

LESSON
1

HARDWARE AND SOFTWARE

Children, now you have understood that computer is an amazing machine that can do different types of jobs. It has different parts that work together to form a computer system.

The two basic parts of a computer system are:

- **HARDWARE**
- **SOFTWARE**

HARDWARE

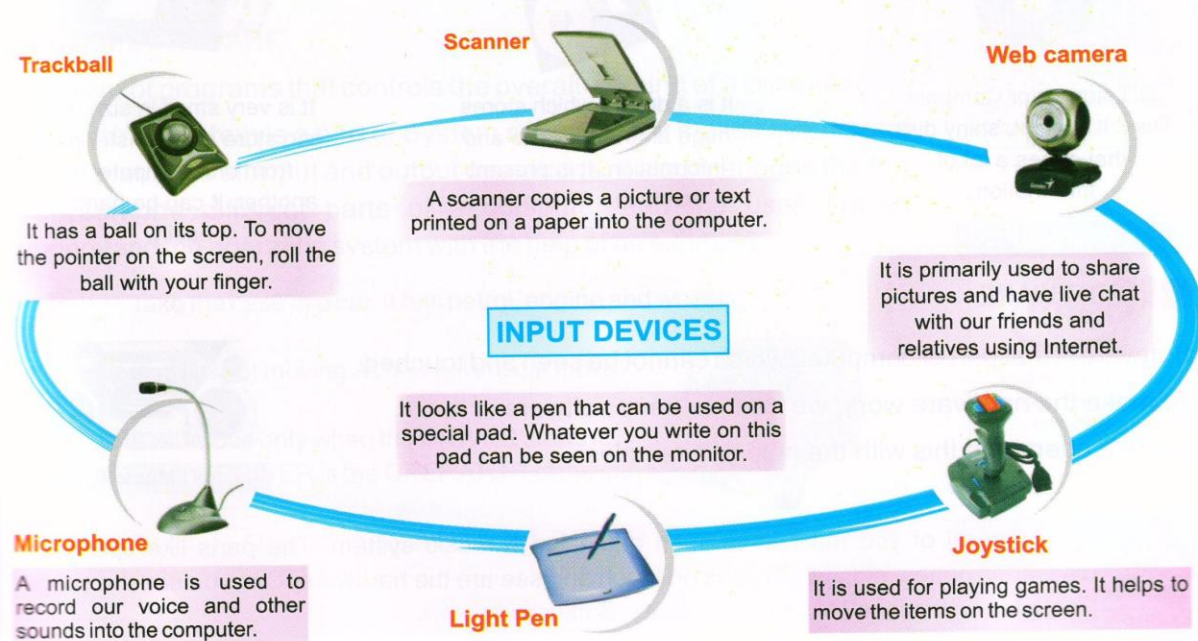
The physical parts of a computer which you can touch and see are called **Hardware**.

A human body consists of different parts. The outer parts of a body are visible but the parts like brain, lungs, heart, etc., which are inside, cannot be seen. Similarly, in a computer, we can see the parts of the hardware that are outside, e.g., monitor, keyboard, etc. They are attached to the CPU by cables. Some parts of hardware are inside the CPU. You can see them only when you open the body of a CPU box, e.g., Hard disk, CPU chip, etc.

Hardware of a computer is further classified into three parts: Input, Output and Storage devices.

INPUT DEVICES

There are special types of hardware devices that are used to input words, numbers, or pictures into a computer. These are called **Input devices**, e.g., keyboard, mouse, joystick, microphone, etc.



OUTPUT DEVICES

The devices which display the information and results are called **Output devices**, e.g., monitor, printer, etc.

Monitor



It looks like a TV screen. Whatever you type on the keyboard can be seen on the monitor. It also displays the processed information.

Printer



It prints the output which you see on the computer screen on paper.

Speaker



Speakers are used to hear music and sounds stored in a computer.

STORAGE DEVICES

The devices used for storing data are called **storage devices**. Hard disk is the main storage device, which stores the entire work we do on a computer. Other important devices, like, CD, Pen drive and DVD are also used to store information.

CD



CD stands for Compact Disk. It is a flat, shiny disk that stores a lot of information.

Hard Disk



It is a device which stores huge amount of data and information. It is present inside the CPU box.

Pen Drive



It is very small in size, but can store and transfer data from one computer to another. It can be handled easily.

SOFTWARE

Software is that part of computer, which cannot be seen and touched.

To make the hardware work, we need to have software in it.

Let us understand this with the help of examples:



Fig. 1.1: Music System



Example

Children, all of you must have seen and used a music system. The parts like speakers, cassettes, tapes, etc., which you can touch and see are the hardware. Can you see the songs recorded on the tape? No, because that is Software.

A CD is hardware, but the songs or movies, which are stored in it are software, as they cannot be touched and seen.



Example

Likewise, a TV is hardware and the programmes that you watch on it are software.

Let us go back to the working of a computer. Which of the following step is done by software?

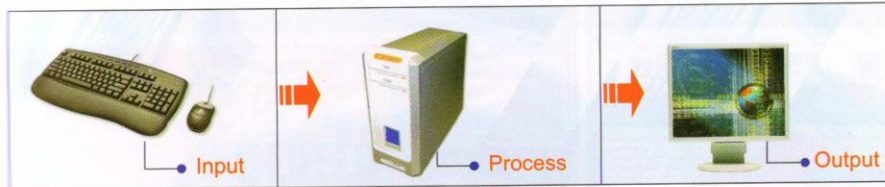


Fig. 1.2: Working of a Computer

Yes ! Processing is done by software. It takes the input from the user, processes it and displays the output on the monitor.

Thus, we can define, Software is a set of instructions given to the computer to do a particular work.

