



Online Hotel Booking System

Android app

App link
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1.ABSTRACT

This is an online hotel booking system designed using android studio and Firebase database. This app helps the user reserve the hotel room of customer choice online.

This app facilitates the end user to view the hotel and hotel rooms based on the various categories and sorting preferences they select. It also lets the users register to the app so that individual profile can be maintained. User can access and modify user profile by signing in. New users are given sign up option.

The user account maintains the personal details of the customer, both billing and room preference of the customer. Also, the reservation User has made can be viewed in the bookings module. The user can cancel reservation.

If the user is business owner, then User can add business to the mybooking app and manage business profile so customer can view rooms provided by them. Also, hotel owner can add and update business information along with amenities provided and picture of service. Price can be managed by the hotel owner based on their business models and services provided by them.

The system admin can manage app. Admin can manage user and agents(business owner) accounts . he can also remove any user or agent account if he wish.

2.INTRODUCTION

With the ever expanding use of the internet and online travel booking sites for vacation planning, opportunities may exist for niche travel reservation offerings in the Online Travel Agency industry. My booking app is a new app developed to provide an online travel reservation service, specialized in Hotel room reservation services. The app plans to offer hotel accommodation service distribution for many types of hotel properties, from small independent hotels to five star luxury residences worldwide.

Mybooking app is an efficient, informative, and user-friendly android application for leisure travelers to book reservations for their holiday vacations. Travelers will be able to easily make accommodation reservations, for a vast range of hotel rooms and vacation home properties worldwide, at very competitive rates. The service will also provide a more competitive distribution channel for hotels and resorts to make their accommodation products available to a targeted customer base. This app will greatly simplify the process of finding the most suitable accommodations for this more specialized traveler group, while providing hotels and other accommodation suppliers with a more cost effective distribution channel for their product.

3. PROBLEM IDENTIFICATION

The current manual reservation system uses paper and direct human interaction to book the hotel room and manage reservations. This makes delays exchanging of information in the hotel. Reservation is done via phone calls or by visit in person to the hotel reservation office. The guest's personal details such as Name, gender, Age and Duration of visit or stay, are entered during booking made. Then the booking officer asks to prepare room for guest before customer check in date. The data and documents are transferred manually to the appropriate office for compilation of the guest's file. On the day of check in date the file is transferred to the reception. On the day of checking in the guest is given the key to his room, customer also specify if room service is needed.

The Front desk hands over the customers file to the account department where guest pays for accommodation and other fee. The customers file is updated on daily basis of his expenditure costs. The financial department generates the bills on and delivered to the customer in their rooms. The guest pays at the accounts department.

A day before their check out day, their expenditure are generated. The guests receive their expenditure at the accounts office as they check out, where they pay for remaining balance if any.

After analyzed various traditional hotel room booking system, I had noticed the below problems in their system. Manual system for storing records is not consistent as some inaccuracy can creep in while writing records manually.

- Guest or visitors may face hard time to getting place to stay in area.
- It is difficult to store record of availability of room and huge number of customer's records.
- More manpower is required and the current system consumes too much time to making reservation and storing data.
- Maintaining of up to date availability of inventory is bit difficult, thus, it is making hard for executive to search the particular records and room.

- Payment processing and collection is difficult.
- Inaccurate of records or data.
- There is no centralized database can be created as information not at one place.
- More money and paper and other resources are wasted to store the record of available rooms and customers

3.1.ADVANTAGES THE MANUAL SYSTEM.

1. Employee with the no computer skill or any special skill is not required.
2. No need to rely on any device to access or use data.
3. Human interaction is required to create booking, thus one can better identify customer.

3.2.DISADVANTAGES OF THE MANUAL SYSTEM.

1. There is maximum possibility of losing customers record and files or mix up customer's record.
2. As we are not sure and we can to re use past records, unwanted duplication of information and data is possible.
3. As the actual file is available, there are chances that one can use the files and information without permission or right.
4. Maintaining file security and standard is difficult
5. As very easy access to guest information by unintended users, guest information is extremely unconfidential.
6. Reusing or retrieves of guest records is extremely difficult.
7. Human are required to fill forms and enter data, manual data entry leaves to errors.

