



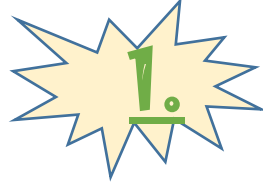
पुर्णा International School

Shree Swaminarayan Gurukul, Zundal

Class -III

Super Computer

Year- 2020-21



How a Computer works

• Focus of the Chapter

1. Data & Information
2. Input-process-Output cycle

Introduction

A Computer processing device is the part of the computer that receives input, processes the input and gives output. A computer can add large numbers and make other complex calculations and give you the result in just a few seconds.

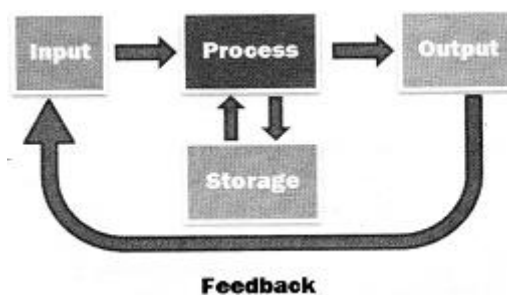
The body of the computer is the hardware such as CPU, VDU, etc. These are the mechanical and electronic parts which can be seen and touched. A computer executes commands and instructions.

Almost all the systems and the machines that we find around us work in the same way. They accept some input. These inputs are processed in a specific manner to produce some Output. For example, we take oranges, put them in the juicer, switch it on and finally we get orange juice.

I-P-O Cycle

The IPO Cycle is termed as Input-Processing-Output cycle. A computer receives data as input, processes it, stores it and then produces output.

This Input-Process-Output (I ? P - O) cycle is represented in the following figure:



- **Input:** The devices that allows data and instructions to be entered in a computer (such as keyboard, mouse, scanner)
- **Process:** The computer performs useful operations by manipulating the data in many ways. This manipulation is called processing.
- **Output:** The devices that allows information to be represented (i.e., given: - out) to the user, such as display screen or printer.

Input Devices:

An input device is any machine that feeds data into a computer.

Mouse: A mouse is a hand handled pointing device for computer, involving small object fitted with one or more buttons.



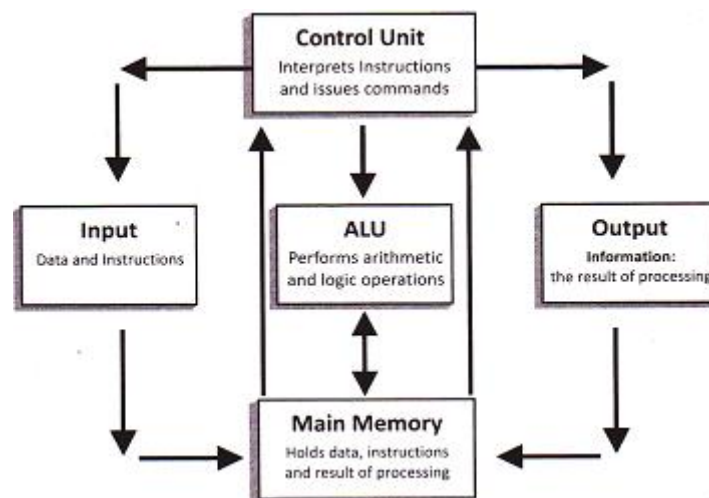
- **Joystick:** This is a computer input device especially helpful when playing computer games.



- **Microphone:** The microphone is used to record sounds using the computer.
- **Scanner:** A Scanner is an external device used to record data on to the computer.
- **Touch Screen:** A Touch Screen is a display device the allows the user to interact with a computer by using their finger.
- **Light Pen:** A light pen is a light sensitive pointing device commonly used to select or otherwise modify text or data on a screen

Processing Devices:

The computer performs useful operations by manipulating the data in many ways. This manipulation is called processing examples list of words or numbers, modifying documents and pictures according to user instructions and drawing graphs. A computer processing data in the CPU.



When you ask a question to someone, they take in the input process and give the output. Your brain does it every second, it uses eyes, nose, mouth etc., as input devices and then processes the information that they fed it and then tell you are seeing, eating or listening to.

For example, as you seen in real life, cooking, - The ingredients are the inputs, cooking them is the process and the food prepared is the output in computer.

- **Memory:** This part stores the data and information. Memory is the internal storage area in the computer system. The memory identifies data storage that comes in the form of chips, tapes or disks.
- **Control Unit:** Control unit handles all processor operations of the computer. It directs all input and output flow fetches the data for instructions from the memory.
- **ALU:** An ALU is term as Arithmetic Logic Unit is a major component of the Central Processing Unit of a computer system. The main purpose of the ALU is to perform mathematical operations such as addition, subtraction, multiplication and division.

Output Devices:

Output can be meaningful information and can appear in a variety of forms as numbers, characters, pictures and printed pages.

- **Monitor:** This is also known as Video Display Unit (VDU). It is used to display a wide variety of information such as text, graphics, video, animation, icon etc.
- **Speaker:** Speakers are popular output devices with computer systems. They receive audio input from the computer's sound card and produce audio output in the form of sound.
- **Plotter:** A Plotter is a computer hardware device much like a printer used for printing graphics.
- **Headphones:** Headphones are a hardware device that help us to listen to music and sounds.
- **Printer:** Printer is an external hardware output device that print text or graphics on paper.

Keywords

- **Data** – Numbers & words that are typed in.
- **Information** – Data that has been processed to give it meaning.

Exercise Corner

A. Tick (✓) the correct answer.

1. The data we type into a computer act as?
a. Input b. Output
2. A computer follows this cycle?
a. B.P.O b. I.P.O
3. We use this device to give input?
a. Keyboard b. Monitor
4. The device shows us the output?
a. Mouse b. Monitor

B. Circle the correct outputs.

1. Milk
2. Paper
3. Clay
4. Water
5. Corn

C. State (T) for true and (F) for false statement

- a) Computers give inaccurate results. _____
- b) A computer works at a very high, one second is a very long time for a computer. _____
- c) Computers can store huge amount of data permanently. _____
- d) Hard disk, the main storage device is found inside the CPU cabinet. _____

D. Circle the correct option:

- a) Devices that are used to give instructions to the computer are called
 - i) output devices
 - ii) input devices
 - iii) storage devices
 - iv) processing devices

- b) On paper a printer gives us a copy of our document. Such a copy is called a
 - i) softcopy
 - ii) paper copy
 - iii) easy copy
 - iv) hardcopy

- c) An example of computer software is.
 - i) MS Paint
 - ii) mouse
 - iii) Wire
 - iv) monitor

E. Fill in the blanks to complete the sentences.

Diligent	Speed	Memory	mistakes	Decisions
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- a) A computer is it can work for long hours.
- b) A man can make _____ while typing, but a computer is accurate.
- c) Man, and computer both have _____.
- d) A computer cannot take its own _____.

F. Give the full form of the following acronyms:

VDU

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CPU

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DVD

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G. Name the Hardware devices shown below.



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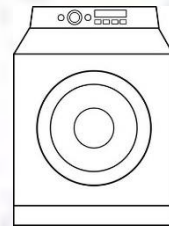
6. Taking hint from the pictures name the steps in the IPO cycle for washing clothes.



1) _____



2) _____



3) _____



4) _____