Computer Networks, Fall 2016

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Lab 1: A simple TCP client-server application

Due: Part-I on Aug. 8 (Group A) /10 (Group B)
Part-II on Aug. 22/24

In this lab, you will gain familiarity with socket programming by modifying the a simple client-server code provided in the textbook. *This lab is to be done individually.*

1 Part - I

1.1 Running the sample code - 30%

Save the client-server code of Section 1.4.2, `client.c` and `server.c`, in separate folders (helpful for doing Part-II). Compile and test the client-server code. For compiling, you can invoke:
`gcc srcfilename -o execfilename`
We will announce the address of a test server that we'll be running in the lab. To complete this part, send from your client your name to the test server.

1.2 Make the client connect to a specified address - 30%

Modify the server code so that it binds to a specified address instead of `INADDR_ANY`. Test the code using your own IP address. You can find out your IP address by issuing `ifconfig -a`.

2 Part-II

Requesting and receiving files - 40%

Modify the code to support the following sequence of instructions:

1. Client establishes connection
2. The server sends "`Hello`"
3. The client may send any number of file requests. The client makes the requests by sending a filename, one at a time.
4. If the server has the file, it sends "`OK`" followed by the file. Otherwise, it sends "`File not found`" message. The server should keep displaying all requests on the terminal.
5. The client terminates the session by sending "`Bye`"

Submission and demo Submit your code on blackboard by 2PM on the respective due dates. For demo, have the following two files ready to be sent by your server:

1. File `name.txt` that contains your name, SNU ID and email address
2. Your photo in file called `photo.jpg`