

Chat-Byte

A MESSAGING SERVICE PROTOTYPE

PRESENTED BY:

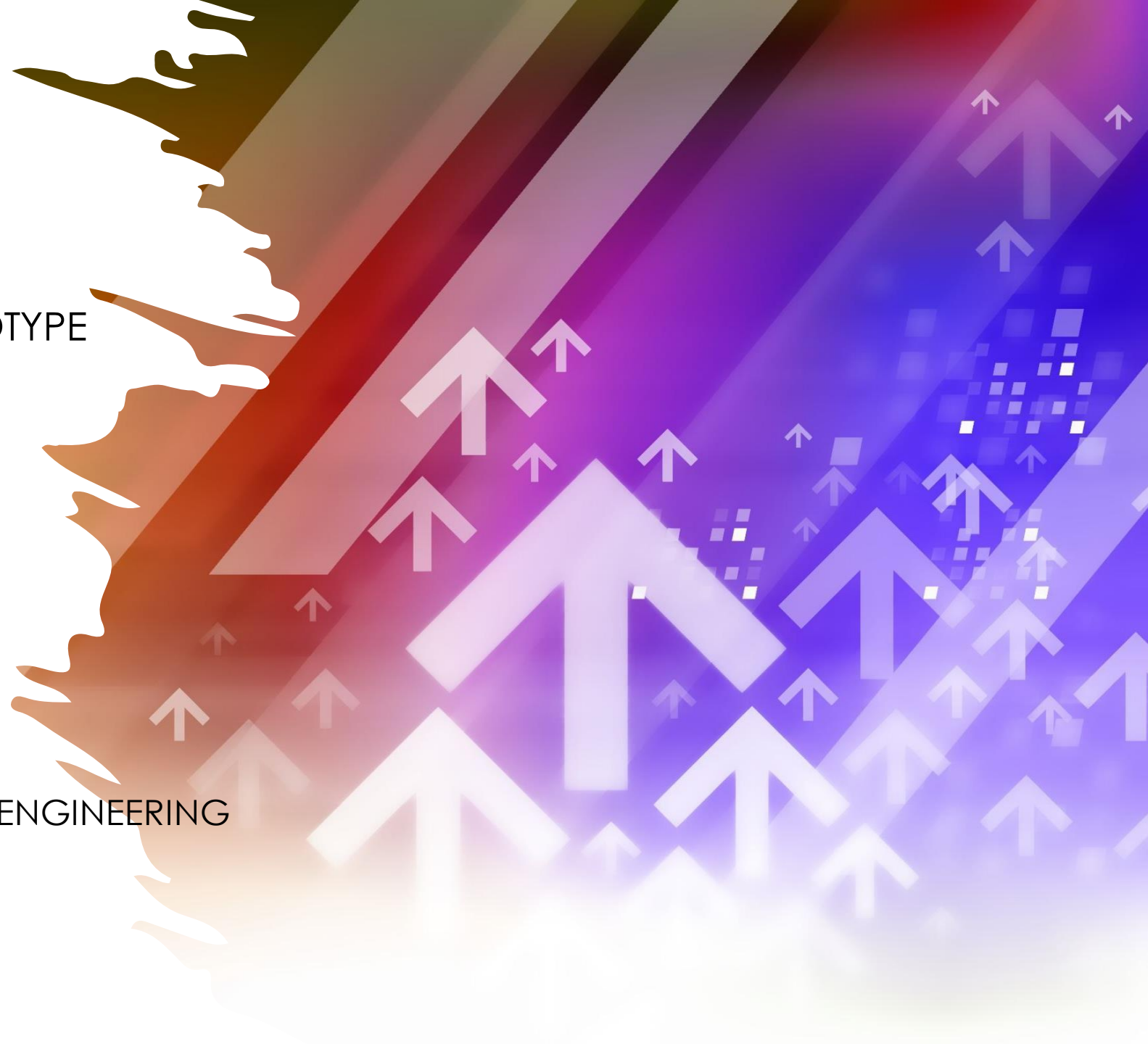
NANDITA GUPTA

2101MM12

B.TECH,

METALLURGICAL AND MATERIALS ENGINEERING

IIT PATNA



FEATURES

1. User registration and authentication using **JSON Web Token(JWT) and Bcryptjs**
2. Direct messaging: Two users can chat with each other
3. Group chat functionality
4. Real-time message updates
5. Typing indicator: When typing, the recipient gets notified
6. User status: Whether you are online or offline
7. When new message arrives, it shows notification.

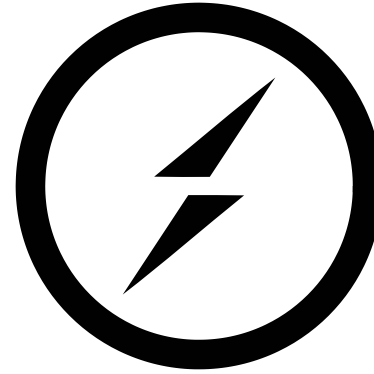
TECH STACK



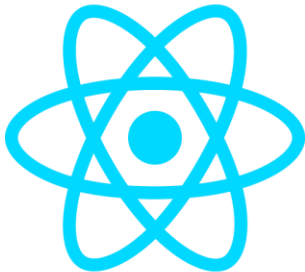
Node.js and Express.js
Building the Backend of the website



