

# COMPUTER AND INFORMATION TECHNOLOGY

Course Code:510113

BBA -2<sup>nd</sup> Semester

## Chapter 2

Fundamental of Computer Hardware

Lecture 01

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## 2.1 Introduction

**Computer system depends on the followings-**

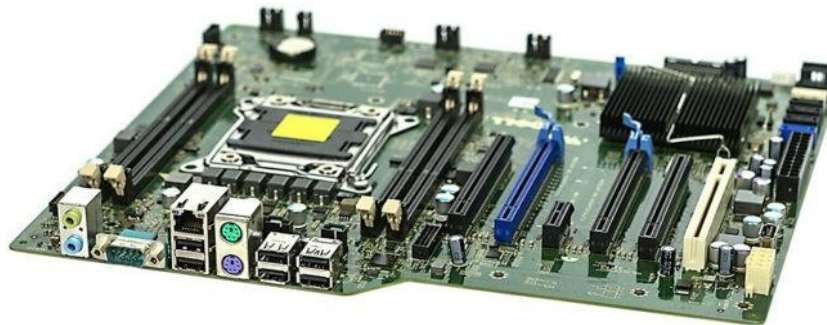
1. Hardware
2. Software
3. Data
4. Human ware(user/producer

## 2.2 Computer Hardware

The term “Computer Hardware” refers to the physical elements of a computer, the machinery or the electronics in a computer.

Examples of Hardware are the followings:

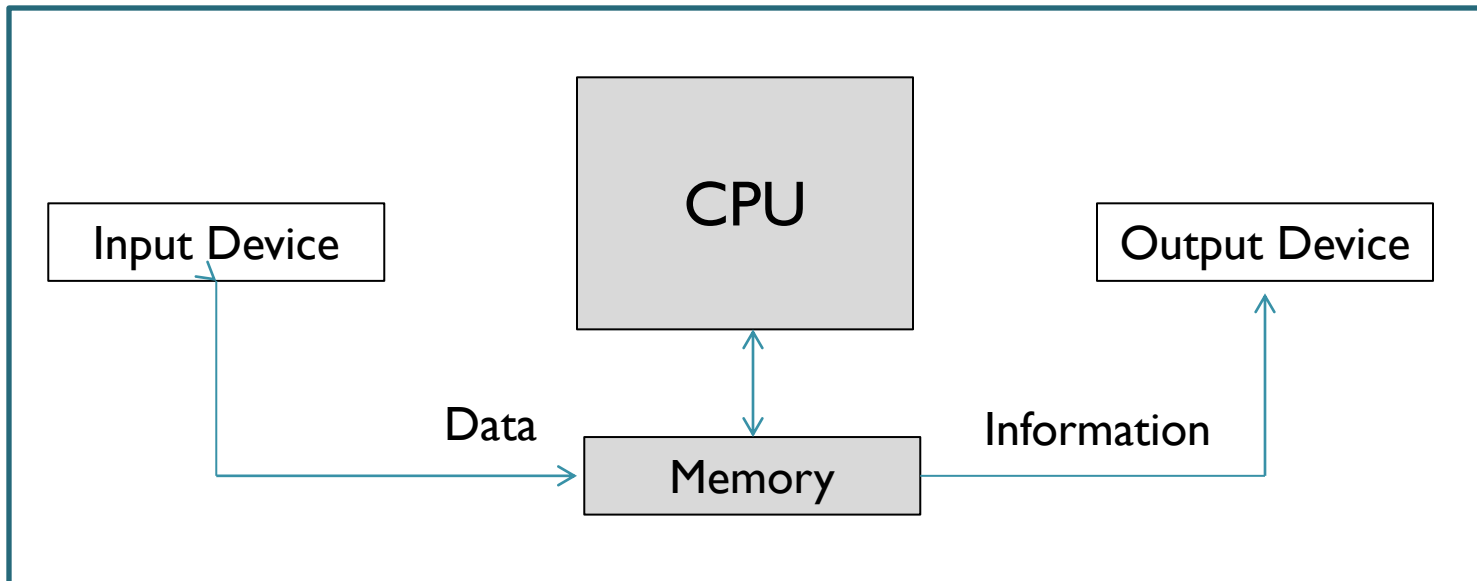
- ❖ Input devices-keyboard, mouse, etc.
- ❖ Output devices-printer, monitor, etc.
- ❖ Secondary storages devices-Hard disk, CD, DVD, etc
- ❖ Internal components-CPU, motherboard, RAM etc



## 2.3 Components of Hardware

A basic computer hardware consists of 4 components:

1. Input device
2. CPU
3. Memory
4. Output device



## 2.4 Types of Hardware

**Computer hardware is classified into four main categories:**

1. Peripheral hardware or devices-  
devices are connected to the computer externally.
2. Processing hardware-  
devices are used to process data using program instructions, manipulate functions, perform calculations and control other hardware devices.
3. Memory hardware-  
store instruction and data received from input unit. Store the result of arithmetic operation and supply to output unit
4. Storage hardware-  
Since RAM is volatile memory and nothing can be permanently stored in it, to save our data permanently we require secondary memory devices

## 2.5.1 Input Devices

Any device that is used for communicating with the computer from an outside environment is called the input device. Through an input device, user can feed and give instructions and data to the computer.

### **LIST OF INPUT DEVICES:**

1. Keyboard
2. Mouse
3. Joystick
4. Punched card reader
5. Punched paper tape reader
6. Magnetic disk
7. Magnetic tape
8. Optical scanner
9. Optical mark reader
10. Optical character reader
11. Magnetic ink character reader
12. Voice data entry terminal

## 2.5.2 Output Devices

Output unit is used to display the effect including the visual effect of instructions to the computer and its interaction with data.

Output devices normally translate the information and data stored in the computer after processing it into a form which is understandable by human beings.

### **LIST OF OUTPUT DEVICES:**

1. Monitor
2. Printers
3. Plotters
4. Projector
5. LCS Projections Panels
6. Computer Output Microfilm
7. Speakers
8. Head phone
9. VDU
10. Film recorder
11. Microfiche

## 2.5.3 Both Input-Output Devices

An input-output device is any hardware used by a human operator or other systems to communicate with a computer. As the name suggests, input/output devices are capable of sending data (output) to a computer and receiving data from a computer (input).

### LIST OF INPUT-OUTPUT DEVICES:

1. Modem
2. Network cards
3. Touch screen
4. Headsets
5. Facsimile
6. Audio cards/ sound card





## 2.5.2.3 Bar-Code (BCR)

Barcode technique is a kind of input media of a special purpose or a dedicated computer in which a computer reads the barcode image straightway into the computer in an understandable form. Barcodes are nothing but a set of symbols that contains only two colors such as black and white strip of bars. These set of black and white bars of lines are converted into a binary form of information. The large size bars are called as wide as white spaces and the small ones are called as narrow space. The black bar represents '1' and the white space between the bars is denoted '0'.



### The most widely used barcode systems are:

1. UPC (Universal Product Code numeric type)
2. EAN(European Article Numbering)
3. Code93-alphanumeric type
4. Inter leaved 2 of 5 numeric type
5. Code128 0alphanumeric type
6. Code bar-numeric type

