



University of Dhaka
Department of Computer Science & Engineering
CSE 2216 - Application Development Lab (Batch 28)

Assignment 2

Project Progress

Team Name

DU_CodeX_Legends

Roll Numbers

2

24

29

48

Submitted On

18 January 2024

Idea

Our app aims to make finding and renting a home simple, personalized, and efficient. Users can search for homes that meet their needs by filtering based on criteria such as location, number of rooms, budget, and additional amenities. Property owners can list their homes for rent on the platform, setting their preferences for rental duration and availability. Potential renters can then explore available listings, with an option to contact the owners directly through an integrated messaging feature, making communication seamless. Additionally, the app will include a secure payment gateway for advance payments, ensuring convenience and trust for both parties. To enhance the user experience, we plan to implement an area-based search feature, allowing users to pinpoint desired neighborhoods or regions effortlessly. This app will streamline finding and renting a home, offering a reliable and user-friendly solution for renters and property owners alike.

Tools Used

- **Framework that was used for the app:** React Native (Expo Router)
- **Database:** MongoDB
- **Backend Framework :** Express

App Screens

Starting Page:



Login Page:



Email

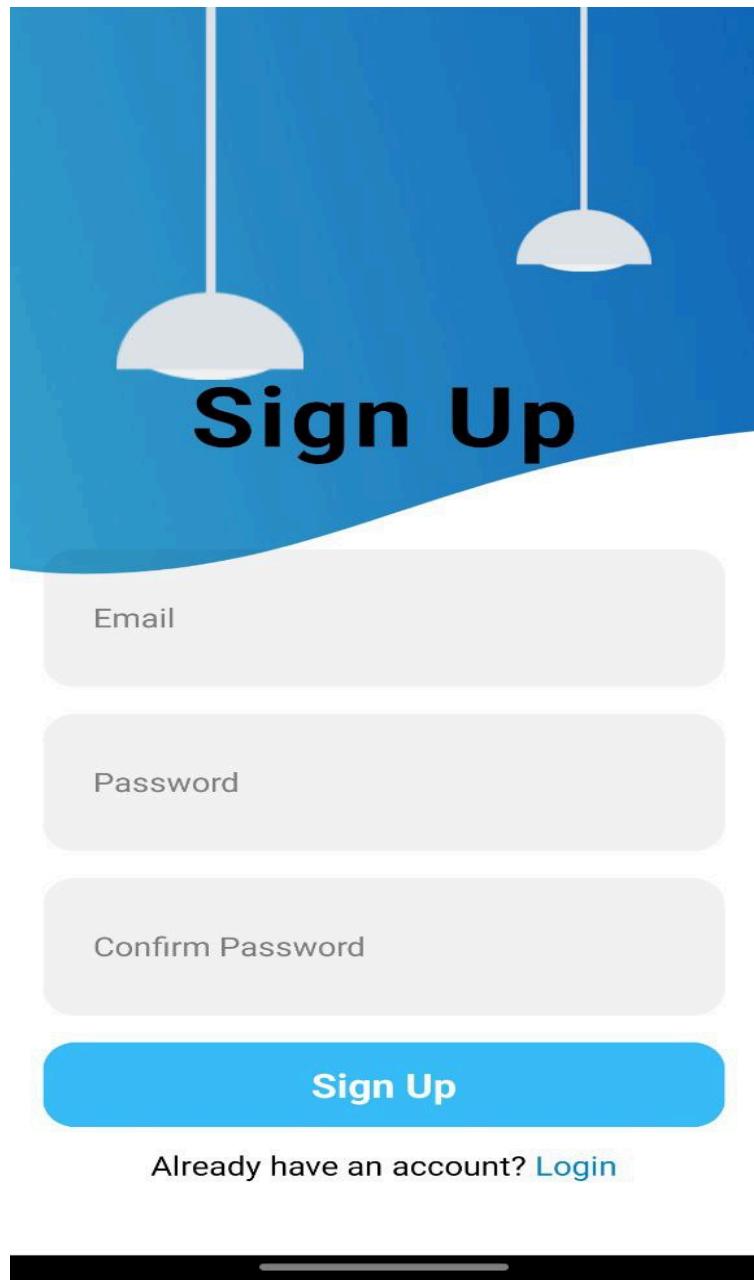
Password

Login

Don't have an account? [Sign Up](#)



Sign Up page:



Home Page:

