

**Comp 7005 Computer Systems Technology September 2019**

**Assignment #1**

**Due:** October 2, 0900 hrs. You may work in groups of two.

**Objective:** To implement a simple client-server using the **TCP/IP protocol suite**.

**Your Mission:**

- Design and implement a server application that will listen for connections from clients and once the connection has been established it will respond to file transfer commands from the client(s).
- Design and implement a client application that will initiate a connection to a remote server, and will issue commands to the server to either send a file or to receive a file.
- Supply the server information as command line arguments.
- Implement two functions: **GET** and **SEND** in your application.
- That is, a client can use the **GET** function to request a named file from a server.
- Similarly it can use **SEND** to send a specified file to a remote server.

**Constraints:**

- You may use any language of your choice to implement your application.
- The server will listen on port 7005 for connection requests.
- When a GET or SEND command is received by the server, the server will initiate a data connection from port 7006 to port X (any port of your choice) on the client machine to either send or receive a file.

**To Be Submitted:**

- Hand in complete and well-documented **design work, source code, and an executable.**
- You are also required to demonstrate your working programs during the lab the day the assignment is due.
- Ensure that you clearly explain the testing procedures for your programs and provide test data as necessary.
- Submit a **zip** file containing all the code and documents (**PDF format**) as described below in the sharein folder for this course under "**Assignment #1-FT**".

**Assignment #1 Evaluation**

(1) Design Work	5
(2) Functionality	35
(3) Testing	10
<b>Total:</b>	<b>50</b>