

## CoE/EE 1150 Computer Networks

Due date: Monday, November 20, beginning of lecture

Accepted up to: Monday, November 27.

*Server Client mishmash*

### 1 Purpose

In this small project, you will enlarge your knowledge of the Berkeley socket layer to include a server. This server will only need to respond to *one* client at a time.

### 2 Basic ideas

Your basic assignment is to accept a byte stream from a client and modify it. You are free to choose the data type (text, audio, speech, video, images, whatever...). But you must modify it in a way of your choosing and then send it back to the client. What port should you use for your server? Choose one with personal meaning, but greater than 1024 and less than 65536.

### 3 Basic layout

Using any dialect of C, you are to write a server-client pair using the Berkeley socket interface. The sketch for the server is as follows:

1. After establishing a server socket, use `bind` and `listen` to listen for an incoming connection.
2. Use `accept` to create a client socket.
3. Then use `recv` to receive data from the client.
4. Modify the data and send it back (using `write` of course).

The client sketch is as follows:

1. open a socket to the server
2. Use `connect` to establish the byte stream
3. Then `read` from the source and `write` to the server
4. And ... `read` from the server

Please hand in: Source code and a transcript of your program running.