

Write a pair of TCP/IP applications (SERVER, CLIENT) where each CLIENT connects to the SERVER on port 7000 over TCP. The server keeps a list of all connected CLIENTS (ip and port) and sends that list to each CLIENT upon connection. The server also sends incremental changes to the list to each of the connected CLIENTS whenever a new CLIENT arrives or when a CLIENT closes its TCP connection to the server.

Each CLIENT reads messages from the standard input and sends that message over UDP to all the other CLIENTS registered to the server (the list is kept by each CLIENT and updated by the SERVER). Users can type in messages at the standard input and each message will be sent by the CLIENT to all other registered CLIENTS through UDP. Whenever the user enters a message with the content "QUIT" - that CLIENT disconnects its TCP connection from the SERVER and closes its UDP socket (the "QUIT" message is not sent to all other clients). Upon receiving a list incremental update, each CLIENT displays a message stating the client action (Ex: : *Client 192.168.0.3:5000 has disconnected*" or "*Client 192.168.0.3:5000 has connected*")