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I confirm that I understand my coursework needs to be submitted online via Google Classroom under the relevant module page before the deadline in order for my assignment to be accepted and marked. I am fully aware that late submissions will be treated as non-submission and a marks of zero will be awarded

Acknowledgement

This interim report of the Final Year Project is prepared in partial fulfillment with prescribed rules and regulations of **London Metropolitan University** for Bachelor 3rd year, 1st semester. It is the result of the cooperation and support of Islington College and Final Year Project internal supervisor **Mr. Sahir Prajapati** and external supervisor **Mr.Subash Basnet.**

So, I would like to express my hearty appreciation and gratitude to our respected tutors for providing valuable feedback, suggestion, guidance, and monitoring for preparing this report and project. Your precious time has certainly helped me in giving meaning to my project work.Last but not the least, I wish to express my sincere gratitude to my family, teachers,friends, and all those who help me to complete this report.

Summary

This report gives a general summary of how the mobile and web-based BookMyService application is progressing. Admin users use a web application, whereas users of the user and service provider mobile applications. The web application in this case is based on Django Framework, Django Rest Framework, HTML, and CSS, whereas the mobile application is built on Flutter, Dart, and Django. Customers can view and filter service providers via the mobile application, make service bookings, and service providers can perform services. Similarly to this, an administrator can manage users through a web application, view booking information, view user feedback, and delete users as necessary.

This report is structured into five chapters: Introduction, Background/Literature review, Data Development, Progress Analysis, and Future Work. The project topic and context are briefly described in the introductory part, and the methodology, technology, and similar system reviews are covered in the literature review. Likewise, the section under "Development to Date" includes information about the project's development phase. Similarly, the project's progress analysis is covered in the chapter on the analysis of progress, and the project's remaining tasks are covered in the chapter on future work.

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1. Introduction

1.1 Introduction to topic

In today's busy world, where everyone is overwhelmed with their demanding work schedules, it's very challenging to maintain one's hectic life without some assistance with housework and childcare. Hiring a babysitter or a cleaner to look after the kids or the housework might help people decompress from their stressful lives.

Even in urban houses in Nepal, domestic assistants are growing indispensably. Without them, a significant portion of our lives would be devoted to household tasks, leaving no time for work, reading, or Netflix. Families, newlyweds, and even single professionals who work from home in Kathmandu depend on maids to keep their houses operating smoothly. Despite doing such a necessary service, domestic assistants receive extremely little compensation and frequently face verbal or physical abuse. Over three million women are employed in Nepal as of the 2017–18 labour force survey (Khatry, 2021). Despite this fact it is still difficult to locate domestic help and there aren't many online resources that can assist you as well.

Bearing these facts in mind I want to introduce “Book My Service”, a mobile application for booking and providing services. It acts as a bridge between service takers and service providers. It allows you to search and book skilled individuals according to their experience in the field. Different house chores such as housekeeping, babysitting, cooking, caregiving, plumbing etc. Since, 90.72% of Nepal's mobile users use Android, I've chosen to create an android application, which will have a larger market once it is released (Statista, 2022)

1.2 Current scenario

1.2.1 World

The present world is very competitive. People are often busy hustling for their livelihood. People are busy in their jobs and so doing house chores become a burden. Their life becomes a bit unmanaged due to the work load. Therefore, home chore related services

inaugurated. Hiring people to do the home chores like interior decorating, gardening, babysitting, dog sitting, etc. is common, specially in developed countries. There are many websites that are popular home service providers like Houzz, Thumbtack, Angie's List, etc. According to podium, more than 6 million households in US use Angie's List and it has more than 10 million verified customer reviews (Podium, 2022). It offers all kinds of home services ranging from a handy person to remodeling houses. The usage of a home service system increased because people get to hire professional workers that bring quality leads. In the US alone, home service industry is 425 billion dollars industry (Podium, 2022). Globally, the ILO estimates that there are at least 67 million domestic workers (excluding child laborers). With such large workers and the industry being a billion-dollar industry, the potential of a home service system is very high. It benefits service providers, cottage industries, clients and the system owners.

1.2.2 Nepal

Nepal is under developed country. Its development isn't as paced as developing countries. But it has made some remarkable technological advancements. Nepal is trying to keep up with the rest of the world and is digitalizing itself. One can find computers in almost all sectors these days. Similarly, the service center is also getting digitalized. In Nepal, there are over 1.5M home service providers which is 22% of total employment (Koolwal & Vanek, 2021). The services include cleaning, babysitting, garden services, interior decorator, pest removing, etc. Nepal also introduced online booking services like Bookgara, Sakchha, ServiceMandu etc. as its attempt to digitalize service center.

1.3 Problem domain

This project was considered after the thorough research done in the corresponding domain/ area. The research highlighted that domestic workers are being under-compensated for their work and also made to work extra. They are made to work out of their job profile. Furthermore, the workers experience discrimination and abuse based on their work status, race, and social, ethnic, and religious background. The research

showed the problems faced by the clients as well. They cannot find a trustworthy domestic service provider. Most domestic workers lack the professionality and experience required to get the job done. There have been cases where the middle-man takes extra profit, therefore cheating both the service provider and the service receiver.

1.4 Scope

In order to solve the mentioned problem, this application offers an online platform for both service takers and service providers that bridges the distance between the two parties. This application is more concerned with the issue of a domestic service provider. By allocating their prices per their work hours and experience, service providers can avoid being under-compensated. Before registering, the system checks the legitimacy of the service providers to ensure that clients are provided with the options of a qualified and dependable service provider.

1.5 End User

This application has three end users: a service provider, a service receiver, and an administrator. The users of the mobile application would be the service provider and service receiver, whereas the admin would be the final user of the web site.

The following are the list of user's activities.

Admin:

i. View all user's details.
ii. View booking details.
iii. Verify user's

Service Provider:

i. Login themselves.
ii. Register themselves.
iii. View client's profile.

iv. View ratings and reviews.
v. Offer services.
vi. Accept and rejecting booking request.

Service Receiver:

i. Login themselves.
ii. Register themselves.
iii. Book and cancel the service.
iv. View service provider's profile.
v. Provide ratings and feedbacks.
vi. View their booking list.

1.6 Aims and objectives

The main aim of this project is to create a dependable and efficient mobile application that connects employers and domestic service providers. This will fill the gap between employers and domestic service providers benefitting both sides.

The following objective has been established to accomplish this goal.

i. To learn about mobile applications and their working mechanism.
ii. To understand and implement the usage of the relational database.
iii. To learn about the concept of API programming and the backend of the mobile application.
iv. To conduct research among service providers about the possible best way to create an environment for them to work and implement it.
v. To learn and implement the Flutter and Dart programming languages.

1.7 Report Structure

1. **Introduction**

   The introduction includes details on the project, problem domain, end users, project scope, goals, and objectives.

2. **Background/literature review**

   The background/literature review comprises an examination of a similar application, technology, and methodology used in this project.

3. **Development to date**

   The development to date consists of the technical progress of this project.

4. **Analysis of progress**

   The project's progress analysis is included in the analysis of the progress chapter and aids in determining the project's actual progress as indicated by the Gantt chart.

5. **Future work**

   The remaining tasks for this project that must be completed in the future are included in future work section.

6. **Reference**

   All the references that were used as sources for this project, report, are listed in the references section.

7. **Apendix**

   The appendix section contains of SRS documents, survey result, and extra contents of this project.

2. Background and literature review

A service rental system can be understood as a system that allows to rent human resources for certain tasks. This system helps the customers to find a suitable service provider therefore, providing employment to the service providers. Thus, it helps both sides. Different services like home services, gardening, baby/ elderly caring, etc. can be booked using these systems. Since the present world is too competitive and people are often busy in their jobs, they hardly find time for their home chores in their schedule. A

home service rental system can be very useful in such situations. The users can book the service providers according to their experiences, ratings, pricings or other factors from the system. Since the application has its own set of rules, the service providers are guaranteed to be professionals. A popular example of a service rental application is Angi with a total of 7.8M visits and one billion dollar annual revenue . (SimilarWeb, 2022)This data is enough to show that a service rental application has a very good scope in the market and it also addresses the problems of general users. 'Book My Service' is also a home service rental application based on android that allows the users to book and rent human resources related to home chores like cleaning, gardening, interior designing, etc.

2.1 Technology used

2.1.1 UI design

The user interface (UI) for this project was developed in Figma. It is an online tool for collaborative interface design that also has offline functionality made possible by desktop programs for Windows and macOS. Figma has a large community of designers and developers, making it easy to find a reference on relevant UI design.

2.1.2 Frameworks

a. Django

The backend part of this application is developed using Django framework. It is a high-level Python web framework that enables rapid development of secure and maintainable websites.

b. Django REST Framework

The Django REST Framework is used to create an Application Programming Interface (API) to connect mobile apps to the database. The Django REST framework (DRF) is an effective and adaptable toolset for creating Web APIs. Its key advantage is that it greatly simplifies serialization and makes your data

accessible to external clients like mobile apps, single-page applications (React, Angular, etc.), or third parties.

c. Flutter

Flutter is used for developing the frontend of this android application. Flutter is Google's UI toolkit for creating stunning, natively built applications from a single codebase for mobile, web, and desktop.

2.1.3 Programming language

a. Dart

Dart programming language is used along with the Flutter to create the frontend of the android application. It is an open source, structured, object-oriented programming language developed by Google for building Android, web, and desktop applications.

b. Python

Python programming language is used along with the Django and DRF to develop the backend and API for this application. Python is a general-purpose, high-level programming language that supports a variety of programming paradigms, including structured, object-oriented, and functional programming.

2.2 Methodology

2.2.1 Considered methodology

The following are the considered methodologies for this project:

a. Evolutionary Prototyping

Evolutionary prototyping is a software development process in which the developer or development team first creates a prototype. Following initial client feedback, several prototypes are created, each with more functionality or enhancements,

until the final product emerges (Sherrell, 2013). This method saves time and effort because each prototype is not started from scratch.

b. RAD

Rapid Application Development (RAD) is a versatile strategy for rapidly developing and deploying software applications. The RAD approach is ideally suited to adapt to new inputs and changes, such as features and functions, upgrades, etc. It is designed to be adaptable to changes and to accept new input, such as new features and functions, at every stage of the development process. There are four phase RAD methodology: planning, user design, construction, and implementation (Casey, 2022).

2.2.2 Selected Methodology

Scrum Methodology

People all throughout the world use well-known methodologies such as Agile, Waterfall methodology, Spiral Model etc. to develop software. This project is built using the Scrum methodology. Scrum is one of the Agile methodologies, which is fast, adaptive and focuses on continuous development of product via sprints (two to four weeks). It has several stages like product backlog, sprint planning, sprint backlog, daily scrum, sprint review, and product increment. The product backlog is a set of requirements provided by the client themselves. Following that, a sprint is planned. The planning phase includes sprint backlog, strategy for reaching the goal, and team members and their duties. The team holds daily scrum meetings to plan tasks for the day and errors and bugs since the last scrum. The team provides the completed work for the sprint, which closely matches the client's anticipated output. The increment can be understood as the stepping stones towards the final product which is sum of all the releases of the Sprint (Scrum, 2022).

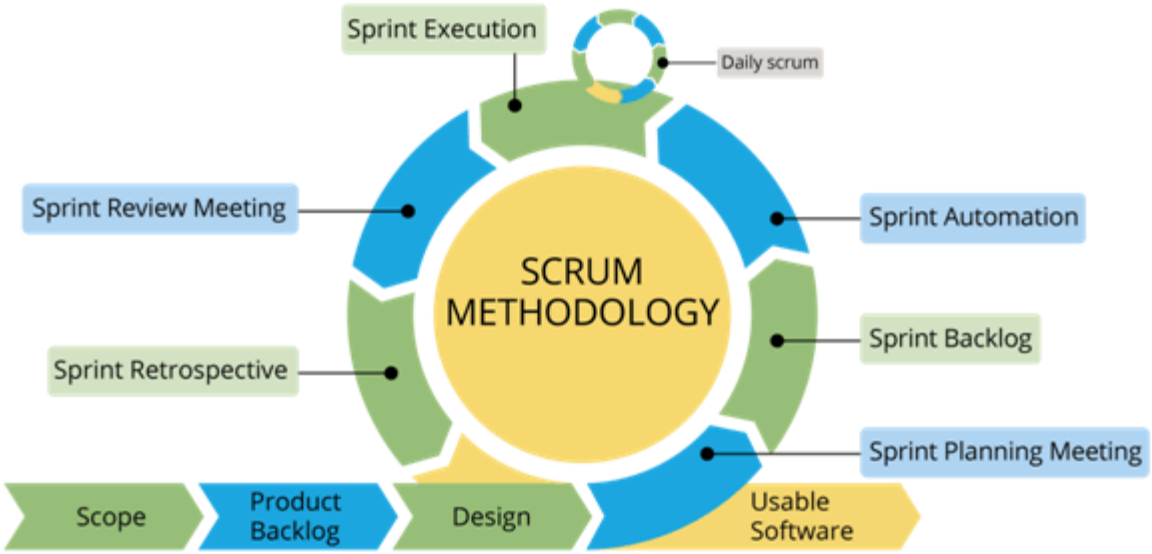


Figure 1: Scrum Methodology

The following are the advantages of scrum methodology:

i. Short sprints make it much easier to implement changes based on feedback.
ii. Sprints are used to divide large projects into more manageable chunks.
iii. It is simple to make the necessary changes because developments are coded and tested during the sprint review.

2.3 Review of similar projects

2.3.1 Similar projects

a. ServiceMandu

ServiceMandu is the online marketplace platform where user can directly order their required service through mobile apps and websites (ServiceMandu, 2022). It provides multiple service categories. The user may find it difficult to grasp the services because ServiceMandu's user interface is not particularly friendly and it uses technical words to classify the services.

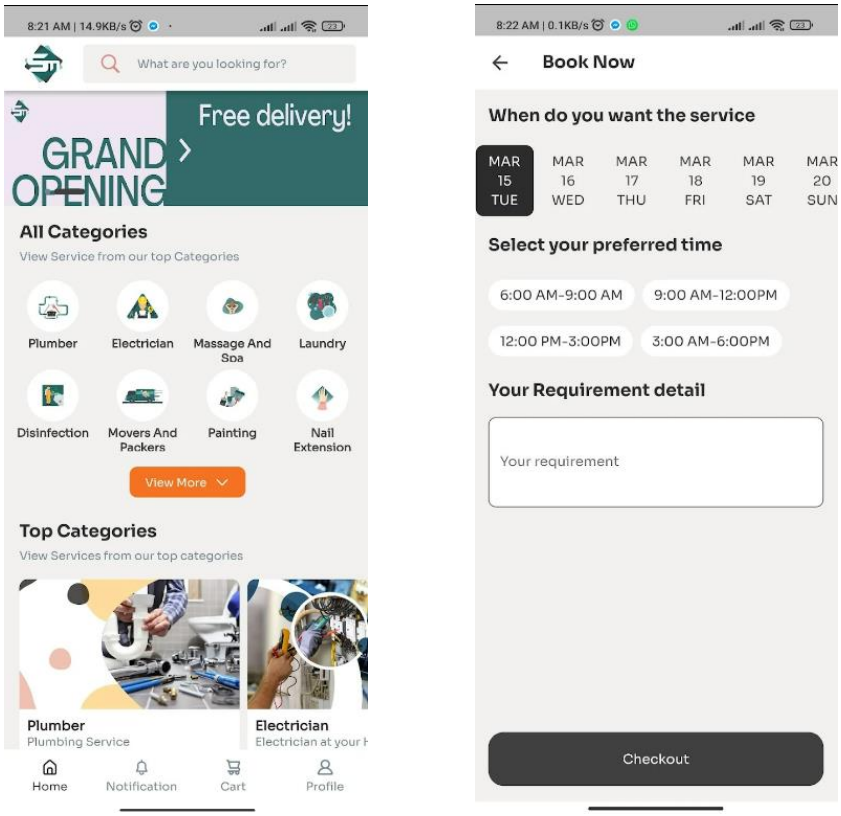


Figure 2: ServiceMandu User interface

b. Bookgara

BookGara is an online community platform that links providers of all sorts of services with potential customers in order to address a need (BookGara, 2022). It interacts between the service provider and the service receiver, by creating an interconnected network. This platform's booking service is not real-time because it takes more than four hours to accept a booking request.

