



## What is a computer



- A computer or computing machine is a device that performs mathematical and logical operations on symbols and other forms of information at high speed and with precision.
- Early computers were used mainly to compute (add, subtract, multiply, divide and so on).
- Today, computers perform a variety of tasks such as, text processing and handling large quantities of information, which takes different forms (text, image, sound, and video).



## What is a computer

A computer is an electronic device, operating under the control of instructions stored in its own memory that can accept data (input), process the data according to specified rules, produce information (output), and store the information for future use



## Types of computers

- **Embedded computers**
- **Non-embedded computers**

### Embedded computers

- **Embedded computers**
- **Non-embedded computers**

A computer that is internal component of another machine



## Computers classification

Computers can be generally classified by **size** and **power** as follows, though there is Considerable overlap:

- ❑ **Personal computer:** A small, single-user computer based on a **microprocessor**. In addition to the microprocessor, a personal computer has a keyboard for entering data, a monitor for displaying information, and a storage device.



- ❑ **workstation :** A powerful, single-user computer. A workstation is like a personal computer, but it has a more powerful microprocessor and a higher-quality monitor.



- ❑ mainframe : A powerful multi-user computer capable of supporting many hundreds or thousands of users simultaneously.



- ❑ minicomputer : A multi-user computer capable of supporting from 10 to hundreds of users simultaneously.





❑ **supercomputer** : An extremely fast computer that can perform hundreds of millions of instructions per second.

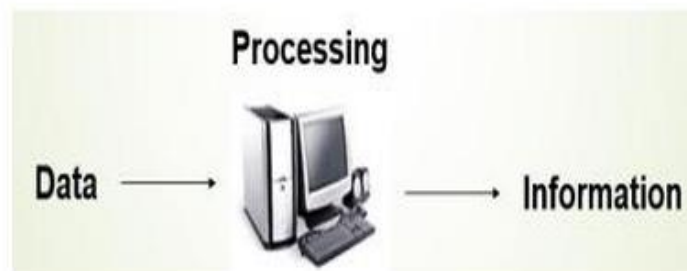




## Function of a Computers

Any digital computer carries out five functions in gross terms:

- ☐ Takes data as input.
- ☐ Stores the data/instructions in its memory and use them when required.
- ☐ Processes the data and converts it into useful information.
- ☐ Generates the output
- ☐ Controls all the above four steps.



