


6.

* Mobile : Sim :

$\{1000000000,000\} \Rightarrow 10^{10}$ 12 number

Airtel Union Idea vodafone

Idea : 99 - 10^8 Phone

Airtel : 86 - 10^8 Phone

vodafone

935 ----- Union

932 ----- 10^7

Tata doc:

934 ----- 10^7

Idea :

[63.0.0.0]

↓
Class C



198.67.28.

NID

$$2^8 = 256$$

NID

8
2⁸ = 256
0 | 21 64 64 64
| 64 64 64 HR

Delhi

R

T

$$2^6 = 64$$

$$2^6 = 64$$

00
01
10
11

00 000000 = {198.67.28.0, 198.67.28.63} Delhi
00 111111 =

Mask = 2
01
001100

8
{000
001
010
0110}

198.67.28.0/26
NID ^{First}

$$32 - 26 = 6 \text{ bits (Host ID)} \quad \checkmark$$

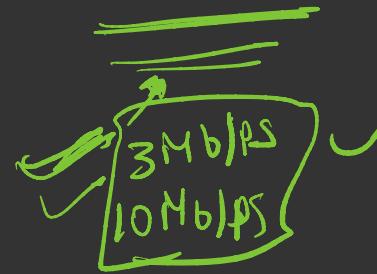
$$2^6 = 64 \quad \checkmark$$

01 00 00 00 00 00 198.67.28.64
01 11 11 11 11 11 198.67.28.127

① Physical Layer

① Cable & connectors ✓

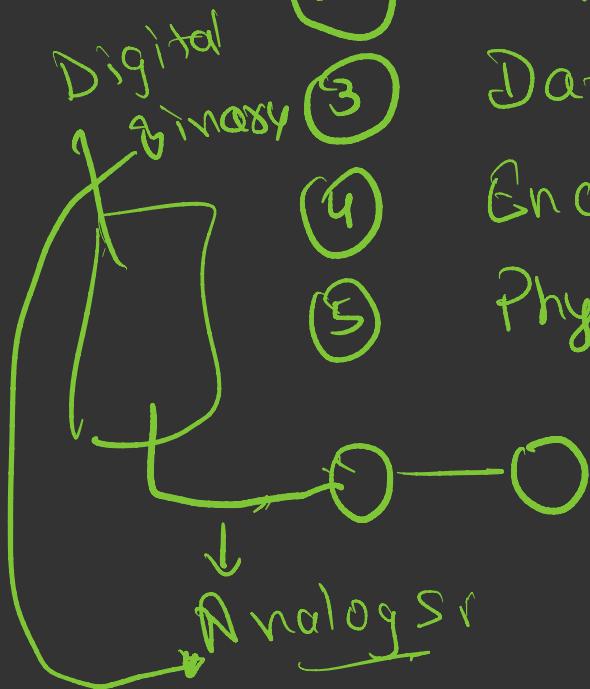
② Repeaters ✓

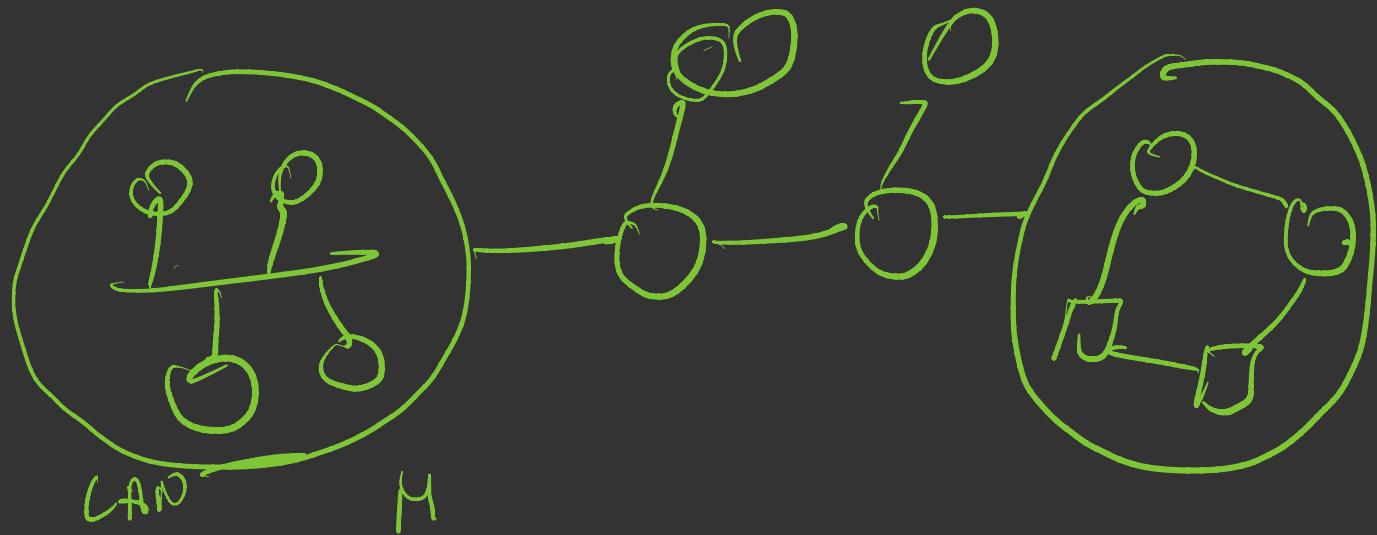


③ Data Rate Control

④ Encoding

⑤ Physical Topology





② Data link Layer.

