Basic Property of Computer

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1946 - 1948 — 1st Computer generation

2017 - 2018 Aartificial Increment (AI)
5th generation.

* Characteristics OF Computer.

1) Speed Hz → KHz → MHz → GHz → PicoHz
10^3 10^6 10^9 10^{12}

2) Storage byte → KB → MB → GB → TB
10^3 10^6 10^9 10^{12}

3) Accuracy.

* Characteristics OF Computer :-

1) Storage :- Computer has large Storage Capacity to store data & Information permenentaly.
The basic unit of storage is byte. (1 byte required to store 1 character).

The upgrated storage unit are byte Kilobyte (KB), Megabyte (MB), Gigabyte (GB), Terabyte (TB).

The primary memory and secondary memory is measured in this unit.

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2) Speed :-

The processing unit of speed of Computer is too fast and can Perform Lack of instructions per second. It's speed is measured in Hertz (Hz).

The Higher unit of speeds are Hz → KHz → mHz → GHz → PicoHz.

3) Accuracy :-

Computer performs every Calculations and Processing accurately. It's Accuracy is 100 %.

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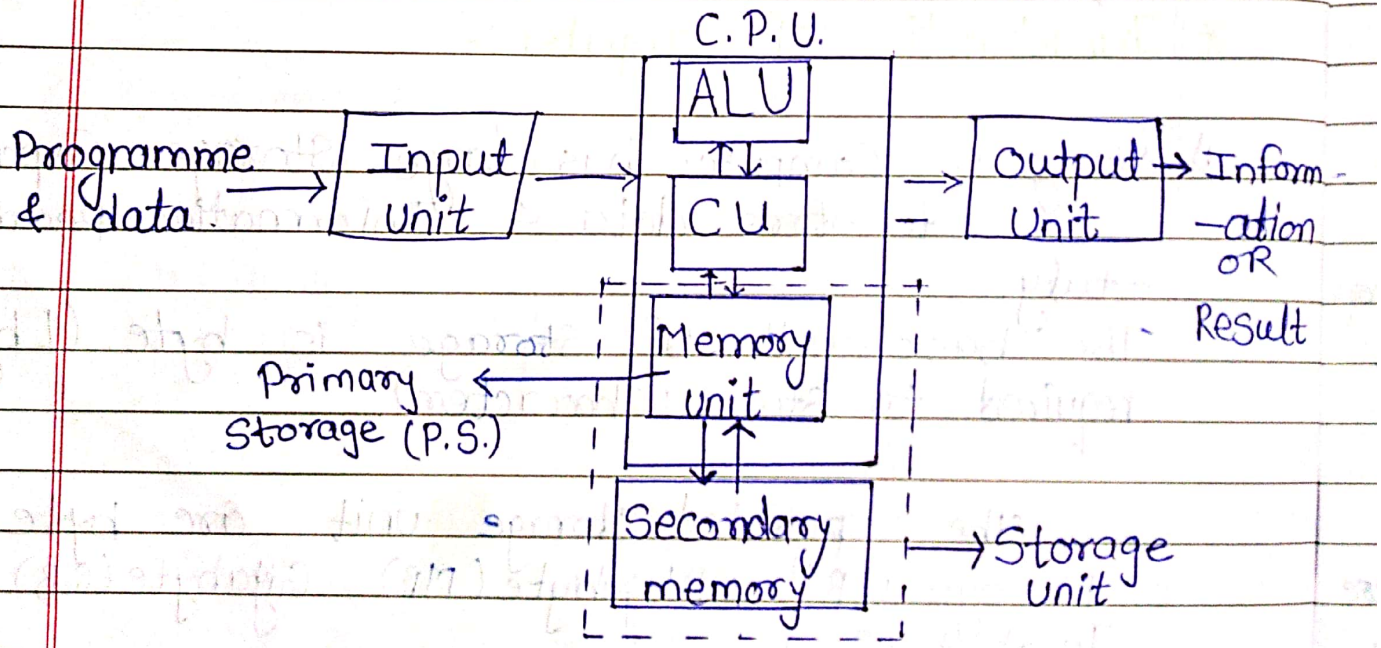
* Block - Diagram of Computer :-



Computer is an electronic device which takes the data as input through Input Unit, process on It Using C.P.U and gives the result or Information as output through output Unit.

A figure shows basic organisation of Computer System which has five blocks name with five units Correspond to the five basic operations performed by all computers systems functions of each these units are described below.

1) Input Unit -

Data and Instructions must entered to a Computer System before Computer Can Perform any Competitions on the Subscribe / Supplied data.

- The Input unit accepts Instructions and data From the outside world.

- It Converts these Instructions and data in Computer acceptable form with the help of Input Interfaces.

- It Supplies the Converted instructions and data to the Storage unit for further processing

* Output Unit :-

The Output Unit performs the reverse-sed Operations of that of An Input Unit.

