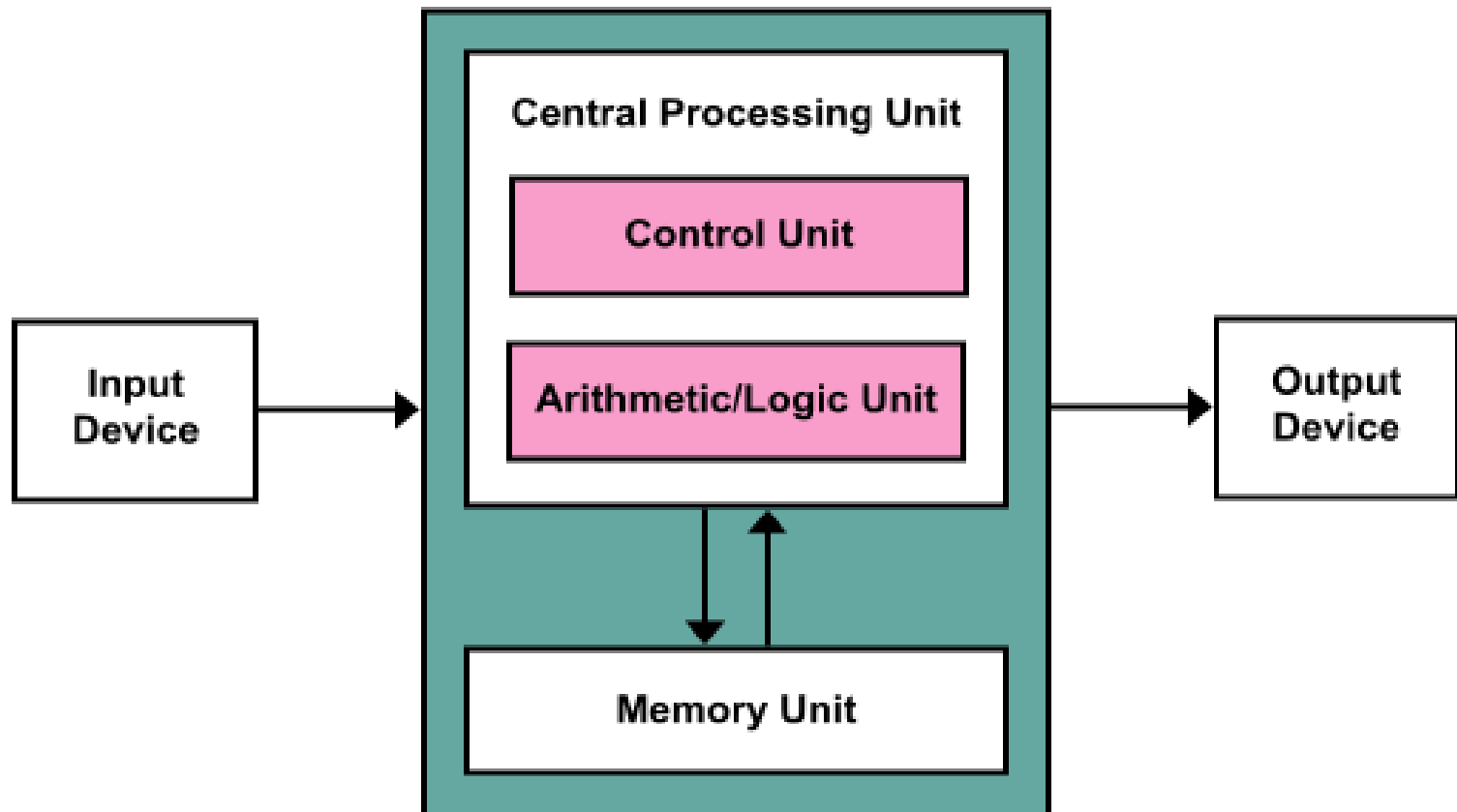


BASIC COMPUTER CONCEPTS



- DATA is a collection of independent and unorganized facts.
- INFORMATION is the processed and organized data presented in a meaningful form.
- DATA PROCESSING is the course of doing things in a sequence of steps.

- **COMPUTER** is an electronic machine that follows a set of instructions in order that it may be able to accept and gather data and transform these into information.



Data Processing In Computer

1. It accepts and gather data. (INPUT)
2. It processes data to become information. (PROCESSING)
3. It stores data and information. (STORE)
4. It presents information. (OUTPUT)

Three Major Components

- **HARDWARE** is the tangible part of a computer system.
- **SOFTWARE** is the non-tangible part that tells the computer how to do its job.
- **LIVEWARE** refer to people who use and operate the computer system, write computer programs, and analyze and design the information system.

