

Assignment-3: Milestone-1

CS346: Software Engineering Laboratory

Assignment-3 Report

Task:

To develop a Community-Based Local Services Platform

Author:

Group 1B

Instructor:

Prof. Pradip K. Das, Dept. of CSE, IITG

Preface

This project was assigned to **Group 1B** as the final project in the course CS346: Software Engineering Laboratory, Spring 2024 Semester, at IIT Guwahati.

Group 1B consists of the following students (listed roll number-wise):

- 1. Abhinav Kumar, 210101003
- 2. Anup Kumar, 210101019
- 3. Arani Rajesh Kumar, 210101019
- 4. Arvind Kumar, 210101022
- 5. Bhogi Sai Sathwik, 210101031
- 6. Bussa Sai Santhosh, 210101033
- 7. Devika Singh, 210101036
- 8. Divya Garg, 210101037
- 9. Gautam Sharma, 210101042
- 10. Gholap Sarvesh Sarjerao, 210101043
- 11. Gutthula Naga Satyam Preetam, 210101044
- 12. Kshitij Maurya, 210101059
- 13. Madala Sai Deekshitha, 210101063
- 14. Majji Aditya, 210101064
- 15. Mithilesh Gupta, 210101067
- 16. Parth Kasture, 210101074
- 17. Posa Mokshith, 210101077
- 18. Pratham, 210101079
- 19. Pratham Goyal, 210101080
- 20. Priyanshu Raj, 210101083
- 21. Rangu Rishvanja Simha, 210101084
- 22. Riya Mittal, 210101089
- 23. Sahil Jaiswal, 210101091
- 24. Shreya Saraf, 210101099
- 25. Sreehari C, 210101101
- 26. Swagat Bhupendra Sathwara, 210101101

- 27. Vanga Nikhitha, 210101107
- 28. Pratyush R, 210101116
- 29. Ketan Singh, 210101118
- 30. Shivam Agrawal, 210101119
- 31. Akshit Sharma, 210101124

Each meeting was well documented and their minutes can be found on our team's notion page,. Every work was recorded through notion.

Contents

1	2 Problem Statement 2.1 Target Audience							
2								
3								
4	Pro 4.1 4.2 4.3	2 Provider Perspective						
5	Dat 5.1 5.2 5.3	Level 0						
6	ER	R Diagrams						
7	Pro	Proposed UI 22						
	7.1	•		20				
	7.2	Pages common to everyone 7.1.1 Landing Page 7.1.2 Login Page 7.1.3 Login as Admin Admin Pages 7.2.1 Admin-Provider Chat Interface 7.2.2 Admin-Customer Chat Interface 7.2.3 Admin Dashboard 7.2.4 Feedback of all the providers		22 22 22				

8	Fut	ure Im	provements	42
		7.4.12	Profile Page	41
		7.4.11	Upcoming Appointments Page	38
		7.4.10	Home Page	38
		7.4.9	Search Page	38
		7.4.8	Registration Page	38
		7.4.7	Pending Payment Page	38
		7.4.6	Payment Page	38
		7.4.5	Previous Appointments Page	34
		7.4.4	Admin Customer Chat Interface	34
		7.4.3	Application Feedback Page	34
		7.4.2	Provider Feedback Page	34
		7.4.1	Customer Slot Booking Page	34
	7.4	Custor	ner Pages	34
		7.3.13	Provider Registration Page	32
		7.3.12	Provider Appointments Page	32
		7.3.11	Provider Profile Page	32
		7.3.10	Provider Profile Edit Page	30

1 Introduction

The Community-Based Local Services Platform is a comprehensive digital solution designed to connect users with various service providers in their local community. It serves as a centralized hub where users can easily discover, evaluate, and book services including interior design, painting, carpentry, electrical work, and more. The platform prioritizes user experience, transparency, and security throughout the entire process, ensuring a seamless interaction between service providers and customers.

Key features of the platform include:

- 1. **Service Provider Profiles**: Service providers, such as decorators, carpenters, and electricians, create detailed profiles showcasing their expertise, qualifications, service offerings, pricing, and service areas. This allows users browse through comprehensive information and make informed decisions based on these.
- 2. **Search and Booking**: Users can efficiently search for service providers using filters such as location, service type, ratings, and reviews. Listings display important details like ratings, reviews, and available appointment slots, enabling users to schedule appointments directly.
- 3. **Messaging and Notifications**: The platform facilitates seamless communication between users and service providers through a messaging system. Clear icons and alerts keep users informed about bookings, reminders, and updates, ensuring effective communication throughout the process.
- 4. Rating and Reviews: Ratings and reviews are prominently displayed on service provider profiles, allowing users to assess the quality of service based on feedback from previous customers. Users can also contribute their own ratings and reviews, providing valuable feedback for continuous improvement.
- 5. **Secure Payment Integration**: Various payment methods are available for transactions, with the platform implementing a secure payment gateway to ensure the safety and convenience of financial transactions.
- 6. **Feedback and Support**: User-friendly forms and dedicated support channels are provided for interactions related to service providers. The platform actively collects feedback to enhance the overall user experience and improve service quality.

With clear policies on advance payments, cancellations, and rescheduling, as well as dedicated support channels for feedback and assistance, the platform aims to provide a hassle-free experience for both users and decorators alike. Overall, the Community-Based Local Services Platform serves as a valuable resource for both users seeking reliable local services and service providers looking to connect with potential customers in their community.

2 Problem Statement

In the realm of community-based services, a significant gap exists in the provision of a centralized platform that facilitates effective interactions between service providers and users. This deficiency hampers the seamless connection between service providers and users, resulting in inefficiencies and sub-optimal user experiences. To address this issue, our project aims to develop a sophisticated software platform encompassing service provider profiles, robust search and booking functionalities, real-time communication, rescheduling capabilities, secure payment and a comprehensive feedback mechanism.

2.1 Target Audience

Understanding the distinct needs and expectations of the target audiences is crucial for tailoring the platform to meet their specific requirements. Our software solution is designed to cater to a diverse range of users, creating a dynamic ecosystem for community-based services. The primary target audience includes:

1. Service Providers:

- Individuals or businesses offering services within the community. This includes professionals such as home service providers, consultants, and more.
- Service providers benefit from a centralized platform to showcase their offerings, expanding business, and connecting with potential clients.
- Service providers often operate in varied capacities, offering diverse services that
 cater to distinct user needs. These nuances necessitate a flexible and adaptable platform capable of accommodating a wide array of service types, scheduling preferences,
 and pricing models.

2. Users:

- Individuals seeking community-based services for various needs, such as home repairs, consultations, educational services, and more. Users are looking for a convenient and efficient platform to discover, book, and interact with service providers.
- The platform aims to provide users with a user-friendly experience, offering a wide array of services and ensuring a seamless booking process.
- Users expect a seamless experience in discovering, booking, and communicating with service providers. Addressing these needs involves creating an intuitive interface, personalized profiles, and robust communication channels.

