

1

Know Your
Computer

SNAP RECAP

1. Monitor, CPU, keyboard, mouse and UPS are the important parts of a computer.
2. A computer can also have speakers, printer, scanner, microphone, headphone, joystick and web camera.
3. Information given to the computer is called data.
4. Devices used to enter information into the computer are called input devices, such as keyboard and mouse.
5. The device that helps to convert data into meaningful information is called a processing device. The CPU is the processing device in a computer.
6. Devices used to show the result of processing are called output devices, such as monitor, speakers, headphones and printer.
7. Devices used to store data are called storage devices, such as hard disk, floppy, compact, disc and pen drive.

LEARNING OBJECTIVES

You will learn about:

- | | |
|--------------------------------------|---|
| 1. definition of a computer | 4. types of software |
| 2. hardware and software | 5. operating system |
| 3. examples of hardware and software | 6. difference between hardware and software |



Introduction

In the previous class you learnt that computers are man-made machines. They are used to do many things. For example, solve sums, check spellings, listen to music, draw pictures, play games, etc.

You also learnt that computers function in the following way.

1. You enter data or instructions into a computer using the keyboard or the mouse (Fig. 1.1). This data or instruction is called **input**.
2. The computer converts the data into meaningful information with the help of the CPU. This step is called **processing**.
3. After processing the data, the computer gives you the result on the monitor. You can also take a printout of this result. This result is called the **output**.

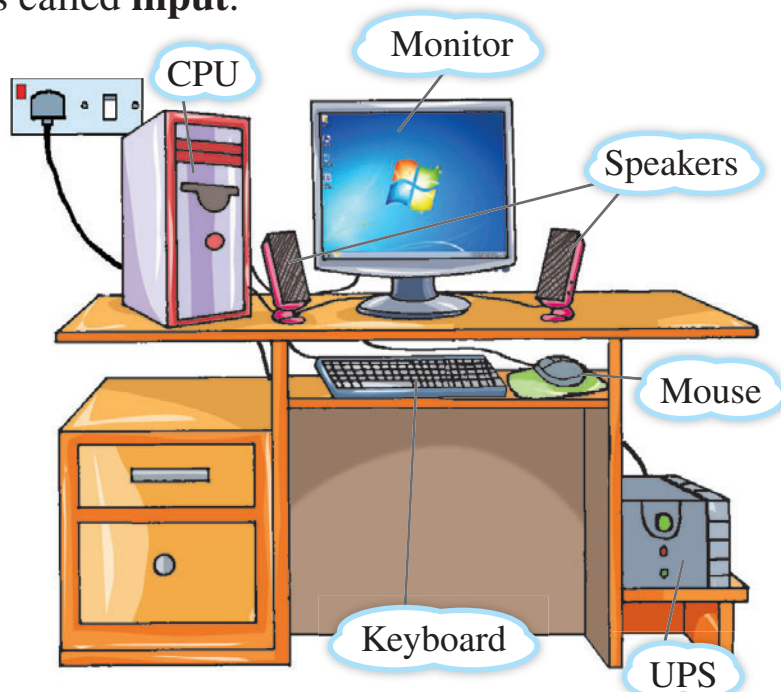


Fig. 1.1 Computer system

Therefore, a computer may be defined as an electronic device that accepts data, processes it and gives the result. It follows a cycle which is known as the **Input–Process–Output Cycle (IPO Cycle)**.

Hardware and Software

Different parts of a computer can be divided into two categories, namely, hardware and software (Fig. 1.2).

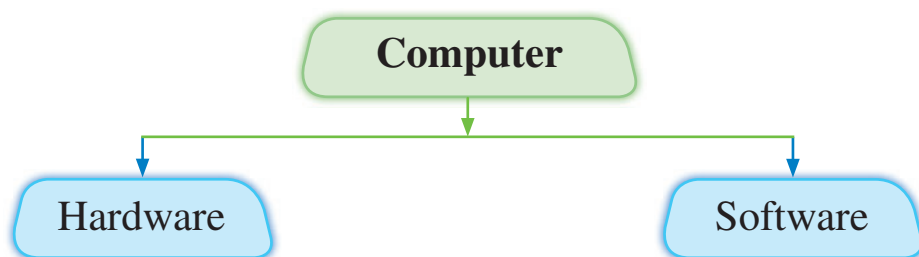


Fig. 1.2 Different parts of a computer

The physical parts of a computer that you can see and touch are called **hardware**. The Central Processing Unit (CPU) is an example of hardware. There are more parts inside the CPU which you can see only if you open up the CPU box. Other types of hardware are connected to the CPU using wires and cables (Fig. 1.3).

