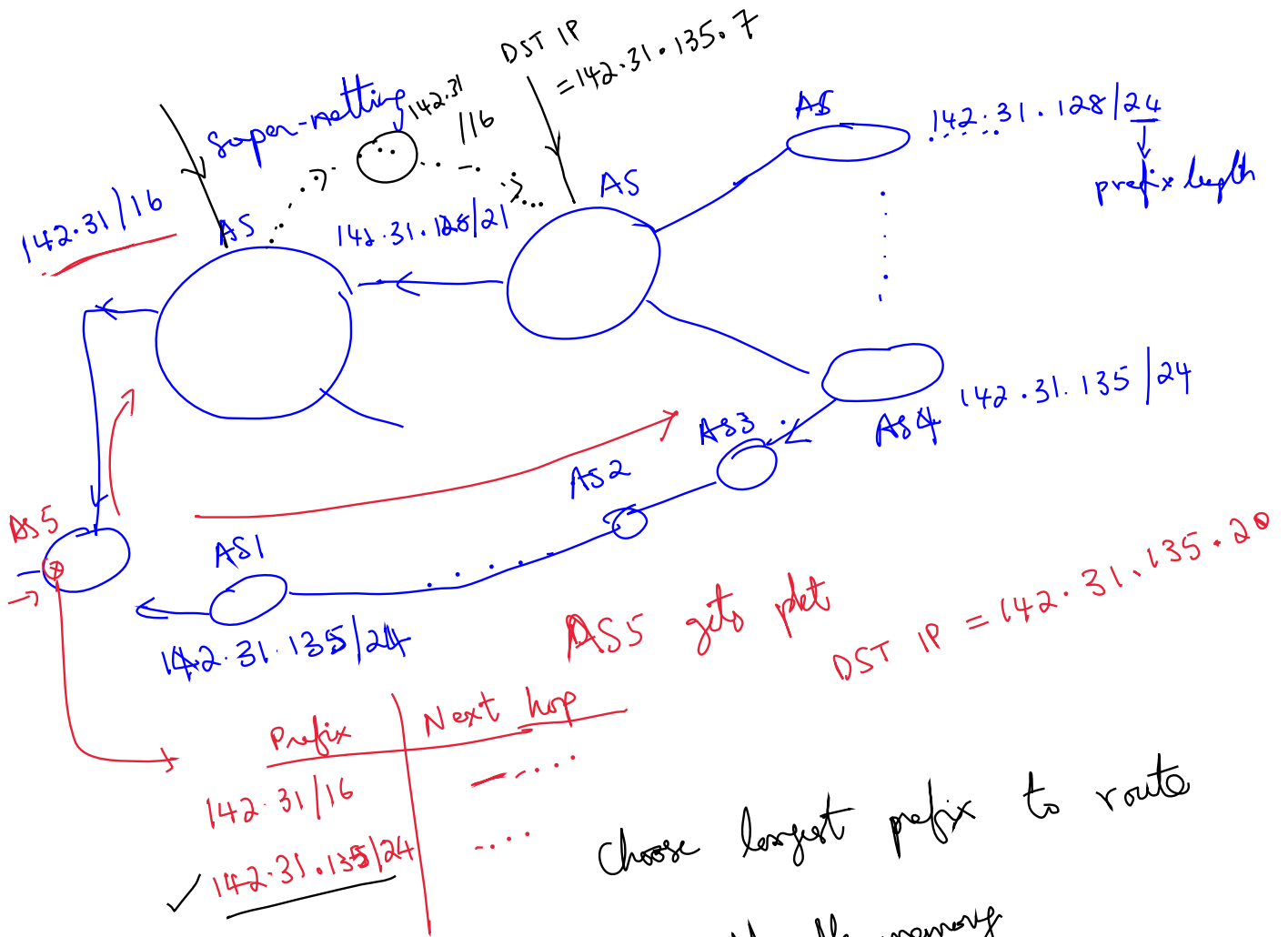
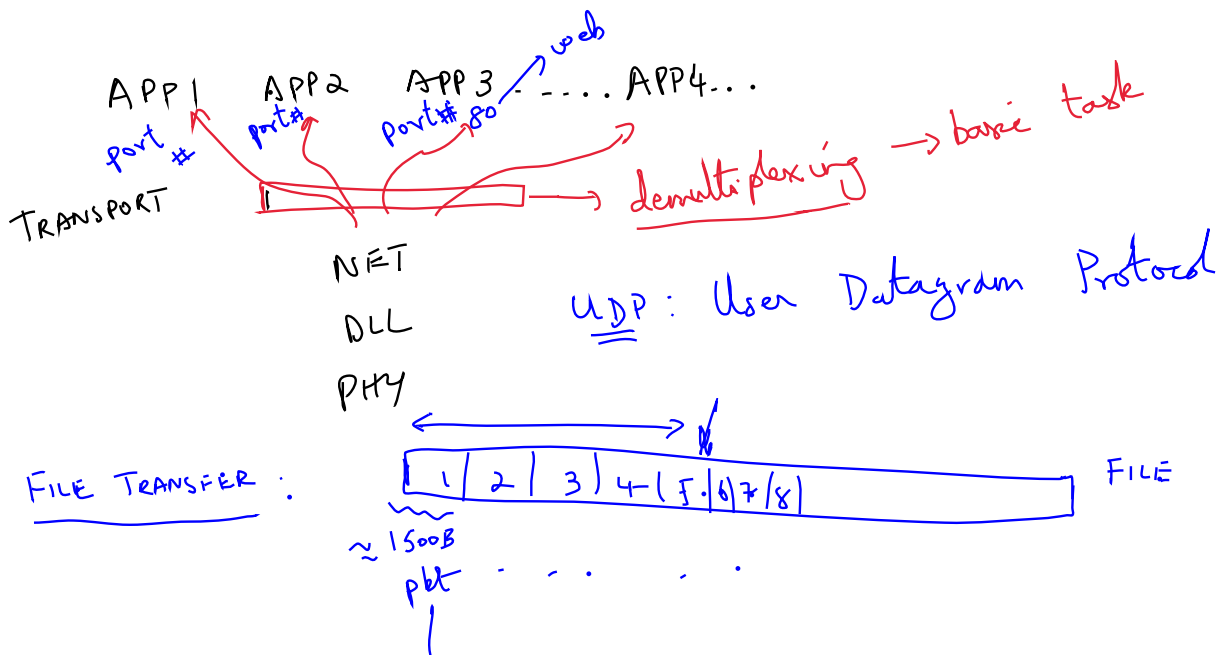


