

Software Report for  
**Hobby-Based Social Media**  
App/Website  
(G8)

**Contributors**

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# 1. Testing Summary

## 1.1 1. Unit Testing

### Modules Tested:

- Input Modules: Sign Up, Send Message
- Output Modules: Add Groups, Fetch Messages
- Transform Modules: Recommend Friends, Update Friendships, Create Profile

#### 1.1.1 Input Module: Sign Up

Seq	Condition Tested	Test Data	Expected Result	Test Result
1	Valid registration	New institutional email (e.g., cs11022@iith.ac.in)	Account created successfully	Pass
2	Duplicate email	Existing email (e.g., cs11022@iith.ac.in)	Error: "Email already registered"	Pass
3	Invalid email format	"invalid-email(e.g., name@college.edu)"	Error: "Invalid email(Use institute Email Id only)"	Pass

#### 1.1.2 Input Module: Send a Message To Another Group/User

Seq	Condition Tested	Test Data	Expected Result	Test Result
1	Valid message	Message: "Hello"	Message delivered to recipient	Pass
2	Empty message	Message: ""	"Send" button not Responsive	Pass
3	Network failure	Disconnected From sender Side	Error: "Failed to send Message(Please Check Your Network connection)"	Pass

### ***1.1.3 Output Module: Add Groups***

<b>Seq</b>	<b>Condition Tested</b>	<b>Test Data</b>	<b>Expected Result</b>	<b>Test Result</b>
1	whether user is added in the group	Clicked "join group"	Display the group in message UI	Pass
2	whether group contains newly added user	Clicked "join group"	User added in the group DB	Pass
3	User Anonymity Maintained or not	Clicked "join group"	User Pseudoname Displayed in Chat	Pass

### ***1.1.4 Output Module: Fetch Messages/Requests***

<b>Seq</b>	<b>Condition Tested</b>	<b>Test Data</b>	<b>Expected Result</b>	<b>Test Result</b>
1	Fetch unread messages	User ID passed to Chats Database	Return respective unread messages	Pass
2	No messages	User ID passed to Chats Database	Return empty list	Pass

### ***1.1.5 Transform Module: Recommend Friends***

<b>Seq</b>	<b>Condition Tested</b>	<b>Test Data</b>	<b>Expected Result</b>	<b>Test Result</b>
1	User with shared interests	User Preference	Recommend users with same interests	Pass
2	User with No shared interests with another User	User Preferences	Users not recommended to each other	Pass

### ***1.1.6 Transform Module: Update Friendships***

<b>Seq</b>	<b>Condition Tested</b>	<b>Test Data</b>	<b>Expected Result</b>	<b>Test Result</b>
1	Accept friend request	Request sent by another User	Friendship status updated to "accepted"	Pass
2	Reject friend request	Request sent by another User	Friendship status updated to "rejected"	Pass
3	Unfriend friend	A friend for user's Friend List	Friendship status updated to "rejected"	Pass

### 1.1.7 Transform Module: Create User Profile

Seq	Condition Tested	Test Data	Expected Result	Test Result
1	Valid profile data	User Input Details(Valid Syntax)	Profile created and saved in database	Pass
2	Missing required fields	Username: "" (empty)	Error: "Username is required"	Pass

## 1.2 2. Integration Testing

### Selected Interactions:

1. Sign Up → Log In
2. Send Message → Fetch Friends and Groups
3. Update Preferences → Recommend Groups
4. Recommend Friends → Fetch Recommendations
5. View Profile → View Preferences

### 1.2.1 Input-Input: Sign Up → Log In

Seq	Condition Tested	Test Data	Expected Result	Test Result
1	Sequential execution	New user: "cs11022@iith.ac.in"	Account created + successful login	Pass
2	Invalid Signup	Invalid Signup Data and Credentials	Login Aborted	Pass

### 1.2.2 Input-Transform: Send Message → Fetch Friends and Groups

Seq	Condition Tested	Test Data	Expected Result	Test Result
1	Message to friend	Message: "Hi!", Friendship: active	Message delivered + friendship status preserved	Pass
2	Communication with blocked user	Message: "Test", Block status: true	Message Not received	Pass

### **1.2.3 Transform-Transform: Update Preferences → Recommend Groups**

Seq	Condition Tested	Test Data	Expected Result	Test Result
1	Valid preference update	Preferences Updated	3 new groups/Users recommended based on updated Preferences	Pass
2	Empty preferences	Preferences are not given at all	Generic recommendations shown	Pass

