INPUT DEVICES

Computer Peripherals

❖ Devices that are connected to the computer, but is not a part of core computer architecture (**CPU**).

❖ Device that is used to **put** information into or **get** information out of the computer.

Types of Peripherals

❖ **Input Devices:** Used to interact with, or send data to the computer. Ex.: Mouse, Keyboard etc.

❖ **Output Devices:** Provide output to the user from the computer. Ex.: Monitor, Printer etc.

❖ **Storage Devices:** Store data processed by computer. Ex.: Hard drives, Flash drive etc.

List of Peripheral Devices: Input

❖ Keyboard	❖ Scanner
❖ Mouse	❖ Web-Camera
❖ Trackball	❖ Data Glove
❖ Spaceball	❖ Digitizer
❖ Touchpad	❖ Touch Panel
❖ Touchscreen Monitor	❖ Light Pens
❖ Joystick	❖ Voice System

KEYBOARD

- ❖ Made up of push button switches which send a signal to the CPU each time we press them.

- ❖ Having Alphabet, Numbers, Function, Special Keys.

- ❖ Software Keyboard or On-Screen Keyboard display an image of a Keyboard on the screen.

- ❖ The AT Keyboard (84 keys), It was later replaced with the 101-key .

- ❖ It can be used for shortcuts (Key combination), helpful in DOS command (where mouse doesn't work).

Mouse

Mechanical Mouse   **Optical Mouse**

❖ It is used to control the cursor or pointer on the screen and to give commands to the computer.

❖ It allows operations to be performed without having to remember complicated keyboard commands.

❖ A **mechanical/roller** mouse has a ball that is rolled as the mouse is moved about on the desktop.

❖ An **Optical** mouse use a light instead of a ball. Able to work on almost any surface without a mouse pad.

Trackball

❖ A ball device that can be rotated with the fingers or palm of hand

Spaceball

❖ Six degrees of freedom

❖ Does not move, detects strain placed on the ball by trying to move it.

Joystick

- ❖ A joystick looks like car's gear shift handle.

- ❖ Control objects on screen.

- ❖ A small, vertical lever mounted on a base

- ❖ Movable joystick measures motion

- ❖ Stationary (isometric) joystick measures strain.

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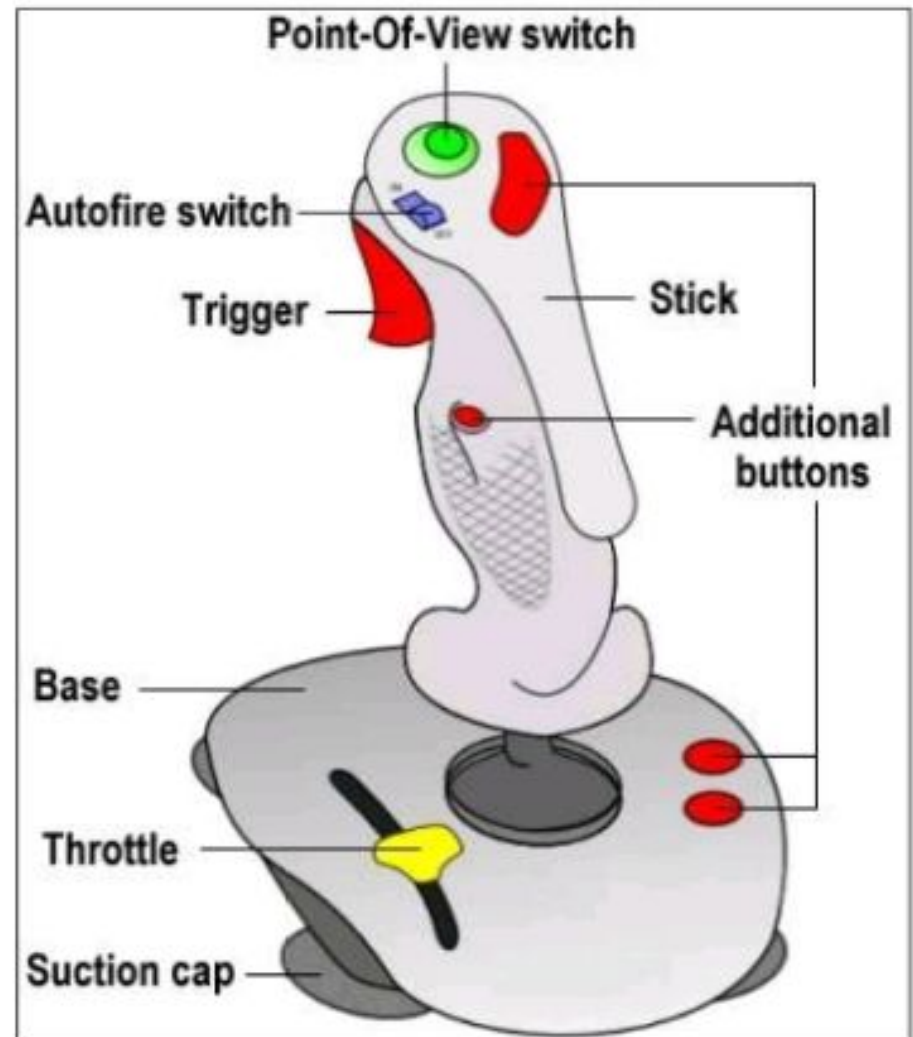
Bar Code Reader

❖ A barcode reader is an electronic device for reading printed bar codes.