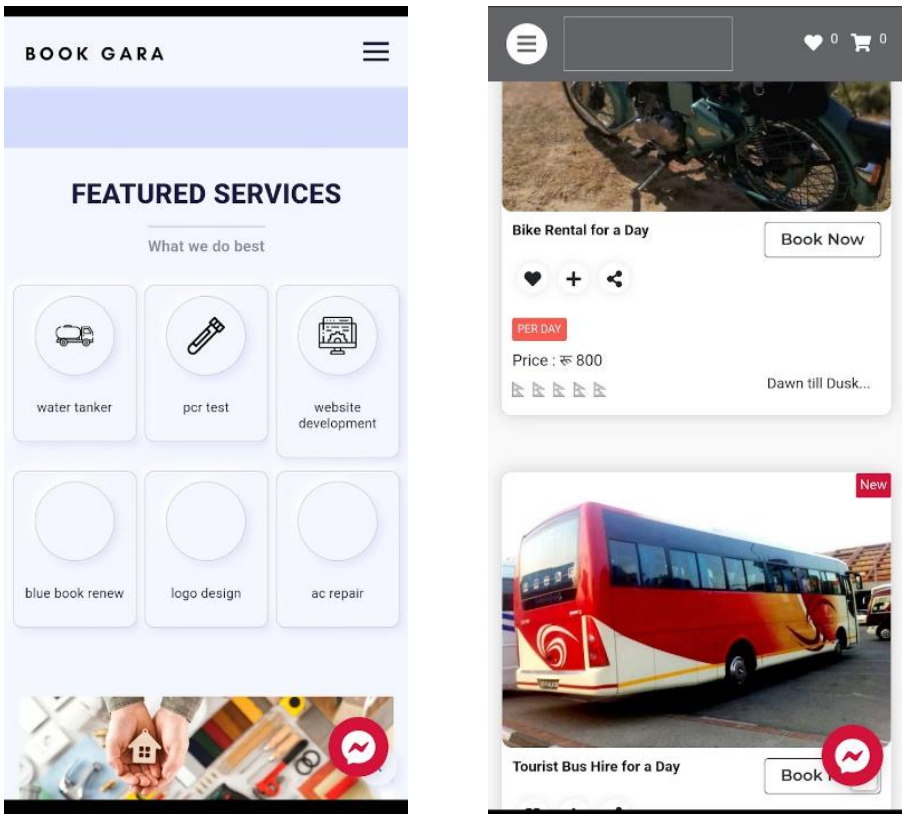


Figure 3: Bookgara user interface

c. Mr.Right – Home service

Mr. Right is an online platform for all kinds of home services and repair-related jobs. It offers a variety of services, including home cleaning, appliance repair, pest control, and electrician. The user can match directly with the local professional using Mr. Right. Although this function may be useful, it takes away the user's freedom to select the professional and forces them to schedule the one the system shows or detects.

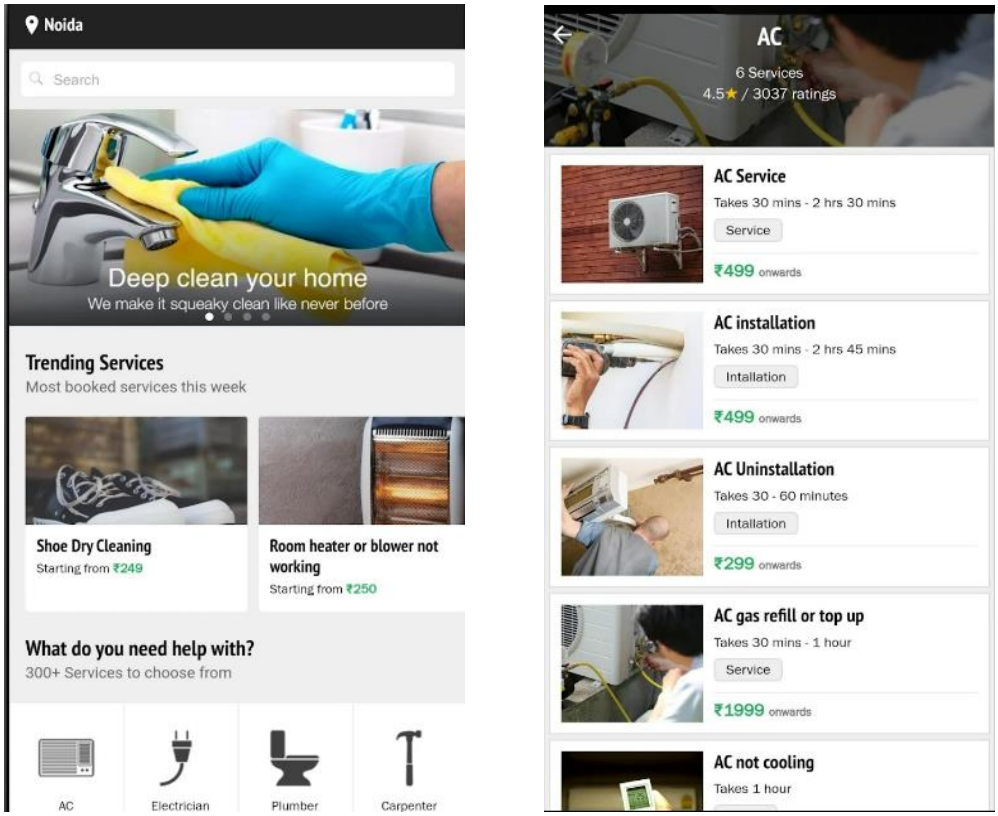


Figure 4: Mr. Right - Home Service User interfaceComparison

2.3.2 Comparison Between Similar System

S.N	Features	BookMyService [My project]	ServiceMandu	Bookgara	Mr. Right
1.	Login	Available	Available	Available	Available
2.	Register	Available	Available	Available	Available
3.	Book service	Available	Available	Available	Available
4.	Service providers profile listing	Available	Not Available	Not Available	Not Available

5.	Notification and alerts	Available	Available	Available	Available
6.	Rating and feedbacks	Available	Available	Available	Available
7.	Browse professionals using filters	Available	Available	Not Available	Not Available
8.	Online Payment	Available	Not Available	Available	Available
9.	Manage Availability	Available	Not Available	Available	Available
10.	Schedule Service	Available	Not Available	Not Available	Available
11.	Manage and verify service provider	Available	Available	Available	Available
12.	Edit Profile	Available	Available	Available	Available

Table 1:Comparison table

2.3.3 Analysis of Similar Projects

The research was carried out on the different systems of the same domain. Out of them three systems were chosen namely, ServiceMandu, Bookgara and Mr. Right. These systems helped to clear out the concepts of a service rental application. The working mechanism of the application was understood. Many features of 'Book My Service' were inspired from these systems. Similarly, some functional and UI related issues were found while using those similar systems. This project tries to eliminate such issues. Some rules are also made compulsory so that the users can enjoy the 'Book My Service' experience

both in and out of the app. For example, this project manages the schedule of the service providers. Another example of such feature is that the users can also book offile service providers. It adds more flexibility to the users to choose between the service providers.

3. Development to date

3.1 Designed logo for Application

Figure 5: BookMyService logo

3.2 SRS Document

The SRS document is included in appendix section i.e SRS Document.

3.3 User Interface/WireFrame

The wireframe is include in the appendix section i.e Wireframe/UI.

3.4 ERD

Initail ERD of Book My Service

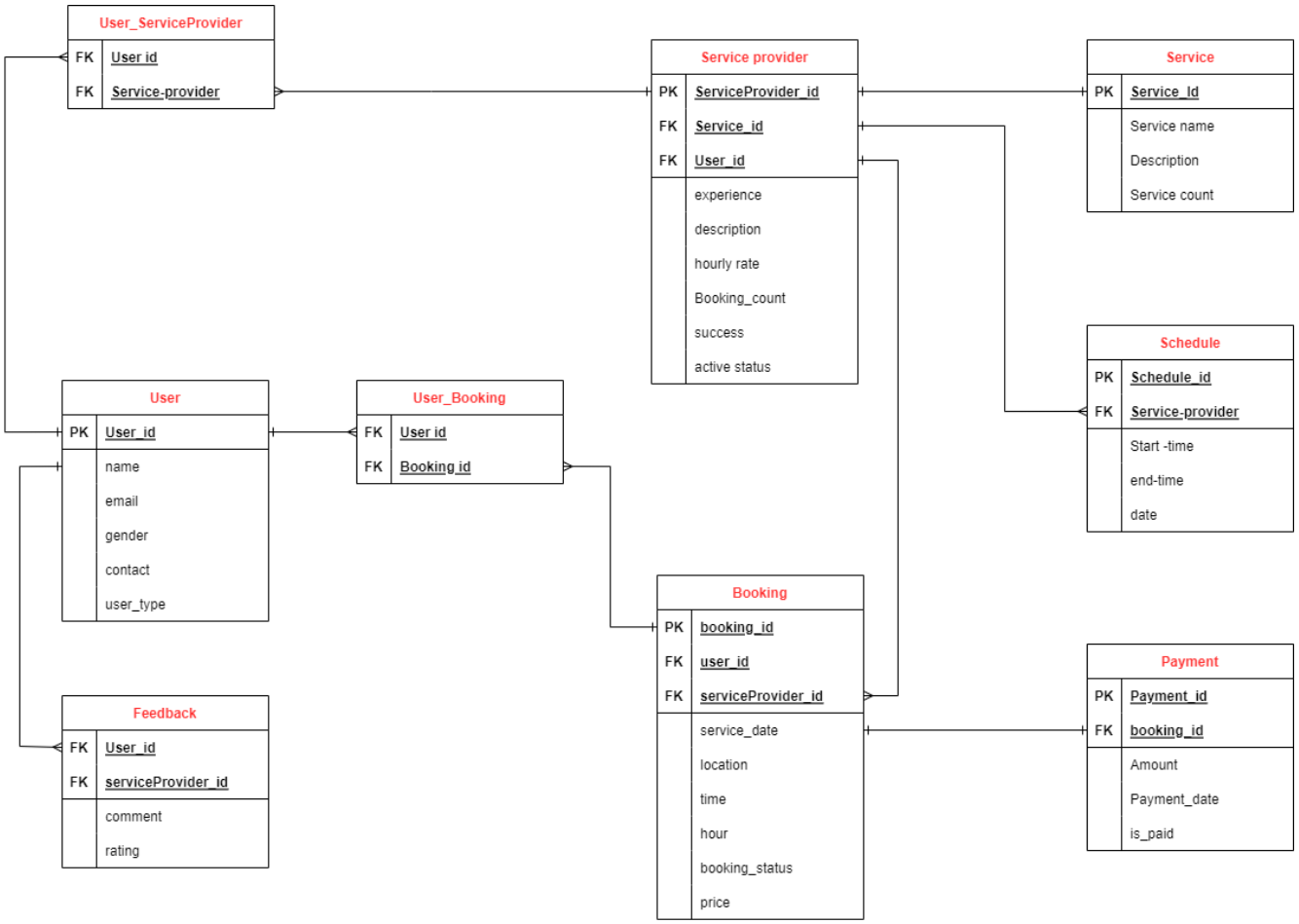


Figure 6: Entity relation diagram

3.5 Use Case diagram

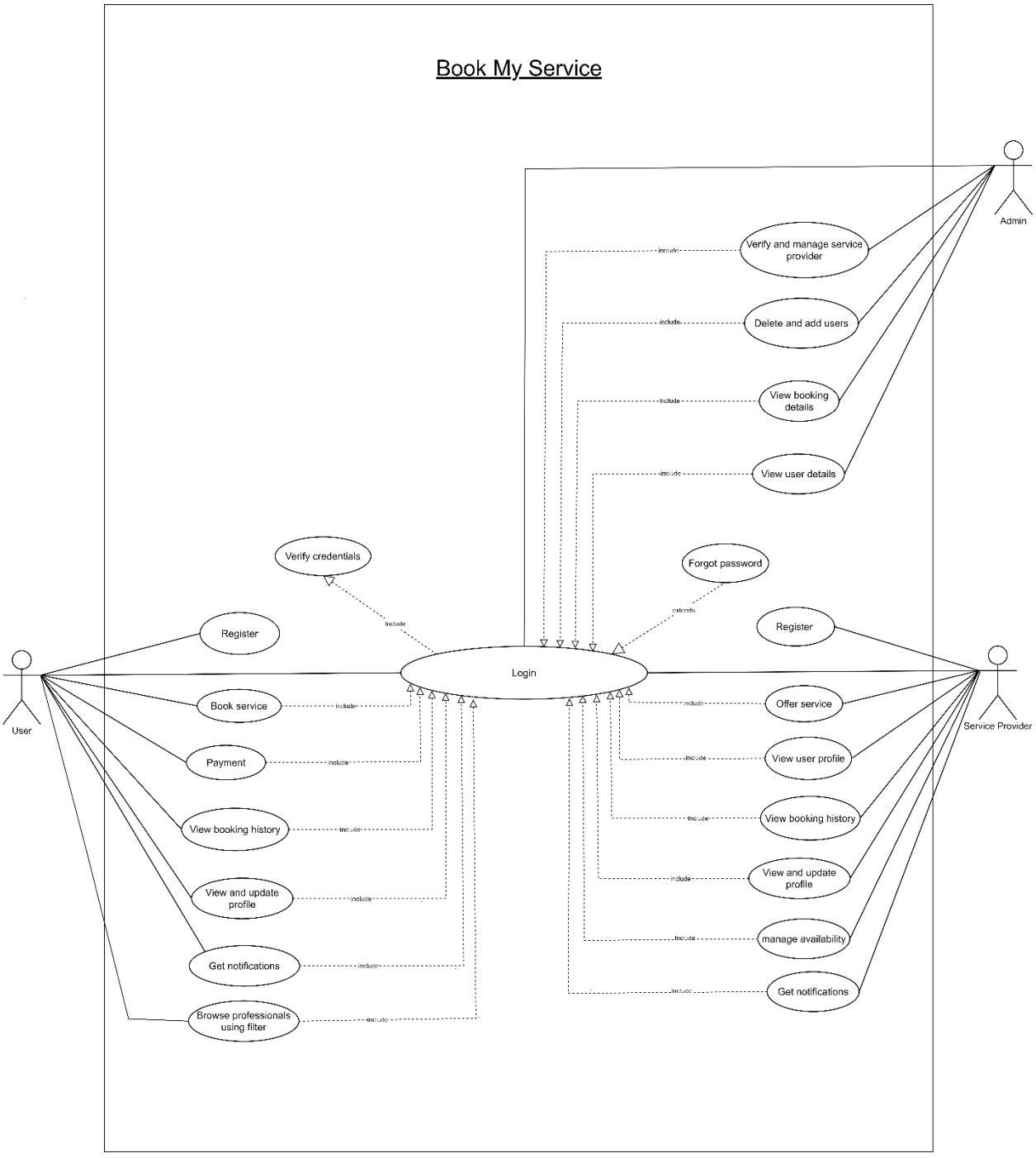


Figure 7: Overall system use case diagram

3.6 High level Use Case

The high level use case is include in the appendix section i.e High level Use Case.

