

Chat App - Implementation Manual:

UML Diagram

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|      ChatApp      |
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| - chatArea: TextArea |
| - user1InputField: TextField |
| - user2InputField: TextField |
| - user1Name: String   |
| - user2Name: String   |
|-----|
| + start(primaryStage: Stage): void|
| - sendMessage(username: String, |
|   message: String): void      |
| - appendMessage(message: String):|
|   void                        |
| - getCurrentTime(): String    |
| + main(args: String[]): void  |
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```

1. Main Class Structure:

- a. The ChatApp class extends Application, which is the entry point for JavaFX applications.
- b. It contains instance variables for UI components (chatArea, user1InputField, user2InputField) and user-related data (user1Name, userName).
- c. The class implements methods such as start, sendMessage, appendMessage, and getCurrentTime, as well as the main method.

2. UI Setup (start Method):

- a. The start method initializes the UI components using JavaFX classes (BorderPane, VBox, TextArea, TextField, Button).
- b. It sets up event handlers for button clicks (user1SendButton, user2SendButton) to send messages.
- c. Dialog boxes (TextInputDialog) are used to prompt users for their usernames (user1Dialog, user2Dialog).

3. Message Handling:

- a. The sendMessage method processes and sends messages entered by users, and adds a timestamp.
- b. The appendMessage method updates the chat area with the sent message using Platform.runLater.

4. Time Formatting:

- a. The getCurrentTime method formats the current time in the "HH:mm:ss" format using SimpleDateFormat.