

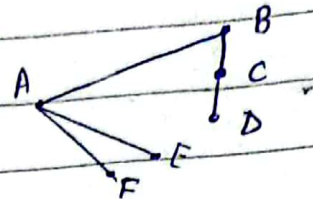
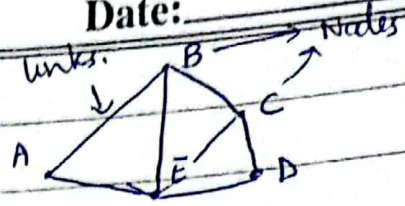
Date: _____

Communication Patterns

- Broadcast
- Unicast

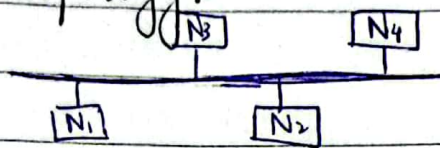
- Multicast

Sender → Receiver



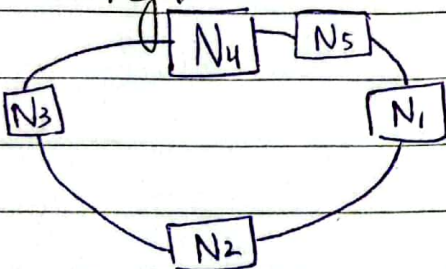
Network Topology:-

01- Bus



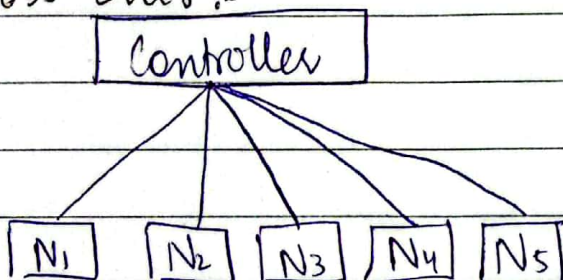
- Not that reliable, chances of congestion, collision.
- Packages drop, used at small scale.
- One breakage will break whole comm channel.
- Single point of failure - Only used for small environments.
- Broadcast is easy as it will broadcast on common link only.

02- Ring:-



- Scalability is difficult

03- Star:-



n - nodes

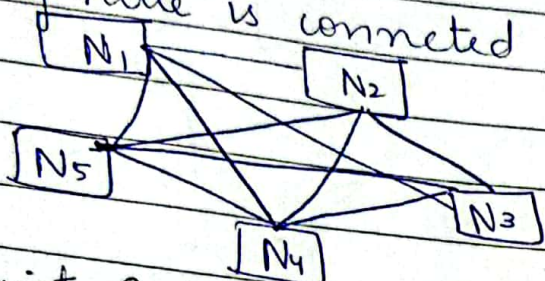
n - no. of links

- Nodes are not directly connected.
- All connections are made via controller.
- Scalability is easy, to add new node.

04- Mesh:-

Date: _____

Every node is connected to every other node directly.



$$\text{No. of links} = \frac{n(n-1)}{2}$$

Circuit Switching vs Packet Switching:-

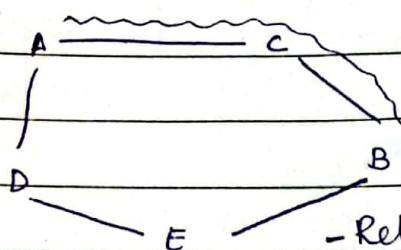
Source



Destination



- connection setup
- check if source will send connection req to destination.



Path will be reserved.

- Reliable.

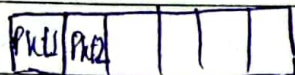
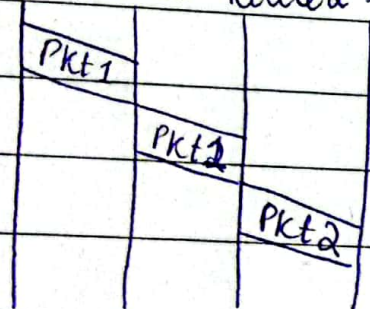
- slow, takes time in conn establishment.

Packet Switching:-

Data is divided into packets.

Every packet will have its own packet route.

