

# **FLAT BOOKING: AN ANDROID BASED APPLICATION**

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This report is being submitted in partial fulfillment of the requirements for the Bachelor of Science in Computer Science and Engineering degree.

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**DAFFODIL INTERNATIONAL UNIVERSITY**

**DHAKA, BANGLADESH**

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## APPROVAL

This Project titled “**FLAT BOOKING: AN ANDROID BASED APPLICATION**”, submitted by Md. Imran Hossain ID: 182-15-11681 to the Department of Computer Science and Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 26 January 2023.

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## DECLARATION

I hereby declare that this project has been done by us under the supervision of **Mr. Raja Tariqul Hasan Tusher, Assistant Professor**, Department of CSE Daffodil International University. Furthermore, I hereby declare that no part of this project or effort has ever been submitted elsewhere for approval or accrediting of any kind.

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First, I express my heartiest thanks and gratefulness to almighty Allah for His divine blessing makes us possible to complete the final year project successfully.

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I want to thank everyone of our Daffodil International University classmates who participated in this conversation while still finishing their school work. Finally, I should express my gratitude to my parents for their unwavering support and tolerance.

## ABSTRACT

Our social structure is going to be simpler these days thanks to the advancement of technology. As you can see, we can get our daily necessities in a very short time online. But if we look at the current social system, we can see that Posters and signboards are hung on the walls to booking family homes and student or bachelor homes. And we waste time, money to put up signboards and posters in different places. To prevent these issues, using this platform is quite simple and practical. You can advertise your home for rent on this platform for free, and hundreds of people will see it. However, if the rental sign or signboard is lifted from the wall, they could suffer harm like becoming wet in the rain, losing another person's advertisement, being placed on top of another rental sign or signboard, etc. So, to avoid wasting this time and money we can booking homes online. You can find your favorite house now through "**Flat booking**" apps. Beautiful and pleasant environment family house small and big, bachelor, seat rent, all kinds of facilities for male and female jobbers, the biggest online platform in Bangladesh. Through our Facebook group or through our Google site: you can easily find your desired home advertisement.

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# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

"Flat booking app" are for give house rentals and an online platform for take renting houses. Through this platform, you can get all kinds of facilities for both give house rentals and take renting houses. For example, a renter can find a home rental of his choice no matter where he is staying. Even if a landlord publishes a rental ad, it will be seen by hundreds of people and the owner can exchange his information with the renter. But, if we look at the current social system, we can see that hundreds of to-let houses are hung on the walls in different places and areas for rent and both parties have to waste time and money to hang this to-let which is difficult for many of us. And these to-lets and signboards are abandoned after use and are left lying around which is harmful to our environment. We can see that due to bad weather the to-let or signboard gets wet with rain which makes it unusable later on. And on the other hand, due to the use of online platforms, we can get all kinds of facilities at home.

I can even get an idea about the environment of the house by looking at the pictures of the house on this platform. So, through this online platform, you can find a house rental in a beautiful and pleasant environment without any problem through these flat booking apps.

### 1.2 Motivation

This project is an online platform system where all professional people have an easy way to find flats and provide all kinds of services for users to rent flats. The tenant can find the type of house they want to rent and the tenant can know everything about house rent from this platform. For example, the tenant can know all the information about the rent from which month, what kind of amenities the house has, the rent amount and pictures of the house and can even communicate or exchange information with the landlord.

### 1.3 Objectives

This Flat Booking in the registration form user can open his own profile account with name, email, phone number, password. After opening the account, the user can publish the advertisement for house rent by filling all the details in the list for house rent. And a database, which is a safe way of record keeping, is used to store this entire information. And features of the app include: To users will be able to booking homes online in a very short time. To users will be able to make home bookings and receive home bookings. All students or bachelor users will be able to post signboards or TO-LATE at their convenience and other users will be able to see it. This method will allow users to find the address of nearby homes from its location. To users can report any inappropriate information on our page. The user can publish the advertisement for house rent by filling all the details in the list for house rent.

Features:

- Create account for user.
- User can view his profile after creating his account.
- Login with email, phone number, password to verify phone.
- Users can app share it with their friends after downloading it from Google Play Store.
- Go to ad post for house rent and publish the ad by filling the necessary list.
- The renter can find the house rent of his choice from the homepage of the app.
- User can delete his own advertisement after publishing it.
- Logout or exit to exit the app.
- Add photos to rent a house.
- Search locations for house rentals.
- Share information with the homeowner.
- Direct phone or mail access from the app.
- Be aware of transactions while renting a house.
- Follow the rules for renting a house.
- Report to us and if you encounter any problems.

#### **1.4 Expected Outcome**

These flat booking app will service all professionals or common people to find and rent flats. And for pulling all these To-let or signboards, you have to go to different places or areas and put them there and waste time and money for this work. For this it is very easy and convenient to use this platform to avoid these problems. Because of this platform you can post ads for free to rent your house and hundreds of people can see these ads. But they are likely to get damaged if the to-let or signboard is pulled on the wall, like getting wet in rain, removing other person's advertisement, superimposing one to-let or signboard on another to-let or signboard etc.

Again, we can see that due to prolonged bad weather the tenant has to face many problems in finding a rental house. In case of facing such problem, we can do house rent booking through online platform and tenant can book house rent from home in his preferred area or region. On the app's main page, the renter can find the kind of home they wish to rent, and the platform will provide them with all the information they need to do so. For instance, the renter may get all the details about the rent, including the month it starts, the amenities the house offers, the rent amount, and images of the property. They can even get in touch with the landlord and exchange information.

#### **1.5 Report Layout**

This the introduction, motivation, purpose, anticipated result, and report format of my project have all been covered in chapter one of our six-chapter report. The background of my project and the associated activities were essentially discussed in chapter two. Comparative research, the size of the issue, and my project's challenges.

And all the description and structure of this project are described step by step. In addition to the Model of a Service Process, other topics covered include requirement gathering and analysis, use case modelling and description, design requirements, and logical data model. The focus of chapter four is on the details of the project specification, which covers the front-end design, back-end design, interaction design, UX, and implementation

requirements. In chapter five, I went into detail about the implementation and testing phases, including the database implementation, the front-end design implementation, and the test outcome and report. I discuss the app's conclusion and future plan in chapter six. Where the modernization features can be seen in the app.

## **CHAPTER 2**

### **BACKGROUND**

#### **2.1 Introduction**

“Flat Booking” is an online platform android apps application. Because, making sure the developer computer has a good configuration of RAM, Hard Disk, or SSD is important because it is developed in the Android Studio IDE, which is very demanding. So, the initial experience was challenging. Occasionally, some built-in functions in the updated version of IDE are depreciated and replaced with new features.

I have to write updated code because utilizing, the depreciation method can occasionally result in errors. To fix these errors, I have to examine the Stack Overflow and Google Android developer documentation sites. I need to know how to programming in Java for the purpose of constructing apps. I also need to be familiar with PHP for Rest API and SQL Quarry for database connection, data insert, retrieval, and manipulation because, the combination of database with Android application requires knowledge.

#### **2.2 Relevant Work**

The user has to open a registration account in the apps to verify his profile because if user profile account is not active then he can't post any advertisement for house rent. There is a list of posts for the user, where the user can see the new or old ads and can delete any errors that appear after posting the ads. Even if a person receives information in an irrelevant ad, it is another any user can report the information to the admin. And this flat booking app can be shared with any of the user's friends.

#### **2.3 Comparable Research**

At first, I have to exchange information with each tenant and landlord to get an idea of what the online rental platform offers and get an idea of their needs and don'ts. Then I need to have an idea to confirm if there is any other app on the server like this flat booking app. I also learned about the Android Studio IDE, including how to set it up and what the bare minimum requirements for a computer's setup are. I also learned about the Java Home

environment variable, which is a system-advanced environment variable used to support or build Java programs [1]. I searched google play store but, I found an app for house rent but nothing similar to flat booking app. The flat booking app has many features. In the flat booking app, if a user finds any mistake in an ad, he can delete it at his own will and can search for his house rent by searching Google to find the house rent. And I'll work to make the design and functionality user-friendly.

## **2.4 Extent of problems**

My app does not detect any user posting irrelevant information or advertisement. On the other hand, if a user uploads a violent image as a house rent image, the app doesn't understand either. In that case we have to physically monitor flat booking admin within 5-6-hours after doing this violence delete this content and disable this user account. “Flat booking” app will not take much user traffic. If 5000+ users are using this app at once then the server will be down and Application Not Responding (ANR) will occur. A common programmatic problem in developing apps is the Java null pointer exception. The null pointer exception is a runtime exception. In Java, an unusual null data can be assigned to an item reference.

A null pointer exception is thrown when the program tries to use a reference to an item that contains null data. This problem occurs many times when I run the app, but it is a bit difficult to find out why the compiler shows this type of error, but I solved those problems by studying the code.

## **2.5 Challenges**

There are several problems that an app developer faces when creating one. My lack of experience in android development meant that I had to start various things from scratch in my project because I lacked the necessary understanding [1].

