

**WEEK-3**

- **Ports:**

Whereas the system bus is responsible for all data movement internal to the computer, ports allow movement of data to and from devices external to the computer. Our ad speaks of three different ports with the line, “2 USB ports, 1 serial port, 1 parallel port.” Most desktop computers come with two kinds of data ports: serial ports and parallel ports.

**1- Serial ports:**

Transfer data by sending a series of electrical pulses across one or two data lines.

**2- Parallel ports:**

Use at least eight data lines, which are energized simultaneously to transmit data.

**3-USB:** The system also is equipped with a special serial connection called a USB (universal serial bus) port. USB is a popular external bus that supports Plug-and-Play (the ability to configure devices automatically) as well as hot plugging (the ability to add and remove devices while the computer is running).

#### **4- Dedicated I/O buses:**

Some systems augment their main bus with dedicated I/O buses. Peripheral Component Interconnect (PCI) is one such I/O bus that supports the connection of multiple peripheral devices. PCI, developed by the Intel Corporation, operates at high speeds and also supports Plug-and-Play. The PCI modem allows the computer to connect to the Internet.

### **1.4 Standards Organizations**

- There are many organizations that set computer hardware standards to include the interoperability of computer components.
- Some of the most important standards setting groups are:
  - **The Institute of Electrical and Electronic Engineers (IEEE):**
    - Promotes the interests of the worldwide electrical engineering community.
    - Establishes standards for computer components, data representation, and signaling protocols, among many other things.
  - **The International Telecommunications Union (ITU):**
    - Concerns itself with the interoperability of telecommunications systems, including data communications and telephony.

- National groups establish standards within their respective countries:

- **The American National Standards Institute (ANSI):**

- **The British Standards Institution (BSI):**

- **The International Organization for Standardization (ISO):**

- Establishes worldwide standards for everything from screw threads to photographic film.

- Is influential in formulating standards for computer hardware and software, including their methods of manufacture.