A Route1 Route2 B



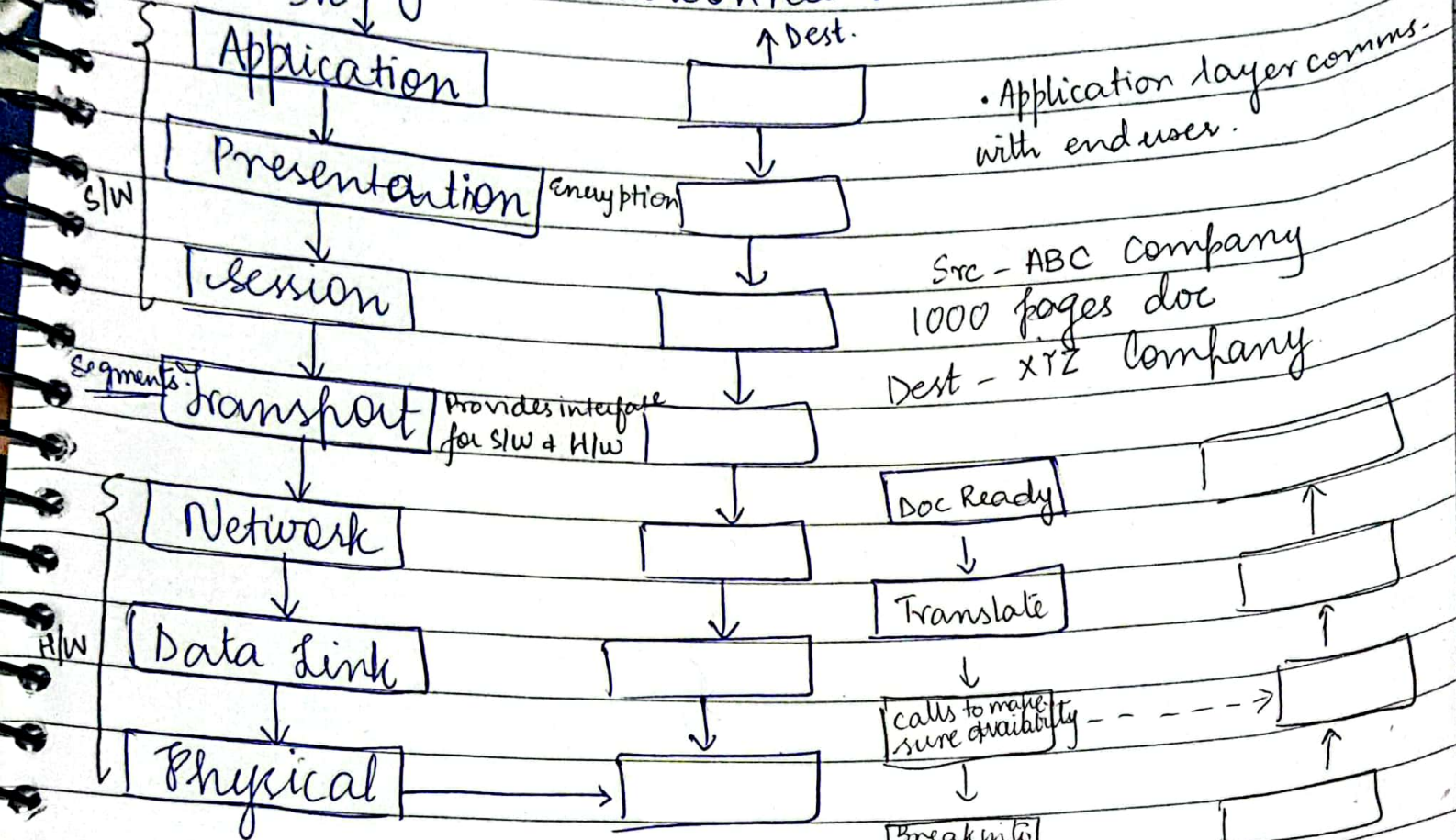
- Not reliable, but fast

All People Seem To Need
Data Processing.

Date: _____

OSI Reference Model (1986) — ISO

→ Open System Interconnection



Project Topics

- 01 - SDN - Software Defined Networking
- 02 - NFV - Network Function Virtualization
- 03 - Intent Based Networking