It's Supplies Information obtained from data processing to outside world. The output unit performs

i) It accept the produced result which is incoded form.

ii) It converts this coded result ~~which~~ to human acceptable form. using the unit called output Interface.

iii) It Supplies the Converted result to outside world.

* Storage Unit :-

Storage unit hold or Store

i) The data and Instructions required for Processing (resived from input unit)

ii) Intermediate result of processing.

iii) Final result of Processing.

Storage unit of Computer is two types of storage,

1) Primary Storage also known as main memory & Storages the Pieces of Programme Instructions, data, Intermediate result and recentally produce result.

The C.P.U can ~~access~~ execess these Pieces of Information directly at very high speed. These storage is Volatile. and Looses the information as soon as Computer System Switch off.

2) Secondary Storage also known as Oxillary Storage takes care of limitation of primary storage. It suppliment the limited storage capacity and volatile characteristics of primary ~~memory~~ storage.

The storage in this unit is permanent. It is commonly made up of magnetic material.

* Arthematic Logic Unit (ALU) :-

ALL Calculation and Comparisom Operation -s are performed In ALU. ALU does the proc- -essing and Computer temporarily transfered the Intermediate result.

* Control Unit :- (C.U.)

Control unit does not perform any actual processing Job but act as Central nervous system for other Components.

It manages or coordinates the Operations of all other Components.

* C.P.U :-

C.U and ALU of Computer are together Known as CPU. It is the brain of Computer.

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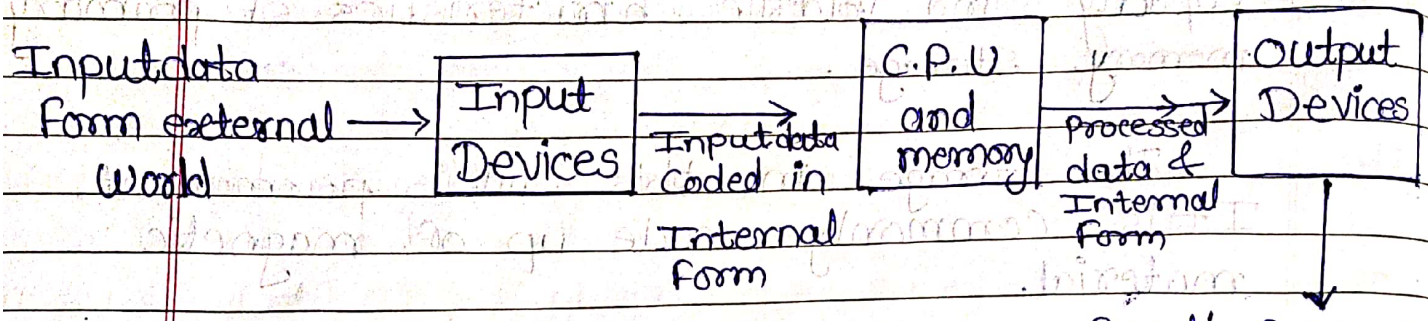
* Input and Output Devices :-



* The role of I/O devices in Computer System. *

* Input and Output devices - I/O ~~de~~ are also Known as periphiral devices because they Surround a Computer C.P.U and memory.

Input devices Enter data From outside world Into primory Storage & output devices Supply the results of processing From Primary Storage to user which is Shown in the figure.

* Input Devices :-

1) Keyboard -

It is the most Commonly use input device which allows text and numeric data entry Into Computer System.

It has number of Keys such as alphabates Keys, (a, b, c, ---z,) Numeric Keys, Symbol Keys, Function Keys, Special Keys, & Arrow keys.

Alphabates Keys :- a, b, c, d, ---Z.
Numeric Keys :- 1, 2, 3, ----.
Symbol Keys :- #, ?, >, <, ----.
Function Keys :- F_1, F_2, F_3, --- F_{12}.
Special Keys :- Shift, Ctrl, Alt., Space bar, back space, tab, insert, dele. etc.
Arrows Keys :- ↑, ↓, →, ←.

2) Point and draw devices :- For designing and Selection from the menu there are devices called ~~pointion~~ pointing devices out of which -

i) Mouse -

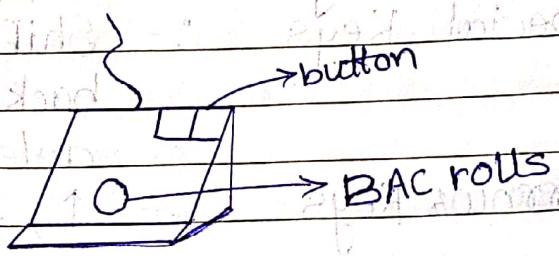
~~The~~ Mouse is most commonly use pointing device ~~Form~~ graphical user Interface (GUI). A GUI Provides Screen with graphic icons or menus and allows a user to make rapid selection.

Mouse has three button Left, right, & middle.