3.7 System Architecture

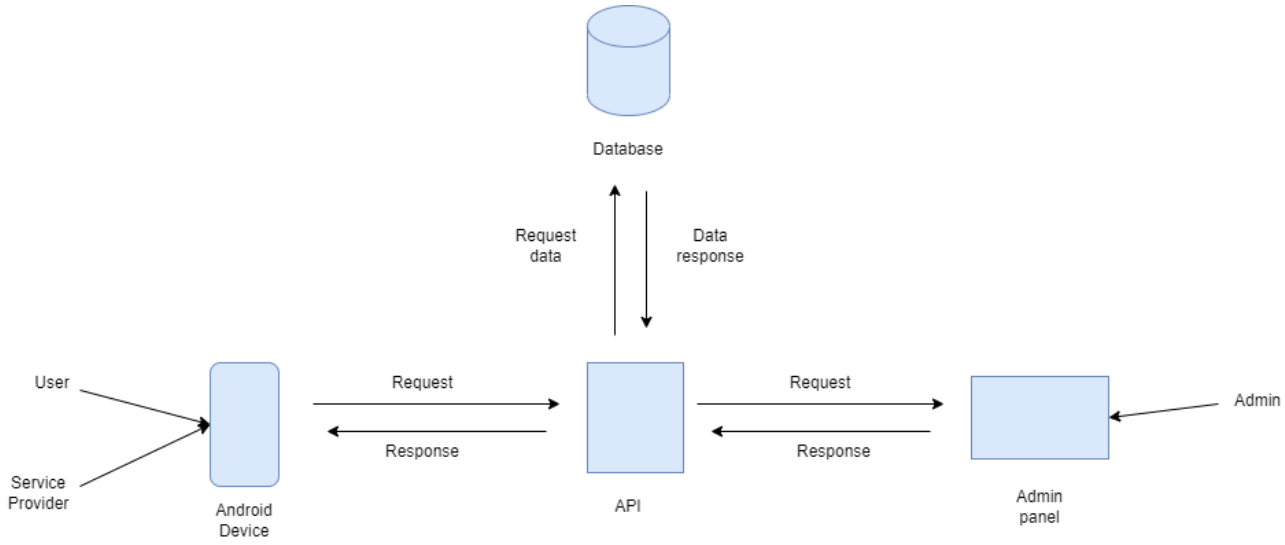


Figure 8: System Architecture

As shown in the above figure, when the user sends data through the API, it goes through the validation process and if the data is valid then it is saved into the database. Similarly to this, when a user makes a data request through an API, the request is validated to determine whether it is valid or not. If it is valid, the API pulls the data into JSON format, and only the necessary data is fetched by the backend of this application and displayed to the users on the front-end i.e mobile application.

3.8 Developed Features in Android

a. Login Screen

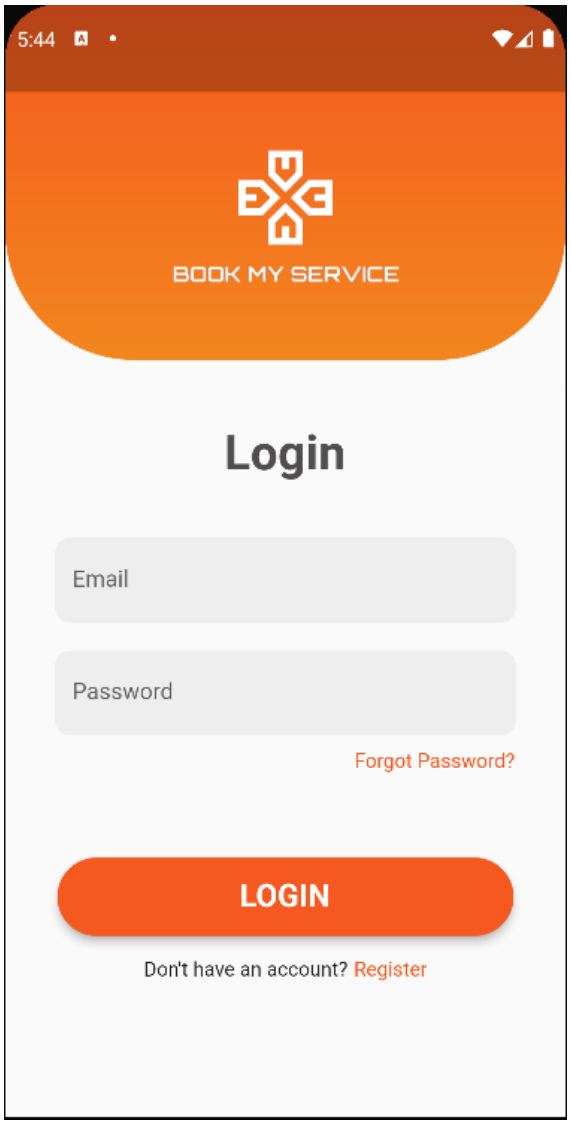


Figure 9: Login screen for normal user and service provider

b. Registration screen for normal user

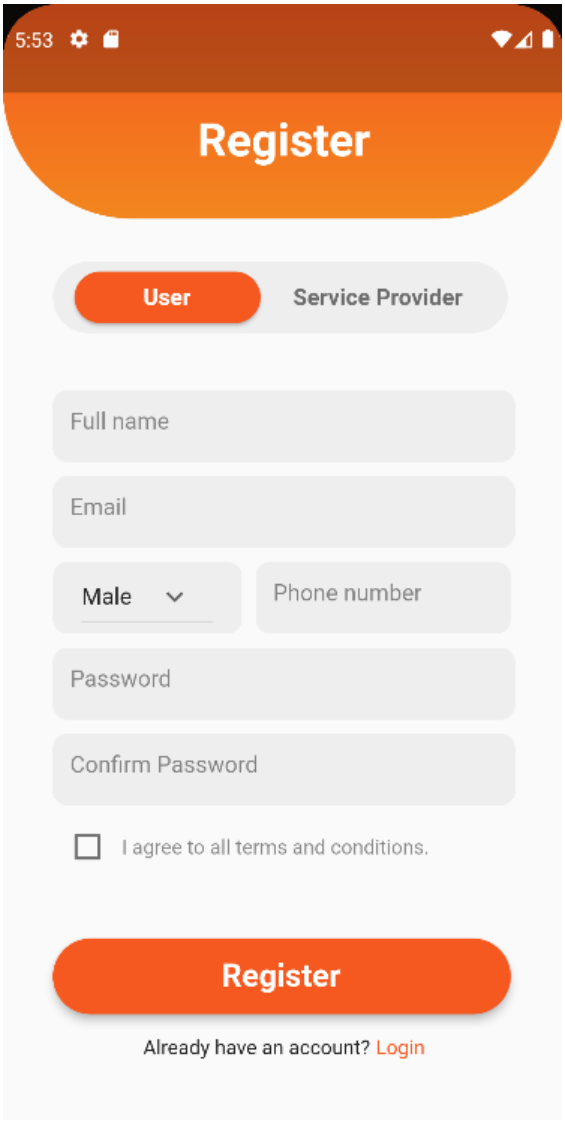


Figure 10: Registration screen for normal user

c. Registration screen for service provider

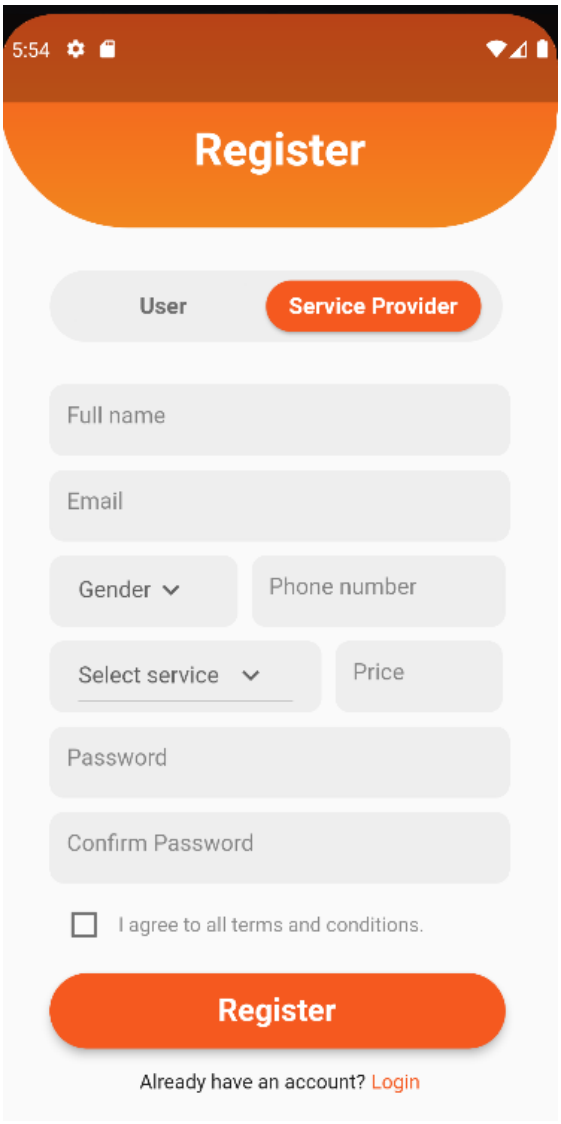


Figure 11: Registration screen for service provider

4. Analysis of Progress

4.1 Progress Table

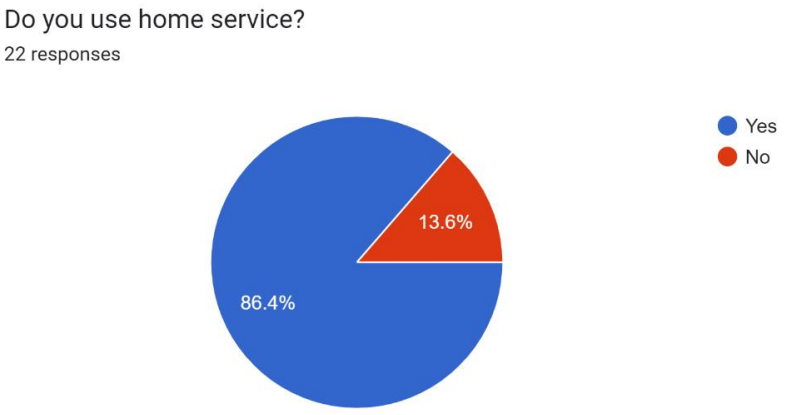
S.N	Tasks	Status	Progress
1.	Topic Selection	Completed	100%
2.	Requirement Analysis	Completed	100%
3.	Research on Similar projects	Completed	100%
4.	Finalized Proposal	Completed	100%
5.	Conduct Public Survey	Completed	100%
6.	Design Logo	Completed	100%
7.	Use case diagram	Completed	100%
8.	Develop ERD	Completed	100%
9.	SRS document	Completed	100%
10.	Develop UI	Completed	100%
11.	Develop System Architecture	Completed	100%
12.	Develop Android Applcation for normal user and service provider	Partially Completed	10%
13.	Develop Admin panel in web application	Not Completed	0%
14.	Test cases and testing	Not completed	0%

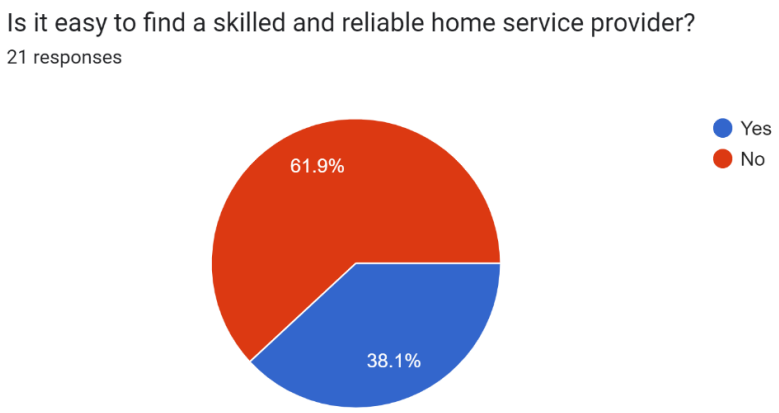
15.	Application Development	Not Completed	0%
16.	Finalize FYP Report	Not Completed	0%
17.	Review and increment	Not Completed	0%
18.	Submit Final Report	Not Completed	0%

Table 2: Progress table

4.2 Progress Review

Initially, research was conducted on different problems faced by people on day-to-day basis. A topic was selected out of them and thorough research was carried out on that specific topic. A survey was also conducted to know the personal opinions of people related to the problem domain. In the survey of 22 people 86.4% uses home service and 13.6 % don't. And 61.9% people have hard time finding a reliable and skill service provider.





After studying the survey data and some similar systems, the final features for the project were decided. Some of these features were taken as inspiration from the research while the others were taken as a measure to avoid the difficulties that may have been faced by the users. These features are being developed in the mobile application and about 30% of development process has been completed to date.

The project development is not complete according to Gantt chart. There might be several reasons for lagging behind but I think lack of experience in developing a full stack app is the primary reason. Developing a mobile application from scratch is a very new experience to me. The lack of experience led to unrealistic plans and therefore, the project development lagged behind according to Gantt chart. Furthermore, flutter is a new language for me. Eventhough I had already learned dart language and flutter beforehand, developing an application is different from practising exercise questions.

4.3 Progress Timeline

The development of the project to date is about 2 to 3 days behind schedule. While most of the tasks were completed within the deadline, some of them required few extra days than the allocated time in previous Gantt chart. Thus, the project timeline will be extended

by about 5-6 days in total. The project was supposed to be complete on 24th of March 2023 but after improvising the schedule, the project will now complete on 31st March 2023.

4.4 Action Plan

The project will now be developed according to the new Gantt chart. Since the initial project schedule failed due to aforementioned reasons, the new schedule has been made with realistic schedule, plans and development. Further, the development will also be based on the feedback of the supervisors. Weekly progress will be made according to Gantt chart the problems faced during the development will be addressed using documentations, youtube videos, and google.

5. Futher work

The project's remaining tasks that must be completed in the future and within a time frame projected by the Gantt Chart are listed in the future work section. The Gantt chart showed that the following tasks still needed to be finished, and they are mentioned below:

a. **Develop admin panel**

   There will be a web application for the admin panel. To access the admin panel, the administrator must log in via the web through which the admin can manage and monitor service providers as well as see bookings, user information, and provider details. The Gantt chart's schedule will be followed to complete the development of the admin panel.

b. **Develop android application for users**

   The Android application development process is proceeding in accordance with the Gantt chart timeframe. This application's primary functions, such as online booking and payment, are still in development and will be finished in accordance with the Gantt plan.

c. Testing

This application's testing phase will be carried out in accordance with the newly created Gantt chart. A test case must be designed before testing. This testing will assist in the elimination of errors and problems identified during the course of this project.

d. Review and refinement of project

The feedback from the supervisors will be used to review and improve this project.

e. FYP report finalization

The improvised Gantt Chart will be followed in order to complete the FYP report. The Use Case diagram, ERD, System architecture diagram, and test cases will all be completed concurrently with the FYP report's completion.

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Available at: https://www.similarweb.com/website/angi.com/?fbclid=IwAR1KNNRlQyoNfCeup7PkdiPcR7IYLk0Cp2eWJhwkJw5LaQIBX4A3E_nU_gY#overview
[Accessed 26 Dec 2022].

