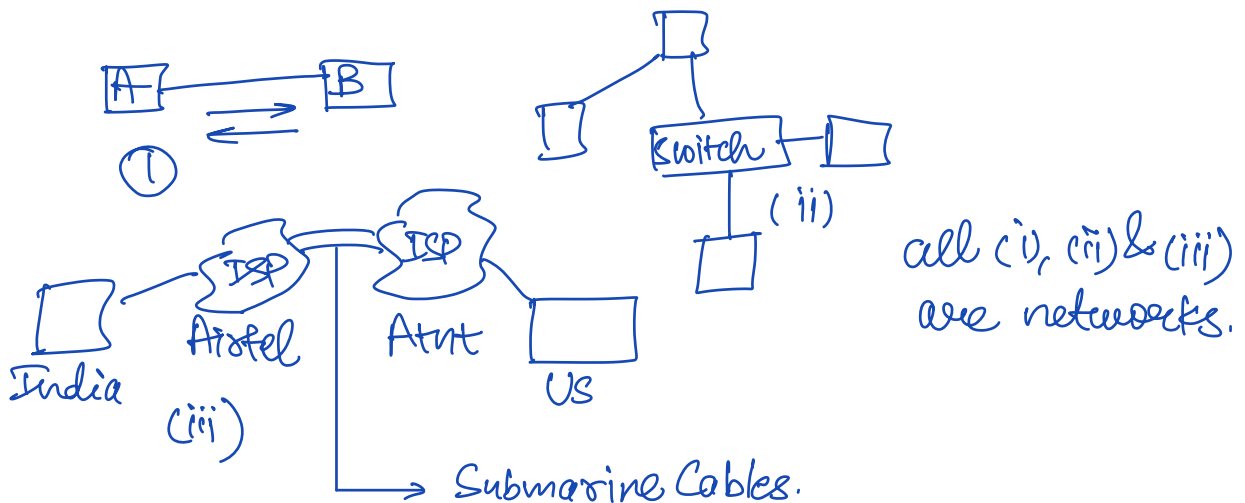


## Index:-

- ① Network fundamentals
- ② Subnetting
- ③ Practical implementation

## ① Network Fundamentals:-



- Network:- when two or more computers are connected to each other, sharing files & stuff - It is called network.
  - Any "host" connected together, creates a network.

- Host:- Any device, that gets an IP Address is called a host.
  - Eg: PC, Mobile, Servers. etc.

- Networking:- sharing of data & info together is called "Networking".

⊕ the Process is "Networking" & the infrastructure is "Network".

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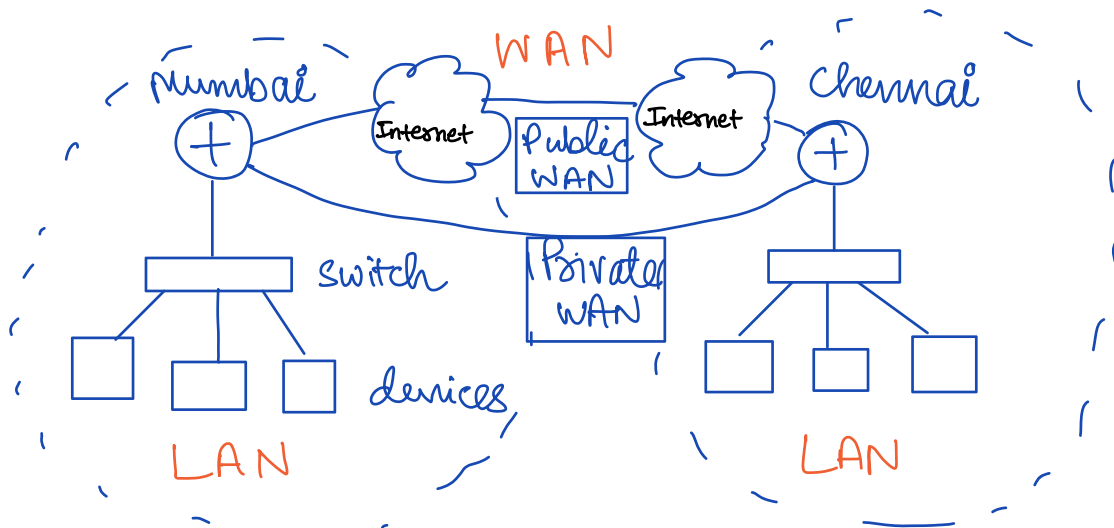
LAN → Local Area Network

WAN → Wide Area Network.

★ } Industry terms

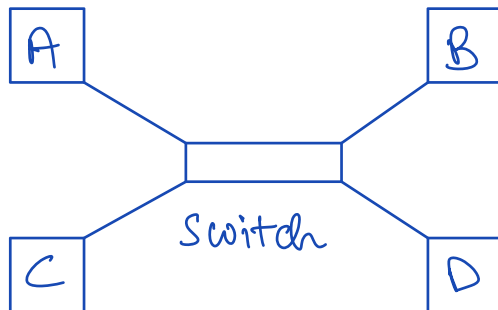
- Router :- When you want to connect two or more different networks, you use routers.
  - router helps you to connect outside your network.

- Internet :- It is network of networks.
  - Interconnection of very big/small networks is called Internet.



- WAN
- Private : A dedicated Cable. to connect the devices.
  - Public : When using a VPN
    - i.e. when using public resources to connect locations.
    - eg: Using Internet.

- Switch:- A device used to connect two or more hosts/devices.



