



Tcp connection using 3-way handshaking Method

↳ connection means Reserve pu, buffer, bandwidth
- variation of

eg- Dialup.

↳ Reliability means no data loss (100% Guarantee)

client (Laptop)

Server (Google)

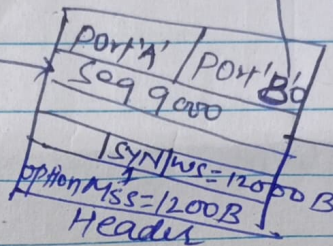
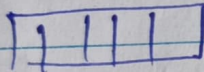
Active
open phase

Web pages.

65535

Port NO.
'A'

5000 to
60000



Passive

seq - Randomly
Generated
Sequence no.

0 to $2^{32}-1$

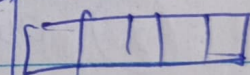
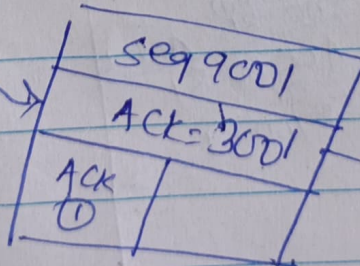
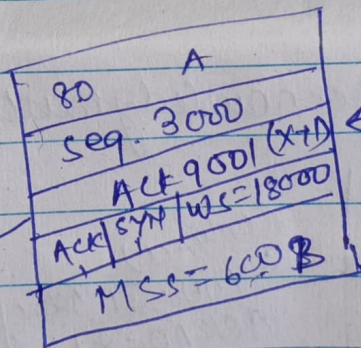
SYN → synchronize

WS → buffer of
client's

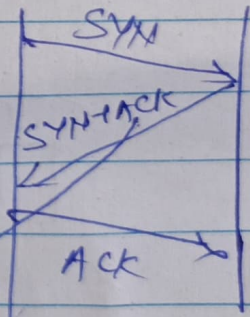
receiving end

MSS → max.

segment size
1200 B



18000
6000 B
= 30



next
expected byte

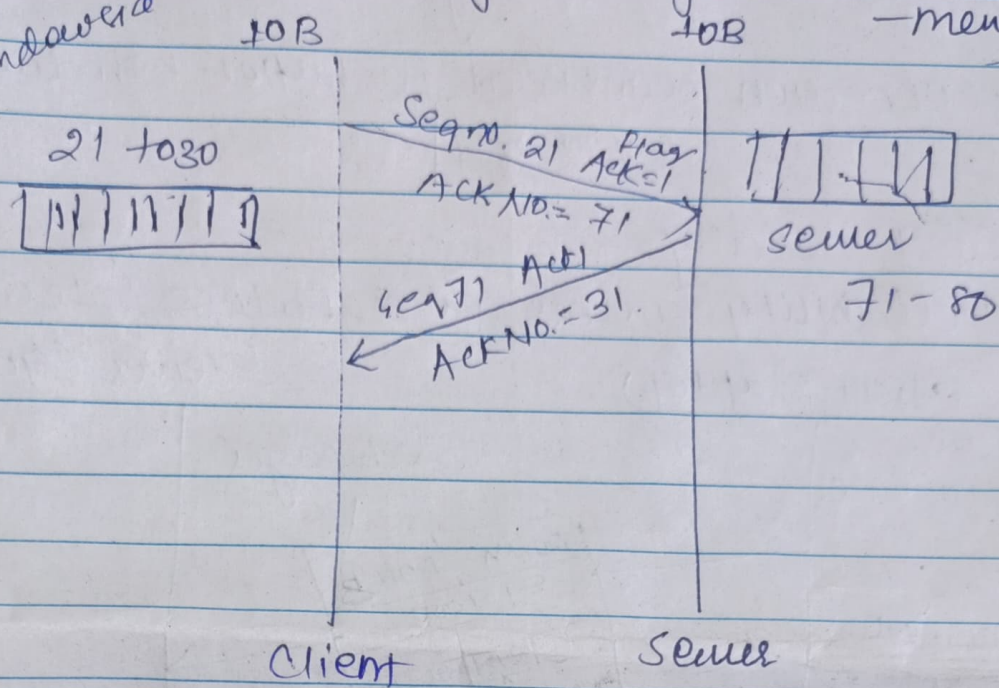
10 segments.
 $\frac{10}{12000}$
ms



ROLL NO.

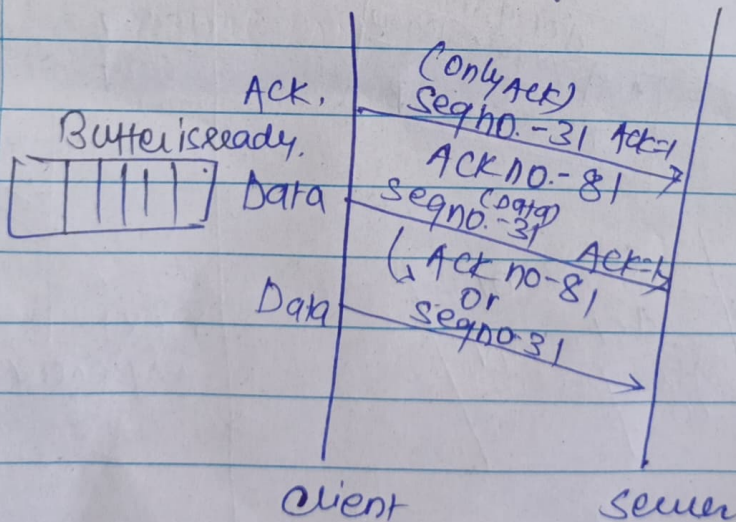
Although 2¹⁶ window size

Tcp Data transfer (After connection establishment)



