

LESSON

7

Input Devices

Objective of this Chapter

- 7.1 Input devices
- 7.2 Uses of Input Devices
- 7.3 Keyboard
- 7.4 Mouse
- 7.5 Microphone
- 7.6 Scanner
- 7.7 Web Camera
- 7.8 Touch Pad
- 7.9 Bar Code Reader
- 7.10 Light Pen
- 7.11 Joy Stick
- 7.12 Touch Screen
- 7.13 Track Ball
- 7.14 Magnetic ink card reader
- 7.15 Digitizer
- 7.16 Biometric
- 7.17 Electronic Signature Pad

Introduction

The computer will be of no use unless it is able to communicate with the outside world. Input devices are required for users to communicate with the computer. In simple terms, input devices bring information into the computer these input devices are known as peripherals since they are attached with the CPU and memory of a computer system.

CPU alone cannot function. It has many helping devices. These devices help in its working. Some devices give input to CPU and some receive its output. Devices which give input to computer are called **Input devices**. In this lesson we will study about these devices in detail.



7.1 Input Device

An **input device** is a **hardware** device that sends data to a computer, allowing users to interact with and control it. Devices that give data and instructions to the computer are called Input devices. Input devices are needed to give input to the computer.

7.2 Uses of Input Devices

If CPU is the brain of computer then the Input devices of computer such as key board, mouse, microphone are its eyes and ears, that feed the information into the computer. We use input devices to give data and information to the computer.

Generally used Input devices are :

- ➡ Keyboard
- ➡ Mouse
- ➡ Microphone
- ➡ Scanner
- ➡ Web Camera
- ➡ Joy Stick
- ➡ Light Pen
- ➡ Touch pad
- ➡ Barcode reader
- ➡ Touch screen
- ➡ Track ball
- ➡ Magnetic ink card reader
- ➡ Digitizer
- ➡ Biometric
- ➡ Electronic signature pad

7.3 Keyboard

Keyboard is most common and very popular device which helps in inputting data to the computer. The layout of the keyboard is like that of traditional typewriter. A keyboard has many buttons which are called keys.



There are some additional keys provided for performing additional functions. A keyboard is used for typing letters, words, numbers and special symbols. It is a standard input device. Commonly used Keyboard or standard keyboard has 104 keys.



Fig. 7.1 Keyboard

Types of Keys : Keyboard has five types of Keys. These are

- Alphabetical Keys
- Numeric Keys
- Functional Key
- Special Keys
- Arrow Keys



Fig. 7.2 Keys of Keyboard

7.3.1 Alphabetical Keys (A to Z)

Alphabet keys are used to type characters. These keys are present in the middle of the key board. All the keys A to Z are called alphabet keys.



7.3.2 Numeric Keys (0 to 9)

The numeric keys are used to type numbers. These keys are present below the functional keys. On the right side of keyboard a special pad is present. It contains 17 keys. This key pad is called numeric key pad. This pad is similar to calculator, because along with numbers it also has mathematical signs and enter key. On the left top of the pad, a key named num lock is also provided. The key's of this key pad works if num lock is on. The status of num lock is indicated by the indicator on the keyboard.

7.3.3 Functional keys (F1 to F12)

These are 12 in numbers. These are from F1 to F12. These are located at the top of the keyboard. The function of these keys can be different for different programs. e.g. F1 key is generally used for help.



Fig. 7.3 Functional Keys

7.3.4 Special Keys

Each special key is used to perform a special function. Some special keys with their functions are mentioned as under :

S.No.	Name of Special Key	Function
1	Delete	To delete characters written on right side of cursor.
2	Back Space	To erase character present on left side of cursor.
3	Enter	To start a new line or to execute the command
4	Space Bar	To insert space between two words or texts.
5	Shift	It is used along with other key e.g. when shift and 'a' pressed together will print A.
6	Ctrl	It is also used along with other key e.g. in paint Ctrl and S key when pressed together, they save a file
7	Alt Key	It is also used with another key e.g.- alt + F4 are pressed together to close an open program
8	Caps Lock	When we press caps lock key then an indicator appears on the key board. It means caps lock is on, it means capital letters will be written.



7.3.5 Arrow Keys

These are used to move cursor. These are four in number. These can move up, down, left, right. Arrow Keys are used to move the cursor in all directions.

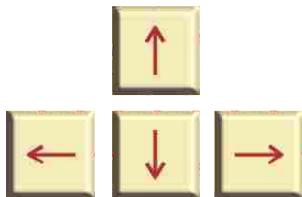


Fig. 7.4 Arrow Keys of Key Board

7.4 Mouse

Mouse is an important Input device. It is used to control cursor on the screen. It is a small device. It is also called **pointing device**. Generally it has three buttons called left button and right button. Wheel is present between these buttons called scroll button. It is called mouse because of its shape. Mouse is rolled over a flat surface. As you move a mouse, the cursor also moves on the screen in same direction. Now days wireless/cordless mouse are also in use.

Mouse pad : The pad on which we move the mouse is known as the Mouse pad.



Fig. 7.5 Mouse

Mouse has following three buttons

- ➡ Left Button
- ➡ Right Button
- ➡ Scroll Button



7.4.1 Left Button

Generally we use the left button. When we press left button once, it is called "click" when pressed twice it is called "Double Click". The programs are opened with double click. While things are selected with single click.

7.4.2 Right Button

When we press right button, it is called right click. It is used to open shortcut Menu.