4.PROPOSED SOLUTION & OBJECTIVE

4.1.PROPOSED SOLUTION

Main aim of designing this project is to design a system that can manage and handle the activities that are involved in a hotel reservation in an organized, cost-effective and reliable way. It will help the administrative to do their work in very simple manner without causing any trouble and Visitors or customer to reserve their room according to needs before they come to hotel. Customer can use electronic device like android smart phones or tablet etc to book and confirm their stay with hotel. Based on the limitation and shortcomings identified in the existing Hotel Room reservation system, the solutions have been provided for the better management to the organization and ease of access to the customer.

The proposed solution will have ability to manage customer ' s account where they can save their preferences and personal information. Customer will have many options to compare rates and services based on their requirement. Efficient searching, sorting and filtering offered to the customer. Traveler or any other customer can book and secure their place to stay before or without actually visiting the hotel. Executives and business owner can easily manage the inventory and rates of their hotel rooms. The proposed system will be able to handle payment and transactions.

4.2.OBJECTIVE

- With this app Customers can easily go online with their mobile phones or tablets to browse about hotels within their vicinity.
- Guests can be able to book for rooms within their budgets after seeing and accessing these hotels within their vicinity.
- Receptionists can easily access customer's information online without delay or with little delay.
- Fraud done by the receptionist by not registering every customer will not occur because the customers details will be online and can be accessed by the managers too.

4.3. SCOPE

This project is aimed at developing an online application for hotel reservation. This system can be used by end users (Customer and hotel owners i.e agents) and administrator to perform extensible tasks, to reserve and sale hotel room in an easy and secure manner. The following facilities have been implemented :

- Secure registration and profile management facilities for customers.
- Adequate searching mechanisms for easy and quick access to particular hotel room and services.
- Reserving the room and payment.

In addition to the above mentioned basic functional requirements for the project, the following supplementary requirements as well. I have created app navigation so that the customers can search for rooms and reserve or save to their account to reserve it later. A sorting mechanism for rooms by city. Module for a contact mechanism for the rooms from the customers has also been implemented.

5.MODULES

The HOTEL Booking SYSTEM consists of 3 modules

- **Admin module**
- **Agent module**
- **User module**

5.1. ADMIN MODULE:

5.1.1.The Functionalities of the Administrator are:

1. The administrator should login into the system with unique admin password and username.
2. If the username and password is validated then he can gain access to the system.
3. Admin can view all the users details with their profile pictures.
4. Admin can view bookings of the particular user.
5. Admin can delete user accounts.
6. Admin can view all the agent details with their profile pictures.
7. Admin can check the rooms of the particular agent added by them.
8. Admin can remove particular agent account.
9. He can manage all the rooms check price and remove if it is over priced.

5.1.2.The Administrator can do the following actions:

1. Login
- 2.View and Manage User Accounts
3. Check user bookings
- 4.View and Manage Agent Accounts
- 5.View and Manage Room.
6. View Hotels
7. Edit / Delete Hotels
8. Upload Hotel Images.
- 9.Logout

5.2.AGENT MODULE:

5.2.1The Functionalities of the Agent are:

- 1.The agent can register with the application by entering his appropriate details.
- 2.The User should login into the system with unique his/her password and username.
3. If the username and password is validated then he can gain access to the system.
- 4.Agent can add new rooms to the app.
- 5.He can view rooms that he has added previously.
- 6.He can manage (edit/delete) his previous rooms added to app.

7.He can Add/update his Profile Details with Profile picture

5.2.2.The Agent can do the following actions:

1. Register
2. Login
3. Update Profile
- 4.Add Room
- 5.Edit or Delete Rooms
- 6.Add/ Update hotel facilities.
- 7.Logout

5.3.USER MODULE:

5.3.1.The Functionalities of the User are:

1. A new User can register with the application by entering his appropriate details.
2. The User should login into the application with unique his/her password and username.
3. If the username and password is validated then he can gain access to the application .
4. View the all room Categories.
5. He can Book Room.
- 6.He can Pay using Upi payment or he can pay at hotel.
- 7.He can save rooms to wish list.
- 8.He can search rooms

9.He can See all his Previous bookings.

10.He can Cancel Booking

11.He can contact using mail/phone number.