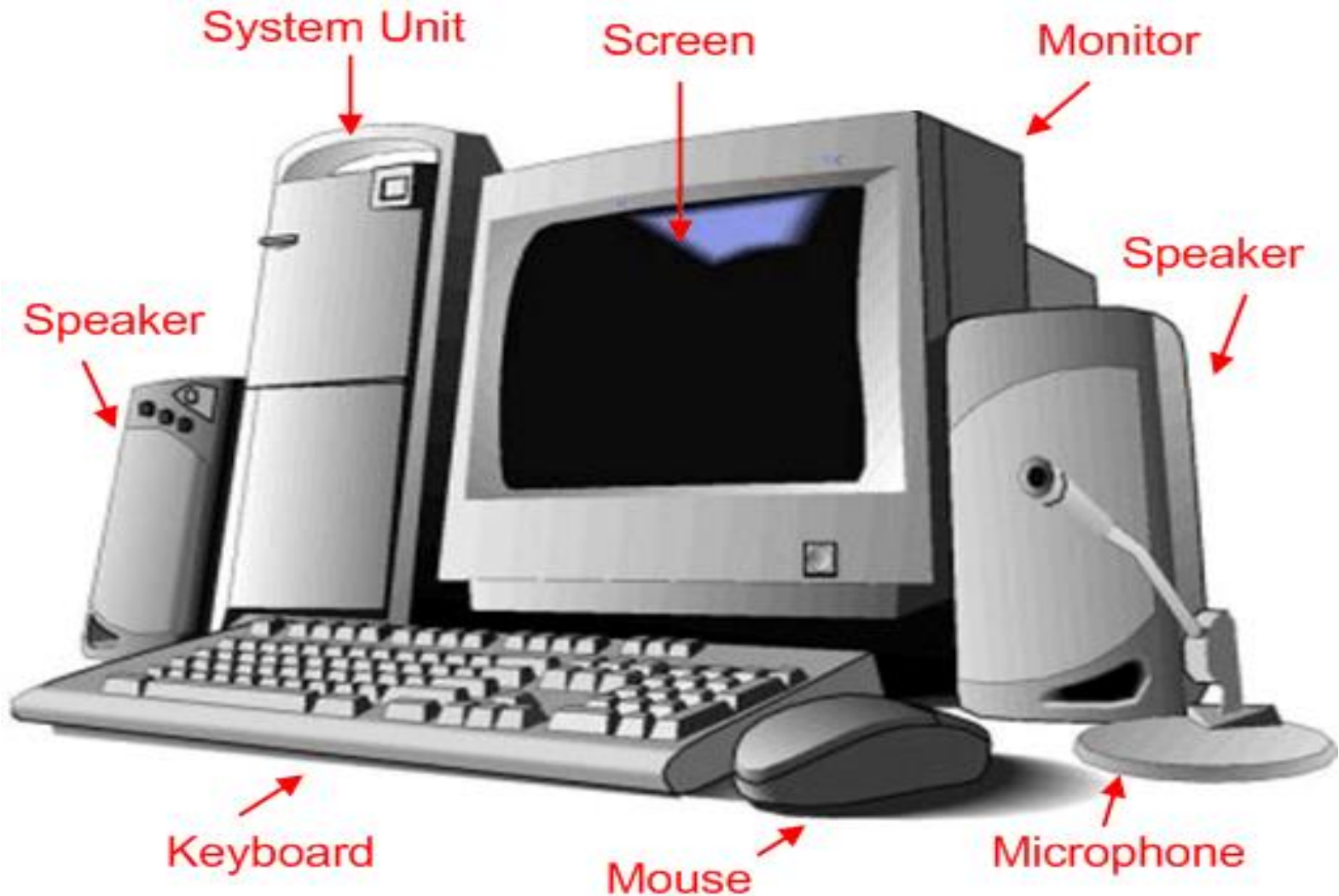
Basic Units of Measurement

- BIT is a unit of information equivalent to the result of a choice between only 2 possible alternatives in the binary number system.
- BYTE is a sequence of 8 bits (enough to represent one character of alphanumeric data) processed as a single unit for information.

Basic Units of Measurement

1,024 bytes	=1 kilobyte (KB)
1,024 KB	=1 megabyte (MB)
1,024 MB	=1 gigabyte (GB)
1,024 GB	=1 Terabyte (TB)
1,024 TB	= 1Petabyte(PB)
1,024 PB	=1 Exabyte(EB)
1,024 EB	=1 Zetta Byte(ZB)
1,024 ZB	=1 Yotta Byte(YB)
1,024 YB	= 1 Bronto Byte
1,024 Bronto Byte	= 1 Geop Byte

BASIC PC HARDWARE



Basic hardware of a PC system

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

1. Central Processing Unit

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

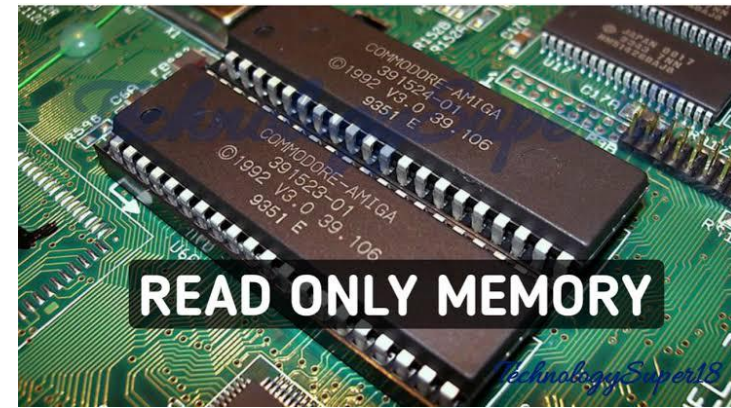


2. Memory Unit

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.