Then I enrolled in a six-month course with developers to study Android Studio, and I looked for information or ideas on YouTube, Google, and Stack overflow. There are still many issues to be resolved, such as app server upkeep, newly discovered problems in the app, and Google searches for any runtime flaws in the code. Google made a modification

to its user device authorization access policy for Android 10 and Android 11 public last year. As a result, I had to alter that code in accordance with the new user authorization because some of it didn't work in the old approach.

# CHAPTER 3

## SPECIFICATION OF REQUIREMENTS

### 3.1.1 Service Process Model

A service process is a high-performance, stateless procedure that is not permanent or audited. Service processes should only last a brief time and perform a single task because they operate in memory. Taking information from a database as an illustration. Along with business and page flow processes, a service process is saved under the Processes branch of the Project Explorer. [8]

Following the Service Process Model diagram shows:

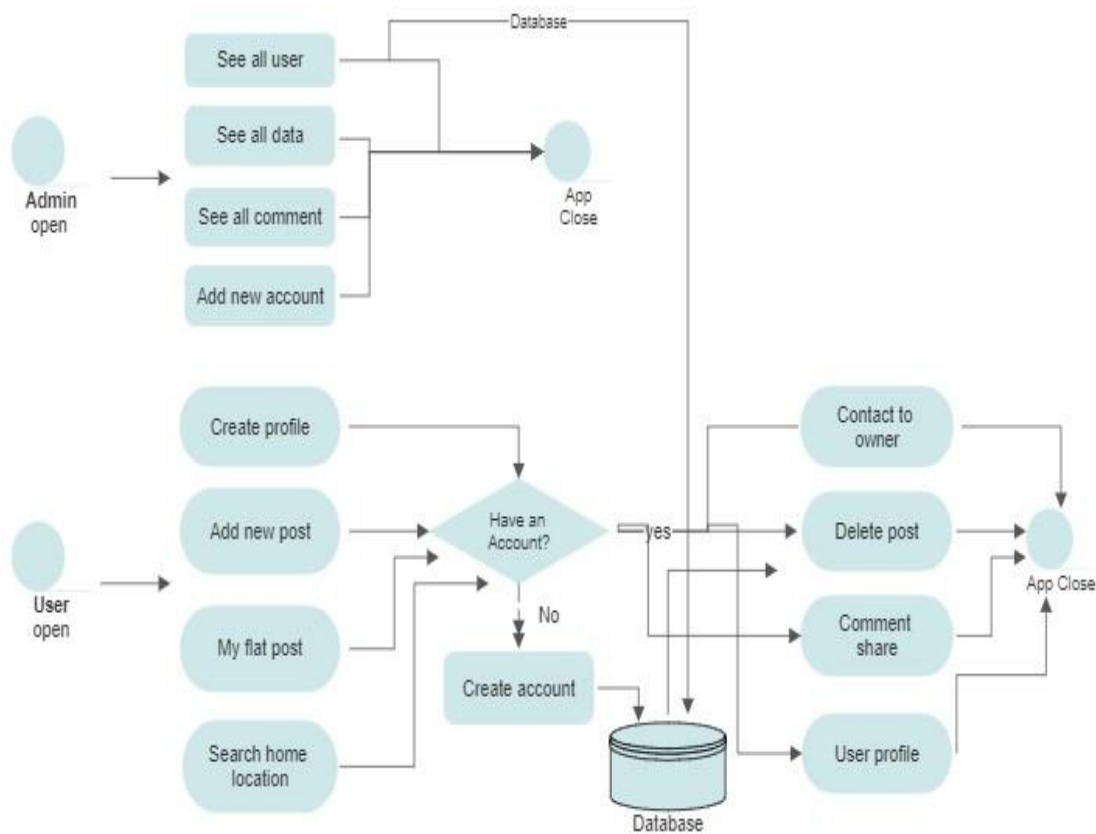


Figure 3.1: Service Process Model



### 3.1.2 Block of Diagram

A special type of flowchart used in designing to conceptualise a system at a deep level is called a block diagram. These diagrams are helpful for resolving technical problems and are used to plan new systems or to clarify and enhance existing ones. [8]

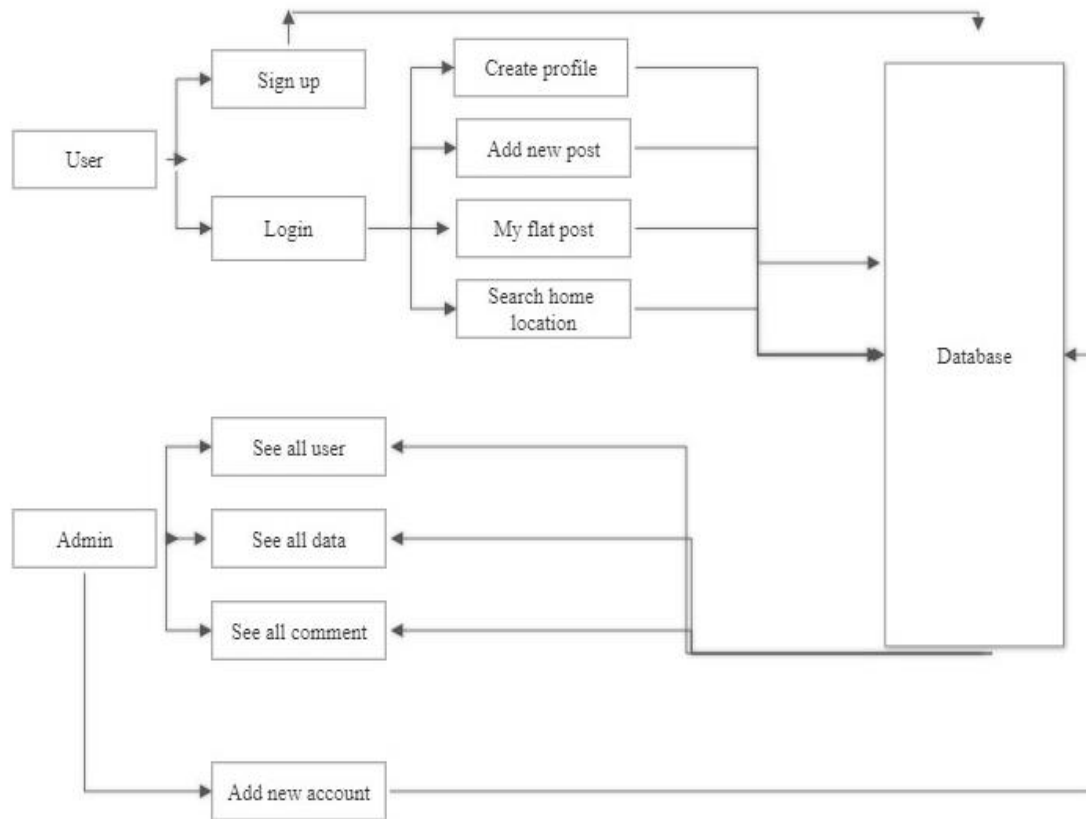


Figure 3.2 Block Diagram of system

### 3.2 Collection and Analysis of Requirements

At first step in coding is requirement analysis and collecting. There are different kinds of requirements, including functional and non-functional requirements. The app's functionality, features, and user interface are its functional requirements. Performance, responsiveness, security, availability, and dependability are non-function criteria. The practical tools, I spoke with my senior and junior university classmates, explained my idea, and showed them a prototype of my app. They then advised me that if I implemented this

approach, it would look beautiful and be useful. My respected supervisor, sir, has given me many more pieces of advice regarding functional requirements.

### **3.2.1 Possibility Analysis**

The most crucial study for developing an app is this one. After choosing an idea, you must do a possibility analysis of the project proposal. That indicates whether your idea is original, suitable for your target market, stable and user-friendly, and able to address a user problem. It also indicates whether your service is practical for customers. Let's say you spend well in the development of a fantastic software for Bangladeshi van drivers with the intention of using it to help them with a worthwhile issue. However, in this instance it doesn't matter how good or functional your programming is if your intended audience cannot utilize, it in any way. Before creating this app, research the van pullers in the area to find out how many of them own smartphones, whether they use the internet, whether they are interested in using this service, and other information.

I conducted a possibility analysis before implementing my plan. First, I performed a search in the Google Play Store to see if there was a similar platform there and to see whether the functional aspects of that app were identical. So according to my opinion this platform has different features like any other platform and we can see that there are many ads for house rent on Facebook but there is no understanding about the house rent details, so the function and features of this app. I can get all kinds of facilities. Since my idea is unique, I asked every departmental student if they would find this app useful. What features will be included in the application and how easily they will be able to share it.

The user activity, such as how many users are using the app or website at once and how much traffic the service receives, must be taken into account while conducting a possibility Analysis for an Android or web application. Because the maximum number of users who can use the service concurrently must be designed into the database and the database capacity. In that situation, a smaller number of users than usual do not use this app. I created the app database, database storage capacity, and user traffic speed for that reason.

