

Accoest

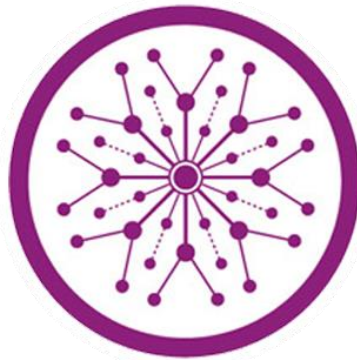
(Guest Accommodation)

Final Year Project

Session 2018-2022

A project submitted in partial fulfillment of the degree of

BS in Computer Science



Department of Computer Science

Faculty of Computer Science & Information Technology

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*The candidates confirm that the work submitted is their own and appropriate credit has been given where reference has been made to work of others

Plagiarism Free Certificate

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Project Report

Accoest (Guest Accommodation)

Change Record

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APPROVAL

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HEAD OF THE DEPARTMENT

Comments: _____

Date: _____ Signature: _____

Dedication

I dedicate this project to God Almighty my creator, my strong pillar, my source of inspiration, wisdom, knowledge and understanding. This project is dedicated to our Parents who have never failed to give us financial and moral support, forgiving all our needs during the time we developed our system. This project is dedicated to our Asdviser Mr. Muhammad Fawad Nasim, without him continued support and counsel we could not have completed this process. Lastly, this project is dedicated to Superior University where we have taken support and environment to complete this project.

Acknowledgements

I am really thankful to my supervisor Mr. Muhammad Fawad Nasim from Superior University Lahore for his guidance, inspiration, constructive suggestion and encouragement that helped us throughout the evolution of this project. He has taken innumerable efforts to go through the project and make necessary corrections as and when needed. Finally, I would like to thank the beginning teachers, mentor-teachers and administrators in our university that assisted me with this project. Their excitement and willingness to provide feedback made the completion of this project an enjoyable experience.

Executive Summary

A majority of unpleasant issues faced by guest and host seem to grow due to lack of communication. We are developing a android based application with some astounding highlights. The primary thought is that it is a Android app named as Accoest. Accoest venture helps the clients in finding house rooms in different cities when they want to travel or make tour plans. The fundamental reason for this venture is to help the client to effectively and to provide feasibility as it is the world of technology. Fortunately, building a positive relationship doesn't take much effort and it all starts with one basic idea communication. Accoest provides the solution by offering the ability to share issues between guest and host which leads to rapid issue resolution and fewer misunderstanding. The goal of the software is to create a better relationship between guest and host. The Accoest app is designed to support guest and host by enabling them to document and communicate their issues in regards. It helps the guest to make booking and it also helps the host to keep track of bookings book by guest. In this manner a person can rent a room as per night bases according to his feasibility.

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Chapter 1

Introduction

Chapter 1: Introduction

The current paradigm shifts in technology field, there is a quick need to embracing and appreciating the power of technology. Rental house, room and apartment management has become very important factor in modern society hence there is a need to have a Guest accommodation management system. House has a very central importance to quality of life with considerable economical, social, cultural and personal significance. That's why we are introducing the Accoest (Guest Accommodation application).

1.1. Background

A house is a dwelling-place used as a permanent or semi-permanent residence for an individual, family, households or several families in a tribe. Rent a room in your house that is always available for short-term occupancy by paying visitors. This room is used solely as a hotel or similar establishment but it is not a dwelling unit. Home is one of the very basic need for human being. From the four need of human being as its need people who have no home may live through paying rent for other people who have more houses, flats etc. But here what we have to understand is that the relation between the person who rented house and the renter. There are different renters who have different behavior that show different characteristics on rent people. Some renters may have a positive relationship other may have negative. Here those renters who have bad behavior may show unpleasant or bad behavior on rented peoples. But here what we have think that how those rented people for renter that have bad behavior we live together. Renting of their own house may have advantage as well as disadvantage. On the other hand the rented may get difficulties or disadvantage from that particular house are payment of period calls may enter into bankruptcy, the renter may ask him to leave his house with an expected time. He/she may not have full of freedom to wonder in the compound of that particular house, even he/she may not have right to enter after passing of the entrances time. House is a necessity, and for some people support is a necessity too. Our system considered this problem and will solve this problem.

1.2. Motivations and Challenges

The current situation shift in technological field, there is a need required to embrace and appreciate the power of the technology. Guest and host sector remain vigilant to face the challenges of change by employing a new strategy that facilitates easy management of Rental Room, flat or houses. Hence there is need to develop a rental management system that can simplify work for the rental manager so, that all their work can be done efficiently and effectively. House has a central importance to quality of life with considerable economical, social, cultural and personal significances. House play a very huge role in revitalizing economical growth in the country, with shelter being among key indicators of development. The universal declaration of human right gives one of the basic human right to a decent standard of living, central to which is the access to adequate housing. House as a basic human being need demand that urban dweller should have access to a decent house, defined as one that provide a foundation for rather than being a barrier to good physical and mental health, personal developments and fulfillment of life objective. Everyone who is a person want to live in a house although he is a visitor or a local of this city. They want to have a house where he can live and survive their living standard The focus of this research project is basically managing housing for low income, medium and high incomes households or what is commonly known as affordable house for living. "Affordable living" is a term used to describe individual's capability to pay for certain product or services because their income is enough to do so. Although the term "affordable housing" is often applied to rental housing; that is within the financial means of those in the lower income range of a geographical areas, the concept is applicable to both middle- and high-income individual. Challenges are that awareness of the system will play a vital role and the insurance of the person who will rent a house. Developing rental houses comes with many advantages especially to the Landlord who are able to increase their profits through rent paid by the tenants. Increasing number of Visitors and owners makes management difficult especially for the owners who are losing huge sum of money through visitors who evade rent but through this application they have a record of the visitors and ask the money before living in their house.

1.3. Goals and Objectives

The following are the project objectives:

- Develop a Accoest app that allows the user to view host data as well as houses record.
- Develop a system that allow the user to add, edit, search and delete data from the database.
- To study and analyze the requirement specifications of the rental system. To produce the SR Specification of the system.
- To produce the Document of software design of the system.
- The time of the user will be saved, and he will have a complete knowledge about what he will be going to rent.

1.4. Literature Review/Existing Solutions

There are many systems similar to this for example Zameen.com and Lamudi.pk but this system is based on different idea and trend which is rental rooms for Paying Guests. This review addresses have a number of research question: a reviews of the literature on definitional issues on housing affordability; or an assessment of the nature and extent of the housing affordability problem; a review of policies and programs to address the housing affordability problem In Pakistan there is no separate proper platform which is made for visitors. So, we providing separate platform for this problem.

1.5. Gap Analysis

These debates and controversies in cities around the world provide significant circumstantial evidence that short-term rental are implicated in gentrification. Accordingly, we are now proceed to demonstrate, there is fire to go with this smoke. Our argument is that Accoest and other facilitators of short-term rental housing are indeed systematically driving gentrification and displacement. Accoest simultaneously opens and provides a means for closing new technology-driven rent gaps, but it does so by raising potential rentier income without any need for redevelopment, in a geographically uneven fashion, concentrating in neighbourhood with extra-local tourist appeal which do not necessary overlap with area gentrifying due to more traditional state or market factor.

1.6. Proposed Solution

The following features are being provided through the system:

- This project integrating all Operation process in the computer to synergies the important resources of Materials and Money. The department people can gather the needed information at their desk without any manual burden.
- This project reduces manual burdens and automates the functions of various departments.
- In manual process, to decide the Room booking details, vacating details have to be verified each time. But with this project these processes are automated and no manual checking is required. This project reports can be automatically generated. The process of creating report are manually very tedious which are made very easy and automatically through the project.
- The reports produced help in making management decision easily.
- The project eliminate many difficulties saving a lot of time and energy, which could be used for some other constructive purpose towards the organization's success.

ADVANTAGES:

1. Less effort
2. Quick reference
3. Future enhancement

1.7. Project Plan

1.7.1. Gantt Chart

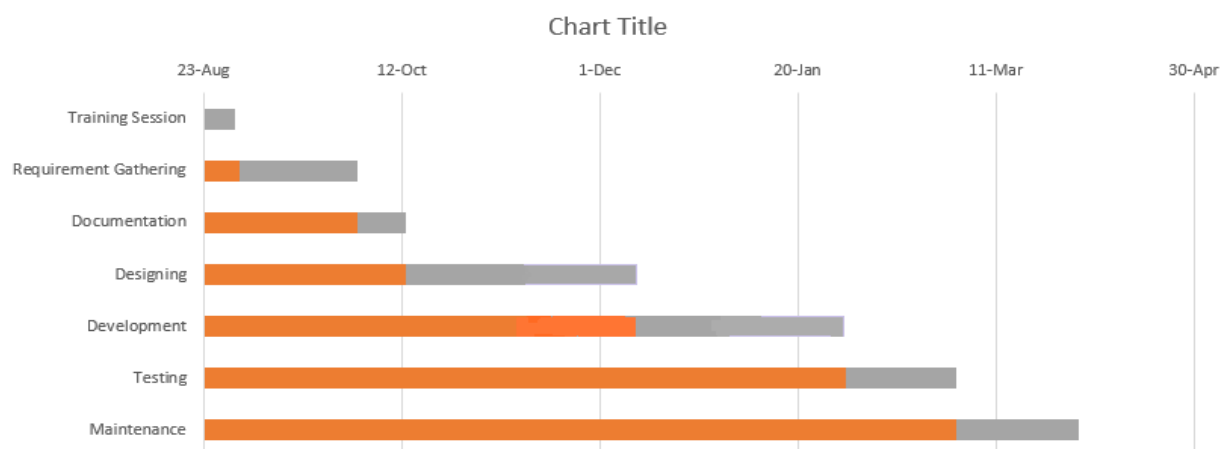


Figure 1.1

1.7.2. Work Breakdown Structure

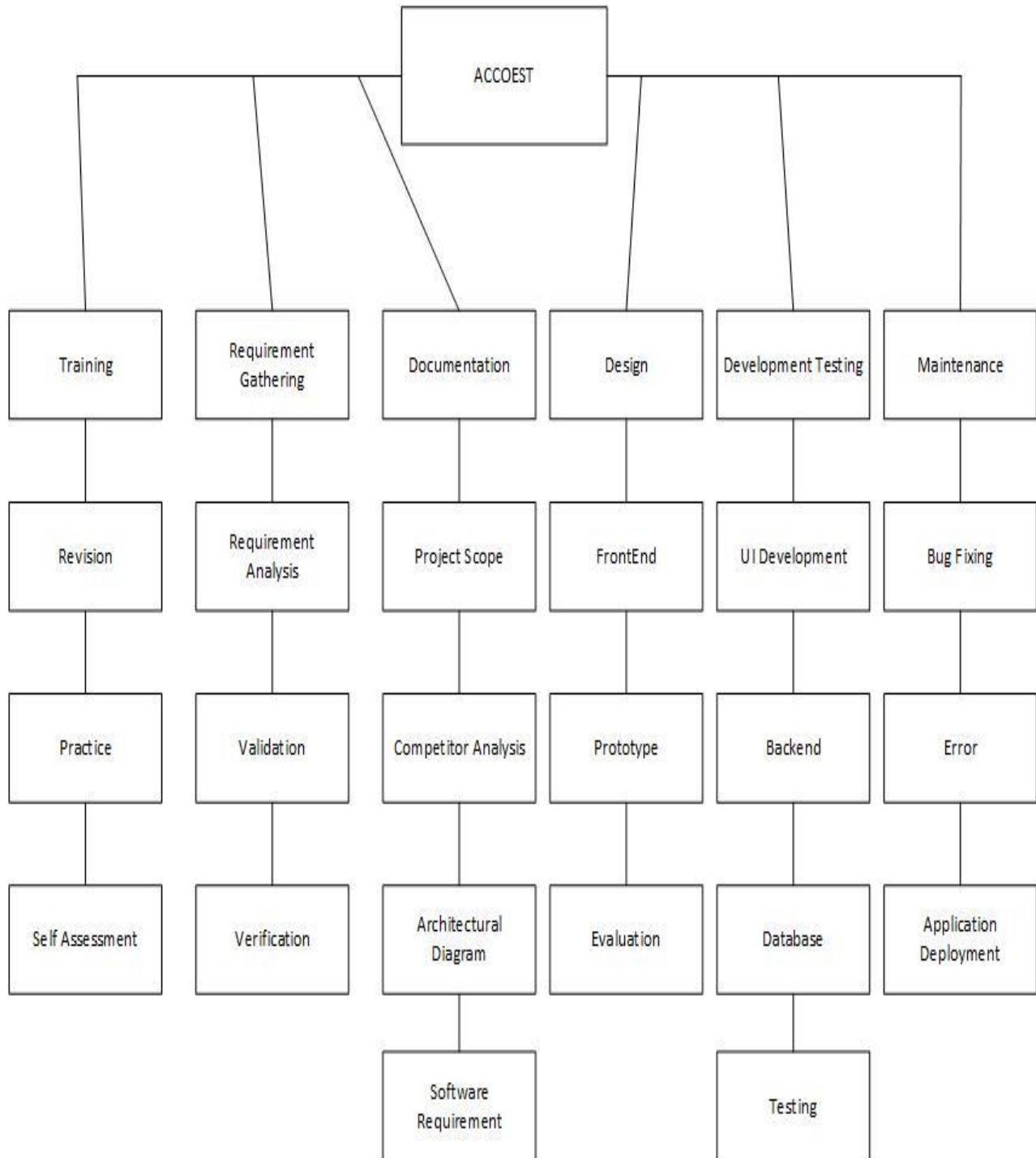


Figure 1.2

1.7.3. Roles & Responsibility Matrix

WBS #	WBS Deliverable	Activity #	Activity to Complete the Deliverable	Duration (# of Days)	Responsible Team Member(s) & Role(s)
1	Training Session	PA-1.0	Training session	5	Ali & RIZWAN
2	Requirement Gathering	PA-2.0	Project requirement gathering	10	ALI & RIZWAN
3	Documentation	PA-3.0	Project documentation	45	ALI
4	Designing	PA-4.0	Project interface design	30	ALI & RIZWAN
5	Database	PA-5.0	Project database design	30	ALI & RIZWAN
6	Coding	PA-6.0	System coding	30	ALI & RIZWAN
7	Bug Fixing	PA-7.0	System bugs remove	30	RIZWAN
8	Final Testing	PA-8.0	Complete Testing	10	ALI & RIZWAN
9	Maintenance	PA-9.0	System maintenance	12	ALI & RIZWAN

Table 1.1

1.8. Report Outline

This report defines the phases of requirement gathering, documentation, development environment, E-drawing environment, implementation and expected deliverables as well as presentation layer, business logic layer, data management layer, physical layer and clearly define the role and responsibilities of each person on each phase for the successful development of project.