❖ Bar code reader helps identify a product.

Scanners

❖ Scanner is a light sensitive device that helps you copy or capture images, photos, and artwork that exist on paper and converts it into digital form that can be processed and stored by the computer.

Web-Camera (Webcam)

❖ A webcam is a video camera that feeds its image to a computer or computer network.

❖ Their most popular use is the establishment of video links, permitting computers to act as videophones or videoconference stations.

Data Glove

❖ Used to grasp a virtual object

❖ Measures hand and finger position

❖ Can also be used as input device to detect surface.

Digitizers

❖ Used for drawing, painting, or selecting positions

❖ Graphics tablet used to input 2D coordinates by activating a hand cursor or stylus at given positions on a flat surface

❖ Used to trace contours, select precise coordinate positions

- Hand held cursor
- Stylus

❖ Electromagnetic

- Grid of wires
- Electromagnetic pulses send an electrical signal in stylus or cursor

❖ Acoustic

- Sound waves to detect stylus position by microphones
- Can be 3D.

Touch Panels (1/2)

- ❖ Select objects by the touch of a finger

- ❖ Optical
  - ▪ Line of infrared light-emitting diodes (LED) along vertical and horizontal edges
  - ▪ Interrupted when panel is touched

- ❖ Electrical
  - ▪ Two transparent plates of material, one conducting, the other resistive
  - ▪ Touch brings the plates to be in contact with one another, causing a voltage drop
  - ▪ Measure the voltage drop

- ❖ Acoustical.

Light pens

❖ Pen-shaped device to select screen positions by detecting lights coming from points on the CRT screen

❖ Used to capture position of an object or select menu options.
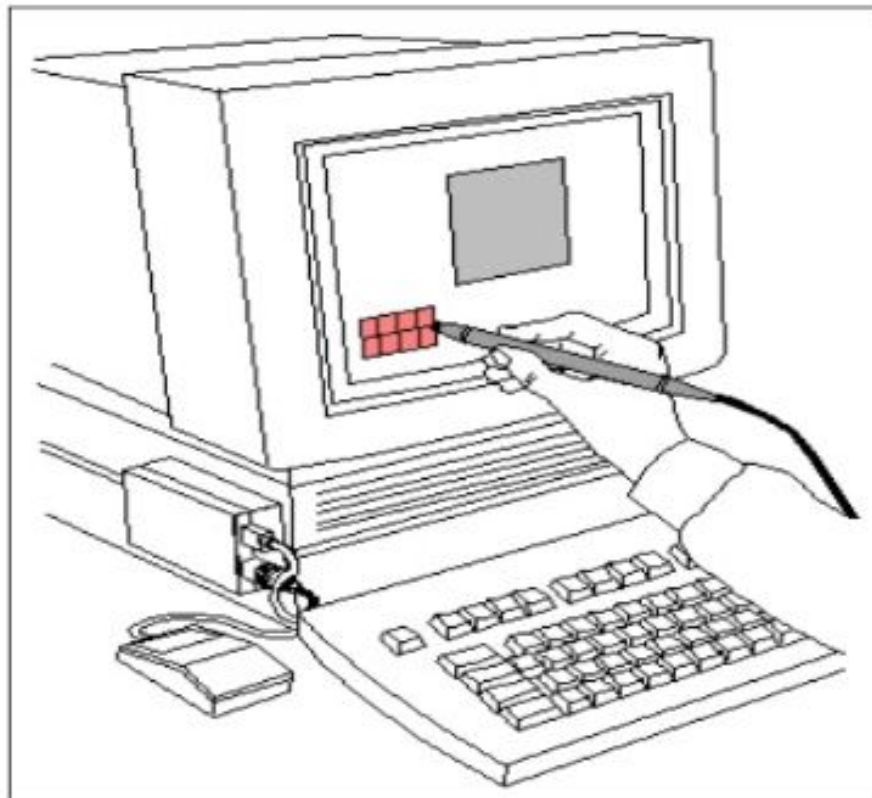
Voice Systems

❖ Speech recognition systems to recognize voice commands

❖ Used to activate menu options or to enter data

❖ Uses a dictionary from a particular user (learning system).