12.He can Add/update his Profile Details including Profile picture

5.3.2.The User can do the following actions:

1. Register

2. Login

3. Update Profile

4. User Functionalities

a. Advanced Search

b. Booking

c. Payment

d. cancel

e.save room

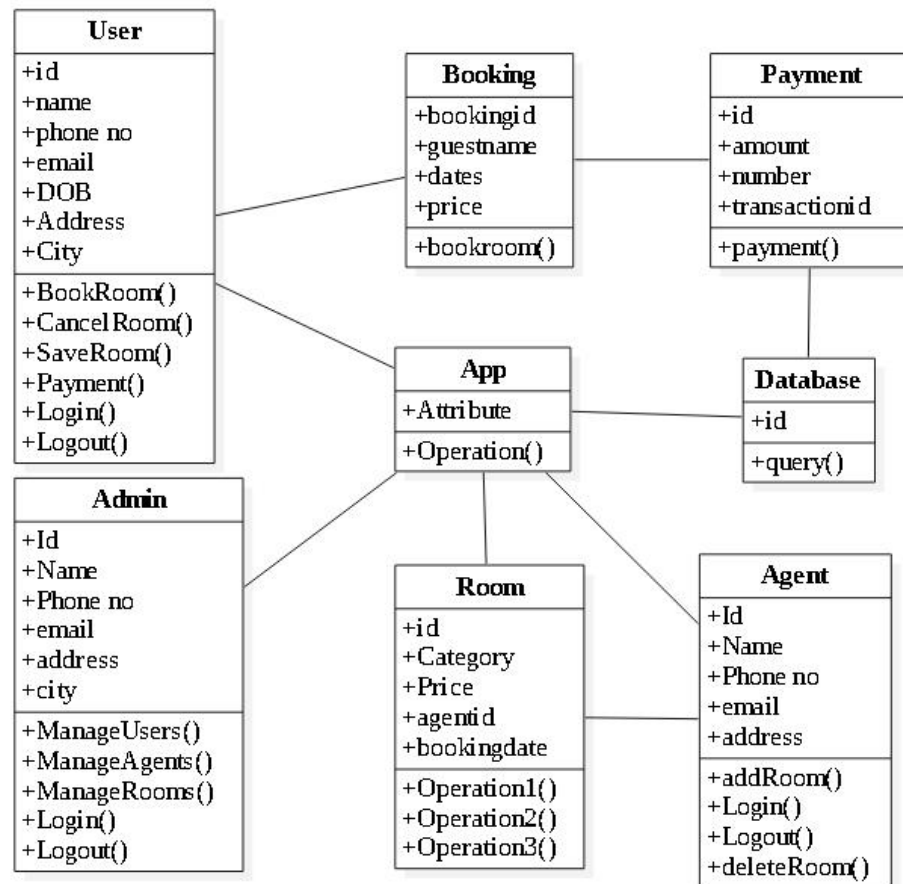
5. Logout

6.UML DESIGN

The Unified Modeling Language allows the software engineer to express an analysis model using the modeling notation that is governed by a set of syntactic semantic and pragmatic rules. A UML system is represented using five different views that describe the system from distinctly different perspective.