### **1.2.4 Transform-Output: Recommend Friends → Fetch Recommendations**

Seq	Condition Tested	Test Data	Expected Result	Test Result
1	System recommendations and Displayed User recommendations are same	User Preferences Provided in UI and recommendations by system	Results are identical	Pass

### **1.2.5 Output-Output: View Profile → View Preferences**

Seq	Condition Tested	Test Data	Expected Result	Test Result
1	Consistent data	For e.g., Profile: "John", Preferences: "Chess"	Both views show matching data	Pass

## **1.3 3. System Testing**

### **Use Cases Tested:**

- User Signup
- User Login
- Edit Profile
- Friend Recommendation
- Group Invite Based on Interests
- Anonymous Group Chat
- Identity Reveal

- Unfriend User

## 1.4 Selected Use Cases from SRS

1. Use Case 1: User Signup
2. Use Case 3: User Login
3. Use Case 5: Edit Profile
4. Use Case 6: Friend/Group Recommendation
5. Use Case 7: Group Invite Based on Interests
6. Use Case 13: Anonymous Group Chat
7. Use Case 15: Identity Reveal
8. Use Case 18: Unfriend User

## 1.5 Test Case Specifications

### 1.5.1 Use Case 1: User Signup

Seq	Condition Tested	Test Data	Expected Result	Test Result
1	Valid institutional email	cs11022@iith.ac.in	Account created	Pass
2	Personal email	user@gmail.com	Error: "Invalid domain"	Pass

### 1.5.2 Use Case 3: User Login

Seq	Condition Tested	Test Data	Expected Result	Test Result
1	Valid credentials	Correct email	Dashboard access	Pass

### 1.5.3 Use Case 5: Edit Profile

Seq	Condition Tested	Test Data	Expected Result	Test Result
1	Valid profile update	All profile changes made by user are valid	Profile updated	Pass

#### **1.5.4 Use Case 6: Friend Recommendation**

<b>Seq</b>	<b>Condition Tested</b>	<b>Test Data</b>	<b>Expected Result</b>	<b>Test Result</b>
1	Maximum Likelihood match	Identical hobbies	Users are recommended to each other with high probability	Pass
2	No common interests	Dissimilar hobbies	Low probability of recommendation	Pass

#### **1.5.5 Use Case 7: Group Invites**

<b>Seq</b>	<b>Condition Tested</b>	<b>Test Data</b>	<b>Expected Result</b>	<b>Test Result</b>
1	Matching preferences	For e.g., "Chess" hobby	Chess club invite	
2	Multiple matching interests	multiple hobbies	3 group suggestions	Pass

#### **1.5.6 Use Case 13: Anonymous Chat**

<b>Seq</b>	<b>Condition Tested</b>	<b>Test Data</b>	<b>Expected Result</b>	<b>Test Result</b>
1	Group message	Example Message, "Hello all"	Send to all users	Pass
2	High traffic of messages	multiple concurrent messages	Ordered delivery	Pass

#### **1.5.7 Use Case 15: Identity Reveal**

<b>Seq</b>	<b>Condition Tested</b>	<b>Test Data</b>	<b>Expected Result</b>	<b>Test Result</b>
1	Mutual reveal	Both accept	Full profiles visible	Pass
2	One-way reveal	Single acceptance	information shown for the reveal user	Pass
3	Rejected reveal	Rejected reveal request	Keep the Identity anonymous	Pass

#### **1.5.8 Use Case 18: Unfriend User**

<b>Seq</b>	<b>Condition Tested</b>	<b>Test Data</b>	<b>Expected Result</b>	<b>Test Result</b>
1	Active friendship	Existing friend	Remove from list	Pass



## 2. Use Case Implementation

Use Case	Status
User Signup	Implemented
User Onboarding	Implemented
User Login/Logout	Implemented
Edit Profile	Implemented
Friend/Group Recommendation	Implemented
Group Invite (Accept/Reject)	Implemented
User Friend Request (Accept/Reject)	Implemented
Anonymous Chat - Group	Implemented
Anonymous Chat - Friend	Implemented
Reveal Identity Features	Implemented
Ask to Reveal Identity	implemented
Unfriend User	Implemented
Exit Group	Implemented
Automatic Group Formation	Implemented

