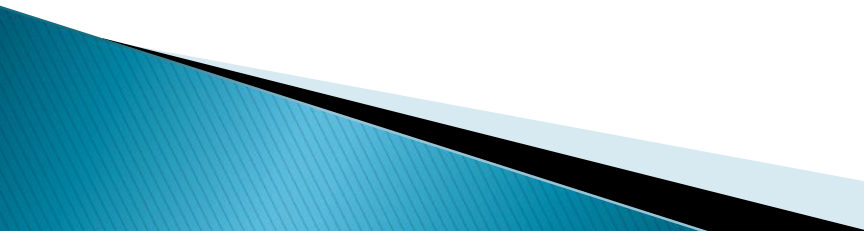


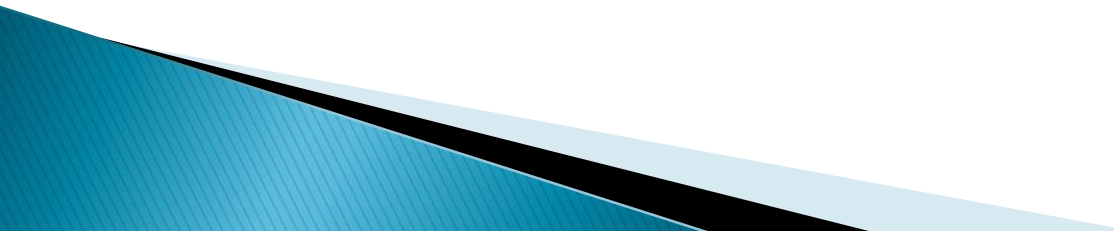
# Network Topology

BLIS4008

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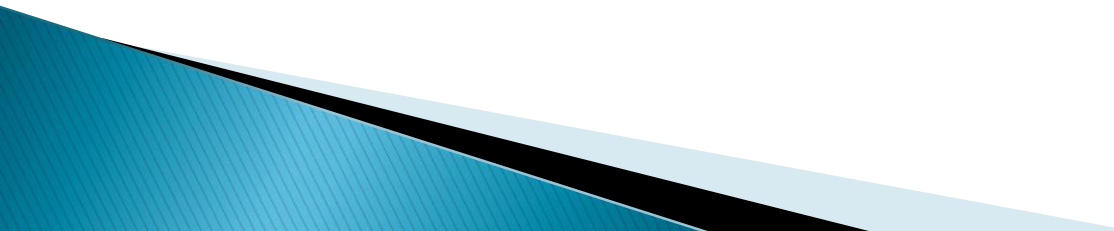


# Network Topology

- ▶ Topology means the way in which the network of computers is connected.
  - ▶ Topology is a geometrically interconnection pattern and this pattern the computers are connected using suitable transmission media.
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# Types of Topology

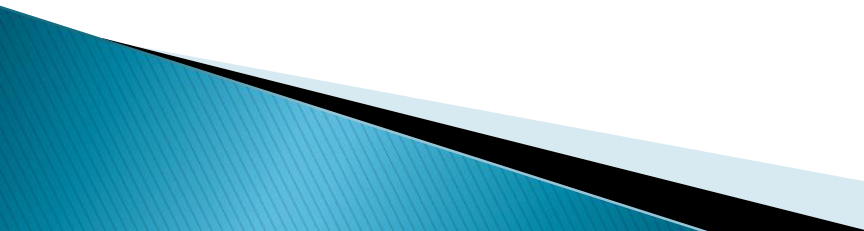
Different types of topology are as follows:-

1. MESH TOPOLOGY
  2. BUS TOPOLOGY
  3. STAR TOPOLOGY
  4. RING TOPOLOGY
  5. TREE TOPOLOGY
  6. UNCONSTRAINED TOPOLOGY
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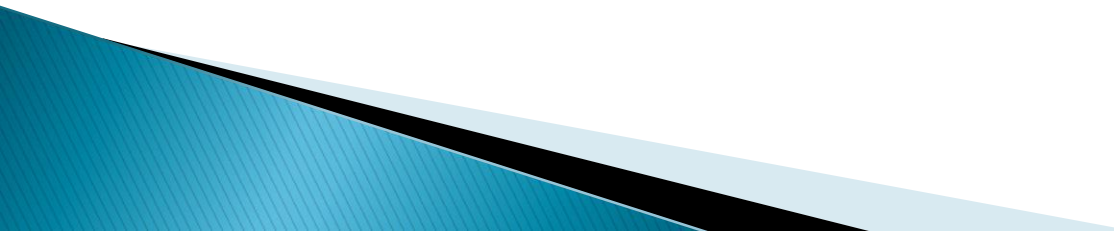
# 1. Mesh Topology

In mesh topology each node is connected to every other node.

