



SNS COLLEGE OF ENGINEERING

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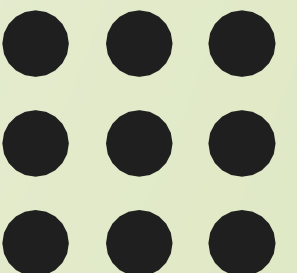
Department of Artificial Intelligence & Data Science

Course Name - COMPUTER GRAPHICS

III Year / V Semester

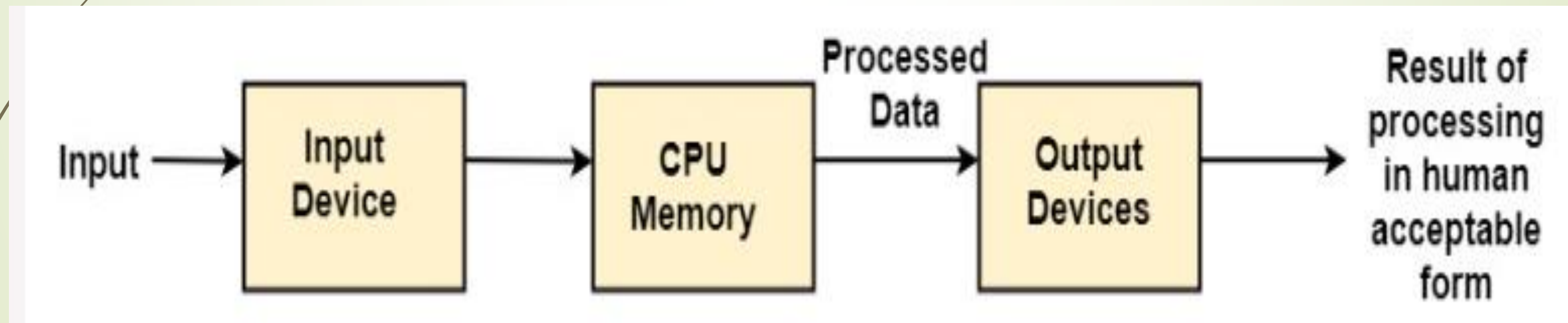
Unit 1 - INTRODUCTION TO COMPUTER GRAPHICS

