .

## Printer

A printer is an output device that prints out information from the computer on a paper .the output that is printed on the paper by the computer is known as hard copy. A printer can prints in black and white or colored depending on the features present in it.

Printers are classified in to different types based on their speed , size , cost and

Quality of printing . there are many types of printers.

1 impact printer

2.non-impact printers

a. laser printer

b. thermal printer

c. Inkjet printer

## Plotter

Plotters are special types of printers which are able to draw high quality images .They

Are used by engineers , architect and maps –makers of machine and large scale maps..

There are many types of plotters.

1. Pen plotter
2. Drum plotter
3. Flate bed plotter
4. Inkjet plotter

### Software

It is set of instruction or commands. The collection of instructions or commands is called program and the collection of program is called software

There are three types of software .

1. Application software
2. System software
3. Utility software

### Application software

Application software is a set of programs designed to help the user to perform specific tasks. Numerous application software has been developed over the years to serve different purposes . we can choose application software depending upon our requirements.

Application software divided in to many category.

1.word processing software:-

This software is used for creating documents like letters, stories, reports, etc. all word processing software provides option for creating, editing, formatting and printing text and graphics.

Ex:- MS –WORD

## 2.spreadsheet software:-

This software accept data values in row and column format and lets you create manipulate calculate and analyze data in the desired manners

Ex:- ms excel ,lotus1-2-3

## 3.Data base management system:-

DBMS is a software that lets you large amount of data in an organized manners.

Ex:- ms access, Visual fox pro

## 4.Desktop publishing software :-

This type of software is used for creating the design and layout of books, journal, broachers, Newspaper, pamphlets etc.

Ex:- Coral draw ,adobe page maker

## 5.Graphics software :-

Graphics software are used to work with images.

Ex:- Adobe photo shop

## 6.Multimedia software:-

The software that manipulate image ,text sound animation and video is called multimedia software.

Ex:- VLC media player

## 7.presentation software :-

This software are used to display information In a dynamic manner such as a slide show .

Ex:- MS POWER POINT

## System software

System software controls the operation of a computer. This software helps in running of other software . it also monitors the use of hardware like memory ,CPU etc.

System software is divided into two types

- 1.Operating system
- 2.Language processor

### OPERATING SYSTEM

The basic software present in a computer is called the operating system. this enables the User to work with the hardware. An operating System communicates with the hardware and monitors other programs. It helps us to manage files and folders to store information on the computer. Windows ,Mac os linux,Unix are some example of operating system.

### MS WINDOWS

Windows is an operating system .It is developed by Microsoft company. It is GUI based operating system

### PARTS OF WINDOWS

- 1.Desktop
- 2.Icon
- 3.Task bar

4.date and time icon

5. Start button

6.My computer

7.recycle bin

8.internet explorer

q1:- how to create a new folder?

step 1:- right click on the desktop

step2:- click on new option

step3:- click on folder option

Q2:- how to delete a folder?

step1:- right click on the folder.

step2:- click on delete option

Q3:- How to rename a folder?

step1:- right click on the folder

step2:- click on rename option

step3:- type a new name

Q4:- How to change desktop background?

step1:- right click on the desktop

step2:- click on personalization option

step3:- select a picture

Q5:- how to set screen saver setting on the desktop ?

step1: - right click on the desktop

step2:- click on lock screen option

step3:- click on screen saver setting

step4:-choose 3d text

step5:- click on setting button.

6:-- how to set date and time on the desktop?

step1:- click on date and time option

step2:- click on date and time setting

step 3:- click on change date and time