## 3. Code Metrics

- Total Lines of Code: **4056**
- Total Number of Modules: **40**

## 4. Module-wise Lines of Code

S.No	Lines	Submodule
1	501	./frontend/src/home/home/HomePage.js
2	445	./frontend/src/home/chat/ChatWindow.module.css
3	284	./frontend/src/home/chat/FriendChatWindow.js
4	243	./server/src/routes/recommend.js
5	216	./db/init.sql
6	196	./server/src/server.js
7	194	./server/src/routes/chat.js
8	191	./frontend/src/home/home/HomePage.module.css
9	183	./frontend/src/home/chat/GroupChatWindow.js
10	149	./frontend/src/onboarding/OnboardingPage.js
11	121	./frontend/src/onboarding/Onboarding.module.css
12	119	./recommender/recommend.py
13	116	./frontend/src/home/chat/ChatPage.js
14	115	./frontend/src/home/chat/ChatPage.module.css
15	79	./recommender/read_db.py
16	68	./recommender/write_db.py
17	67	./frontend/src/onboarding/IntroPage.js
18	65	./recommender/app.py
19	65	./frontend/src/home/MainPage.js
20	63	./docker-compose.yml
21	62	./server/src/routes/createUserProfile.js
22	54	./server/src/auth/newUser.js
23	52	./frontend/src/onboarding/IntroPage.module.css
24	47	./server/src/routes/user.js
25	47	./frontend/src/login/LoginPage.module.css
26	42	./frontend/src/home/MainPage.module.css
27	37	./server/src/routes/commonfn.js
28	36	./frontend/src/login/LoginPage.js
29	32	./server/src/auth/user.js
30	27	./frontend/src/global.css
31	24	./recommender/Dockerfile
32	23	./recommender/db_connection.py
33	20	./frontend/src/App.js
34	19	./frontend/src/firebase.js

Table 2: Module-wise Lines of Code with Paths

<b>S.No</b>	<b>Lines</b>	<b>Submodule</b>
35	17	./server/Dockerfile
36	12	./server/src/db/connection_pool.js
37	10	./frontend/src/index.js
38	7	./server/src/auth/firebase.js
39	6	./recommender/requirements.txt
40	2	./frontend/.env

