



SNS COLLEGE OF TECHNOLOGY

Coimbatore-35
An Autonomous Institution

Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A+' Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai



DEPARTMENT OF INFORMATION TECHNOLOGY

PROGRAMMING FOR PROBLEM SOLVING

I YEAR - I SEM

UNIT 1 – Introduction to Problem Solving Techniques

TOPIC 2 – COMPUTER HARDWARE



BASIC HARDWARE OF A COMPUTER



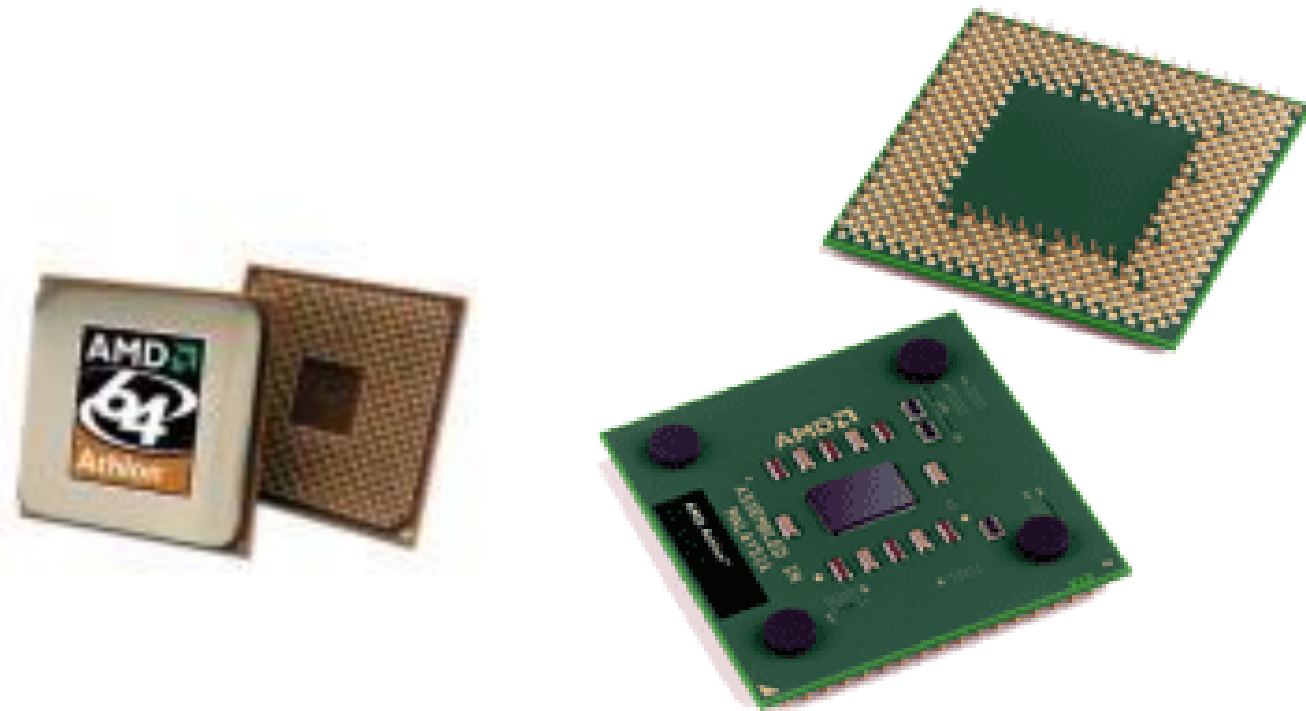
- Central Processing Unit (CPU)
- Memory Unit
- Input Devices
- Output Devices
- Secondary Storage Devices



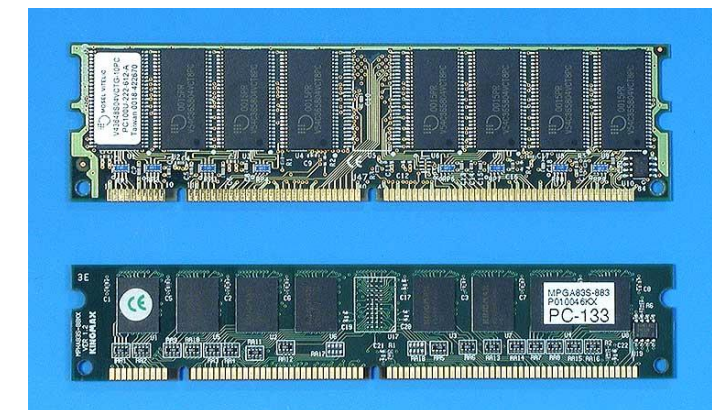
CENTRAL PROCESSING UNIT & MEMORY UNIT



- Central processing Unit:
 - Brain of the computer.
 - It directs and controls the entire computer system and performs all arithmetic and logical operations



