

# 1. What is a Computer Network?

- A **computer network** is a group of computers or devices connected together to share information and resources, like files, printers, or the internet.

## Types of Computer Networks:

- **LAN (Local Area Network):** Small networks like in homes, schools, or offices.
- **WAN (Wide Area Network):** Large networks, like connecting cities or countries (e.g., the internet).
- **MAN (Metropolitan Area Network):** Networks that cover a city, like in a university campus.

## Network Models:

- **Client-Server:** One central computer (server) provides services to other computers (clients).
- **Peer-to-Peer:** All computers are equal and share resources without a central server

## Advantages of Networks:

- **Save Money:** Share expensive devices like printers.
- **Easy Communication:** Send messages, emails, or video calls easily.
- **Backup:** Store important data centrally and securely.

## Disadvantages of Networks:

- **Security Problems:** Hackers or viruses can attack networks.
- **Expensive:** Setting up and maintaining a network can cost a lot of money.
- **Complex to Manage:** Large networks need experts to manage