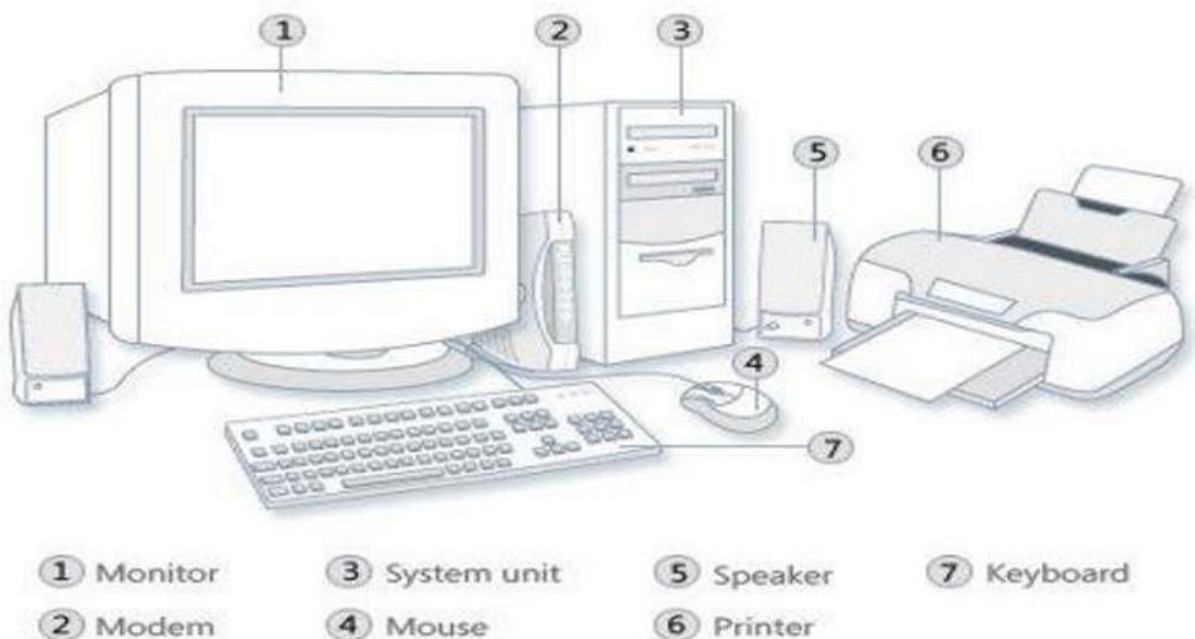
## Computer Components

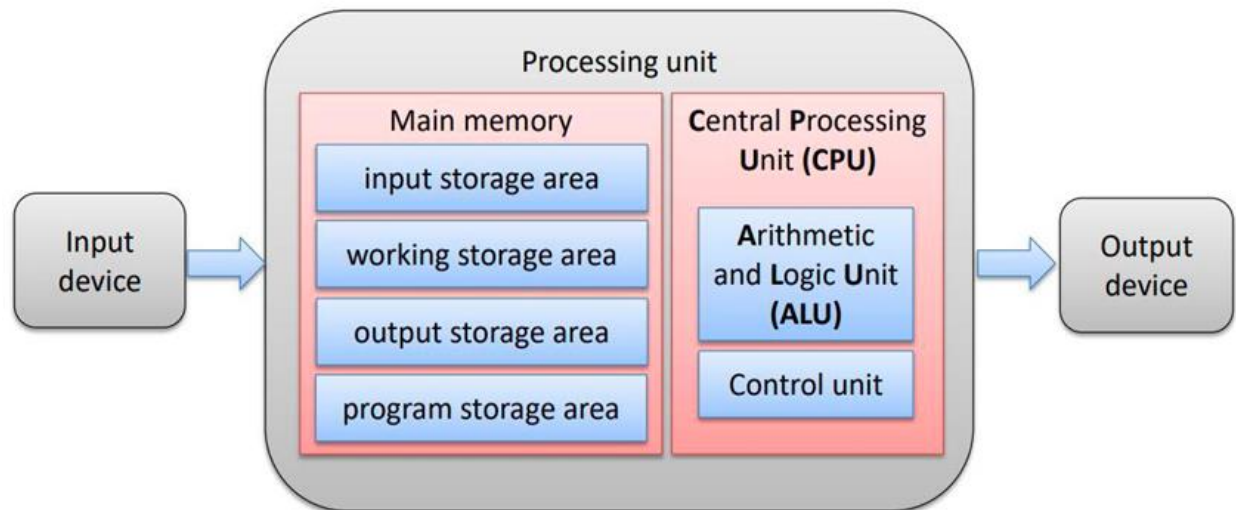
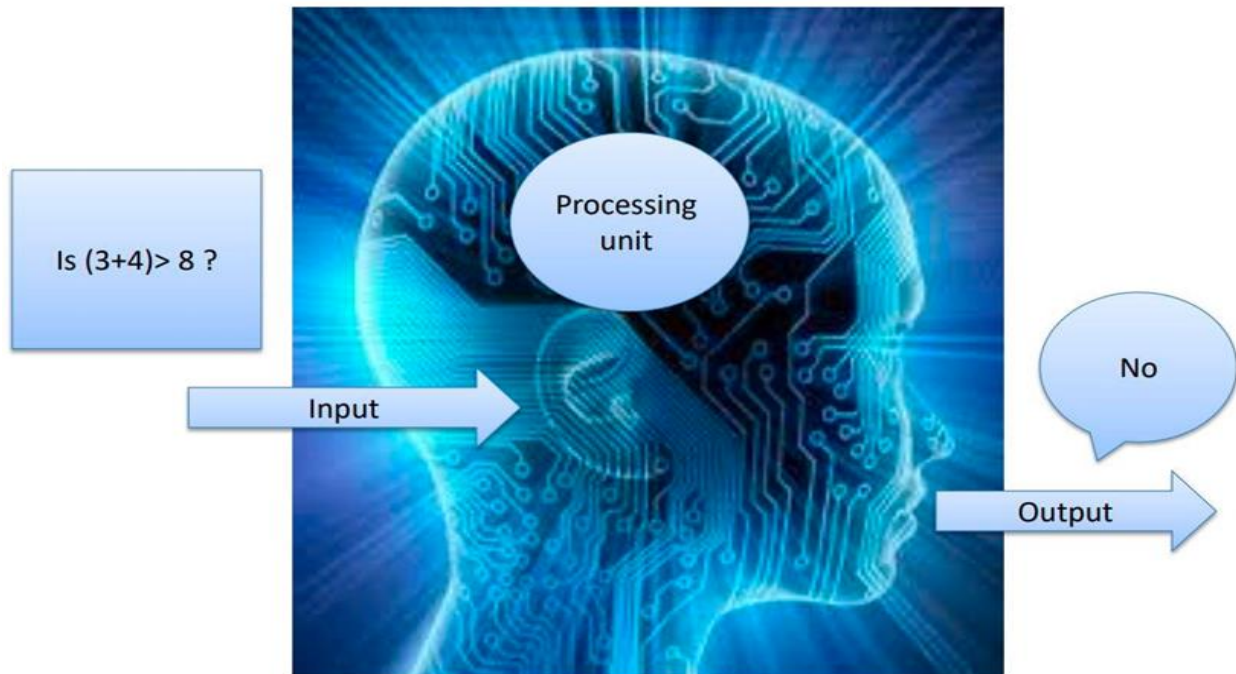
Any kind of computers consists of

