Computer Networks III

- ✗ Application layer
- ✗ Presentation layer
- ✗ Session layer
- ✗ Transport layer
- Network layer
- Data link layer ✓
- Physical layer ✓

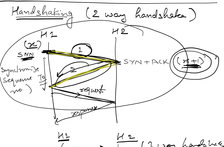
No

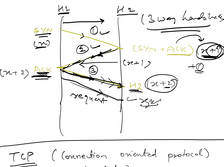
TCP / IP Model (4 layers)

5) Process / Application layer
4) Host to Host / Transport layer (2 protocols TCP/UDP)
3) Internet layer (network layer)
2) Network / Access / link layer
1) Physical layer

TCP UDP

Handshaking (2 way handshake)





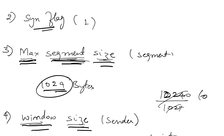
TCP (connection oriented protocol)
(3 way handshake)

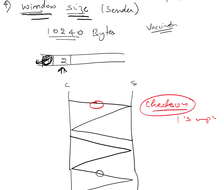
1) Sequence (SQN) no. (random sequence no. generated at sender side)

2) Syn flag (1)

3) Max segment size (segment)
1024 Bytes
1024 byte to TCP

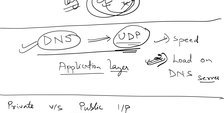
4) window size (sender)
10240 Bytes
Vacant





UDP (connectionless protocol)
(no handshaking)

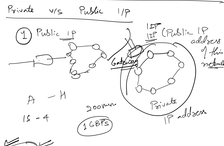
Whatsapp calls (UDP)
video calls (UDP)
conference (All joins server)
log



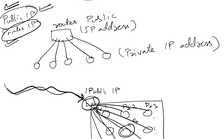
DNS → UDP → speed
Application layer
load on DNS server

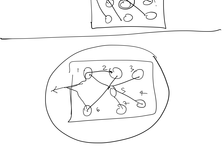
Private v/s Public IP

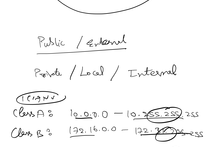
① Public IP



A – H
B – 4
200mm
1 GBPS



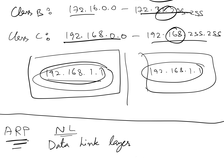




Public / External

Private / Local / Internal

(IPv4)
Class A 10.0.0.0 – 10.255.255.255
Class B 172.16.0.0 – 172.31.255.255
Class C 192.168.0.0 – 192.168.255.255



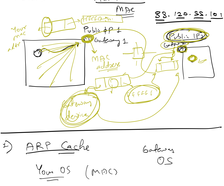
ARP NL
Data link layer

MAC address ← dest & source
(frames) (IP) → MAC

1) ARP Cache
Your OS (MAC) Gateway OS

2) ARP Time Cache Time Out

3) ARP request



4) ARP response (MAC address of the dest)

Socket ⇒ IP & Port
192.168.20.31 & 8080