EECE 4830-5830 Network Design, Dr. Vinod Vokkarane

Programming Project Phase 1: UDP Client and Server

Project description: The TCP/IP stack has five layers, namely application, transport, network, link, and physical. In Phase 1 of the project, each student has to implement the standard user datagram protocol (UDP) sockets. The intention is to transfer a file (use an image file) between a UDP client process and a UDP server process. Note that the client and server process can reside on the same host, but have to use different port numbers. **Make sure that your program can transfer files (or data) in both directions.**

Implementation: **Individual effort**

Deadline: Sep. 23rd Midnight through Blackboard

Expectations: In this phase of the project, each student is expected to gain a thorough understanding of socket programming.

Programming language: Python, C, C++, or Java (recommended).

Deliverables:

1. **ReadMe.txt**: Name of the team members, list the names of files submitted and their purpose, and explain steps required to set up and execute your program.
2. **Design Document** (design.doc): describe the purpose of each class and each data type. Also provide a step-by-step sample execution of your program (possibly with screen shots of a sample scenario).
3. **UDP client/server source files** (.java, .c/.cpp/.h): well documented source code; mention ALL references for reuse of source code (if any).
4. **Transfer File** (No .EXE files): sample file (few 100KB size) used to test the functionality of your program.

Submit all your documents in a single compressed file with the name **StudentLastNamePhase1.zip**. All submission will be inspected using the **Plagiarism detection software.**

References:

1. Socket Programming
   - Python Socket Programming (Textbook Sec 2.7)
   - JAVA Socket Programming
   - Linux Gazette's Socket Programming and Beej's Guide
   - Socket Programming by JAVA World and O'REILLY JAVA Network Programming
2. UDP: RFC768