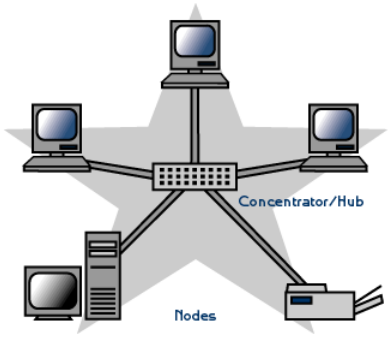
# Networking Topologies:

1. **STAR TOPOLOGY** : Consists of the central node to which all other nodes are connected.



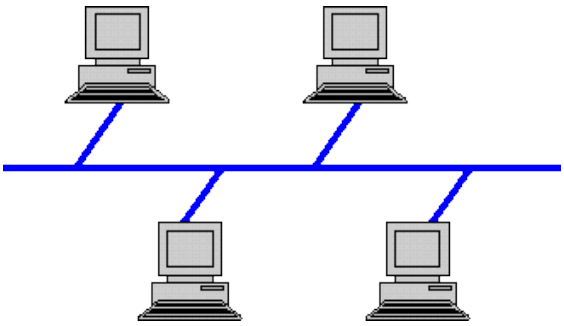

**Advantages :**

- Ease of Service :- One device per connection .
- Centralized control / Problem diagnosis :- Simple access protocols.

**Disadvantages :**

- Long cable length :- Difficult to expand.
- Central Node Dependency.

2. **BUS TOPOLOGY** : Consists of single cable on which all the nodes are connected



**Advantages :**

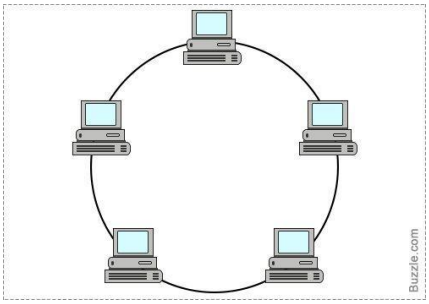
- Short cable length :- Simple wiring layout

- Resilient Architecture :- Easy to extend

**Disadvantages :**

- Fault Diagnosis Difficult  Fault Isolation Difficult
- Nodes must be intelligent  Repeater Configuration

3. **<u>RING/CIRCULAR TOPOLOGY</u>** : Nodes are connected in the form of ring. Each node is connected to two neighboring nodes.



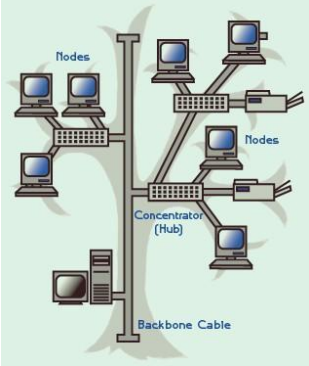

**Advantages** :

- Short Cable Length :- Suitable for Optical Fibers No wiring closet space req.

**Disadvantages** :

- Node failure causes network failure
- Difficult to Diagnose faults
- Network re-config. is difficult

4. **TREE TROPOLOGY:** Modified form of bus topology. Forms inverted tree like structure.




**Advantages** :

- Easy to extend i.e. new nodes can be added easily.
- Fault isolation in easy.

**Disadvantages :**

- If the root node fails, whole network is down.