

Assignment 2

Description of code and function implementation:

Written code for server:

Keeps a list of client ports

Function sendtoone to send message to only one port

takes message, client and port to send as argument and uses send

Function sendtall to send message to all ports

takes message and client as argument and uses send in a loop for all clients

Function getmsg to receive message and send it to specified client

Main Function

make server

make socket

bind socket

listen from socket

constantly check for clients and creates threads for each

Written code for client:

Function recvmg to receive messages from other clients and print them on terminal

Main function

create socket

connect socket to server

create client thread that constantly waits for a message

prints message received

closes socket

Compilation and testing:

1st Terminal:

```
gcc server_all.c -pthread
```

```
./a.out
```

Rest of the Terminals you want to use as client:

```
gcc client_all.c -pthread
```

./a.out <<Name of client>>

Inputs:

“Port number /ALL” “message you want to send”

Expected output:

All clients will show message if the client sending the message writes ALL before or in message

Client on certain port will show message if client sending messages writes the port number before message

Error-values and how to interpret them:

```
Error, socket cannot be made
Error, connection to socket failed
Error, can't write message
//for client
Error: can't send
Error: can't bind
Error: couldn't listen
Error, couldn't accept
//for server
```