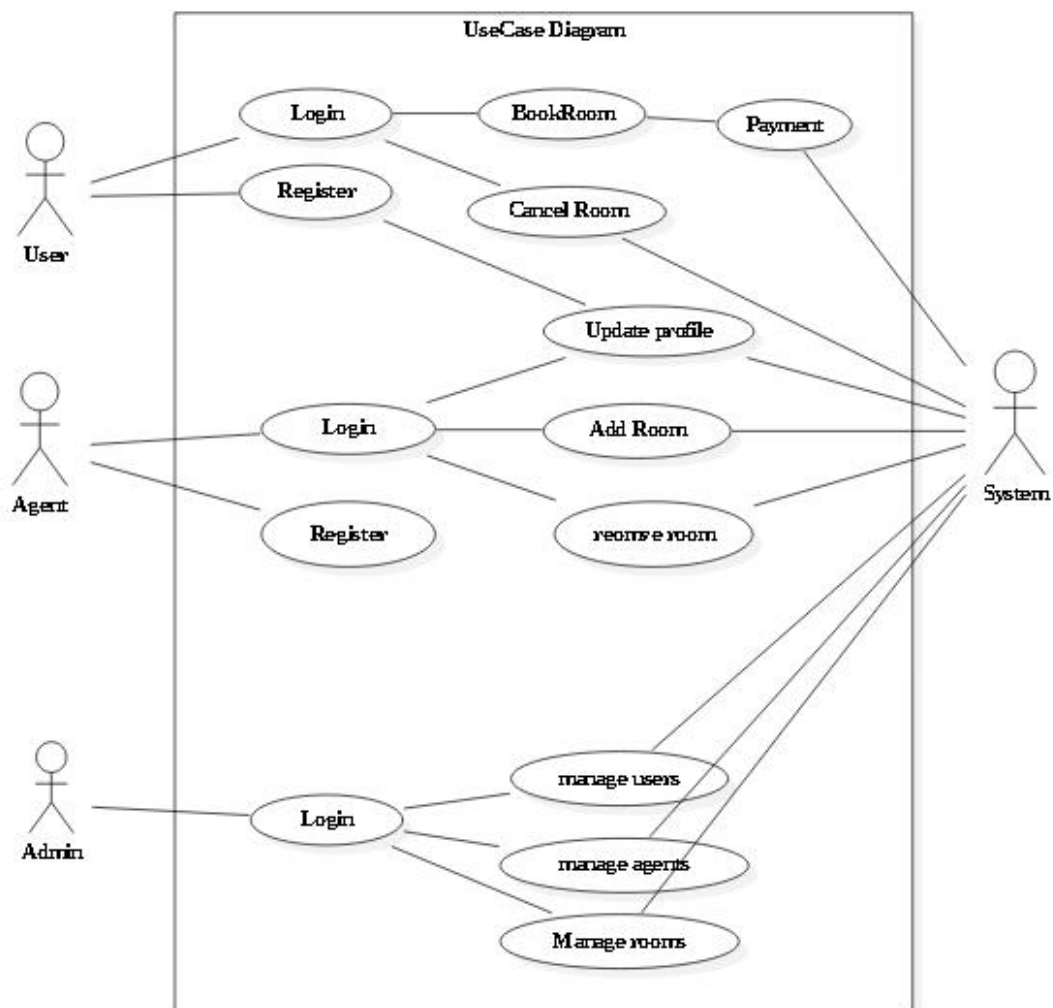
6.1.CLASS DIAGRAM

The class diagram is the main building block of object-oriented modeling. It is used both for general conceptual modeling of the systematic of the application, and for detailed modeling translating the models into programming code. Class diagrams can also be used for data modeling.