### 3.3 Modeling and Description of Use Cases

A use case is a diagram that shows how a client will apply the framework to achieve his business goals. An object or a utilitarian is mentioned in the application. And utilization, case graph is composed of two main sections. Anyone who acts in a framework is an entertainer in a usage case graph. [8]

Following the use case diagram shows:

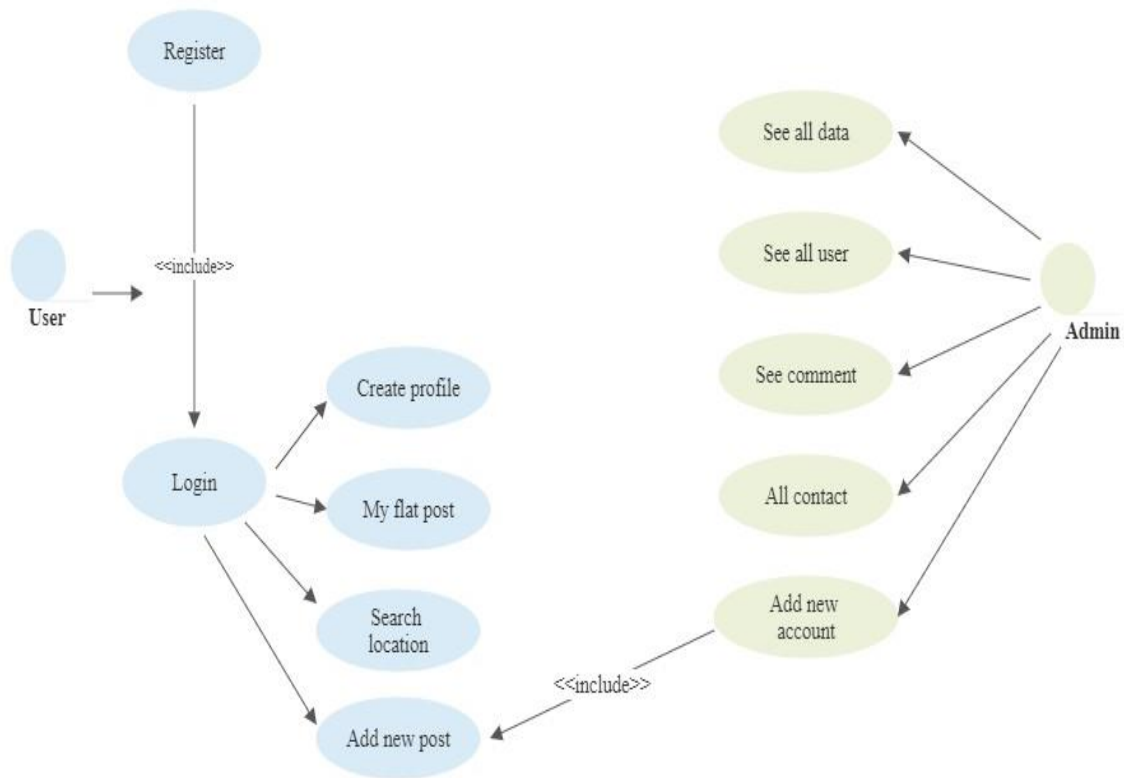


Figure 3.3: Use Case Diagram

### 3.4 Inductive Data Model

Logical data models, in their most basic sense, are diagrams that show how data is stored in databases. All entities and relationships between tables are shown in this diagram, which is known as an E-R diagram. [8]

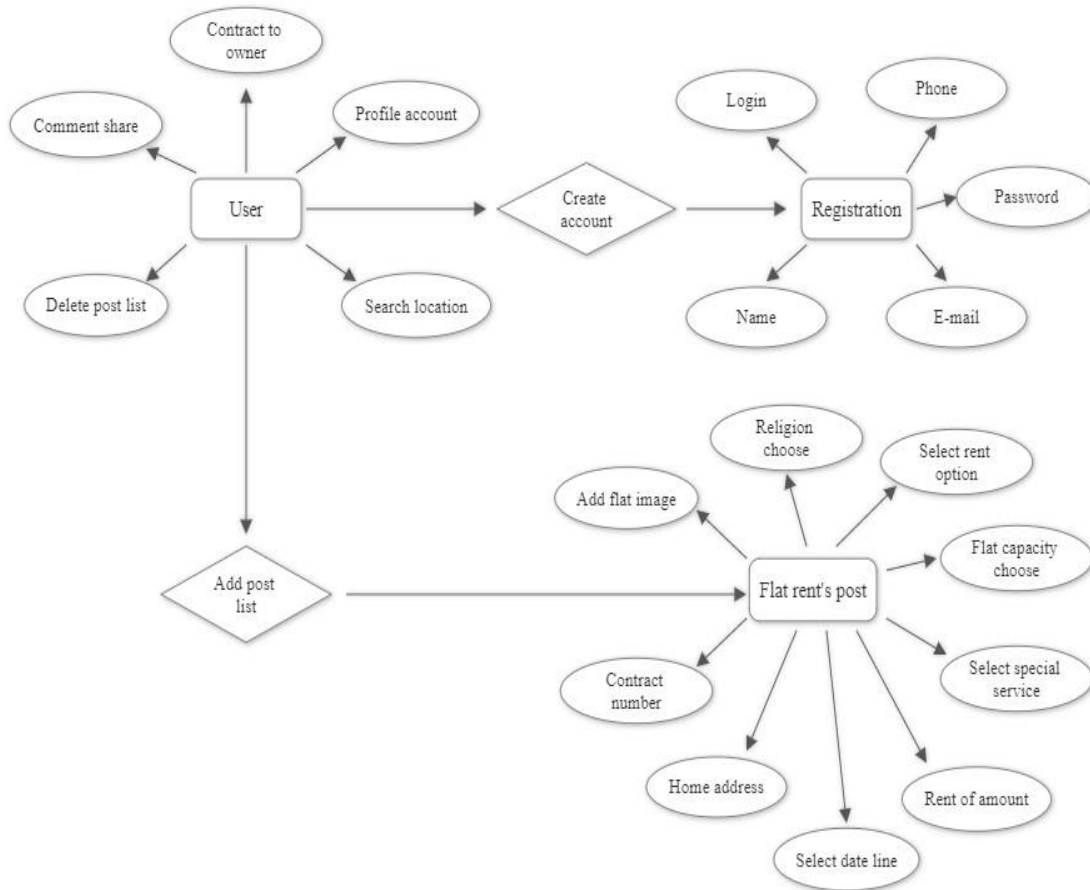


Figure 3.4: ER Diagram of System

### **3.5 Design Conditions**

The design of needs comes first when creating an application. Because, the design of the requirements determines every process. The following are a few crucial requirements:

- After creating an account, the user can access his profile.
- The user may remove his own advertisement after it has been posted.
- To exit the app, logout or click Exit.
- Include pictures when renting a home.
- Look for rental homes in certain areas.
- Inform the homeowner with information.
- Directly from the app, you can call or mail.

## CHAPTER 4

### DESIGN OF SPECIFICATION

#### 4.1 Front-end Design

The mobile application's most crucial element is this one. The user can immediately engage with other users or a person thanks to the presentation layer's work. People of days prefer quick and simple things. I therefore made an effort to create a user interface for the app that is very interactive and user friendly. For a good user experience and simple interaction, I occasionally utilize, Google Material Design. The home page for this app is shown in figure 4.1. Here is the list of all categories of houses for rent. Where user can find all kinds of facilities in this list to find his house, even can find house in different areas of his choice. User can go from this home page to other page.

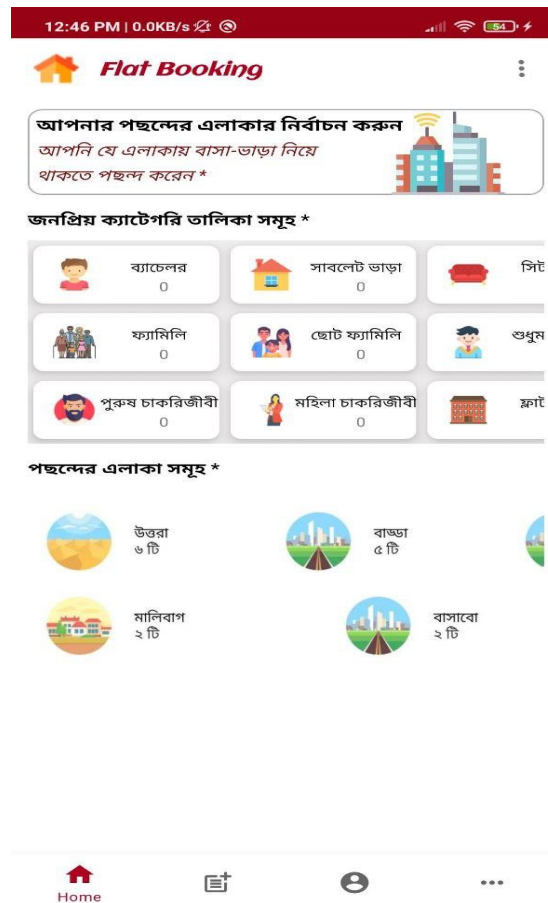


Figure 4.1: Home page

In fig 4.1, on this homepage, the user can click to find the list of houses of his choice, here you can find all types of house ads.