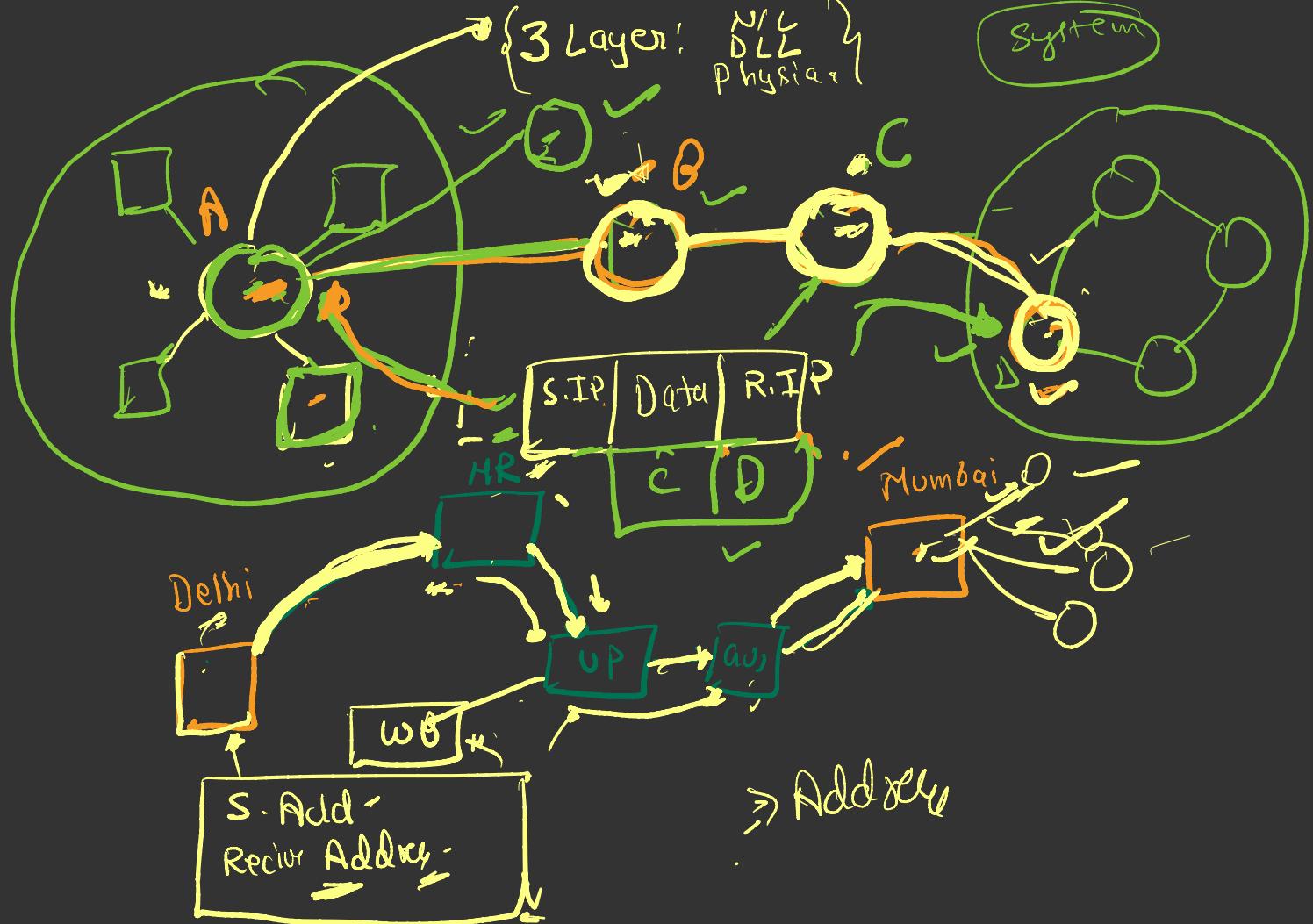
Important

- Hop to Hop delivery.
- Giving physical address
- Error Detection & handling
- Framing
- Flow control
- Access Control

NIC

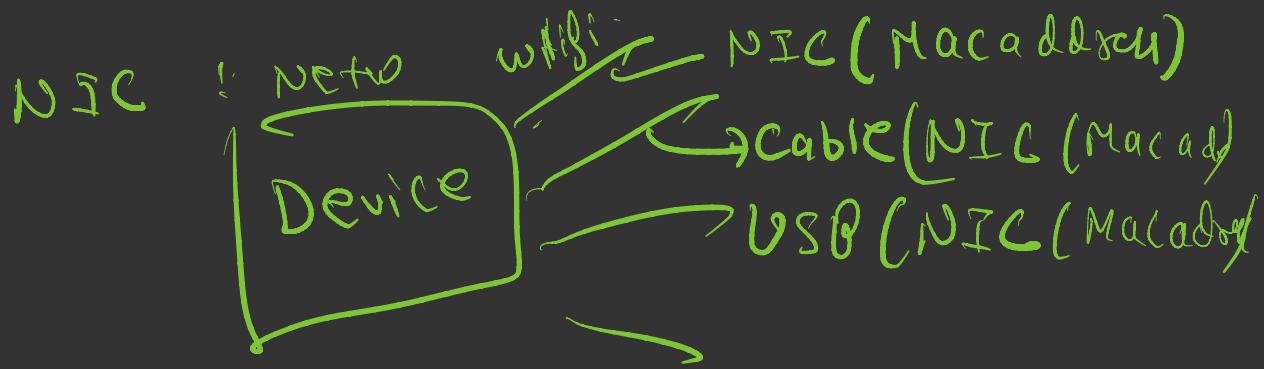
↓
NIC
[Network Interface
Card]

Mac Address



3 → Network Layer :

- Logical address
- Routing
- Fragmentation & Reassembly
- Congestion Control



4 → Transport Layer

→ End to end Delivery (Port to port)

→ Segmentation & Reassembly.

→ TCP & UDP

→ Error Detection & Correction ,

→ Flow Control .

⑤ Session Layers .

- Session Establishment .
- Authentication & Authorization
- Checkpoint

6 → Presentation Layer :

- Encrypt | Decrypt
- Data Compression
- Data Translation

⑦ Application Layer:

- Providing Network Interface.
- Application: HTTP, FTP, SNTP, HTTPS
- Network Transparency.

Computer Network!

OS I Model,

Open system Interconnection

Operating System