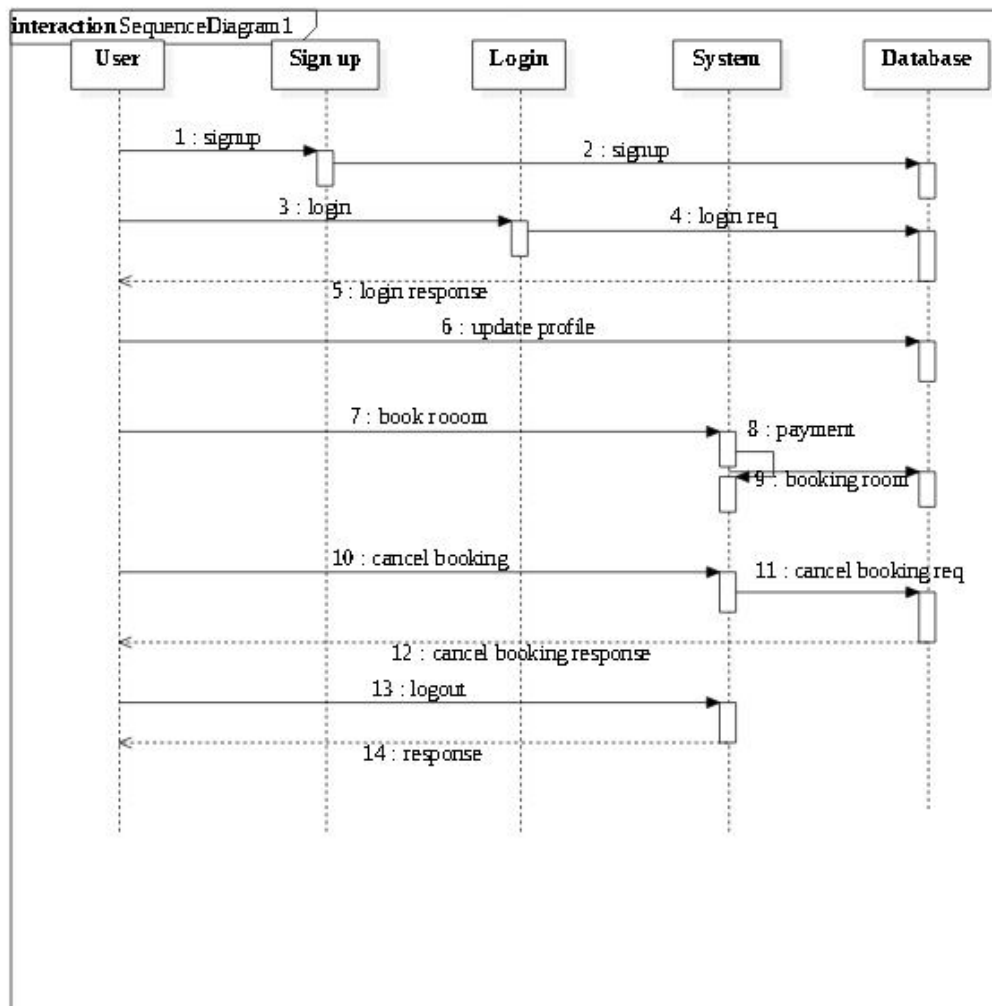
6.2.USE CASE DIAGRAM

A use case diagram at its simplest is a representation of a user's interaction with the system and depicting the specifications of a use case. A use case diagram can portray the different types of users of a system and the various ways that they interact with the system. This type of diagram is typically used in conjunction with the textual use case and will often be accompanied by other types of diagrams as well.



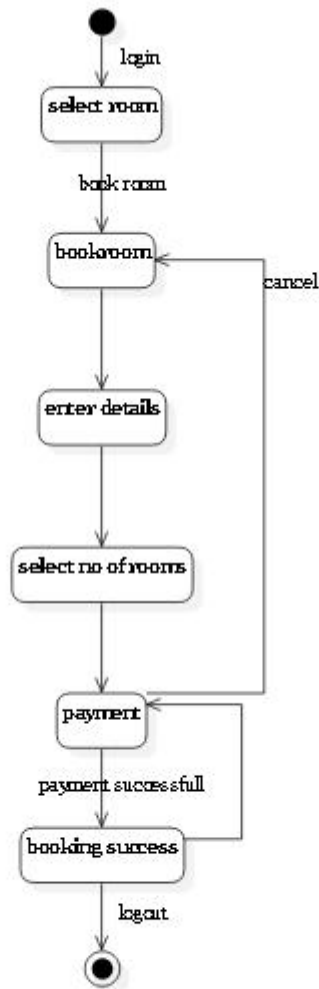
6.3.SEQUENCE DIAGRAM

A sequence diagram is a kind of interaction diagram that shows how processes operate with one another and in what order. It is a construct of a Message Sequence Chart. A sequence diagram shows object interactions arranged in time sequence. It depicts the objects and classes involved in the scenario and the sequence of messages exchanged between the objects needed to carry out the functionality of the scenario. Sequence diagrams are typically associated with use case realizations in the Logical View of the system under development. Sequence diagrams are sometimes called event diagrams, event scenarios, and timing diagrams.