7. Apendix

7.1 Software Requirement Specification

7.1.1 Introduction

1) Purpose

The purpose of this document is to provide a thorough overview of the mobile application 'online service booking platform'. It explains the system's features, operations, user interface, and user privileges.

2) Scope

This system offers a platform that connects the service provider and the service receiver. The system provides an easy-to-use user interface and an advanced filter module that makes it quick and easy for the user to find the best service possible.

3) Intended Audience

The primary audience for this document is software developers, testers, and project managers who will use it as a reference during the production of this system. The document also includes a summary of the system's features, including its hardware, software, and interfaces. It is advised that users carefully read the section on interface and function.

7.1.2 Overall Description

1) Product Perspective

An online service booking system is developed to provide a platform where users can offer and receive the best service possible. This application primarily focuses on a service provider by giving a service provider an employment and a platform to promote

their service. Additionally, it helps to establish communication between service provider and recipient.

2) Product Features

This application provides its customers with a variety of functions. Each user is given access to a variety of particular capabilities, such as a service provider's ability to control the availability of their service, a service recipient's ability to browse service providers using filters, and an administrator's ability to authenticate and verify users. There are additional feature sets that have been created for the advantage of both users, including online payment methods, notifications, ratings and feedback, and many more.

3) User classes and characteristics

'Book My Service' is designed to provide and receive services. It targets towards two main age group, the first one is working population i.e., 18-60 and the second age group is 26 and above who are busy in their occupation or cannot perform home chores. The most privileged user role in this app is admin. An admin has access to all functions of the system and can also allow or remove users. Another user role is service provider. A service provider can make their profile with all necessary details, accept bookings, make their availability schedule. Similarly, service receivers can view the service provider profiles, book them and cancel the bookings.

4) Operating environment

This application is design4)ed to run on mobile devices. It is planned to be launched in android only. The admin site will be a web application, therefore, Windows, MacOS like popular OS will be able to run the site.

5) Design and implementation constraints

This application's development is broken down into four main phases: designing, frontend, backend, and database development. The app's user interface (UI) will be created with Figma, a web-based UI design platform. The Dart programming language and Flutter will be used to create the front end. Similarly, the backend of the project will be created using the Python programming language and Django Framework. We'll make use of PostgreSQL as our database.

7.1.3 System Features

1. **Registration:**

   Description:

   The users are presented with a registration form, into which they must enter their legitimate credentials in order to sign up as users of this application.

   Functional Requirement:

   Req – 1: Before registering, the user is presented with two choices.

   Req – 2: The first option is for normal users/ service receivers and the second option is for service providers.

   Req – 3: To proceed with the registration process, the user must select one of the two options.

   Req – 4: The system must verify whether the user submitted a blank form or not.

   Req – 5: The given credential's validity must be verified by the system.

   Req – 6: The system must notify the user whether or not the registration process was successful.

2. **Login:**

   Description:

   The users are presented with a login form, into which they must enter their credentials to login into the application.

   Functional Requirement:

   Req – 1: The user is presented with a login form.

Req – 2: The system must verify whether the user submitted a blank form or not.

Req – 3: The system must utilize the provided email to validate the user's existence.

Req – 4: The system must verify the given password.

Req – 5: If the user is not registered or if the provided email or password is invalid, then the system must display an error message.

Req – 6: The system must log in to the user in accordance with their user type if the supplied credentials are valid.

3. **Service Providers Profile listing:**

Description:

The system shows a list of service providers whose profiles can be browsed by users to view their details.

Functional Requirement:

Req – 1: The user can view a list of service providers thanks to the system.

Req – 2: Users can look through the list of service providers.

Req – 3: The profiles of the service providers are available for users to view.

4. **Book service:**

Description:

The system allows the registered users to book the available service.

Functional Requirement:

Req – 1: The system should show the user all of the available service providers.

Req – 2: When a user clicks on a service provider, the system takes the user to the profile of that service provider, where a button to book the service is available.

Req – 3: The user must click the "book now" button to begin the booking procedure.

Req – 4: When a user clicks the "book now" button, they are taken to a booking screen where they must provide information on their booking, including the date, time, and hour.

Req – 5: The system analyzes the service provider's schedule when the user enters their booking information, and if the service provider is already booked, the system will notify the user.

Req – 6: The system will display the cost, time, and date of the booking on the confirmation page if the chosen service provider is not already booked.

Req – 7: The system provides users with two payment options: cash on delivery and online payment.

Req – 8: In order to finish the booking, the user must select one of the two options.

Req – 9: The user is forwarded to the transaction procedure if they choose the online payment option.

Req – 10: If the transaction is successful, the system will confirm the booking and display the message "booking successfully."

Req – 11: The system analyzes the service provider's schedule when the user enters their booking information, and if the service provider is already booked, the system will notify the user.

Req – 12: The system will display the cost, time, and date of the booking on the confirmation page if the chosen service provider is not already booked.

Req – 13: The system provides users with two payment options: cash on delivery and online payment.

Req – 14: The user is forwarded to the transaction procedure if they choose the online payment option.

Req – 15: If the transaction is successful, the system will confirm the booking and display the message "booking successfully."

5. **Notifications and alerts:**

Description:

The system notifies users of their booking status and ongoing activity in the application via notifications.

Functional Requirement:

Req – 1: The system offers a page where user can view all of your notifications.

Req – 2: The user receives notification from the system when their reservation is confirmed.

Req – 3: If the service provider is being booked, the system will notify them.

Req – 4: If any of their bookings are canceled, the system sends a notification to the service providers.

6. **Rating and feedbacks:**

Description:

The system enables the user to rate and comment on the performance of the service provider.

Functional Requirement:

Req – 1: After each service is finished, the system gives users a form.

Req – 2: The feedback form is optional, so users are free to skip it.

Req – 3: The system rates the service provider based on user ratings and comments.

Req – 4: The service providers are able to see the reviews and comments.

7. **Browse Professionals using Filter:**

Description:

Users can browse service providers using the system's various filter options, including pricing, rating, and specialty.

Functional Requirement:

Req – 1: The system shows users the profile of the service provider.

Req – 2: Users are free to browse and view the profiles of service providers.

Req – 3: To help the user find the best service, the system offers a filtering option.

Req – 4: The list can be narrowed down by the user depending on cost, specialty, and rating.

8. **Online payment:**

Description:

The system enables users to make payments for services via online transactions.

Functional Requirement:

Req – 1: Users have two payment choices available to them: cash on delivery and online payment.

Req – 2: When a user chooses the online payment option, the E-sewa interface is opened.

Req – 3: To complete the transaction, users must complete the transaction form.

Req – 4: The system will validate the transaction form before moving forward with the transaction.

Req – 5: If the transaction is successful, the system will inform the user.

9. **Manage Availability:**

Description:

The system provides flexibility to service providers to choose the start and end times of their service.

Functional Requirement:

Req – 1: The system offers a button to change the service provider's availability status.

Req – 2: The service providers can toggle the availability status on or off according to their schedule.

10. Schedule service:

Description:

The system allows users to book a service in advance.

Functional Requirement:

Req – 1: The system offers the ability to pre-book a service while making a booking.

Req – 2: The user is also required to make the payment when making the booking in advance.

Req – 3: Only half of the payment will be refunded if the user cancels the reservation after it has been confirmed.

11. Manage and verify service provider:

Description:

The system allows the admin to manage and verify service providers based on their credentials.

Functional Requirement:

Req – 1: The system gives the administrator access to a dashboard where they may carry out important tasks.

Req – 2: An administrator can add, modify, and delete users.

Req – 3: During the registration process, the system enables the administrator to confirm the service provider.

Req – 4: The system notifies the service provider when the administrator approves the registration.

12. Edit profile:

Description:

The system allows the users to build and edit their profile.

Functional Requirement:

Req – 1: The system takes the user to their profile details when they click the profile button.

Req – 2: Users of the system can modify their passwords.

Req – 3: The system enables users to modify other data, like email, name, phone number, and bio.

7.1.4 External Interface Requirements

1) User Interfaces

To ensure that everyone can utilize the application to its maximum potential, it should have a user-friendly user interface (UI). The user interface (UI) has a big impact on how a user interacts with the system, thus it's important to choose objects, colors, text fonts, and other design elements very carefully.

2) Hardware Interfaces

The application is created for end users including service providers, service receivers, and administrators. All the users except the admin are required to have an android device with android 6 or above to use this application. The admin must have a laptop or a desktop to use the admin site. Users must have an internet connection in order to use this online application. Apart from a laptop and an android phone, no additional hardware is required.

3) Software Interfaces

The application will be created using integrated development environments and common code editors. The majority of the coding for the system's user interface will be done in Visual Studio Code.

7.1.5 Non-Functional Requirements

1) Security Requirement

Data breaches and unauthorized access of any kind should be prevented on the system. To access media like images and use cookies, it needs to get the user's

consent. Only reading access to personal data is permitted for the administrator and the system (except passwords). Users only have read access to other users' data and are only permitted to write to their data.

2) Performance requirements

The system must handle user bookings and online transactions, hence it must have a high transmission rate. Although it might not require extremely high performance, it must be scalable in order to accommodate numerous bookings and transactions at once.

7.2 High level Use Case

a. Register

Name: Register

Actors: user, service provider

Description: The users must register into this applcaiton in order to use its features.

b. Login

Name: login

Actors: user, service provider, admin

Description: After registration the users must login into the application using their email and password.

c. Book service

Name: Book service

Actors: user

Description: The users can book a service according to their preference.

d. Payment

Name: Payment

Actors: user

Description: The users must pay the necessary amount to confirm booking.

e. View booking history

Name: View booking history

Actors: user, service provider, admin

Description: The user and the service provider can only view their booking history while admin can view all the booking history.

f. View and update profile.

Name: View and update profile

Actors: user, service provider

Description: The user and the service provider can view others profile but they can only update their own profiie.

g. Get notification

Name: get notification

Actors: user, service provider

Description: The system will send notification to the users and service providers regarding their bookings and the ongoing activities in the application.

h. Browse professionals using filter

Name: browse professionals using filter

Actors: user

Description: The users can browse service providers using filter option based on price, service type and rating.

i. Offer service

Name: offer service

Actors: service provider

Description: Only registered service provider can offer the service in this application.

j. Manage Availability

Name: manage availability

Actors: service provider

Description: The service providers can manage the availability of their service.

k. Manage and verify service provider

Name: manage and verify service provider

Actors: admin

Description: The admin has the sole authority to manage and verify service providers.

l. Delete and add users

Name: delete and add users

Actors: admin

Description: The admin can add and delete users through admin panel.