3. Administrators:

- Platform administrators are responsible for managing and overseeing the overall functionality and user experience.
- Administrators play a crucial role in ensuring the security, scalability, and smooth operation of the software.
- Their responsibilities include monitoring user activities, maintaining data integrity, and implementing updates to enhance platform performance.

By comprehensively addressing these nuances, anticipating user needs, and carefully considering constraints and requirements, our software solution aims to provide a well-rounded and effective platform for community-based services, catering to the intricate demands of both service providers and users alike.

3 Assumptions

Due to a lack of clarity, we assumed the following assumptions while building a solution to the given problem.

- 1. Provider will have to make separate accounts for different services. One account can handle only one service.
- 2. Provider cannot cancel or reschedule appointments that have been confirmed already.
- 3. A customized cancellation policy will be implemented, wherein the percentage of the total amount deducted upon cancellation will vary based on the time remaining before the appointment.
- 4. Payment will be done via secure string encryption.

4 Problem Solution

Primary technologies used in this software are Visual Studio 2022, Visual C++, and KYC Payment Method. Visual Studio 2022 would be used to develop the platform's frontend (UI/UX) and backend components, utilizing languages like C++ for backend logic. ODBC (Open Database Connectivity) is a standard API (Application Programming Interface) for accessing database management systems (DBMS).KYC (Know Your Customer) is a process used by financial institutions and payment service providers to verify the identity of their customers.

4.1 User Perspective

Problem: Users struggle to find reliable decorators for their needs, and they often encounter challenges in booking, communicating, and making payments.

Solution:

- 1. **User-Friendly Interface**: Developing an intuitive platform with a prominent search bar and filters to streamline the search process so that users can easily find decorators based on location, service type, ratings, and reviews.
- 2. **Transparent Booking**: Implementing a clear booking system where users can view decorator profiles with detailed descriptions, pricing, and service areas, which allows users to schedule appointments directly, with visible appointment slots and available dates.
- 3. Seamless Communication: Integrating a secure payment gateway to ensure safe and convenient transactions. Users can make advance payments to secure bookings, with clear policies on cancellations and rescheduling.
- 4. **Secure Payment Options**: Ratings and reviews are prominently displayed on service provider profiles, allowing users to assess the quality of service based on feedback from previous customers. Users can also contribute their ratings and reviews, providing valuable feedback for continuous improvement.
- 5. Rating and Reviews: Displaying ratings and reviews prominently on decorator profiles, allowing users to make informed decisions based on feedback from other customers.

4.2 Provider Perspective

Problem: Decorators struggle to showcase their expertise, manage bookings efficiently, and communicate seamlessly with clients.

Solution:

- 1. Comprehensive Profiles: Enabling decorators to create detailed profiles showcasing their expertise, qualifications, service areas, pricing, and contact information, with corresponding pricing for transparency.
- 2. Efficient Booking Management: Providing decorators with tools to manage bookings effectively, including clear policies on advance payments, cancellations, rescheduling, and offering flexibility for rescheduling based on availability.
- 3. **Direct Communication**: Facilitate seamless communication with clients through a messaging system integrated into the platform which allows notifications for bookings, reminders, and updates.

4. Rating and Feedback: Displaying ratings and reviews prominently on profiles to show-case reputation and credibility.

4.3 Admin Perspective

Problem: Admins need tools to manage the platform effectively, ensure policy compliance, control decorators and facilitate communication between users and decorators.

Solution:

- 1. **Admin Dashboard**: to monitor platform activity, manage user accounts, and oversee bookings and payments.
- 2. **Policy Management**: Implementing clear policies on advance payments, cancellations, rescheduling, and communication guidelines. Ensuring compliance with regulations and standards to maintain trust and reliability.
- 3. Customer Support: Offering dedicated support channels for users and decorators to address any issues or concerns, also assisting with bookings, payments, and communication to ensure a positive experience.
- 4. **Security Measures**: Implement robust security measures to protect user data and ensure secure transactions to manage financial records.

5 Data Flow Diagram

5.1 Level 0

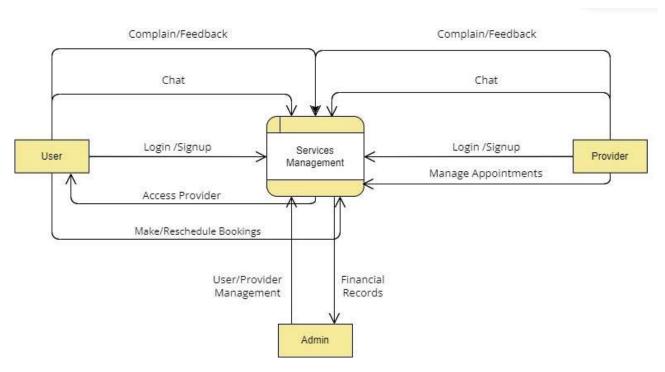


Figure 1: Data Flow Diagram for Level 0

5.2 Level 1

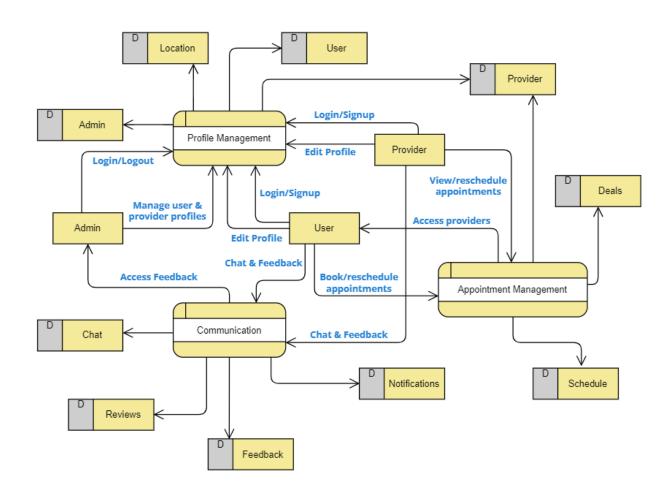


Figure 2: Data Flow Diagram for Level 1

5.3 Level 2

5.3.1 Manage Appointments

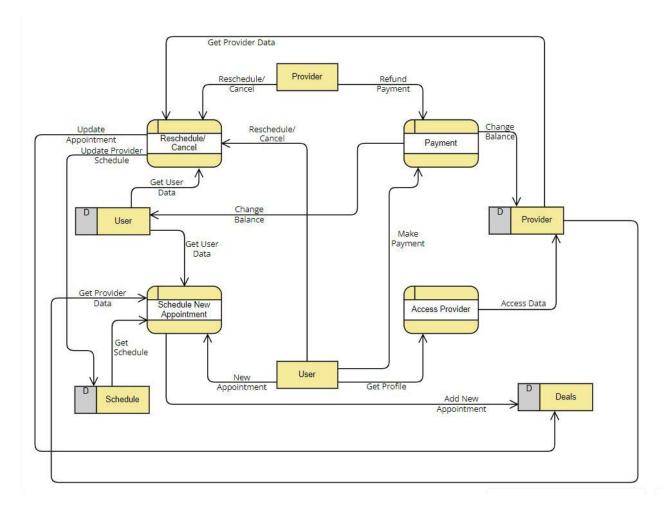


Figure 3: Data Flow Diagram for Manage Appointments

The Manage Appointments Data Flow Diagram (DFD) illustrates the flow of data and processes within a system designed to facilitate the scheduling, modification, and payment of appointments between users and providers. The system relies on four distinct databases - user, provider, schedule, and deals - to store and manage relevant data associated with appointments. The system caters to four primary functions:

- 1. **Schedule New Appointment:** Users can initiate the scheduling of a new appointment with a provider. They can only make an appointment in a slot that has not been previously booked yet.
- 2. **Reschedule/Cancel Appointment:** Users and providers have the flexibility to reschedule or cancel existing appointments. The revised schedule is updated in the schedule database.
- 3. **Payment:** This function facilitates secure payment transactions and the balance of users and providers are updated in the user and provider databases respectively.
- 4. Access Provider: Users can view the provider profile to make informed decisions while making any appointment.