7.4.3 Scroll Button

It is just like a wheel fixed in the centre of left and right button of mouse. It rotates which is called scrolling. It is used to move screen up and down.

7.5 Microphone

It is also called mike and is used to input/record voice. We can give instructions to computer with the help of mike of our computer. If it has microphone then we can record our own voice. We can listen recorded voice. Those users who can not type, can give input to the computer with microphone. Using microphone we can also talk to our friends on the Internet.



Fig. 7.6 Microphone

7.6 Scanner

Scanner is an input device. It is used to add text and picture in computer. It works like a Photostat Machine. Difference is that Photostat machine gives output on paper while it saves output in computer. Scanners of many types and shapes are available in the market.



Fig. 7.7 Scanner



7.7 Web Camera

Web Camera is used to click photo graphs. We can edit these photos in the computer. It is similar to camera. Difference is that a camera develops photo on a film roll and Web camera saves photos in computer. Web camera is not an expensive device.



Fig. 7.8 Web Camera

7.8 Touch Pad

It is also an input device. Touch pad are used in laptop in the form of a small panel containing different touch-sensitive areas. It is used in place of mouse. The buttons of touch pad are similar to mouse left right button which are up down within touch pad. A touchpad is operated by using your finger and dragging it across a flat surface; as you move your finger on the surface, the **mouse cursor** will move in that same direction, and like most computer mouse, the touchpad also has **buttons** below the touch surface that **enables** you to **click** like mouse.



Fig. 7.9 Touch Pad



7.9 Bar Code Reader

A Barcode reader (or Barcode scanner) is an electronic device for reading printed barcodes. Like a flatbed scanner, it consists of a light source, a lens and a light sensor translating optical impulses into electrical ones. In every single business today barcodes are used for different reasons. These are helpful in stores in order to maintain accurate and updated inventory monitoring. They can help to determine the price of an item. It is a fixed input gadget that is used to capture and read information enclosed in a bar code. This device consist of scanner.



Fig. 7.10 Bar Code Reader

7.10 Light Pen

It is an pointing device. It is just like a pen and is connected to a VDU. The tip of light pen contains a light sensitive element which when placed against the screen, detects the light from the screen enabling the computer to identify the location of the pen on the screen. Light pen have the advantage of drawing directly on to the screen.



Fig. 7.11 Light Pen

7.11 Joy Stick

Joysticks consist of a base and a stick that can be moved in any direction. The stick can be moved slowly or quickly . Some joysticks have sticks that



can also be rotated to the left or right. Because of the flexible movements a joystick allows, it can provide much greater control than the keys on a keyboard. It is an input device consisting of a stick. It has lever that moves in all direction and control the movement of a pointer. It is often used to play video games and usually have one or more push buttons



Fig. 7.12 Joy Stick

7.12 Touch Screen

A type of display screen that has a touch-sensitive transparent panel covering the screen. Instead of using a pointing device such as a mouse or light pen, you can use your finger to point directly to objects on the screen. For example ATM machine, Smart Phones, Smart Boards etc.



Fig. 7.13 Touch Screen

7.13 TrackBall

Track Ball is an input device that is mostly used in notebook or labtop, instead of a mouse. This is a ball which is half inserted by moving fingers on balls, pointer can be moved. Since the whole device is not moved, a track ball requires less space than a mouse. A trackball comes in various shapes.





7.14 Track Ball

7.14 Magnetic Ink Card Reader (MICR)

MICR input devices is generally used in banks because of a large numbers of cheques to be processed every day . The bank's code number an cheque number are printed on the cheques with a special type of ink that contains particles of magnetic material that are machine readable. This reading process is called Magnetic Ink Character Recognition (MICR)



Fig. 7.15 Micr Reader and Code

7.15 Digitizer

Digitizer is an input device which converts analog information to digital form. Digitizer can convert a signal from the television or camera into a series of numbers that could be stored in a computer. They can be used by the computer to create a picture of whatever the camera has been pointed at.





Fig 7.16 Digitizer

7.16 Biometric

Biometric is a type of machine by which a person can be uniquely identified by its body parts like fingerprints, hand, eye etc.



Fig. 7.17 Biometric

7.14 Electronic Signature Pad

It is an electronic device used to capture written signatures and convert them to digital format.



Fig 7.18 Electronic Signature Pad



Points to Remember

1. Input devices are used to give input to computer.
 2. Keyboard is an input device. It looks like a type writer.
 3. Mouse is used to move cursor here and there.
 4. Scanner is used to add text and pictures in the computer.
 5. Web Camera sends photo graphics in the computer.
 6. Mike is used to record voice in the computer.
 7. Touch pad is used in laptop.
 8. Bar Code Reader is used in Big Stores.
 9. Light Pen : It is a pointing device.
 10. Joy Stick is used to play video games.

Exercise

1. Fill in the Blanks using the right option:



2. Write down True or False :

1. Web Camera produce photos on film roll.
2. Scroll button is used to move screen.
3. Joystick is used to control video games.
4. F1 to F12 are functions Keys.
5. Delete key is special key.

3. Short Answer type Questions :

1. What is an input device ?
2. Name Six input devices .
3. Write short Note on Trackball.
4. Write a note on touchpad.
5. What is the use of Microphone?
6. Write a note on MICR.
7. Give use of web Camera.
8. Where is Scanner used?

4. Long Answer type Questions :

1. Write note on Keyboard And its keys In Detail?
2. Write a note on Bar Code Reader?
3. What is Mouse? Explain the functions of Mouse Button.

