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COMP 307 Assignment 5

(A) what you did to get the program installed and running

I first took a look at the code and tried to compile it. There were a couple warnings that I decided to fix. Then I used netstat and a port scan to make sure I wasn't using a port that was already in use. Then I changed the code on the server so that when the socket was created it used the following options:

```
setsockopt(sockfd, SOL_SOCKET, SO_REUSEADDR, &(int){ 1 }, sizeof(int));
setsockopt(sockfd, SOL_SOCKET, SO_REUSEPORT, &(int){ 1 }, sizeof(int));
```

This ensured that the port that the server started using wouldn't be marked as in use, and the client could connect. Then I simply executed the client with the address localhost and the port that I entered in the server file, and sent a message and it worked.

(B) a description of the output (what did the program's do)

The server creates, opens, connects to a socket and has a character buffer to then receive data from the port. The client connects to the same port on the same address, and then prompts the user to enter a string. Upon entering the string, the data is sent to the said port and then arrives at the server since the server is listening. The data is fed into the server's character buffer, and then it prints that it received the said message (and prints the message as well).

(C) what difficulties did you have (for example, maybe you could not get it to run – if so, why)

1.   Port was marked as busy, so I needed to set options described above
2.   Annoying warnings because the code doesn't comply with C99
3.   Finding a port that was available (surprisingly annoying on OSX)