Baptiste Saliba

CS\_428

Programming Assignment 2

**Design Decisions:**

I had a lot of trouble with this assignment. I started by making a functioning udp version of this project before I realized it had to be TCP. Then, I tried to use ‘fork’ in order to both receive input from clients and also convey the messages to the clients simultaneously however that got messy really quickly. I then tried to use pthreads but that too was very messy and didn’t seem to work as I had wanted. Finally, I found a geeksforgeeks article which seemed to do what I needed to so I ended up following that article. The code is very similar to theirs. I chose to make this continuous so that you could send multiple messages from both clients.

Remote vs. Local:

This program works on both local and remote. The only problem I had on remote was that I couldn’t use the ‘gets’ function so I ended up using the ‘getline’ function instead.

**Output:**

Remote

A screenshot of a cell phone

Description automatically generated

Local

A screenshot of a cell phone

Description automatically generated

**Possible Edge Cases:**

This is a pretty simple program. Client1 and client2 both wait for a response from the server so there is no possibility of either client sending more than one message to the server at a time. One of the edge cases is if client1 sends a message and then client2 disconnects. This would leave client1 waiting indefinitely. Some other edge cases are if the clients don’t connect to the server properly or the server isn’t set up correctly but there are a lot of error checking cases for that.