Script for CNT 4004 Project Grading – Fall 2017

Student names: _____ and _____

The "successful operation" component of your project will be graded as below. The maximum grade is 50. See the attached appendix for instruction on how to use the remote Linux server.

Step #1: Transfer a 100 MB file on your local host between two consoles using tcpFileSend and tcpFileRecv. Do this three times and log the transfer time for each trial. The average of these three trials will be the benchmark time for steps #2 and #3. ***This step is 2 points maximum.***

Step #2: Transfer a 100 MB file on your local host between two consoles using your UDP based sender and receiver programs. Do this three times and log the transfer time for each trial. The average of these three trials will be the transfer time for this step. This transfer time must be within 10% of the benchmark time for full credit. ***This step is 10 points maximum.***

Step #3: Transfer a 100 MB file on your local host between two consoles using your UDP based sender and receiver programs with an emulated 2% packet loss. Do this three times and log the transfer time for each trial. The average of these three trials will be the transfer time for this step. This transfer time must be within 15% of the benchmark time for full credit. ***This step is 15 points maximum.***

Step #4: Transfer a 100 MB file on your local host (connected to USF WiFi) to the remote host using using tcpFileSend and tcpFileRecv (tcpFileRecv runs on the remote host). Do this three times and log the transfer time for each trial. The average of these three trials will be the benchmark time for step #5. ***This step is 3 points maximum.***

Step #5: Transfer a 100 MB file on your local host (connected to USF WiFi) to the remote host using your UDP based sender and receiver programs (your receiver program runs on the remote host). Do this three times and log the transfer time for each trial. This transfer time must be within 10% of the benchmark time for full credit. ***This step is 20 points maximum.***

Step	Time 1	Time 2	Time 3	Mean time	Notes and score
1					
2					
3					
4					
5					

Grading notes:

1) The score for steps #2, #3, and #5 linearly scales as the measured transfer time exceeds the given transfer time to a minimum of 5 points for a time double the given acceptable transfer time. So, just being able to transfer a file (demonstrating functionality) is 5 points.
2) If the 100 MB file transfer is not possible for steps #2, #3, and #5, then a 1 MB file will be used to demonstrate functionality – the maximum possible grade is then 5 points for each of these steps.
3) If the received file is corrupted, points will be deducted.

Appendix – Instructions on using the remote server for the file receiver

A virtual machine was created for you to test your project implementation. The OS of the machine is Linux; make sure that your UDP receiver can run on a Linux machine.

Each student has an account created on the machine. To access the machine, you will use SSH.

- For Windows: Use PuTTy to access the machine. Under host, type the address below `<your netid>@research.jadorno.com`. This should prompt a window asking for a password; the password is your U-number with the U uppercase.
- For Linux/Mac: Open a terminal window and run the command below `ssh <your netid>@research.jadorno.com`. After that is should ask a password; the password is your U-number with the U uppercase.

Port numbers to be used by each group will be assigned in class. Each group will have a unique port number to prevent port number conflicts between groups.

To upload files to the virtual machine, do the following:

- For Windows: Download FileZillla Client. Once download it, open it. Enter the following on the fields; Host: research.jadorno.com, Username: <your username>, Password: <your password>, Port: 22. This will show the server files on the right side and on the left side you will see the files from your local computer. To upload a file from your computer to the server, right click the file and press "Upload".
- For Linux/Mac: Open command line. Navigate (change directory using `cd` command) to the folder where the file you want to upload is located. Once you are in the folder, type the following command: `sftp <your username>@research.jadorno.com`. Type your password when it asks for it. Once you are in, to upload the file to the server, write this command to upload the file: `put <file to upload>`.

NOTE: Always exit from the server whenever you finish using it.