MongoDB
Storing user chats and group chats data



Socket.io
For building real-time connections between users

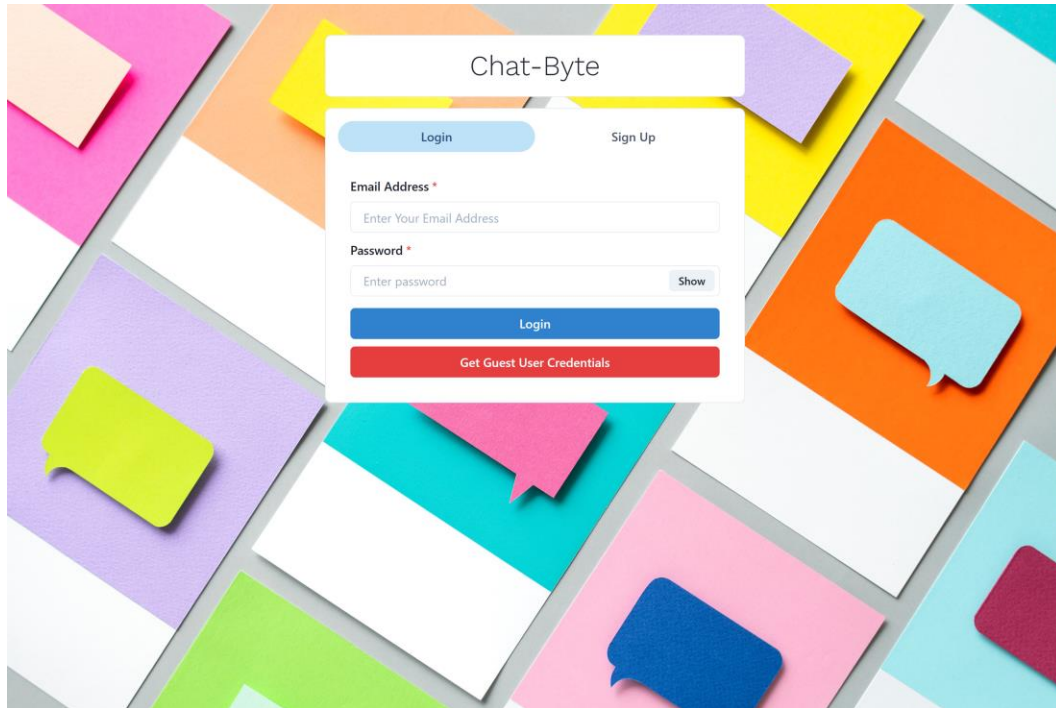


React.js, Chakra UI
Building User Interface and Frontend

A large, horizontal, orange brushstroke with a rough, textured edge, resembling a paint stroke, serves as a background for the text.

USER INTERFACE

Login and Signup Pages



The image shows a login and signup form for 'Chat-Byte' overlaid on a background of colorful sticky notes. The form is white with a light gray border. It has a header with the 'Chat-Byte' logo. Below the header, there are two tabs: 'Login' (active) and 'Sign Up'. The 'Login' tab contains fields for 'Email Address' and 'Password', both with placeholder text. There is a 'Show' button next to the password field. Below the fields are two buttons: a blue 'Login' button and a red 'Get Guest User Credentials' button.