- Memory Unit:
 - Where the programs and data are stored .
 - READ ONLY MEMORY (ROM) contains the pre-programmed computer instructions such as the Basic Input Output System (BIOS).
 - RANDOM ACCESS MEMORY (RAM) is used to store the programs and data that you will run. Exists only when there is power.





INPUT DEVICES



Allows data and programs to be sent to the CPU.

- Keyboard
- Mouse
- Joystick
- Microphone
- Webcam
- Scanner
- Monitor



Wide angle



Play&Plug



Video Call



Built-in MIC





KEYBOARD & MOUSE



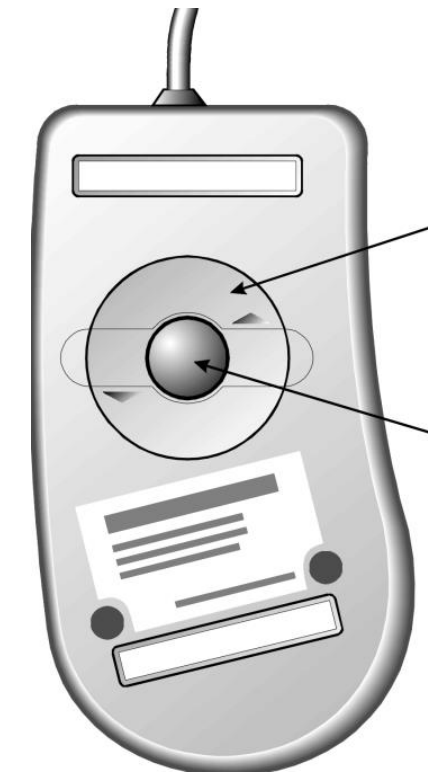
➤ Keyboard Types

- Traditional keyboards
- Flexible keyboards
- Wireless keyboards
- PDA keyboards



➤ Two Types of Mouse

- Mechanical: a type of computer mouse that has a rubber or metal ball on its underside and it can roll in every direction.
- Optical: This type uses a laser for detecting the mouse's movement.





OTHER POINTING DEVICES



- Trackball
- Track point
- Touch pad
- Touch Screen
- Joystick
- Light Pens
- Stylus





SCANNING DEVICES & IMAGE CAPTURING DEVICES



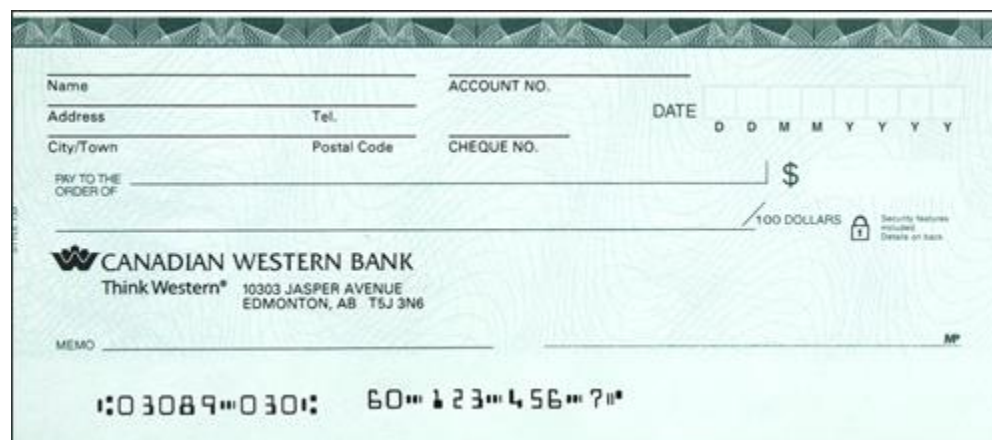
➤ Scanner Types

- Optical scanners
- Card readers
- Bar code readers
- Character and mark recognition devices



➤ Camera Types

- Digital Cameras
- Digital Video Cameras





OUTPUT DEVICES



➤ Output Devices: Media used by the computer in displaying its responses to our requests and instructions.