2:43 PM | 0.1KB/s | 66%

Dhaka medical college road , Dhaka medical college , Dhaka-South , Dhaka

road number21 , Bashundhara Block D , Dhaka-South , Dhaka

sukrabad 21, number flat. , Dhanmondi-32 , Dhaka-South , Dhaka

2:43 PM | 0.1KB/s | 66%

**\*\* আপনার বাসাবাড়ি হোক সুন্দর ও নিরাপদ পরিবেশে \*\***

**আগামী 1/10/2022 মাসে Room Rent এর বাসাভাড়া হবে \***

Address : sukrabad 21, number flat. , Dhanmondi-32 , Dhaka-South , Dhaka

**বাসা ভাড়ার কার্যপ্রণালী বর্ণনা :-**

Room Rent	তারিখ: 1/10/2022
২ টি ওয়াস রুম	২ টি বারিন্দা
৩ টি বেড রুম	ফ্লট: ৪ তলা
পোস্টদাতা: ম্যানেজার	ইসলাম ধর্মের

**বাসার স্পেশাল সুবিধাসমূহ :-**

গ্যাস সুবিধা, WiFi সুবিধা, লিফট সুবিধা, গাড়ি পার্কিং সুবিধা, সিকিউরিটি গার্ড সার্ভিস

**মাসিক ভাড়া :-**

\$ 11,000

**পোস্ট বিজ্ঞাপনদাতার ফোন নাম্বার :-**

01840084581

**বাসা সম্পর্কে অথবা ফ্ল্যাট সদস্য সংখ্যার মন্তব্য :-**

Figure 4.2: All categories list

On this “Add post” page user can fill this list to book the house and pay the house rent. And in this list, there are all types of facilities of house rent, capacity of house rent, date from which the house will be rented, location of house or house address, you can write comments about the house on this page, you can give contact phone number and You can upload pictures for home.

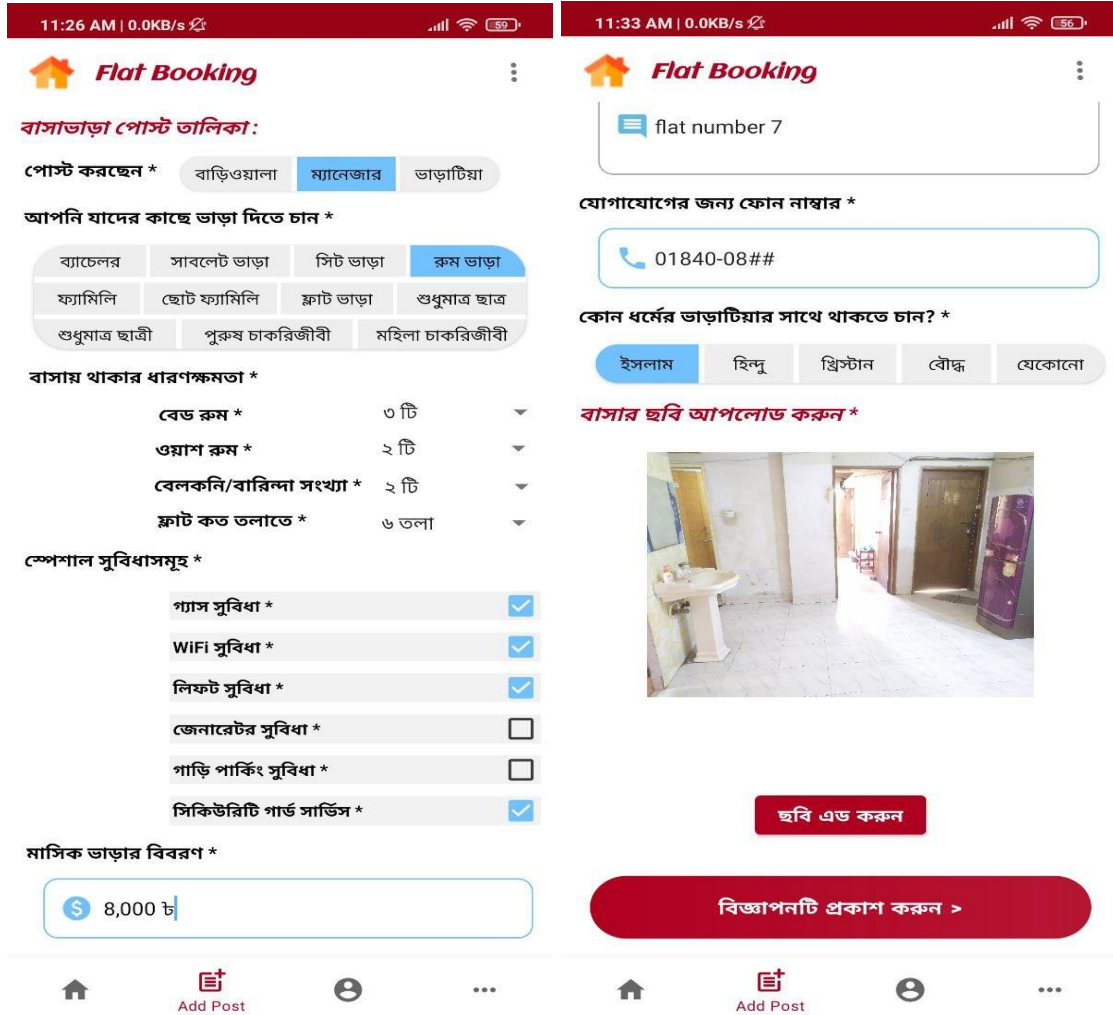


Figure 4.3: Add Post



In this profile page user can see this page after creating his own account, moreover he can't see this page and he can't post home rental ads until he creates his own account. The user of this page can save his own profile image and delete the ads he has posted for rent, even log in and log out from this page.

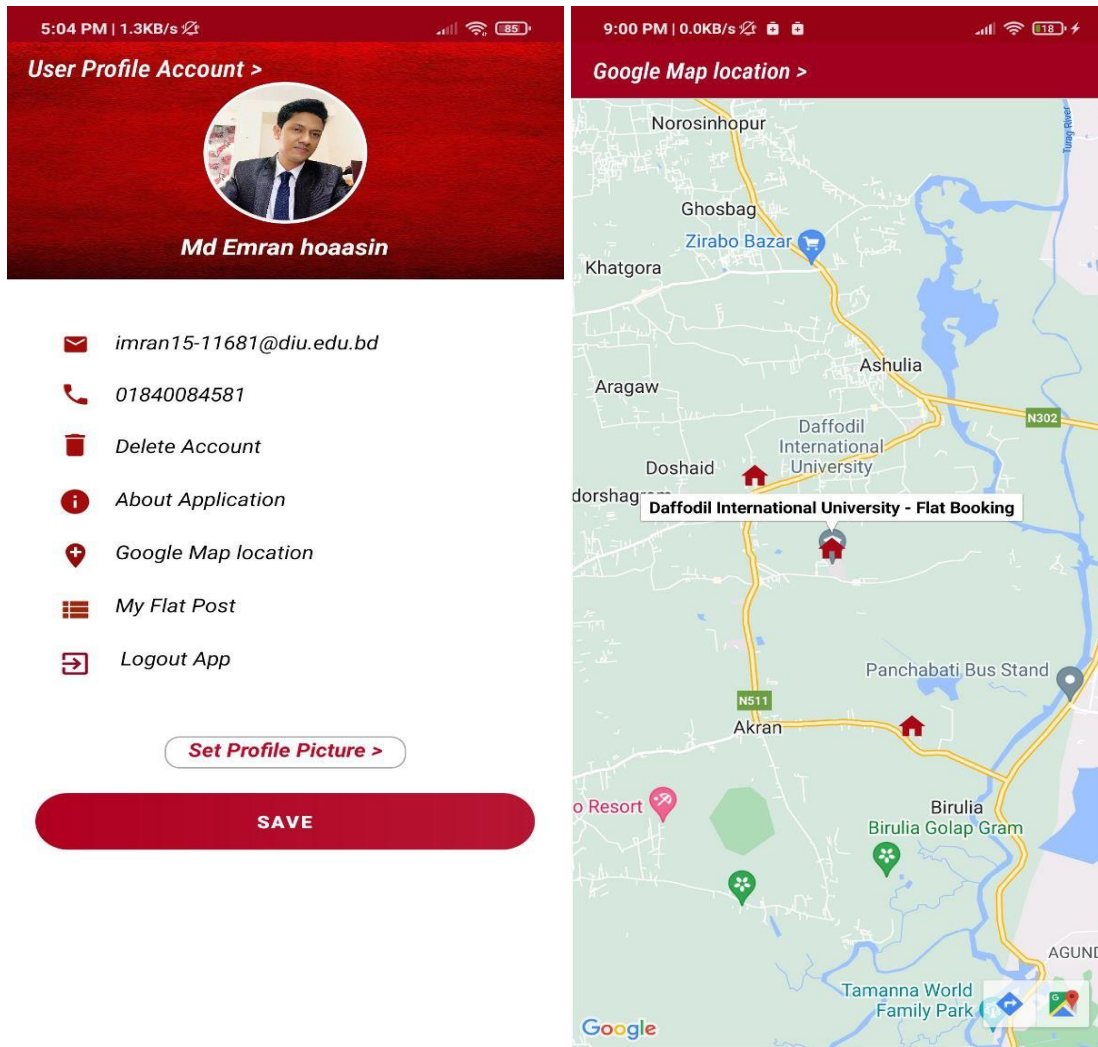


Figure 4.4: Profile Account and Search Home Location

This more page user can know all kinds of information about house rent rules and even can see your ads list after posting house ads. Even if a person has posted any irrelevant information or advertisement, then you can report that problem by commenting.



