Socket Programming

1. Build a server in Java that listens for a connection from a client, receives a message, and echoes it back. The client, also in Java, should connect to the server, send a message, and display the response.

2. Create a chat server in Java that can handle multiple clients simultaneously using threading. Clients should be able to send messages to the server, which are then broadcast to all other connected clients.

3. Create a web client in Java capable of sending a GET request to a web server and displaying the response.

4. In Java, how can you ensure that a server can handle multiple clients without blocking? Discuss the role of threads in this context.