3. Input Devices

- Allows data and programs to be sent to the CPU.
 - Keyboard
 - Mouse
 - Joystick
 - Microphone
 - Webcam
 - Scanner
 - Monitor



Other Pointing Devices

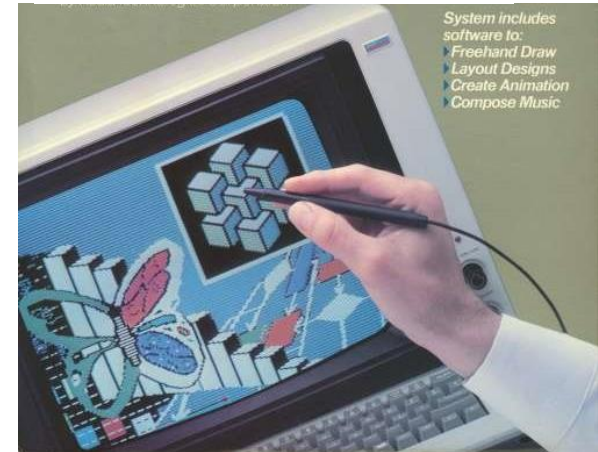
- Trackball
- Track point
- Touch pad
- Touch Screen



- Joystick – input device for computer games



- Light Pens – light-sensitive penlike device



- Stylus – penlike device commonly used with tablet PCs and PDAs.



Scanning Devices

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

A scan of a Canadian Western Bank cheque. The form includes fields for Name, Address, City/Town, Postal Code, ACCOUNT NO., DATE (with a grid for D, D, M, M, Y, Y, Y, Y), and CHEQUE NO. The amount is written as 100 DOLLARS. The bank name is CANADIAN WESTERN BANK, with the slogan "Think Western®" and address 10303 JASPER AVENUE, EDMONTON, AB T5J 3N6. A MICR line is visible at the bottom: @0308900301: 60 123 456 7 11.

Image Capturing Devices

- Digital Cameras



- Digital Video Cameras



4. Output Devices

- Media used by the computer in displaying its responses to our requests and instructions.
- Monitor
- Audio Speakers
- Printer

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.

Dot matrix
printer



Laser
printer

Inkjet printer

5. 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.
- Floppy disk, Hard disk, CD Rom

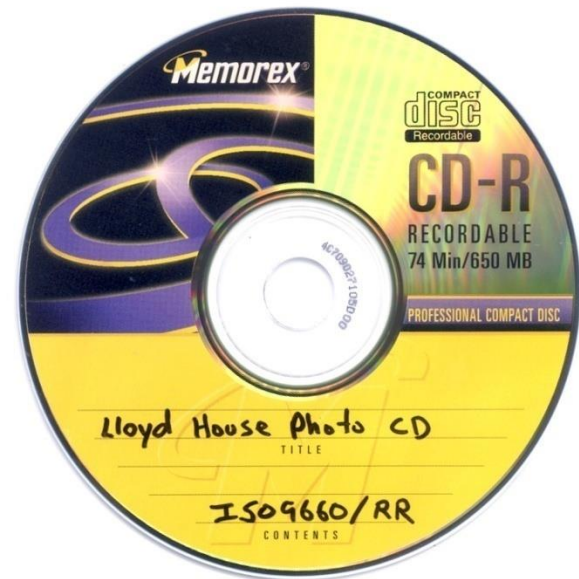
Hard Disk Drive or Hard Disk

- Made of rigid materials unlike floppy disks
- 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.



Kinds

- Blue Ray Disk – 40G
- Digital Versatile Disk
 - DVD-R – write once, 3.95G
 - DVD RW – rewritable, 3G
 - Single Layer and Double Layer
- Compact Disk
 - CD-R – write once, 650MB
 - CD-RW – rewritable, 700MB



Optical Drives

- CD-ROM read CDs
- CD-Writer read/write CDs
- DVD-Combo read/write CDs, read DVD
- DVD Writer read/write CDs
read/write DVDs

Other Secondary Storage

- Solid-State Storage

- Flash memory cards



- USB flash drives



Parts that Build Up A System Unit

- Casing or cover
- Power Supply
- Motherboard
- Microprocessor
- Memory
- Video Card
- Sound card
- Floppy disk drive
- Hard disk drive
- CD-ROM drive
- MODEM

Motherboard

- The physical arrangement in a computer that contains the computer's basic circuitry and components.
- Components are:
 - Microprocessor
 - (Optional) Coprocessors
 - Memory
 - Basic Input/Output System (BIOS)
 - Expansion Slot
 - Interconnecting circuitry

Expansion Slots

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