Switches have various costs depending on the features they provide

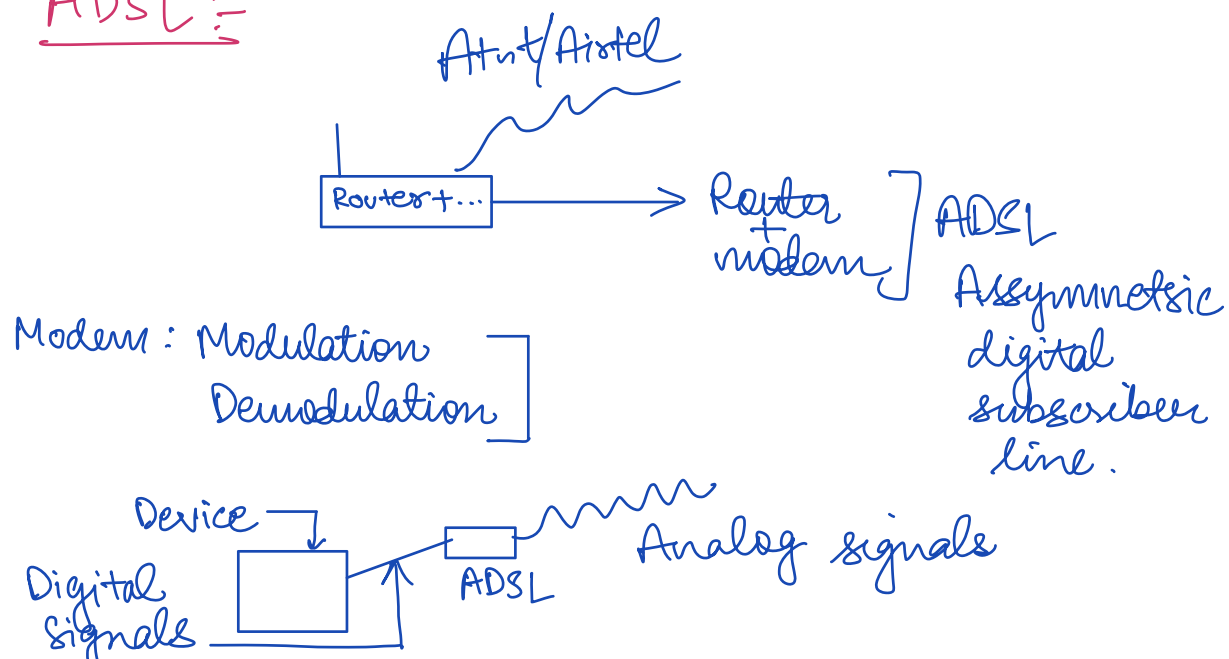
→ Unmanageable switch:

- just like a power extension,
- same data shared to every device, whether needed or not.

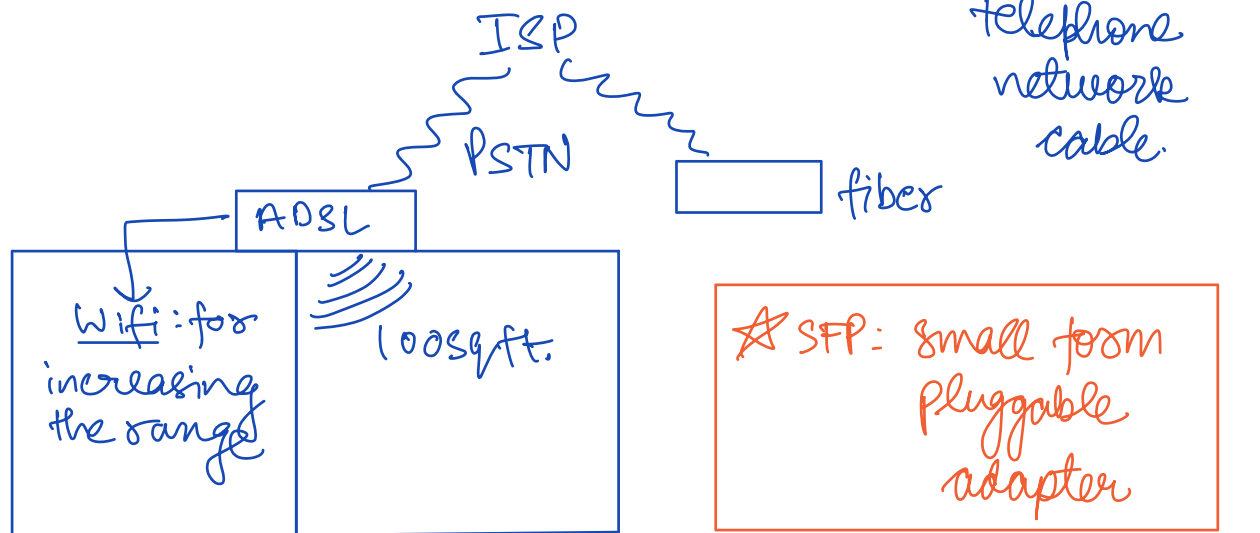
→ manageable switch:- (Professional)

- Many more features
- VLAN.

ADSL:-



## Wifi vs Modem?



(\*) **NIC** :- Network interface Card

→ wired NIC  
→ wireless NIC  
→ Bluetooth NIC

→ 3 MAC addresses.

these NIC chips have MAC addresses.

- We use NIC chips to connect our devices to the internet.
- Every device has NIC chips.