

Types of Computers

On the basis of principle of construction

Computers are divided into three types:



COMPUTER

BASIS OF WORK

DIGITAL

ANALOG

HYBRID

SIZE WISE

EMBEDDED
COMPUTER

PERSONAL
COMPUTER

MAIN FRAM

MINI
COMPUTER

SUPER

Workstations

PURPOSE WISE

SPECIAL

GENERAL

Desktop
Laptop
Tablet PC

Hand-helds
pocket
PDAs
MP3 players
Cell phones

Application Areas

- TV
- stereo
- remote control
- phone / mobile phone
- refrigerator
- microwave
- washing machine
- electric tooth brush
- oven / rice or bread cooker
- watch
- alarm clock
- electronic musical instruments
- electronic toys (stuffed animals, handheld toys, pinballs, etc.)
- medical home equipment (e.g. blood pressure, thermometer)



- Very small in Size
- These are computer fixed inside various electronic equipments to automate and control their working
- Example - use daily routine
- Timer to a washing machine
- Set heating level in microwave
- Auto mode in AC and refrigerators
- Programmed by manufacture



Microcomputers(Personal Computer)

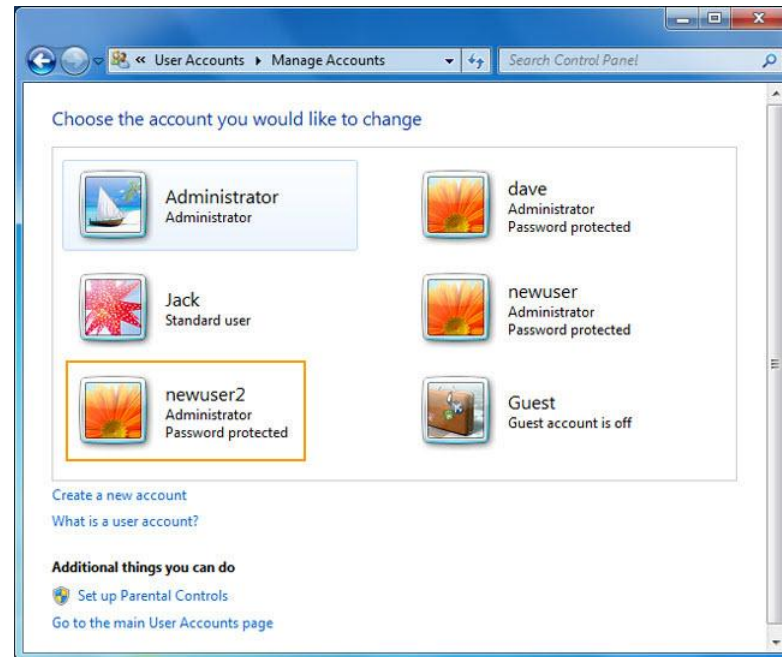
- A microcomputer is the smallest general purpose processing system.
 - They are designed to be used by one person at a time.
 - Ram 64MB, 128MB, 512MB, 1GB.
 - Its CPU is microprocessor
 - Has separate components (keyboard, mouse, etc.)
 - Examples: - **IBM PCs, APPLE** computers
- Microcomputer can be classified

1. Desktops
2. Portables
3. Hand-helds



Personal (Micro) Computers :

- **Data Storage**
 - Hard disk and floppy disk drivers are used to enter and store data and programs.
- **Softcopy Output**
 - A visual display screen (monitor) and / or a printer is used to get the output.



The different portable computers are: -

- 1) Laptop
- 2) Notebooks
- 3) Palmtop (hand held)
- 4) Wearable computers

Laptop: - this computer is similar to a desktop computers but the size is smaller. They are expensive than desktop. The weight of laptop is around 3 to 5 kg.



Notebook: - These computers are as powerful as desktop but size of these computers are comparatively smaller than laptop and desktop. They weigh 2 to 3 kg. They are more costly than laptop.



Palmtop (Hand held): - They are also called as personal Digital Assistant (PDA). These computers are small in size. They can be held in hands. It is capable of doing word processing, spreadsheets and hand writing recognition, GAME playing, faxing and paging. These computers are not as powerful as desktop computers.



Wearable computer: - The size of this computer is very small so that it can be worn on the body. It has smaller processing power. It is used in the field of medicine. For example pace maker to correct the heart beats



- **PDA**s
 - **Personal Digital Assistants**
 - generally used to maintain an electronic appointment book, address book, calculator, and notepad



Mainframe

- Mainframe computers can support hundreds or thousands of users, handling massive amounts of input, output, and storage.
- Mainframe computers are used in large organizations where many users need access to shared data and programs.
- Mainframes are also used as e-commerce servers, handling transactions over the Internet.





