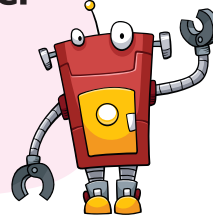# Computer Hardware and Software

2

Learning in this chapter
- ❂ Computer system
- ❂ Hardware
- ❂ Software

Computer System

Do you know that all the parts of the computer together make a computer system?

A computer system is defined as one that is able to take a set of inputs, process them and create a set of outputs or you can say that computer system is a machine that is used to generate information from data. This is done by a combination of hardware and software.

Thus a computer system has two parts. These are :
- ■ Hardware
- ■ Software

You draw pictures on a computer with the help of MS Paint. Here MS Paint is an example of software and things such as mouse, keyboards, monitor with which you draw pictures are examples of computer hardware.

Hardware

The physical parts of a computer that we can touch and see are called computer hardware. Mouse, keyboard, monitor, system unit, printer, etc. are examples of computer hardware. It is also referred to as the machinery or equipment of computer.

Do you Know? The outermost visible layer of a computer is called skinware.

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

Input Devices

Devices that help us to enter inputs (data and instructions) into the computer are called Input devices. E.g., Keyboard, Mouse, Joystick, Microphone, etc.

	Keyboard A keyboard is used to enter data and instruction and to give commands to the computer.
	Mouse The Mouse is a pointing device. It is used to give inputs to the computers by pointing, clicking and dragging.
	Joystick The Joystick is an input device which is used for playing computer games. A joystick also has some push buttons, which can be pressed to give inputs.

	### Microphones The Microphone is an input device that helps us to input sound into the computer. It is called a mic in short.
	### Web Camera It helps to capture images and videos and sends them to remote computers through the Internet. This device is mainly used in video calling over the Internet.
	### Scanner A Scanner is an input device that helps us to capture images from paper and input them onto the computer.

Do *you* **Know?** Main job of the input devices is to take inputs from the user and convert them into a from (electronic signals) that a computer can understand.

Activity

Here are some more input devices, which work like a mouse, Use a mirror to read their names.

Touchpad   Trackball   Light pen

Output Devices

Any devices which shows us the result of processing done by the computer is called an output device.

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Let us learn about some of the common output devices.

Monitor It shows visual output in the form of text, pictures and videos on its screen.	
Printer A printer is an output that is used for printing pictures, graphics and text output on paper.	
Speakers The computers give a sound output through the Speakers. When we play a multimedia CD, we need to connect the speakers to the computer to hear its sound.	

Storage Devices

The devices which are used for storing data are known as storage devices. Some common storage devices are shown below :

The Hard Disk or hard disk drive is the computer's main storage device. It has a very large storage capacity. It stores our work and all the programs when the computer is switched off.

The Compact Disk or CD is a shiny circular disk. It can store information like video, audio, text, etc. We need a CD drive to read the data from a CD.

A Digital Versatile Disk or DVD looks similar to a CD but can store much more data than a CD. A DVD drive can read the data both from a CD and DVD.

The Pen Drive is a small storage device but it can store a lot of information. The pen drive is connected to a USB port present on the System Unit.

FAMOUS PERSONALITY

The pen drive (also known as the USB drive and the keychain drive) was invented by Pua Khein Seng of Taiwan.

Software

Software is that part of a computer, which cannot be seen and touched. To make the hardware work, we need to have software in it.

Thus, software is the set of programs that tell a computer what do .Software acts as an interface between the user and the hardware.

Types of Software

There are two main types of software.

(i) Application Software

(ii) System Software

Application Software

Application software is a type of computer program that performs a specific task. This task can be personal, educational and business function.

Application software are created to facilitate a variety of functions including but not limited. The most common application software programs are used by millions every day and include :
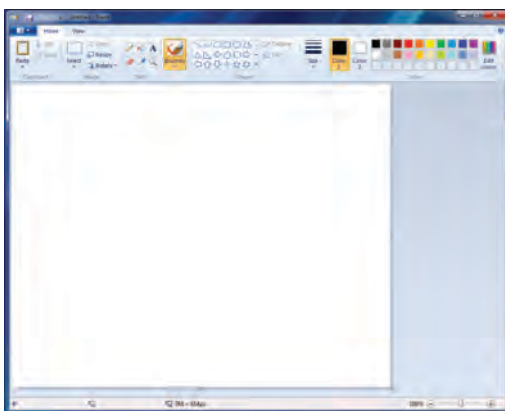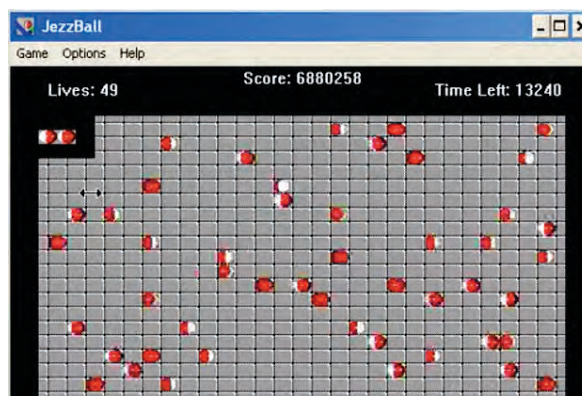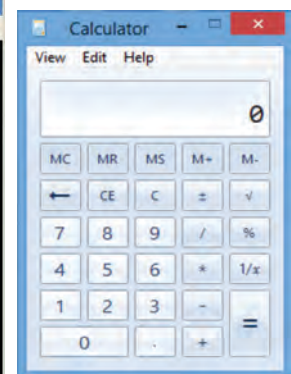

| MS Word | Note Pad | Window Media Player |

| Paint | Game | Calculator |

System Software

System Software is a type of computer program that is designed to run a computer's hardware and application programs. It provides to platform to other software.