7.3 Wireframe/UI

a. Login Screen

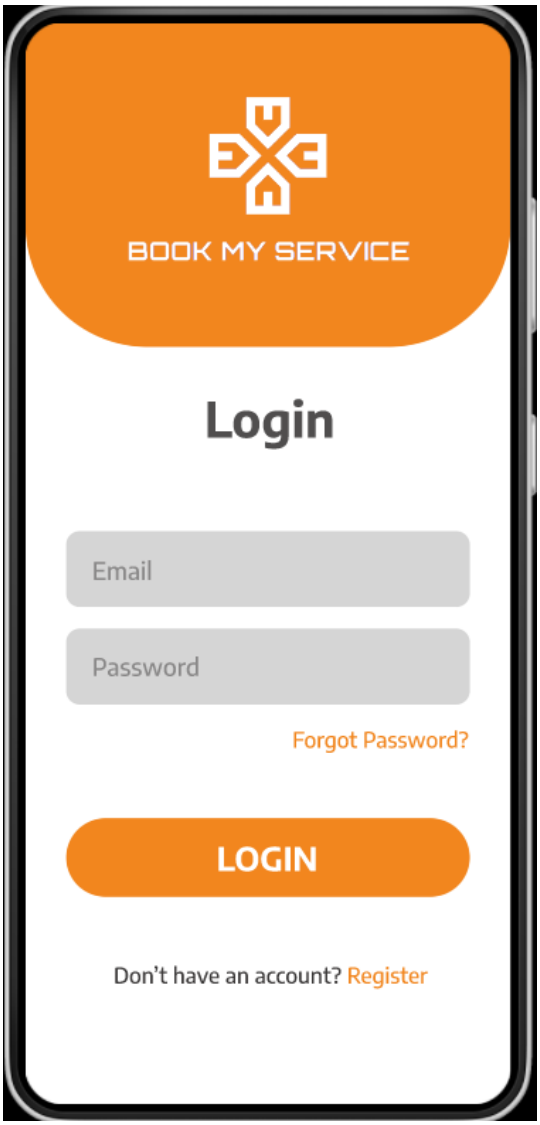

Figure 12: login UI

b. Registration Screen

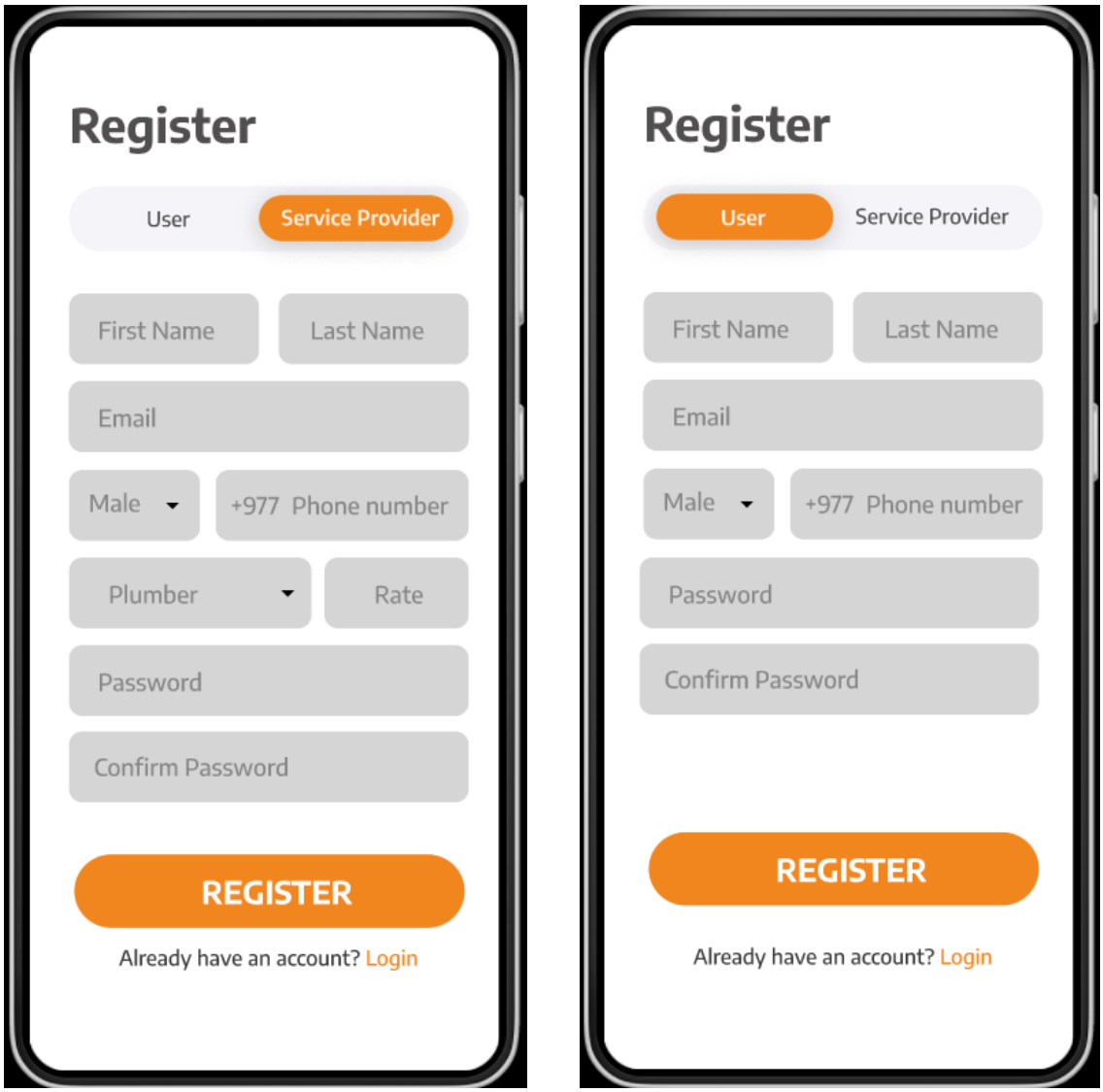

Figure 13: Registration UI

c. User profile Screen

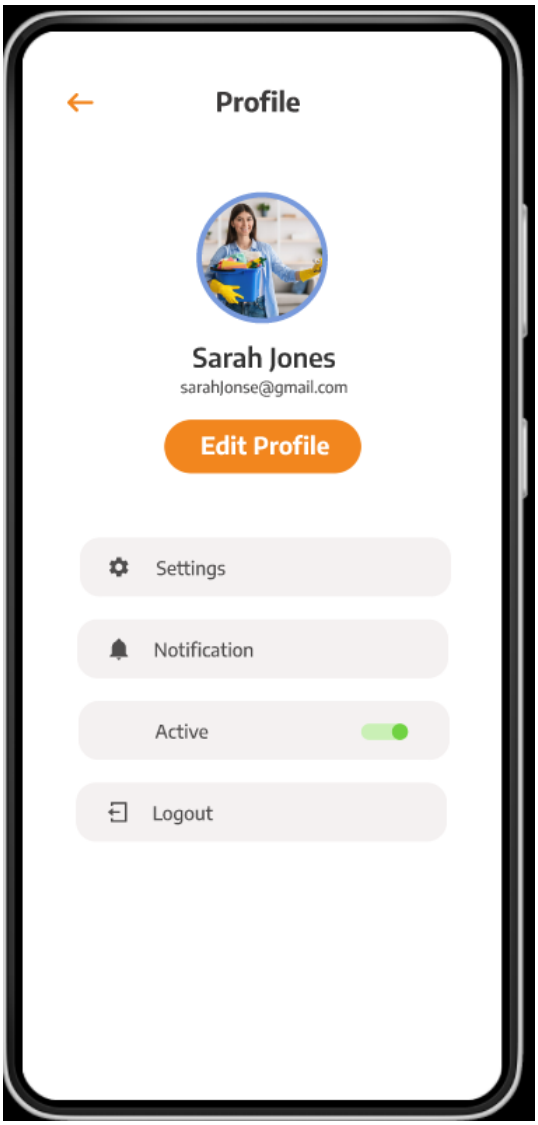

Figure 14: User profile UI

d. Home Screen

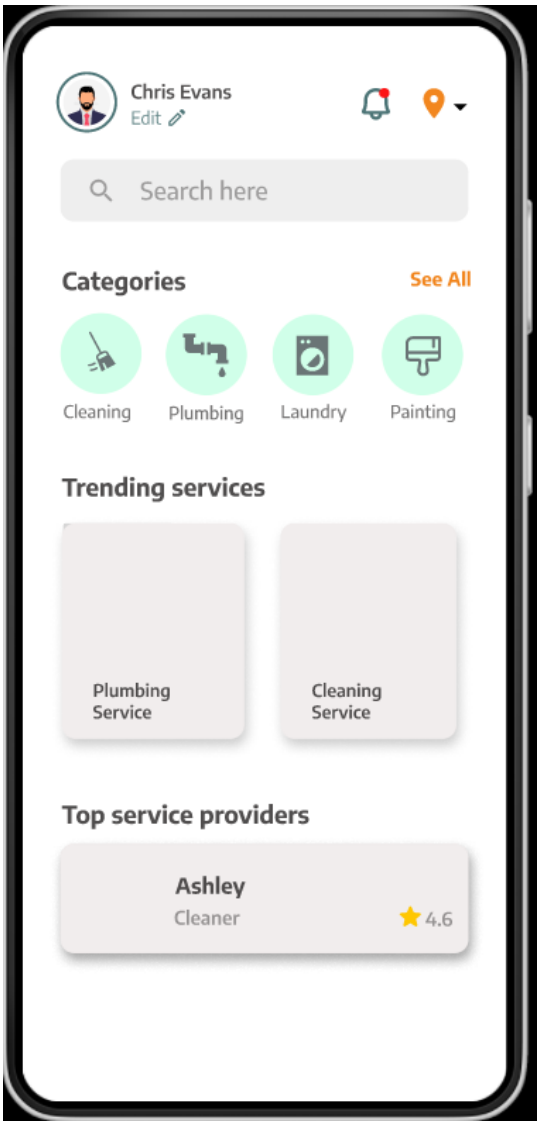

Figure 15: Home UI

e. Notification Screen

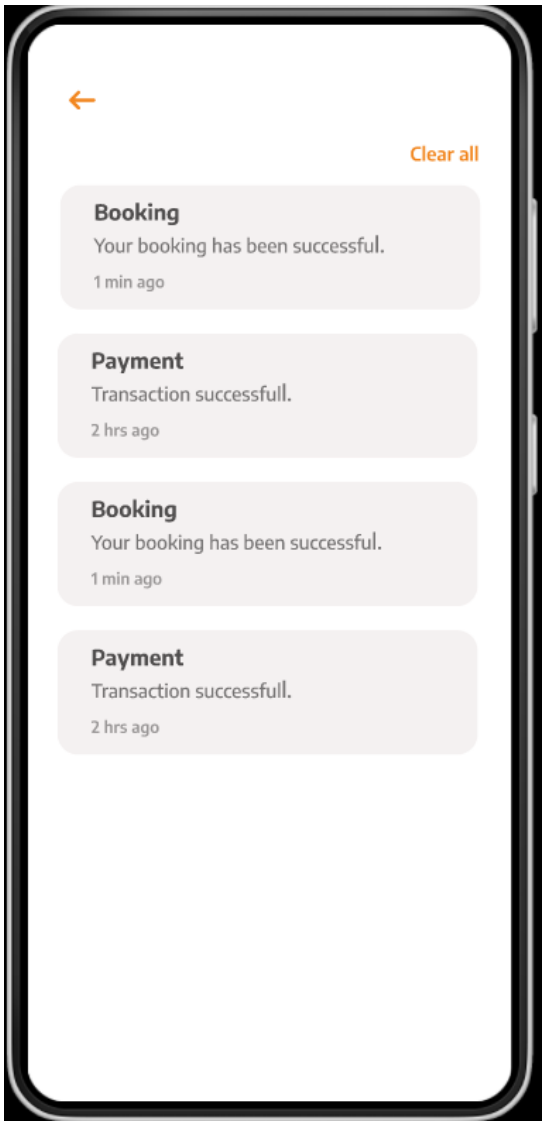

Figure 16: Notification UI

f. Service provider Profile Screen

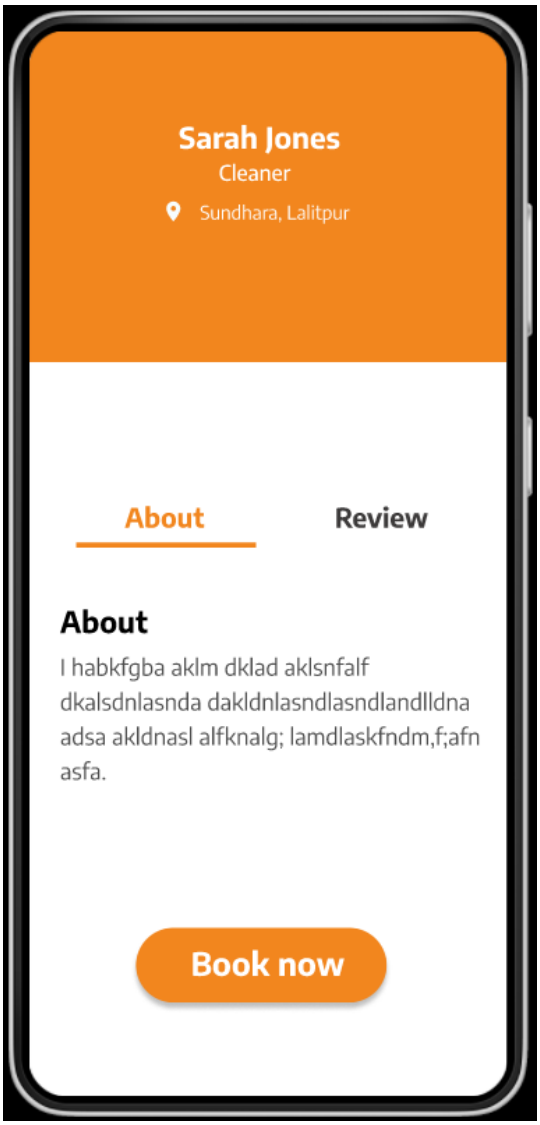

Figure 17: Service provider profile UI

g. Booking screen

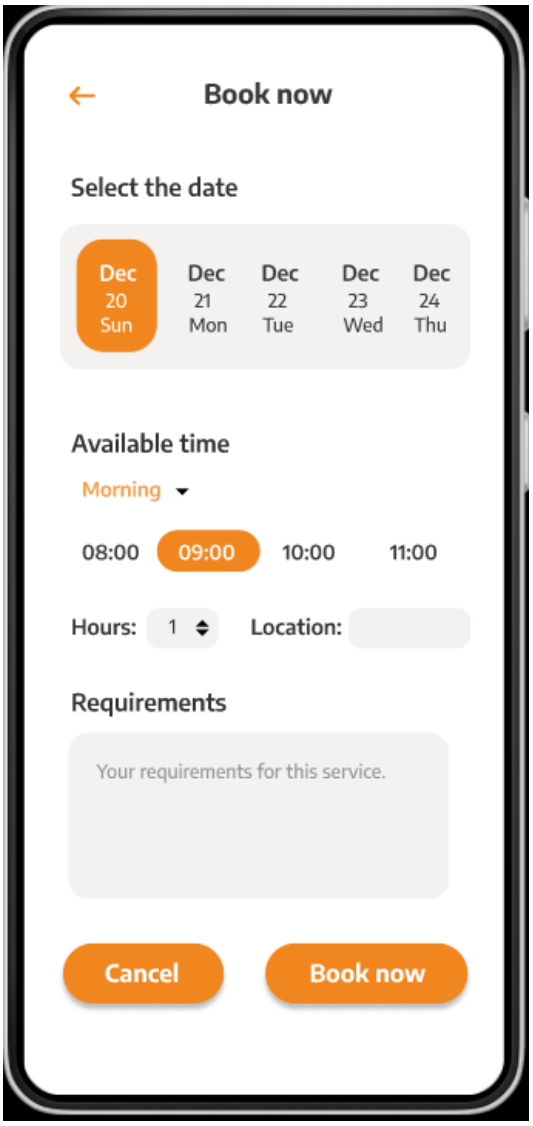

Figure 18: Booking UI

h. Booking confirmation screen

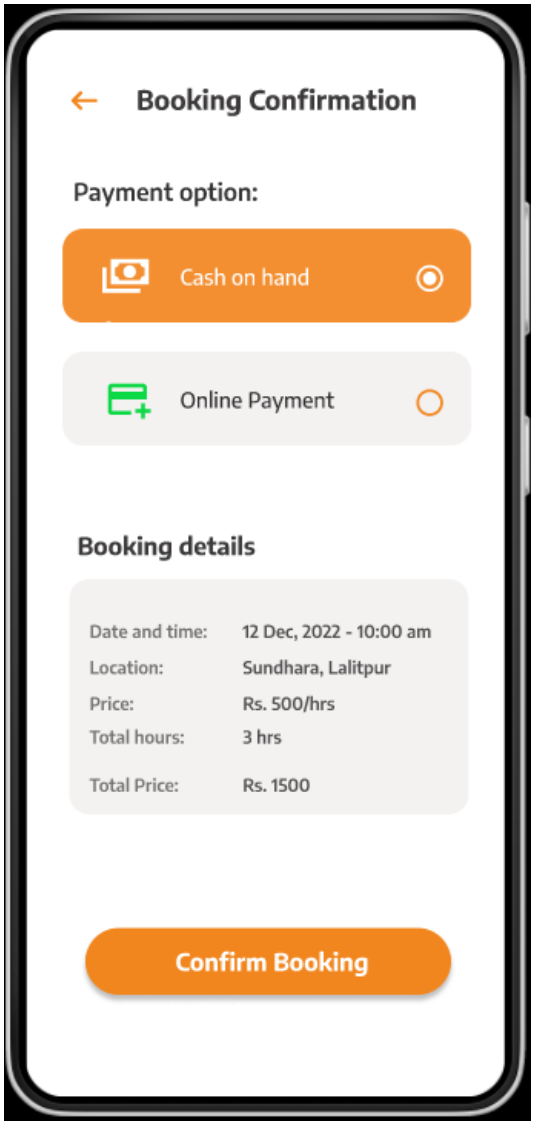

