Final Project Proposal for a Multi-Person Online Chatroom

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Project Overview

We plan to develop a multi-person online chatroom that provides real-time chat and collaboration capabilities. The chatroom will include the following features:

1. **GUI User Interface:**

   Provide an intuitive graphical user interface (GUI) for users to chat and interact.

2. **User Authentication:**

   Users must log in to access the chatroom.

   New users can register or existing users can log in.

3. **Message History Storage:**

   The chatroom will store message history, allowing users to view previous chat content.

   Message history can be stored in a database.

4. **Multi-Threading Support:**

   Utilize multi-threading to allow multiple users to connect and chat simultaneously.

   Each user connection will be handled by an independent thread.

5. **Socket Communication:**

   Implement socket communication between clients and the server.

   The server will listen for incoming client connections and handle message exchange.

6. **Database Integration:**

   Use a database to store user information, chat records, etc.

   User login details and chat history will be stored in the database.

Technology Stack

- GUI: Java Swing
- Multi-threading
- Socket programming
- Database: JDBC & MySQL

Expected Deliverables

- A fully functional multi-person online chatroom application that meets users' chat needs.
- A user-friendly GUI for easy interaction.
- Ensuring data security, including user authentication and chat record storage.