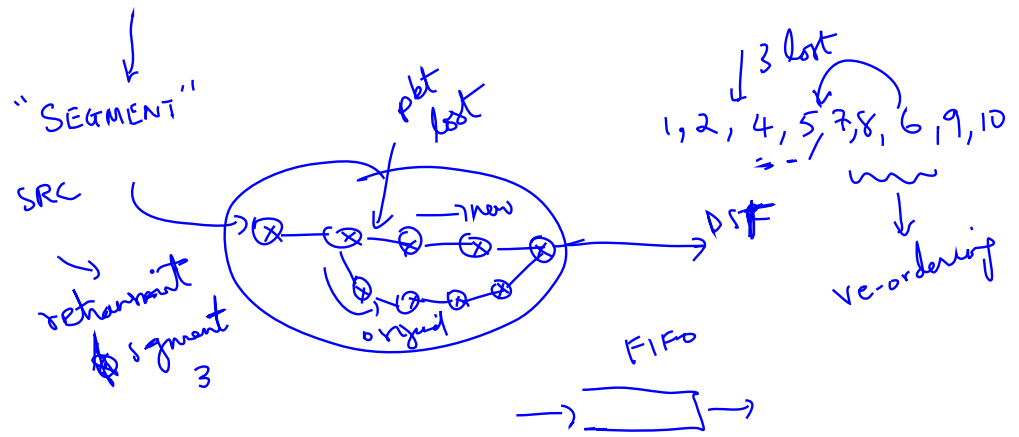
LONGEST PREFIX MATCHING



CAM: Content addressable memory

Layer-4 Transport Layer





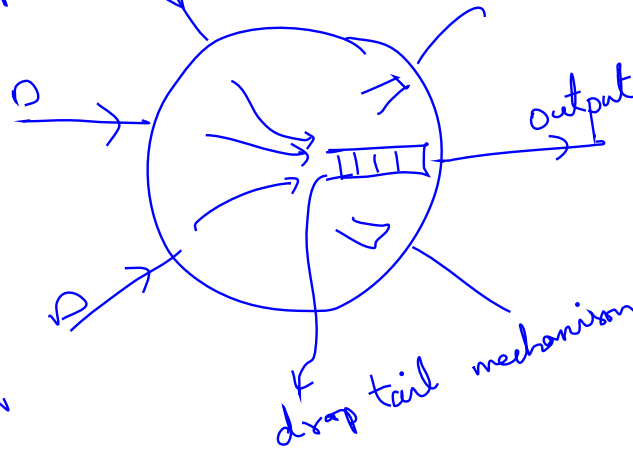
Transport

(TCP) : ✓ Reorder segments

✓ Reliable data transfer: retransmitting lost segments

✓ Congestion control → infer packet loss

Input



CONGESTION

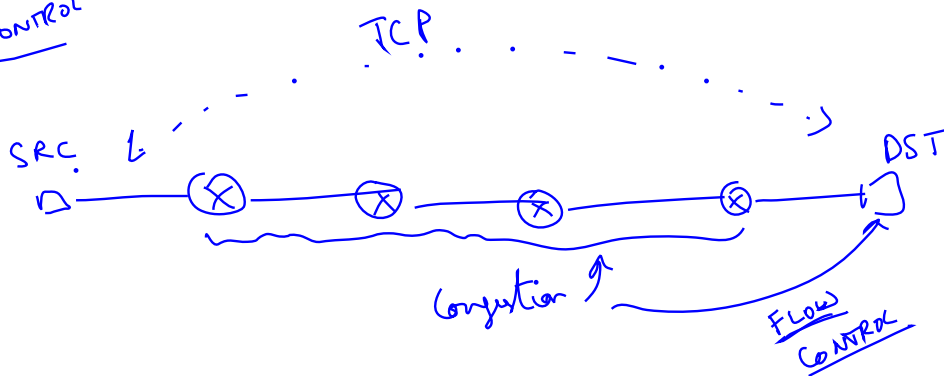
↳ Queue full, pkts dropped

TCP infers "congestion"

