* TCP:

Server assigns the server port to server socket by using server.bind(server\_address). When anyone sends a packet to port 10005 at the IP Address of server, that packet will be directed to this socket. Server then listens to the connection by using server.listen(5) in which the server can queue up as many as 5 connect requests before refusing outside connections.

Client connects to server socket by using client\_socket.connect(server\_address)

Server accepts client connection by using client\_socket, address = server.accept() in the while loop. client\_socket and address are 2 variables server.accept() returns.

Client then sends the information to server by using client\_socket.send(message), which contains the message.

Server receives the message (256 bytes buffer) by using client\_socket.recv(256) then send back the information in uppercase by client\_socket.sendall(data.upper()). Server saves the message in the text file group.txt with format:

Group:

Student name 1

Student name 2

…..

Student name n

* UDP:

Server assigns the server port to server socket by using server\_socket.bind(("localhost",9004)). The server waits until any message sent to port 9004.

In client, after inputting the message, the message will be sent to server by using client\_socket.sendto(message,(server,port\_no))

In server, after receiving the message, it will process the message and sent the uppercase message to client by server\_socket.sendto(data.upper(), address)

In client, the message is received by using data, s\_addr = client\_socket.recvfrom(256) in which data is the uppercase message.