

CLASSIFICATION OF COMPUTERS

ACC TO FUNCTION/PURPOSE

- ❖ Analog computer
- ❖ Digital computer
- ❖ Hybrid Computer

1. **ANALOG COMPUTERS** are that in which data varies continuously i.e. **the movement of data is continuous.**

REPRESENTED BY: series of waves

USED FOR

- ❖ Measuring temperature, pressure, etc
- ❖ Communication
- ❖ Broadcast transmission

EXAMPLE

Automobile Speedometer, Analog clock etc

2. **DIGITAL COMPUTERS** are those computers in which data flows in discrete form.

REPRESENTED BY: pulses, two series i.e. 0s & 1s

USED FOR

- ❖ Mathematical calculations
- ❖ Compare values
- ❖ Storing the result

EXAMPLE

Digital watch, Education system, business purpose

3. **HYBRID COMPUTERS** are combination of both analog computer and digital computer

MEASURES: both continuous and discrete form of data

EXAMPLE

- ❖ STD/PCO phone, where one communicates with a person using analog computer & the rate as charges and pulse rate is measured in forms of digit.
- ❖ Measuring heart beat or ECG system in ICU in a hospital

IN DIGITAL COMPUTER, CLASSIFICATION CAN BE DONE ON THE BASIS OF PURPOSE

- ❖ **GENERAL PURPOSE COMPUTER**
- ❖ **SPECIAL PURPOSE COMPUTER**

GENERAL PURPOSE COMPUTER: These are designed to perform the variety of jobs or applications for this reason; they are less efficient than special purpose computers.

EXAMPLE

Banking, Sales Analysis, PCs, etc

SPECIAL PURPOSE COMPUTER: These are designed to meet the needs of some special application. They are designed to perform a single job. So they execute a task quickly and more efficiently. Program and instructions are stored permanently in them.

EXAMPLE

Weapon designing

ACC TO SIZES

- ❖ Super Computer
- ❖ Mainframe Computer
- ❖ Mini Computer
- ❖ Micro Computer
- ❖ Desktop Computer
- ❖ Pocket Computer

1. SUPER COMPUTER

PURPOSE: Special purpose computers handle mostly complex scientific, statistical applications or programs.

KEY FEATURES

- ❖ High technology
- ❖ High capacity memory i.e. 8.4 million
- ❖ Computes data processing in short time
- ❖ Highly sophisticated technology
- ❖ Cost varies from 1 million to 5 million

IMAGE



EXAMPLE

India's first super computer is PERM

DRAWBACK

- ❖ Operating Supercomputer requires highly qualified staff.
- ❖ Experts were required for such computer engineering.
- ❖ They are sensitive to temperature, humidity, dust, etc.
- ❖ Non portability & large size

2. MAINFRAME COMPUTERS

KEY FEATURES

- ❖ Smaller size than super computer
- ❖ Large memory capacity
- ❖ Allows networking of up to 100 terminals
- ❖ Cost varies from 5-20 lacs.

IMAGE



EXAMPLE

PDP-370, IBM 40

DISADVANTAGES

- ❖ Experts and highly qualified professionals were required to operate it
- ❖ Sophisticated technology required for manufacturing & assembling the computer

3. MINI COMPUTER

KEY FEATURES

- ❖ Higher processing speed than lowest category computer but slower than super computer & Mainframe computer
- ❖ Portable computers because of smaller size
- ❖ Memory capacity RAM is up to 128 MB
- ❖ Secondary Memory store 40 GB
- ❖ Costs around Rs 50 thousand to 90 thousand

EXAMPLE

PDP-11 and PDP-45

DISADVANTAGES

- ❖ Cannot connect all hardware devices
- ❖ Cannot execute all languages and software

4. MICRO COMPUTER

KEY FEATURES

- ❖ Smaller than Mini Computer
- ❖ High speed computer but slower than mini computer
- ❖ Costs around Rs 30000 to 60000
- ❖ Portable
- ❖ RAM requires 64 MB to 128 MB
- ❖ Limited languages FORTRAN, Basic, COBOL, Pascal can be executed

EXAMPLE

Uptron, HCL, PCL, Wipro, PCs, HP, PC-AT, PC-XT

DRAWBACKS

- ❖ Limited Hardware devices can be connected
- ❖ Experts were required

5. DESKTOP COMPUTERS

PURPOSE: Education system and small scale industry

CALLED: HOME or Briefcase Computers

KEY FEATURES

- ❖ Portable
- ❖ High speed processing processor varies from 80286 to 80586
- ❖ Requires RAM from 16 MB to 64 MB
- ❖ Internet facility for communication
- ❖ Costs around Rs 30,000 to Rs 60,000

IMAGE



EXAMPLE

HCL, PCL, Wipro, COMPAQ, HP, LEO, SAMSUNG, etc

DISADVANTAGES

Execute limited software and languages related to windows based

6. POCKET COMPUTER

KEY FEATURES

- ❖ Small in size
- ❖ Portable like a digital diary
- ❖ Requires RAM maximum up to 1GB
- ❖ Disk capacity is 80 GB

IMAGE



DISADVANTAGE

Execute limited Software