



ACADEMIC WORLD SCHOOL™ BEMETARA

1

Introduction To Computers



LEARNER'S OUTCOME

After completing this chapter, you will be able to :

- ❖ understand the concept of input, process, output
- ❖ identify, name and classify input devices, output devices, processing device and storage devices
- ❖ define computer memory
- ❖ differentiate between Primary and Secondary memory

INTRODUCTION

A computer is made up of four types of devices.

input devices

processing device

output devices

storage devices

Let's understand the terms input, process and output.

Suppose your mother wants to make bread toasts in the toaster. It involves the following steps :

Step-1 She puts slices of **bread (input)** inside the toaster.

Step-2 The toaster **bakes (processing)** the bread for some time.

Step-3 You get the bread **toasts (output)** as a result.



bread (input)



toaster (processing)



toasts (output)

All machines generally follow these three steps :

input

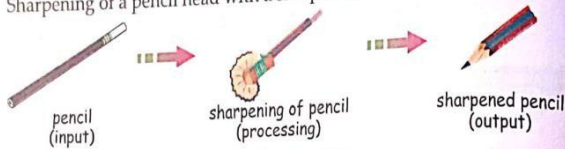
processing

output



Let us take a few examples.

❖ Sharpening of a pencil head with a sharpener.



❖ Making shirt from cloth on a sewing machine.



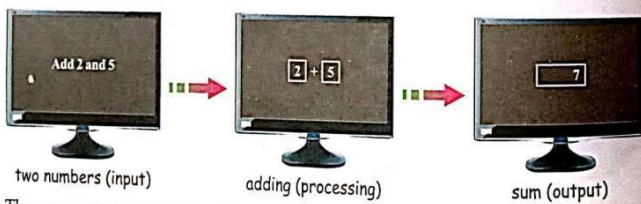
A computer is a **machine**. It also follows these three steps.

For example, if you want to add two numbers, say 2 and 5 on the computer, you should follow the three steps:

Step-1. Type 2 and give the command '+' (here the command is 'Add') and then type 5 to the computer. This is **input**.

Step-2. The computer adds the two numbers according to your instructions. This is **processing**.

Step-3. The result of adding 2 and 5 is 7, that is displayed on the monitor. This result is the **output**.



Thus computer accepts the data, processes it and gives a meaningful output. The process of input, processing and output of data is called as IPO (input, process & output) cycle. The computer does the above works using some devices. These are: input devices, processing device and output devices.

INPUT DEVICES

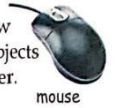
You enter **data** and **instructions** into the computer by means of input devices. The most commonly used input devices are **keyboard** and **mouse**.

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



keyboard

A mouse is used to draw pictures and to 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** 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

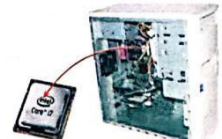
IT UPDATE

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

Fun With Computers-4

OUTPUT DEVICES

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

It shows the work being done by the computer.



monitor

It helps you to take the output on the paper.



printer

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

They help you to listen music and sounds.



speakers

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



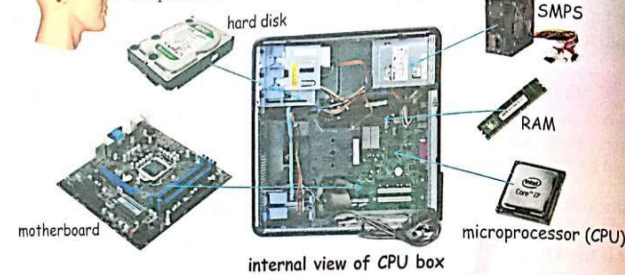
plotter

Do You Know?

There are mainly three types of printers-Dot Matrix printer, Inkjet printer and Laserprinter.

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).



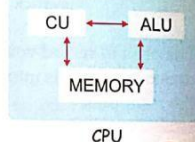
internal view of CPU box

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.



CPU

Do You Know?

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

Multiple Choice Questions

Tick (✓) the correct option.