Table 3: Module-wise Lines of Code with Paths

## 5. UI Screenshots

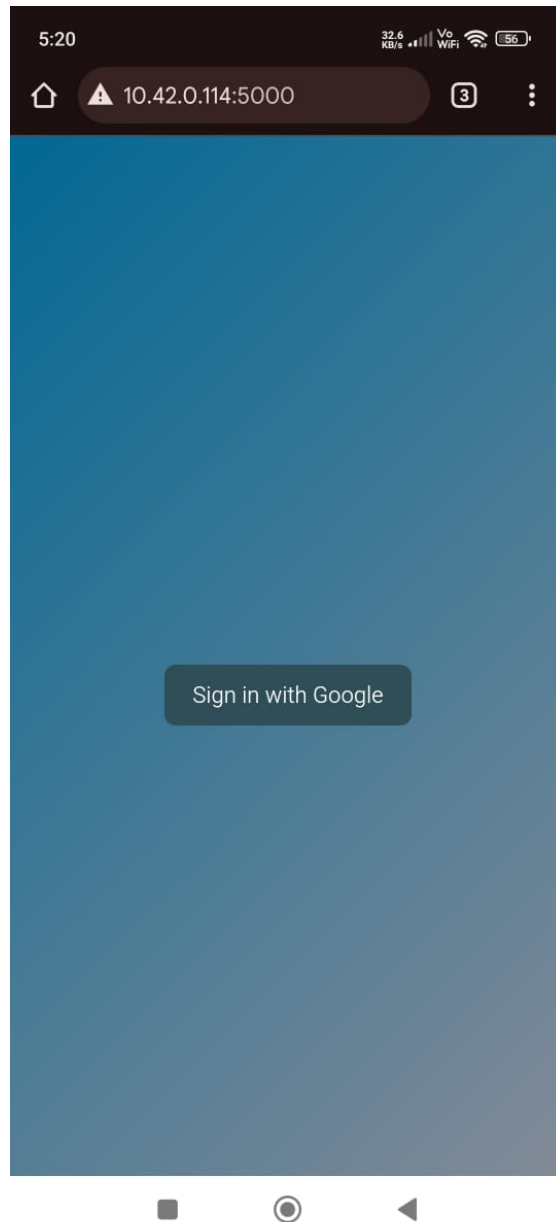


Figure 1: Login Page

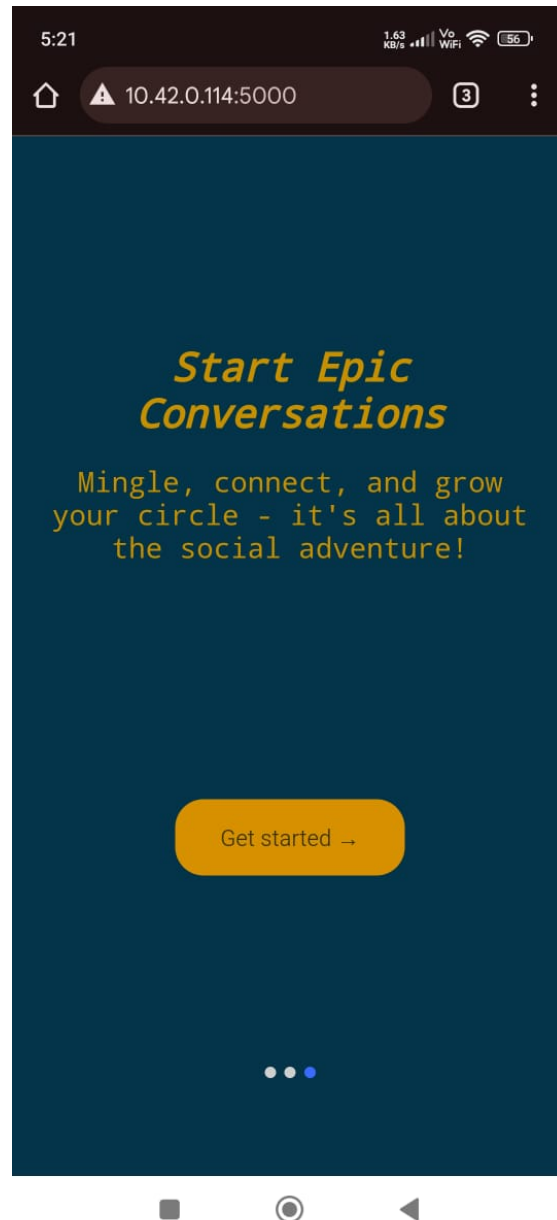


Figure 2: Onboarding

5:21

0.25 KB/s Vo WiFi 5G

## Sync your signals

Let's dial in what makes your Den tick. Adjust the sliders to set your priorities (0–10).

