Online Chat Application: Explanation

The Online Chat Application demonstrates the use of socket programming in Java for real-time communication between multiple clients.

ChatServer Implementation

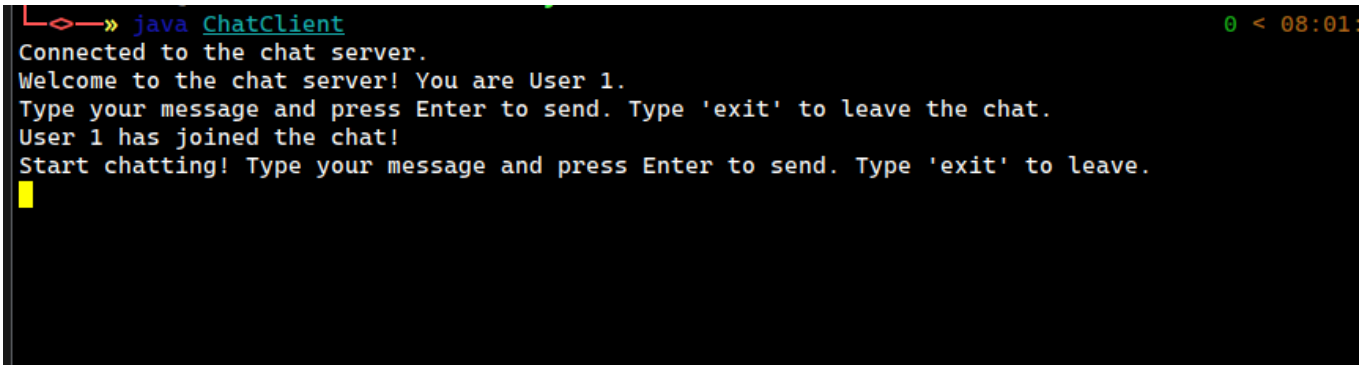
The server, implemented in the `ChatServer` class, listens for incoming client connections using a `ServerSocket`. Upon connection, each client is assigned a unique user ID (e.g., User 1, User 2). The server maintains a list of active users and broadcasts messages to all connected clients. A dedicated thread handles each client to ensure smooth and concurrent operations.

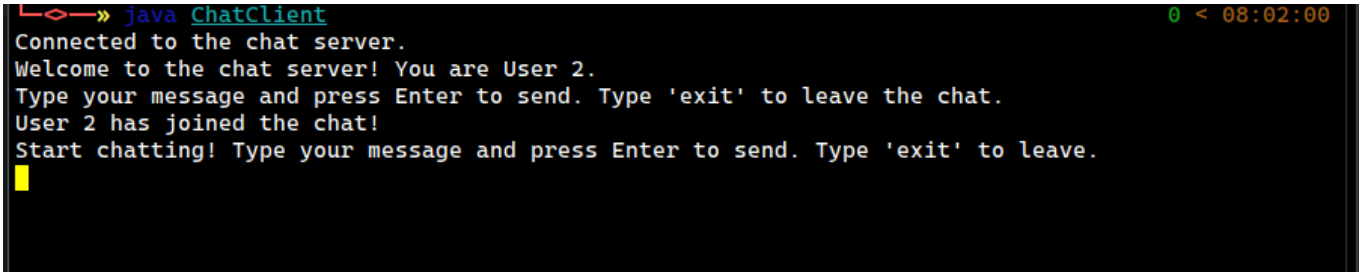
Server Console Output:

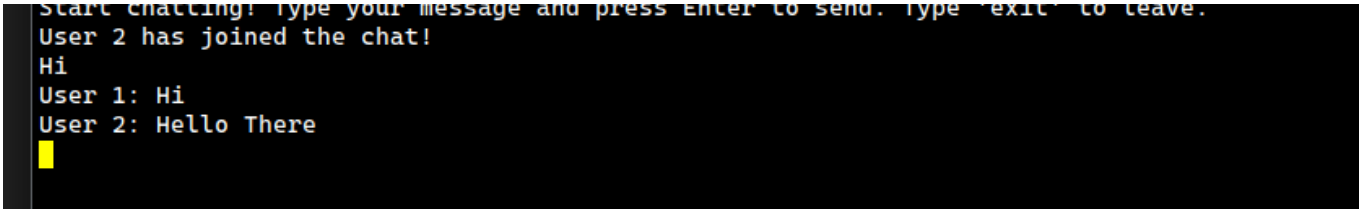
ChatClient Implementation

The `ChatClient` class allows clients to connect to the server. Upon connection, the server informs the client of its assigned user ID. The client can send messages, which are broadcast to all users, and receive messages from others in real time.

Client Console Output:







User Interface

The interface is text-based, providing clear instructions for users to send messages and exit the chat. This simplicity ensures user-friendliness while maintaining functionality.