# Mobile and Distributed Systems

## Assignment 1

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The purpose of this assignment was to develop a client/server chat system where clients can connect to the server and use it to send each other messages using TCP and suitable multi-threading. UDP was used to periodically update clients on who is currently in the chatroom. This assignment should demonstrate that it can work on at least for computers.

Messages were implemented using two abstract classes (Message, ServerMessage) and with many subclasses from these two. Theses messages ranged from broadcasting to private messaging to client/server notifications. The message are sent using the TCP protocol.

The Server handles all client request and messages to each other. It also regularly replied a client’s request to be updated with a list of clients that were currently in the chatroom.

The Client/ClientGUI allowed a user to type in message and select whether they would like to send messages to everyone (using the “Broadcast” button) or a private message to a person selected in a list of current available user (user the “Private” button). The Client also has a separate Thread that request from the server every 300 ms for an updated list of current user. This request is done using UDP.

## INSTRUCTIONS FOR RUNNING THE PROGRAMS

Really the only important thing to remember is to run the Server.MAIN first.

After that you can open up to 128 clients by running the Client.MAIN.

The server must remain running at all times while any number of clients are open!