

**Instructions for Users:** Open two terminals, one for the server and one for the client. Run both files by typing "python server.py" in the server terminal and "python client.py" in the client terminal. The server will display the corresponding IP address and port number for the client to use, and in the client terminal it will prompt the user to enter an IP address and a port number. Enter the corresponding IP address and port number, followed by the message you want to send to the server. The program will continue forever until the client does not want to send any more messages, pressing enter to escape the program.

```
PS C:\Users\Jimmy_kf29rsy\Documents\GitHub\CECS-327-HW-5> python client.py
Enter IP address: 192.168.1.23
Enter port number: 27885
Enter message you want to send (Enter to exit): asdsad
Server Response: "ASDSAD"
Enter message you want to send (Enter to exit): hello!
Server Response: "HELLO!"
Enter message you want to send (Enter to exit): goodbye
Server Response: "GOODBYE"
Enter message you want to send (Enter to exit):
PS C:\Users\Jimmy_kf29rsy\Documents\GitHub\CECS-327-HW-5> 
```

```
PS C:\Users\Jimmy_kf29rsy\Documents\GitHub\CECS-327-HW-5> python server.py
IP address of server : 192.168.1.23
Port Number : 27885
Server listening...
Received "asdsad" from the client
Received "hello!" from the client
Received "goodbye" from the client
Done
```

I am able to communicate within my own computer, however when I am trying to connect to my partner's server it is unable to bind to his server. This is most likely because the data I am trying to send cannot get past my local router onto the network since I have not designated a specific port for the server to receive the incoming signal from. Also, the IP address is an additional problem. Since every home router can have the same IP address, the server must have a unique IP address in order for duplicate addresses to be eliminated. A possible solution could be for the server side to configure their router settings to create a static IP address, and configure a port number for the data to travel through. Another solution could be for both devices to be under the same network, eliminating the problem of cross-router communication.

```
PS C:\Users\Jimmy_kf29rsy\Documents\GitHub\CECS-327-HW-5> python client.py
Enter IP address: 192.168.1.23
Enter port number: 1234
Either the IP address or port number was entered incorrectly, try again.
Enter IP address: 192.168.1.23
Enter port number: 1234
Either the IP address or port number was entered incorrectly, try again.
Enter IP address: 
```