Using mouse we can perform three actions. Click, double Click (activation) & drag.
↓ (Selection) ↓ (group selection)

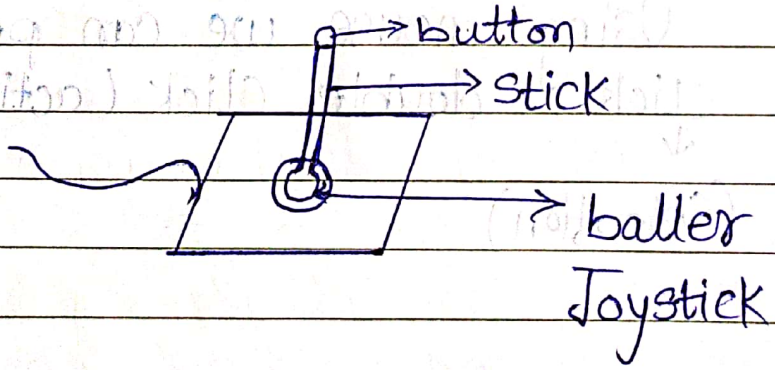
A mouse is small handed device that Feets Comfortablely in Palm and it roles on a Flat Surface so that graphics cursor moves on the screen, this point is called hotspot of graphic Cursors.

ii) Track ball - It is also a pointing device Similar to mechanical mouse.



Track ball is prefered device for CAD/CAM Software (Computer Added Design / Computer Added manufacturing) because a designer move the Graphic Cursor with hand movement only without any movement of equipment.

Joystick is device that works on the Same principle as track ball. The user hold the Stick in hand and moves in arround to spherical ball.



Light Pen - Light Pen is also a point and draw Input device and helps to Focuses on Screen.

3) Image Scanner -

Image Scanner is an also Input device that translate paper document Into an electronic Formate For Input to a Computer.

This Input devices is very useful In preserving paperdocument In electronic formate.

4) * Optical Character Reginition (OCR) :-

OCR uses Character Reginition Softe-ware which Converts ~~be~~ bit map Image of character to equivalent ASCII Code.

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5) * Optical Mark Reader (OMR) :- Imput device Is a scanner, which can recognise pre-specifi-ed type of mark made by Pencil or pen,

for eg:- In objective type test application (Question) mark ~~there choses~~ choice of Correct answer on a special pre-printed test scoring sheet by darking small sphere by pencil.

6) * Bar Code Reader -
data Coded in the form of small lines Known as bar codes.
bar code represent ∝-Numeric data by Combi-nation of adjecent vertical lines by Varying their width and spacing between them.

7) * MICR → Magnetic InK character Reader:-
MICR is Similar to OCR.
Banking Industry uses it for faster processing of Large Volume of checks handled every day by this industry.

8) * Digitizer :-
Digitizer is Input Device used for Convert-ing Pictures, maps & Drawings into digital form For Input to Computer.

* Output Devices :-
is electro mechanical device that accepts data from a Computer and translate them into a form Suitable for use by outside world or User.
Several Output Devices are available today they are broadly of two types.
1) Soft copy output and 2) hard Copy output.

1) Soft Copy Output - Soft Copy output are temporary in nature because it does not appear

on paper and can not carrying to others when Computer is OFF.

2) Hard Copy Output - It is permenant in nature appears on paper & can carry out to others without to Computer.

For Example - Output produced on paper by ~~Computer~~ printer

1) * Moniter :-

Moniters are most Popular Soft Copy output devices. They display an Output on a television like ~~Spring~~ Screen.

The user uses Keyboard to Input data to a computer & Moniter to view the output From the Computer the Combination of bOth Keyboard & Moniter is Called terminal.

2) Printer :- Are the Most Popular Hard Copy output device different types of Printers are available today such as Dot Matrix printer, Ink. Jet Printers, laser Printer.

3) * Dot Matrix Printer - In Dot Matrix printer Characters are printed on paper by ~~String~~ Stricking the character on ink ribbon So that character will be

Stricke on paper.

* Ink Jet Printers are character printers that forms characters and Images by Springing small Drops of Ink on a paper & By some mechanism with the help of These Ink characters are Form.

Ink Jet printer produces printed output as ~~IIIE or~~ patterns of tiny dots they can print any shape of characters. - That a programme can discribe. Ink Jet printers are both monocrome & colour and has a printing speed From 40 – 300 characters per second. they are coselier than dot matrix printer but gives batter quality than that.

* Leaser printers - are pages printers. that print one page at a time. leaser printer produce high quality output & forms the character by tinny ink particles. The printing quality is very good & Bright & use for graphics art also. It can Print 4 - 12 Pages per minute.

They are coselyer than the previous one

3) * Plotter :- is a unother output device for Arkitekes & engineers engineers, cityplaner or other who used to generate high need

Precision hard Copy graphic output of Varing Size.

4) * Screen Image projector is also a output device.

5) * Speaker is also an output device.

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