Thus system software includes the programs that are dedicated to managing and controlling overall activities of a computer itself.

Example of system software is Operating system (OS). When you start your computer, operating system also start with it. The window in your computer is an operating system, which is example of system software.
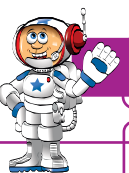

Window 8

Window 10

POINTS to Recall

- All parts of computer together make a computer system.
- A computer system has two parts- Hardware and software.
- Physical components of a computer are known as hardware.
- Software is set of instructions given to a computer to do a specific task.
- Hardware and software are complementary to each other.

TERMS to Learn

- Computer system : A machine use to generate information from data.
- Hardware : The physical parts of the computer that you can touch and hold like the mouse, CPU, etc.
- Software : Set of programs given to a computer to do a particular task.
- Program : Set of instructions is called program.

Multiple Choice Questions :

A. Tick (✓) correct answer :

1. Two parts of computer system are:

   (a) Hardware ⃝   (b) Software ⃝   (c) Both of these ⃝

2. Which of the following is not an example of computer hardware?

   (a) Mouse ⃝   (b) Window 8 ⃝   (c) Keyboard ⃝

3. Which of the following is not a component of computer hardware?

   (a) System software ⃝   (b) Input devices ⃝   (c) Internal component ⃝

4. Which of the following is not an example of Application Software?

   (a) Operating System ⃝   (b) Calculator ⃝   (c) MS Paint ⃝

5. Which controls and manages the overall activity of a computer?

   (a) MS word ⃝   (b) Hardware ⃝   (c) Software ⃝

B. Fill in the blanks with the help of given hints :

> **HINTS :** Software, Hardware, Computer system, Hardware, Software, Paint

1. _____ is a machine that is used to generate information from data.

2. Two parts of computer system are _____ and _____.

3. To draw pictures on a computer, we use _____ program.

4. _____ is refered to as the machinery or equipment of computer.