Topic :Graphics Input Primitives and Devices

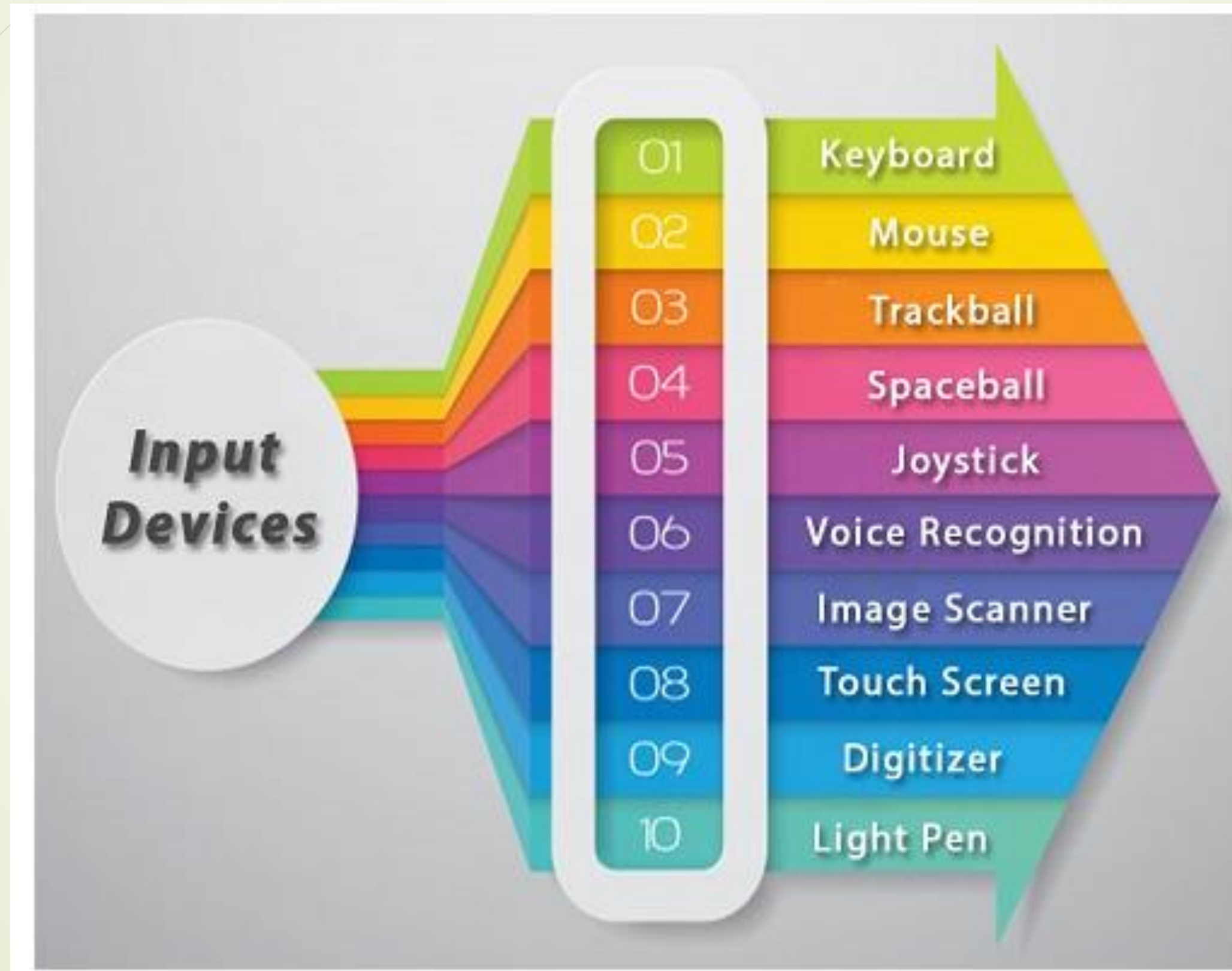


INPUT DEVICES

- ❖ The Input Devices are the hardware that is used to transfer input to the computer.
- ❖ The data can be in the form of text, graphics, sound, and text.



INPUT DEVICES



Keyboard

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- ❖ The most commonly used input device is a keyboard. A keyboard with 101 keys is called a QWERTY keyboard.
- ❖ The keyboard has
 - **Numeric Keys:** 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
 - **Alphabetic keys:** a to z (lower case), A to Z (upper case)
 - **Special Control keys:** Ctrl, Shift, Alt
 - **Special Symbol Keys:** ; , " ' ? @ ~ ? :
 - **Cursor Control Keys:** ↑ → ← ↓
 - **Function Keys:** F1 F2 F3....F9.
 - **Numeric Keyboard:** It is on the right-hand side of the keyboard and used for fast entry of numeric data.



MOUSE

- ❖ Mouse is the most popular pointing device.
- ❖ A mouse can be used to control the position of the cursor on the screen, but it cannot be used to enter text into the computer.
- ❖ Functions of the mouse:
 - Clicking
 - Double Clicking
 - Right Clicking
 - Dragging
 - Scrolling



TRACKBALL

- ❖ Track ball is an input device that is mostly used in notebook or laptop computer, instead of a mouse.
- ❖ It can move two directions.



SPACEBALL

- **A graphical input device that is based on a fixed spherical ball.**
- It is similar to trackball, but it can move in six directions
- It is used for three-dimensional positioning of the object.
- It is applicable in CAD applications .Animation is also done using space ball.



JOYSTICK

- Joystick is also a pointing device, which is used to move the cursor position on a monitor screen.
- The joystick can be changed in all four directions. The function of a joystick is similar to that of the mouse
- It is mainly used in Computer Aided Designing (CAD) and playing computer games.



DIGITIZERS

- A digitizer is a machine that converts an analog object, image or signal into a digital (i.e. computer-readable) format.
- Suitable only for applications which required high-resolution graphics.
- Digitizer is also known as Tablet or Graphics Tablet as it converts graphics and pictorial data into binary inputs



IMAGE SCANNERS

- An image scanner is a device that optically scans images, printed text, handwriting or an object and converts it to a digital image.
- There are three types of scanners available: drum scanner, flatbed, and handheld scanners



LIGHT PENS

- Light pen is a pointing device similar to a pen. It is used to select a displayed menu item or draw pictures on the monitor screen.



TOUCH SCREEN

- It is a computer display screen that is sensitive to human touch.
- A touch panel is a piece of equipment that lets users interact with a computer by touching the screen directly



VOICE SYSTEM

- Voice recognition(or voice system) is the ability of a machine or program to receive and interpret dictation or to understand and perform spoken commands.
- There are two variants of voice recognition – speaker dependent and speaker independent



THANK YOU