Figure 19: Confirmation UI

i. Booking history Screen

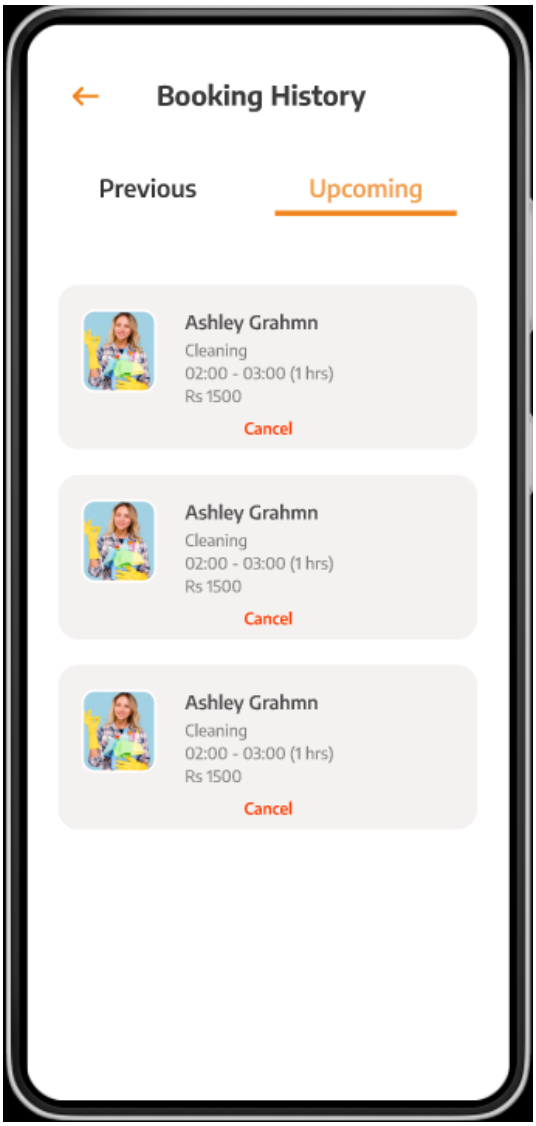

Figure 20: Booking history UI

j. Review screen

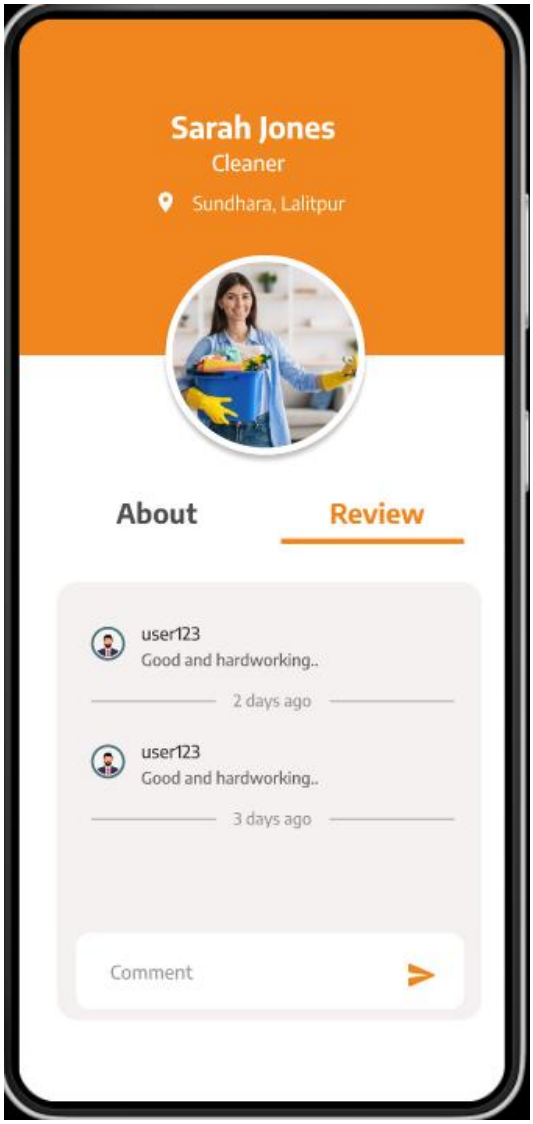

Figure 21: Review UI

k. Admin panel login page

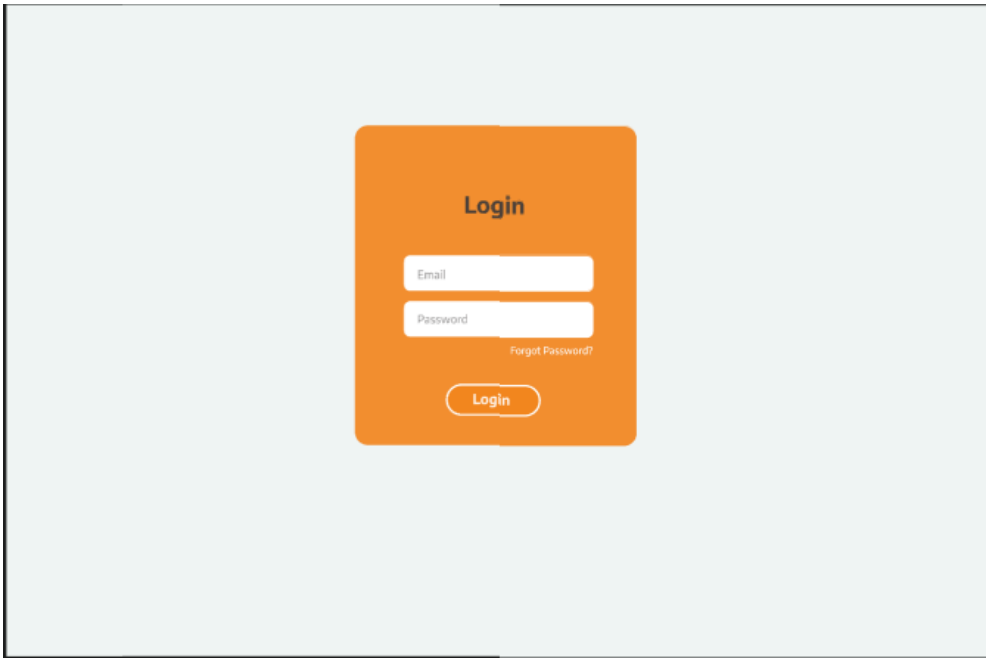

Figure 22: Admin panel login UI

l. Dashboard

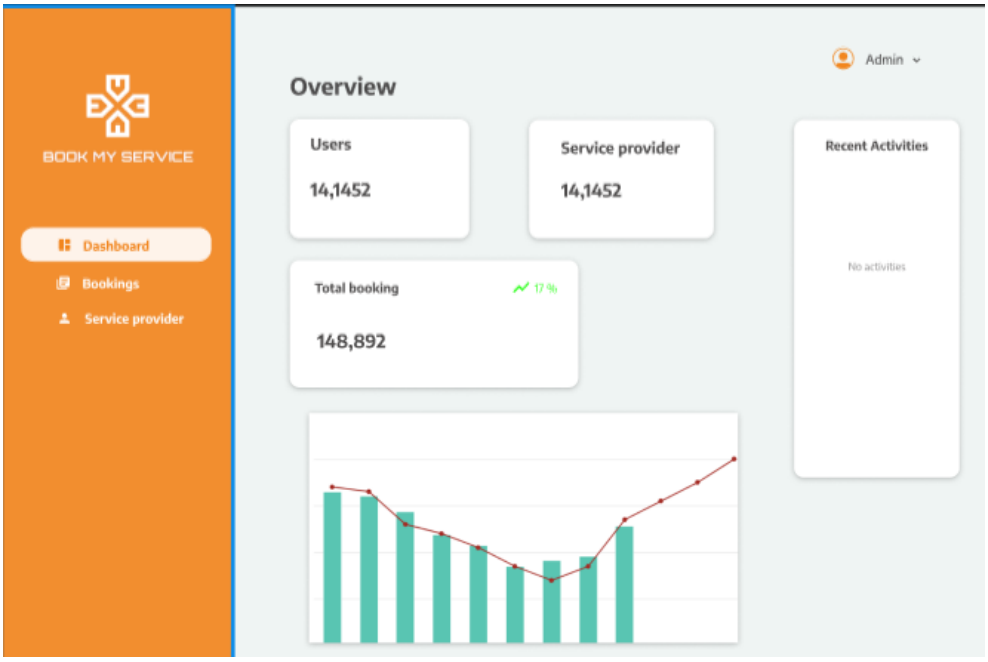

Figure 23: Dashboard Ui

m. Booking page

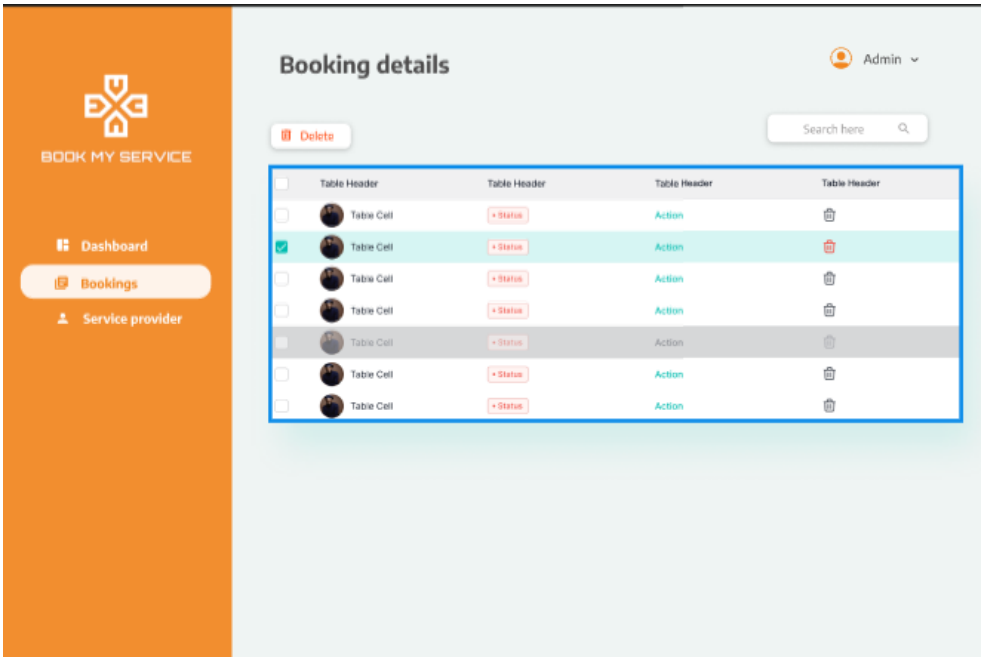

Figure 24: Booking page UI

n. Service provider management page

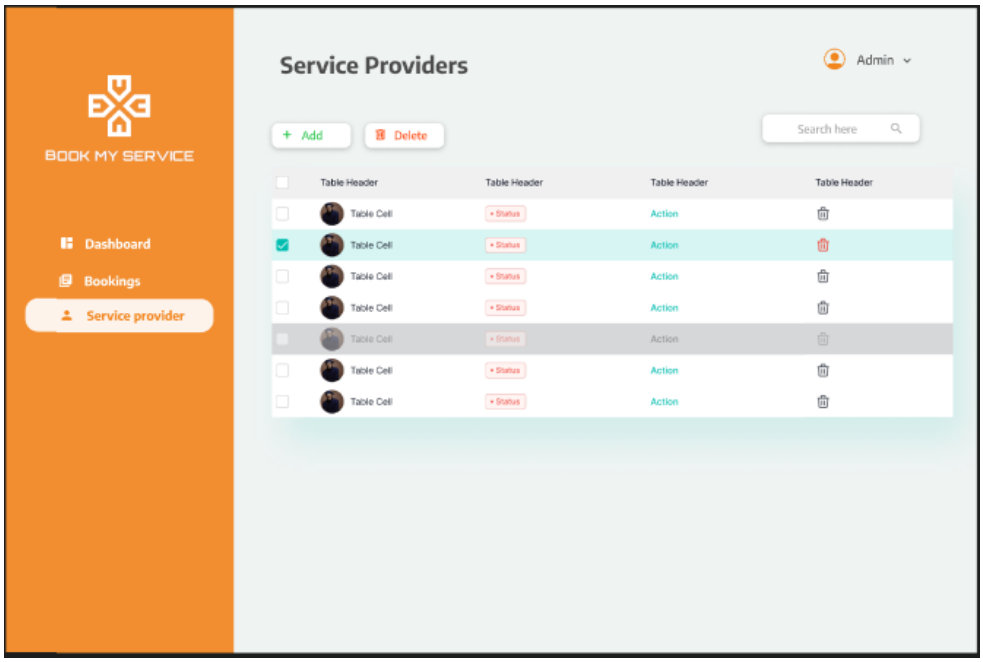

Figure 25: Service Provider management page UI

7.4 Development code of this project

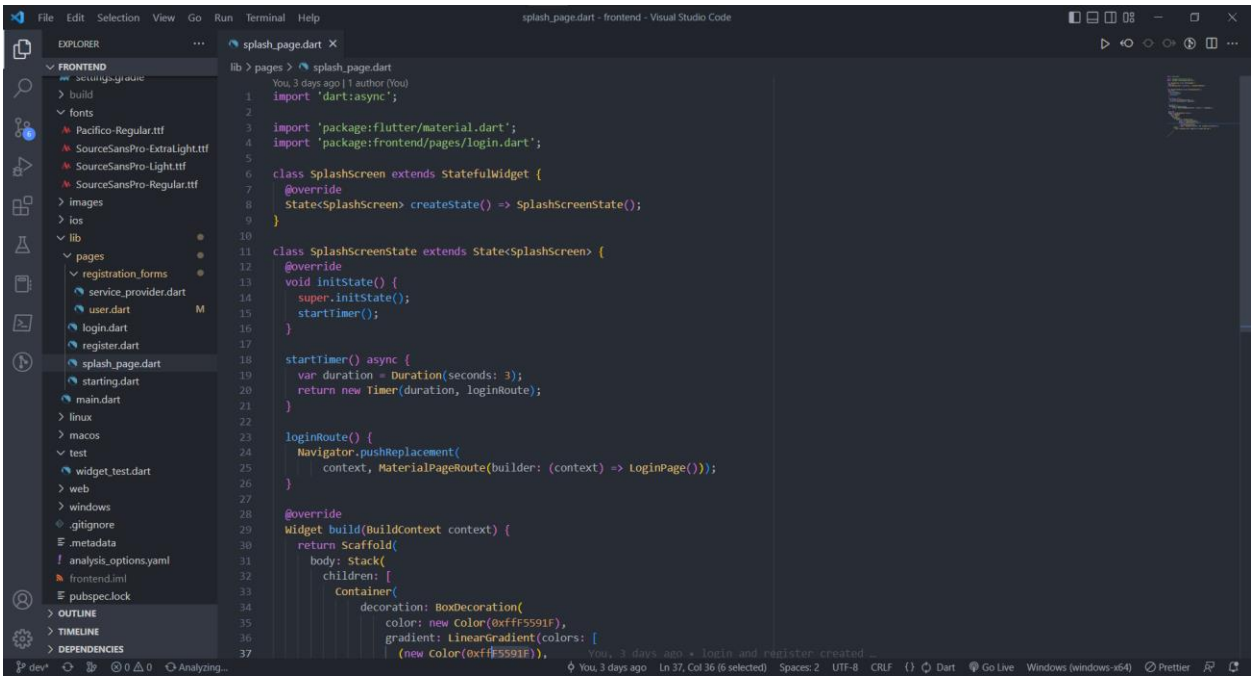

Figure 26: Screenshot of Splash screen code