5.3.2 Profile Management

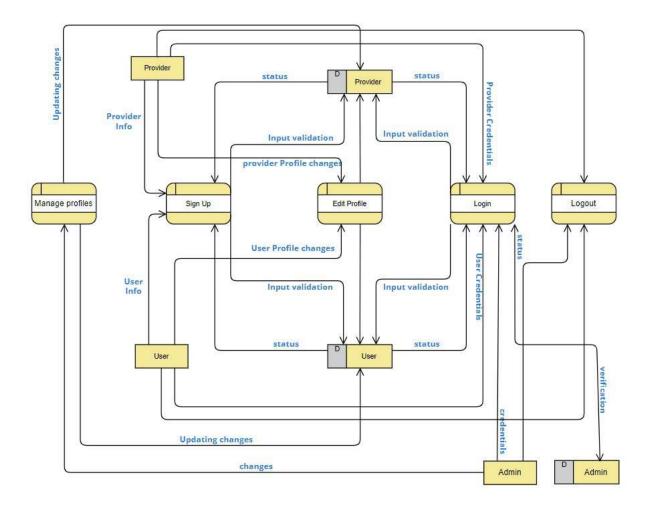


Figure 4: Data Flow Diagram for Profile Management

The Profile Management Data Flow Diagram (DFD) depicts the flow of data and processes within a system designed to manage user profiles across three distinct categories: user, provider, and admin. The system relies on three separate databases - user, provider, and admin - to store and manage profile information for each profile type. It handles the following functionalities:

- 1. **Login/Logout:** Users, providers, and admins can securely log into their respective profiles using appropriate credentials. This process involves accessing the relevant databases for user, provider, and admin profiles to authenticate the user's identity. Once logged in, users have the option to securely log out of their profiles.
- 2. **Sign Up:** New users can register for an account within the system by providing the necessary information for their chosen profile type (user, provider, or admin). Upon sign-up, the system stores the user's details in the corresponding database.
- 3. Edit Details: All users, including regular users, providers, and administrators, can modify and update their profile information as needed. This process involves retrieving the user's existing details from the respective databases, allowing them to make edits, and then saving the changes back to the appropriate database.

5.3.3 Communication

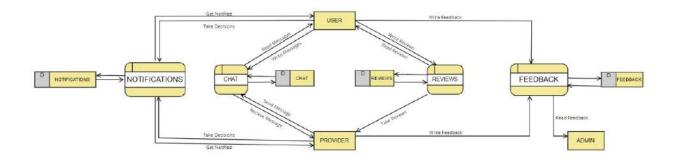


Figure 5: Data Flow Diagram for Communication

The Communication Data Flow Diagram (DFD) depicts the flow of data and processes within a system designed to handle communication in different forms between user and provider like chat, notifications and reviews. The system relies on four separate databases - notifications, chat, reviews and feedback. The system is structured around four primary functions:

- 1. **Notifications:** Users and providers can both send and receive notifications including appointment reminders, new messages, service updates, and other pertinent information. These notifications are stored and managed within the notifications database.
- 2. **Chat:** Users and providers have the capability to engage in real-time text-based communication through the chat feature. Chat messages are logged and stored in the chat database, enabling users and providers to review past conversations and maintain a record of their interactions.
- 3. **Review:** After the completion of a service or interaction, users have the opportunity to provide reviews regarding their experience which can be used by the provider to improve service quality. Users can also read reviews given by other users before making an appointment.
- 4. **Feedback:** Both users and providers can give feedback which is stored in the feedback database and can also be read by the admin.