These hardware are used for performing various tasks. For example, the monitor is used for displaying pictures, the keyboard is used for typing text, the mouse is used for giving instructions, the printer is used for printing pictures and documents. Joystick, microphone, scanner and speakers are some more examples of hardware.

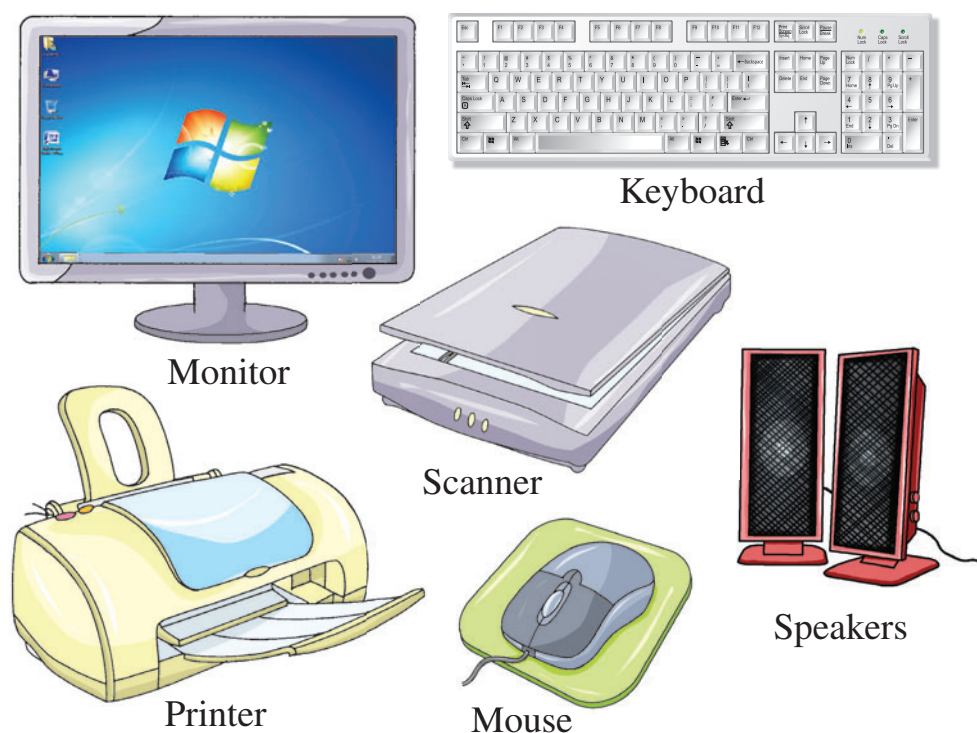


Fig. 1.3 Hardware

The set of instructions that tells the hardware how to perform a particular task is called **software**. Unlike a hardware, we cannot see or touch a software.

A computer needs software to work. *Without software, a computer would be of no use.* To understand what software is, let us take the example of a television (TV). The TV itself is a hardware. But the programs you watch on TV are software (Fig. 1.4).



Fig. 1.4 A family watching TV

There are different kinds of software to do different kinds of work. For example, MS Word is a software program used for creating text documents. Paint is a software program used for drawing pictures. These software programs are readily available in the market. These can be bought and installed on your computer. Some software programs are also available for free on the Internet.

Types of Software

There are two types of software – application software and system software.

Application software

Software that is used to perform one special kind of task is called **application software**. There are many different types of application software. Some of these are:

Word processing software: These software programs are used to write letters, stories, reports, etc. The things you write with a pen can also be written in a word processing software using a keyboard. The most commonly used word processing software is MS Word (Fig. 1.5).