does Congestion Control

reduce segment sending rate

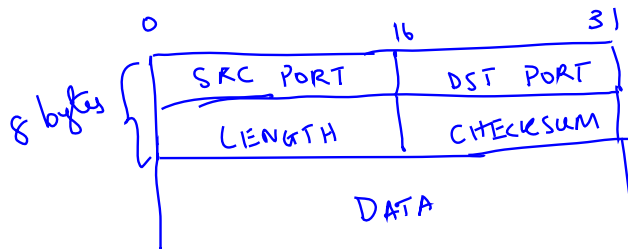
Flow Control



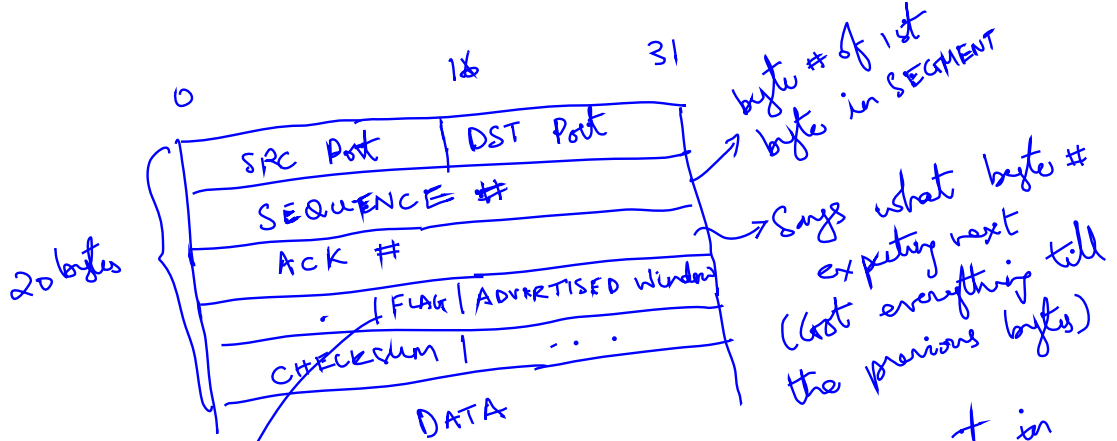
VAN JACOBSON - 1980S

SALLY FLOYD

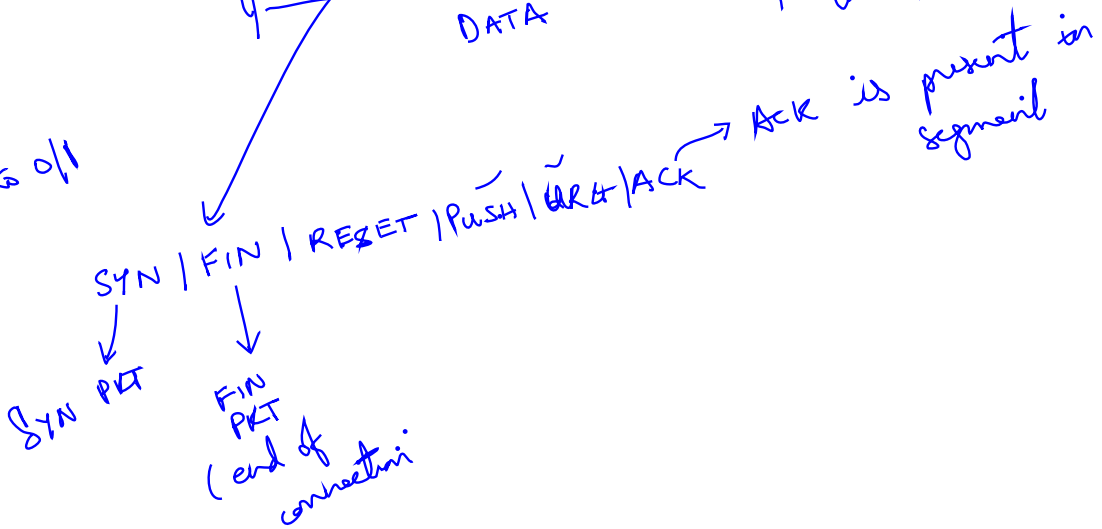
UDP Header



TCP
HEADER



Bits set to 0/1



Protocol Field at IP layer

6 TCP

17 UDP