Transport layer Protocols

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IP addr. identifies a host.
Port " " " process inside a host.
Transport layer protocols responsible for process to process delivery.

Connectionless V Connection Oriented:-

1) In connec less ptcl packets are sent before connection is established, opposite of connection oriented.
2) In connectionless packets may arrive out of sequence.
3) Packets may be delayed/lost in conn. less.

Reliable V Unreliable.

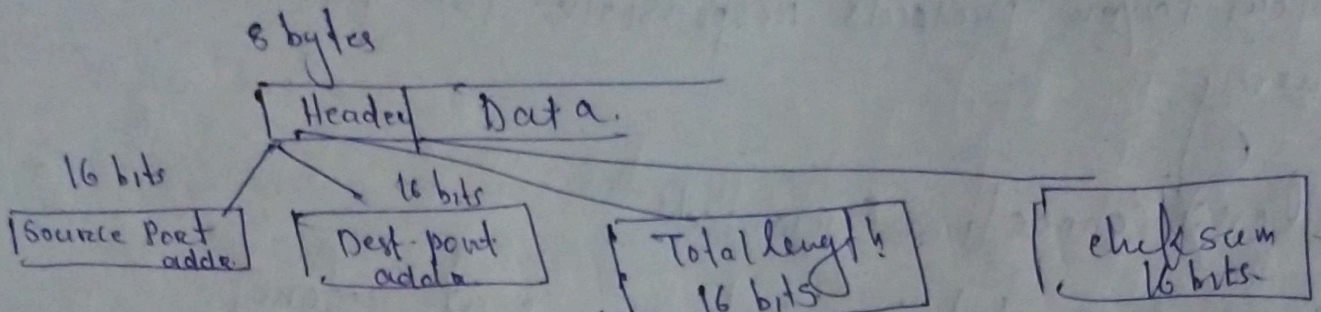
1) If application layer needs flow control & error ctrl. services, then the transport layer has to provide a reliable protocol like TCP, SCTP.
2) If applctn layer has its own flow ctrl, & error ctrl tools, then the transport layer protocol can be unreliable; it need not have flow/error ctrl tools Ex: UDP.

UDP: (User Datagram)

1) Connectionless service.

2) Unreliable hence no flow ctrl.

3) Checksum is provided for error detection.



Total length = Size of UDP header + APP packet size.

Max allowed UPP packet size = $2^{16} - 1$.

TCP (Transmission Control Protocol)

Process to Process Delivery. Unlike UDP. TCP is a stream oriented protocol. Meaning packets generated by a single application layer process are treated as part of a stream.

TCP segment