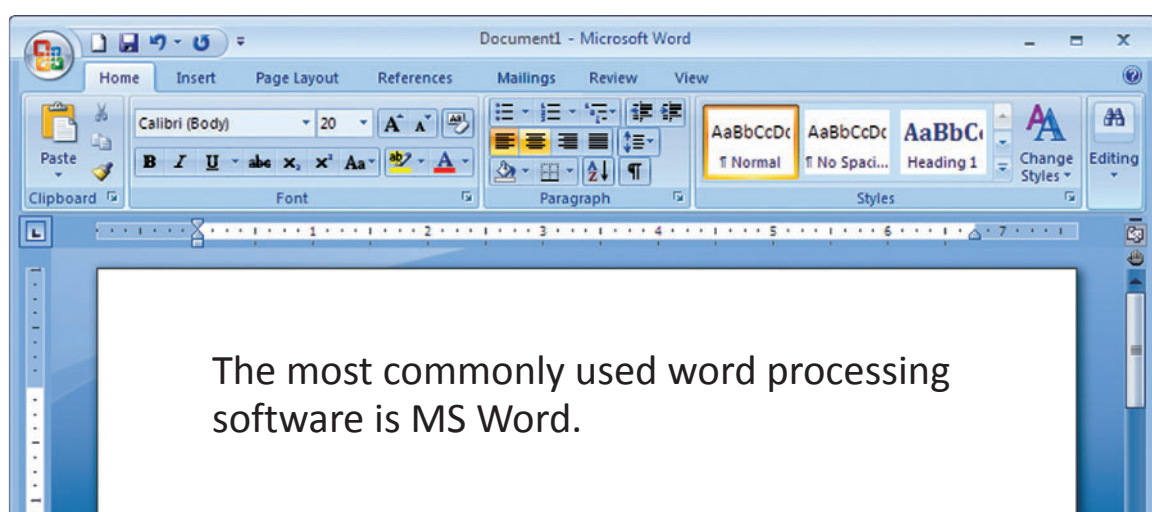


Fig. 1.5 MS Word – A word processing software

Multimedia software: These software programs are used for drawing pictures, playing games (Fig. 1.6) and watching movies. Paint is a very simple kind of multimedia software.

System Software

Software that is used to control the operation of a computer is called **system software**. System software is needed to run the computer. It refers to the files and programs that make up your computer's **operating system**.



Fig. 1.6 Car racing game

Operating System

The operating system controls the overall working of the computer. It manages the hardware and the other software programs.

To understand what an operating system is, think of it as a traffic policeman. A traffic policeman tells cars and motorcycles when to move, in which direction and at what speed (Fig. 1.7). In the same way, an operating system tells the computer when to run which software program and at what speed.



Fig. 1.7 A traffic policeman directing traffic

There are many different types of operating systems available in the market. The most common operating systems are Microsoft Windows and Mac OS. Some operating systems are also available for free, for example, Linux and Unix.

FACT-FILE

Microsoft Windows is the most popular operating system. It runs almost 90 per cent of the home computers in the world.

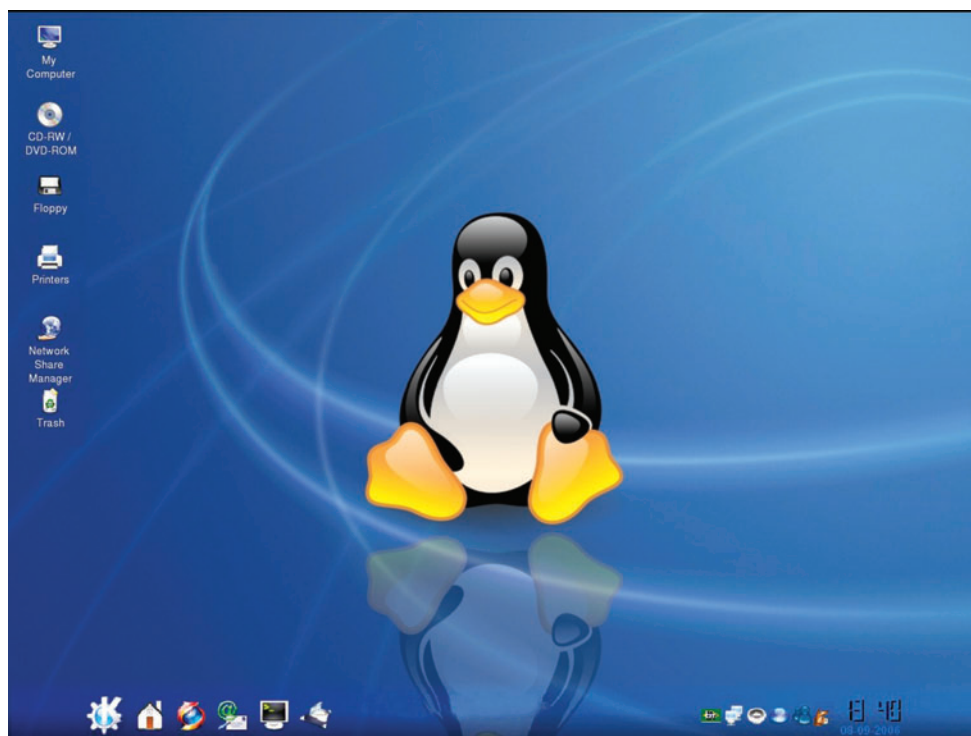
There are two types of operating systems: *single-user operating system* and *multi-user operating system*.

