

Class III

Note:-

- This is the assignment for the students of class-3, based on chapter-1, “**Introduction to Computers**”.
- Students are suggested to go through the chapter.
- Students can use a separate notebook (Computers revision notebook) for the given assignment.
- Solved computers worksheet (based on PT-2 syllabus) will be provided later.
- Students are suggested to first go through these links:-

1. <https://youtu.be/H6o35wOVPZY>

2. https://youtu.be/wwnQ9_PiYeU

Lesson -01

Introduction to Computers

Computer

All machines work in three steps:-

Input- Processing - Output

Computer is a machine. It also works on IPO cycle. Computer accepts the data, processes it and gives a meaningful result. The process of input, processing and output of data is called IPO (Input - Process - Output) cycle.



COMPUTER SYSTEM

A computer system is defined as a machine that is used to generate information from data. Data are the raw facts and figures. Information is meaningful data. A computer system has different parts that together make it work.

These parts are: Hardware and Software.

You play games on a computer. A game is an example of a software and things such as the mouse, keyboard, monitor and joystick are examples of **hardware**.

You draw pictures using the mouse in Paint program. The Paint program is an example of software and the mouse is an example of hardware. **You can touch or feel the hardware parts but you cannot touch the software**

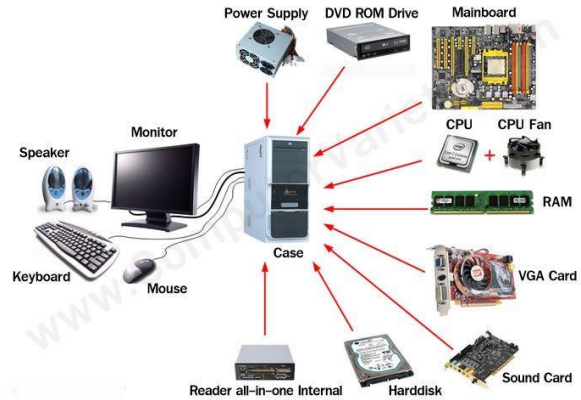


➤ COMPUTER HARDWARE

Computer hardware refers to the parts of a computer system that you touch and feel such as monitor, CPU, keyboard, mouse, printer, speaker, microphone and headphone. In other words, computer hardware refers to all the electronic and mechanical parts of a computer system.

Some commonly used hardware parts are:

- Monitor
- Keyboard
- Mouse
- Printer
- CPU box
- Headphone



You know that some body parts like the brain, heart, liver and lungs are inside your body. Similarly, the computer also has some hardware parts inside it.

These parts are present in the CPU box.

Some of these are:

- Motherboard
- Microprocessor
- Hard disk
- SMPS
- RAM

▪ Categories Of Hardware

Hardware is categorised into three types of devices according to their function.

✓ **Input Devices**

The devices which are used to give input to the computer are called input devices like keyboard, mouse, microphone and scanner.

✓ **Processing Device**

The device which is used to process the input data is called processing device. CPU is a processing device.

✓ **Output Devices**

The devices which are used to show the output of the processed data are called output devices like monitor, printer, headphone and speakers.



➤ COMPUTER SOFTWARE

Software is the set of programs (instructions) that tells a computer what to do.

Some of the popular software are :

- Microsoft Office
- Windows 7
- Photoshop CS6

Types of Software There are two types of software:

1. System software
2. Application software

Application Software

The application software is software that helps you in doing some specific work. For example, you use Paint program to draw. You cannot do sums using Paint. To do sums, you use the calculator program. For example Paint, Window media player , wordpad ,calculator.

System Software

As your parents controls and manages different works at your home, the system software control and manages the overall activities of a computer system. So, the system software is like a manager of a computer system. System software runs the application software. When you start your computer, a software also starts with it. This software is called the **operating system**. Operating system is an example of system software.

some operating systems are: -

- Windows XP
- Windows 8.1
- Windows 7
- Windows 10

Key Points

- ❖ A computer is also known as a computer system.
- ❖ A computer accepts data, processes it and gives out the results.
- ❖ A computer has two major parts: hardware and software.
- ❖ Both hardware and software together help the computer to work.
- ❖ Computer hardware refers to all the electronic and mechanical parts of a computer system.
- ❖ Software is a set of programs that tell a computer what to do
- ❖ There are two types of software :- application software and system software.

Assignment -01

Fill in the blanks: -

1. The process of input , processing and output of data is called as _____ cycle.
2. The game you play on computer is an example of _____.
3. _____ is present inside the CPU box.
4. _____ is an example of input device.
5. We can touch and feel the _____.
6. _____ is a software used to do sums on a computer.
7. _____ is a software used to do drawing in computer.
8. System software is like a _____ of a computer system.
9. _____ is an operating sysytem.
10. A computer _____ has different parts that together make it work.
11. A computer has two parts _____ & _____.
12. Printer, monitor are examples of _____ devices.
13. Software is a set of _____.