Chapter 2

Software Requirement Specifications

Chapter 2: Software Requirement Specifications

2.1. Introduction

2.1.1. Purpose

We are going to provide an online platform which will help you to rent your house, room and apartment. We are mainly focusing on Rooms on rents in this management system because we see this gap in market. People who came from different cities for short time on work purpose or vacations they must book hotel rooms which is much expensive. In European Countries rental room is on trend people prefer to rent a furnished room for short time like a day or week. In Pakistan people didn't have this awareness so by introducing this platform we will spread awareness of this trend which will solve many problems and provide business to locals.

2.1.2. Document Conventions

The document is prepared using Microsoft Word and has used the font type 'Calibri'. The fixed font size that has been used to type this document is 12pt with 1.5 linespacing. The bold property is used for heading in the documentation. All pages except the cover page are numbered, the numbers appear on the lower righthand corner of the page. Each figure and data table are numbered and referred to the main text and chapter number.

2.1.3. Intended Audience and Reading Suggestions

The intended audience of this document would be owner of the house who is host and the person who will take room for rent which is guest and project team with the objectives to refer and analyzing the information. The SR Specification document can be used in any case regarding requirement of the project and the solution that have been taken. The document would final provide a clear idea about the system that is building. Brief outline of the document

1. Overall Description
2. System Features
3. External Interface Requirements
4. Non-Functional Requirements

2.1.4. Product Scope

This system will help to manage deal between house owner and guest and run the online rental business systematically. In this system, we will provide android-based application that can be used by the house owner and guest to negotiate and make deals.

Owner Side:

- User can visit application from Google play store and can search the market value of its property.
- User can post add for renting or renting its property.
- Update and Delete the ad.

Guest Side:

- User visit application from Google and can search the market rate of the accommodation.
- User can book the room.
- User add listing in favorite.

2.1.5. References

1. Zameen.com. (2006). [online] Available at: <https://www.zameen.com> [Accessed Jan. 2006].
2. Lamudi.pk. (2013)- [online] Available at: <https://www.lamudi.pk> [Accessed Jan. 2013]
3. Realproperty.pk. Pakistan's Real Estate Portal [online] Available at: <http://www.realproperty.pk>

2.2. Overall Description

2.2.1. Product Perspective

The Accoest is a new self-contained software product which will be produced by the project team in order to overcome the problems that have occurred due to the current manual system. This newly introduced application will provide an easy access to the system and it will be user friendly functions and attractive interfaces. The system will give better options for the problem of handling large scale of physical file system. The final outcome of this project will increase the efficiency of almost all the tasks done at the Rental Houses in a much convenient manner.

2.2.2. Product Functions

Registration as User or Host

- Login
- Search Room Posts
- Add Posts
- View Posts
- Add to Bookings Function
- Make Booking
- Cancel Booking
- View Reservation
- Checkout
- Add post
- Update delete post
- User Profile

2.2.3. User Classes and Characteristics

There are two user levels in Accoest. I. Host II. Guest

Host: Host is responsible for posting adds and rent his house. Host can post adds. Host can add or delete his adds.

Guest: Guest is the one who will see adds and rent a house or room for accommodation and can give suggestions and reviews about the host and the system.

2.2.4. Operating Environment

Hardware and software requirements

Hardware:

1. Operating System Supports all known operating systems, such as Android
2. Smart Mobile 1GB RAM.
3. A Laser printer will need to be used to print these reports and notes.

Software:

1. Android Studio
2. Firebase

2.2.5. User Documentation

User must know the complete detail of our application that, how to use it or how to deploy it.

User use internet to book our post or need friendly environment.

2.2.6. Design and Implementation Constraints

- Client detail save into the database.
- The Online android Application System is running 24 hours per day.
- Users may access from any android phone that has Internet perusing abilities and an Internet association.
- Users must have to know their right username and password to go into their online records and do further activity on the application.

2.3. External Interface Requirements

2.3.1. User Interfaces

Client of the app will be given the Graphical UI;

Login, signup

In that case the client isn't enlisted yet; he can enter the points of interest and enlist. Which requests that the users write his username and secret password. If the client entered his username or Password Incorrect then error message occurs.

Search and view

The registered user or guest can enter the kind of Product he is looking for and after that he can scan for the required Product by entering the name of the item. User can also search/view and add rooms by their accordance. After that the specific result display.

Add/delete posts

User can add or delete posts too.

2.3.2. Hardware Interfaces

Equipment prerequisites for Insurance on mobile will be same for both the gathering which are takes after:

- Ram: - 1 GB or above.
- Memory: - Specific
- Android Device

2.3.3. Software Interfaces

These databases include Posts and user information. These can be modified by the end user. The Accoest database will include the user info and Products info. The user or products or booking detail information database will contain all the detail of the user or posts detail or booking detail such as first name surname ID number and phone number, P id, P name, p category, order id, check-in date, check-in date, reservation id.

2.3.4. Communications Interfaces

The two gathering thought to be associated through either by Local area network or wide area network for the correspondence. Sender Communication channels Receiver.



Figure 2.1

2.4. System Features

1. **Register:** User can register into the System
2. **Login:** User can login into the System
3. **Add Posts:** After login user can add Posts like rooms and homes.
4. **View Post Detail:** user can see rooms pictures and can also check the detail of the rooms and room owner.
5. **Make Reservations:** User can make reservations of rooms and homes on systems.
6. **Cancel Reservations:** User can cancel reservations of rooms and homes on systems which they make before.
7. **Add to Favorite:** User can add post in favorite.
8. **Log out:** After making reservation user can logout.

2.4.1. User Registration

“User can register into the System”

Identifiers	FR-001
Title	Allows Register access online
Requirement	User name, Password, Contact, Email
Rational	Register to the system and provide security to personal information.
Restriction and risk	Correct data must be entered during registration, otherwise user don't get registered.
Priority	Safety, timing

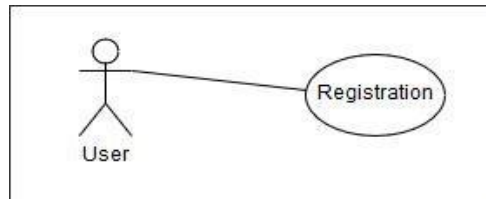
Table 2.1

2.4.1.1. Functional Requirements

REQ-SF1-1: User must enter correct name to get application on play store

REQ-SF1-2: User must fill the registration form to get registered. So, user can perform further tasks on application.

REQ-SF1-3: User must click the submit button after filling the form to get registered.



User Registration UseCase

Figure 2.2

2.4.2. User Login Function

“User can login into the System”

Identifiers	FR-002
Title	Allows login access online
Requirement	Email, Password
Rational	Login to the system and provide security to personal information.
Restriction and risk	User name and password must be correct otherwise user don't register.
Dependency	Mobile, Connection with internet
Priority	Safety, timing

Table 2.2

2.4.2.1. Functional Requirements

REQ-SF2-1: User must be registered into the system.

REQ-SF2-2: User must enter email correctly to login the system.

REQ-SF2-3: User must enter password correctly to login the system.

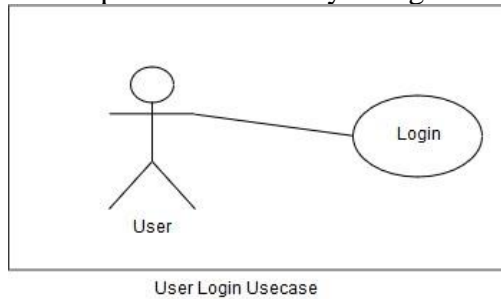


Figure 2.3

2.4.3. Add Posts Function

“User can add post in the System”

Identifiers	FR-003
Title	Add Posts
Requirement	Post title, Post description, Pictures and Price
Rational	A user must add post in system
Restriction and risk	User must be login
Dependency	Valid information
Priority	Add post in user account

Table 2.3

2.4.3.1. Functional Requirements

REQ-SF2-1: User must be login to the system.

REQ-SF2-2: User must enter valid information of add in the system.

REQ-SF2-3: User must enter all relevant details of rooms or house to add post.

REQ-SF2-4: User must submit the add to post it.

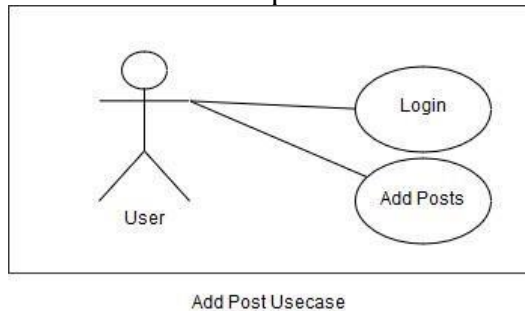


Figure 2.4

2.4.4. View Details Function

“User can view details of posted adds and host reviews in the System”

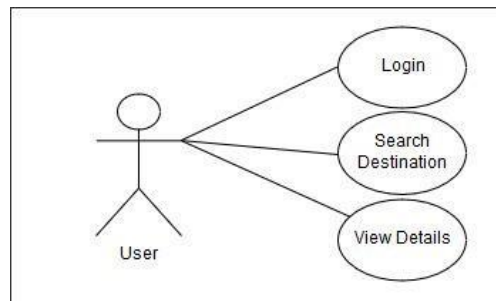
Identifiers	FR-004
Title	Allows user to view detail
Requirement	User login and then view detail of room/house
Rational	Login to the system and view detail
Restriction and risk	User must login to check the detail otherwise detail don't show.
Dependency	Mobile, Connection with Internet
Priority	Safety, timing

Table 2.4

2.4.4.1. Functional Requirements

REQ-SF2-1: User must be login to the system.

REQ-SF2-2: User must enter correct destination on searching of add in the system.



View details Usecase

Figure 2.5

2.4.5. Make Reservation Function

“After watching the detail of rooms or homes user can make reservation of selected room in the System”

Identifiers	FR-005
Title	Allows user to make reservation
Requirement	User login and then view detail of room/house and enter check in, check out dates.
Rational	Login to the system and make reservation

Restriction and risk	User must login to check the detail otherwise user can't make reservations.
Dependency	Mobile, Connection with Internet
Priority	Safety, timing

Table 2.5

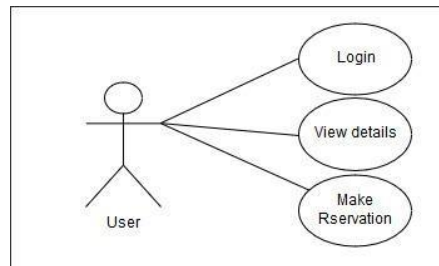
2.4.5.1. Functional Requirements

REQ-SF2-1: User must be login to the system.

REQ-SF2-2: User must view details of posted add in the system.

REQ-SF2-3: User must enter check in date for making reservations.

REQ-SF2-4: User must enter check out date for making reservations.



Make Reservation Usecase

Figure 2.6

2.4.6. Cancel Reservation Function

“After making reservation of rooms or homes user can cancel the reservation of selected room in the System”

Identifiers	FR-006
Title	Allows user to cancel reservation
Requirement	User login and make the reservation.
Rational	Login to the system and cancel reservation
Restriction and risk	User must login to check the detail otherwise user can't cancel reservations.
Dependency	Mobile, Connection with Internet
Priority	Safety, timing

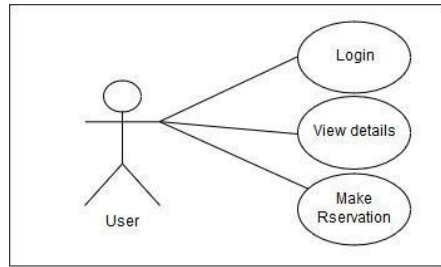
Table 2.6

2.4.6.1. Functional Requirements

REQ-SF2-1: User must be login to the system.

REQ-SF2-2: User must make reservation in the system.

REQ-SF2-3: User cancel the reservations which he makes before.



Make Reservation Usecase

Figure 2.7

2.4.7. Logout Function

“After making reservations the user can logout”

Identifiers	FR-009
Title	Allows Logout access online
Requirement	User registration, user login
Rational	Logout to the system and provide security to personal information.
Restriction and risk	User must login.
Dependency	Mobile, Connection with Internet
Priority	Safety, timing

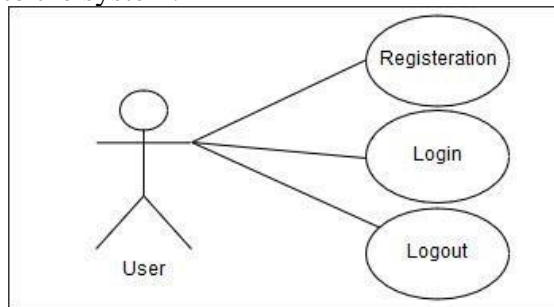
Table 2.7

2.4.7.1. Functional Requirements

REQ-SF2-1: User must be registered to the system.

