PERIPHERAL DEVICES – INPUT OUTPUT DATA ENTRY DEVICES:

These devices are used in sending or feeding data or instructions to the computer. There are many input devices that can be used with the multi-media computers, but only few of them are basically data entry devices.

1. *Key board*: A very popular device you will see with every Personal Computer. This keyboard resembles that of a typewriter keyboard. When compared to a typewriter keyboard, this has certain extra keys performing specific tasks based on the programme in use, called Function keys, Hot-keys and special keys. Data is basically entered through this device. Even instructions could be sent to the computer through it.

2. *Mouse*: Is a handy device which is highly popular in the Graphic User Interface (GUI) environment namely Window based programmes and games, this could be used in selecting from options, drawing and painting.

   It has a roller ball and two or three buttons each of which could be assigned a specific function through the software. This device could be held by the palm by the user. This shows a pointer on the screen, when the user moves his palm holding it on a mouse pad, the ball moves and the pointer on the screen makes a synchronized movement, thus making it possible to select and when the left button (normally) is pressed the selection is processed.

3. *Joystick*: Popularly used in games only. It's functionality is limited only to movement on the screen.
4. *Voice entry/mic.*: This records the voice and through a certain software the recorded software could be held in data form.
5. *Punched card*: It was a device known for data entry in a third generation and preliminary stage of the fourth generation computers, when

computers were limited in number and their running costs were high. It resembled the Blaise Pascal's card designed to hold weaving patterns that were used on looms.

Holes were punched in a specific pattern representing data on the basis of BITS, using a card punching machine and later a bunch of such cards holding data were fed to the computer using. Punched card Reading device. It used to read the data rapidly into the machine, thus saving running costs of the machine, since manual data entry is slower when compared to the machine speed.

Even to-date these machines in a different form are still used in 'time office' of hotels and big organisations. The card punches the date and time of employee's entry into office and exit. Which at the end of the month automatically can feed to the computer, data required to compute wages and over-time wages and also to maintain their leave/absence accounts.

On the same lines is the key card, which has holes in different patterns, forming a kind of password to the room locks upon registration of guest. The machine interface could make over a million patterns or formations of the holes. Even this has become a little old in the hotel line.

6. *Magnetic Card*: This has become a very popular and foolproof device used by different commercial establishments.

A small magnetic band on a card, present on a Credit Card or Prepaid telephone Card or Prepaid Railway ticket card, etc. gives access to the holder of the card at Hotline Bank Credit Machines at Super Markets etc., ATMs; PCOs; and Railway stations respectively, registering the details on the card and updating the data on the card and account of the user immediately. This avoids manual entry and delay in debiting the users account.

7. *Bar code reader*: Vertical magnetic bar on merchandise to denote specifications of the product and other relevant information could be read by this device.

   It is mostly used in super markets and central stores in a manufacturing unit. When the barcode on the merchandise or the item is brought to the electronic eye of the reader, bills, consignment / delivery challans are issued, the inventory / stock registers are updated and reports relating to availability of stock, stock movement / demand, cost of manufacturing, variance between standard cost & actual cost, vendor details, usage or demand sectors, purchase orders, indents could be automatically generated.

8. *Optical Character reader (OCR):* Works on similar principle, it could read characters in a particular form and format, and send the data to the computer. The signature on a cheque could be identified and matched with already captured image of the account holder, and a debit is allowed by it.

9. *Magnetic Ink Character Recognition (MICR):* A light coloured band at the bottom of a cheque, holding the identity of the bank / branch and the cheque number is very convenient to enter data or bank clearance houses. These are extensively used in Indian in big cities and town, where the clearance houses are computerized.

   These readers can, at a high speed read the data and enter the details into the respective banks. If this concept is extensively used even the amount, and the account holder's accounts could be automatically posted, without involving human data entry from the keyboard.

10. *Scanner*: These can scan and store data, photographs, pictures or images in the computer in BIT form. The New account holder's signature, or a new employee's signature, or a signature on a passport

or driving license could be stored at historic information for retrieval when required for verification etc.

11. *Inter-net*: With the help of a MODEM (Modulator DEModulator), EMAIL/FAX / TELEX/TELEPHONE, computers at different sites or distant places can be connected. This is basically a tool of the present generation for access to information or data anywhere in the world. The data could be transferred or transmitted or downloaded and used for different output generation or MIS. A multi-national hotel property, doing it's reservations worldwide, or sending requests / tariffs and other information to Travel agents or through their websites have become a common thing now. The head office constantly gets its database updated from different properties across the globe through their own leased lines or dedicated lines.

12. *Storage devices*: These were discussed in detail earlier. These devices are very popular and they work in basic input, output operations. The data or programmes stored on these are retrieved and used by the computer, to again process and give out information.