

AAST College of Computing and Information Technology

Network Protocols (CS422)

Spring 2014

Homework 3 (Total of 40 pts)

Due on May 11th, 2014

No late submissions will be allowed

Q1. (20 pts) Modify the source code for the simple TCP daytime client and server programs to allow the same TCP client to connect to the TCP server using multiple processes in one run of the client program.

- Your modifications must show the PID (Process ID) of the multiple running processes of the client.
- Use the **netstat** command to show the TCP state of the server before and after running of the modified client program.
- Use **wireshark** software to show the Three-Way Handshake, the response of the daytime server and the TCP Connection Termination conversation segments between the modified client and server programs

Q2. (20 pts) Solve the previous question assuming that the TCP client will use multiple threads instead of multiple processes when connecting to the TCP daytime server.

- Are there any differences in the output of the netstat command or the TCP segments between the client and the server?

What to Submit?

- Please submit soft copy and running version of your programs on Ubuntu Linux to your TA during section time.