## **Some features:**

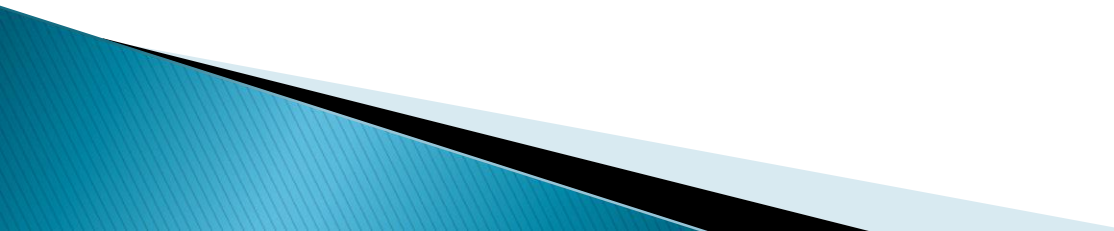
- Fully connected
  - Not flexible
  - Highly reliable
  - Poor expandability
  - Point to point dedicated link
  - Media used for connection– twisted pair, co-axial cable or optical fiber
  - Transfer of data in parallel mode
- 

## 2. Bus Topology

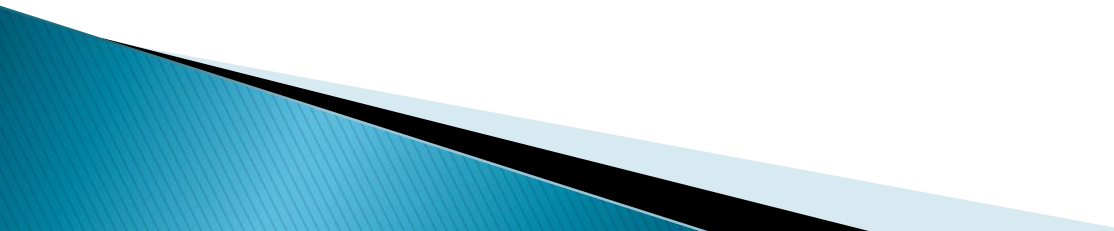
- ▶ In Bus Topology all stations connected through tap(hardware interfacing ).
  - ▶ This topology supports linear transmission medium
  - ▶ It supports full- duplex operation between the station and the tap.
  - ▶ At each end of the Bus there is a terminator, which absorbs any signal, preventing reflection of signal from the endpoints.
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# Bus Topology

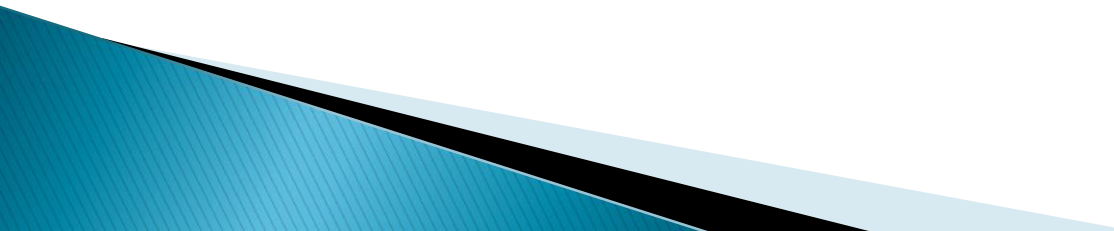
## Some features:

- It is flexible
  - Medium reliability
  - It is expandable
  - Its performance is medium
  - It is a cost-effective( because shared link is used between different stations)
- 

# 3. Star Topology

- ▶ In Star Topology each node is connected directly to a common central node.
  - ▶ In this topology each node connect to a central node called as the star coupler
  - ▶ A star coupler is a two point to point links—one for transmission and one for reception.
- 

## Some features:

- ▶ Star topology has a high speed of data transfer
  - ▶ It is a flexible
  - ▶ It is a high reliable
  - ▶ It is a easy maintainable
- 



# 4. Ring Topology

- ▶ In ring topology data circulates around the ring in one direction
- ▶ In this topology links are unidirectional

## **Some features:**

- It is not very reliable
- It works on in three modes
  - Listen Mode
  - Transmit Mode
  - By-Pass Mode

# 5. Tree Topology

Tree topology is an extension of Bus topology.

When need to add more station, we can use a repeater in a tree format (Hierarchical format).

**Some features:**

- It is a flexible
- It is a Scalable

# 6. Unconstrained Topology

- ▶ Unconstrained topology has no any symmetric and constrained by well - defined interconnection pattern.
- ▶ In this nodes are connected arbitrary manner.

## Some Features:

- Unconstrained topology is a flexibility with a lot of configuration
- Complex routing- due to this delay of data transfer

**Thanks**