Figure 4.5: Excessive page

In fig 4.5, by going to the problem submission option on this page, the user can comment on the problem faced by the user and let the admin of this app know if any problem is detected in any feature.

1:57 PM | 2.6KB/s

বিস্তারিত >

**FOR RENT**

### সমস্যা সাবমিট করুন

ফ্ল্যাট বুকিং অ্যাপ ব্যবহারকারী হিসেবে আপনি কোন সমস্যার সম্মুখীন হয়ে থাকলে এই ফর্ম এর মাধ্যমে আপনার সমস্যা গুলো শেয়ার করতে পারেন।

**\*প্রয়োজনীয়**

ইমেল \*

আপনার ইমেল

আপনার নাম \*

আপনার উত্তর

ফোন নম্বর \*

আপনার উত্তর

Figure 4.6: Share comment

The user interface of to access some crucial services, create an account using your name, email address, and phone number.

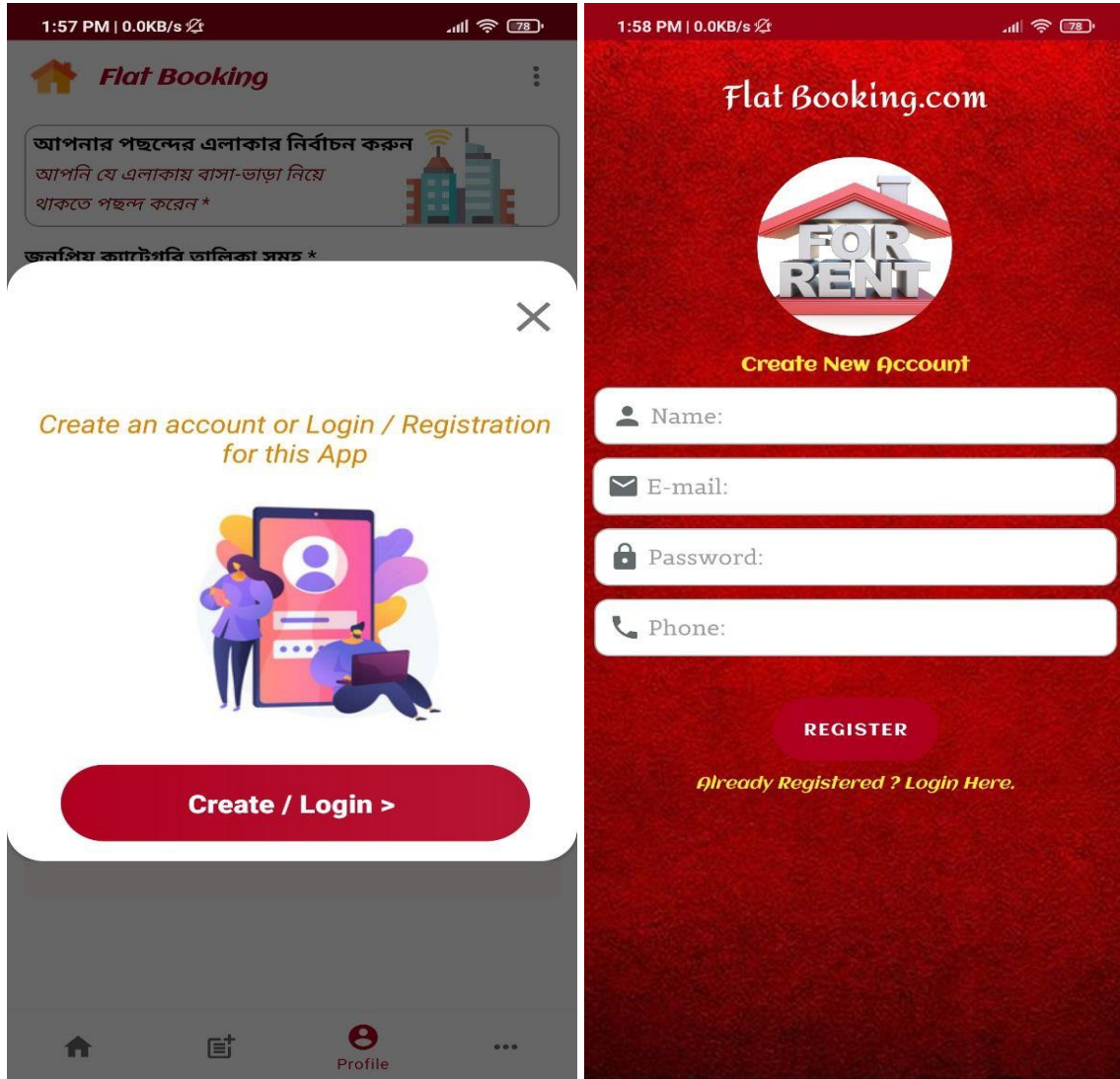


Figure 4.7: User Login

## 4.2 Back-end Design

The design XML code for "All categories" features is shown here.

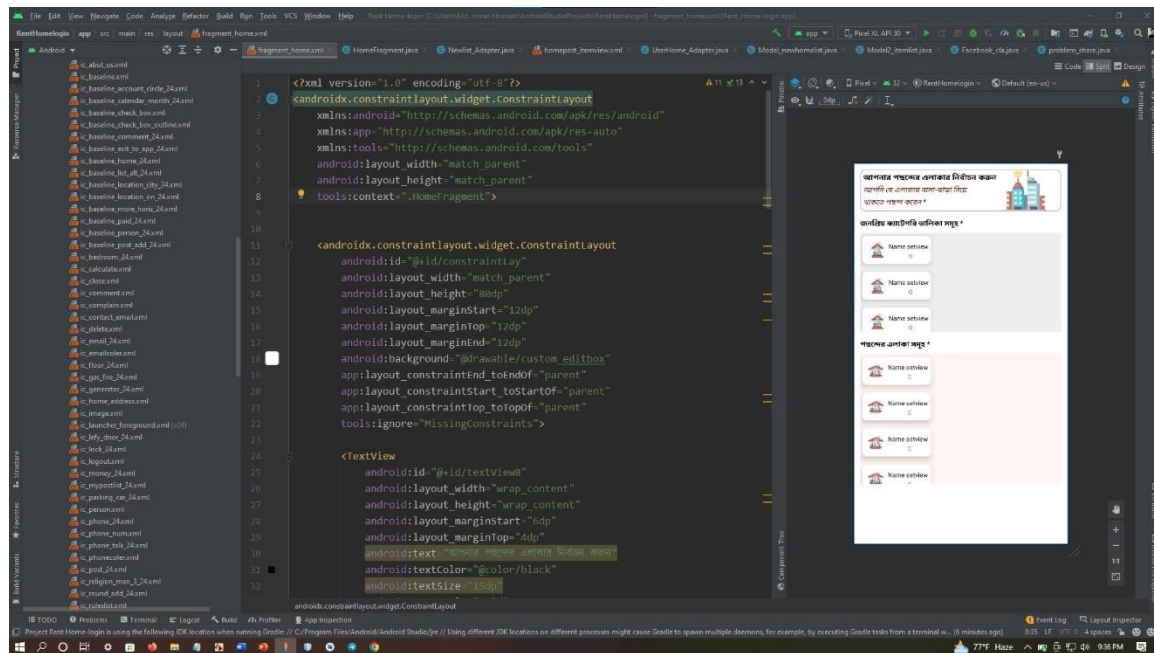


Figure 5.1: All categories xml code

XML code for a Add post is shown in this screenshot.