5.4 Level 3

5.4.1 Payments

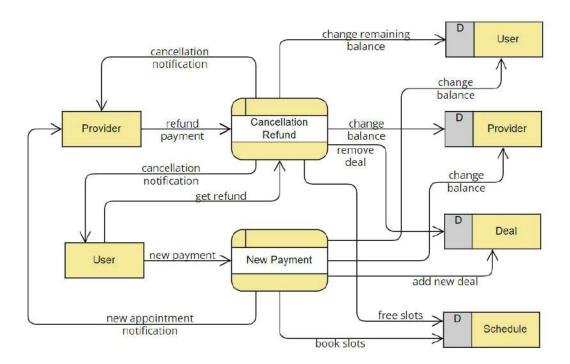


Figure 6: Data Flow Diagram for Paymennts

5.4.2 Notifications

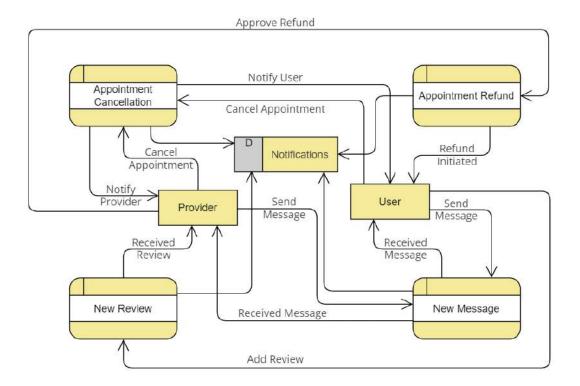


Figure 7: Data Flow Diagram for Notification

5.4.3 Schedule/Reschedule

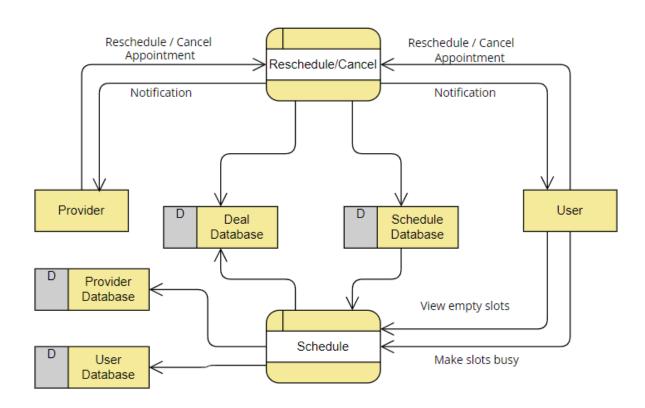


Figure 8: Data Flow Diagram for Schedule/Reschedule

5.4.4 Manage Profile

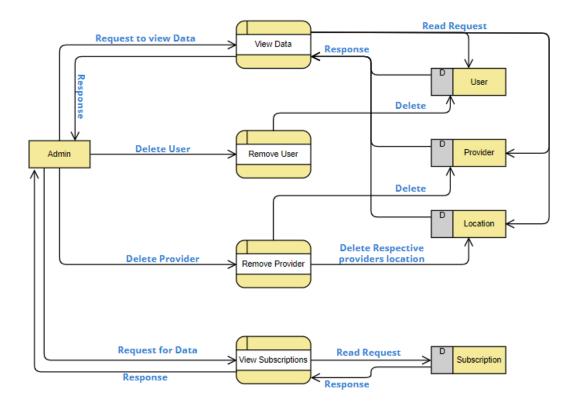


Figure 9: Data Flow Diagram for Manage Profile

5.4.5 Edit Profile

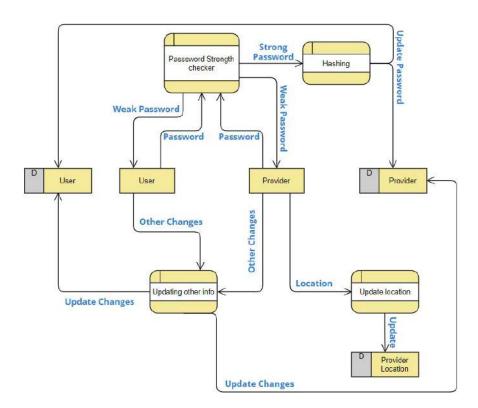


Figure 10: Data Flow Diagram for Edit Profile

6 ER Diagrams

The application will employ the following database tables to handle all the users' operations smoothly.

1. Customer Table

This table stores all the information of customers.

Columns:

- (a) User ID: Type int \rightarrow Primary key \rightarrow User ID can only take even values starting from 2 (to distinguish it from provider ID)
- (b) User Name: Type string
- (c) Phone Number: Type string
- (d) Email: Type string
- (e) Password: Type string
- (f) Balance: Type int
- (g) Public Key: Type int
- (h) Private Key: Type int

2. Provider Table

This table stores all the providers' information.

Columns:

- (a) Provider ID: Type int \rightarrow Primary key \rightarrow Provider ID can only take odd values starting from 1 (to distinguish it from User ID and admin)
- (b) Provider Name: Type string
- (c) Phone number: Type string
- (d) Email: Type string
- (e) Service: Type string → this is used to store which service the provider provides (a provider can only provide one service through his email; for other services, he has to create more emails and accounts)
- (f) Cost per hour: Type int \rightarrow we store cost per hour to easily find the cost to be paid by customer based on appointment hours
- (g) Working hours: Type int $(24 \text{ bit})(1 \rightarrow \text{working}, 0 \rightarrow \text{working})$
- (h) Balance: Type int \rightarrow how much the provider earned by bookings on the application
- (i) Public Key: Type int
- (j) Private Key: Type int

Note: Public key and Private key are used for payment simulation between a user and a provider

3. Location Table

This table maps a provider to a specific location.

Columns:

- (a) Provider ID: Type int \rightarrow Foreign key reference to provider table
- (b) Location: Type string: string \rightarrow To store locations (one location in one row)

Note: No Primary key in this table

4. Notification table

Stores all the notifications that were sent to all the users.

Columns:

- (a) User ID: Type int \rightarrow Foreign Key reference to Customer Table
- (b) Provider id: Type int \rightarrow Foreign Key reference to provider table
- (c) Notification Message: Type string \rightarrow message to be sent
- (d) Date and Time: Type Date Time \rightarrow To store a history, that when a Notification was sent

5. Deals

This table stores details of a particular appointment.

Columns:

- (a) Deal ID: Type int \rightarrow Primary ID
- (b) User ID: Type int \rightarrow Foreign Key reference to Customer Table
- (c) Provider ID : Type int \rightarrow Foreign Key reference to provider table
- (d) Slot: Type int \rightarrow to indicate what the slot is when service provider will come to the customer
- (e) Date and Time: Type DateTime \rightarrow to store when a deal was made
- (f) status: Type int (taking values from 0 to 3)
 - i. 0: Booked 50%
 - ii. 1: Booked 100%
 - iii. 2: Rescheduled
 - iv. 3: Cancelled

6. Chat

This table stores all the exchanged messages between two users.

Columns:

- (a) Deal ID : int \rightarrow Primary ID
- (b) Sender ID: int \rightarrow Foreign Key reference to User/provider table
- (c) Date and Time: Type DateTime \rightarrow to store when a deal was made
- (d) Text/Message: Type string

7. Admin

This table stores the admin details.

Columns:

- (a) Admin Name: Type string \rightarrow Primary key
- (b) Password: Type string
- (c) Email: Type string
- (d) Public key: Type int
- (e) Private key: Type int

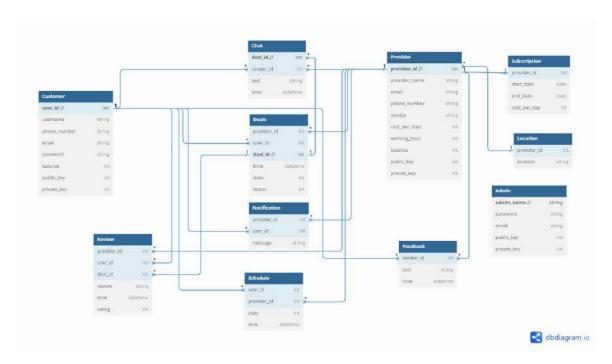


Figure 11: Combined ER Diagram

8. Feedback

This table stores all the feedback given to a particular user.

Columns:

- (a) Customer ID/Provider ID : Type int \rightarrow Foreign Key reference to customer/provider table
- (b) Text: Type string \rightarrow the actual feedback
- (c) Date and Time: Type DateTime → Time of giving the feedback

9. Subscription

This table stores all the provider's subscription details.

Columns:

- (a) Provider ID: Type int \rightarrow Foreign Key reference to provider table
- (b) Start Date: Type DateTime \rightarrow to indicate the start date of the deal
- (c) End Date: Type DateTime \rightarrow to indicate the end date of the deal
- (d) Cost per Day: Type int \rightarrow expense of the deal

10. Schedules

This table stores the appointment schedule of every user.

