

Readme for question -1 Stop and wait :

First go inside stop and wait folder and then follow these steps

- 1.sudo mn (mininet environment will start)
- 2.xterm h1 (create terminal for h1)
3. Xterm h2 (crete terminal of h2)

Inside terminal of h1(loss and delay and queue limit as per wish)

- 4.sudo tc qdisc add dev h1-eth0 root netem rate **10Mbit** limit 100 (execute from xterm h1)
- 5.sudo tc qdisc change dev h1-eth0 root netem delay **5ms** (execute from xterm h1)
- 6.sudo tc qdisc change dev h1-eth0 root netem loss 5% (execute from xterm h1)

Inside terminal of h1

- 7.sudo tc qdisc add dev h1-eth0 root netem rate **10Mbit** limit 100 (execute from xterm h1)
- 8.sudo tc qdisc change dev h1-eth0 root netem delay **5ms** (execute from xterm h1)
- 9.sudo tc qdisc change dev h1-eth0 root netem loss 5% (execute from xterm h1)

After that :

10. python3 cs20btech11051_receiverStopWait.py <h2 terminal>
11. python3 cs20btech11051_senderStopWait.py <h1 terminal>

Enter timeout value observe throughput and retransmit,it packets on terminal of h1

Readme for Question -2 Go back n:

First go inside stop and wait folder and then follow these steps

- 1.sudo mn (mininet environment will start)
- 2.xterm h1 (create terminal for h1)
3. Xterm h2 (crete terminal of h2)

Inside terminal of h1(loss and delay and queue limit as per wish)

- 4.sudo tc qdisc add dev h1-eth0 root netem rate **10Mbit** limit 100 (execute from xterm h1)
- 5.sudo tc qdisc change dev h1-eth0 root netem delay **5ms** (execute from xterm h1)
- 6.sudo tc qdisc change dev h1-eth0 root netem loss 0.5% (execute from xterm h1)

Inside terminal of h1 (loss and delay and queue limit as per wish)

- 7.sudo tc qdisc add dev h1-eth0 root netem rate **10Mbit** limit 100 (execute from xterm h1)
- 8.sudo tc qdisc change dev h1-eth0 root netem delay **5ms** (execute from xterm h1)
- 9.sudo tc qdisc change dev h1-eth0 root netem loss 0.5% (execute from xterm h1)

After that :

10. `python3 cs20btech11051_receiverGBN.py <h2 terminal>`

11. `python3 cs20btech11051_senderGBN.py <h1 terminal>`

Write the value for timeout and window size on h1 terminal

Observe throughput print on screen of h1 terminal