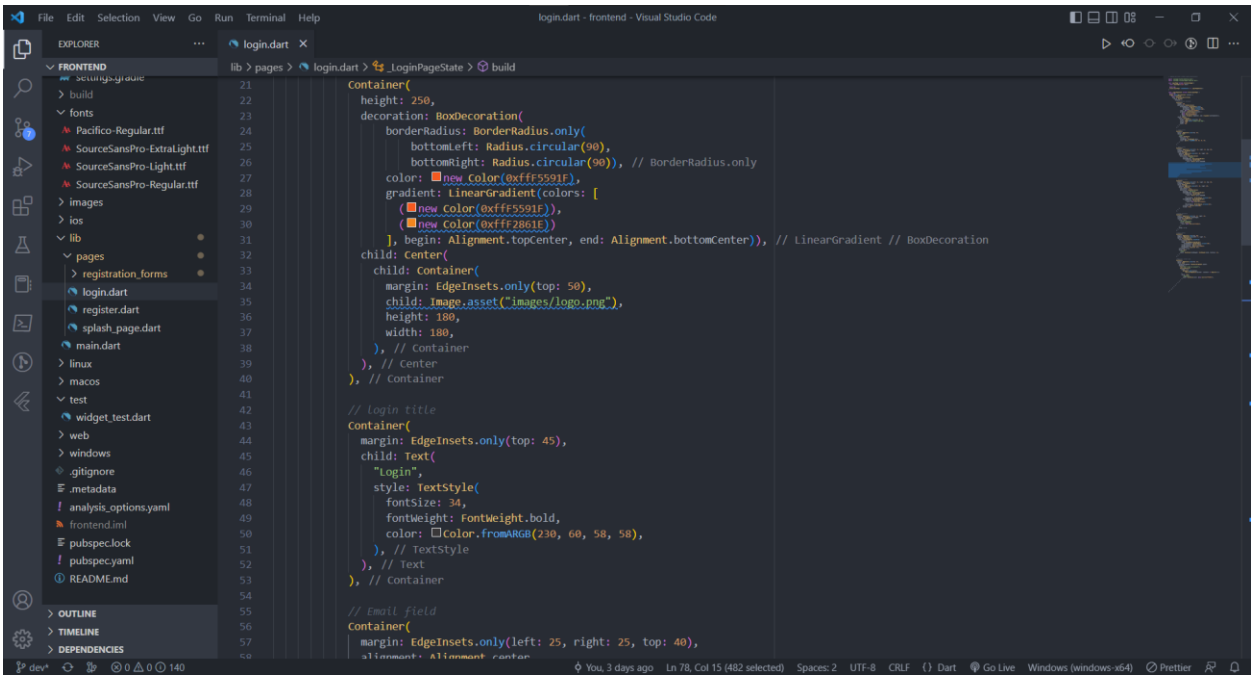

Figure 27: Screenshot of login screen code

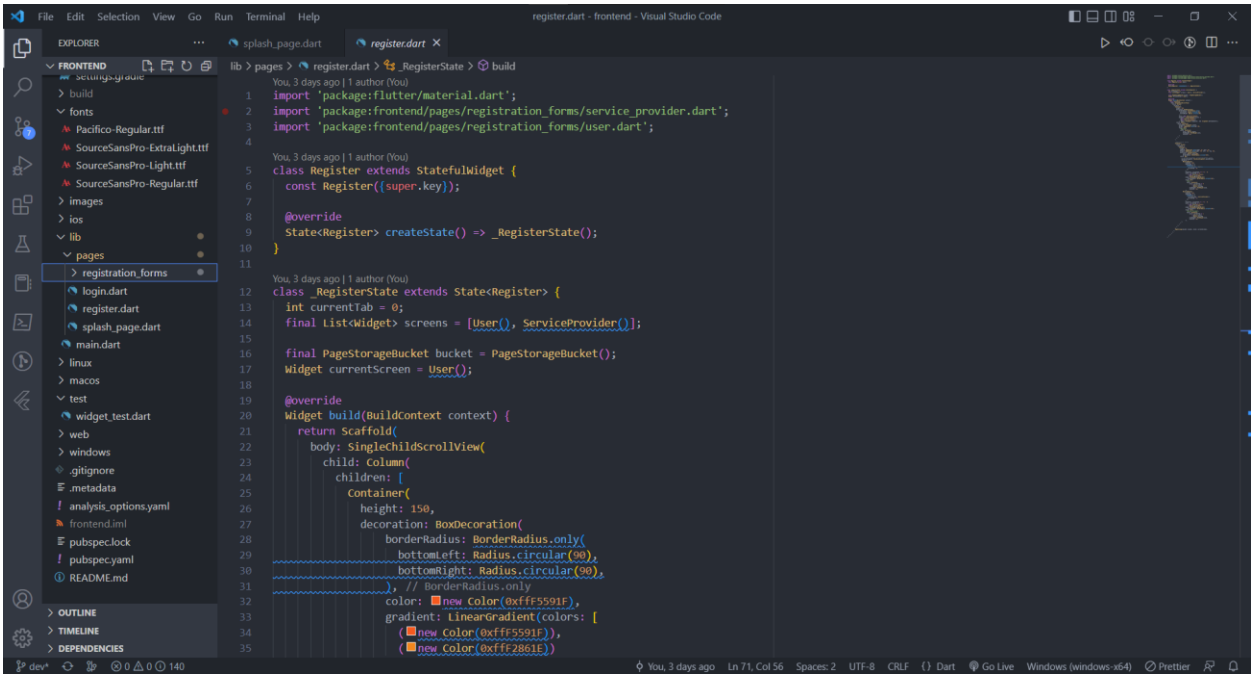

Figure 28: Screenshot of register screen code

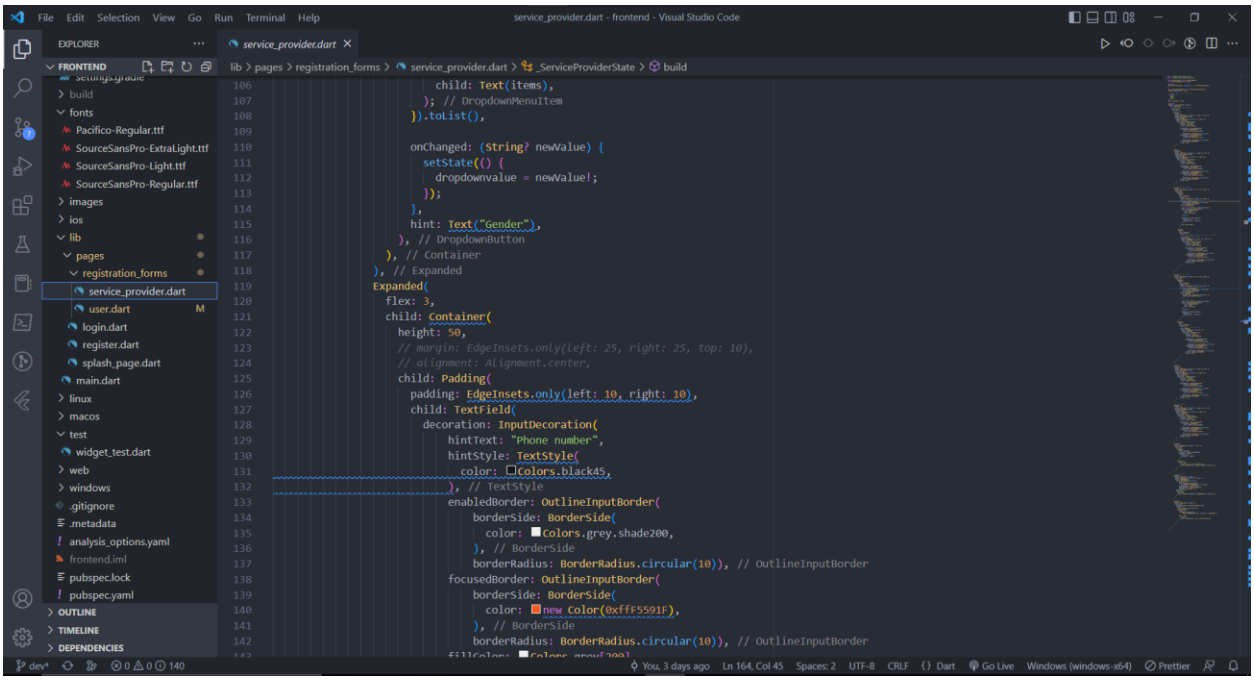

Figure 29: Screenshot of service provider registration code

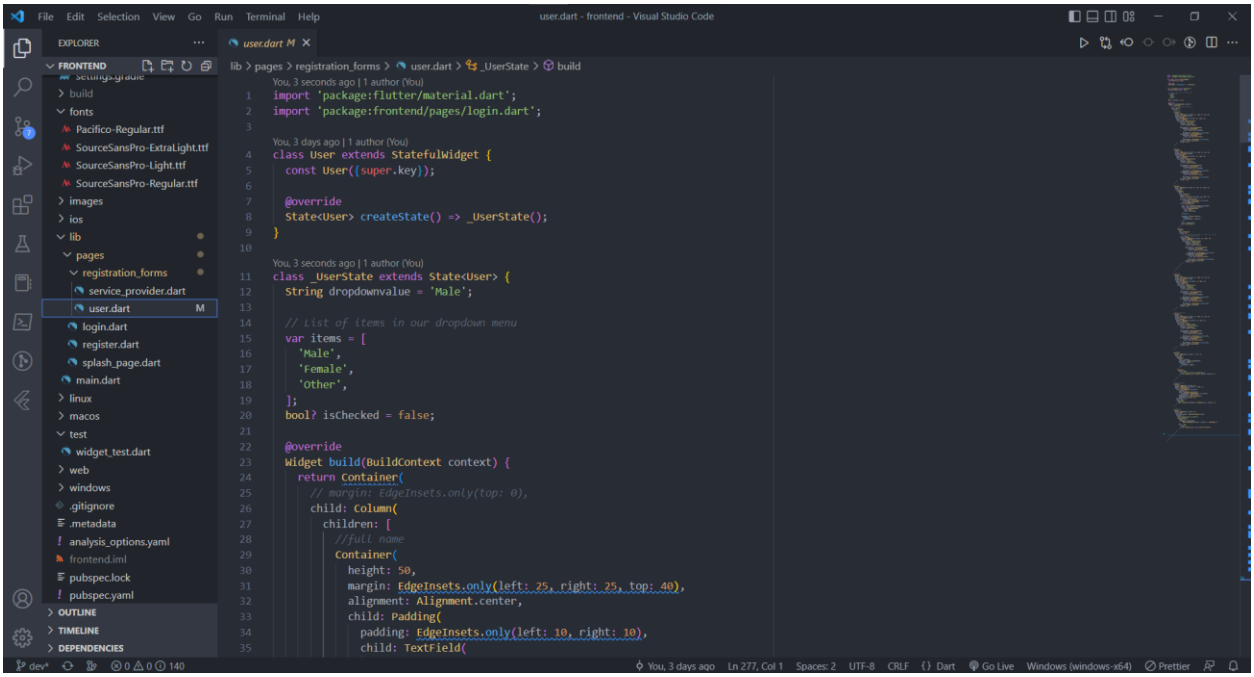

Figure 30: Screenshot of user registration code

7.5 Improvised Gantt Chart

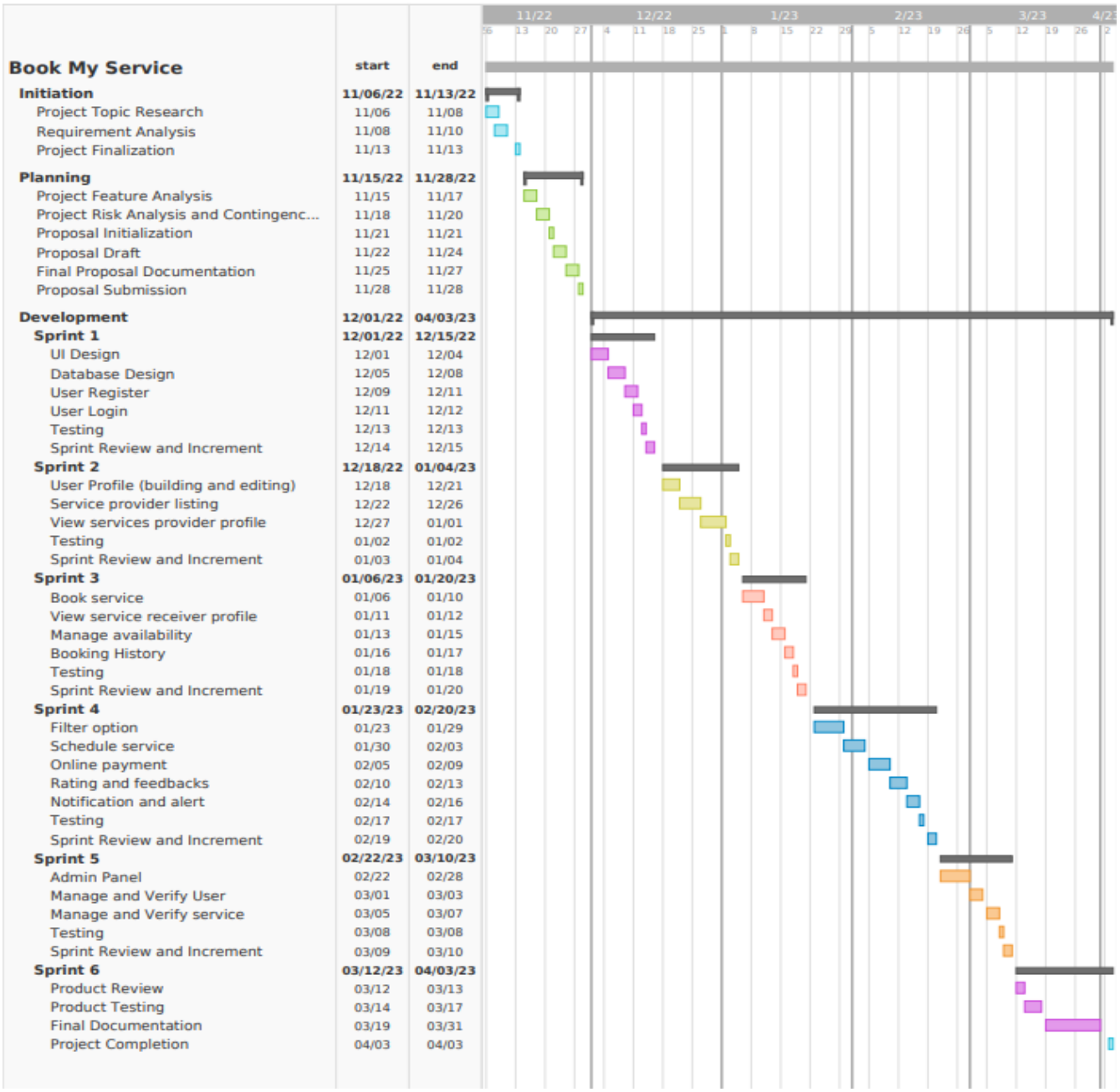

Figure 31: Improvised Gantt Chart

7.6 Survey Results

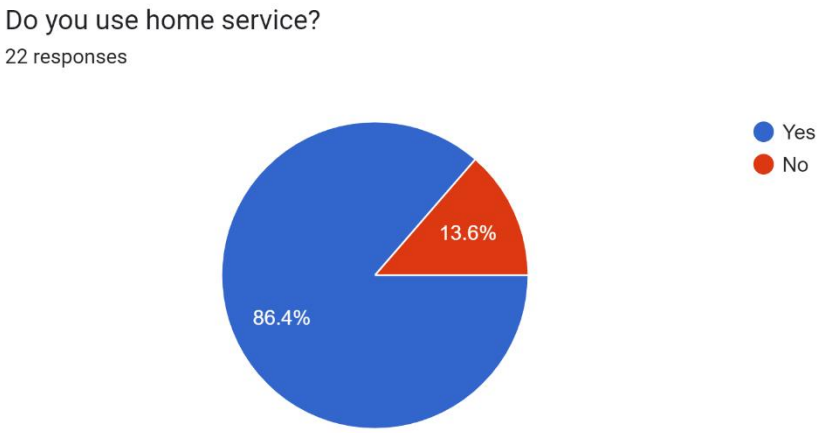

Figure 32: Survey question no.1

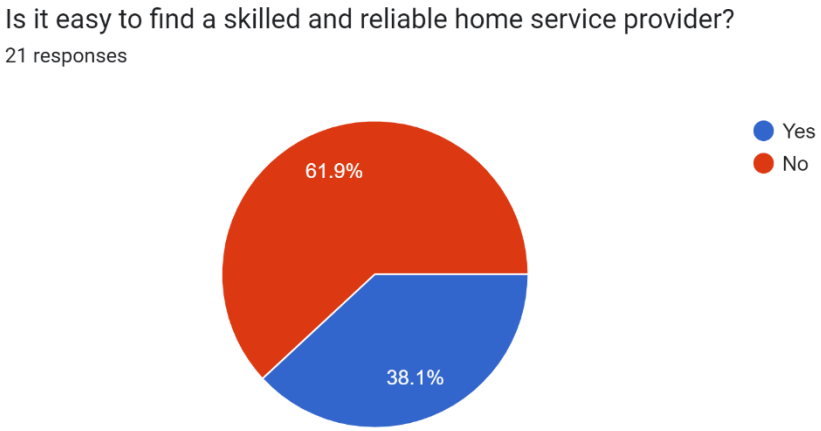

Figure 33: Survey question no.2

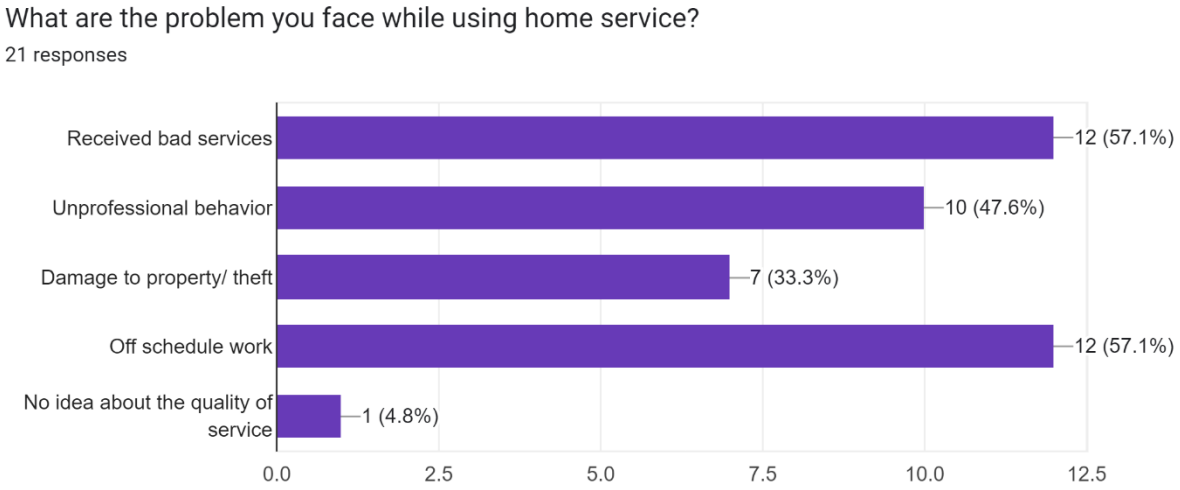

Figure 34: Survey question no.3