### Display Name

Namye

### About You

I like elden ring

Fitness

Priority: 10

Music

Priority: 8

Study habits

Priority: 1



Figure 3: SignUp

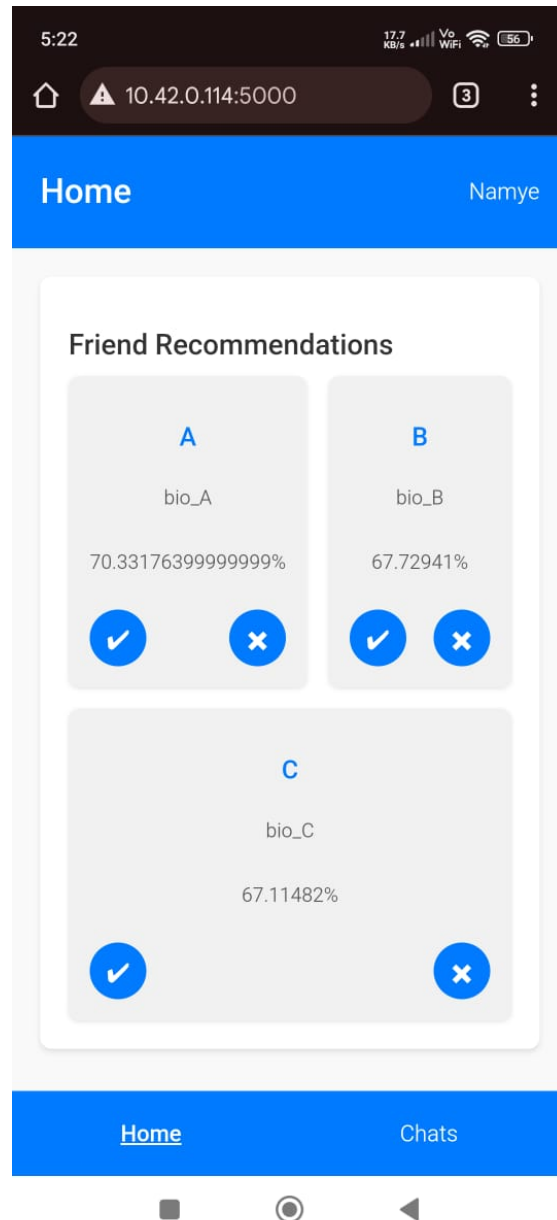


Figure 4: Home Page Friend Recommendations

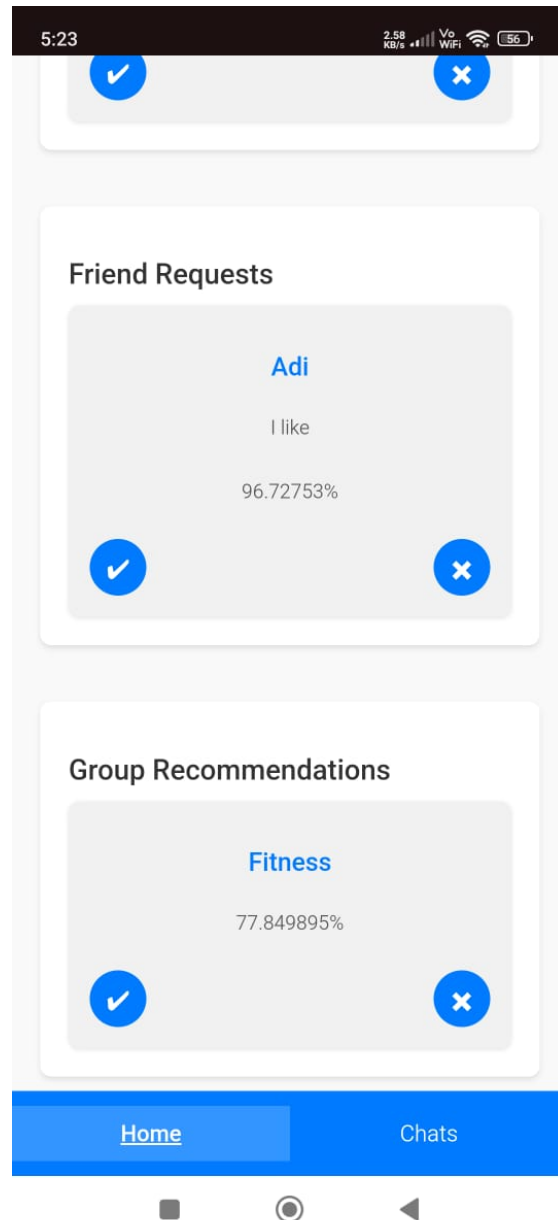