REQ-SF2-2: User must be login to the system. REQ-

SF2-3: User logout to the system.



Logout Usecase

Figure 2.8

2.5.Other Nonfunctional Requirements

2.5.1.Performance Requirements

With a specific end goal to keep up a worthy speed at most extreme number of transfers permitted from a specific client will be any number of clients and can get to the framework whenever. Likewise, associations with the servers will be founded on the criteria of properties of the client like his area, and server will work 24X 7 times.

2.5.2.Safety Requirements

System should have a backup database in case of any loss or damage.

- System should be well updated.
- System should have backup server all the time stand by.
- Administrator should always alert due to that no one hacked application

2.5.3.Security Requirements

Security should be fool proof.

- It should have login through user account.
- Account should be integrated.
- Personal information of client should not be leaked out.

2.5.4.Software Quality Attributes

Reliability: The framework can be utilized by different clients simultaneously. Any user can get this framework with utilizing even a low execution Mobile or tab.

Availability: The framework is accessible 24 hours of the day.

Maintainability: This framework should give the ability to go down the Data.

Portability: Client can sign in to the framework whenever.

2.6. Other Requirements

At that point understanding the principal matter to build up is to survey the plausibility of the tasks or item. It is essentially utilizing to measure how down to earth or gainful the advancement of a product/project framework will be to you. This movement repeats for the duration of the life cycle. There are numerous kinds of possibilities:

- Technical
- Economic
- Specification
- Information

Chapter 3

Use Case Analysis

Chapter 3: System Analysis

This framework is tied in with changing over the renting house rooms framework from manual to on the android. The User/Client can see adds and make reservation online after login to the app. Host is adding posts to database. user can alter or erase the items from the database.

3.1. Use Case Model



Figure 3.1

3.2. Use Case Descriptions

Use Case	Registration ,Login
Purpose	To keep the details of the new user for the website.
Description	Guest and host will register and login
Primary Actor	Guest, Host
Pre- Conditions	None
Post- Conditions	The Guest or host will be registered.
Main Success Scenario	<ul style="list-style-type: none"> • The guest will enter all the details and get registered to make reservations and can get details about the room. • Guest can add their profile whenever they want.
Alternative Scenarios	□ If the system is down an error message will be displayed.
Assumptions	Guest knows how to use the system.

Table 3.1

Use Case	Search and View listing
Purpose	To see the different types of rooms.
Description	Guest will see the complete list of rooms of different type.
Primary Actors	Guest
Pre- Conditions	Guest needs to be logged in or register.
Post- Conditions	The Guest will select any kind of post from any host.
Main Success Scenario	□ The guest can browse different kind of rooms after registration. □ Guest can add post to favorite list.
Alternative Scenarios	□ If the system is down an error message will be displayed.
Assumptions	Guest know how to use the system.

Table 3.2

Use Case	Make Reservation
Purpose	To make the reservation of rooms in the system.
Description	Guest can manage the list of products from cart.
Primary Actors	Guest
Secondary actor	Host
Pre- Conditions	Guest need to add check in and check out date.
Post- Conditions	The host should delete the reservation.
Main Success Scenario	<input type="checkbox"/> The guest can make reservation of rooms in system.
Alternative Scenarios	<input type="checkbox"/> If the system is down an error message will be displayed.
Assumptions	Guest request to confirm the reservation in the system.

Table 3.3

Use Case	Add Posts
Purpose	The host can make post of room and submit it in system.
Description	Host will post the add of room, enter the details about it and able to post it in the system.
Primary Actors	Host
Secondary Actor	Guest
Pre- Conditions	Host must be registered.
Post- Conditions	The details of post should be accurate for confirmation
Main Success Scenario	<input type="checkbox"/> The host can easily add post, enter details and manage post.
Alternative Scenarios	<input type="checkbox"/> If the system is down an error message will be displayed.
Assumptions	Host know how to operate the system.

Table 3.4

Use Case	Manage Post
Purpose	Host will be able to manage its post like update, delete.
Description	Host can update or delete his post from manage post option
Primary Actors	Host
Secondary Actor	Guest, Host
Pre- Conditions	None
Post- Conditions	The data in the category will be update, delete and all the details are valid for the guests.
Main Success Scenario	<ul style="list-style-type: none"> • The Host can easily update and manage the category without any error. • The Host is sure that the records are updated successfully.
Alternative Scenarios	<input type="checkbox"/> If the system is down an error message will be displayed.

Table 3.5

Use Case	Favorite or unfavorite
Purpose	Guest will be able to favorite and unfavorite the post
Description	The post which is like by guest will be add in favorite and later guest unfavorite it.
Primary Actors	Guest
Secondary Actor	Guest
Pre- Conditions	Open detail post
Post- Conditions	Favorite post will be added in favorite category
Main Success Scenario	<ul style="list-style-type: none"> • The Guest add favorite post in favorite list. • The guest later remove post from favorite list.
Alternative Scenarios	<input type="checkbox"/> If the system is down an error message will be displayed.

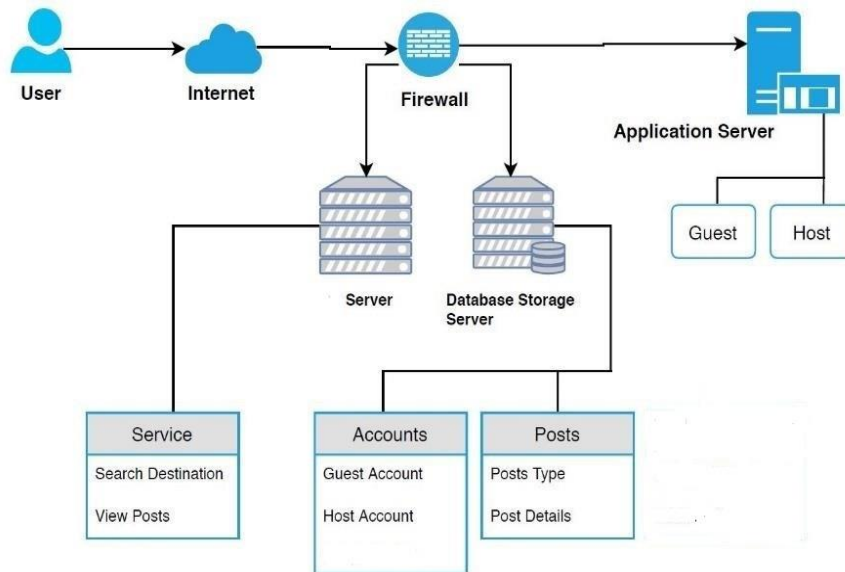
Table 3.6

Chapter 4

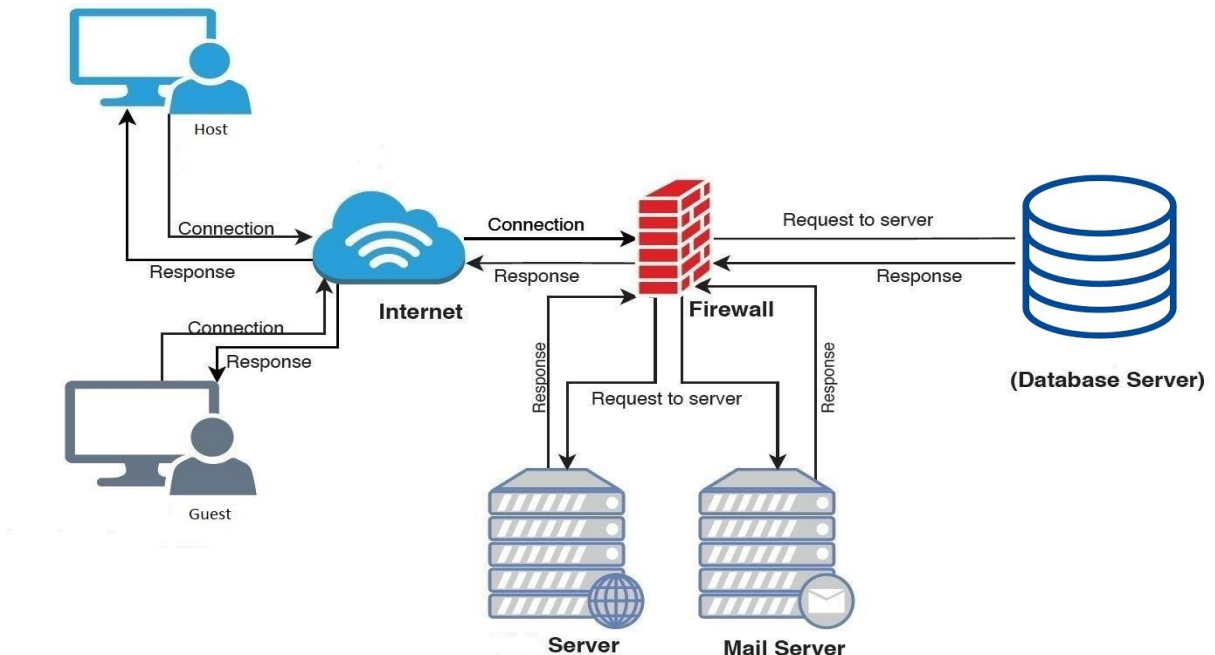
System Design

Chapter 4: System Design

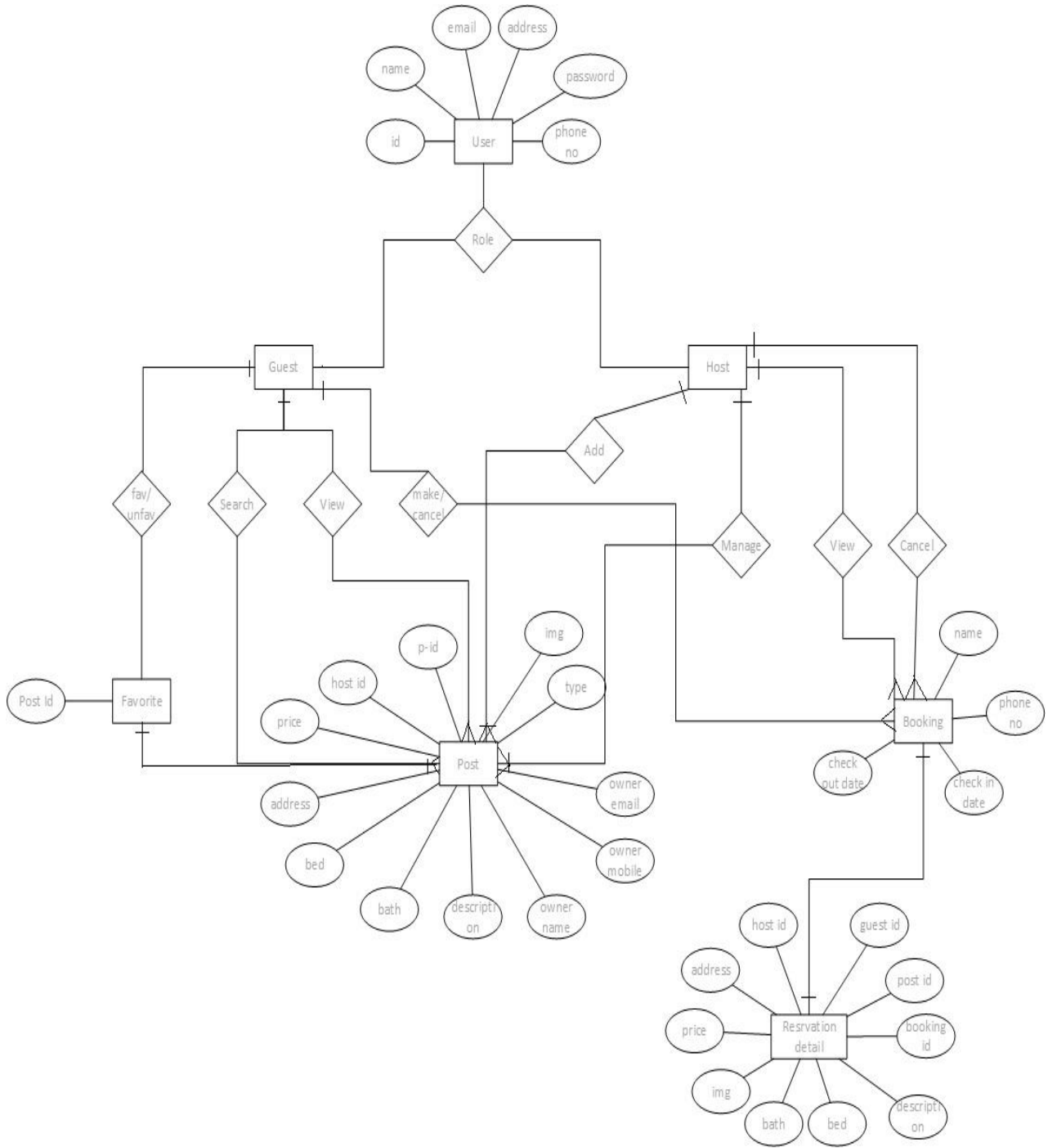
System design is the process of defining the components, modules, interfaces, and data for a system to satisfy specified requirements. System development is the process of creating or altering systems, along with the processes, practices, models, and methodologies used to develop them.



