PORT :

What is port ?

The term **port** in computing usually refers to a **communication endpoint** for networking. It's like a virtual door through which data flows in and out of a device on a network. There are two main contexts where "port" is used:

1. Network Port (most common meaning)

- A port is a **number** (0–65535) used to identify specific processes or services on a computer.

- Used in combination with an **IP address** to route internet traffic correctly.

- Think of an **IP address** as a street address and the **port** as the apartment number

- **Examples:**

📃 **2. Physical Port**

- A physical connector on a device (e.g., USB port, HDMI port).

- Used to plug in hardware like keyboards, monitors, etc.

  Types ports

  These are the actual connectors on a computer or device.

  ⬛ Types of Physical Ports:

  🖊 Common Data & Power Ports:

- USB (A, B, C, Mini, Micro) – used for data and charging

- Thunderbolt – high-speed data/video transfer

- FireWire (older) – for audio/video devices

- Serial/Parallel ports (legacy)

  📽 Video Ports:

- HDMI – modern displays

- DisplayPort – high-end monitors

- VGA – older monitors

- DVI – digital video

- 🌐 Networking Ports:

- Ethernet (RJ-45) – wired internet

- Phone jack (RJ-11) – landline/modem use

- 🔊 Audio Ports:

- 3.5mm jack – headphones/microphones

- Optical (TOSLINK) – digital audio

- RCA – analog audio/video (older TVs)

- 🖫 Memory Card Slots:

- SD/MicroSD – storage for cameras, phones, etc.

⬜ Why We Use Ports (in Networking)

1. Multiple Services, One IP

2. **Client-Server Communication**

3. **Security & Control**

4. **Standardization**