Figure 5: Home Page Friend Request and Group Recommendations



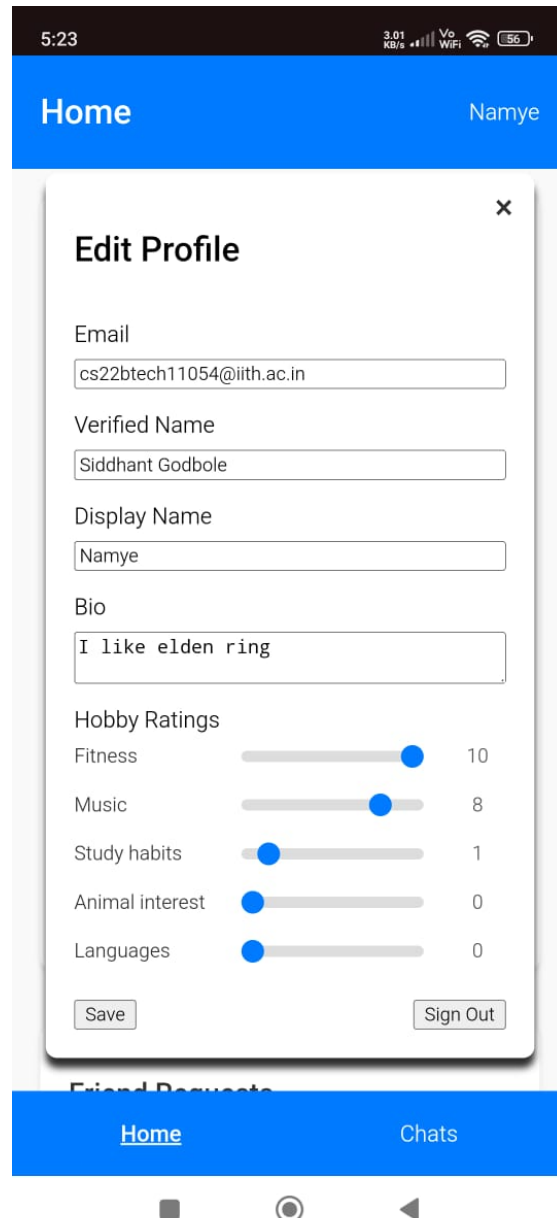


Figure 6: Edit Profile Page

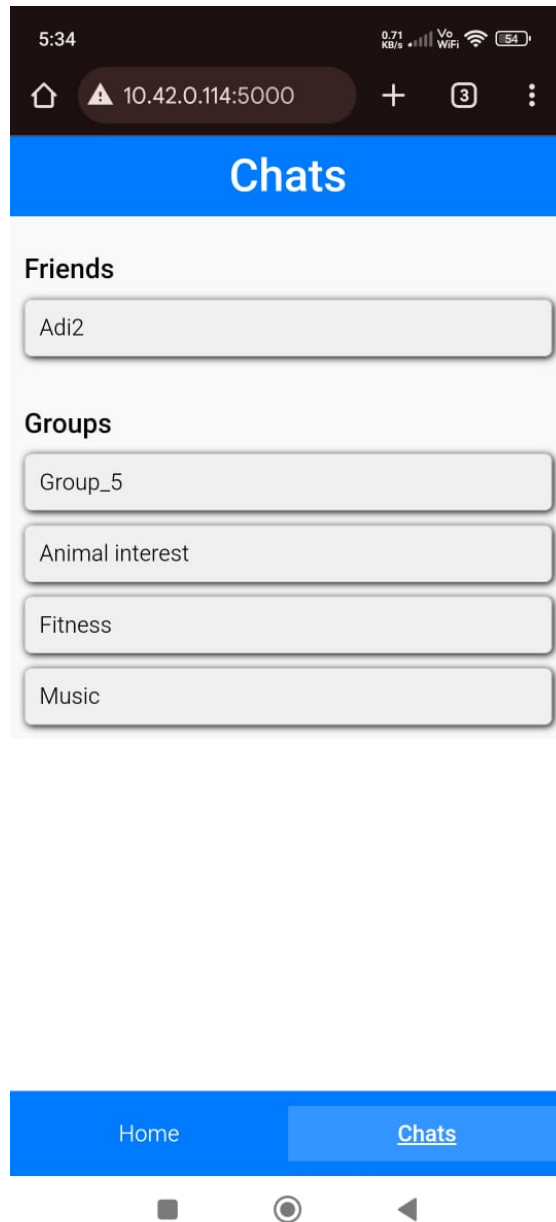


Figure 7: Chats Page

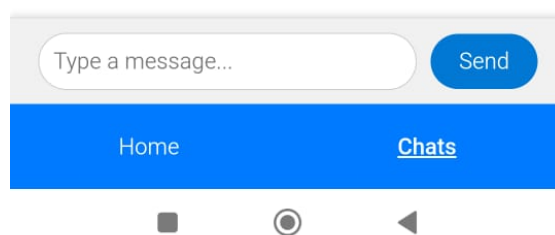
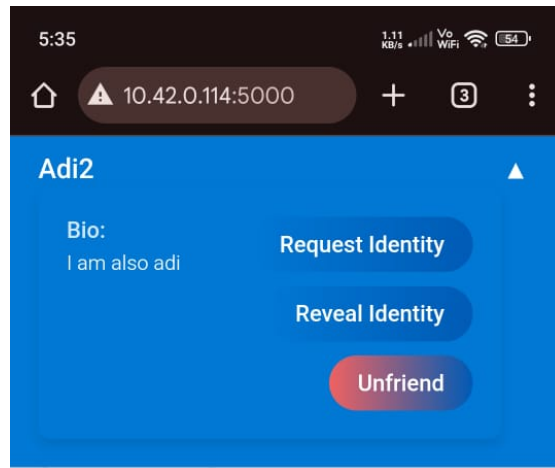