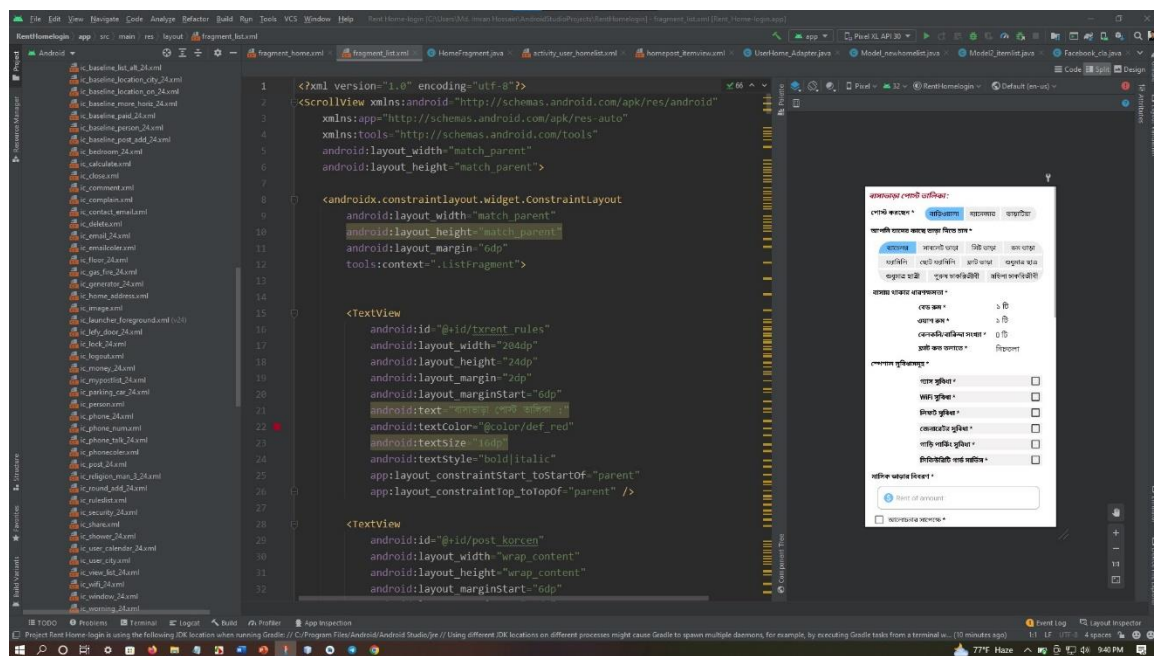


Figure 5.2: Add Post xml code

The user post XML code is seen in this screenshot.

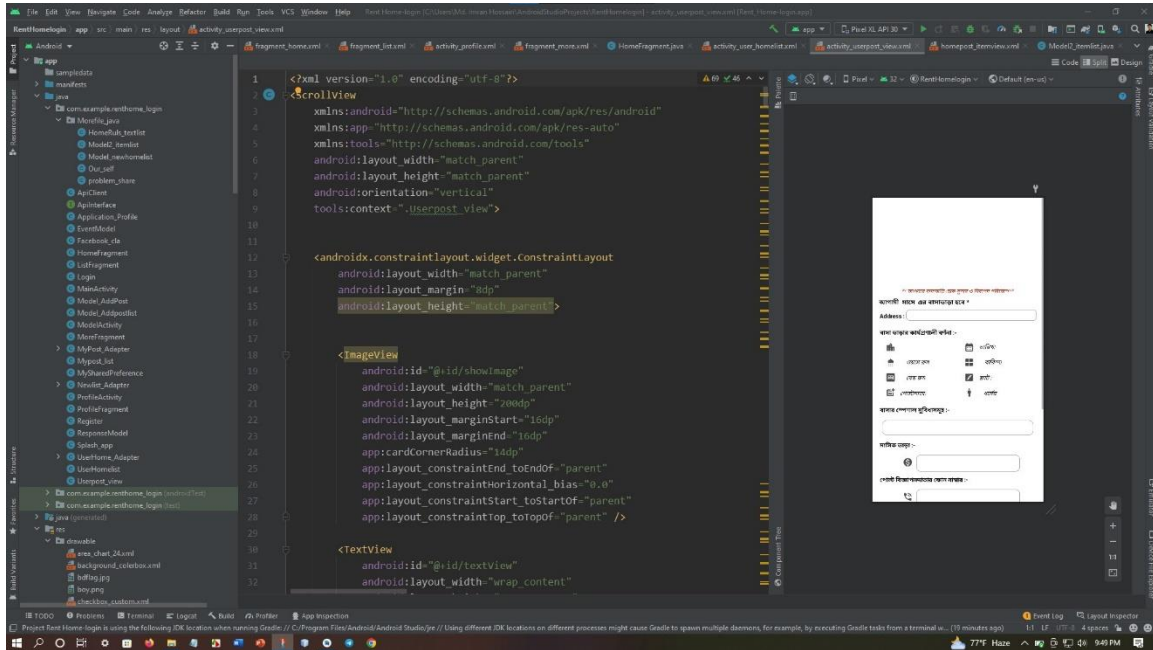


Figure 5.3: User post xml code

In "More page" features, the design XML code is as follows.

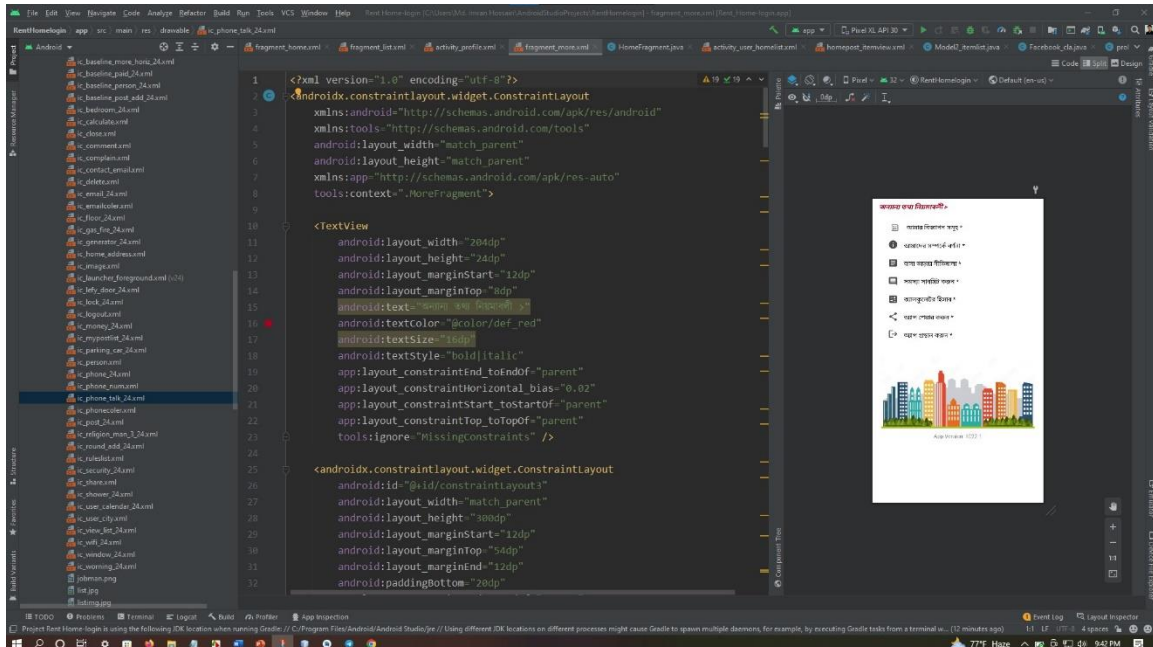


Figure 5.4: More page xml code

### **4.3 User Experience (UX) and Interaction Design**

The user's whole experience while interacting with a product is what UX design is all about. The cycle of interaction design allows for a thorough understanding of client problems, measurement of those problems to determine the typical results, action based on those results, and permanent resolution of the problems. Making products that help clients achieve their goals in the best and quickest way possible is the purpose of the intuitive design strategy. The essential concept of interaction design is the framework for customer and substance communication. When people think about a cooperation plan, programming components like sites or applications are frequently on the list.

### **4.4 Requirement of Implementations**

One more programming language, such as Java, PHP, or SQL, as well as Android Studio, a Google opensource platform, are required to implement this app. A third-party API or library is also included for the implementation of all requirements.

#### **4.4.1 PHP**

The web server uses MySQL as a database, and PHP is used to get data from the database. Our application will communicate with the PHP page using basic rules, and PHP will then visit the MySQL database, obtain the results, and communicate those results back to our application. PHP supports a variety of databases including MySQL, Microsoft Access, and Oracle and runs on a variety of operating systems including Windows, UNIX, and Linux. PHP is able to create, read, write, delete, and close files on the server in addition to collecting form input. Additionally, I utilize, PHP to create Restful APIs and connect apps to databases. This language is used by the majority of developers for their API. NodeJS is also used occasionally to create APIs.

#### **4.4.2 Java**

The most common programming language used by developers to create native apps is Java. Furthermore, a variety of languages, including Kotlin, Flutter, and Dart, can be used to create apps. Java was employed in my application. Programming in Java is done with

objects in mind. Java ME is the name of the portable version of Java. Most smartphones and tablets support Java ME, which is reliant on Java SE. For developing and running programming targeted to embedded and mobile devices, the Java Platform Micro Edition (Java ME) provides a flexible and secure environment. Applications created with Java ME are adaptable, secure, and can make use of the device's local capabilities. Java ME tends to the restrictions connected with creating programming targeted for mobile devices. Fundamentally, Java ME is designed to evaluate the ability of running programming on devices with limited amounts of RAM, display, and processing power. The recommended methodology is to use the Java programming language and the Android SDK, while there are other ways to build apps for Android devices.