5. We can not see or touch _____ .

C. Write (T) for True and (F) for False statements :

1. Combination of hardware and software is used to generate information from data. ☐

2. Information is entered as input into the computer. ☐

3. A scanner is an input device. ☐

4. Software is a program given to a computer to do a specific task. ☐

5. Notepad is the example of system software. ☐

D. Name the device used for the following jobs :

1. A device used to give commands to the computer _____

2. A device used to capture images from paper and input them onto the computer. _____

3. A device used for printing pictures, graphics and text on a paper. _____

4. A device used for hear sounds and music stored in a computer. _____

5. A device that is connected to the USB port of System Unit. _____

E. Match the following correctly by drawing lines :

1. Speakers   (a) Shows output on its screen

2. Headset   (b) Gives the sound output

3. Printer   (c) Used to play games on computer

4. Monitor   (d) Prints output on paper

5. Joystick   (e) Combination of headphones and microphones

F. Very Short Answer Questions :

1. Can hardware works without software?

   _____

2. Name any two hardware devices.

   _____

3. What are two types of computer software?

   _____

G. Short Answer Questions:

1. Explain computer system.

   _____
   _____

2. What is computer software? Give example.

   _____
   _____
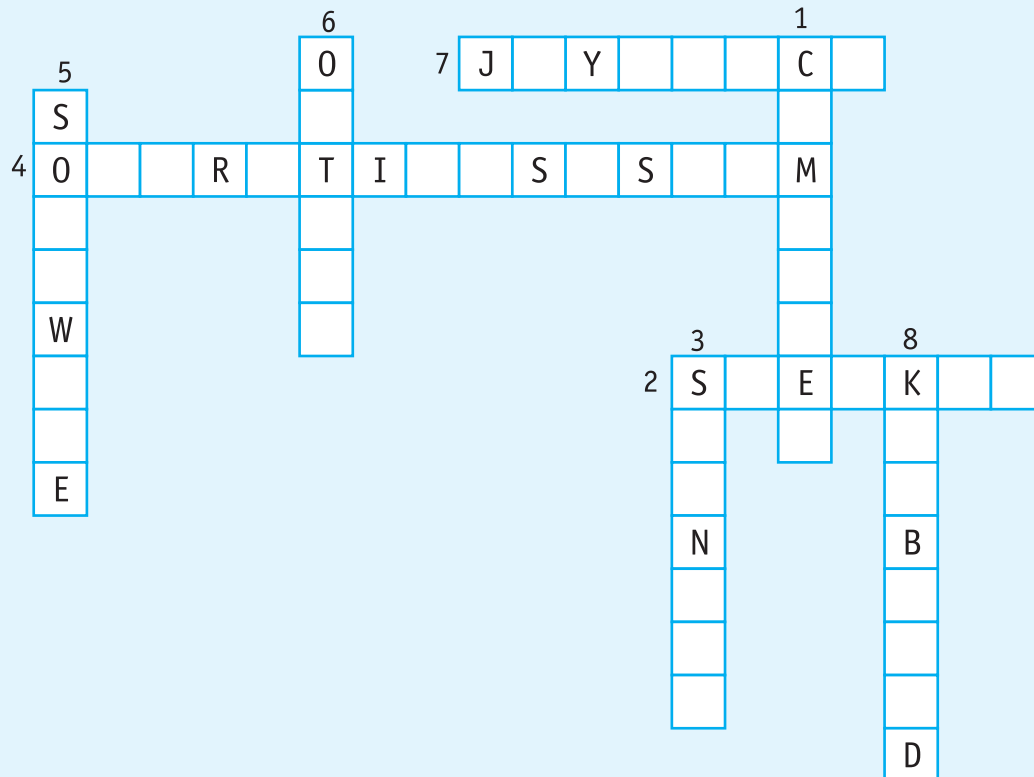
3. Why we use application software?

   _____
   _____

A. **Mark on the types of output each device produces :**

Devices	Text	Audio	Video
Monitor			
Printer			
Speaker			

B. **Read the clues to solve the crossword :**

1. I am a machine that can do various jobs _____
2. I play music stored in a computer _____
3. I feed capture images and text into a computer _____
4. I am a part of the system software that makes a computer run _____
5. I am set of programs to tell computer what to do? _____
6. The result that we get on the screen _____
7. I am a device used for playing games. _____
8. I am a device used to type letters, and characters. _____

Crossword:

- 7 Across: J _ Y _ _ _ C
- 4 Across: O _ _ R T I _ S _ S _ _ M
- 2 Across: S _ E _ K _ _
- 5 Down: S O _ _ W _ _ E
- 6 Down: O _ _ _ _ _
- 1 Down: C _ _ _ _ _ M
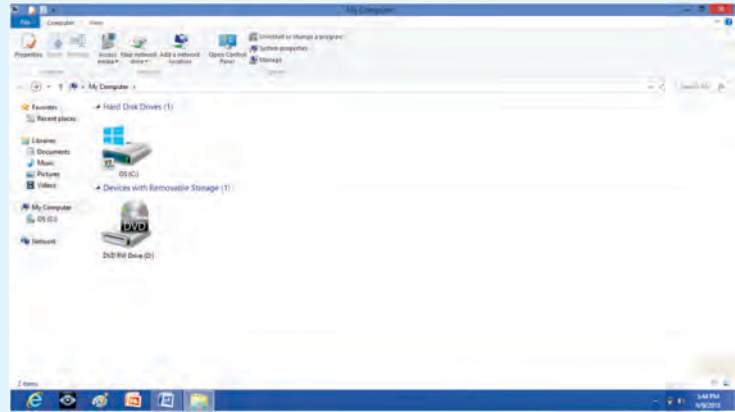- 3 Down: S _ _ N _ _
- 8 Down: K _ B _ _ _ D

Lab Activity

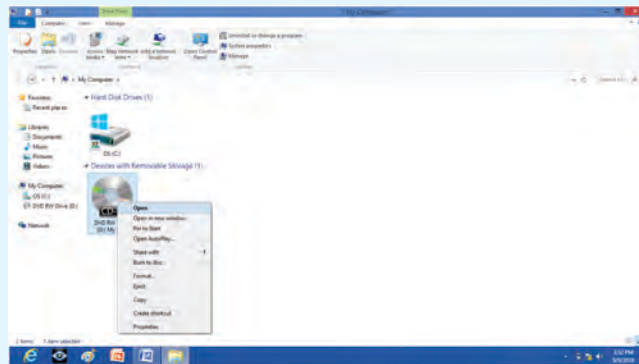**Prepare a chart and paste it in your computer room to show the types of software.**

Practical 1 : To open the hard disk drive and observe its contents.

1. Click on the Search icon on the Start screen, Type My Computer in the search box and press the Enter key.

   .... My Computer window will open showing icons like these that represent your hard disk drives.

2. Double click on a hard disk drive icon. ... The contents stored on the hard disk will be displayed in a window.

3. Double click on any item shown in the window, to view its contents.

4. Now close down all the windows that you have opened to see the Desktop again.

Practical 2: To watch an educational CD/DVD on the computer.

1. Make sure that the speakers are connected to the computer.
2. Insert an Educational CD/DVD into the CD/DVD drive.
3. Open the My Computer window and locate the CD/DVD drive icon.

4. Right click on the CD/DVD drive icon and click on the Open.

   ... The CD/DVD will start playing.

For Teacher's

1. Explain about the importance of Computer System to the students.
2. Divide your class in three groups and each group should describe features of one of the following.

   (a) Input devices   (b) Output devices   (c) Storage devices