Figure 8: Unrevealed Friend chat

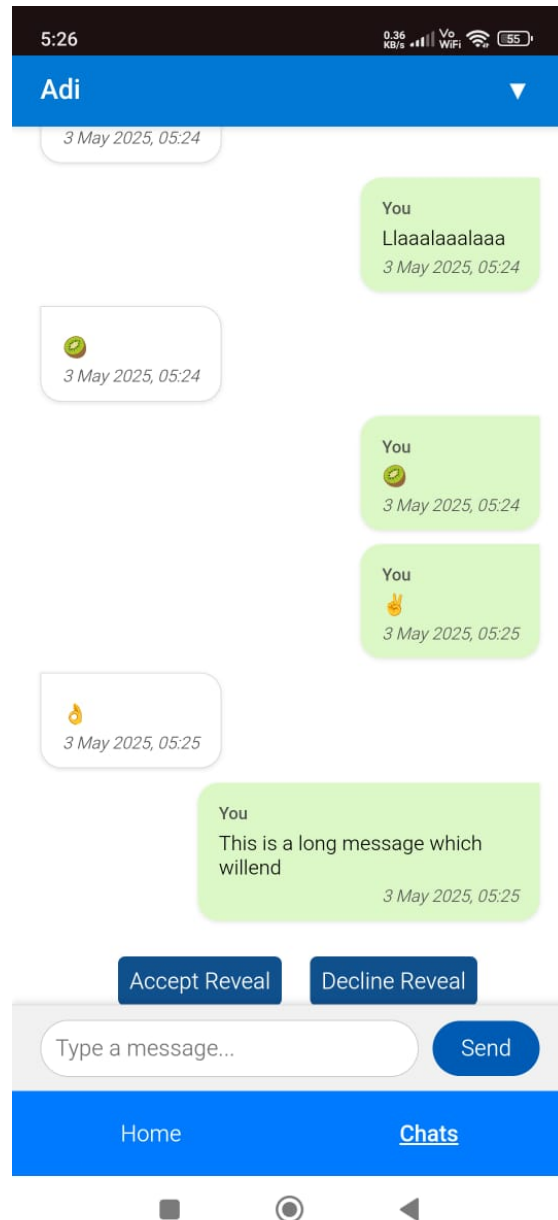


Figure 9: Friend Chat with reveal request

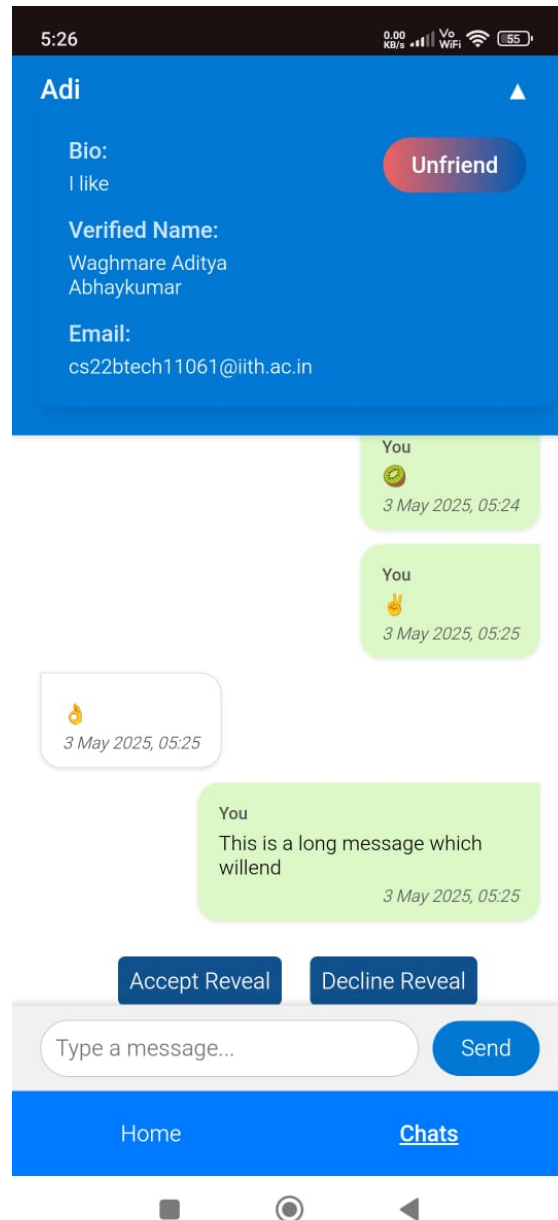


Figure 10: Revealed User info

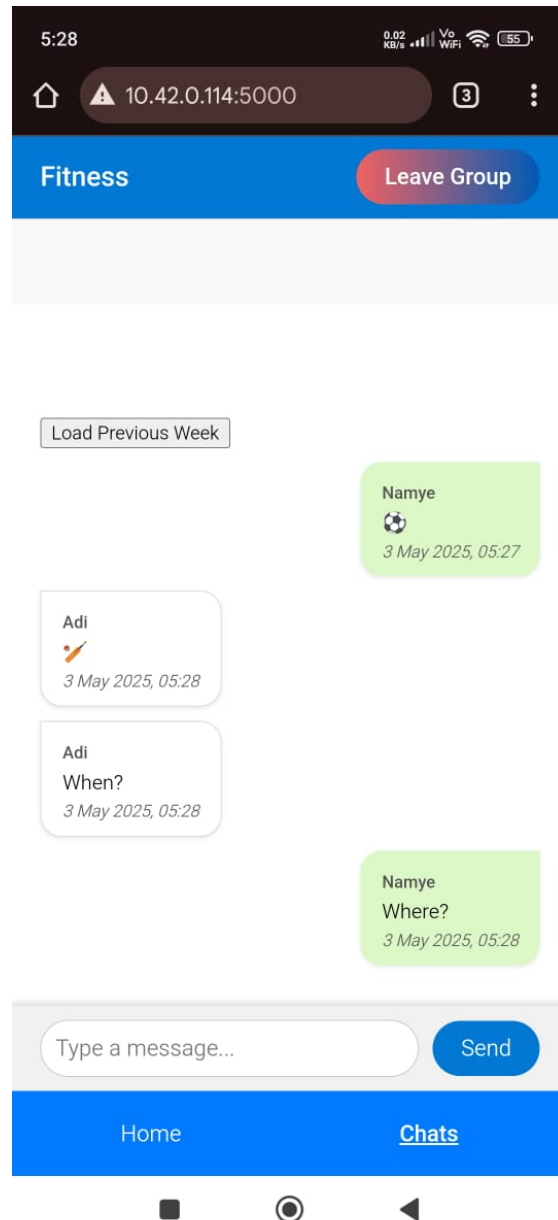


Figure 11: Group Chat

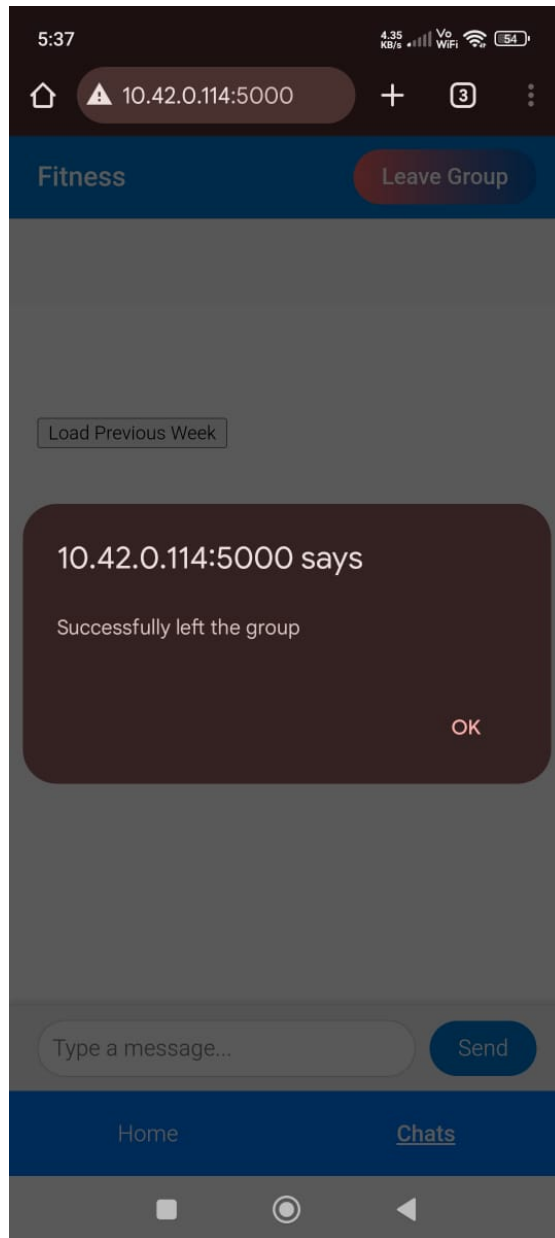


Figure 12: Popups

## 6. Contributions

- **Aditya Waghmare:** React frontend client, Node.js Express & Socket.io server, Python Recommendation service, PostgreSQL database, Docker, Software design, and testing.
- **Siddhant Godbole:** React frontend client, Node.js Express server, Python Recommendation service, and Testing.
- **Gaurav Choudekar:** React frontend client, Software design, and testing.
- **Shivendraraje Gadekar:** React frontend client, Software design, and testing.