

COLLEGE CODE : 9623
COLLEGE NAME : Amrita College of Engineering and Technology
DEPARTMENT : Artificial intelligence and data science
STUDENT NM-ID : autad0008
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TECHNOLOGY PROJECT NAME: Chat Application UI

SUBMITTED BY,
NAME: Anushiya.R
MOBILE NO:9342305214

Problem statement

The chat application current user interface is not optimized for seamless communication, resulting in a cluttered and unintuitive experience for users. Key functionalities such as message navigation, real-time interaction, and notification management are difficult to access and use efficiently. This leads to decreased user engagement, slower response times, and overall dissatisfaction. Therefore, there is a critical need to redesign the chat UI to enhance usability, improve responsiveness across devices, and support smooth, clear, and efficient conversations.

Users

1. Individual Users

People using the chat app for casual conversations, staying connected with friends and family.

2. Business Professionals

Employees and teams who rely on the app for fast, efficient workplace communication and collaboration.

3. Customer Support representatives

People using the chat app for casual conversations, staying connected with friends and family.

4. Community Members

Participants in group chats, such as hobbyists, clubs, or social groups, coordinating activities and sharing information.

5. Students and Educators

Users in academic environments using chat for discussions, group projects, and virtual classroom interaction.

Stakeholders

1. **End Users**

Individuals, professionals, and groups who actively use the chat application for communication.

2. **Product Owners/Managers**

Responsible for defining features and ensuring the application meets user needs and business goals.

3. **UI/UX Designers**

Focused on designing an intuitive and engaging user interface and experience.

4. **Developers/Engineers**

Tasked with building and maintaining the chat application's front-end and back-end systems.

4. Quality Assurance Team

Ensures the application functions correctly and provides a smooth user experience through rigorous testing.

5. Customer Support Team

Provides assistance to users and gathers feedback to improve the application.

6. Business Stakeholders/Investors

Interested in the application's success, user adoption, and return on investment.

User stories

1. User Registration & Login

As a new user, I want to register an account easily so that I can start chatting with others.

As a returning user, I want to log in quickly so that I can access my conversations.

2. Sending and Receiving Messages

As a user, I want to send text messages in realtime so I can communicate instantly.

As a user, I want to receive messages with notifications so I know when someone replies.

3. Multimedia Support

As a user, I want to send and receive images, videos, and files to share information beyond text.

4. Message Status

As a user, I want to see message delivery status (sent, delivered, read) so I know if my messages reached the recipient.

5. Typing Indicators

As a user, I want to see when the other person is typing so I know they're responding.

6. Conversation Management

As a user, I want to view a list of all my conversations so I can quickly pick up where I left off.

As a user, I want to delete or archive conversations to keep my chat list organized.

MVP features

1. User Authentication

Simple signup and login (email/password or social login).

2. One-to-One Chat

Send and receive text messages in real-time between two users.

3. Conversation List

Display a list of recent chats with contacts.

4. Message Notifications

Show in-app notifications for new messages.

5. Message Status

Basic message status indicators (e.g., sent, delivered).

6. Typing Indicator

Show when the other user is typing.

7. User Presence

Show basic online/offline status for contacts.

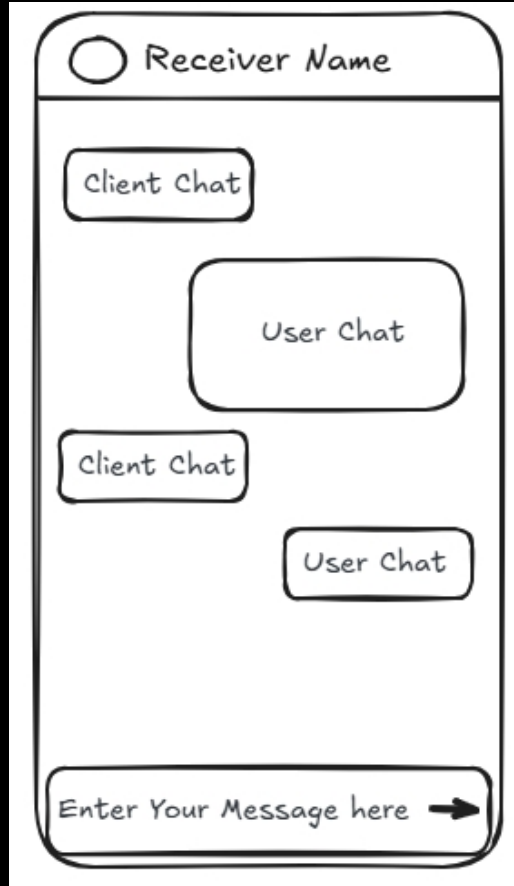
8. Responsive UI

Work well on both desktop and mobile browsers.

API endpoint

HTTP Method	Endpoint	Description	Request Body Example	Response
GET	<code>/users</code>	Get list of users/contacts	None	List of user objects
GET	<code>/messages?chatId=</code>	Get messages in a chat	None	List of message objects
POST	<code>/messages</code>	Send a new message	<code>{ senderId, receiverId, message }</code>	Created message object
GET	<code>/chats</code>	Get all chat threads for user	None	List of chats
POST	<code>/users/login</code>	User login/authentication	<code>{ username, password }</code>	Auth token/user info

wireframes



Acceptance criteria

- **Intuitive and User-Friendly Interface**

The UI must be easy to navigate and operate, allowing users of all experience levels to communicate effortlessly.

- **Responsive Design**

The application should perform smoothly and look consistent on desktops, tablets, and mobile devices.

- **Real-Time Messaging**

Messages must be delivered and displayed instantly without lag or delay.

- **Clear Message Presentation**

Conversations should be organized with clear timestamps, sender information, and distinct message bubbles.

- **Notification Management**

Users should receive timely alerts for new messages, with options to customize notification preferences.

- **Search and Filter Functions**

Users must be able to efficiently search through messages and filter chats by contacts or keywords.

- **Multimedia Support**

The UI should support sending and viewing images, videos, and files within chat conversations.

- **Accessibility Compliance**

The interface must adhere to accessibility standards, supporting keyboard navigation and screen readers.

- **Error Handling and Feedback**

Clear, user-friendly error messages should be displayed for issues such as message failures or connection problems.

- **Privacy and Security**

All conversations and data must be securely handled to protect user privacy and ensure confidentiality.