Part B Report:

1. To estimate the congestion window size, I implemented The TCP Reno taught in class. This algorithm is selected since it is much better than TCP Tahoe. It is being estimated at sender side because the connection is initiated at the sender. After the successful connection establishment we check for the congestion window size.There are various variables to be considered in the calculation of cwnd. They include the icwnd, ssthreshold. I initialize the icwnd to 1 MSS. This based on the readings from Internet and Stackoverflow. Since threshold value can be anything I initialize to rwnd by 2. This value was selected after reading from internet and running many experiments and thus this gives near perfect behavior of TCP Reno. In this algorithm the cwnd window size is reduced for Triple duplicates and Time outs. If the window size goes over ssthreshold we increase the window size linearly. If there is no loss we increment the window size by 2.
2. I implemented this part in the same code as above and while checking for time outs I am increasing the timeout counter value by one and while calculating the retransmission I am increasing the retransmission counter by 1. Even this is done at the sender side after successful connection establishment.

   Output:
   for Flow 43498
   Congestion Window 2
   Congestion Window 4
   Congestion Window 8
   Congestion Window 16
   Congestion Window 17
   Congestion Window 18
   Congestion Window 19
   Congestion Window 20
   Congestion Window 21
   Congestion Window 22
   Congestion Window 23
   Congestion Window 24
   Congestion Window 25
   Congestion Window 26
   Congestion Window 27
   ##
   for Flow 43500
   Congestion Window 2
   Congestion Window 4
   Congestion Window 8
   Congestion Window 16
   Congestion Window 17
   Congestion Window 18
   Congestion Window 19
   Congestion Window 20
   Congestion Window 21

Congestion Window 22
Congestion Window 23
Congestion Window 24
Congestion Window 25
Congestion Window 26
Congestion Window 27
##
for Flow 43502
Congestion Window 2
Congestion Window 4
Congestion Window 8
Congestion Window 16
Congestion Window 17
Congestion Window 18
Congestion Window 19
Congestion Window 20
Congestion Window 21
Congestion Window 22
Congestion Window 23
Congestion Window 24
Congestion Window 25
Congestion Window 26
Congestion Window 27
##
For Flow 43498
Retransmissions: 2 1
For Flow 43500
Retransmissions: 6 90
For Flow 43502
Retransmissions: 0 0