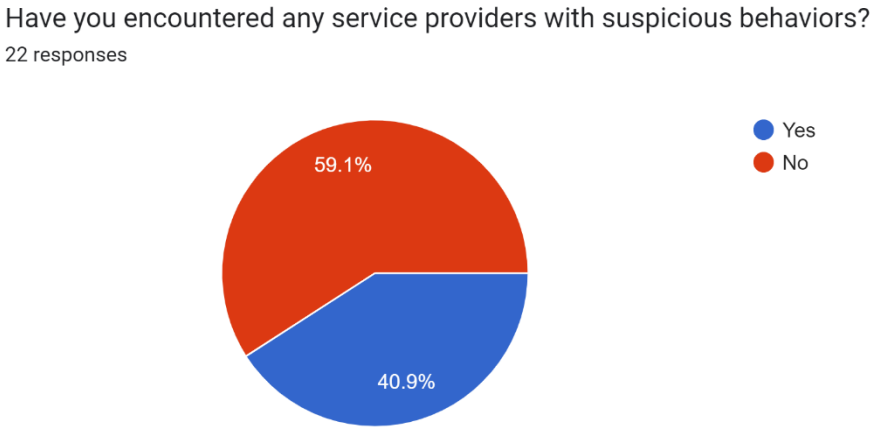

Figure 35: Survey question no.4

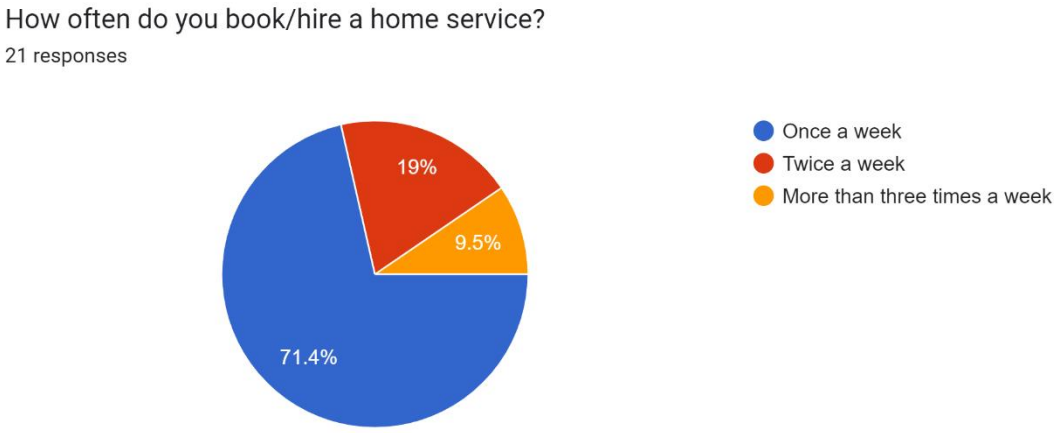

Figure 36: Survey question no.5

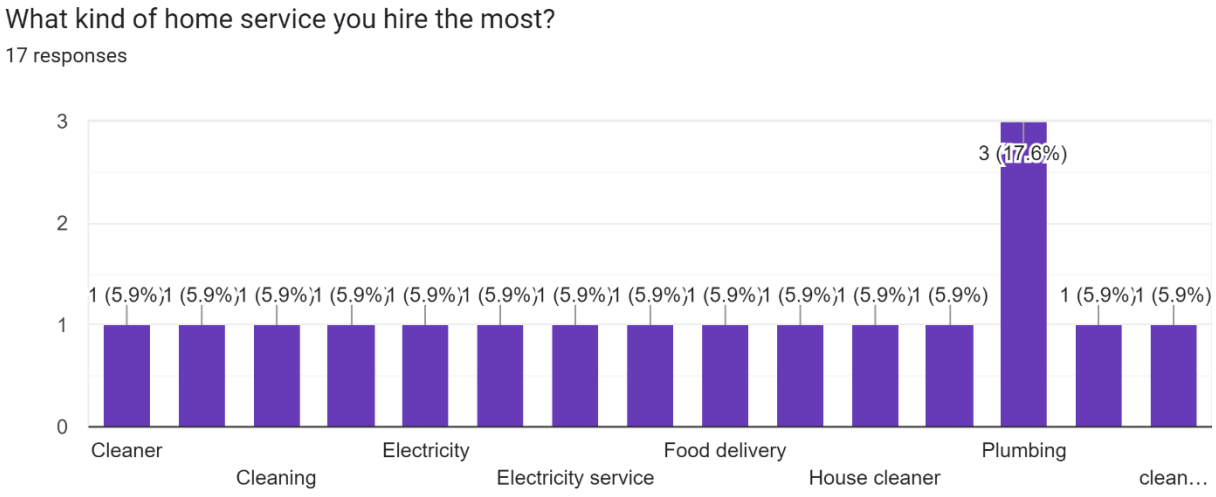

Figure 37: Survey question no.6

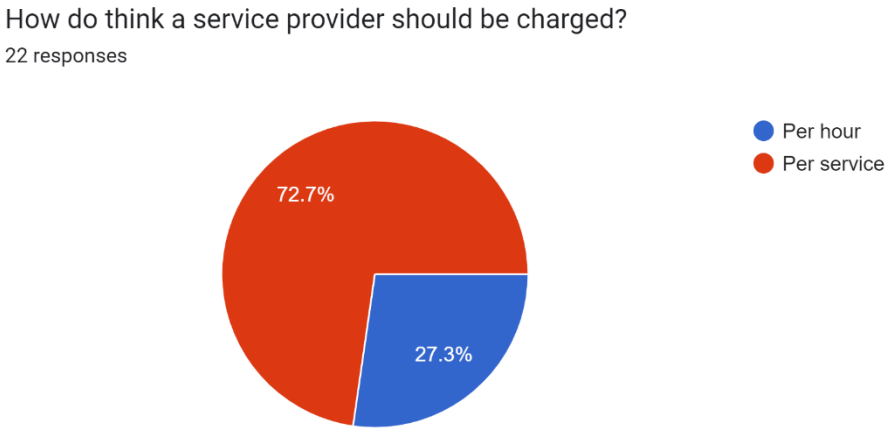

Figure 38: Survey question no.7

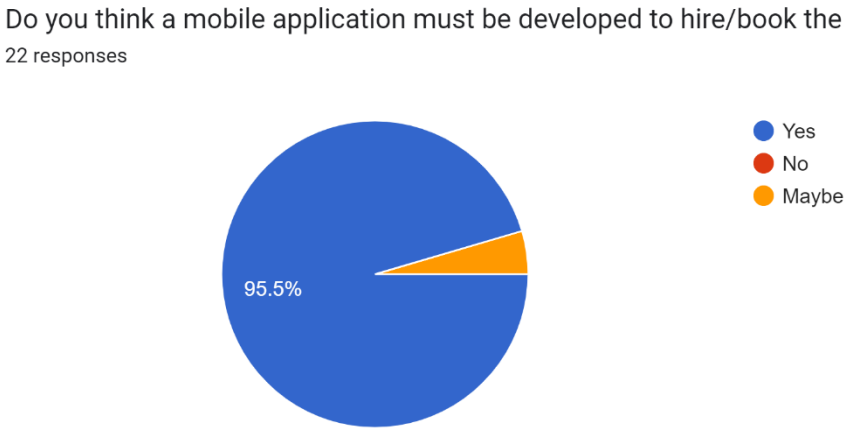

Figure 39: Survey question no.7

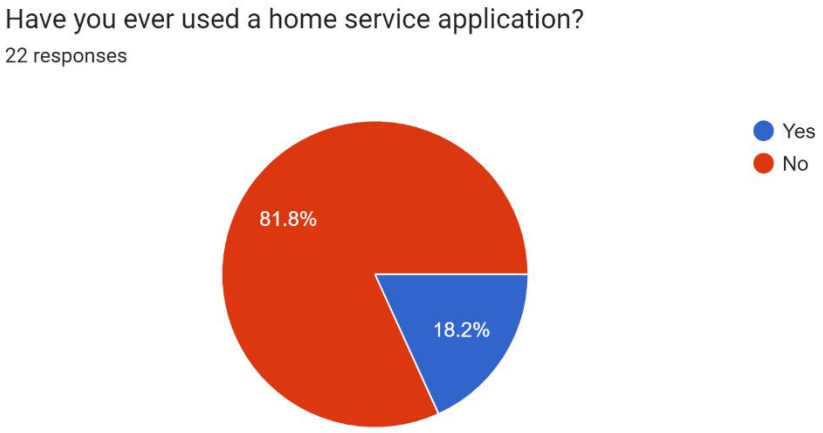

Figure 40: Survey question no.8

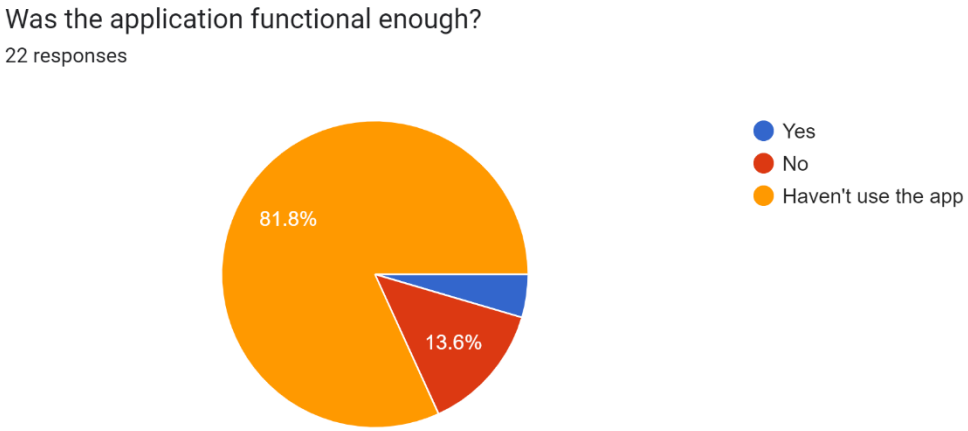

Figure 41: Survey question no.9

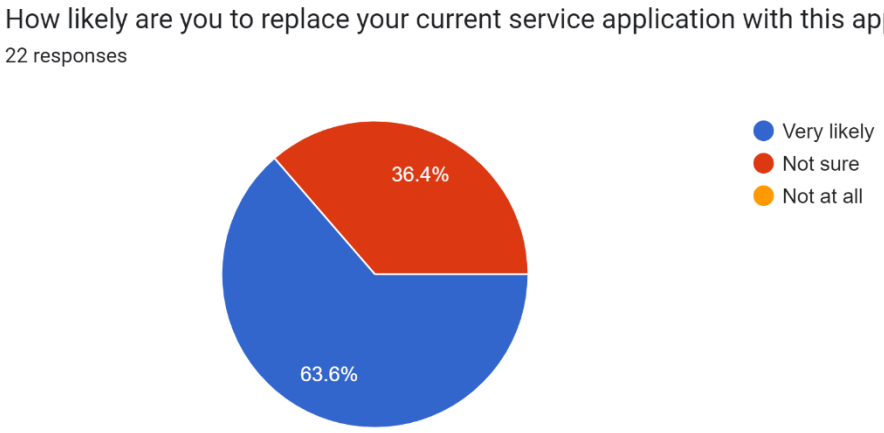

Figure 42: Survey question no.10

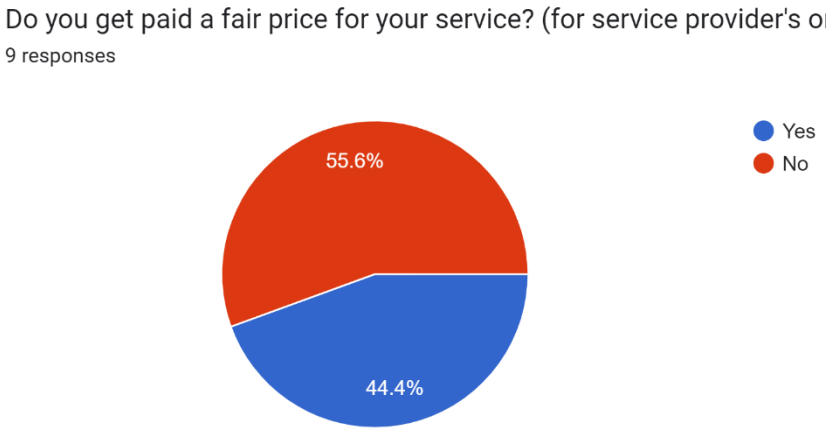

Figure 43: Survey question no.11

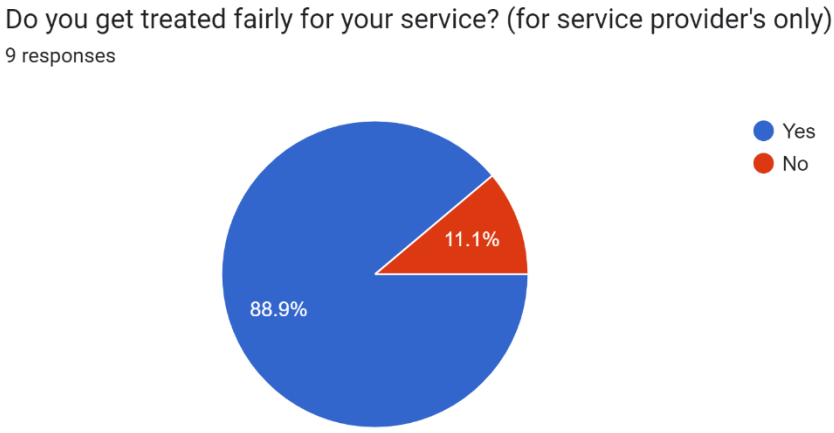

Figure 44: Survey question no.12