IMPORTANT INSTRUCTIONS

- To run the given files **wired.cc** and **wireless.cc**, kindly follow the steps below.
  - Copy both of the files into the **scratch** folder inside the ns3 directory.
  - Kindly check that the build profile for waf is set to **debug**. This is required as the optimized build profile automatically ignores output from the ns3 logging component.
  - Run **./waf** command from the terminal to build the files.
  - The commands to run the files are as follows:
    - **Wired TCP Westwood**: ./waf --run "scratch/wired --agent=Westwood"
    - **Wired TCP Veno**: ./waf --run "scratch/wired --agent=Veno"
    - **Wired TCP Vegas**: ./waf --run "scratch/wired --agent=Vegas"
    - **Wireless TCP Westwood**: ./waf --run "scratch/wireless --agent=Westwood"
    - **Wireless TCP Veno**: ./waf --run "scratch/wireless --agent=Veno"
    - **Wireless TCP Vegas**: ./waf --run "scratch/wireless --agent=Vegas"
- As can be seen above, the TCP agent is entered through a command line argument. In case a wrong agent is entered or no agent is specified, the program terminates after displaying an error message.
- After running the file, an ASCII trace file will be obtained in the ns3 directory. For wired.cc the filename will be **wiredTcp<agent>_trace.txt** where agent can be Westwood/Veno/Vegas. Similarly, for wireless.cc the filename will be **wirelessTcp<agent>_trace.txt** where agent can be Westwood/Veno/Vegas.
- After running the file, a plot file will be obtained in the ns3 directory. For wired.cc the filename will be **wiredTcp<agent>.plt** where agent can be Westwood/Veno/Vegas. Similarly, for wireless.cc the filename will be **wirelessTcp<agent>.plt** where agent can be Westwood/Veno/Vegas.
- After running the file, 10 serialized data files in xml format will be obtained in the ns3 directory, one for each packet size. For wired.cc the filename will be **wired_<agent>_<packetSize>.xml** where agent can be Westwood/Veno/Vegas and packetSize will be one of the 10 packet sizes given in question. Similarly, for wireless.cc the filename will be **wireless_<agent>_<packetSize>.xml** where agent can be

Westwood/Veno/Vegas and packetSize will be one of the 10 packet sizes given in question.

- ❏ The graph corresponding to each plt file can be obtained by using **gnuplot**. The command is **gnuplot filename.plt**
- ❏ The NetAnim xml files can be visualized by opening them using NetAnim.
- ❏ The values of throughput for different packet sizes will also be visible in the terminal on running the files.