TCP | IP Protocol suite (Transmission Control Protocol / Internet Protocol)
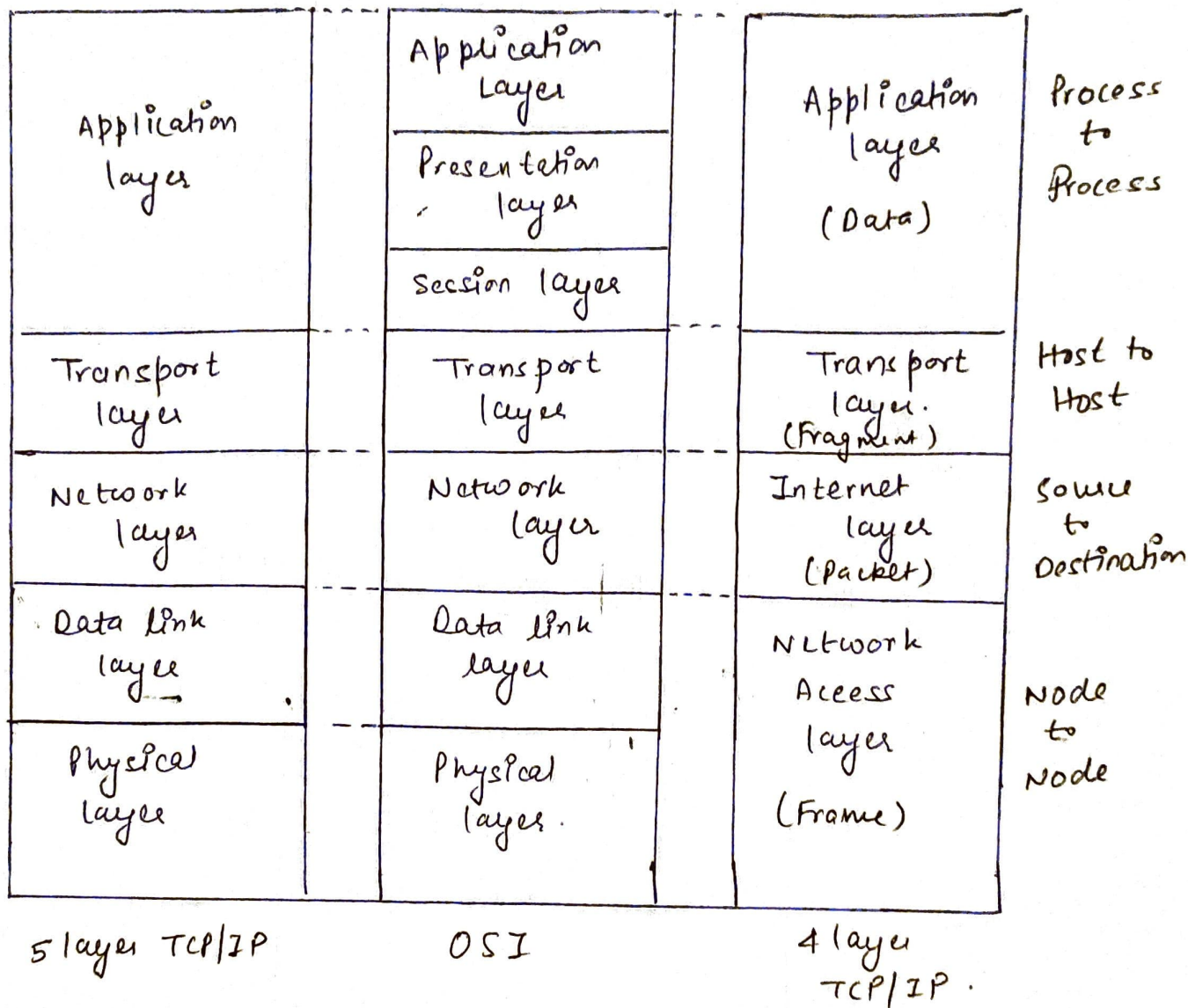
o1 Internet Protocol