1. devices are used to display the result.
 (a) Input (b) Output (c) Processing
2. Input devices are used to enter..... into the computer.
 (a) data (b) food (c) icons
3. Subtracting two numbers is.....
 (a) input (b) processing (c) output

Practical in Computer Lab

Step-1: Open MS Word 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.

Step-2: Save the file with file name 'kinds of food.docx'.

Step-3: Click on Office button and select Print option.

Step-4: Click on Print Preview and see your final output.

STORAGE DEVICES

These devices are needed to **store data** and **information**. These are called storage devices because they store data for computers.

Storage devices or memory units are integral parts of a computer system. Now let us learn more about storage devices.

Fun With Computers-4

Fun With Computers-4

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

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.

ROM (Read Only Memory) : It holds the instructions given by the manufacturer to operate the computer. It is a permanent 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 **hard disk**, **compact disk** and **pen drive**.

hard disk



It stores all the software and data. It is fixed inside the CPU box.

compact disk



It is a portable device that stores large amount of data.

pen drive



It is a small portable device that stores very large amount of data.

DO YOU KNOW?

- ◆ CD-ROM stands for Compact Disk- Read Only Memory.
- ◆ Pen drive is also called flash drive.



REMEMBER

Secondary memory devices are sometimes exclusively referred as storage devices.

Key Points

- A computer is made up of four types of devices.
- You enter data and instructions into the computer using input devices.
- The processing unit of a computer is known as Central Processing Unit (CPU).
- Output devices show the result of the work done by the computer.
- The data and instructions are stored inside the computer in some storage devices.

Exercise-1

INTRODUCTION TO COMPUTERS

A.Fill in the following blanks with appropriate answer.

1. _____ gives result on paper.
2. All internal parts of a computer inside the CPU are attached to _____
3. _____ unit inside the CPU does all the calculations of the computer.
4. _____ is used to play games on the computer.
5. Input devices are used to enter _____ into the computer.

B.Write the answer in one word.

1. It is a portable device that stores large amount of data. _____
2. It store all the software and data and it is fixed inside the CPU box. _____
3. This memory is used to store the data permanently. _____
4. This memory is used to hold the data temporarily while working on the computer. _____
5. This device is also called flash drive. _____

C. Answer the following questions:

1. What is printer? Also name three types of printer.
2. What is hard disk?
3. Name the two types of memory present in computer system?
4. What is secondary memory? Explain any two secondary storage devices?
5. What is an input device ?Write two examples of it.
6. What is processing device? Write two examples of it.
7. Write the abbreviation for the following: RAM, ROM, ALU, and MU.
8. What is the difference between primary memory and secondary memory?
9. What is an output device? Draw different output devices.
10. Write the brand name of all the devices attached to your computer system?

D.HOTS(Higher Order Thinking Skills)

1. Anisha want to prepare an invitation card for his birthday using Paint Program. Suggest her the devices that will help her to take the output?
2. Ansh want to play games on the computer. Suggest him the input device to be used?
3. Draw a picture depicting IPO cycle and label them properly.

LEARNER'S OUTCOME

After completing this chapter, you will be able to

- ❖ name different versions of Windows
- ❖ identify files and folders in Windows 7
- ❖ create a new file or folder
- ❖ select multiple files or folders
- ❖ open, rename, delete, move and copy a file or folder

INTRODUCTION

Dear children! You have learnt in your previous class that **MS Windows** is an operating system that controls the overall activities of the computer. MS Windows operating system has many flavours called **versions** such as MS Windows 95, MS Windows 98, MS Windows 2000, MS Windows XP, MS Windows Vista, MS Windows 7 and now MS Windows 8.

WINDOWS 7

Windows 7 is one of the most popularly used operating systems. It is developed by **Microsoft** for use in general-purpose computer systems i.e. **Personal Computers (PC)**. It is used both at home and for business purpose.

It provides you with a **Graphical User Interface (GUI)**. It uses pictures (icons and buttons) for performing different operations. So, you do not have to remember all commands. You can perform functions like creating, renaming, copying and deleting files and folders just by using a mouse.