Columns:

- (a) User ID: Type int \rightarrow Foreign Key reference to Customer Table
- (b) Provider ID : Type int \rightarrow Foreign Key reference to Provider Table
- (c) Slot: Type int \rightarrow to indicate what the slot scheduled for the user by the provider
- (d) Date: Type DateTime \rightarrow to store when a deal was scheduled

The final ER diagram accommodating all the given tables is shown in figure 11

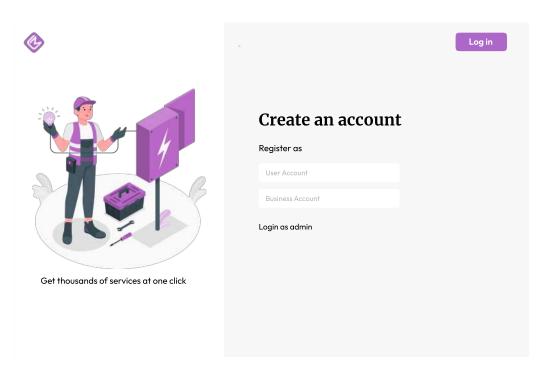


Figure 12: Landing Page

7 Proposed UI

7.1 Pages common to everyone

This section lists pages anyone can see while logging into the system.

7.1.1 Landing Page

The landing page (figure 12) is the first page that anyone would see while opening the application for the first time.

It only has the option to register as a user or a business entity or log in as admin or otherwise.

7.1.2 Login Page

Login page (figure 13) used by the user/business entity to log into the system. One can also go to the registration page if one is a first-time user or log into the system as admin if the user is admin.

7.1.3 Login as Admin

As we hypothesize, the admin is a single user whose duties can be exercised by various users by sharing a common password. That same password is used to log in as an admin into the system. The Login as Admin Page (figure 14 serves the above purpose.

7.2 Admin Pages

These are the pages that can be accessed by the admin only.

7.2.1 Admin-Provider Chat Interface

This page (figure 15) establishes a communication bridge between the providers and the admin, and the admin can access various providers by clicking on their tab on this page.

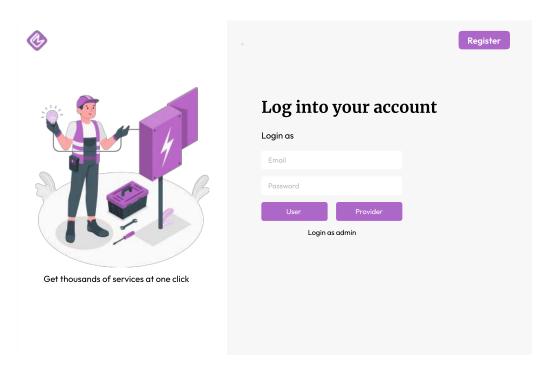


Figure 13: Login Page

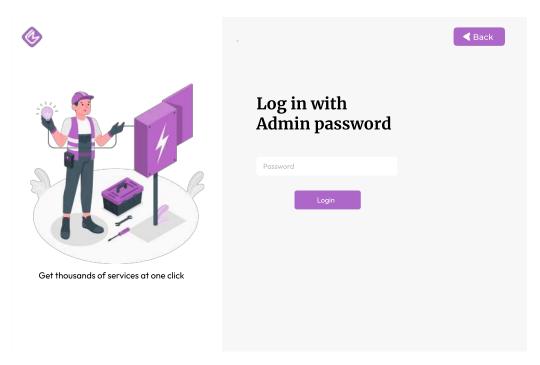


Figure 14: Login as Admin Page

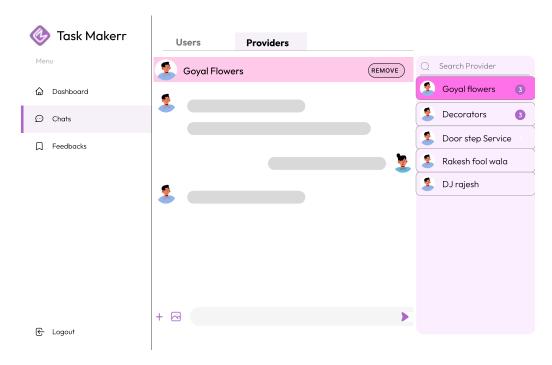


Figure 15: Admin-Provider Chat interface

7.2.2 Admin-Customer Chat Interface

This page (figure 16) establishes a communication bridge between the providers and the customers of the application, and the admin can access various customers by clicking on their tab on this page.

7.2.3 Admin Dashboard

Admin Dashboard (figure 17) is the page that tells the admin of the vital statistics regarding the application, namely:

- 1. Major cities in which the application is actively being used
- 2. Total number of customers on the application
- 3. Total number of providers on the application
- 4. Average ratings of all the customers on the application
- 5. Average ratings of all the providers on the application
- 6. Total business generated by the application in the past week
- 7. Total new customers added to the application in the past week
- 8. Total number of cancellations of services done on the application in the past week

7.2.4 Feedback of all the providers

This page (figure 18) shows the admin all the feedback for all the providers made by the customers after the completion of a service. The admin can also talk to the providers about their feedback through the application.

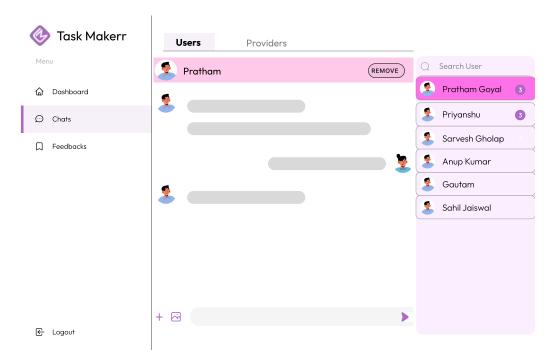


Figure 16: Admin-Customer Chat interface

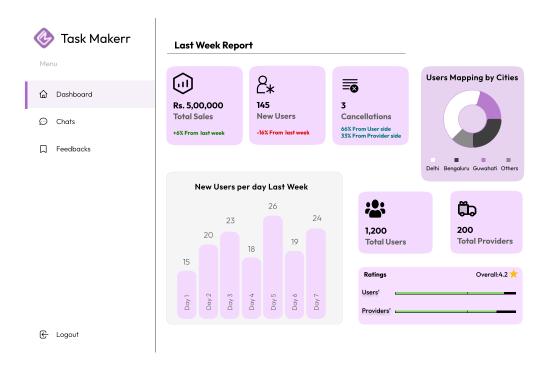


Figure 17: Admin Dashboard

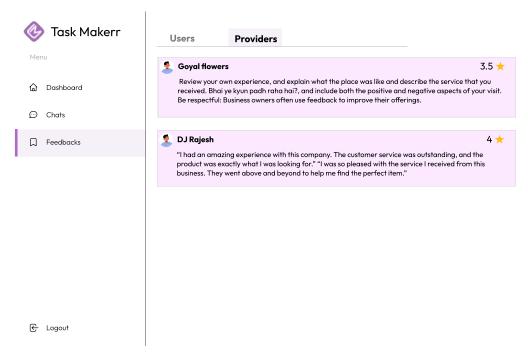


Figure 18: Feedback of all the providers

7.2.5 Feedback of all the customers

This page (figure 19) shows the admin all the feedback for all the customers made by the providers after the completion of a service. The admin can also talk to the customers about their feedback through the application.

7.3 Provider Pages

7.3.1 Customer Feedback Page

This page (figure 20) gives the provider a chance to give feedback to the customer to whom he gave his services.

