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**