Chat-Byte

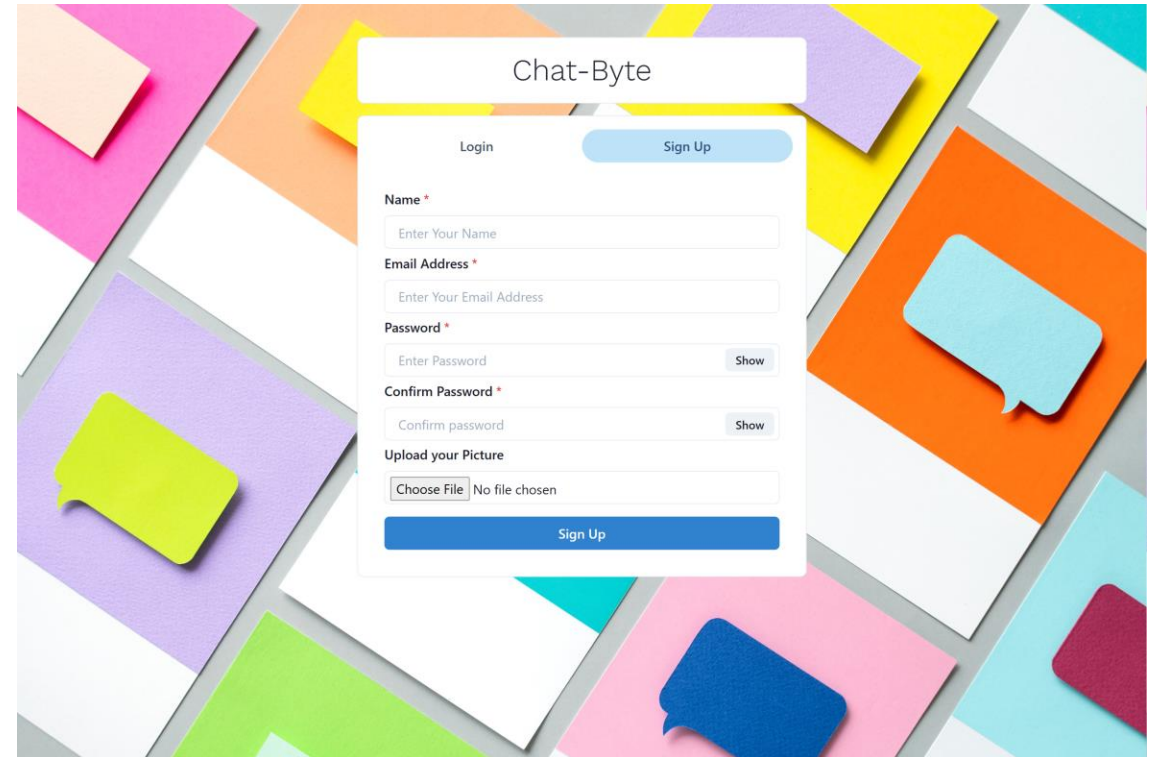
Login Sign Up

Email Address *
Enter Your Email Address

Password *
Enter password Show

Login

Get Guest User Credentials



The image shows a signup form for 'Chat-Byte' overlaid on a background of colorful sticky notes. The form is white with a light gray border. It has a header with the 'Chat-Byte' logo. Below the header, there are two tabs: 'Login' and 'Sign Up' (active). The 'Sign Up' tab contains fields for 'Name', 'Email Address', 'Password', and 'Confirm Password', all with placeholder text. There are 'Show' buttons next to the password and confirm password fields. Below these fields is an 'Upload your Picture' section with a 'Choose File' button and the text 'No file chosen'. At the bottom is a blue 'Sign Up' button.

