BSc Computer Science CS1541 Computer Graphics

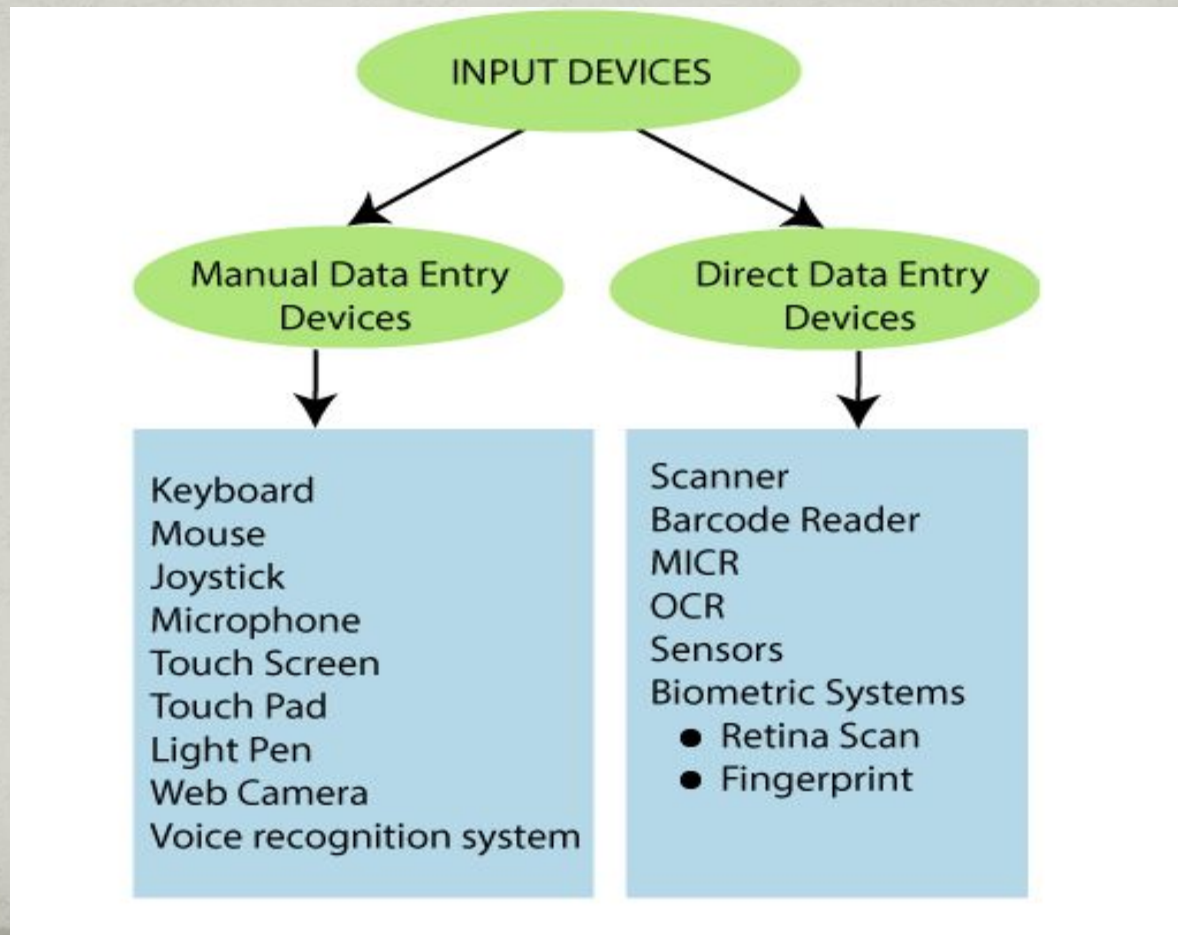## MODULE I

INPUT DEVICES

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Overview

- Piece of computer hardware equipment used to give input to the computer.

- The input can be in the form of graphics, text, sound, audio, video, and image, etc.

- **"Input devices are those devices through which we can give the data and instructions to the computer."**

- **For Example**– Mouse, Trackball, Keyboard, Light pen, etc.

Classification of Input Devices

- Manual data entry devices
- Direct data entry devices

Keyboards

- It is the commonly used input device. It is designed to input text and characters.

- A keyboard contains approx. 108 keys. **For Example**– Alphanumeric keys, Numeric keys, Function key, and cursor key, etc.

- **Types of keys:** These keys include:

- **Alphanumeric keys:** These are located in the center of the keyboard. These keys consist of alphabet (A-Z), Number (0-9), and symbols (@, #, $, %, ^, &, *, !, =, +).

- **Numeric Keys:** A part of keypad contains 17 numeric keys. In which we can include number up to 0-9, mathematics operator like +, -, /, *, and enter key.

- **Function keys:** These keys are placed at the top of the keyboard. In which we can include F1, F2 up-to F12. The function key performs many tasks according to the software.

- **Cursor Keys:** The cursor keys include Up, Down, Left, and Right. These are used to move the cursor on the screen.

Mouse

- **Types of Keyboard:** The type of keyboard is:
- **1. Normal Keyboard:** These are the commonly used keyboard. It is used by the user in their PCs. It contains 108 keys. The normal keyboards are connected to the CPU through the wire.
- **2. Wireless Keyboard:** The wireless keyboard connected to the computer without the wire. It works for a limited distance. It is more expensive than a normal keyboard. The user faces technical complexity in it.
- **3. Ergonomic Keyboard:** It gives the user comfort and ease during the typing; that's why it is called the "Ergonomic keyboard." This keyboard is used to increase the efficiency of the user. It also reduces wrist pain during typing.

- **Advantages**
- Easy to use
- Enable fast data input
- Well tried technology

- **Disadvantages:**
- Sometimes it is difficult to use
- Need desk space to keep

Mouse

- It is used as a popular pointing device. It is used to create images, graphics as well as to click on any button or menu. The mouse has two or three buttons.

- **Functions of the mouse:**

- Clicking

- Double Clicking

- Right Clicking

- Dragging

- Scrolling

- **Advantages**
  - Easy to use.
  - Less Expensive.
  - The Cursor moves faster than the arrow keys of the keyboard.

- **Disadvantages:**
  - Required flat surface to move
  - Needs regularly cleaning
  - Damaged easily

Types of Mouse

- **1. Mechanical Mouse:** This mouse has a rubber ball at the bottom, when we rotate the mouse on the surface than the rubber ball also rotates inside the shell. Now the sensors inside the mouse give a signal to the computer.

- **2. Optical Mouse:** It is a type of Non-mechanical mouse. A light beam is emitted from the surface below it. Based on the light beam, the mouse determines the distance and speed of the object.

- **3. Wireless Mouse:** This mouse communicates to the computer with the help of radio-frequency.

- **It has two main components:**

- **Transmitter-** It is used to send the information of the mouse's speed and its click in the form of an electromagnetic signal.

- **Receiver:** It connects to the computer and used to receive the signals sent by the transmitter.