- Monitor
- Audio Speakers
- Printer

Types of Monitor

- Cathode Ray Tube (CRT)
- Liquid Crystal Display (LCD)



Types of Printers

- **IMPACT PRINTERS:**
 - Uses pressure by physically striking the paper.
 - Ex. Daisy wheel printers, line printers, dot matrix printers & band printers.
- **NON-IMPACT PRINTER:**
 - Does not apply pressure on the paper but instead produces character by using lasers, ink spray, photography or heat.





SECONDARY STORAGE DEVICES



- Attached to the computer system to allow you to store programs and data permanently for the purpose of retrieving them for future use.
- Hard disk, CD/DVD Rom.

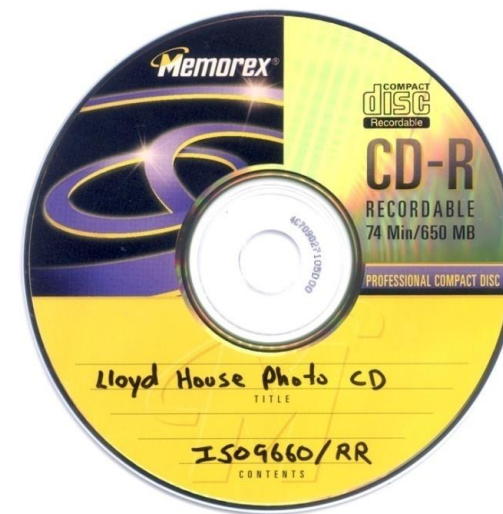
Hard Disk Drive

Made of rigid materials &
Holds a greater amount of data



Optical Discs

A standard part of modern desktop machines, especially used for multimedia purposes and preferred in loading applications.



Optical Discs Kinds

Blue Ray Disk – 40G
Digital Versatile Disk
DVD-R – write once, 3.95G
Compact Disk
CD-R – write once, 650MB
CD-RW – rewritable, 700MB





SECONDARY STORAGE DEVICES



Other Secondary Storage Devices

- Solid-State Storage
- No moving parts
- Flash memory cards
- USB flash drives



Power Supply

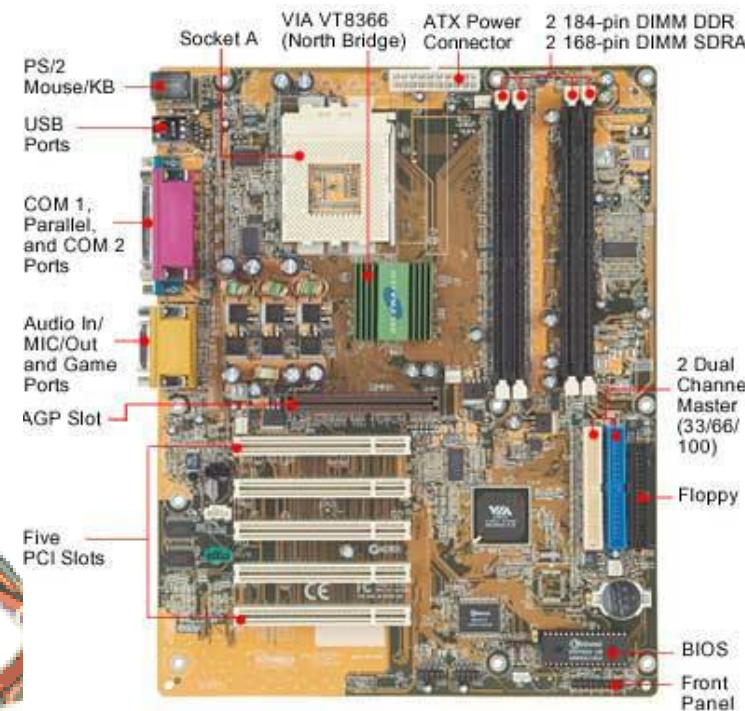
- Responsible for powering every device in your computer.



Motherboard

- The physical arrangement in a computer that contains the computer's basic circuitry and components. Like:

- Microprocessor
- Coprocessors
- Memory
- Basic Input/Output System (BIOS)
- Expansion Slot
- Interconnecting circuitry





EXPANSION SLOTS



- Graphic cards
- Sound cards
- Modem cards
- Network interface cards/network adapter