Chat-Byte

Login Sign Up

Name *
Enter Your Name

Email Address *
Enter Your Email Address

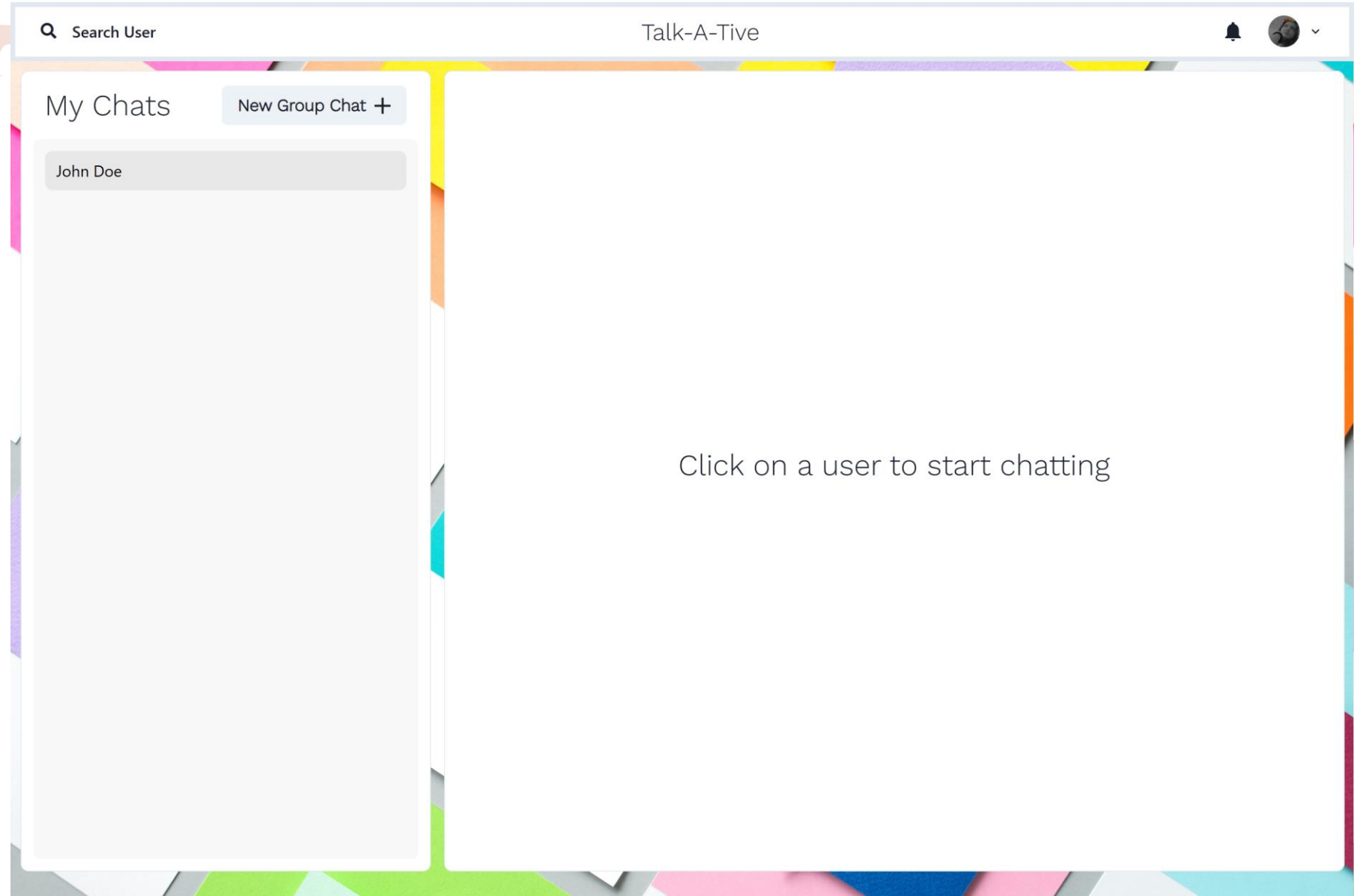
Password *
Enter Password Show

Confirm Password *
Confirm password Show

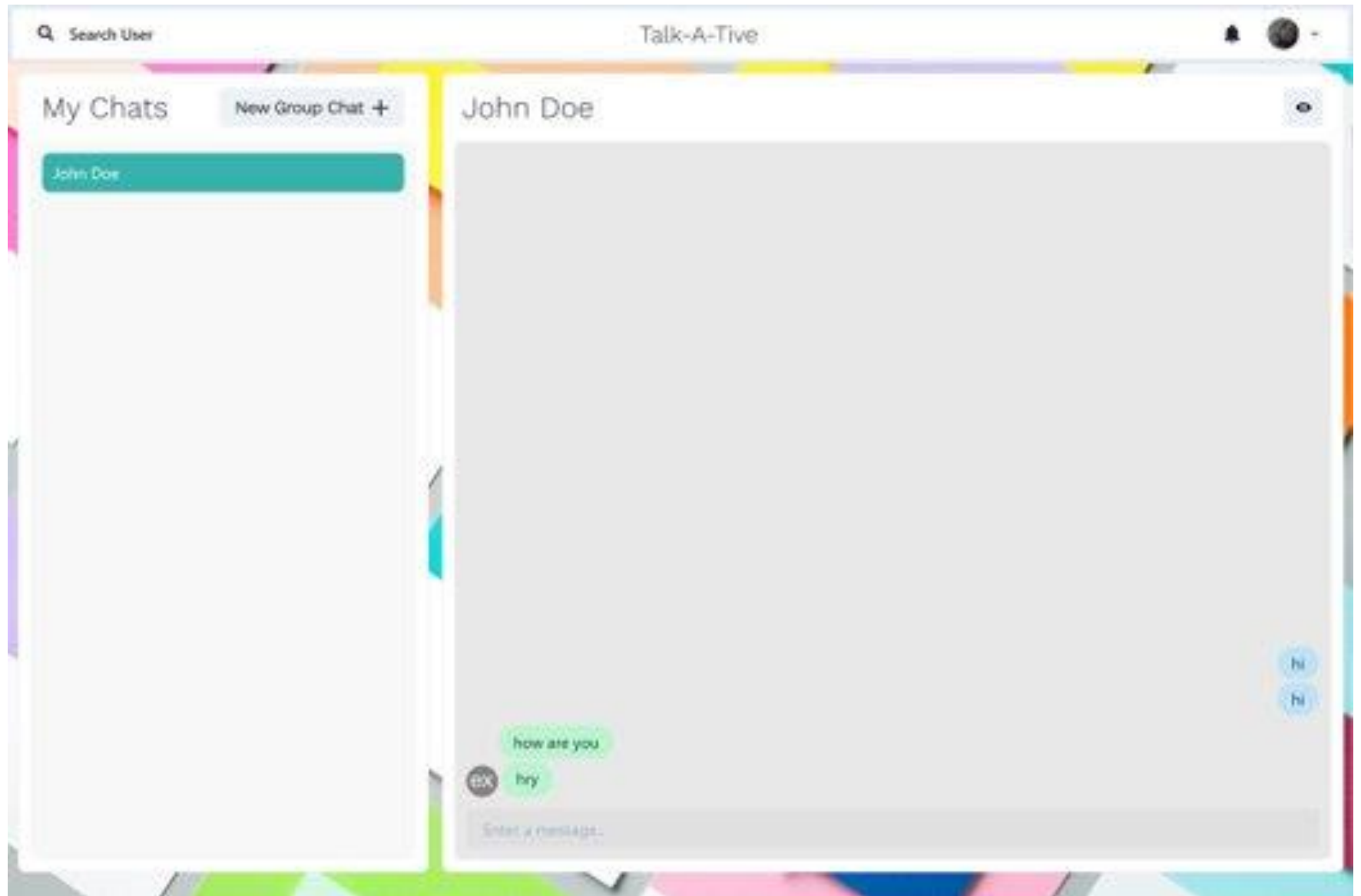
Upload your Picture
Choose File No file chosen