- developed by ARPANET
- supports client server and Peer to Peer

5 layer TCP/IP	OSI	4 layer TCP/IP	
Application layer	Application Layer	Application layer (Data)	Process to Process
	Presentetion layer		
	Session layer		
Transport layer	Transport layer	Transport layer (Fragment)	Host to Host
Network layer	Network layer	Internet layer (Packet)	Source to Destination
Data link layer	Data link layer	Network Access layer (Frame)	Node to Node
Physical layer	Physical layer		

5 layer TCP/IP   OSI   4 layer TCP/IP.

User 1
↓
Application layer
↓
Transport → Internet → Network Access

Node (X)   Internet Network access (X) → NA → Internet
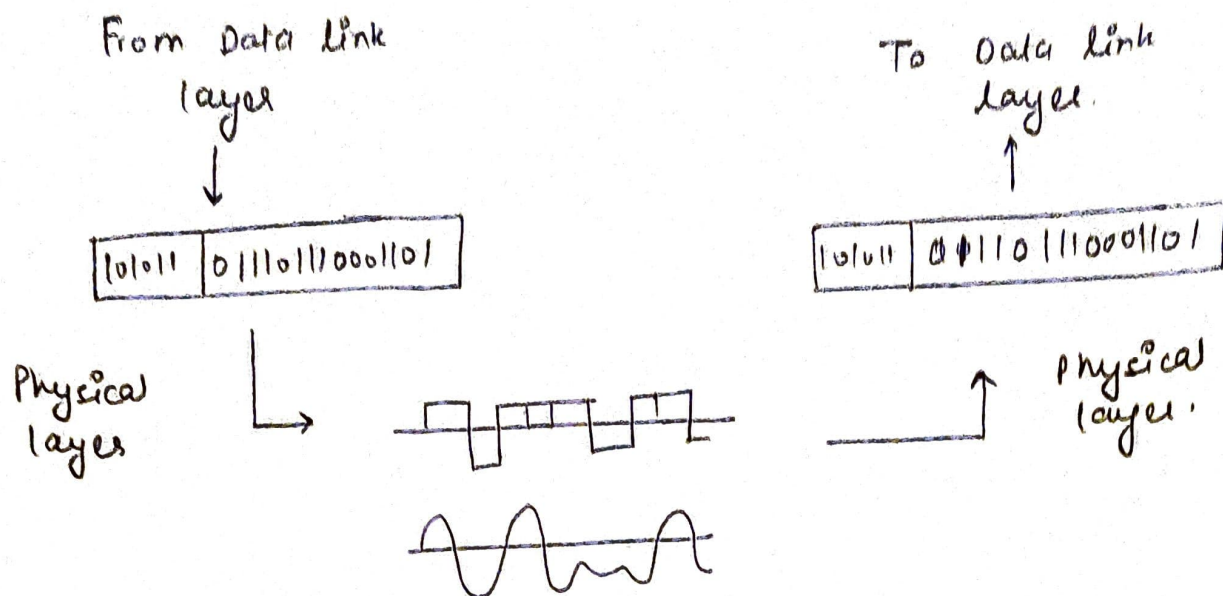↑   ↓
                                          Transport
                                              ↓
                                           App
                                              ↓
                                          User 2.

Lec 2   Physical layer and its functionalities

- Last layer at sender side, first layer on reciever side.

From Data link
layer
↓

| 10101 | 01101100001101 |

To Data link
layer
↑

| 10101 | 01101100001101 |

Physical
layer

Physical
layer

Converting data into signals is done in physical layer.

Physical layer ● (Tangible stuff)

→ Cables and connectors

→ Physical topology ⟶ How to connect devices?

→ Hardwares (Repeaters | Hubs)

→ Transmission mode

→ Multiplexing → using one channel for multiple senders | recievers.

→ Encoding ↪ sending for ex. analog signal in digital form.

Repeaters → to energise attenuated signals.