Project Proposal- Simple Server-Client Chat Program

**Brief Description:**

The aim of this project is to create a basic chatroom between a client and a server using socket programming. The messages between server and client are communicated through a Transmission Control Protocol (TCP)(socket.SOCK\_STREAM) and INET sockets(socket.AF\_INET)(Internet Protocol version 4(IPv4)). Created server socket is bound to an IP address through a port, both of which are given by the user.

**Expected Behaviour:**

The server program creates a socket through which data can be transferred to a client socket.

After a successful connection request by the client socket and after the server accepts the request, the chat between them will start. Threading is used to make sure that multiple messages can be sent and received from either server or client at a time.

**User Interaction:**

Two separate programs must be run on two tabs of terminal, one is server program and the other is a client program. The client socket is connected to the server socket from the same port. Server program is run by giving the command ***python server.py <IP address> <Port> ,*** where the user gives the IP address and the port through which the server socket is being bound to the IP. After running the command, in another tab, run the client program by giving the command ***python client.py <Same IP address as the server> <Same port as the server>*** , where the user gives the IP address and port to which the client socket is to be connected. Then, a prompt appears in both client and server programs, in which a message is typed and sent by pressing "Enter" key. Typing "quit()" in either of the programs will end the conversation with the client.