(1) Piggybacking (Data + ACK)

(2) pure Acknowledgment (only ACK)

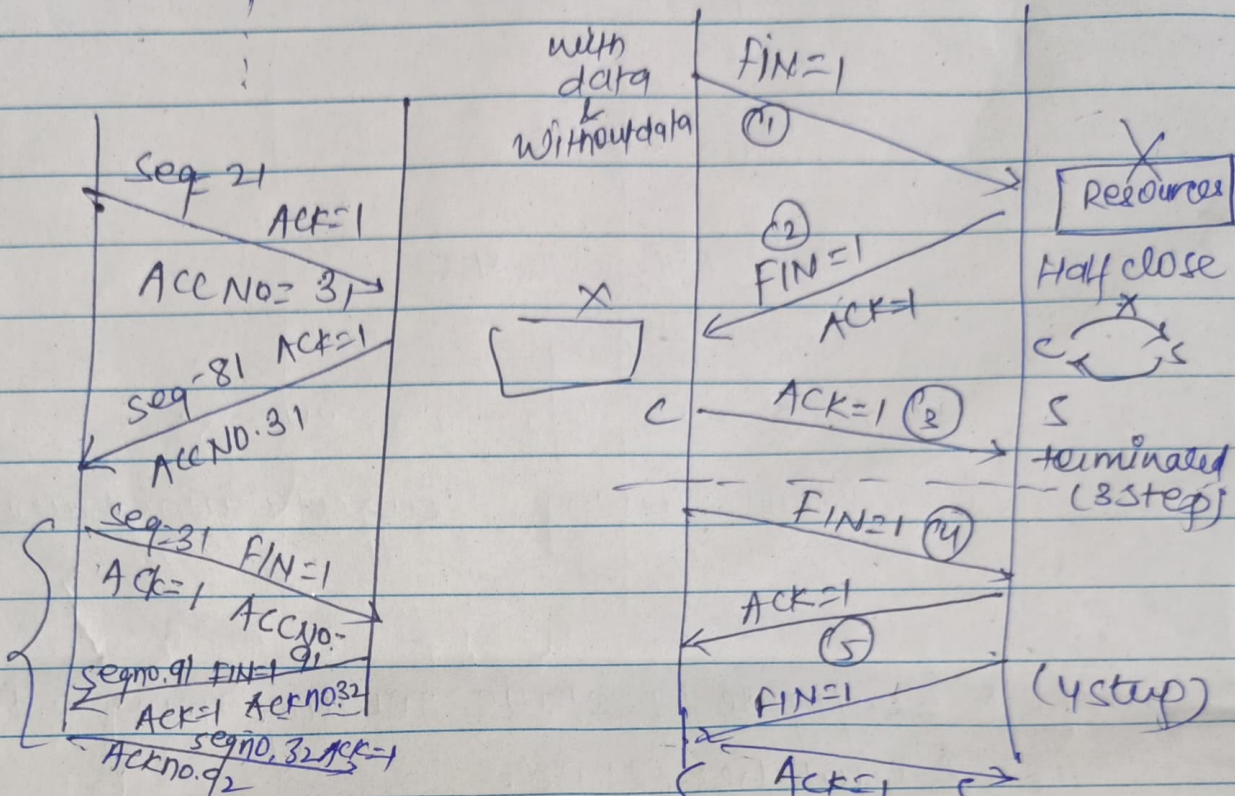




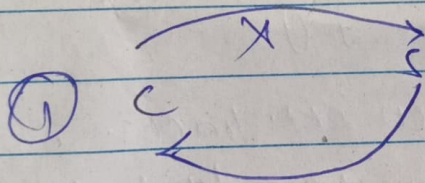
TCP connection Termination

FIN - Finish

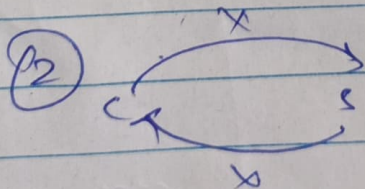
3-step
4-step



client to server.



free resources. means client can't send data to server but it can send Ack to server bcoz for Ack no resource is required.



again server can't send data but it can send Ack.





eg - $W_r = 64KB$

$MSS = 1KB$

$W_r = 64MSS$

$Thr = 64/2 = 32MSS$

1 2 8 16 32 33 34 35 ... 64
slow start th. congestion avoidance

Q. Configure IP static routing using 2 Router, 2 switches, 4 pc.

Q. HTTP/web server configuration in cisco pkt tracer.

Q. Virtual LAN in cisco pkt tracer

Q. Remote desktop connection / Telnet connection in cisco pkt tracer