Computer Networks

- ***Course Code***: BCSE308L
- ***Course Type***: Theory (ETH)
- ***Slot***: D1+TD1
- ***Class ID***: VL2023240100820
- ***Timings***:

Day	Start	End
Monday	10:00	10:50
Thursday	08:00	08:50
Friday	12:00	12:50

Network

- A network is a set of devices (often referred to as nodes) connected by communication links.
- A node can be a computer, printer, or any other device capable of sending and/or receiving data generated by other nodes on the network.
- A link can be a cable, air, optical fiber, or any medium which can transport a signal carrying information.

A network consists of two or more nodes that are linked in order to share resources (such as printers and CDs), exchange files, or allow electronic communications.

The computers on a network may be linked through *cables*, *telephone lines*, *radio waves*, *satellites*, or *infrared light beams*.

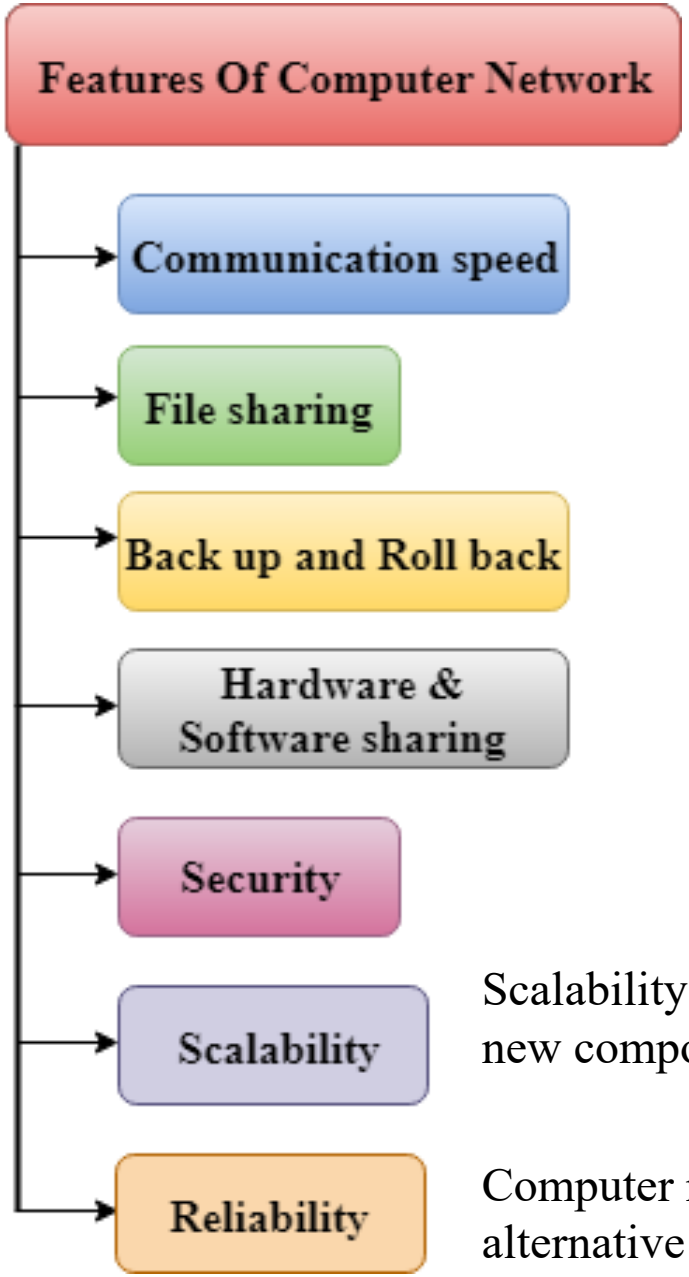
Why Networks are Required?

They provide numerous advantages, such as:

- Resource sharing
- Exchange and sharing of information
- Interactions between people
- Parallel Computing

Most people know about the Internet (a computer network) through applications, such as:

- World Wide Web
- Email
- Online Social Network
- Streaming Audio Video
- File Sharing
- Instant Messaging



Scalability means that we can add the new components on the network.

Computer network can use the alternative source for the data communication in case of any hardware failure.

Why Networks are Required?

Resources Sharing:
Hardware (Computing resources, disks, printers), Software(Application software)

Information Sharing:
Easy accessibility from anywhere (Files, databases), Search Capability(WWW).

Communication:
Email, Message broadcast.

Remote computing:
Remote access is the ability to access a system or network, whether it's a personal device or office server, without being physically present.

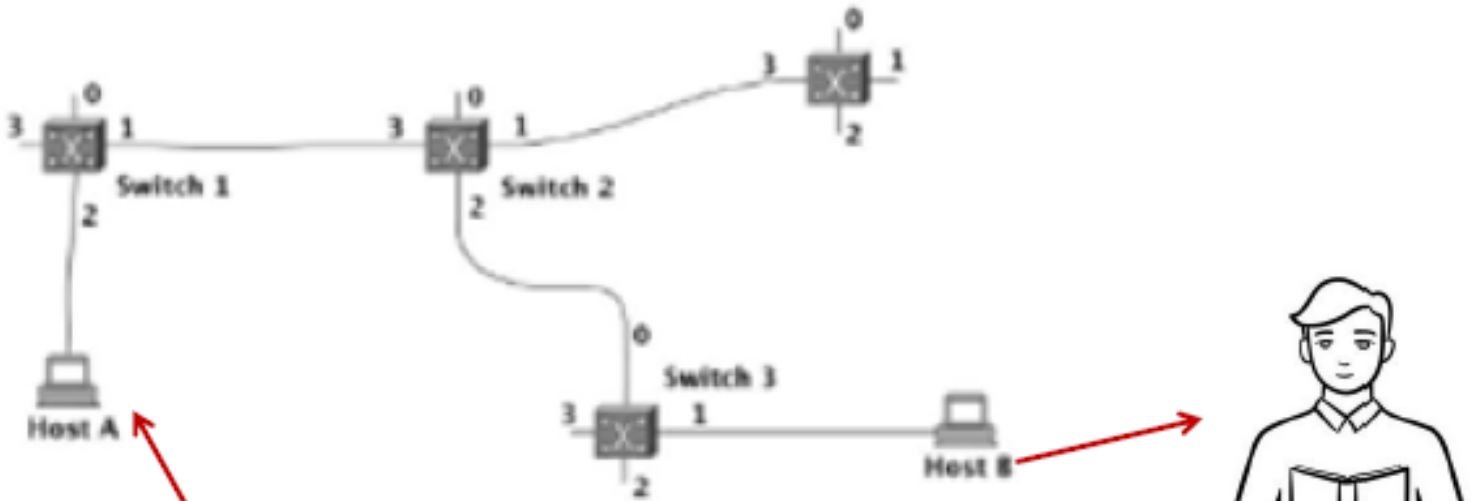
Distributed processing:
Is a setup in which multiple individual central processing units (CPU) work on the same programs, functions or systems to provide more capability for a computer or other device.

Applications

- Email
- Searchable Data(Web Sites)
- E-Commerce
- News Groups
- Internet Telephone (VoIP)
- Video Conferencing.
- Chat groups
- Instant Messages

Application- Example

We are using Teams to conduct this lecture session



Any

Question?

Thank You!