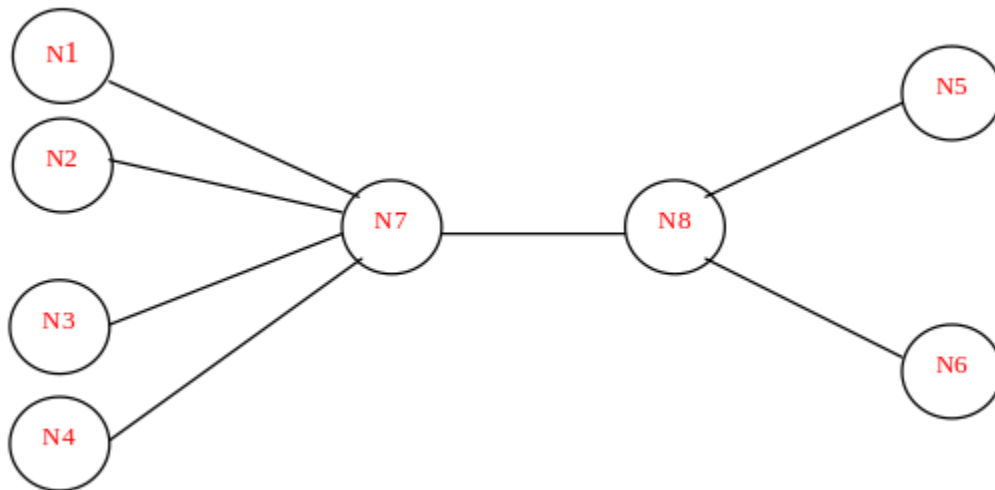


Problem statement

Create the following simple fixed topology with point to point connection among all nodes using NS2/NS3. The client nodes N1, N2, N3 and N4 are connected to server nodes N5 and N6 through the intermediate nodes N7 and N8. Perform TCP flow from the nodes N1 and N2 to node N5 and also perform UDP flow from the nodes N3 and N4 to the node N6. Initially client nodes send a packet every 100ms with the fixed packet size of 100 bytes.



a) Start the TCP application at $t_1=1s$, UDP application at $t_2=5s$ and then run the simulation for 10secs. Show the packet flow using network animator and print the throughput of the network (refer - <http://personal.ee.surrey.ac.uk/Personal/K.Katsaros/media/ns3lab-sol/lab-1-solved.cc>). Plot a graph time vs throughput using gnuplot.

b) Change the packet size to 256 bytes and packet arrival rate to 200ms and plot the graph.