Sign Up

Home Page



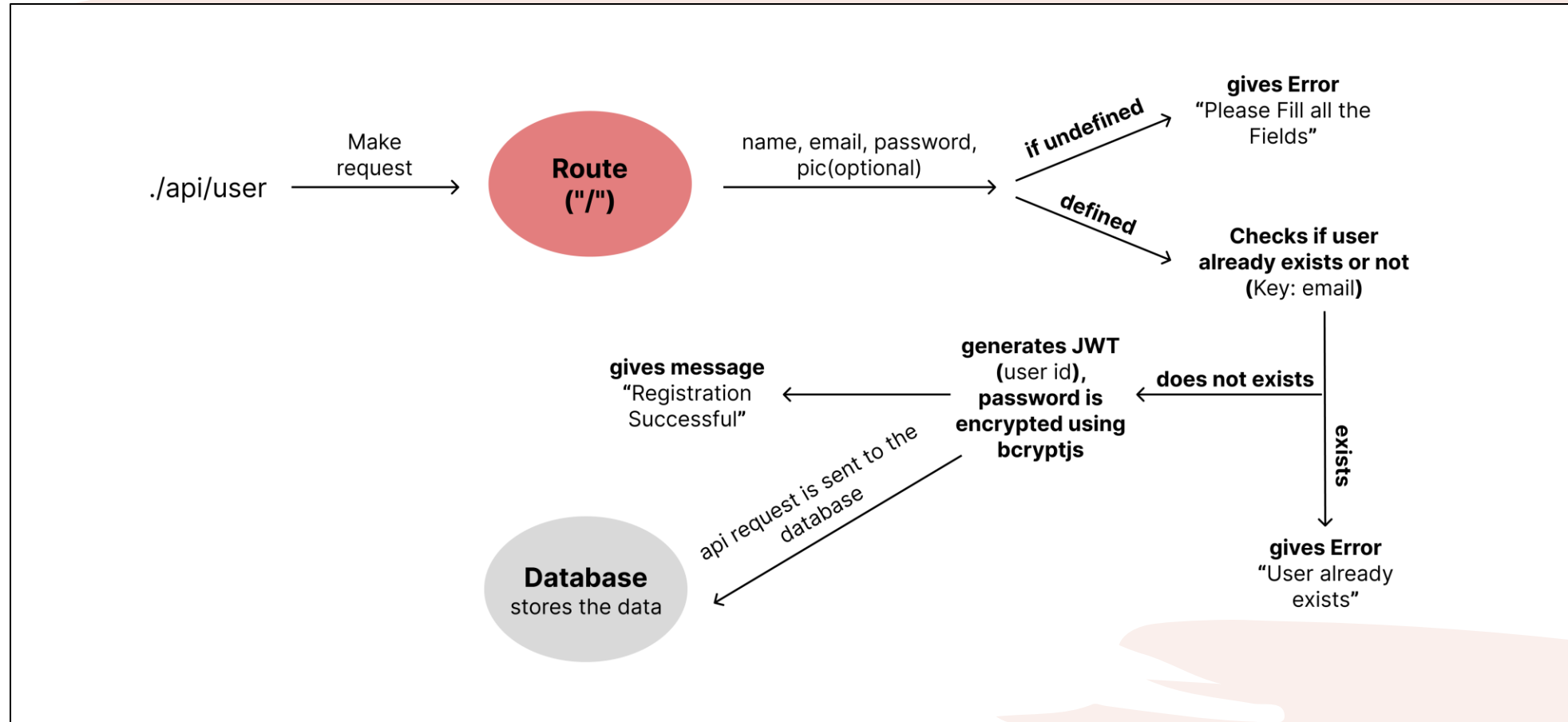
Chat Page



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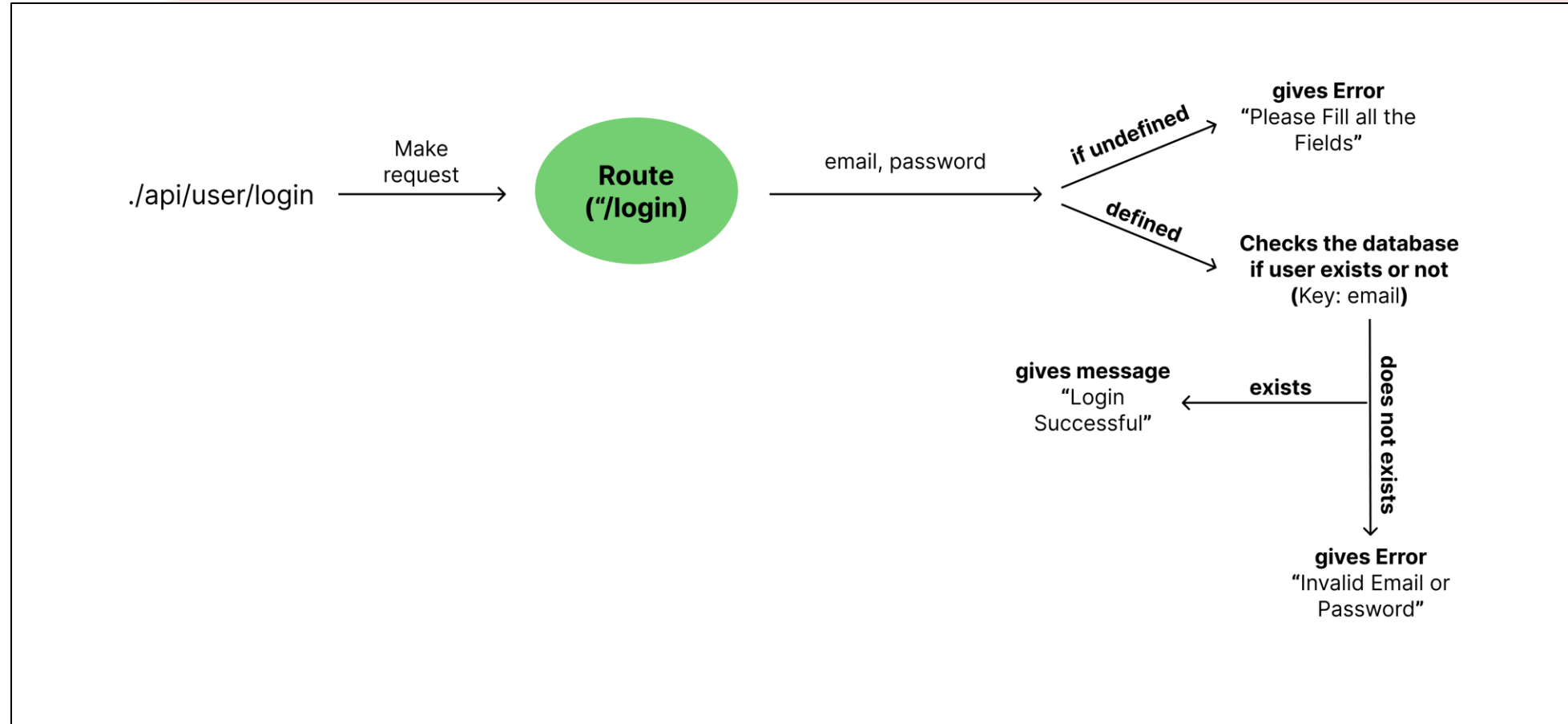
SYSTEM DESIGN