Answer the Following questions: -

1. What are the two types of computer software?
2. Name any two-hardware parts present inside the CPU box.
3. What is a computer system?
4. What is computer hardware?
5. Name any two :-
 - a) Software _____
 - b) Hardware _____
 - c) Operating system _____
 - d) Games you play on computer _____
 - e) Drawing softwares _____
 - f) Application Software _____
 - g) System Software _____

Class IV

Note:-

- This is the assignment for the students of class-4, based on chapter-1, “**Introduction to Computers**”.
- Students are suggested to go through the chapter.
- Students can use a separate notebook (Computers revision notebook) for the given assignment.
- Solved computers worksheet (based on PT-2 syllabus) will be provided later.
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 1. <https://youtu.be/h9F-skKtgDI>
 2. <https://youtu.be/FLQBAe0gkRA>

1.



Introduction To Computers

LEARNER'S OUTCOMES

After completing this chapter, you will be able to:

- ❖ identify, name and classify input devices, output devices, processing device and storage devices
- ❖ define computer memory
- ❖ differentiate between primary memory and secondary memory

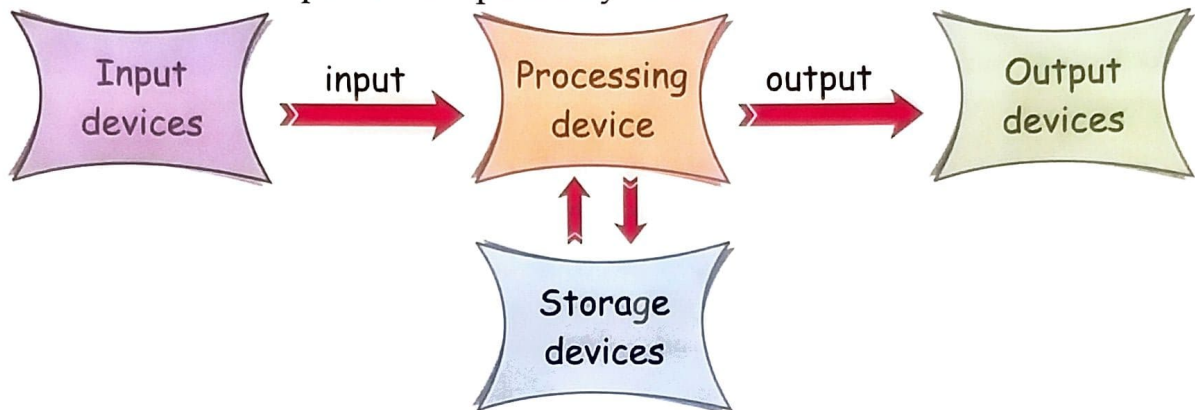
Use Cordova Smart Class Software on the smart board in class to learn about input devices, processing device, storage devices and output devices.

INTRODUCTION

A computer is made up of four types of devices.

➤ input devices ➤ processing device ➤ output devices ➤ storage devices

Look at the diagram given below showing how these devices are connected to each other to form a complete computer system.



Let us learn about input devices, processing device, output devices and storage devices.

Input Devices

You enter **data** and **instructions** into the computer by means of input devices. The most commonly used input devices are **keyboard** and **mouse**.

A keyboard is used to input your work into the computer.



keyboard

A mouse is used to draw pictures and select objects and text on the computer.



mouse



Do You Know

Data is anything that you know is true. Data are facts that may consist of numbers, texts, images, audio, video or a combination of these. For example 1, 5 and 7 are data, your name and age is also data.

Some other input devices are joystick, scanner, microphone, touchpad and light pen.

It is used to play games on the computer.



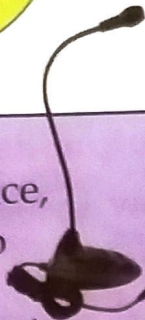
joystick

It is used to select objects on screen. It is also used to draw figures directly on the screen.



light pen

It is used to record voice, music and sounds into the computer.



microphone

It is used to input pictures into the computer.



scanner



touchpad

It is used to move the mouse pointer with your finger. As you move your finger on the flat surface of the touchpad, the mouse pointer also moves in the same direction.

ICT Update

1. An Optimus Tactus Touch Keyboard is a keyboard that does not have any physical keys.
2. The Magic Mouse is the world's first multi touch mouse that lets you click or double-click anywhere on its touch surface.



Processing Device

The processing unit of a computer is **Central Processing Unit (CPU)**. The CPU is present inside the **CPU box**. The CPU does all the calculations of the computer.