FEATURES OF WINDOWS 7

Windows 7 has a very attractive look with colourful themes. It comes with **new features, improved programs and faster speed**. Among the new features available in Windows 7, there are new **technologies** that run in the background, making your computer more efficient and reliable. It has **security tools** that are used to keep your computer more secure.



The **Control Panel** in Windows 7 allows you to change Display settings, Add or Remove programs and change Date and Time. It also helps to manage different resources and functioning of the computer system.



Windows 7 Control Panel

The most common editions of the Windows 7 operating system are **Windows 7 Home Premium, Windows 7 Professional and Windows 7 Ultimate**.

When you start Windows 7, its **desktop** appears on the screen. It has many **icons** on it. These icons are used for opening different programs, files or folders.



Windows 7 desktop

DO YOU KNOW?

Windows 8 is the latest version of Windows.

FILES AND FOLDERS

Suppose, you are drawing a picture in Paint or typing a letter in MS Word. After completing the task, what do you do? You simply save it on your disk with a name.

The area on the disk that contains some information and is saved with a name is known as a **file**. In other words, we can say that a **file is a collection of data stored on some storage device such as a hard disk**.

A **folder** is a place where many files are stored. In other words, the files are contained in a folder. A folder may have one or more files stored in it.

A folder may also contain (store) different folders with files in them. It means there may be both files and folders inside a folder.



folder

DO YOU KNOW?

- ❖ A folder within a folder is called subfolder.
- ❖ Each file in a folder has a name that is unique.

CREATING A FOLDER

Let us learn to create a folder on the desktop.

To create a new folder on your desktop, follow the given steps:

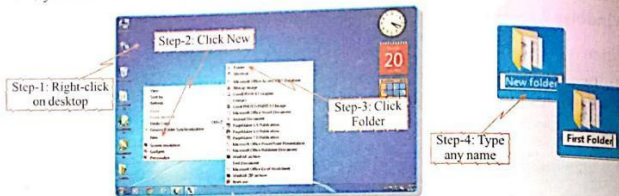
Step-1 Move the mouse pointer away from icons on desktop and right-click the mouse. A shortcut menu appears.

Step-2 Click the New option. A new submenu appears.

Step-3 Click the Folder option. You get a New folder on the desktop.

Step-4 Type the name of the folder as you want. For example, First Folder.

Now, you have a folder on the desktop and you can store files in it.



CREATING A FILE

File can be created in any program in Windows. In fact, you know how to create a file. You have created your files in MS Word and Paint in previous classes. After completing a task, when you save your work by giving a name, a file is created.

OPENING A FILE OR FOLDER

When you have to open a file or folder, simply move the mouse pointer to the required file or folder and double-click on it. It opens and its contents can be viewed.

Practical in Computer Lab

- Step-1:** Create a new folder on the desktop and name it 'My family'.
- Step-2:** Open MS Word. Type your name, parent/guardian's name and home address. Save this file with the name 'My Address' in the folder 'My Family' that you have created on the desktop.
- Step-3:** Close MS Word.
- Step-4:** Open the folder 'My Family' by double-clicking it.
- Step-5:** Open the file 'My Address' by double-clicking it.

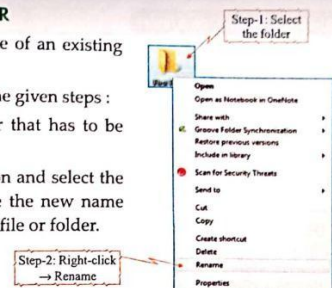
RENAMING A FILE OR FOLDER

Rename means to change the name of an existing file or folder.

To rename a file or folder, follow the given steps:

Step-1 Select the file or the folder that has to be renamed.

Step-2 Right-click the mouse button and select the **Rename** option. Now, type the new name that you wish to give to the file or folder.

