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CN ASSIGNMENT 1 (from ex:3.4)

Eisha Tir Raazia

17K-3730

Section C

Answer of Q.No.1 Sequence number needed to be introduced to identify/determine whether the packet which is being sent is retransmission or a new packet. Therefore, the sequence numbers provide information about the packets that are dropped and supports reordering.

Answer of Q.No.2 Timers help to recognize if a packet is lost or it is received as, if the acknowledgement for a sent packet is not received within the timer duration of packet(timeout) then it is assumed that the packet is lost due to any reason and then it is retransmitted by the packet sender.

Answer of Q.No.3 Even if the round trip delay is constant, the timer will still be necessary and useful in order to detect the packet loss. And sender can create an estimation error which can consequently lead to duplicate transmissions in case of for prematurely expired timers. Only advantage of knowing the RTT is that sender knows/can make a good estimation that either the packet or its acknowledgement has been lost.

Answer of Q.No.4 (Animation for Go-back-N)

(a) Sending 5 packets and killing the first before it reaches the receiver end

- None of the packets were acknowledged when first packet was found lost.

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- Packet 0 selected.
- Packet 0 lost
(R) -  Packet 1 received out of order - no Packets acknowledged. Special case -  No Ack sent.
(R) -  Packet 2 received out of order - no Packets acknowledged. Special case -  No Ack sent.
(R) -  Packet 3 received out of order - no Packets acknowledged. Special case -  No Ack sent.
(R) -  Packet 4 received out of order - no Packets acknowledged. Special case -  No Ack sent.
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- ACK was sent to the sender when retransmitted packets were received again and all the packets in the frame along with the lost packet were sent again..