Single-user operating system

Only one user can work on a single-user operating system at a given time. Microsoft Windows and Mac OS are both single-user operating systems. Such operating systems are mostly used at home.

Multi-user operating system

Many users can work on a multi-user operating system at the same time or even at different times. For this, one main computer is attached to many other computers. Unix and Linux are both multi-user operating systems. These are mostly used in big offices where there are lots of computers.



Linux operating system

Difference Between Hardware and Software

You already know that hardware are parts of the computer you can see and touch. Software is the set of instructions that tells the hardware how to perform a particular task. However, there is one more important difference between hardware and software.

Do you remember that a computer follows the Input–Process–Output cycle to perform tasks? Can you guess which parts of this cycle relate to hardware and software, respectively?

It is the hardware that performs input and output tasks or operations. For example, when you solve a sum on the computer, you first type in the numbers using the keyboard (Fig. 1.8). Then the computer shows the result on the monitor (Fig. 1.9).



Fig. 1.8 Input through hardware



Fig. 1.9 Output through hardware

It is the software that does the processing tasks (or operations). Therefore, the hardware supports the Input and the Output part whereas the software supports the Process part of the IPO cycle.

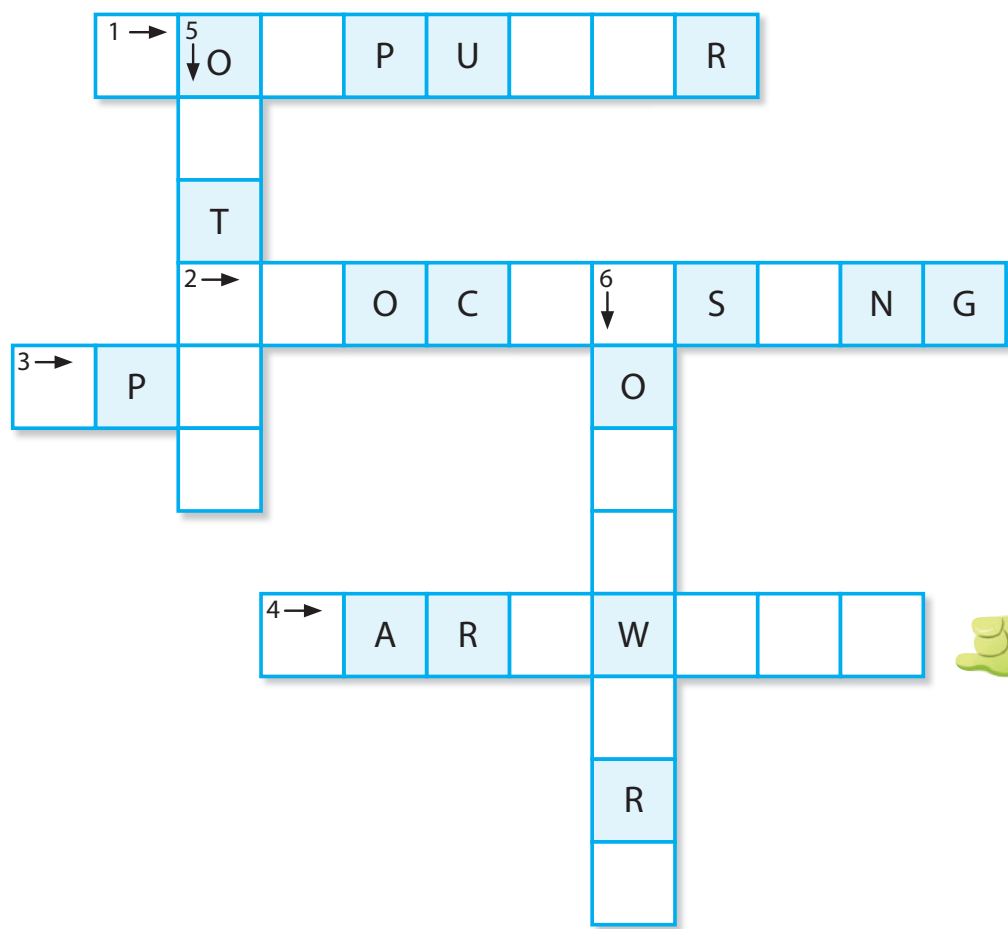
ACTIVITY

A. Tick (✓) the correct answer from the choices given.

- 1. Paint
- 2. MS Windows
- 3. Mac OS
- 4. Linux
- 5. MS Word

Application software <input type="radio"/>	System software <input type="radio"/>
Application software <input type="radio"/>	System software <input type="radio"/>
Application software <input type="radio"/>	System software <input type="radio"/>
Application software <input type="radio"/>	System software <input type="radio"/>
Application software <input type="radio"/>	System software <input type="radio"/>

B. Solve the crossword using the hints given below.



Across

- 1. It is an electronic device.
- 2. Operations done by a software.
- 3. It is an example of hardware.
- 4. These are the parts of the computer that you can touch and feel.

Down

- 5. The result the computer gives after processing the data.
