CSCE 416 Programming Assignment 1
Getting Started on Network Programming

The purpose of this assignment is to familiarize you with network programming. You will obtain, compile, and run a simple network program. You will then implement a simple extension.

Download the file OneWayMesg.zip from the Blackboard and unzip it. You will find three folders, 'c', 'java', and 'python', corresponding to an implementation of the one-way messaging application in that programming language. Each folder contains two programs, OneWayMesgServer and OneWayMesgClient. The instructions on how to run them are given in the README.txt file in each folder.

To see the interaction, run OneWayMesgClient and OneWayMesgServer in two separate terminals. Type something on the terminal where OneWayMesgClient is running, and see that OneWayMesgServer prints out the message. Note that OneWayMesgServer and OneWayMesgClient use a specific port to communicate.

Your task is to modify OneWayMesgServer to create TwoWayMesgServer that accepts user input and sends it to the TwoWayMesgClient, which is a modified version of OneWayMesgClient that prints the received message on the terminal. You can complete this assignment in 'c/c++', 'java', or 'python' language. The TwoWayMesgServer and TwoWayMesgClient output should look like this:

Server> Waiting for a client ...	Client> Connected to server at ('localhost', '50000')
Server> Connected to a client at ('127.0.0.1', '60681')	Client> Hello Server
Server> Client: Hello Server	
Server> Hello Client	
–	Client> Server: Hello Client

That's it. Sounds simple, doesn't it? Indeed, for experienced programmers, this assignment is trivial. Others should find this as an easy way to get started on network programming. Don't simply download the source code and compile the programs; but make sure that you understand how the sockets are created and the connection is established. Start early and seek as much help as needed from the TA and the instructor.

Submission

(1) Create a zip file containing the new TwoWayMesgServer and TwoWayMesgClient source files
(2) Rename the zip file as YOURLASTNAME_P1.zip (YOURLASTNAME in all caps)
(3) Upload it in the Blackboard

Grade Breakdown

(1) 25%: You submitted your assignment on-time; and the new, modified files compile correctly. **Zero points if the files do not compile or you upload the original files**.
(2) 75%: Both TwoWayMesgClient and TwoWayMesgServer can print each other's messages.