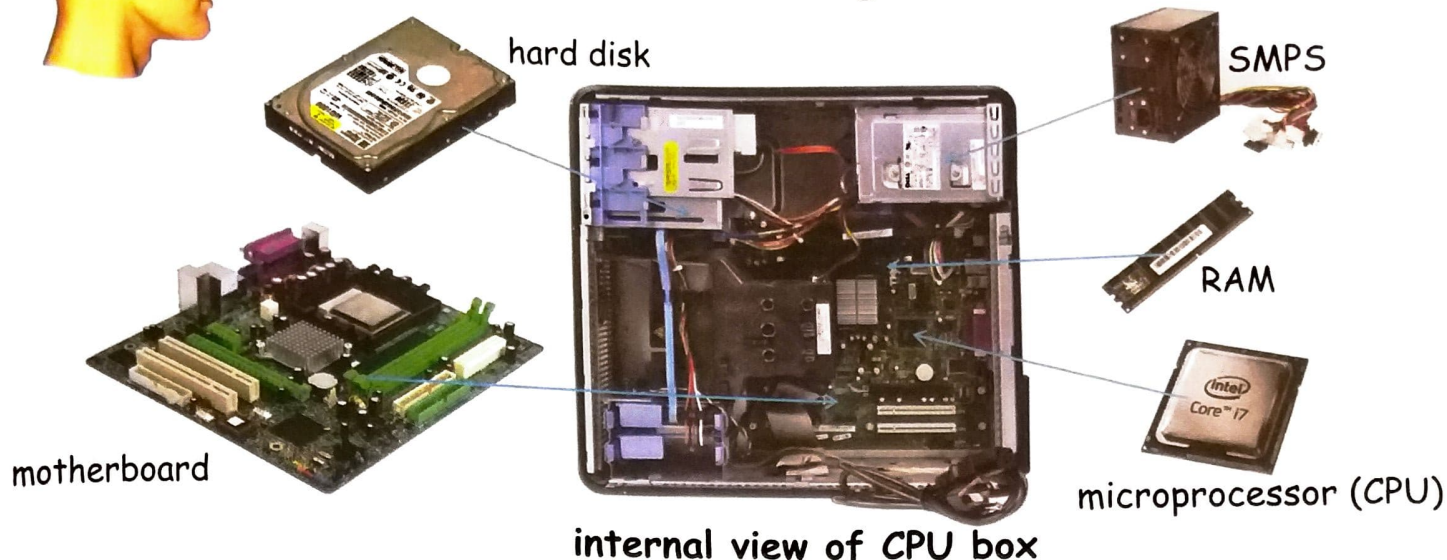
CPU (microprocessor) CPU box



human brain

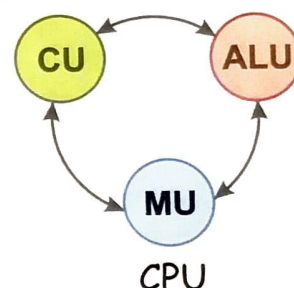


Do you know what your brain does for you? It remembers things and takes decisions. It also does calculations and many other things. The CPU is known as the **brain of the computer**. The computer does all its work through the CPU (microprocessor).



CPU has three parts:

- **ALU (Arithmetic and Logic Unit)** : It does all the calculations.
- **CU (Control Unit)** : It controls all the activities of the computer. It tells other parts of the computer what they should do.
- **MU (Memory Unit)** : It stores data and information temporarily.



Do You Know

When you process data and put it in a meaningful form, it becomes information. So, processed data is called information.

Practical In Computer Lab

Cross Curricular – Science



Perform the following tasks :

1. Open Microsoft Word 2010 and type the data as given below.

Kinds of food :

Energy-giving foods – Rice, Wheat, Potato, Cheese

Body-building foods – Pulses, Milk, Flesh, Eggs

Protective foods – Fruits, Vegetables

2. Save the file with the name 'kinds of food.docx'.
3. Click on File tab → Print option and see the print preview of the document.



Output Devices

Output devices show the **result** of the work done by the computer. The most commonly used output devices are **monitor** and **printer**.

Monitor

It shows the work being done by the computer. There are mainly two types of monitors.



CRT monitor

CRT (Cathode Ray Tube): It is a traditional, glass-screen television like monitor. It is big and heavy so consumes lot of electricity and desk space.

LCD (Liquid Crystal Display): It is the newer, flat panel display. It is light weight and consumes less electricity and desk space.



LCD monitor

Printer

It helps you to take the output on the paper. There are mainly three types of printers.



Dot matrix printer



Inkjet printer



Laser printer

Some other output devices are **speakers**, **projector** and **plotter**.



plotter

They help you to listen music and sounds.



speakers

It is used to take large printouts of drawings on paper sheets.

