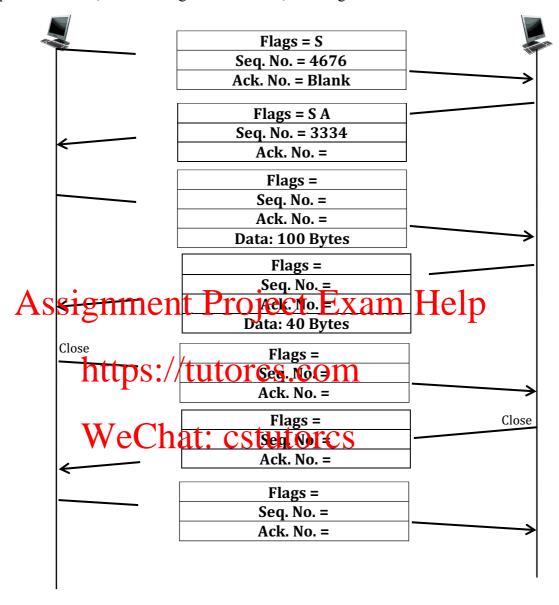
Transport Layer (2) - Questions

Q1) Given the following scenario, populate the TCP header fields that follow for the Sequence Number, Acknowledgement Number, and Flags.



- Q2) TCP waits until it has received three duplicate ACKs before performing a fast retransmit. Why do you think the TCP designers chose not to perform a fast retransmit after the first duplicate ACK for a segment is received?
- Q3) Consider transferring an enormous file of L bytes from Host A to Host B. Assume an MSS of 536 bytes and ISN is 1.
 - a. What is the maximum value of L such that TCP sequence numbers are not exhausted?
 - b. For the L you obtained in part (a), find how long it takes to transmit the file. Assume that a total of 66 bytes of transport, network and data link layer headers are added to each segment before it is sent out on a 155Mbps link. Ignore flow control and congestion control so that A can pump out packets continuously in a back-to-back manner