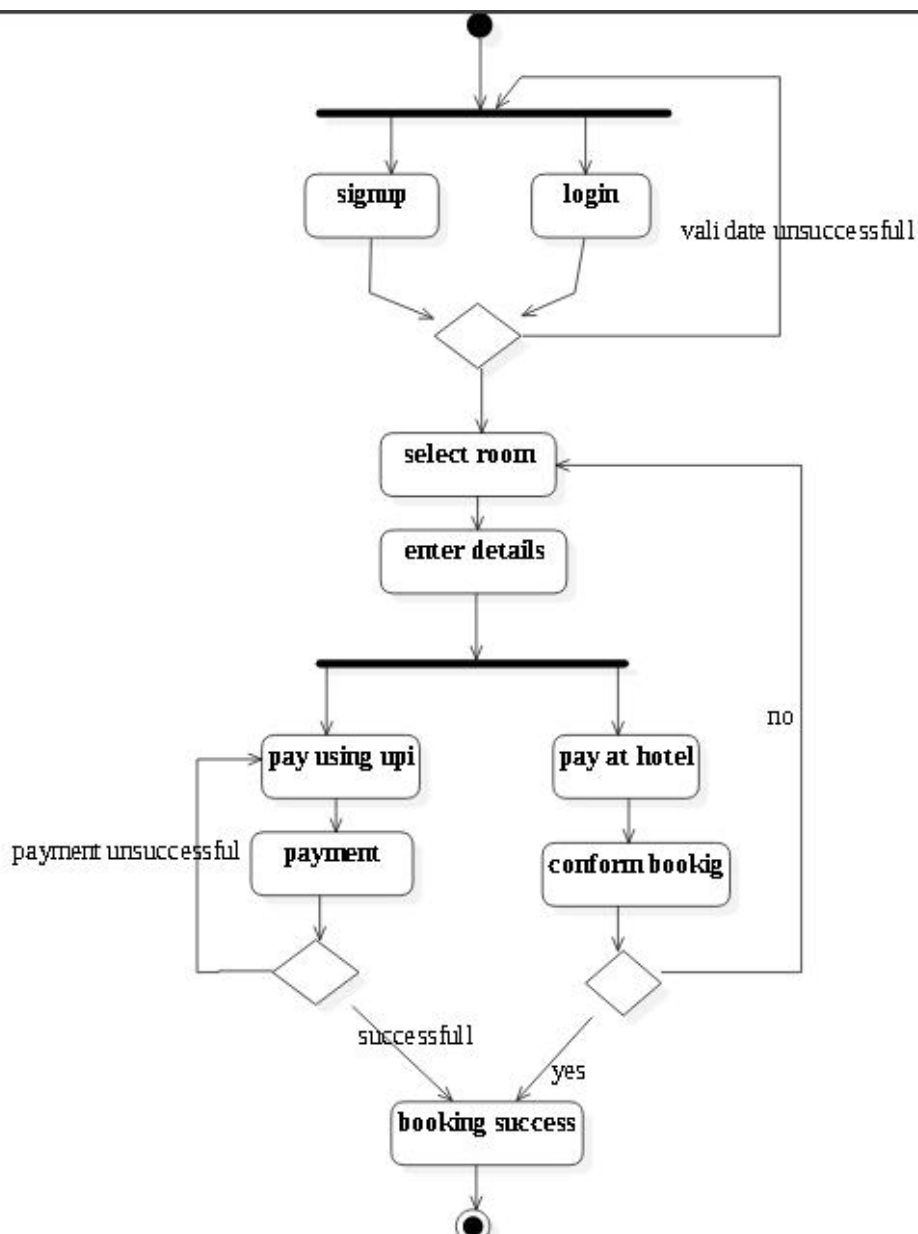
6.4.STATE CHART DIAGRAM

Statechart diagram describes the flow of control from one state to another state. States are defined as a condition in which an object exists and it changes when some event is triggered. The most important purpose of Statechart diagram is to model lifetime of an object from creation to termination.



6.5.ACTIVITY DIAGRAM

Activity diagram is another important diagram in UML to describe dynamic aspects of the system. It is basically a flow chart to represent the flow from one activity to another activity. The activity can be described as an operation of the system.



7. SOLUTION APPROACH

7.1.USER LOGIN ACTIVITY

User login implemented an activity where user name and password are taken as input from edit texts. If user is authenticated and if details are in database we send user to home activity else user should register his details. So we send to user registration activity. Where the user can register his details and create new account.

7.2.USER HOME ACTIVITY

Creating Fragments for user home activity. Home fragment, Saved fragment ,Bookings fragment.

7.3.USER HOME FRAGMENT

In user home fragment he can see types/categories of rooms available. and he can select the type of room he want and see full room details with room and hotel picture and book his room further. Implemented by creating card view for each and every room type category.