#### **4.4.3 SQL**

Structured Query Language, or SQL. SQL is employed to make a connection to a database. It is ANSI's recommended language for frameworks used to manage social information bases (American National Standards Institute). To carry out tasks like updating data on a data set or recovering, SQL expressions are used. Oracle, Sybase, Microsoft SQL Server, Access, Ingres, and other common social database management systems all use SQL. Although most data base frameworks employ SQL, most of them also offer their own, more limited expansions that are often only used on their framework [3].

In any event, almost anything that needs to be done with an information base may be accomplished using the normal SQL instructions, such as "Select," "Addition," "Update," "Erase," "Make," and "Drop." You will receive guidance on the fundamentals of each of these orders via this instructive exercise, and you will also have the opportunity to put that advise to use by using the SQL Interpreter.

#### **4.4.4 Restful API**

A REST API is a collection of operations that programmers can use to send requests and get replies using the GET and POST commands of the HTTP protocol. In this instance, it may also be said categorically that a RESTful API is an application programming interface (API) that employs HTTP requests to GET, UDATE, POST, and DELETE data. Retrofit



is a Java and Android REST Client library that may be used to send an HTTP request and manage the HTTP response from a RESTful API. Retrofit, which was created by Square, may also be used to obtain data in formats other than JSON, such as Simple XML and Jackson. Before moving on, let's briefly describe REST Client and REST API in the context of our particular circumstance.

#### **4.4.5 Design by Google Material**

Material design is a plan language developed by Google that, at its core, is a tremendously complicated and well described set of principles to help both creators and end-clients copy Google's work and to clarify why things in Google appear and react the way they do. However, I also adhere to Google Material Design principles in my app, such as content spacing, text size, text colour, margin, grids, scale active button, app colour, and so on. That implies that the material design offers an app that is completely garish [2].

#### **4.4.6 API Level**

Developers who can communicate with a device's intrinsic capabilities and usefulness have access to its API levels. Usefulness grows as the API level increases (albeit some of it can get expostulated). In order to prevent specific features or libraries from functioning improperly, an app developer must select the lowest possible API level. Android 11 is the most recent api level (API level 31).

# CHAPTER 5

## IMPLEMENTATION AND TESTING

### 5.1 Database Implementation

My programming made use of MySQL. This information base management framework is used to create and manage the information base. It provides an organized, way to retrieve, create, edit, and delete information [4].

For the purpose of creating an easy stage for ID and capacity, databases hold information of all types of data. Data access is now easy, quick, and flexible for the customer thanks to information bases. When constructing a table, related records are examined. The table's structure, which includes the table name, section names, a key that is new to us and a key that is necessary, must be put together in order to arrange and store information.

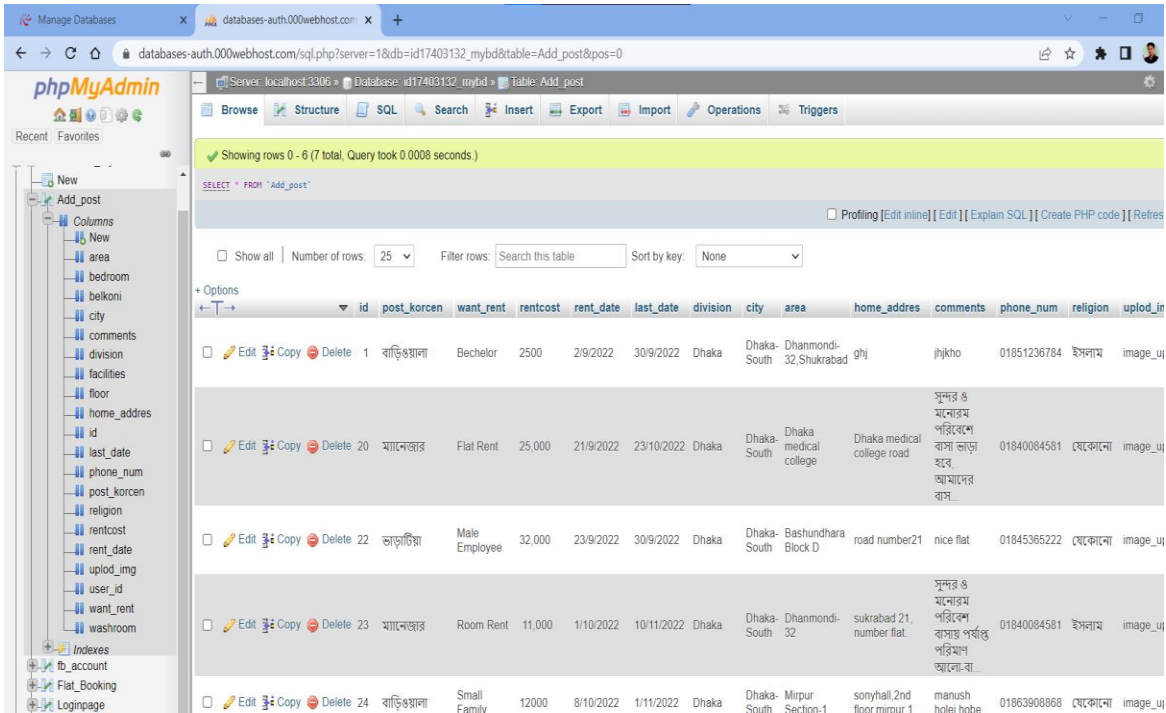


Fig 5.1: Database of MySQL - i

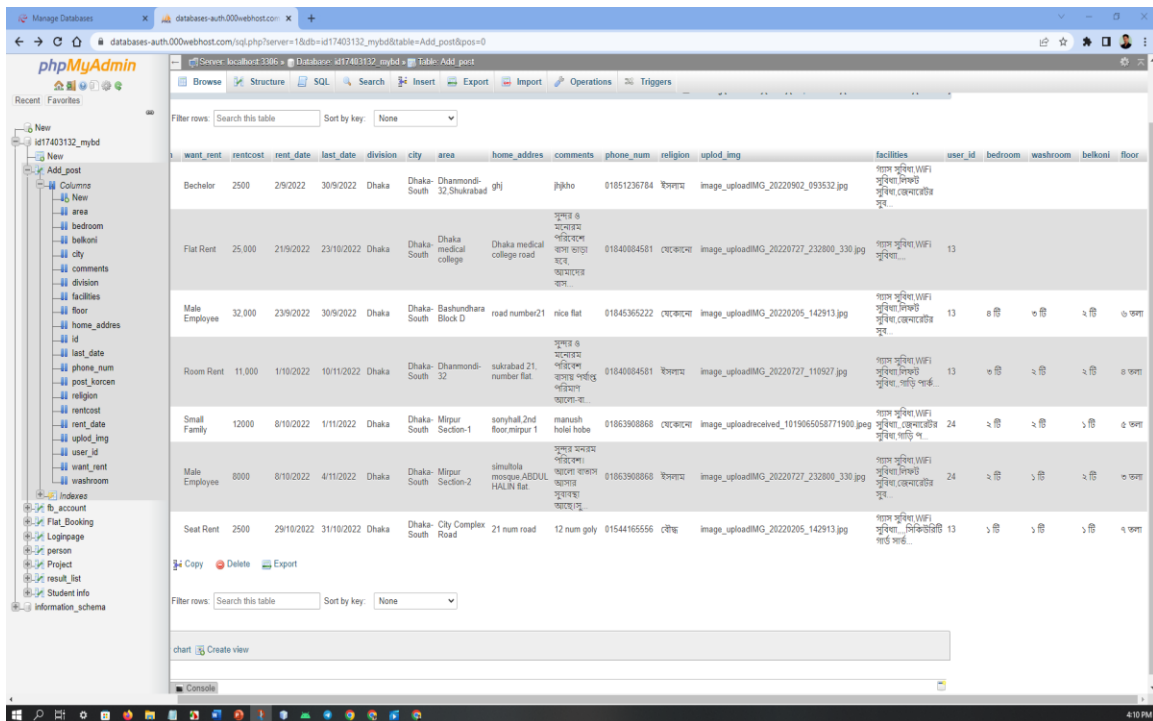


Fig 5.1: Database of MySQL - ii

### 5.1.1 Database in Firebase

Google provides this database. It is more dependable, quick, user-friendly, and has a real-time database. One may build a project and a database using a Google Gmail account. Firebase offers a wide range of services in addition to databases, including cloud storage, Firebase Machine Learning, cloud functions, user authentication, hoisting, cloud messaging, push notifications, test lab, and more [3]. One of the top platforms for back-end services for any project is this one. But those services are not at all cost-free. You must pay Google in accordance with their payment policies after exceeding the limit. The Firebase database is a parent-child tree-style database in the meanwhile.