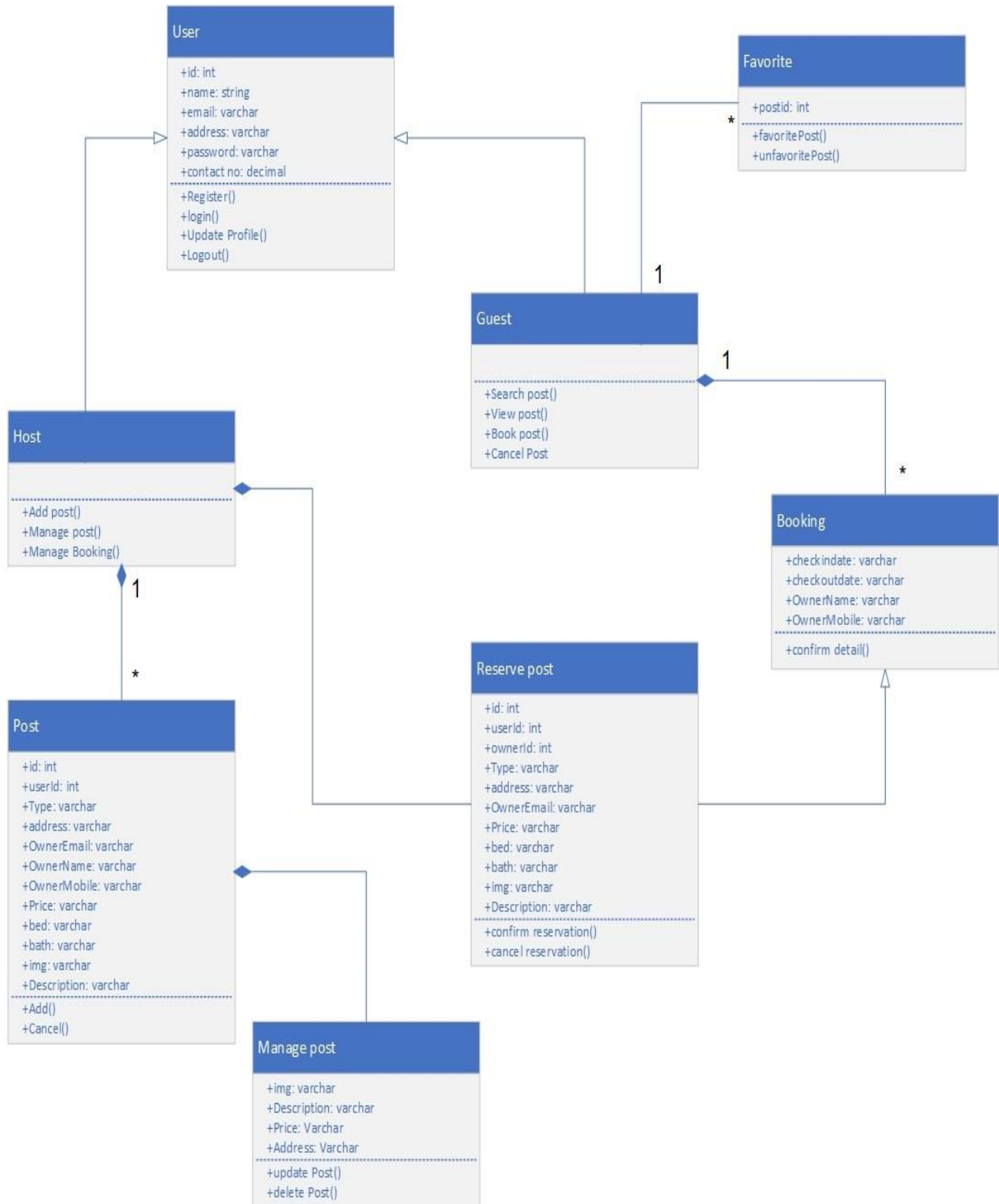
4.1. Architecture Diagram



4.2. Entity Relationship Diagram with data dictionary

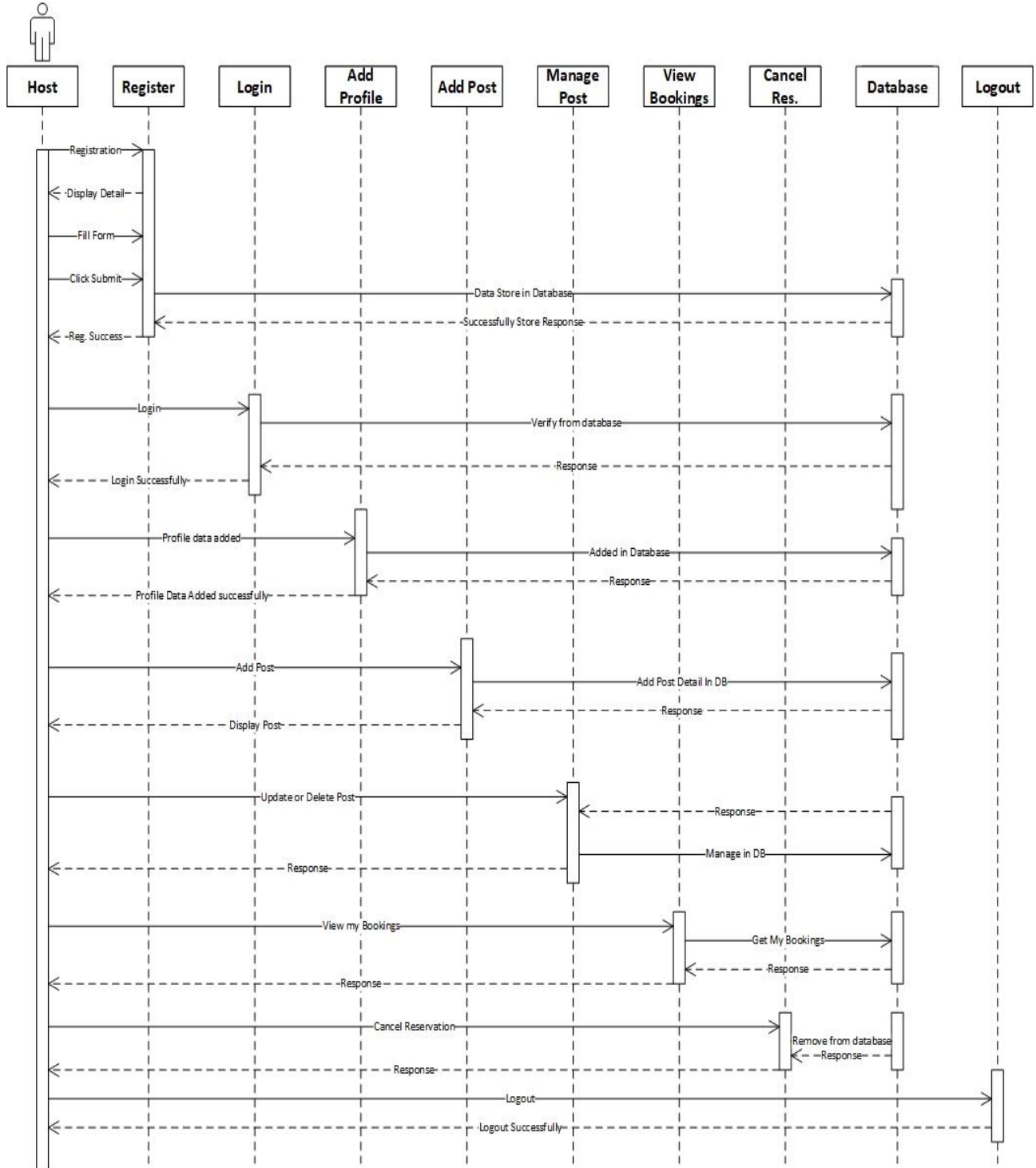


4.3. Class Diagram

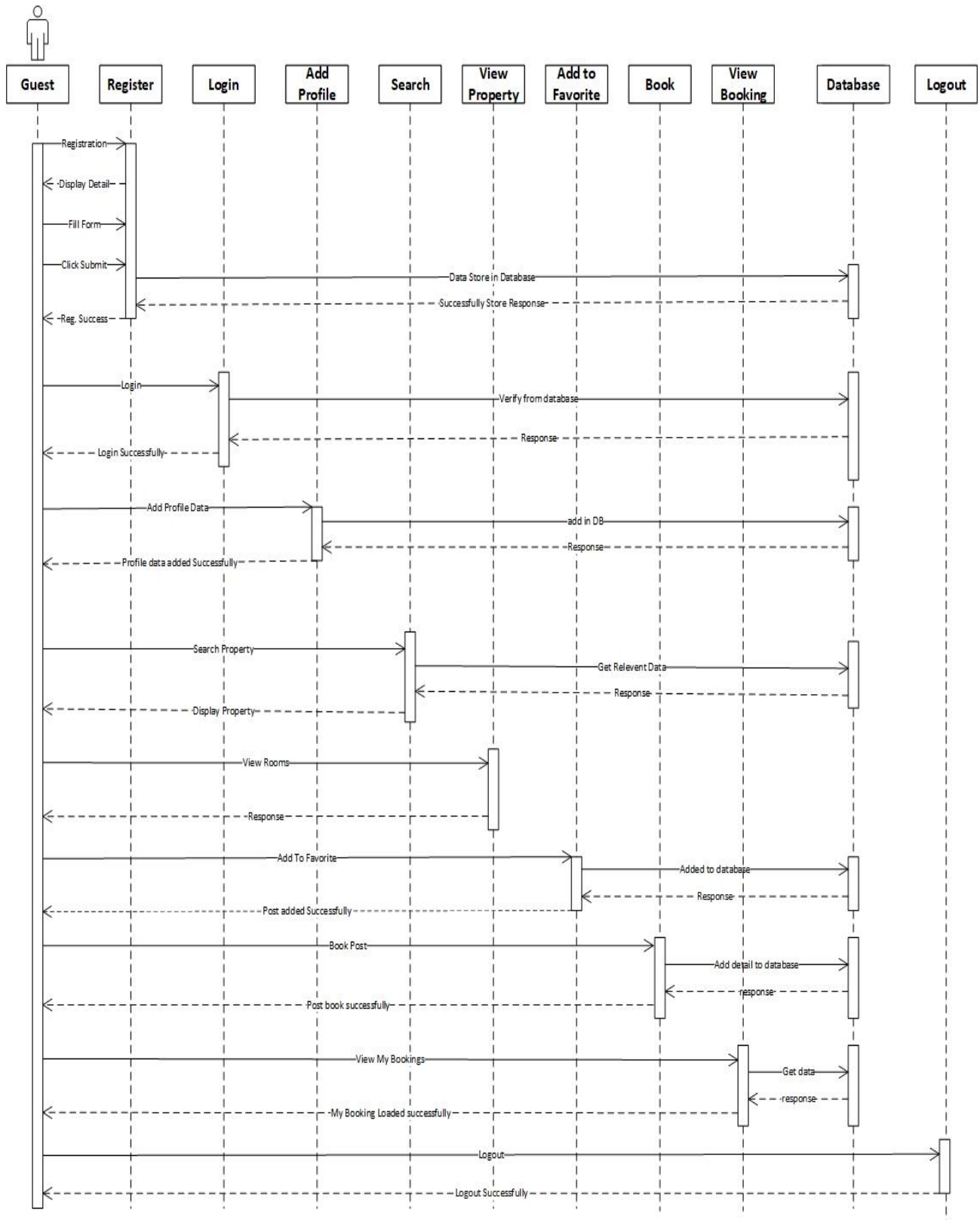


4.4. Sequence Diagram

Host Side:



Guest Side:



4.5. Operation contracts

4.6.1 Operation Contract#1

Name: Register.

Responsibilities: To register the new user.

Cross References: Use case: Register.

Exceptions: None.

Preconditions: Register interface must be opened and user must enter valid information.

Post conditions: Welcome screen showed to the user.

4.6.2 Operation Contract#2

Name: Sign in.

Responsibilities: A user is logged in.

Cross References: Use Case: Sign In.

Exceptions: invalid user name or password.

Preconditions: user must have account.

Post conditions: Successfully signed in.

4.6.3 Operation Contract#3

Name: Sign out.

Responsibilities: user is logged out.

Cross References: Use Case: Sign_out.

Exceptions: None.

Preconditions: Must be logged in.

Post conditions: Log out successfully.

4.6.4 Operation Contract#4

Name: Select room

Responsibilities: User must login and select room.

Cross References: Use Case: Select room.

Exceptions: None.

Preconditions: Must be logged in.

Post conditions: Select item successfully.

4.6.5 Operation Contract#5

Name: View detail.

Responsibilities: User must View detail of the room.

Cross References: Use Case: View Detail.

Exceptions: None.

Preconditions: None.

Post conditions: View detail successfully.

4.6.6 Operation Contract#6

Name: Make Reservation.

Responsibilities: User must make reservation of the selected room.

Cross References: Use Case: Make Reservation.

Exceptions: None.

Preconditions: User must login.

Post conditions: View place order successfully.

4.6.7 Operation Contract#7

Name: Cancel Reservation.

Responsibilities: User must cancel reservation of the room, which he reserved.

Cross References: Use Case: Cancel Reservation.

Exceptions: None.

Preconditions: User must login.

Post conditions: Cancel reservation successfully.

4.6.8 Operation Contract#8

Name: View Reservation.

Responsibilities: User must View Reservation of the room, which he makes.

Cross References: Use Case: View reservation.

Exceptions: None.

Preconditions: User must login.