8.4.ROOM PREVIEW ACTIVITY

After selecting room user can see the preview of room where he can see hotel image, room image, hotel and room details. If he likes it he can book room. or else if he want to see other rooms and save it to wish list he can save room and see other rooms.Implemented by creating card view which has hotel room images and details taking data from firebase database, images from firebase storage and displaying on card view in realtime.

7.5.USER PAYMENT OPTIONS ACTIVITY

In user payment options activity which has two options he can pay at hotel or he can pay using upi payment option. User can pay at time of room booking using upi payment apps like paytm google pay

etc.or User can pay at hotel. Implemented upi payment option. The amount is calculated based on selected no of rooms while room booking whose details are stored in database. And payment details are also stored in database based on the option the user choose.

7.6.USER SAVED FRAGMENT

Here user can see all the rooms that he has saved to wish list and Adding remove option to remove room from saved booking fragment.Implemented using card view, recycler view, firebase recycler adapter. Creating card view for the user bookings fragment and in real time getting data from database of particular user of the saved rooms and displaying it by using recycler view.

7.7.USER BOOKINGS FRAGMENT

Here user can see all his previous bookings. Implemented by using firebase recycler adapter, recycler options and recycler view and card view. Creating cardview for user bookings fragment and Booking fragment xml file has recycler view and in java file using firebase recycler adapter and options getting data from firebase database in realtime of particular user who is signed in and displaying details in cardview. Using view holder and java class for retrieving data from database. Adding cancel booking option to cancel room in booking fragment. Removing booking data from database of user and database of agent to which room belongs after clicking cancel option.

7.8.USER PROFILE ACTIVITY

Here user can add his details like user name, phone no, profile image, date of birth, idcard number, user address and city to the app and update his details later. If the details are already present in database display them where user can see and update if he wishes to update when ever he wants this activity is in user navigation drawer. Getting details by edit texts and storing in database when the user click update.

7.9.AGENT HOME ACTIVITY

Agent home activity where agent can see all the room he has added. Implemented by using card view and firebase recycler adapter and recycler view . Creating card view for the agent home fragment and

in real time getting data of particular agent rooms from database and displaying it by using recycler view.

7.10.AGENT ADD ROOM CATEGORY FRAGMENT

Here agent can select type of room he wants to add and after selecting type of room then he can fill details in room registration form and then he can add room. Implemented by creating card view for each and every room type category.

7.11.ADD NEW ROOM ACTIVITY

After selecting the room category in previous activity. Here agent can fill details of room in the registration form and add room. Creating registration form for adding room and storing data in database.

7.12.AGENT MANAGE FRAGMENT

Here the agent can see all previous rooms he has added . He can select particular room. He can room edit or delete rooms here. Implemented using recycler view and firebase recycler adapter, firebase recycler options and creating view holder and java classes to get data from database and display in cardview of recycler view In real time. Adding delete option to delete particular room. or update room data if he edits room.

7.13.AGENT PROFILE ACTIVITY

Here agent can add/update his details like name, phone no profile image, date of birth, email, hotel address and city and hotel star rating. If the details are already present in database display them then agent can check and update if he wishes to update details. Getting details by edit texts and storing in database when the user click update.

7.14.AGENT BOOKINGS FRAGMENT

Here agent can see all the bookings of the bookings to him from users. Which contains guest name, guest phoneno, email, no of rooms, no of persons, booking dates, total cost of booking and payment status. Implemented using recycler view and firebase recycler adapter, and creating view holder and java classes to get data from database and display in card view of recycler view in real time.

7.15.HOTEL FACILITIES ACTIVITY

Here agent can add facilities available in his hotel which helps user to see details of hotel. He can also hotel image .Taking details from agent using edit texts and details in database.

7.16.SEARCH ACTIVITY

Adding search bar activity to the navigation drawer where the user can search the rooms based on the city he want to book room. Creating Xml and Java files for search activity.Implemented using Recycler View, firebase recycler adpter, recycler options.

7.17.ADMIN HOME ACTIVITY

Adding navigation drawer and bottom navigation to the admin home activity. Creating menu resource files for navigation drawer and bottom navigation. Creating navigation header and adding user image and name of admin to header. Here we can display admin name and profile picture from database which he added in profile activity.