It is used to display videos, images or computer data on a larger screen.



projector



Multiple Choice Questions

Tick (✓) the correct option.

- Input devices are used to enter into the computer.
 (a) data ☐ (b) keys ☐ (c) icons ☐
- is used to draw figures directly on the screen.
 (a) Joystick ☐ (b) Scanner ☐ (c) Light pen ☐
- devices are used to display the result.
 (a) Input ☐ (b) Output ☐ (c) Processing ☐

Storage Devices

These devices are used to **store data** and **information** in the form of bits and bytes in a computer. A **bit** is the smallest unit of data and has either a value 0 or 1. A **byte** is a group of 8 bits. It is the standard unit of storage in a computer. For example: 10110111 is a byte representing a data in computer.

Some of the other data storage units are as given :

Data Storage Units

1 Nibble = 4 Bits
1 Kilobyte (KB) = 1024 Bytes
1 Megabyte (MB) = 1024 KB
1 Gigabyte (GB) = 1024 MB
1 Terabyte (TB) = 1024 GB
1 Petabyte (PB) = 1024 TB
1 Exabyte (EB) = 1024 PB
1 Zettabyte (ZB) = 1024 EB
1 Yottabyte (YB) = 1024 ZB

Storage devices or **memory units** are the integral parts of a computer system. Now, let us learn more about them.

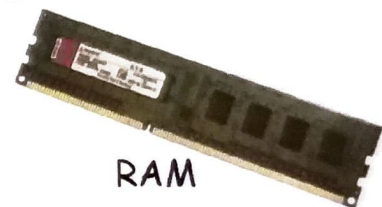
Memory

The data and instructions that are entered into the computer system through input units are to be stored inside the computer in some storage media. This storage media is known as **memory**. There are **two** types of computer memory :

- primary memory
- secondary memory

Primary Memory : It is the **main memory** of the computer. It is present on the **motherboard**. Primary memory is of **two** types : **RAM** and **ROM**.

❖ **RAM (Random Access Memory)** : It is used for holding the data temporarily while the computer is working. Its data gets erased when the computer is switched off.



RAM

❖ **ROM (Read Only Memory)** : It holds the instructions given by the manufacturer to operate the computer. It is a permanent memory.

There are **three** types of ROM :

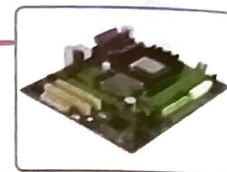
- ⊗ **PROM** (Programmable Read Only Memory)
- ⊗ **EPROM** (Erasable Programmable Read Only Memory)
- ⊗ **EEPROM** (Electrically Erasable Programmable Read Only Memory)









ROM

Remember

Motherboard is the main board present inside the CPU box. The CPU and other internal parts of a computer are attached to it.



Secondary Memory : The secondary memory is used to store the data **permanently**. Its data is not erased even when the computer is switched off. Some commonly used secondary storage devices are as follows:

	Hard Disk stores all the software and data. It is fixed inside the CPU box.
	Compact Disk is a portable device that stores large amount of data.
	DVD(Digital Versatile Disk) is physically similar to compact disk but can store about seven times as much data as a CD. It is used to store and distribute high quality audio and video.
	Blu-ray Disk is developed to enable recording, rewriting and playback of high-definition(HD) video, as well as storing large amounts of data. It can store more than five times the storage capacity of traditional DVDs.
	Pen Drive is a small portable device that stores very large amount of data. Pen drive is also called as flash drive.
	Cloud Storage is a service used for storing the data online. A user just needs an Internet connection to access the data online. Google Drive, OneDrive, Dropbox are the popular cloud storage providers.



Assignment -01

Fill in the blanks: -

1. Input devices are used to enter _____.
2. _____ is used to draw figures directly on the screen.
3. _____ devices are used to display the result.
4. A bit is _____ and _____.
5. A byte is a group of _____ bits.
6. Primary memory are _____ & _____.
7. Three types of ROM are _____, _____ and _____.
8. _____ stores data and information temporarily on the CPU.
9. _____ is the smallest unit of data.
10. _____ holds the instructions given by the manufactures to operate the computer.
11. All the internal parts of a computer including CPU are attached to _____.
12. Cpu has three parts _____, _____ and _____.
13. Three types of Printer are _____, _____ and _____.

Write the full forms of the following: -

1. ALU
2. CU
3. MU
4. LCD
5. CRT
6. RAM
7. ROM
8. PROM
9. CPU
10. DVD

Answer the Following questions: -

1. Write two examples for each of the following
 - a. Input Device ----
 - b. Output Device -----
 - c. Storage Device -----
2. What is a Printer? Also name three types of printer.
3. What is hard disk?
4. Explain the types of primary memory.
5. What is secondary memory? Explain any two secondary storage devices.