

## Assignment - B4.

- Problem statement:

write a program using TCP sockets for wired network to implement a peer to peer chat and multi user chat

- Objectives:

1.) To learn the TCP protocol.

2.) To understand the concept of peer to peer & multi user chat and implement it.

- Theory:

- Network socket:

A network socket is an internal endpoint for sending or receiving data at a single node in a computer network. Concisely it is a representation of this endpoint in networking software such as entry in a table & is a form of system resources.

- Peer to peer chat:

communication is a mean for people to exchange messages. It has started since the beginning of human creation. Distant communication began as early as 1800 century with the introduction of IV, telegraph & then telephony. Interestingly enough, telephone communication stands out as the fastest growing technology from fixed line to variable wireless, from voice call to data transfer. The emergence of computer network and telecommunication from voice call to data transfer, means the same objective that is to allow people to communicate. All

this while the rest of other nodes are acting as clients throughout the whole communication.

- Multiuser chat

with multi-user chat & group chat are at XMPP, the chat rooms designated, where multiple users can converse simultaneously.

Similar to internet relay, a chat room can have different statuses. At the participants take the role of the participants, a visitor or moderator.

- Conclusion:

Students learn how to do peer to peer connection and multi-user connection and multi user connection using TCP packet, in Java.