7.3.2 Admin-Provider Chat Page

This page (figure 21) gives the provider a chat interface with the admin to discuss his/her problems with the application.

7.3.3 Provider Advance Payment Page

This page (figure 22) shows the provider all the advance payments he has received from his/her potential customers.

7.3.4 Provider Cancelled Appointments Page

This page (figure 23) shows the provider all their cancelled appointments, with a button to pay a refund if he hasn't already.

7.3.5 Provider-Customer Chat Interface

This page (figure 24) shows the provider all their chats with potential customers.

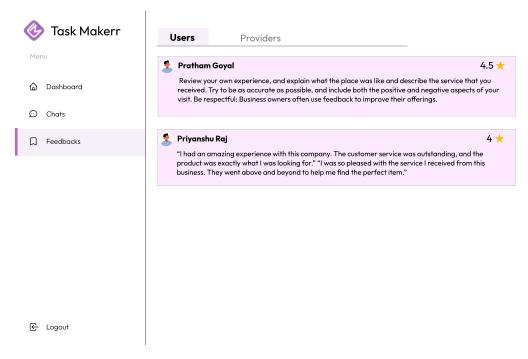


Figure 19: Feedback of all the customers

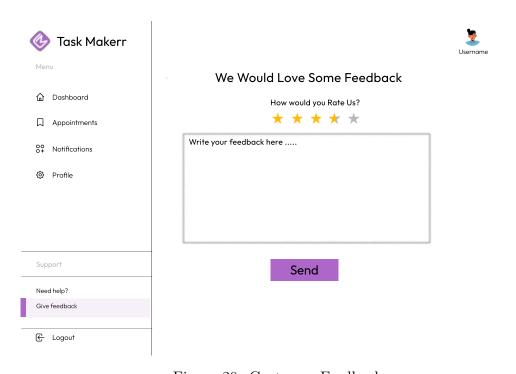


Figure 20: Customer Feedback

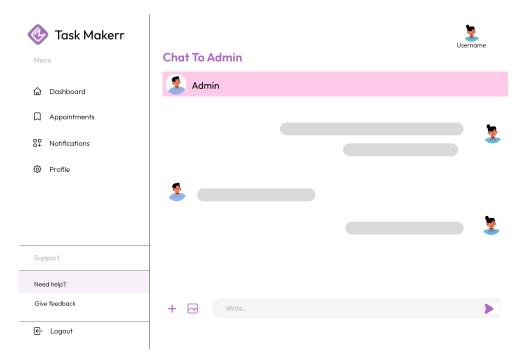


Figure 21: Admin-Provider Chat Page

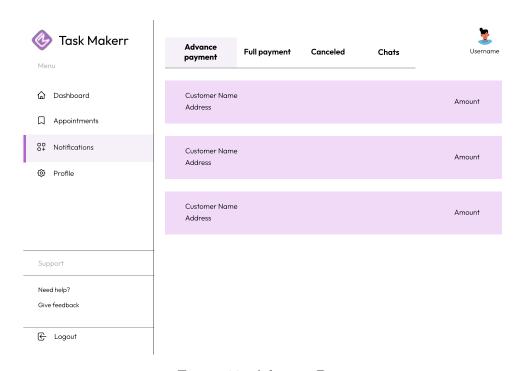


Figure 22: Advance Payments

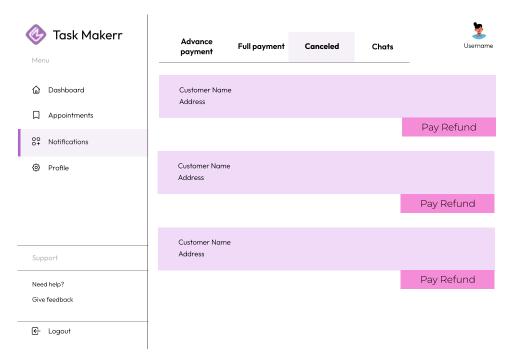


Figure 23: Provider's Cancelled Appointments Page

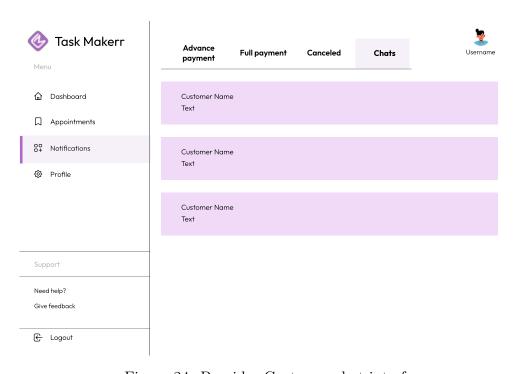


Figure 24: Provider-Customer chat interface

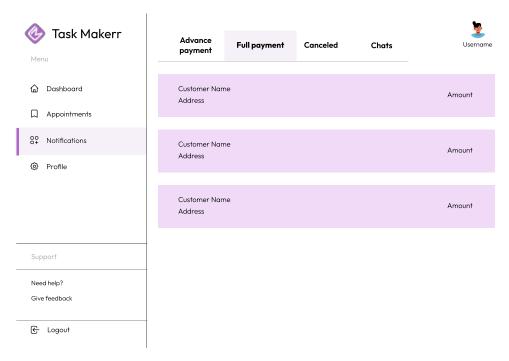


Figure 25: Provider Full Payments Page

7.3.6 Provider Full Payments Page

This page (figure 25) shows the provider all their full payments from previous customers.

7.3.7 Provider Upcoming Appointments Page

This page (figure 26) shows the provider all their upcoming appointments with their future customers.

7.3.8 Provider Pending Payment Page

This page (figure 27) shows the provider all their pending payments from previous appointments.

7.3.9 Provider Dashboard Page

This page (figure 28) shows the provider a summary of his business through the application. The provider can see the following:

- 1. The list of appointments for the day
- 2. The earnings of the provider for the past week
- 3. Total customers served by the provider
- 4. Total money earned by the provider

7.3.10 Provider Profile Edit Page

This page (figure 29) shows the provider's profile, which is being reflected to potential customers. The provider can see and edit the following:

