Computer Networking

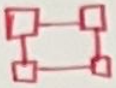
① network :- inter-connection of set of device capable of communicating with each other.

② LAN :- privately own eg: wifi

WAN :- wide area, state country town

→ pt to pt :-  = connects two device through cable

→ switch :- n/w more than two ends

 comb of several point

③ Internet :- two or more network connected

④ switching :- connects at least two links

→ circuit :- 1) only forwading capacity no storing capacity
2) works with full capacity.

→ packet :- 1) Both forwarding and storing capacity
2) partial and full capacity

⑤ Protocol :- set of rule followed by device for effective communi-cation

Principle :- 1) layer shld be bidirectional

2) Both layer (obj in) should be identitical.

→ TCP/IP protocol suite :-

hierachical property

layers :

application	message
transport	segment / ≠ user datagram
network	datagram
datalink	frame
Physical	bits

① Application Layer :-

logical connection end to end user

HTTP :- hyper text transfer protocol

- → acess WWW
- → user make http req to browser, ≠ webpage send the data

SMTP :- simple mail transfer protocol

→ used in email service

FTP :- File transfer protocol

→ transfer file from one host to another

DNS :- Domain name system

→ transfer domain name into IP address

Transport Layer:-

logical conn between end to end user, gets msg from app layer

TCP:- Transmission control protocol

- connection oriented
- congestion, flow control
  - load > than capacity
  - → intake should be balanced

UDP:- user datagram protocol

- connectionless
- no error, congestion, flow control

SCTP:- stream control transmission protocol

- respond to application of multimedia

Network Layer:-

no logical connection host to host connection responsible for creating conn between source and destination computer.

Router:- present in dis and chooses d best route

IP: Internet protocol:-

- defines format of packet

ICMP:- Internet control message protocol

- reports d problem in routing a packet

ARP:- address resolution protocol

↳ find link layer address of host

Datalink layer:-

↳ provides error detection and correction

Physical layer:-

carries indv bits in a frame across a link

Encapsulation and Decapsulation

↓ ↑

Multiplexing Demultiplexing

↳ from many resource data gets collected

→ OSI model:-

Its ~~type of~~ a model

application
Presentation
Session
Transport
Network
Datalink
Physical

→ reason for lack of success

① some layer of it isn't fully defined

② no high performance

③ TCP/IP already implemented, lot of time and more money.