- 6. The set of instructions that tells the hardware how to perform a particular task.

GLOSSARY

Hardware: These are the physical parts of a computer that you can see and touch.
IPO cycle: It stands for Input–Process–Output cycle.
Operating system: It controls the overall working of a computer.
Software: It is the set of instructions that tells the hardware how to perform a particular task.

NOW YOU KNOW

- 1. Computer is an electronic device. It accepts data, processes it and then gives the result. This is the IPO Cycle.
- 2. Different parts of a computer can be divided into two categories: hardware and software.
- 3. Without software a computer would be of no use.
- 4. Software can be of two types: application software and system software.
- 5. There are two types of operating systems: single-user operating system and multi-user operating system.

EXERCISE

A Fill in the blanks with the correct word.

System Electronic Mac OS Application CPU

- 1. The computer is an device.
- 2. The computer cannot run without software.
- 3. The software performs one special kind of task.
- 4. Processing is done by the
- 5. is an example of a single-user operating system.

B Match the following.

- | | |
|-------------------|-----------------------------------|
| 1. Computer | a. MS Word |
| 2. Input | b. Electronic device |
| 3. Input-Process- | c. CPU |
| 4. Hardware | d. Output |
| 5. Software | e. Data entered into the computer |

C State whether the following sentences are True or False.

- 1. A computer is an electronic device.
- 2. Output is the data that you enter into a computer.
- 3. MS Word is a kind of hardware.
- 4. The computer cannot work without system software.
- 5. MS Windows is an application software.

D Answer the following questions.

- 1. What is a computer?
- 2. What is the Input–Process–Output cycle?
- 3. Give any two examples of hardware.
- 4. What are the two kinds of software?
- 5. Name the part of a computer that you cannot see or touch.

LAB WORK

- A. Go to the computer lab and make a list of different kinds of hardware you find there. Also, check the school computer and make a list of the software installed.
- B. Draw two input devices and two output devices using Paint.

TEACHER’S NOTES

- 1. Show the students pictures of the latest input, output and storage devices available in the market these days.
- 2. Ask the students to collect information regarding different versions of Windows operating system available in the market and share it in the class.