Operating System
Lab-3
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B20CS003

Part 2- Unix Programming: Client-Math Server Chat Model

Working-

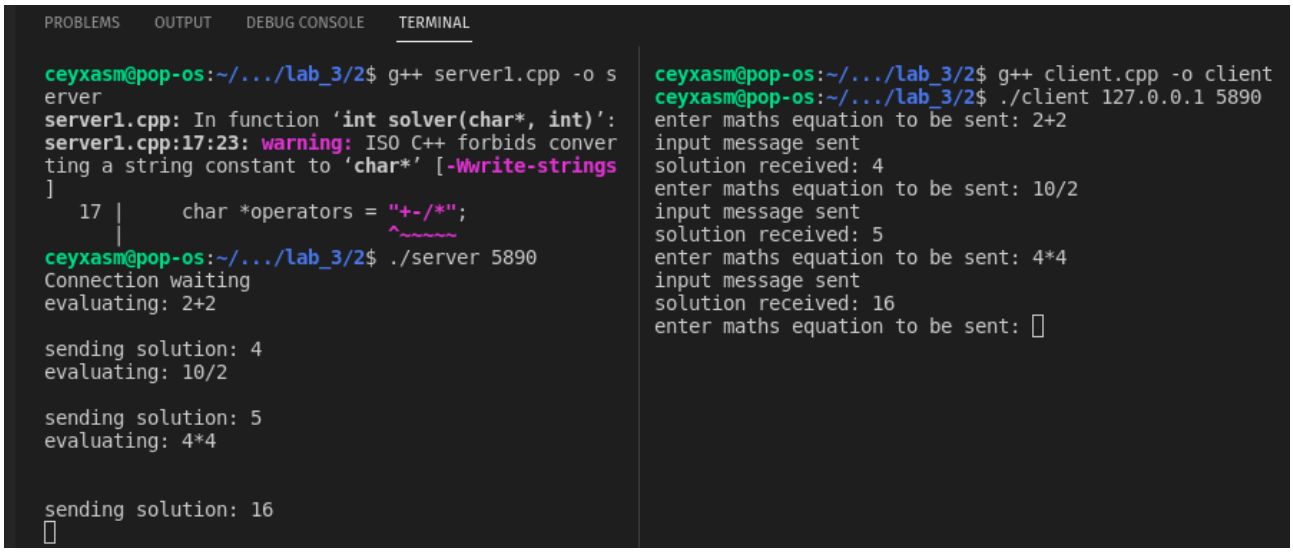
- Server is started which listens to a specified port
- Client is initiated with server IP and port
- After connection is established, it send a simple arithmethic expression which is sent to server through the socket
- Server recieves the expression, evaluates it and sends it back to client which then displays it.

Execution-

- *`g++ server1.cpp -o server`*
- *`./server 5678`*
- *`g++ client.cpp -o client`*
- *`./client 127.0.0.1 5678`*

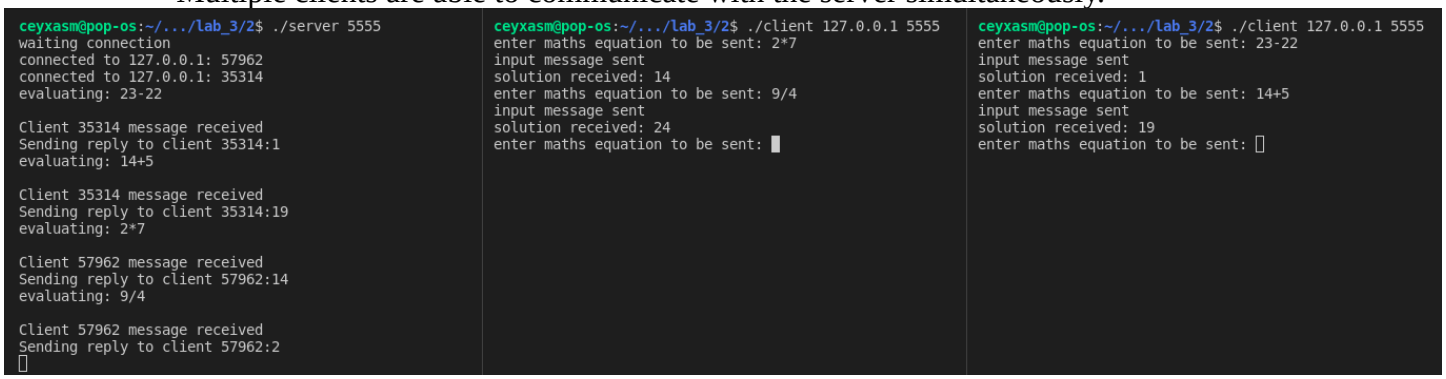
Server Model 1

- Server can handle only 1 client
- If any other client attempts to connect to the server, it has to wait indefinitely



Server Model 2

- Server2 is a multi-process server that forks a new process whenever it recieves a new client request.
- Multiple clients are able to communicate with the server simultaneously.



Server Model 3

- In this part, the server is a single process which uses the concept of multithreading that uses select system calls to handle multiple clients concurrently.
- Even if all the all the clients disconnet, the server keeps running as it expects clients to connect.