The screenshot displays a mobile application interface for real estate. At the top is a header featuring a modern living room interior with light-colored furniture, large windows with bamboo blinds, and a wooden floor. To the left of the header is a black three-line menu icon. Below the header is a navigation bar with three tabs: "Home" (underlined in blue), "Community Center", and "Services". A large blue button with a white plus sign and the text "Add Home" is centered below the navigation bar. Below this is a dark grey search bar containing the placeholder text "Where would you like to live?". Underneath the search bar are two blue buttons labeled "Buy" and "Rent". The main content area features a section titled "Home For Rent or Sale" with a "Show all" link. Below this, there is a "Home" category link. Two property listings are shown in cards. The first listing on the left shows a living room with a sofa and a chandelier, priced at Tk 30000, with 3 beds, 3 baths, and 50 m², located in Dhaka, Dhanmondi. The second listing on the right shows a hallway with a view of a city skyline, priced at Tk 30000, with 3 beds, located in Dhaka.

Home

Community Center

Services

+

Add Home

Where would you like to live?

Buy

Rent

Home For Rent or Sale

Show all

Home

Tk 30000

3 beds | 3 baths | 50 m²

Dhaka, Dhanmondi

Tk 30000

3 beds

Dhaka

Community Center Page:



Home **Community Center** Services

(+) Add Community Center

Available Community Centers

[Show all](#)

[Wedding Community Center](#)



Royal Wedding Hall
Tk 50000
Capacity: 500 people | Parking:
100 cars | 10000 sqft
Dhaka, Dhanmondi



Grand Hall
Tk 45000
Capacity: 300 people |
Parking: 50 cars | 8000 sqft
Dhaka, Dhanmondi

[Birthday Community Center](#)

Services Page:



The Services page features a header with a navigation menu icon and three tabs: Home, Community Center, and Services, with Services being the active tab. A prominent blue button labeled "Add Services" with a plus sign is centered below the tabs. The main content area is titled "Available Services" and includes a "Show all" link. Under "Home Cleaning Services", there is a card for a "Professional Cleaning Service" offered by a person named Prof. The card displays a photo of a cleaner at a window, the service name, price (Tk 1500/visit), duration (3 hours), rating (4.8), experience (5 years), and location (Dhaka, Dhanmondi). Another partially visible card for "Home Repair Services" is also shown.

Home Community Center Services

Add Services

Available Services

Show all

Home Cleaning Services



Professional Cleaning Service
Tk 1500/visit
Duration: 3 hours | Rating: 4.8 |
Experience: 5 years
Dhaka, Dhanmondi



Prof.
Tk 15...
Durat...
Experi...
Dhak...

Home Repair Services

Show All Page:

Where would you like to live?

Show map Show filters

Tk 30000

3 beds | 3 baths | 50 m²

Dhaka, Dhanmondi

Pay Now Page:

 **Demo**

   
Support FAQ Offers Login

CARDS **MOBILE BANKING** **NET BANKING**

   Other Cards

Enter Card Number

First digit is 37 or 4 or 5 and rest digits are 1

MM/YY CVC/CVV 

Card Holder Name

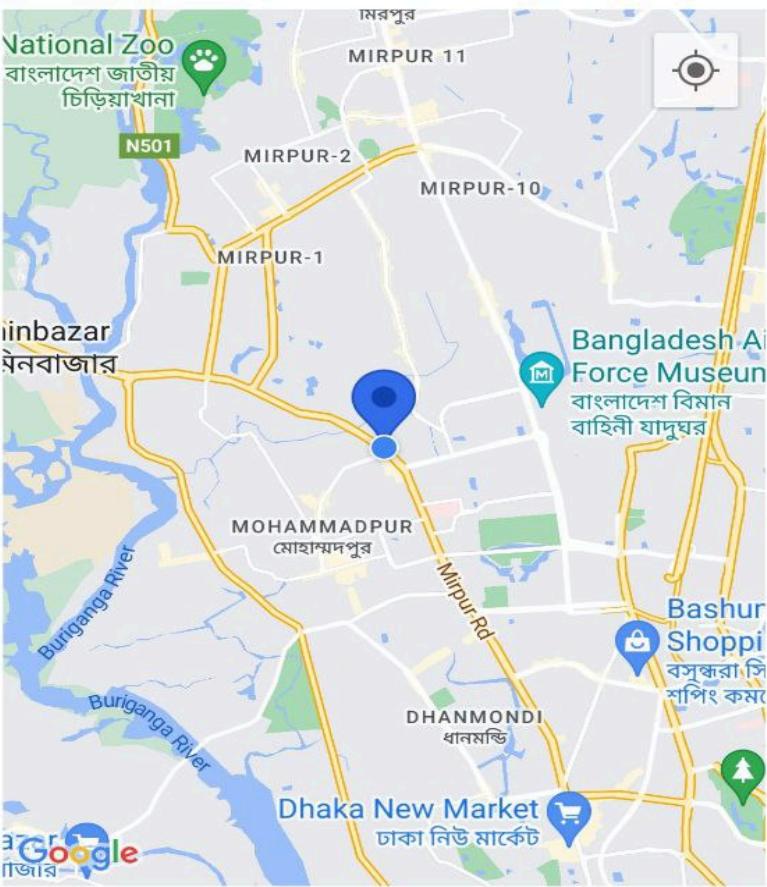
Save card & remember me | 

By checking this box you agree to the [Terms of Service](#)

 PAY 100 BDT

Show Map Page:

Search



Selected Location

Latitude	Longitude
23.775505	90.365118

City:

Filter Page:

Filter Page

All Properties

All Properties

Rent

Sale

Sublet

Over a Time period

City

Area

Min Rent

Max Rent

Beds

Baths

Min Size (sq.m)

Max Size (sq.m)

Search

Reset



Home Details Form Page:

The screenshot shows a mobile application interface for a "Home Details Form". The top status bar indicates the time is 02:25, signal strength, battery level at 94%, and data usage of 0.45 KB/S. The main title "Home Details Form" is centered at the top in a large, bold, blue font. Below the title are five sections, each with a blue header bar and a dark gray input field below it.

- Property Type**: A dropdown menu labeled "Select Property Types" with a downward arrow icon.
- Details**: Two input fields: "Beds" and "Baths".
- Size (sq meters)**: An input field labeled "Size (sq meters)".
- Rent**: An input field labeled "Rent".
- Rent Period**: Four radio button options: "Daily", "Weekly", "Monthly", and "Yearly".

Show Detailed Page:

RENT

Rent: 30000 Tk (Monthly)



Images (2)

Location

Dhaka, Dhanmondi
Road: N/A, House: 32/1 no circular road

Property Details

Beds: 3
Baths: 3
Size: 50 sq.m.
Balcony: 2
Floor: 4

Member Restrictions

Size: 50 sq.m.

Balcony: 2

Floor: 4

Member Restrictions

No Restriction

Facilities

None

Availability

Post Date: 08/01/2025

Available From: 31/01/2025

Owner

Email: abc03@gmail.com

Contact Number: **01852039838**

Call

Message

Message Page:

 **Abc4**

Hello Tauseef 😊
12:37 AM

Enter Card Information

Your entered card information could not be corrupted or become known to the third party, as all transmitted data is encrypted by the SSL protocol.

Note

1. For VISA and MC, look at the back side of your Card to find 3-digit CVV2/ CVC2. For AMEX, look at the upper right corner of the front side of

OTP:

Success **Failed**
Success with risk

1:00 AM

R8now
1:01 AM

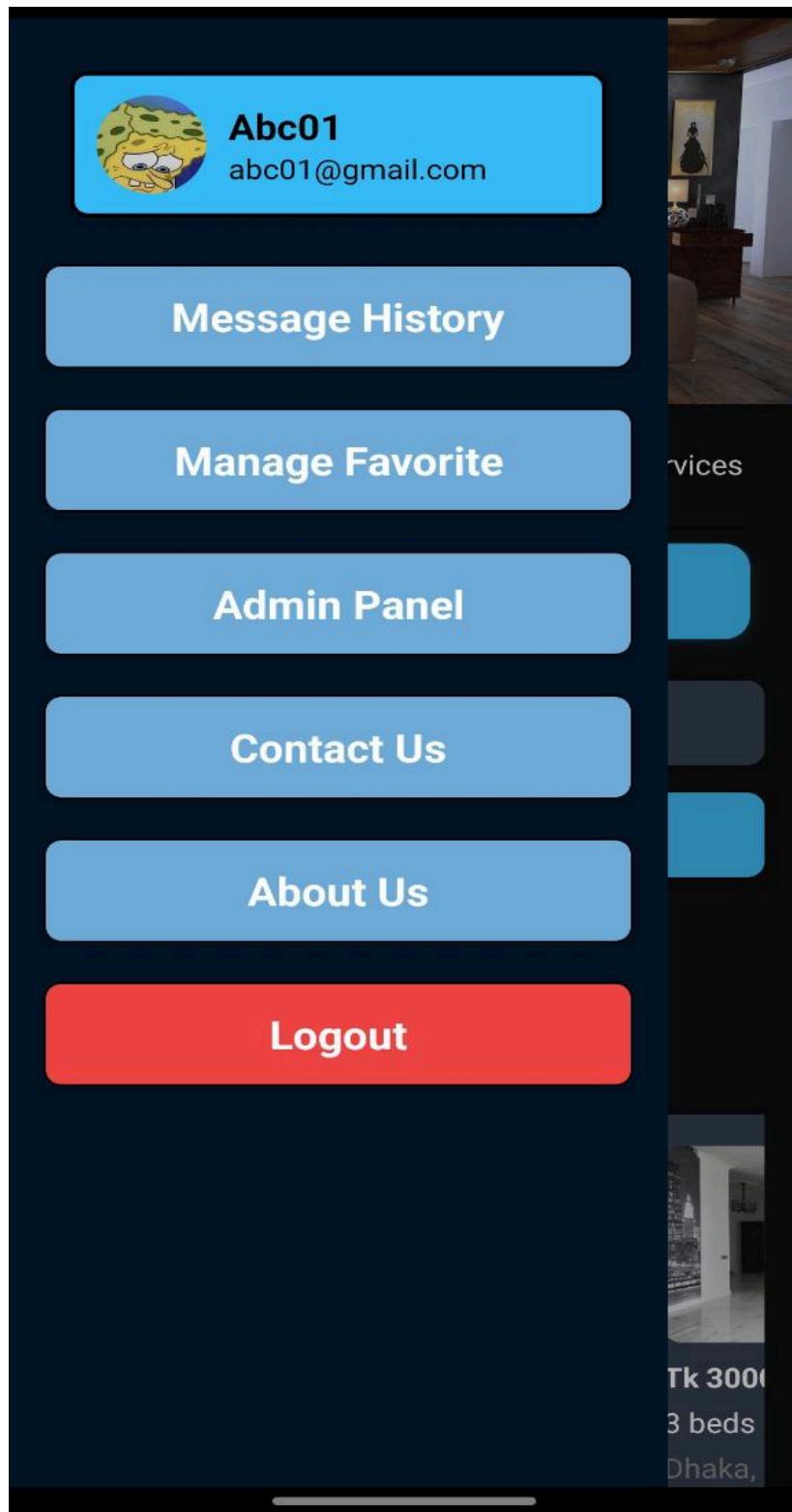

Images (2)

Location
Dhaka, Dhanmondi
Road: N/A, House: 32/1 no circular road

Property Details
Age: 2

 Type Your message...  **Send**

Side bar:



Profile Page:

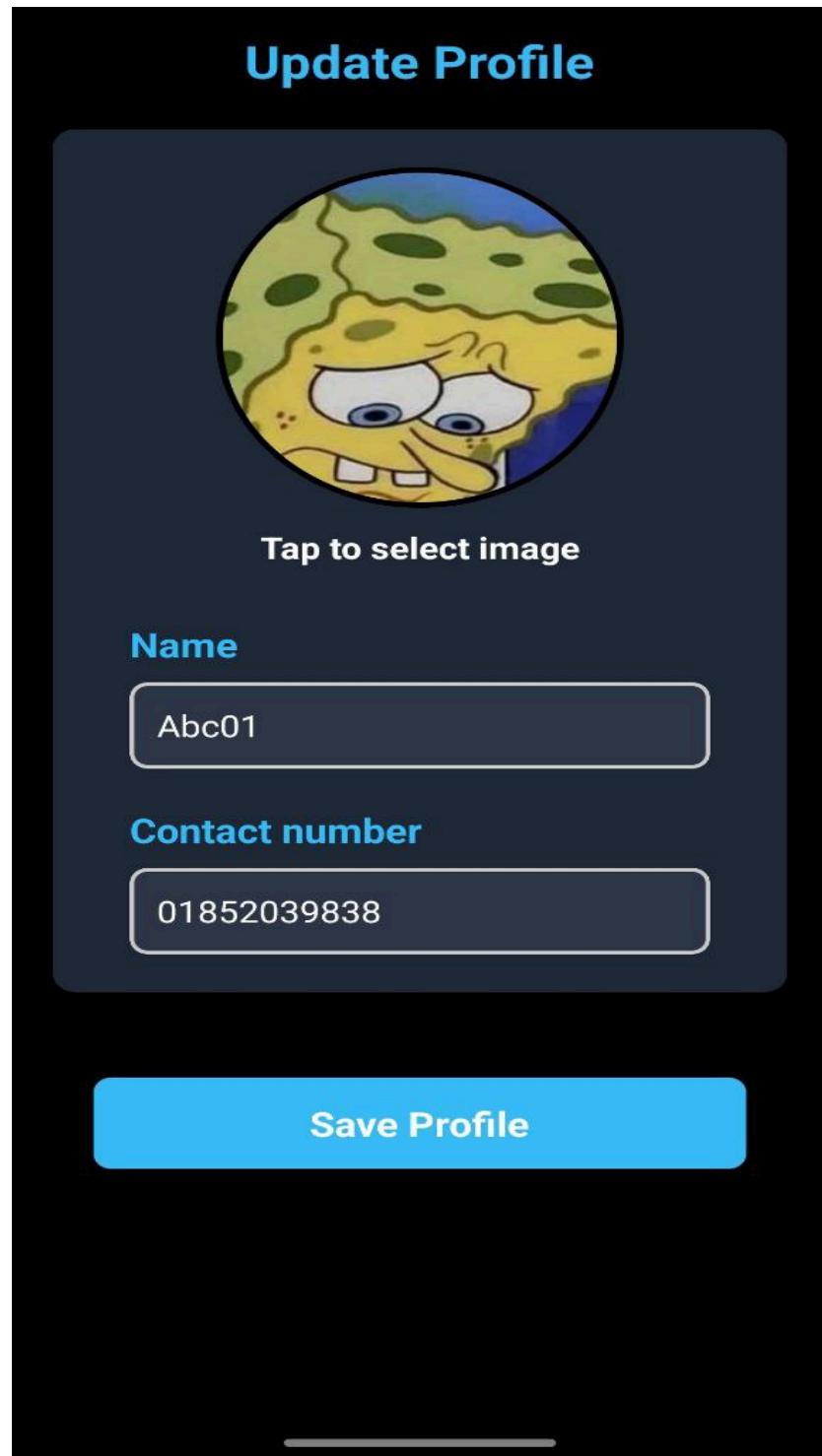
Profile



Name: Abc01
Email: abc01@gmail.com
Contact Number: 01852039838

Update Profile

Update Profile Page:



Message History page:

Messages



Abc4
Available

Admin Panel Page:

Pending requests

Approved requests

Pending Requests Page:

1. Form ID:

678761643f9bb57a35f01266

2. Form ID:

678762593f9bb57a35f01295

3. Form ID:

678715aaf1d437ceba5f5d45

Approved Request Page:

1. Form ID:

67644a484f5e02677d7b188b

2. Form ID:

676452f84f5e02677d7b188d

3. Form ID:

676453444f5e02677d7b188e

4. Form ID:

67646960c5f2d543cfbf208d

5. Form ID:

676d690d46c44294105da5eb

6. Form ID:

676d75518fc551aae0f2120b

7. Form ID:

67737fa421291b6b3b20b0ca

8. Form ID:



Contact Us page:

Contact Us



Md. Tauseef - Ur - Rahman

mdtauseef.rahang01@gmail.com



Tamzid Bin Tariq

mdtauseef.rahan@gmail.com



Ashraful Alam

mdtauseef.rahang01@gmail.com

About Us page:

About Us



Md. Tauseef - Ur - Rahman

Student: University of Dhaka



Tamzid Bin Tariq

Student: University of Dhaka

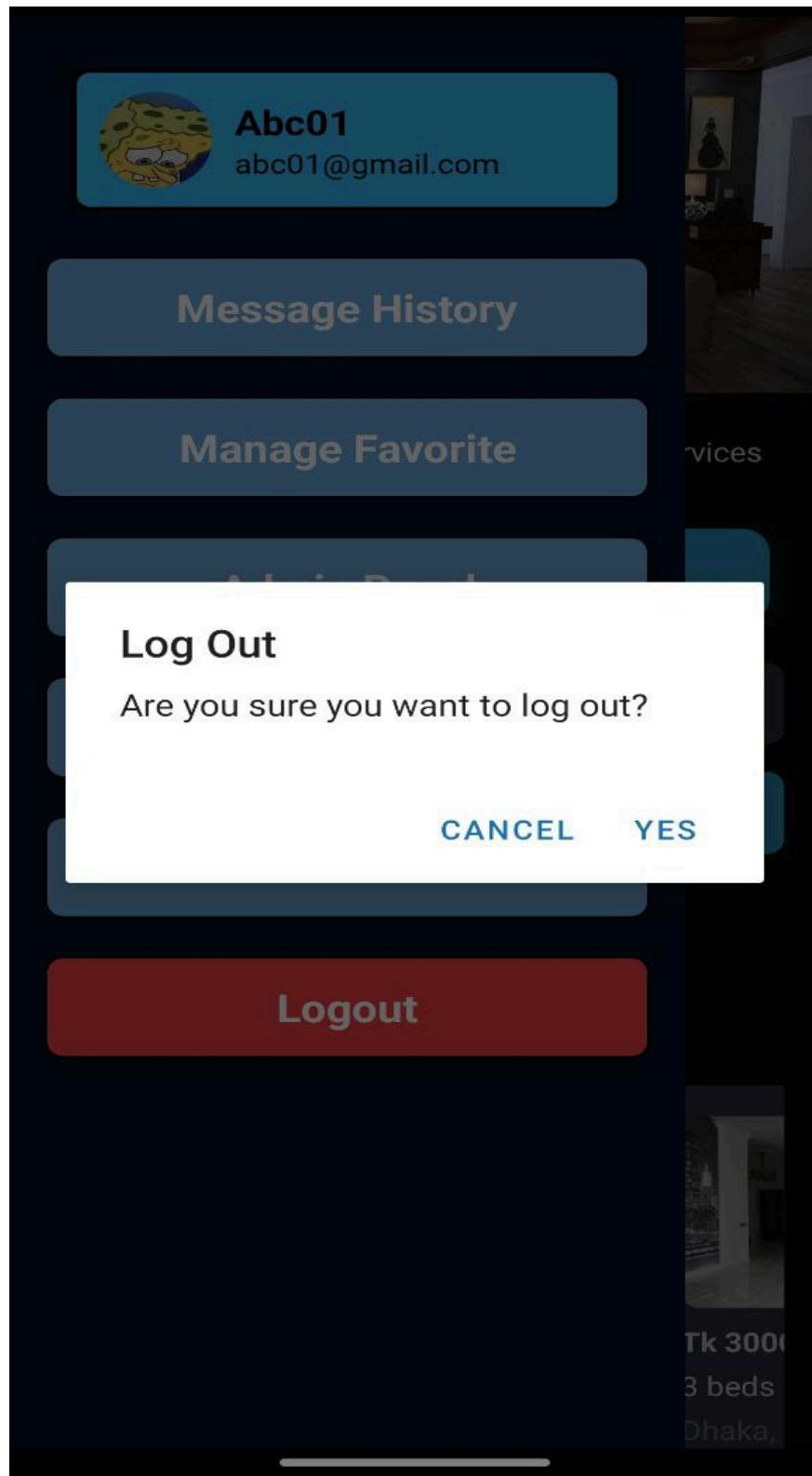


Ashraful Alam

Student: University of Dhaka



Logout Page:



Challenges and Solutions

Challenge 1: Shifting from React Navigation to Expo Router

Issue:

We decided to use React Native as our frontend framework, and I was tasked with creating a Chatting Application. After completing the Realtime Chatting Application and during the code merge, we discovered that different React Native versions were used. Most of the app was built using Expo Router, while I had used React Navigation. This necessitated switching from React Navigation to Expo Router. We initially believed this would be a straightforward task and that an LLM could easily convert the code to Expo Router.

Impact:

The LLM did generate code in Expo Router, but it was largely non-functional, and we encountered numerous errors. Debugging these errors proved challenging for me due to my limited experience with Expo Router.

Solution:

My friend helped me understand the fundamentals of Expo Router and how other pages within our project were functioning. Subsequently, I rebuilt the Chatting Application step-by-step using Expo Router.

Challenge 2: Incorrect Routing Endpoint Caused Message Sending Issues

Issue:

I asked AI to generate a routing endpoint to fetch an user's complete messaging history by their ID. The AI produced "/messagehistory/:userId" as the endpoint.