1. Name

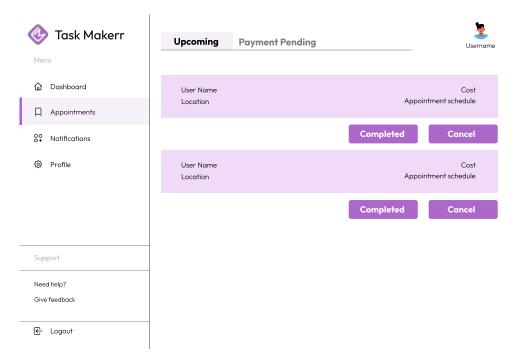


Figure 26: Provider Upcoming Appointments Page

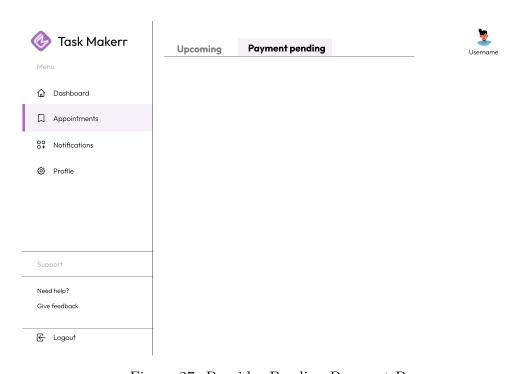


Figure 27: Provider Pending Payment Page

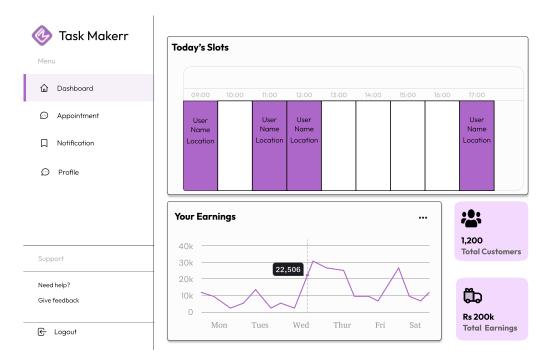


Figure 28: Provider Dashboard Page

- 2. Service
- 3. Email
- 4. Location
- 5. Service Rate
- 6. Appointment time

7.3.11 Provider Profile Page

This page (figure 30) shows the provider's profile, which is being reflected to potential customers.

7.3.12 Provider Appointments Page

This page (figure 31) shows the provider his upcoming appointments and a chatbox to chat with the concerned customer.

7.3.13 Provider Registration Page

This page (figure 32) enables new providers to come to the application. The provider has to provide the following:

- 1. Name
- 2. Service
- 3. Email
- 4. Location
- 5. Service Rate
- 6. Appointment time

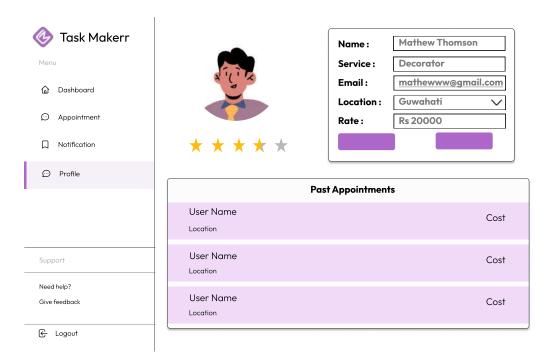


Figure 29: Provider Profile Edit Page

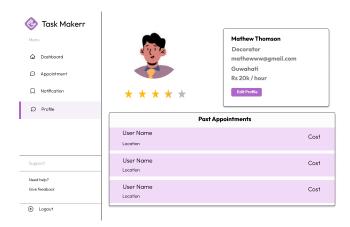


Figure 30: Provider Profile Page

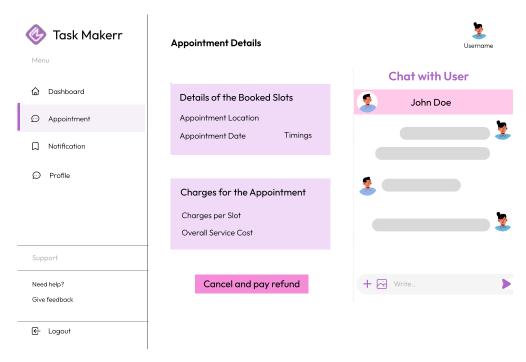


Figure 31: Provider Appointments Page

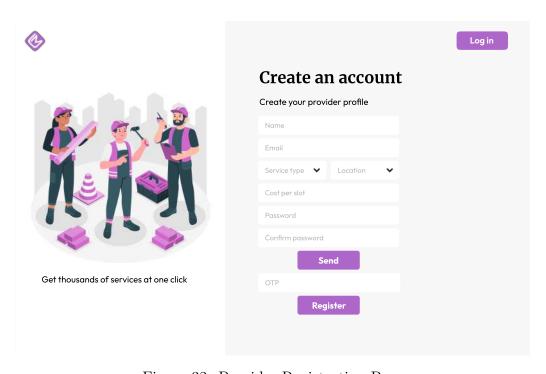


Figure 32: Provider Registration Page

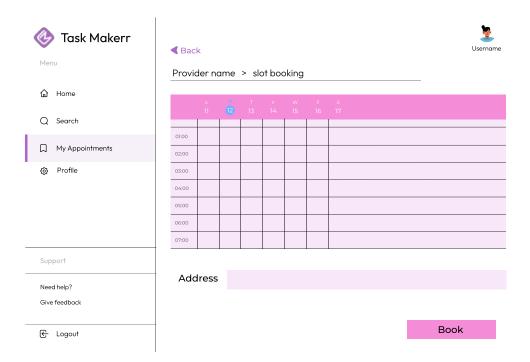


Figure 33: Customer Slot Booking Page

7.4 Customer Pages

These pages are accessible only by a customer on the application.

7.4.1 Customer Slot Booking Page

The customer uses this page (figure 33) to book appointments with the providers.

7.4.2 Provider Feedback Page

The customer uses this page (figure 34) to give feedback on the provider's services.

7.4.3 Application Feedback Page

The customer uses this page (figure 35) to give feedback on the application.

7.4.4 Admin Customer Chat Interface

The customer uses this page (figure 36) to chat with the admin regarding any app functionality issues.

7.4.5 Previous Appointments Page

The customer uses this page (figure 37) to access his/her previous appointments done through the application.

7.4.6 Payment Page

The customer uses this page (figure 38) to pay for availing the services of a provider.