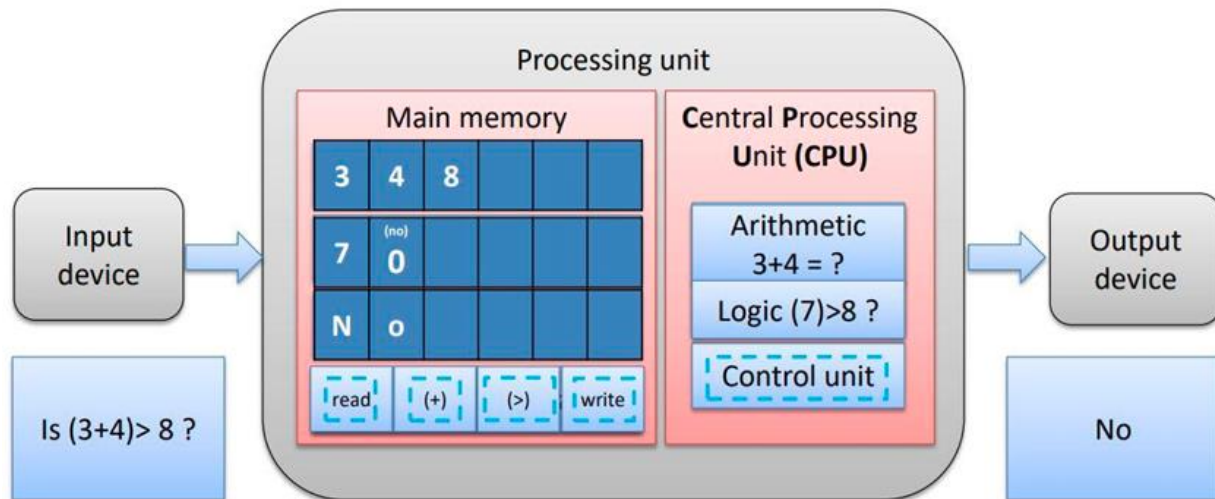
- ☐ Hardware
- ☐ Software

## 1-HardWare

- ❑ Computer hardware is the collection of physical elements that constitutes a computer system.
- ❑ Computer hardware refers to the **physical** parts or **components** of a computer such as the **monitor, mouse, keyboard, computer data storage, hard drive disk (HDD), system unit (graphic cards, sound cards, memory, motherboard and chips), etc.** all of which are physical objects that can be touched



















## Input Devices

Input device is any **peripheral** (piece of computer hardware equipment to provide data and control signals to an information processing system such as a computer or other information appliance. Input device Translate data from form that humans understand to one that the computer can work with. Most common are **keyboard** and **mouse**.

Examples of Manual Input Devices			
Keyboard 	Numeric Keypad 	Pointing Device 	Remote Control 
Joystick 	Touch Screen 	Scanner 	Graphics Tablet 
Microphone 	Digital Camera 	Webcams 	Light Pens 

### Example of Input Devices:-

1. Keyboard	2. Mouse (pointing device)	3. Microphone
4. Touch screen	5. Scanner	6. Webcam
7. Touchpads	8. MIDI keyboard	9.
10. Graphics Tablets	11. Cameras	12. Pen Input
13. Video Capture Hardware	14. Microphone	15. Trackballs
16. Barcode reader	17. Digital camera	18. Joystick
19. Gamepad	20. Electronic Whiteboard	21.

**Note:** The most common use keyboard is the QWERTY keyboard. Generally standard Keyboard has 104 keys.