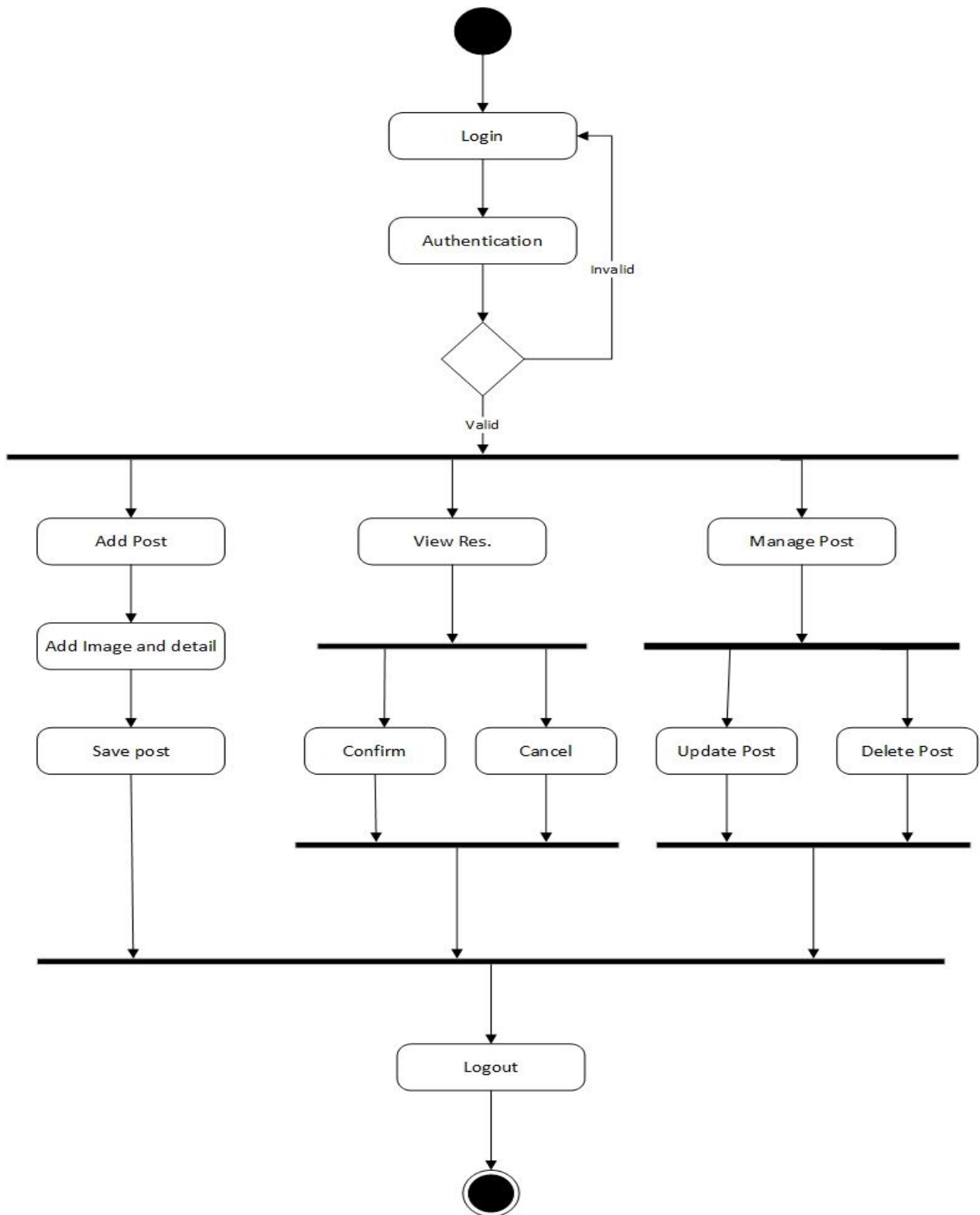
Post conditions: View order successfully.

4.6. Activity Diagram

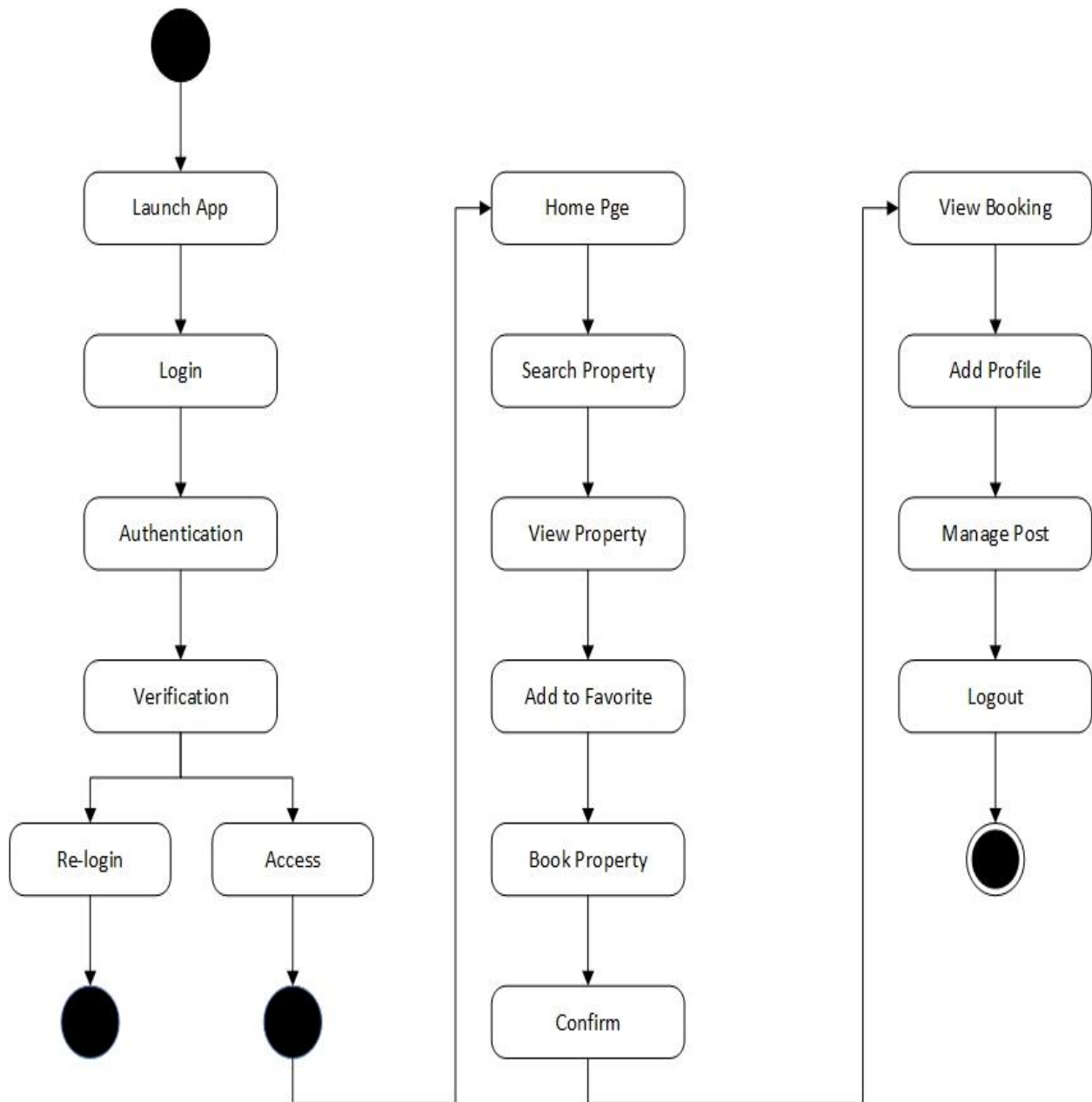
Guest Side:



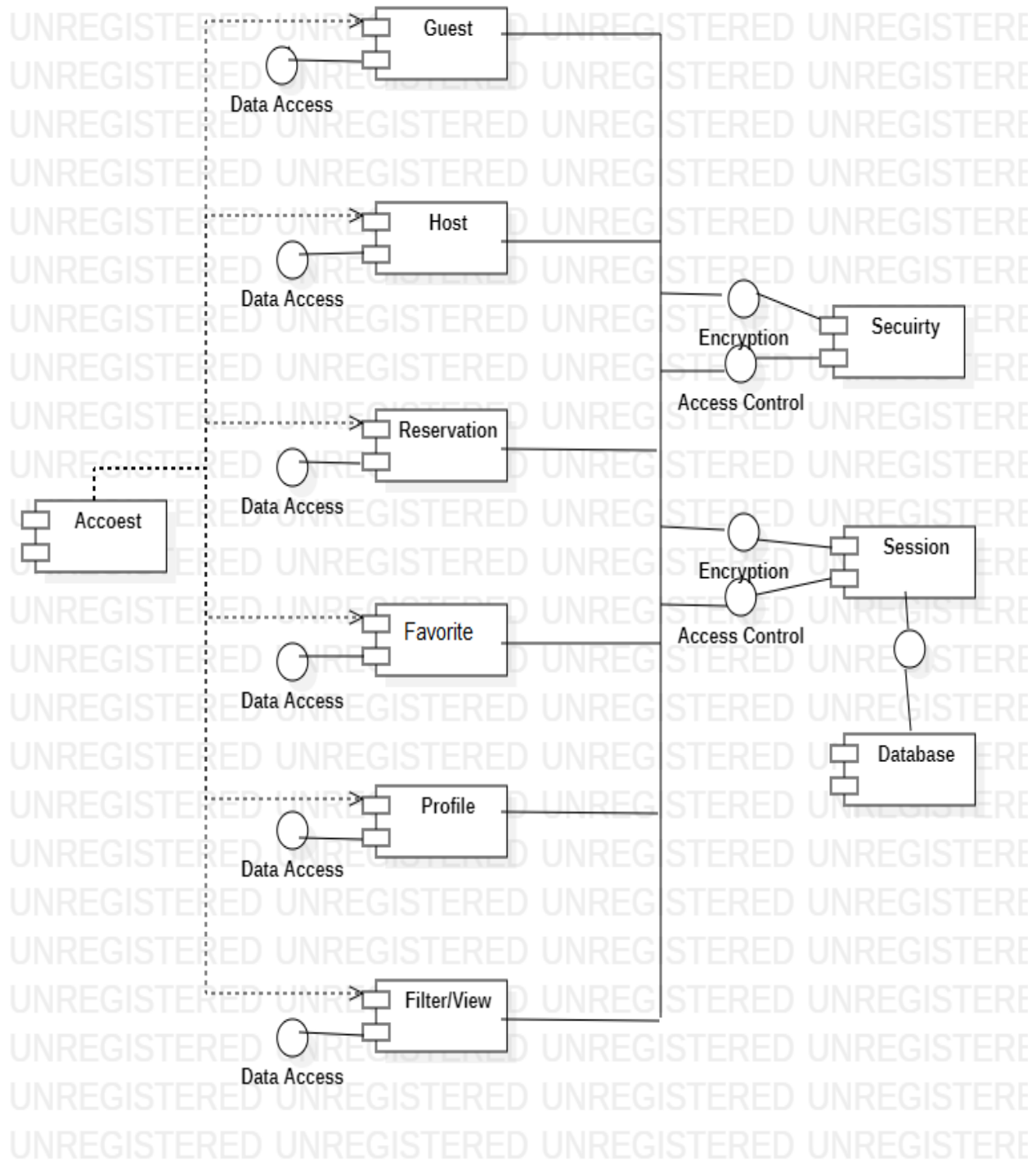
Host Side:



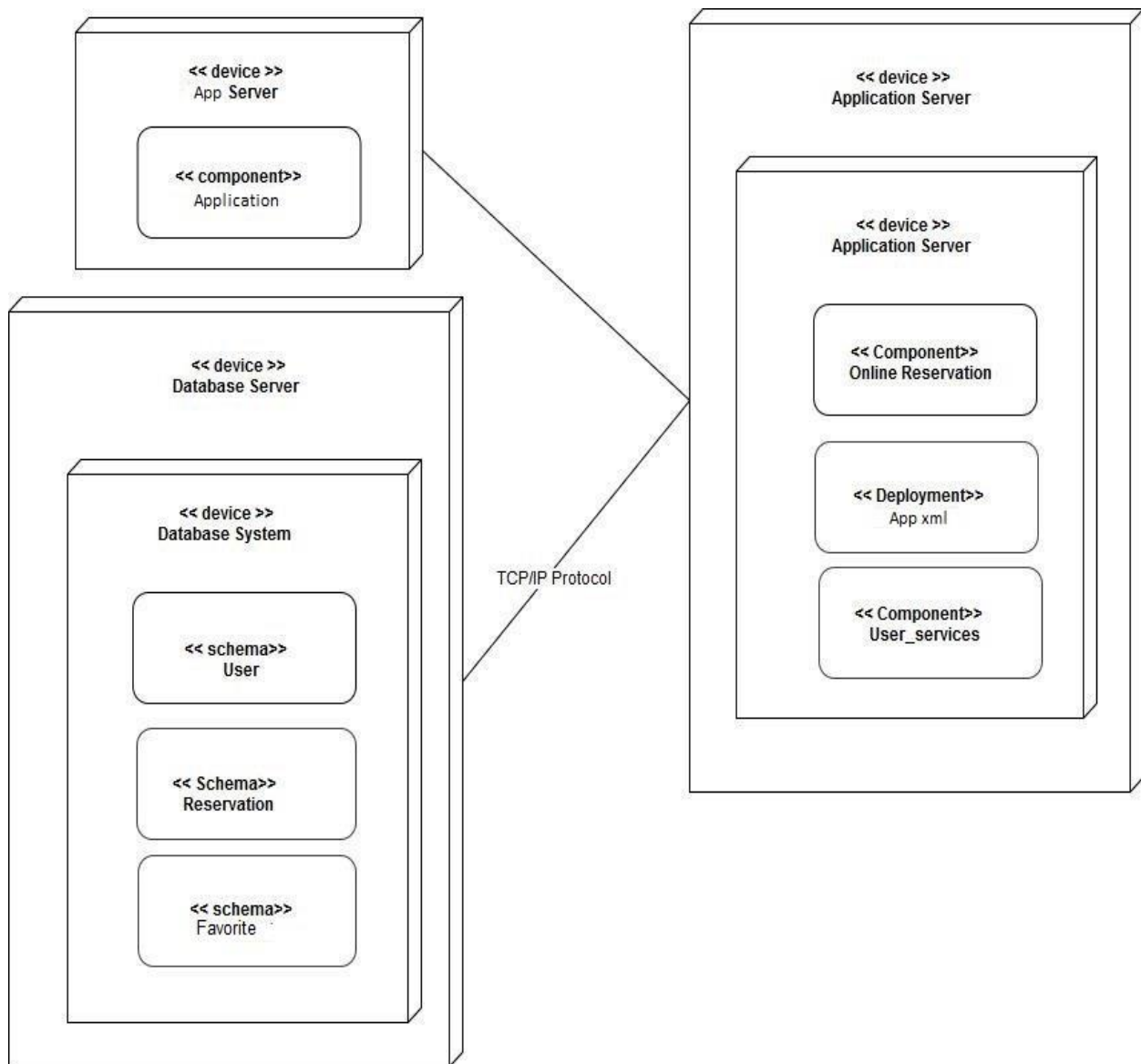
4.7. State Transition Diagram



4.8. Component Diagram



4.9. Deployment Diagram



Chapter 5

Implementation

Chapter 5: Implementation

This is a task with the goal to build up an essential application where a purchaser is given a shopping basket application and furthermore to think about the advances used to grow such an application. This report will talk about every one of the fundamental advances to make and actualize a Android-based Application.