User Login and Registration



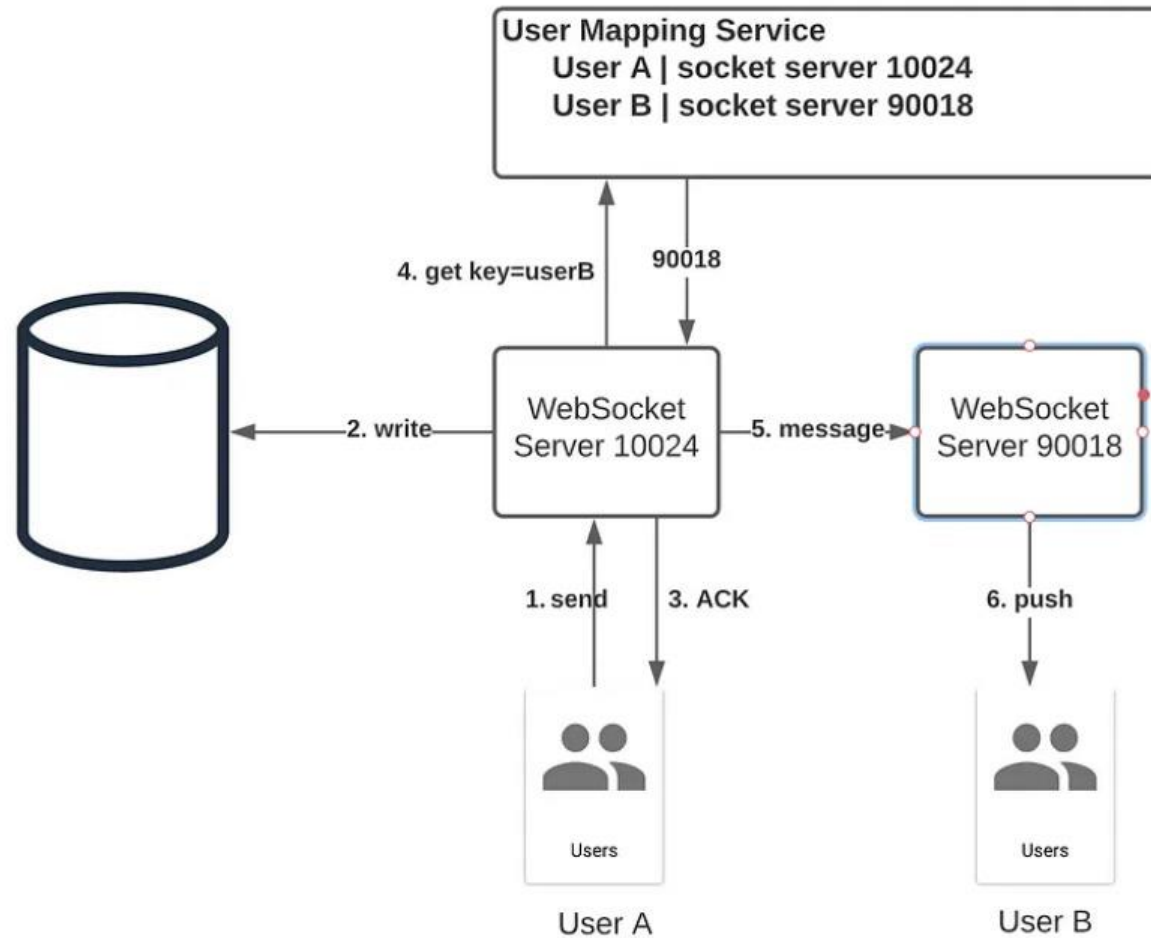
Diagrammatic Representation of User Registration