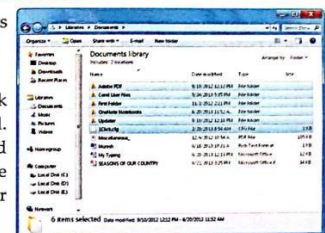


SELECTING MULTIPLE FILES OR FOLDERS

We can select multiple files or folders in two ways: adjacent or non-adjacent.

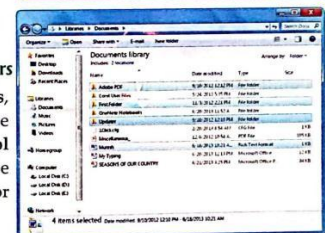
Selecting Adjacent Files Or Folders

To select adjacent files or folders, click the first file or folder to be selected. Then hold down the **Shift** key and click on the last file or folder to be selected. All the adjacent files or folders get selected.



Selecting Non-Adjacent Files Or Folders

To select non-adjacent files or folders, click the first file or folder to be selected. Then hold down the **Control** key and click on each of the items to be selected. All the non-adjacent files or folders get selected.



Multiple Choice Questions

Tick (✓) the correct option.

- Windows 7 is abased operating system.
 (a) GUI (b) CUI (c) KUI
- When you save your work with a name, ais created.
 (a) icon (b) folder (c) file
- Each file in a folder has a name.
 (a) same (b) pet (c) unique

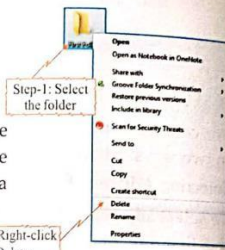
DELETING A FILE OR FOLDER

A file or a folder can be safely deleted.

To delete a file or folder, follow the given steps :

Step-1 Select the file or folder that has to be deleted.

Step-2 Right-click the mouse button and select the Delete option. Windows 7 confirms before deleting the file or folder by displaying a dialog box.



Step-2: Right-click → Delete



Step-3 Press Enter or click the Yes button to delete the file or folder or NO to cancel deleting.

Practical in Computer Lab

Open the folder 'My family' by double-clicking it. Delete the file 'My Address'.

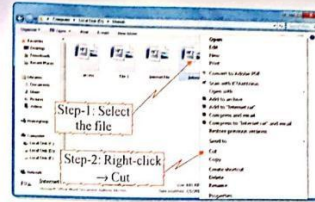
MOVING A FILE OR FOLDER

You can move one or more files or folders from one place to another.

To move a file or folder, follow the given steps:

Step-1 Select the files or folders to be moved.

Step-2 Right-click the mouse and click the Cut option.

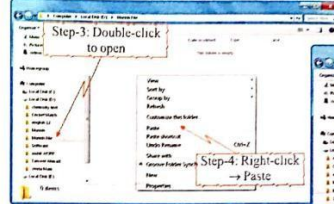


Step-1: Select the file

Step-2: Right-click → Cut

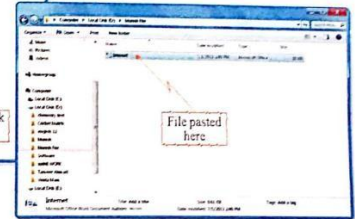
Step-3 Select the location where the file is to be moved. Open this folder by double-clicking it.

Step-4 Now, right-click the mouse and click the Paste option. The file is moved to a new location.



Step-3: Double-click to open

Step-4: Right-click → Paste



COPYING A FILE OR FOLDER

You can copy one or more files or folders in different locations.

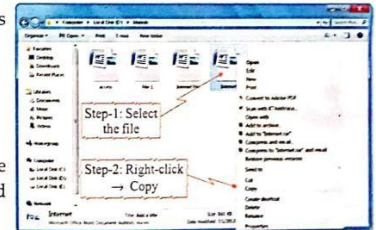
To copy a file or folder, follow the given steps :

Step-1 Select the files or folders to be copied.

Step-2 Right-click the mouse and click the Copy option.