Impact:

This endpoint consistently produced errors. I repeatedly asked solutions from the AI, expecting it to provide effective resolutions. As I was asking for solution from AI by giving the routing page routes/message.js, I ignored debugging that page and focused on the frontend page.

Solution:

Eventually, when I examined the routes/message.js file, I discovered the root cause. Another endpoint,("/:senderId/:recipientId")", was conflicting with "/messagehistory/:userId". The routing logic mistakenly interpreted messagehistory as a senderId, leading to the error. To resolve this, I updated the endpoint to "/messagehistory/conversation/:userId" in both the frontend and backend, which resolved the issue.

Challenge 3: Routing from one page from another

Issue:

For page-to-page routing, Expo router offers the `router.push` and `router.replace` methods. The page the user wishes to go to is replaced with the current page using the `router.replace` method. However, pages are stacked on top of each other using the `router.push` technique. As a result, it is helpful when you wish to navigate to the page that was immediately before. However, there were times when we had to clear the stack and didn't want to go back to the previous page. All of the pages in the stack had to be retrieved because the stack could not be cleared.

Impact:

Because of the routing issue, we had to adjust various page functionality. There are several pages where this issue persists. We are working to resolve this issue. Because there are no ways of clearing the stack, we are attempting to update the features within particular pages.

Solution:

Using Expo Navigation is the solution. However, we must modify the behavior of all other pages in order to accomplish this. We attempted to switch to expo navigation, however we encountered some further error difficulties. However, this problem might be fixed by using expo navigation, modifying page routing, and changing page functionality, which is what we are attempting to do.

Challenge 4: Api limit over

Issue:

The app exceeds its API request limit, causing important features or data-dependent functionality to stop working unless the quota is reset or more restrictions acquired. Because we used the free version of the GoMap API, the limit was surpassed after a few searches.

Impact:

If the API limit is exceeded, users will be unable to search for locations and may encounter errors. Some app functionalities may not work.

Solution:

Use premium APIs. We need to buy an API so that we may deliver ongoing services.

Challenge 5: Issue in implementing payment method

Issue:

Integrating SSLCommerz into an application posed challenges due to the complexity of securely handling transactions and API calls. Ensuring the application remains secure and user-friendly while navigating the payment gateway workflow was a key issue. The SSLCommerz API required precise configuration, such as setting up proper endpoints and handling responses, which sometimes lacked clear documentation or resulted in unexpected errors. I have some minor issues merging the payment process in the project. The real payment system needs official documents which I didn't have.

Impact:

This issue disrupted the user experience and created confusion due to slow payment transitions. Users might perceive the delay as a failure. Moreover, improper handling of sensitive transaction data could expose vulnerabilities, risking compliance issues and financial losses. The delay and lack of feedback during the payment process negatively impacted overall satisfaction, and resolving these issues required significant time and resource investment.

Solution:

The solution involves implementing SSLCommerz with a focus on secure and efficient workflows. I use SSLCommerz's sandbox environment for thorough testing to address API and response issues as I didn't have any documents for the merchant account. To enhance the user experience, we will add visual indicators, such as loading animations, to mitigate perceived delays during payment processing. Transition the payment gateway implementation incrementally to reduce risks and allow time to adapt the application architecture as needed.

Individual Responsibilities

Member 1: Md. Tauseef - Ur - Rahman

1. Database design
2. Frontend design of app
3. Data searching, insertion and deletion
4. Login and signup page
5. Admin panel
6. Maps integration

Member 2: Tamzid Bin Tariq

1. Database design for the messaging part
2. frontend and backend of calling
3. frontend and backend of messaging part
4. Data insertion
5. App debugging

Member 3: Md. Ashraful Alam

1. Database design
2. Maps integration
3. payment method integration
4. frontend design
5. App debugging

Member 4: Sumaiya Tabassum

1. Database design
2. Maps integration
3. admin panel
4. frontend design of app
5. App debugging

Future Plan

Our primary goal is to make the app completely bug-free, ensuring a seamless and reliable user experience. We aim to refine and enhance the convention center and house services sections to provide users with well-designed and intuitive features. Additionally, we plan to improve various pages, optimize the frontend design for better aesthetics and usability, and integrate more comprehensive datasets to enrich the app's functionality. We have also ongoing tasks to complete the implementation of the map. These steps will help us deliver a polished, user-friendly platform.