In the "Flat booking" app, I've been employing two services, including user identification via a phone number and one-time passwords sent through email or phone verification. There are other forms of authentication, such as those using Facebook, email, GitHub, Google, and other services [3].

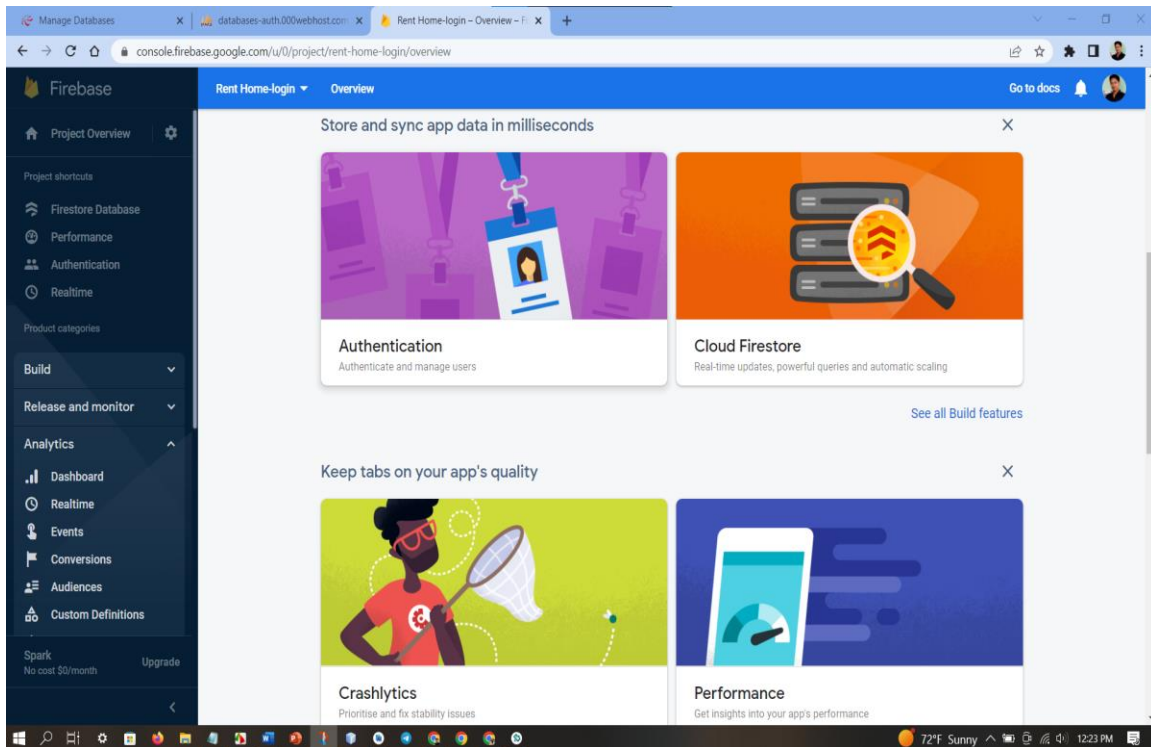


Fig 5.1.1: Firebase in database

## 5.2 Front-end Design Execution

The most useful feature of front-end design is responsive design, which ensures that the layout will be consistent across all phone display sizes. In my programming, I limit the user's ability to change the layout. [6] This layout is responsive to all display sizes. When I utilize, linear layout with weight sum, the design is also responsive. For mobile applications, the front-end design is crucial since this is where users always engage. They won't be able to see the code on the back end. Therefore, no matter how well written your code is, if the app's design is poor, no one will use it.

**Android Layout design:** This Layout editor gives you the ability to layout assembly formats by dragging UI elements into a visual plan manager rather than manually writing design XML. The design validator may view your format on different Android devices and variations, and you can gradually scale the design to ensure that it works well on different screen sizes.

**Constrain layout design:** You have a lot of locations to store things with Constraint Layout, which is now the default format in Android Studio. They can be made subject to regulations, to one another, or to their respective compartments. This enables you to form huge, complex, dynamic, and responsive viewpoints in a chain of command. Even actions are supported by it.

### 5.3 Testing the Application

This test Case table of the “Flat booking” user app features are determined by user action:

**Table 5.1: Test Case Table for User of “Flat booking app**

Case Test	Input Test	Output Expected	Actual Output	Result	Tested On Date
Connection Database	Test API	Successfully connected	Connection is Successful	Passed	2022-09-04
Create in Account	Test in edit test filled, and Insert API	Successfully Created	Created Successful	passed	2022-09-04
Login	login API and Test in edit test filled	Login Successfully	Successful login	passed	2022-09-04
Add Post list	Describe all information to rent the house	Will show all information	Add Published successfully	passed	2022-09-04
User comment	User comments or information	Will show information	Showed message	passed	2022-09-04
User profile Account	User Name, Emil, Phone Number and image	Will show profile account	Showed waring message	passed	2022-09-04
Delete Post list	Delete user post list	Successfully deleted	Deleted Successful	Passed	2022-09-04

**Table 5.2: Test Case Table for Admin of “Flat booking app**

Case Test	Input Test	Output Expected	Actual Output	Result	Tested On Date
See all user account	Get user API	Successfully Showed	Showed Successful	Passed	2022-09-04
See all list data	Get flat list API	Successfully Showed	Showed Successful	Passed	2022-09-04
Add new Flat booking	Insert API	Successfully Inserted	Insert Successful	Passed	2022-09-04
See all comments	Get all information	Showed Successfully	Successful Showed	Passed	2022-09-04

The test Case table of the Flat booking Admin App features are based on admin activities

#### **5.4 Results and Reports of Tests**

A test reports are required to document testing results in a formal manner, providing a rapid opportunity to evaluate testing outcomes. The natural or operational situation must be shown in order to obtain correlation and warning outcomes with the item. The outcome will be recorded in a file. The test outcome report is what it is known as.

- For user engagement, the best UI performance.
- Quick data processing.
- Simple comment sharing.

## **CHAPTER 6**

### **SOCIAL, ENVIRONMENTAL, AND SUSTAINABILITY EFFECTS**

#### **6.1 Environmental Effects**

The development of technology has made our social environmental structure easier nowadays. As you can see, we may purchase our everyday requirements online in a remarkably short amount of time. However, if we take a closer look at the social structure of today, we can notice that posters and signboards are mounted on the walls to advertise the availability of family houses, student housing, and bachelor housing. Additionally, it is a waste of time and resources to display posters and signboards in various locations. So, we may book homes online to save time and money. Through "Flat booking" applications, you may now find your preferred home.

#### **6.2 Social Effects**

We can observe that the renter has a difficult time obtaining a rental home as a result of persistent severe weather. If you encounter this issue, you may book a rental home in your selected nearness from the comfort of your home using our online platform.

#### **6.3 Ethical Issues**

In terms of ethical problems, the problem faced by the tenant is that when a tenant first comes to the area or neighborhood to rent a house, he does not understand anything about how to rent a house. Again, many times we see that due to adverse environment we have to face many problems to find house rent, to deal with such problems we can book house rent sitting at home.

#### **6.4 Plan for Sustainability**

Always consider the viability of a strategy before developing an app or undertaking a project [5]. The most crucial component for an app in the future is this. If the strategy or concept fails, the programming won't function at all in the future.



Sustainability depends on the app's target market, culture, setting, and fashion. The flat booking app provides constructive services that provide all kinds of facilities for the common man.

## **CHAPTER 7**

### **SUMMARY AND FUTURE DIRECTIONS**

#### **7.1 Discussion and Implication**

The "Flat booking app" is a platform for online taking and provide housing rentals. You may access a variety of services through this platform for both giving and taking out property rentals. For instance, a tenant can locate the rental house of his choosing wherever he is residing. Even if a landlord posts a rental advertisement, hundreds of individuals will view it, and the owner can trade contact information with the tenant. However, if we take a closer look at the existing social structure, we can see that hundreds of rental homes are posted on the walls in various locations and environs for rent, and both sides must spend time and money to hang these ads, which is challenging for many of us. Additionally, these lodgings and signboards are used just once before being abandoned and left lying around, harming our environment. We can observe that inclement weather causes the to-let or signboard to become wet with rain, rendering it later on unsuitable. On the other hand, we may obtain a variety of amenities at home thanks to the usage of internet platforms. By seeing the images of the property on this platform, I can even acquire a sense of the surroundings of the home. Therefore, with this internet platform, you can easily choose a rental home in a lovely and comfortable setting through these apartment booking applications.

#### **7.2 Possibility of Future Developments**

- Use your email address, phone number, and password to log in.
- Users who download the app from the Google Play Store can share it with their friends.
- Visit the rental house ad post and publish the ad by filling out the required information.
- The app's front page enables users to look for rental properties of their choice.
- After publishing an advertising, the user can delete it.
- Logout or quit the app to close it.
- To rent a house, add photographs.

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