User Login and Registration



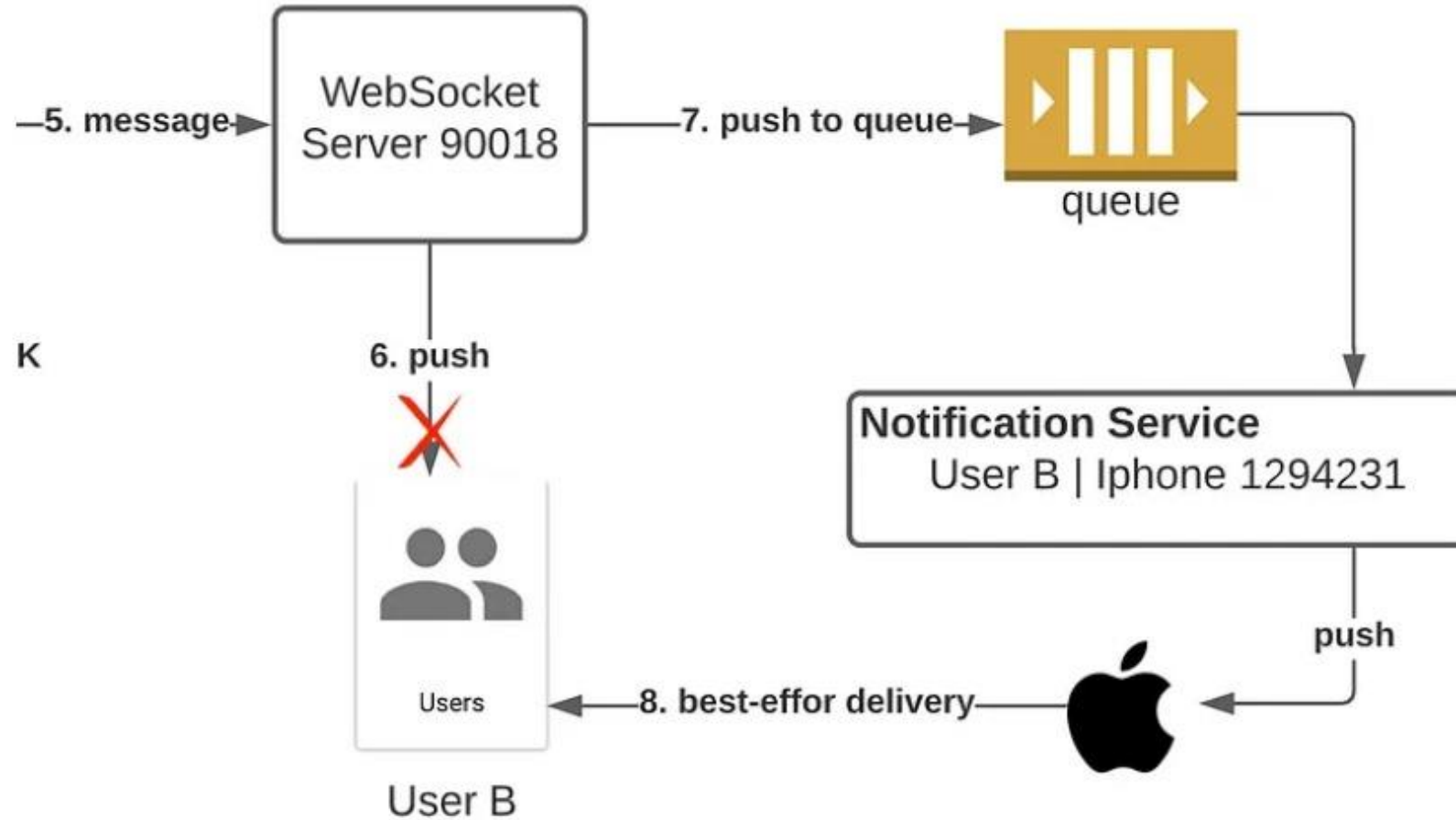
Diagrammatic Representation of User Login

