Computer Networks

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Lab 6: A client-server application for file transfer

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.*

File transfer over a C socket

Save the given client-server code `client.c` and `server.c`, preferably, in separate "client" and "server" folders. Compile and test the client-server code. For compiling, you can invoke:
`gcc srcfilename -o execfilename`

1. Integrate your code for file transfer which you wrote in the previous lab to `client.c` and `server.c` so that once the server receives a string `GET`, it sends a specified file to the client ("sample.txt" for example).

2. Implement command-line switch "f" such that user can provide filename to serve from terminal. If the file does not exist, `File not found!` message is sent. Test the code on a large file. Comapre the sent and received files.

3. Do the previous step using a UDP socket. Are the two files the same? Why or why not?

   You can use timeout on the clinet side, have server send the file size before initiating the transfer or have the server send a flag e.g. `BYE` to indicate the completion of transfer.

Submission Prepare a file that contains your name, AU ID and email address giving it a name that contains your ID. Your server must be able to send this file to a specified IP address.