5.1. Important Flow Control/Pseudo codes

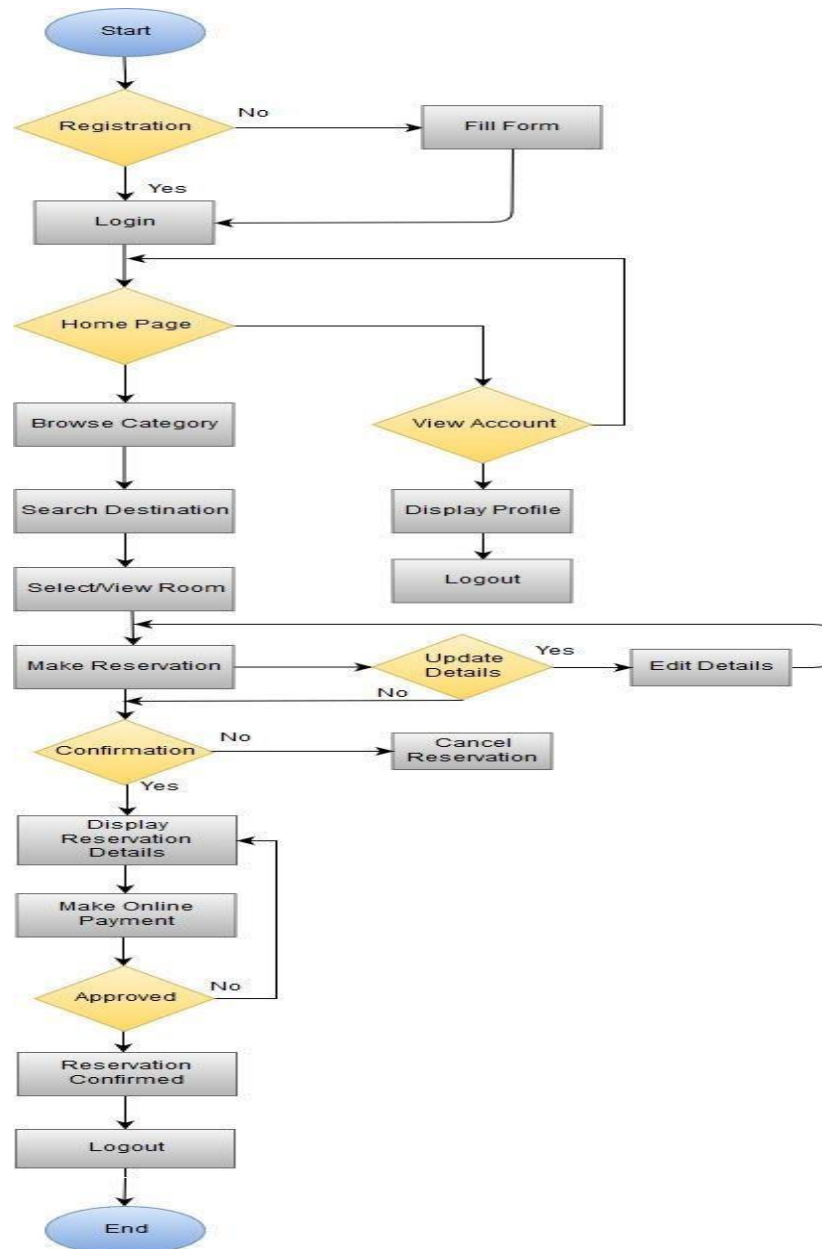


Figure 5.1

5.2. Deployment Environment

Your Android app is deployed when you run it on an Android target device. You can also use the Deployment Manager to manage the deployed files. After your Android application is ready for final deployment, you can proceed to build and sign your application.

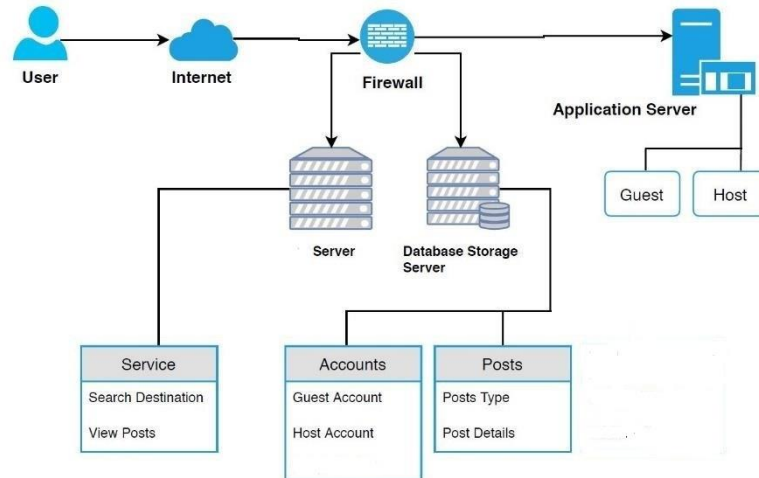


Figure 5.2

5.3. Tools and Techniques

Software and tools that would be used during the entire project preparation are as follow:

- **Android Studio**
We use Android studio for making this android application.
- **Firebase**
We use Firebase to store the data.
- **Language**
We use java as backend language and xml for frontend.
- **Microsoft Word**
Microsoft word is a MS Office application and would be used for documentation purpose throughout the whole project.
- **Microsoft Excel**
Microsoft excel would be used for data analyzing throughout the whole project. And used to display graphs.
- **Project Modeling**
Star UML and Microsoft Visio are to be used to draw use cases and other UML Diagram like Activity, Class, Sequence etc.

5.4. Best Practices / Coding Standards

- No coding repetitions
- Function and classes are always commented showing expected input and output

5.5. Version Control

A component of software configuration management, version control, also known as revision control or source control, is the management of changes to documents, computer programs, large application, and other collections of information. So, in this system we have used the agile software development for version control. This is our first version of the android application.

Chapter 6

Testing and Evaluation

Chapter 6: Testing and Evaluation

The development of online system in which user can view the posted adds of rooms and can make reservation easily. User can search rooms according to their desires. Testing strategy is decided for testing the system so that all modules are tested to fulfill all user requirements. A test strategy is methodology that describes the various steps that need to be performed during testing and the time and effort required for performing them. The following strategies are used for testing.

6.1. Use Case Testing

Test case 1 (Registration)	
Test suite ID	S001
Test Case ID	C001
Actor	Unregister user
Test Case Summery	To verify that the Registration saves new user.
Related Requirement	User should be able to sign up.
Prerequisites	Open the app
Test Procedure	Open the Registration, Press Register test <input type="checkbox"/> Fill Registration Form. Click Submit button.
Test Data	For username field: Ali Siddiqui User email: malisiddiqui1220@gmail.com Password field: 12345678 Confirm password: 12345678 Contact: 03324162617
Expected	For username: <ul style="list-style-type: none"> ➤ The form will not be post and User will be notify "Please match the format request as the password Confirmation is not Correct." ➤ When User enters a Password less then (8 digits password) then a message must show "Your Password must be 8 digit". ➤ If confirm password is not same then it give error. ➤ The User will be created in the database, the app will display the profile page and after adding profile data then it go to home page which display name and profile image.
Actual Result	Test Successful.
Status	Pass
Created By	Muhammad Ali Siddiqui
Date of Creation	25/05/2022

Test case 2 (Login)	
Test suite ID	S002
Test Case ID	C002
Actor	Register user
Test Case Summery	To verify that login button functions correctly.
Related Requirement	User should be able to login
Prerequisites	User must be registered
Test Procedure	<ul style="list-style-type: none"> • Open application • Enter Email and password □ Click on the login button
Test Data	Login detail username: malisiddiqui1220@gmail.com Login detail password: 12345678
Expected	<ul style="list-style-type: none"> ➤ If the username and password is valid then the home page should be opened. ➤ When User enters in invalid Email then message show “Your Email is invalid Please Enter the correct Email, Retry option”. ➤ When User enters a wrong Password then message show “Your Password is invalid Please Enter the correct Password, Retry option”.
Actual Result	Login successful
Status	Test Successful.
Created By	Muhammad Ali Siddiqui
Date of Creation	25/05/2022

Table 6.2

Test case 3 (Search Posts)	
Test suite ID	S003
Test Case ID	C003
Actor	Register user
Test Case Summery	To verify Search property button is functioning correctly.
Related Requirement	User can search post and add view details.

Test Procedure	<ul style="list-style-type: none"> Login in Search Post
Test Data	Search post by entering price, address, city, property type etc
Expected	User can View post related to his search
Actual Result	Search properties shows result and user can show details.
Status	Test Successful.
Created By	Muhammad Ali Siddiqui
Date of Creation	25/05/2019

Table 6.3

Test case 4 (View Post Details)	
Test suite ID	S004
Test Case ID	C004
Actor	Register user
Test Case Summary	To verify View post detail is functioning correctly.
Related Requirement	User can view required information to view detail.
Prerequisites	Select the item.
Test Procedure	Login in User can search post and view related post
Test Data	User can view detail of the items
Expected	User can view detail of selected item.
Actual Result	View detail of the selected item
Status	Test Successful.
Created By	Muhammad Ali Siddiqui
Date of Creation	25/05/2022

Table 6.4

Test case 5 (Make Reservation)	
Test suite ID	S005
Test Case ID	C005

Actor	Register user
Test Case Summery	To verify place order button is functioning correctly.
Related Requirement	<ul style="list-style-type: none"> • User must be successfully Login In. • Information of the User must be successfully entered. • Information of the Source must be successfully entered.
Prerequisites	User must be login.
Test Procedure	User must login Select the post Place the booking after selecting the post.
Test Data	User can make reservation.
Expected	User can make reservation after selecting the post and the booking display in both host and guest account
Actual Result	Make reservation after selecting the post.
Status	Test Successful.
Created By	Muhammad Ali Siddiqui
Date of Creation	25/05/2022

Table 6.5

Test case 6 (Cancel Reservation)	
Test suite ID	S006
Test Case ID	C006
Actor	Register user
Test Case Summery	To verify cancel reservation button is functioning correctly.
Related Requirement	<ul style="list-style-type: none"> • User must be successfully Login In • User must book a post.
Prerequisites	User must be login.
Test Procedure	<ul style="list-style-type: none"> • User must login • View the book post • User can cancel the reservation.
Test Data	User can cancel reservation.
Expected Result	User(host or guest) can cancel booking after making the reservation.
Actual Result	Cancel the reservation.

Status	Test Successful.
Created By	Muhammad Ali Siddiqui
Date of Creation	25/05/2022

Table 6.6

Test case 7 (Add Post)	
Test suite ID	S007
Test Case ID	C007
Actor	Register user
Test Case Summery	To verify add post button is functioning correctly.
Related Requirement	User must be successfully Login
Prerequisites	User must be login to system
Test Procedure	<ul style="list-style-type: none"> • User must login • Add post
Test Data	Post field: Big Room Description field: Big nice room at low price Rent: 1300 Post Image 1: Img.jpg Post type: Room Location: Wapda Town City: Lahore Bed: 1 Bath: 2
Expected	User can add the post of rooms in system.
Actual Result	Post is added by user host
Status	Test Successful.
Created By	Muhammad Ali Siddiqui
Date of Creation	25/05/2022

Table 6.7

Test case 8 (Update Post Details)	
Test suite ID	S008
Test Case ID	C008
Actor	User Host
Test Case Summery	To verify Update item button is functioning correctly.