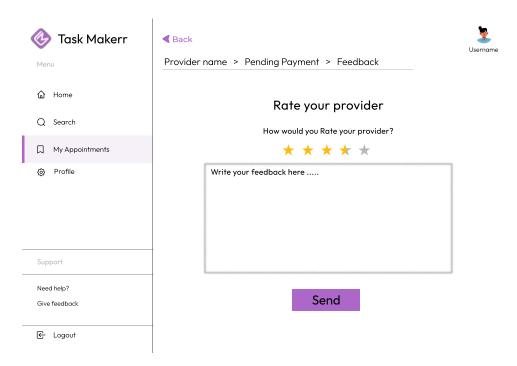


Figure 34: Provider Feedback Page

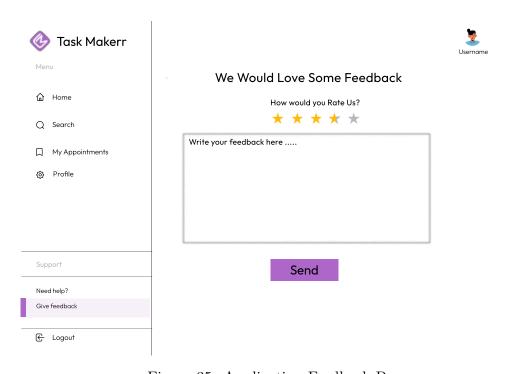


Figure 35: Application Feedback Page

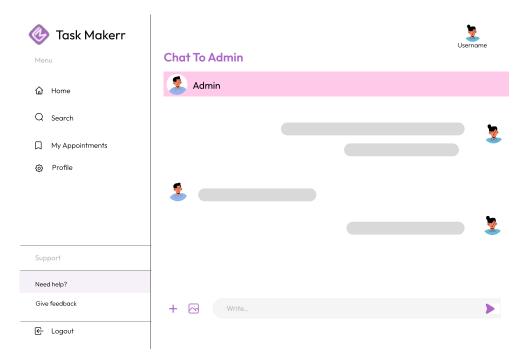


Figure 36: Admin Customer Chat Interface

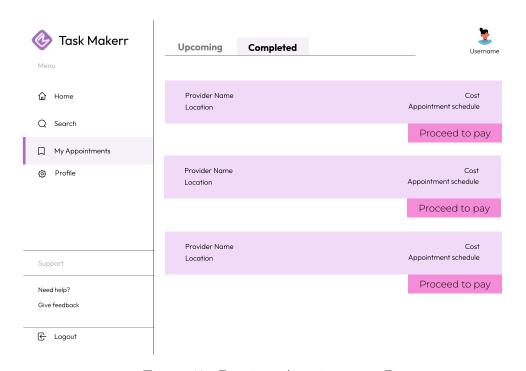


Figure 37: Previous Appointments Page

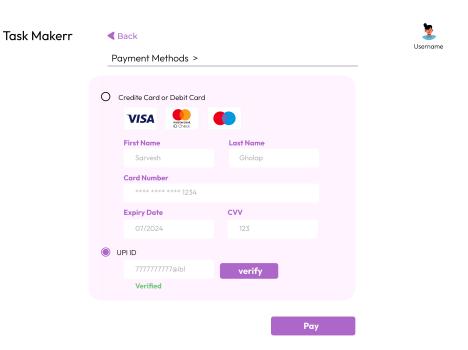


Figure 38: Payment Page

7.4.7 Pending Payment Page

The customer uses this page (figure 39) to pay the pending payments of the past services that the customer availed.

7.4.8 Registration Page

The customer uses this page (figure 40) to register as a customer on the application. Only his name and mail are required for registration. Also, OTP-based authentication is done while registering.

7.4.9 Search Page

The customer uses this page (figure 41) to search for potential service providers. Various filters are given to the customer for efficient searching.

7.4.10 Home Page

The customer sees this page (figure 42) while logging into the application; it shows the top providers for each category to the customer.

7.4.11 Upcoming Appointments Page

The customer uses this page (figure 43) to access his upcoming appointments through the application. The customer can reschedule, cancel, or even chat with the provider concerned regarding the appointment through this page.

7.4.12 Profile Page

The customer uses this page (figure 44) to see his profile.

The customer sees the following:

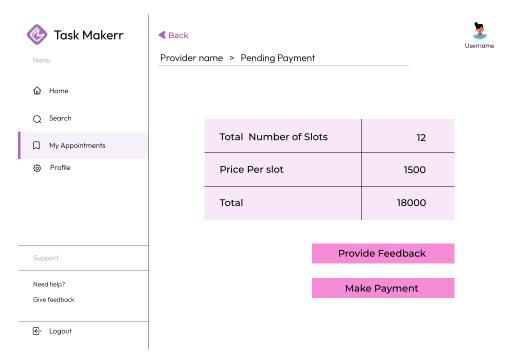


Figure 39: Pending Payment Page

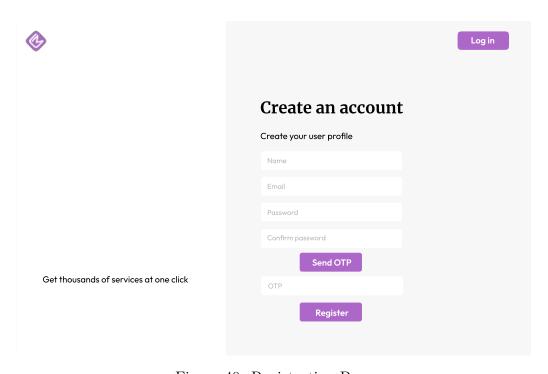


Figure 40: Registration Page

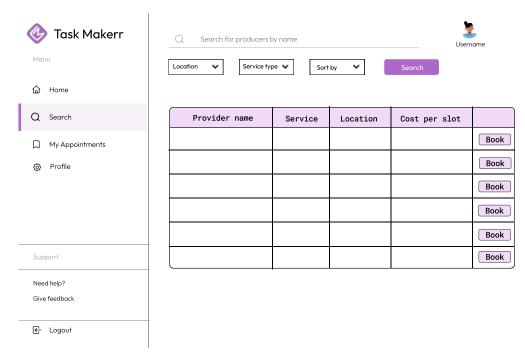


Figure 41: Search Page

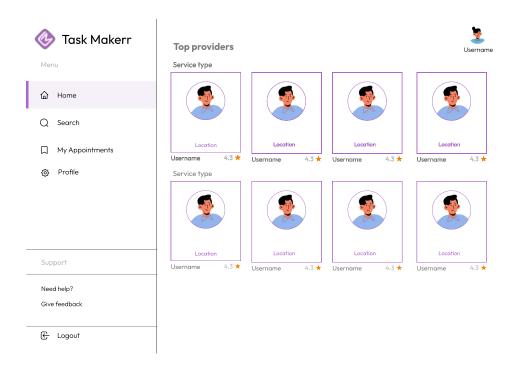


Figure 42: Home Page

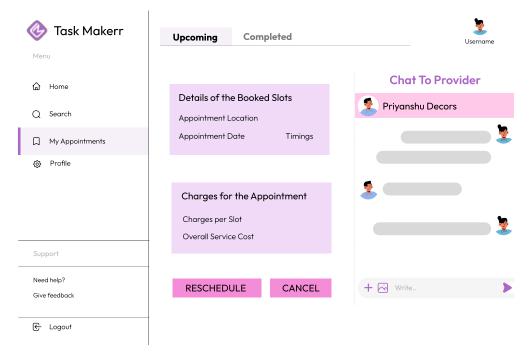


Figure 43: Upcoming Appointments Page

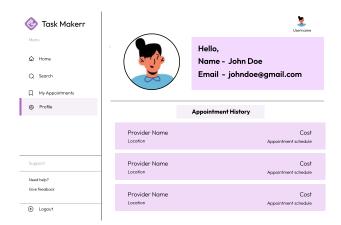


Figure 44: Profile Page

- 1. Name
- 2. Email
- 3. Previous Appointments

8 Future Improvements

We have proposed many novel solutions to the given problem in the previous sections, but still our solution has room for improvement in the form of below future improvements in the application.

- 1. Cancellation of an appointment from the provider's end
- 2. Free usage/offers/discounts for bringing users to the application
- 3. Automated removal and detection of low ranked service providers
- 4. Generative AI based chatbot
- 5. Point redeem system
- 6. Aadhaar based verification