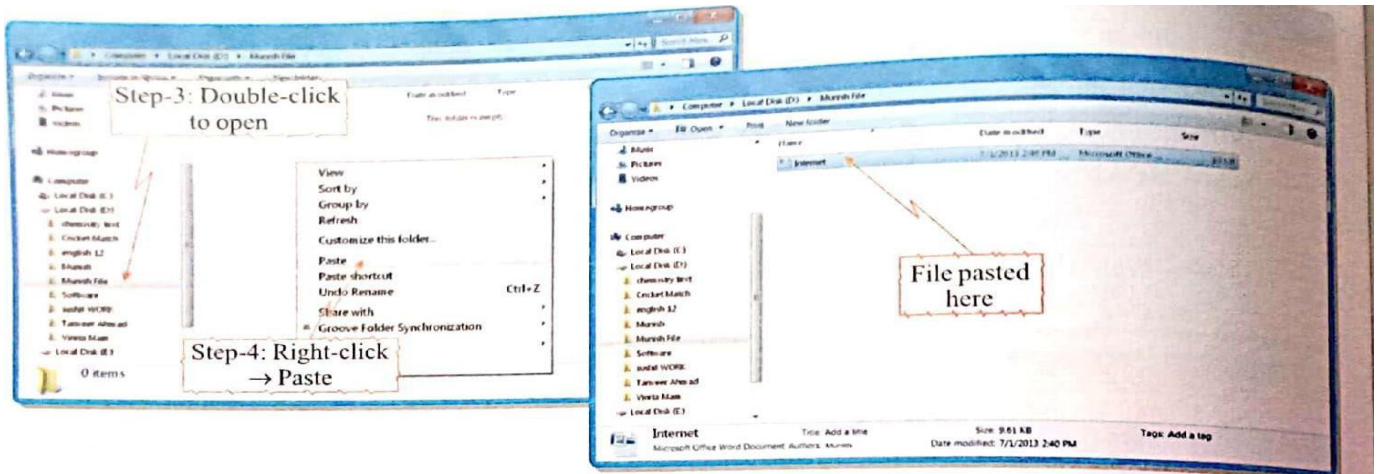
Step-3 Select the location where the file is to be copied and double-click to open it.

Step-4 Right-click the mouse and click the Paste option. The file is copied to a new location.



Step-1: Select the file

Step-2: Right-click → Copy



Practical in Computer Lab

- Create a new folder 'My School' on desktop.
- Cut the folder.
- Now, open 'My Family' folder created earlier and paste 'My School' in it.

Key Points

- MS Windows operating system has many flavours called versions.
- A folder within a folder is called subfolder.
- A file is a collection of data stored on a storage device such as hard disk.
- A folder is a place to store one or more files.

Exercise-2

MORE ON MS WINDOWS'7

A. Fill the blanks with appropriate answer.

1. Windows 7 is a _____ based operating system
2. Windows 7 is developed by _____.
3. MS Windows has many flavours called _____.
4. To select non adjacent files or folders, hold down the _____ key and click the desired items..
5. _____ means to change the name of an existing file or folder.

B . Write the answer in one word.

1. This is a folder within a folder. _____
2. This is a place to store one or more files. _____
3. This is a collection of data stored on a storage device such as hard disk. _____
4. This is created, when you save your work with a name. _____
5. This is a small picture, used to open a program, file or folder. _____

C. Answer the following questions

1. What is Windows' 7 ?
2. What is the full form of GUI?
3. Write two features of MS Windows 7?
4. What is the difference between a file and a folder?
5. What is the use of Copy and Paste command?
6. Which option is used to change display setting of your computer system?
7. Name any two versions of MS Windows?
8. Write the steps to create a folder on the desktop.
9. Write the steps to move a file from one folder to the other?
10. What is a file?

D. HOTS (Higher Order Thinking Skills)

1. Isha has completed her computer project and saved it in a folder 'Project' and she wants to rename the folder as 'Isha-Project' . Suggest her the steps she should follow to rename the folder.
2. Prepare a chart on 'Windows' describing all the versions of Windows and year of launch. Take help from your parents as well.