Related Requirement	User host can Update post
Prerequisites	User host must be login Post must be added
Test Procedure	<ul style="list-style-type: none"> • User must be login • Post added • Post updated
Test Data	Post field: Big Room Description field: Big nice room at low price Rent: 1300 Post Image 1: Img.jpg Post type: Room Location: Wapda Town City: Lahore Bed: 1 Bath: 2
Expected	Post details can update by user host.
Actual Result	Post details are updated
Status	Test Successful.
Created By	Muhammad Ali Siddiqui
Date of Creation	25/05/2022

Table 6.8

Test case 9 (Delete Post)	
Test suite ID	S009
Test Case ID	C009
Actor	User Host
Test Case Summery	To verify delete item button is functioning correctly.
Related Requirement	User host can delete post form database.
Prerequisites	User host must be login Post must be added
Test Procedure	<ul style="list-style-type: none"> • User must be login • Post added • Post delete
Test Data	Post is deleted in the database.
Expected	Post is deleted in the database by user host.
Actual Result	Post is deleted in the database.
Status	Test Successful.
Created By	Muhammad Ali Siddiqui

Date of Creation	25/05/2022
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Table 6.9

Test case 10 (Logout)	
Test suite ID	S010
Test Case ID	C010
Actor	Register user
Test Case Summery	To verify that Logout button is working when user click on it.
Related Requirement	Login user can Logout.
Prerequisites	User must be login
Test Procedure	<ul style="list-style-type: none"> • When the user can Log in if he want to Logout. • Click Logout button
Test Data	All user data
Expected	For username: <ul style="list-style-type: none"> ➤ After logging out user not able to book room or go to home page ➤ After logging out user go to login page
Actual Result	Logout successful
Status	Test Successful.
Created By	Muhammad Ali Siddiqui
Date of Creation	25/05/2022

Table 6.10

6.2. Function testing

The function testing is about to test the whole function and check that if the function is working properly. In this scenario we will test all the functionalities of the project an after all these testing we have entered all the screenshots of our website which are given in this document. System testing involves the set of tests that ensures that the entire system performs according to specifications.

6.3. Unit testing

Unit testing is a white-box testing technique. The main focus in this test is to verify all the modules of the software system. Each module is unit tested, as follows:

- Unit testing for the project User Management is tested by valid user or invalid user.
- Unit testing for the project User Account management is provided by testing Login, Logout and creating new or deleting updating existing data.
- Unit testing for the project articles details is performed by entering new information.
- Unit testing for the Project Detail of items give detail accurately.
- Unit testing for the module Add/update/delete post.

System Unit Testing		
System Unit Name	Testing Method	Test Result
Registration Form	Manual Testing on android	Pass
Login Form	Manual Testing on android	Pass
Favorite/unfavorite post	Manual Testing on android	Pass
Search post	Manual Testing on android	Pass
Post Add Form	Manual Testing on android	Pass
View Post Details	Manual Testing on android	Pass
Make Reservation	Manual Testing on android	Pass
Edit/ Delete Post	Manual Testing on android	Pass
Delete Reservation	Manual Testing on android	Pass
Logout	Manual Testing on android	Pass

Table 6.11

6.4. Integration testing

Integration testing is a technique which is done for testing the interface of software component. Every software component in unit tested, and then all the components are integrated to perform the task together.

This test is conducted to ensure that all the components are working properly after interfacing. All the modules of the application are integrated by the incremental approach, and integration testing of the system is performed as follows:

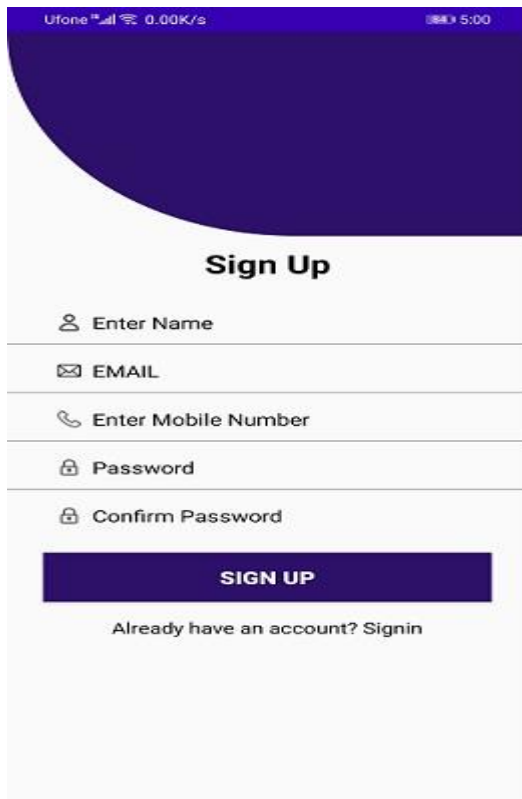
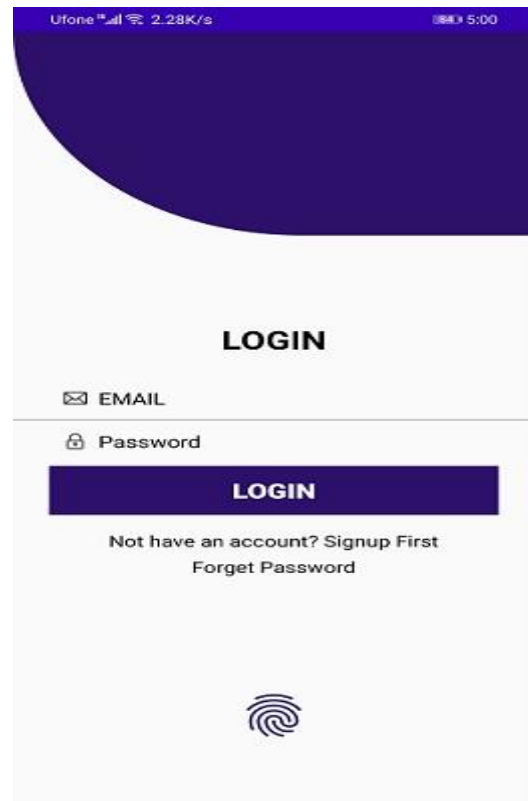
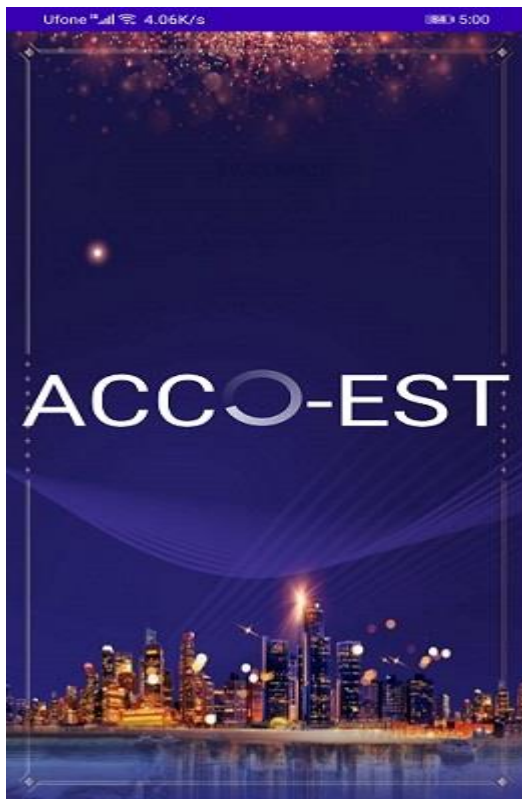
- Integrate login module and test that the software is properly connected to the database.
- Integrate all modules and test by inserting updating, and deleting records.

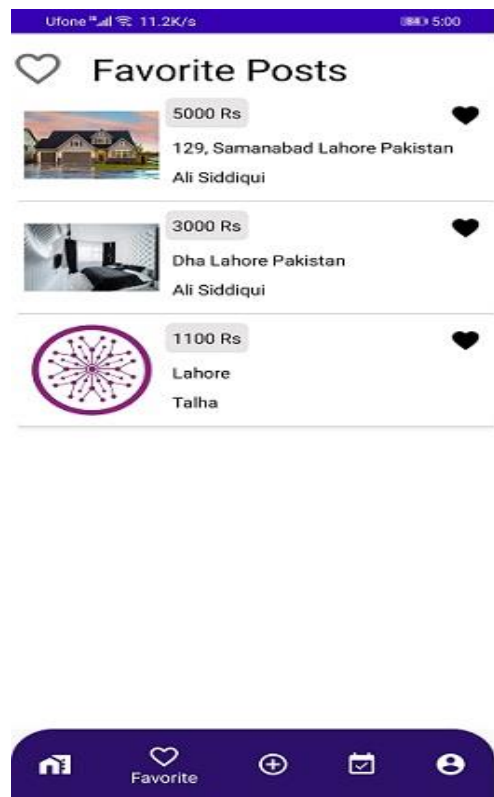
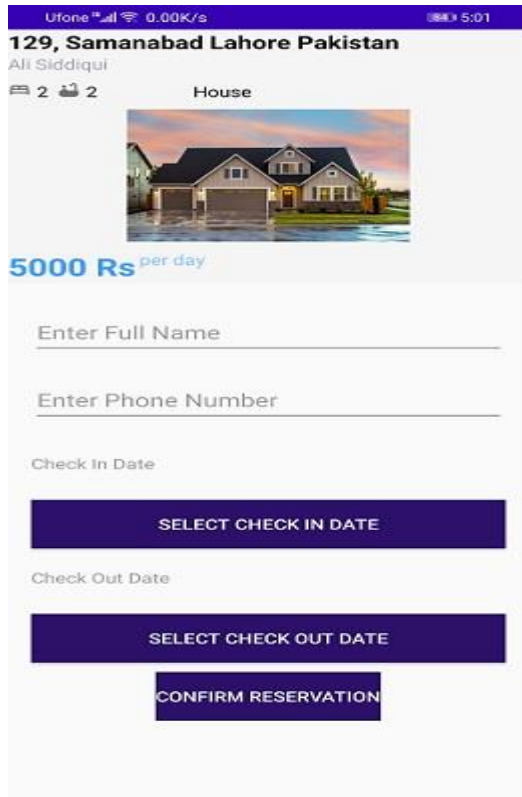
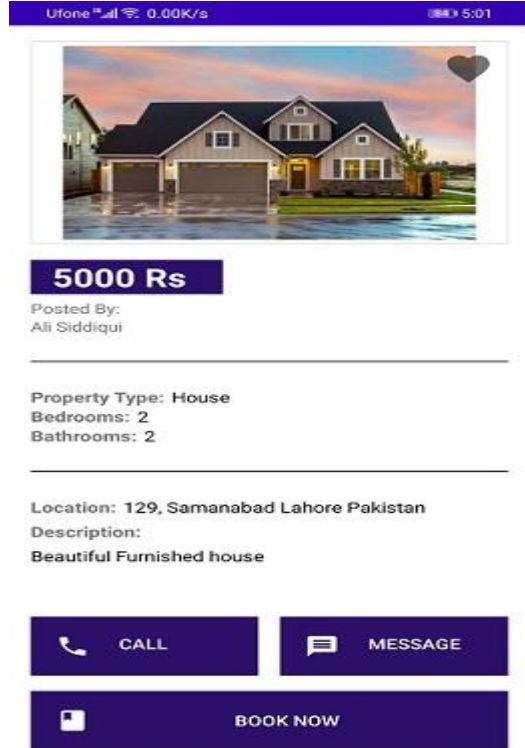
6.5. Data flow testing

