



Computer Network

Lesson 5

This chapter will cover the following;

- What is the Computer Network
- Advantages of Computer Network
- Types of network connection
- Basic Devices in a Computer Network
- Communication in Computer Networks
- How Computers Share Resources
- Benefits of Computer Networks

Computer Network

- A computer network is a group of computers connected together to share information and resources.
- Networks can be small (like in homes) or large (like the internet)
- Two main types:
 - LAN (Local Area Network)
 - WAN (Wide Area Network)

Advantages of Computer Network

- Ability to communicate with network users, using e-mail, short messaging services, etc.
- Advantages of networking Common use of documents, images, photos, songs, video, etc.
- Sharing software such as computer games
- Ease of taking back ups since the data files are saved in a server computer in the network
- Facility to save important information in a network storage device

Types of network connection

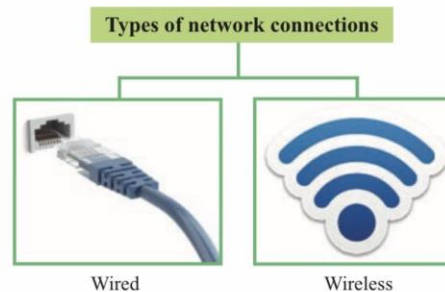


Figure 5.2 : Types of network connections

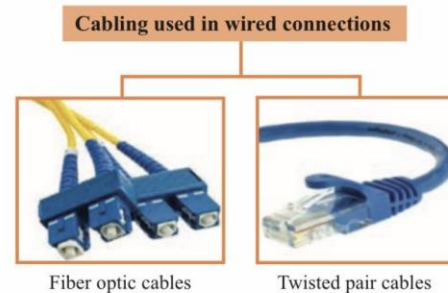
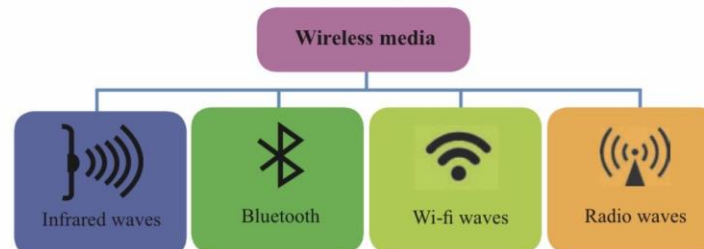


Figure 5.3 : Cabling examples



Basic Devices in a Computer Network

1. Router

Connects different networks together (e.g., home to internet)

2. switch

Connects devices within a LAN

3. Modem

Connects the network to the internet

4. Access Point

Provides wireless access (Wi-Fi)

5. Network Interface Card (NIC)

Hardware inside a computer to connect to a network

Communication in Computer Networks

- Devices communicate by *sending and receiving data*.
- Communication follows specific *protocols* (rules), like:

TCP/IP – for internet communication

HTTP – for web browsing

SMTP – for sending emails

Data is broken into small pieces called *packets* and sent over the network.

How Computers Share Resources

Computer networks allow sharing of:

1. Files and Folders

Users can access files stored on other computers or servers.

2. Printer

One printer can be used by many computers.

3. Internet Connection

Multiple devices can connect to the internet using one connection.

4. Applicat

Shared apps and databases in organizations.

Benefits of Computer Networks

- * Easier communication (email, chat, video calls)
- * Cost-saving through resource sharing
- * Centralized data management
- * Remote access to information

Summary

- * Computer networks connect devices for communication and sharing.
- * Key devices: router, switch, modem, etc.
- * Networks support data communication and resource sharing.
- * They are essential in homes, schools, and businesses.

THANK YOU!