

DESCRIPTION OF THE CODE-

There are two files named Server.c and Client.c.

The Server.c sets up the server and Client.c sets up the client. There are multiple clients set up. With each client a new thread is invoked. The server is informed about all the clients as it has a array list of Client[].

Server is set up on the port 8080. We take a string input which can have SEND or ALL at the beginning and depending on that it either send to one person if the string starts from SEND and sends to everyone if the string starts with ALL. If the string starts with SEND then it is followed by a number indicating the client number to which the server is sending the message and then it is followed by the message which has to be sent to the particular client. In the string starting with ALL "ALL" is followed by the message sent to everyone except itself.

We made a client structure in Server.c and made the array of that client to store all info of the client in the array. Main method of both server.c and client.c is for socket connection.

Client is always ready to receive messages. There is a server socket and client socket on clients end. Communication takes place using sockets. These sockets can exchange messages.

HOW TO COMPILE-

- 1) Run the makefile using make command on terminal.
- 2) ./Server on the terminal
- 3) Then open new terminals and write ./Client on each terminal to make multiple clients.
- 4) Then just chat between clients.
- 5) You can start a string with SEND or ALL depending on whether you want it to be sent to one or to all connected clients. Message can have spaces in it.

ERROR-

- 1) If you send a message to yourself then it prevents that to happen.

Reference-

<https://gist.github.com/Abhey/47e09377a527acfc2480dbc5515df872>