Sending Messages between users

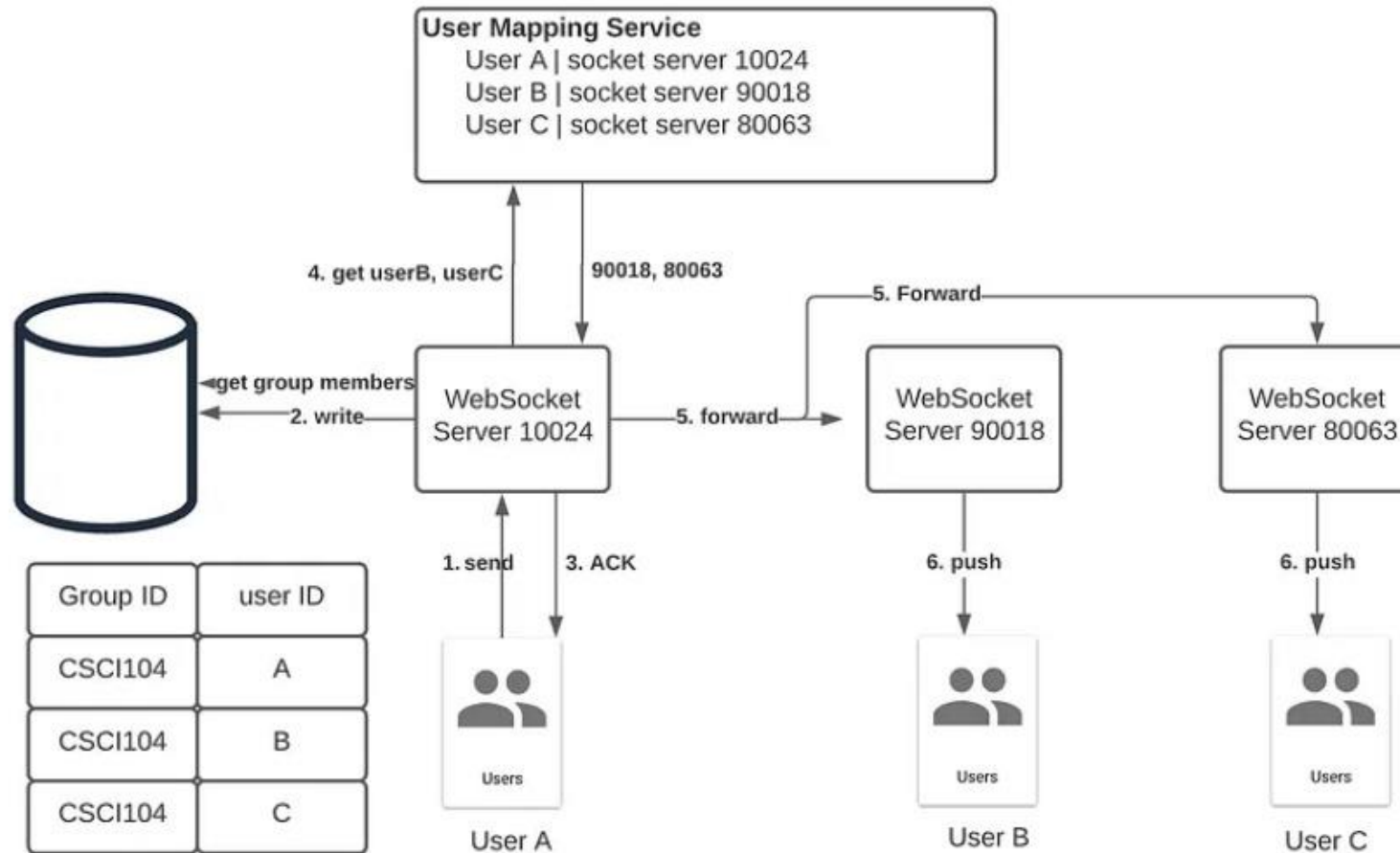


Normal
Message
Delivery

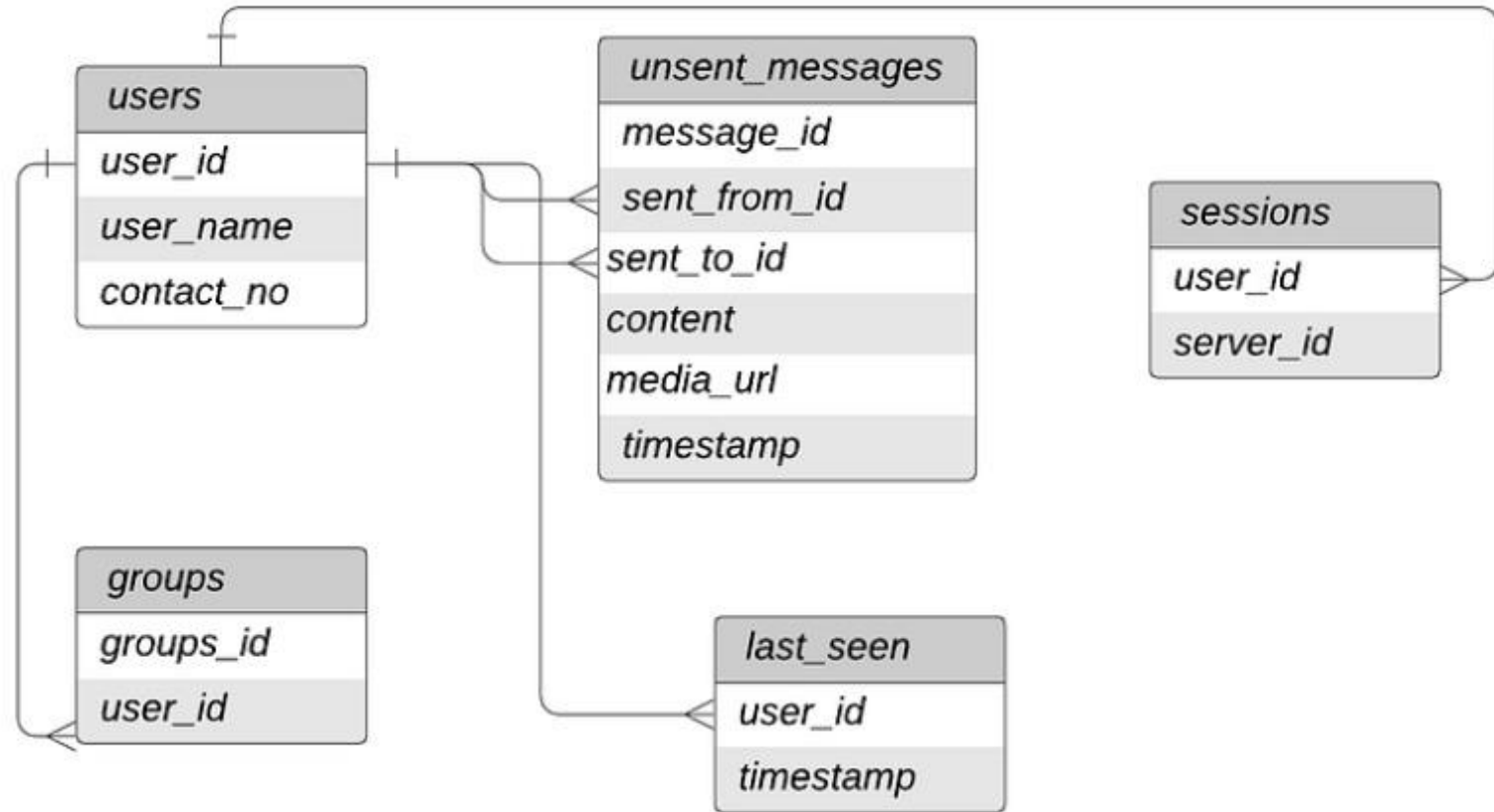
Failed Message Delivery



Group Message Delivery



DB Schema



Private Chat Table

user ID 1	user ID 2	message ID	timestamp	message
John	Sally	8492	2021/12/21..	"Hello"



partition key



sort key

Group Chat Table

Group ID	bucket	message ID	timestamp	message	user ID
CSCI350	3	12345	2021/12/21..	"hw posted"	Jack



partition key



sort key

Deployment

- Using heroku functionality

SOCIAL IMPACT AND USEFULNESS

1. Conversations in a virtual environment are more interactive and engaging.
2. A text message with features like personalized emojis, reactions, gifs & media is more interesting than just plain language
3. In-app Chat is an instantaneous form of communication
4. Brings people closer virtually even if they live far off from each other
5. Able to handle a high volume of users, sessions and channels
6. Customer can get all the information and queries sorted within an app via live customer service chats



THANK YOU