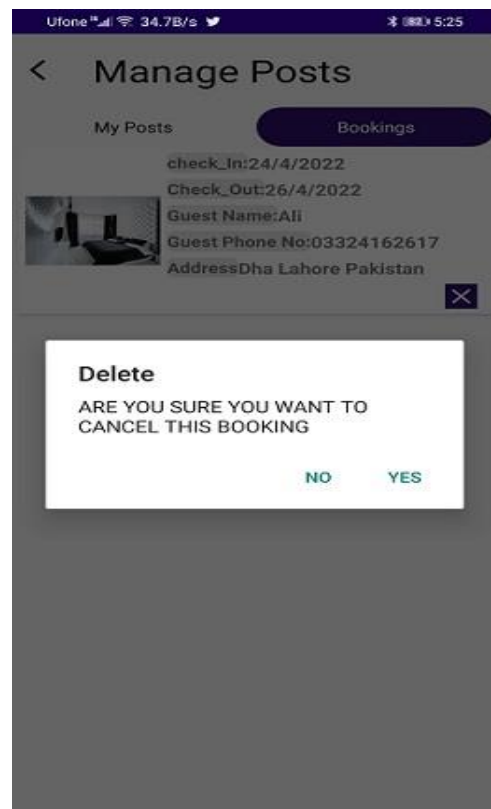
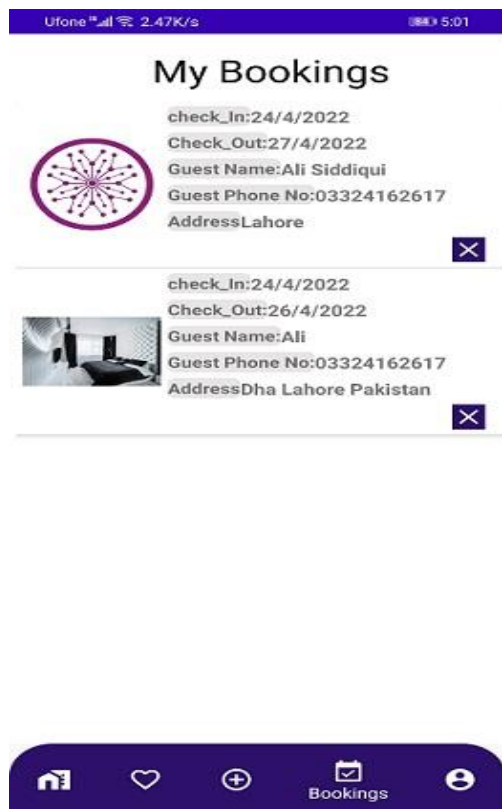
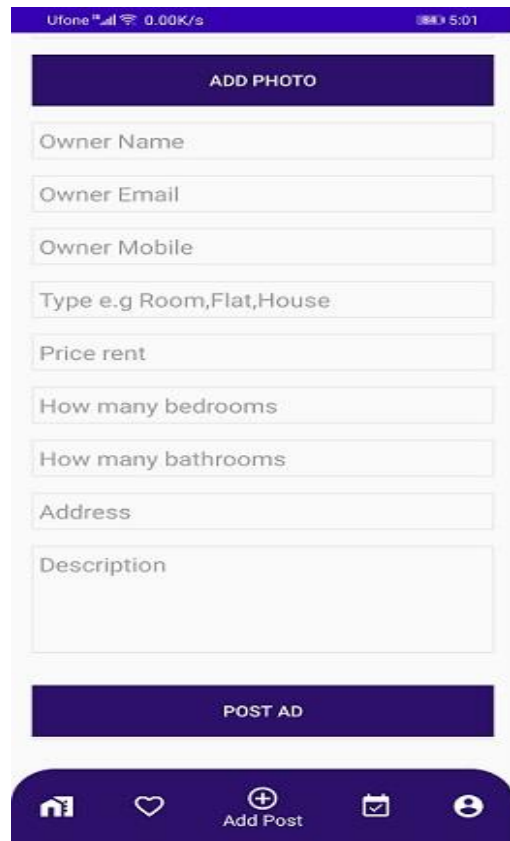
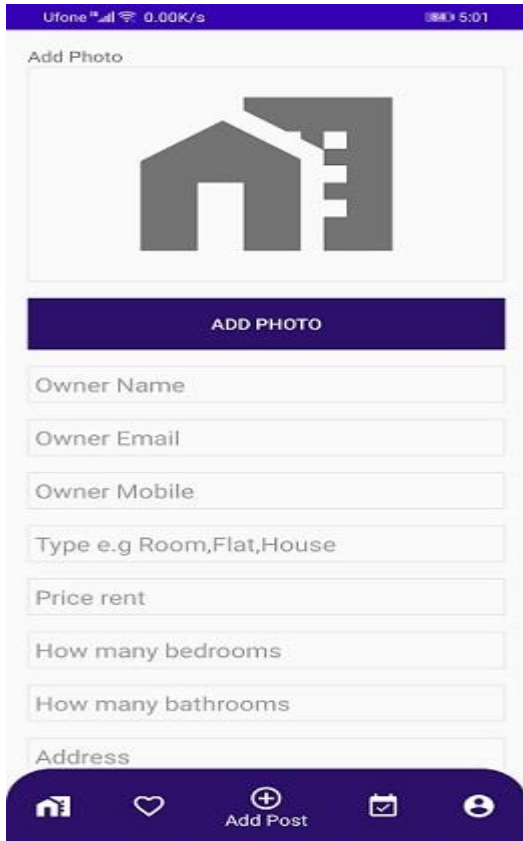
Dataflow Testing		
Data Unit Name	Testing Method	Test Result
Registration	Interface → Firebase Database, Firebase Database → Interface	Pass
Login	Interface → Firebase Database, Firebase Database → Interface	Pass
Favorite/ unfavorite post	Interface → Firebase Database, Firebase Database → Interface	Pass
Post Add Form	Interface → Firebase Database, Firebase Database → Interface	Pass
View Post Details	Interface → Firebase Database, Firebase Database → Interface	Pass
Make Reservation	Interface → Firebase Database, Firebase Database → Interface	Pass
Edit/ Delete Post	Interface → Firebase Database, Firebase Database → Interface	Pass
Delete Reservation	Interface → Firebase Database, Firebase Database → Interface	Pass

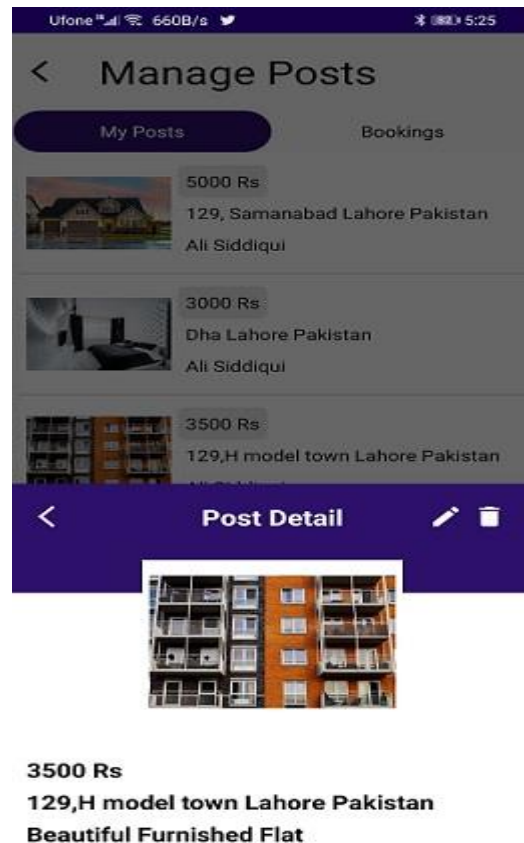
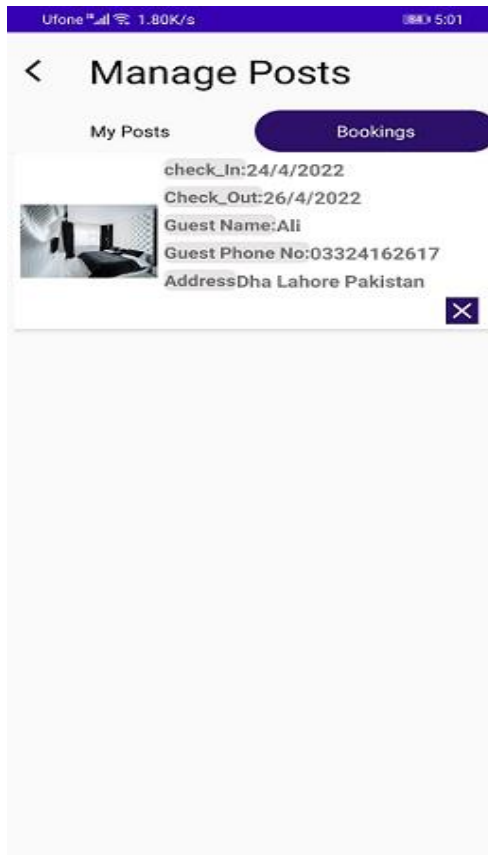
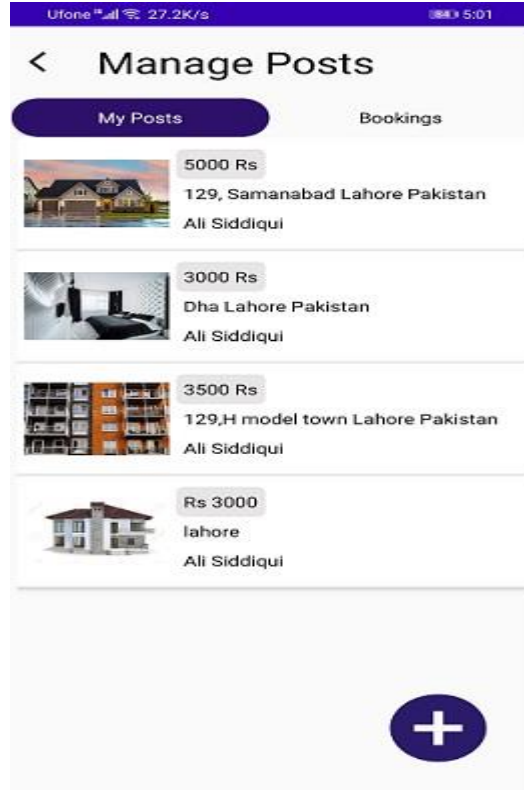
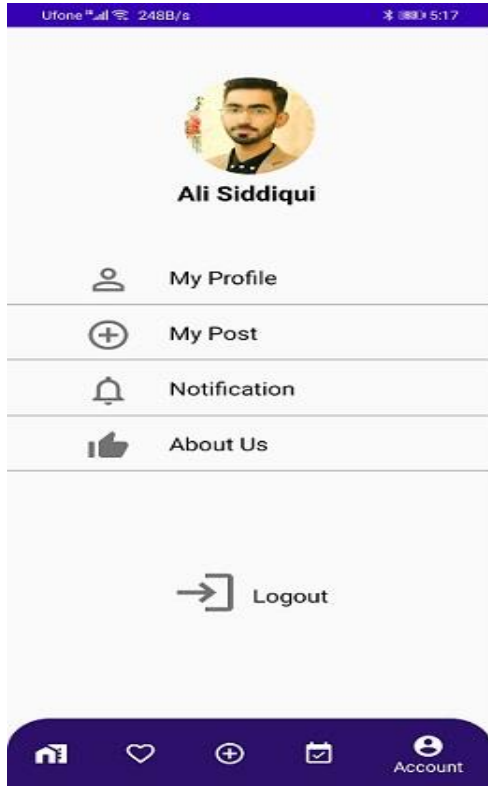
Table 6.12

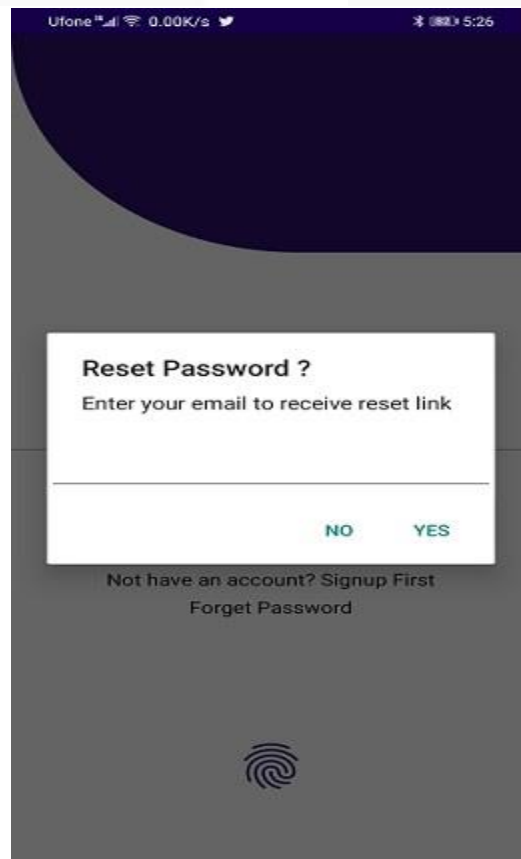
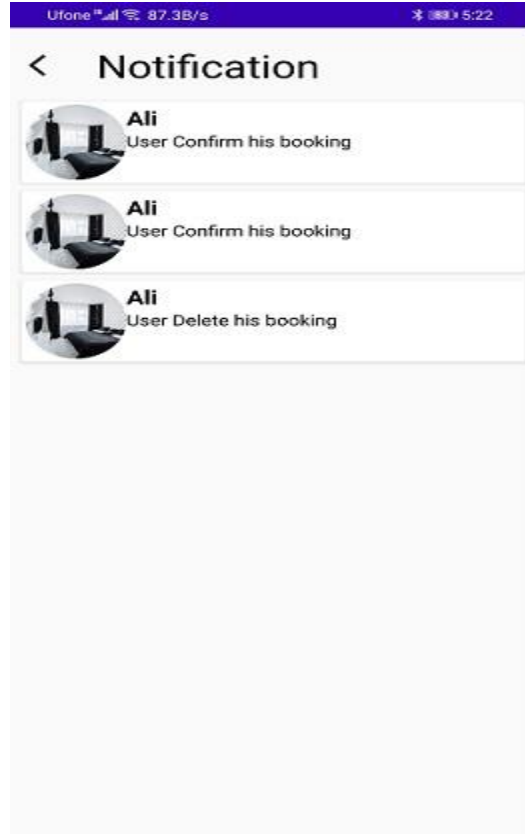
Screen shots:











Chapter 7

Summary, Conclusion and Future Enhancements

Chapter 7: Summary, Conclusion & Future Enhancements

7.1. Project Summary

A majority of unpleasant issues faced by guest and host seem to grow due to lack of communication. We are developing a android based application with some astounding highlights. The primary thought is that it is a Android app named as Accoest. Accoest venture helps the clients in finding house rooms in different cities when they want to travel or make tour plans. The fundamental reason for this venture is to help the client to effectively and to provide feasibility as it is the world of technology. Fortunately, building a positive relation does not take as much effort and it start with one basic idea communication. Accoest provides the solution by offering the ability to share issues between guest and host which leads to rapid issue resolution and fewer misunderstanding. The goal of the software is to create a better relationship between guest and host. The Accoest app is designed to support guest and host by enabling them to document and communicate their issues in regards. It helps the guest to make booking and it also helps the host to keep track of bookings book by guest. In this manner a person can rent a room as per night bases according to his feasibility.

7.2. Achievements and Improvements

Accoest is the online vacation rental app where user search different posts of room and select different posts only in one application. This project has great future scope. Accoest is online room rental system where user easily search ads of rooms and make reservation sit in your own mobile phone and host add his room, house, flat post in a single app.

The purpose of this project is to present an efficient, reliable online vacation rental management system and make reservation efficient and effective. The achievements that we have made is that we are providing a platform especially for travelers and tourists to view posts and make online reservations and plan their trip easily.

7.3. Lessons Learnt

This project helped us in gaining valuable information and practical knowledge on several topics like designing Android app UI using XML in android studio, backend like java using for database integration, designing of responsive Android application, and management of database using Firebase. We learn how to make documentation of the project. The entire system is secured. Also, this documentation help us to understand about the development phases of a project and software development life cycle(SDLC). We also learned how to test different features of a project.

7.4. Future Enhancements/Recommendations

In future the project will be updated with to top most methodology and with the passage of time new advancement will be made in it and kept in knowledge. In future we also add payment feature in which guest send in app money and host receive the money and confirm it. Stay aware of patterns and advancements in online industry, watch out for the opposition and receive new innovation.

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