- **Super computer** are those computer which are designed for scientific job like whether forecasting and artificial intelligence etc. They are fastest and expensive. A super computer contains a number of CPU which operate in parallel to make it faster. It also known as grand father computer.
- Application – whether forecasting, weapons research and development.

Mini Computers

This setup (mini Computers) allowed more people to have access to computers.

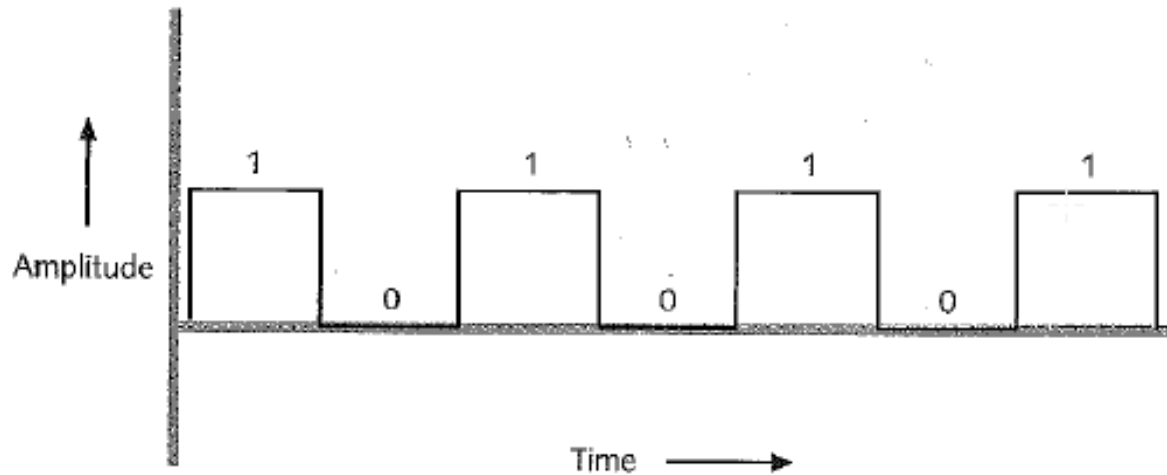
- **minicomputer** is a class of multi-user Computer that lies between the largest Multi-user systems (mainframe computer) and the smallest Microcomputers or personal computers.
 - **Mainframe computers are used to run commercial applications and other large-scale computing purposes.**
 - **It is also used in banking and insurance businesses.**
 - **For example millions of records , each day.**



Workstation

- **Personal computer=Workstation**
- Workstations are more powerful and higher in performance than desktop computers, especially with respect to CPU and Graphics, memory capacity and multitasking capability.
- Its Powerful desktop computer designed for specialized tasks.
- Lot of processing speed.
- Can also be an ordinary personal computer attached to a LAN (local area network).

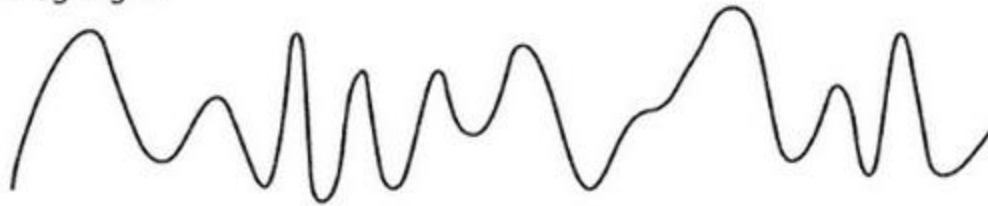




- ❖ **Digital Computers:** information are represented using the digits 0s and 1s. The computers that we use at our homes and offices are digital computers.
- ❖ Digital signals have two states, on or off. The off state is usually zero volts, and the high state is typically five volts.
- ❖ Perform mathematical calculations, compare values and store results. A digital computer coordinates its signals with a master clock.
- ❖ The clock's speed determines the computer's overall speed

- **Analog Computers:** The earliest computers were analog computers.
- Analog signals are continuous. They may have any value between two extremes, such as -15 and +15 volts. An analog signal's voltage may be constant or vary with time.
- Analog computers are used for measuring of parameters such as temperature, speedometer in your car, pressure and voltage.

Analog Signal



Digital Signal



Neuron Spiking Signal