There are two types of software:

1. System Software

2. Application Software

SYSTEM SOFTWARE

It is a set of programs that controls the overall working of a computer .

Operating system is a part of System software that makes a computer run. It manages all input and output operations. It also manages the link between the different parts of a computer and the user. Let us understand the operating system with the help of an example.



Example

Take the case of a car. It has petrol, engine and wheels.

But, it is not moving. When will the car move?

It will move only when the **DRIVER** starts it.
So, the DRIVER is the OPERATOR of the car.



Similarly, **Operating System** is the **DRIVER** of a computer, which makes it run. Without an Operating System, a computer cannot work on its own.

Fact File



Alan Turing is known for his contribution towards modern computers. He is considered as Father of Modern computers.

Quick Quiz

Which part of our body acts as an input unit?

Fact File



Lady Ada Lovelace is regarded as the first computer programmer.

Know the Fact



Intel is the world's largest processor company.

Quick Quiz

Who acts as the Operating System in your school?

APPLICATION SOFTWARE

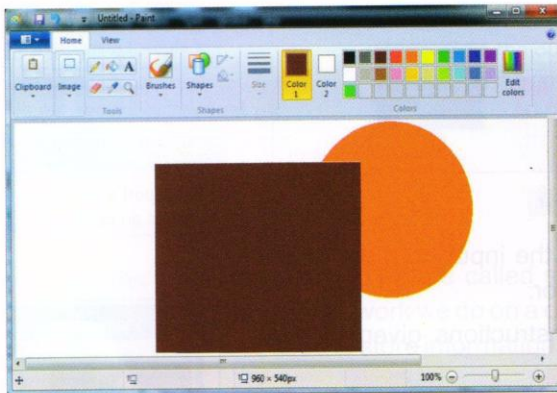
The software that does a specific type of work is called **Application software**. Let's understand this with the help of an example:



You have a juicer in your house. What do you do with that? You can only extract juice of fruits and vegetables with it. This indicates that you can do a specific type of job with one machine.



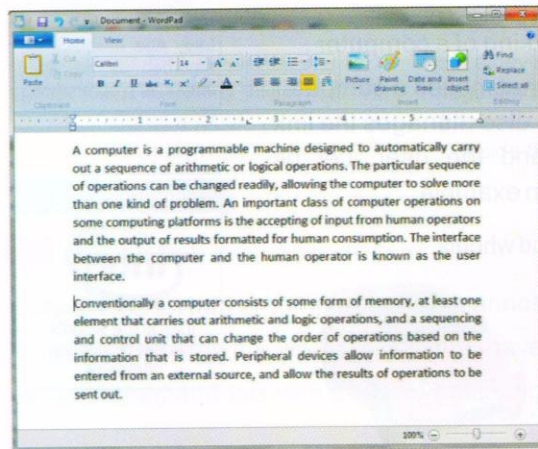
There are different types of application software that help in doing specific types of jobs.



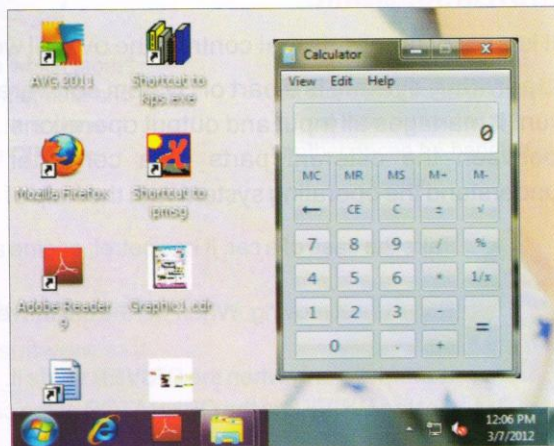
MS Paint: Used for drawing pictures.



Games: Used for entertainment.



WordPad: Used for typing and making corrections in the text.



Calculator: Used for doing calculations.



Points At a GLANCE

- ◆ The two basic parts of a computer are: Hardware and Software.
- ◆ The parts of a computer, which you can touch and see are called hardware.
- ◆ A group of instructions given to the computer is called software.
- ◆ System software is a set of programs that controls the overall working of a computer.
- ◆ The software that is designed to do a specific type of work is called Application software.



BRAIN DEVELOPER

A. Fill in the blanks:

1. The parts of a computer that can be touched and seen are called
2. The devices used for storing data are called
3. The devices which give results after processing are called
4. A set of instructions given to the computer is called
5. The manages the overall working of a computer.

HINTS

- Software
- Hardware
- Operating system
- Storage devices
- Output devices

B. State True or False:

1. The software that can do a specific type of work is called System software.
2. A scanner is an input device.
3. Paint program is used for drawing pictures.
4. A printer is an output device.
5. The devices through which we get output are called input devices.

C. Match the following by colouring the pair with the same colour:

Input device	Printer
Data	Hard Disk
Storage device	Songs
Hardware	90+85+69+98+76+84
Software	Keyboard



D. Application Based Questions:

1. Kabir sings a song and records it in the computer. Which input device did he use?
.....
2. Sheena draws a greeting card using a specific software. What type of software did she use?
.....

E. Name the device used for each of the following jobs:

1. A device commonly seen in video parlours for playing games.
2. A device used to record our voice and other sounds in a computer.
3. A device that can read words, pictures or numbers from paper and store them in a computer.
4. A device used to hear sounds and music stored in a computer.

F. Answer the following:

1. What is software? Name its types.
.....
.....
2. What is a storage device? Give any one example.
.....
.....
3. What do we call the hardware devices that are used to enter words, numbers or pictures?
.....
4. Which application software is used for typing and making corrections in the text?
.....
5. Name the program used for performing calculations.
.....