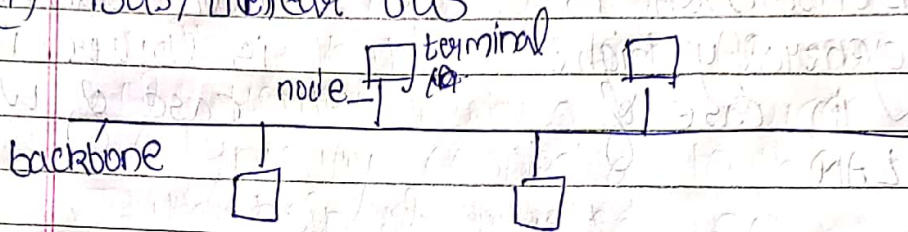


Topology

The Physical connection of more than one computer in a different structure is known as network topology and they are arranged in a diff. different method.

(1) Bus/Linear bus



Bus network use a common backbone to connect all devices. A single cable is called a backbone and it shares a communication media that devices attach or tapped into with an interface connector. If one device wanted to communicate with other devices on network, it sends a broadcast message onto the wire that all other devices see, only the intended receiver actually accepts and process the message.

All the nodes are connected in a linear cable with the help of file servers, workstation or other peripheral devices

Advantages

More nodes can be connected to the cable with the help of hub or switch.

Disadvantages

If cable will fail, then the network also fails.

(a) Ring

In a ring network every device has exactly two neighbours for communication purposes. All messages travel through a ring in a same direction that is clockwise or anti-clockwise direction.

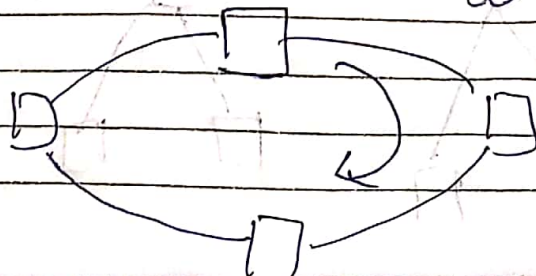
Advantages

It requires less cable to connect nodes.

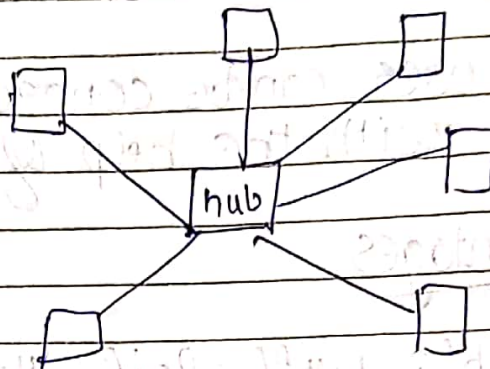
Disadvantages

A failure in any cable or device results the breakdown of entire topology.

Mainly found in school, offices and colleges.



(3) Star/home network



In a star topology, it is connected with a hub, it may be switch or router in which devices typically connected to the hub with help of twisted pair internet.

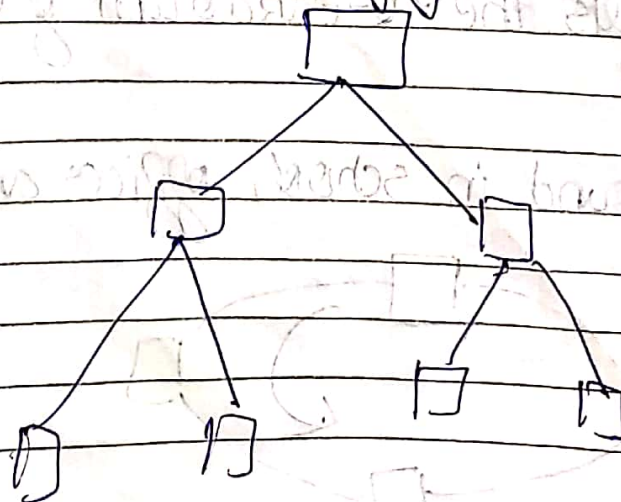
Advantages

- (i) Easy to detect the failure of node
- (ii) If one node is failed then also the whole network can access data.

Dis-advantages

It requires more cable.
If any problem arises in hub then whole network will breakdown.

(4) Tree Topology



Tree topology is integrated with multiple star, linear, ring topology. It is the simplest form. A Hub connect directly to tree bus and each hub function has root of tree devices.

A tree topology combines the characteristics of linear bus, star, ring.

Advantages

The broadcast messages can be send easily from one device to another.

Disadvantages

It requires more cable

Difficult to detect problems

Limited no. of hub connection point

(5) Mesh Topology