7.18.ADMIN MANGE USERS FRAGMENT

Creating new card view to display user details and creating recycler view and displaying all the users with user details and picture. Adding options for admin to check particular user bookings and remove user account options. Admin can see all users and he can check user bookings and he can delete particular user account. Implemented using recycler view firebase recycler adapter and firebase recycler options.

7.19.ADMIN MANAGE AGENT FRAGMENT

Creating new card view to display agent details and creating recycler view and displaying all the agents and with details and profile picture. Here admin can see all the agents with their details and profile image. And he can see all the rooms of particular agent and he can delete particular account of agent. Added options for admin to check particular agent rooms and admin can remove particular agent account from app. Implemented using recycler view firebase recycler options and fire base recycler adapter.

7.20.ADMIN MANAGE ROOM FRAGMENT

Creating new card view for room details and creating recycler view and displaying all the Rooms of all agents and room details with the room photo. And adding options for admin to check particular rooms and admin can delete room from app. Implemented using recycler view, firebase recycler adapter ,and firebase recycler options. Taking data of all the rooms and displaying using recycler view in realtime .writing code for it in java

7.21.ADMIN PROFILE ACTIVITY

Which contain admin profile image and admin details. Admin can add his details and he can also update his details later .Creating java and xml files for admin profile activity.and storing details in database

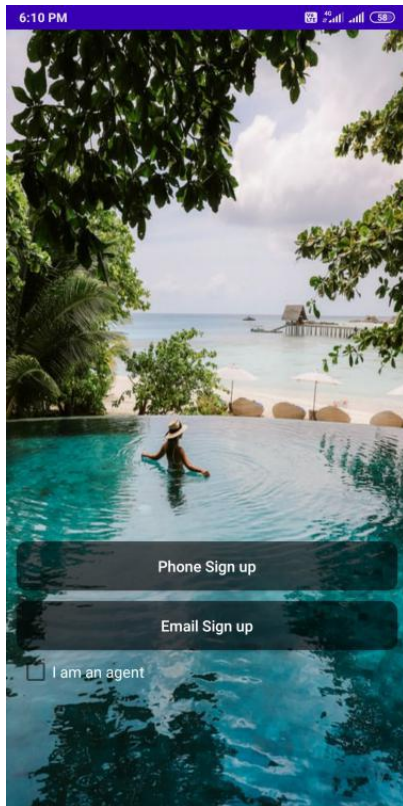
8.PROJECT DESCRIPTION WITH SCREEN SHOTS

8.1.LOGIN MODULES ACTIVITY



8.1.1.Sign up/Login activity

If the user is new the he can select Join now and create an account. If the user has already an account then he can login with user name and password. If admin wants to log in he can click on I am an admin text view which redirects to admin login activity.

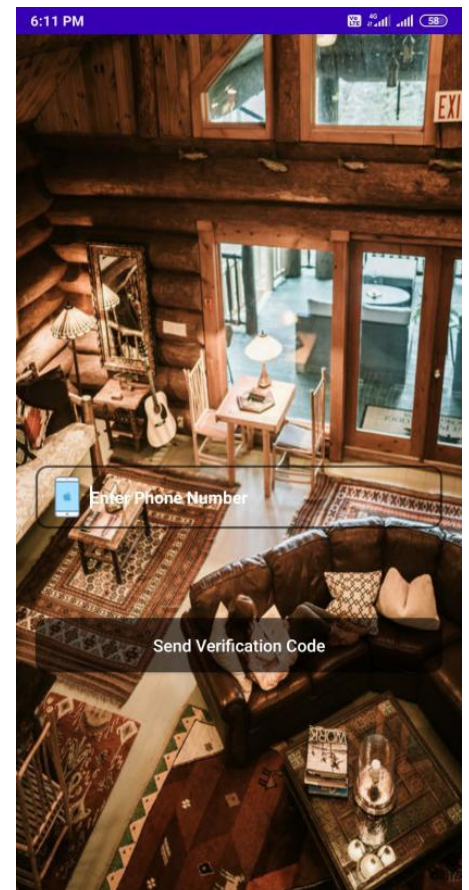


8.1.2.Sign up Activity

If user is new then he can sign up using mail or phone number by selecting the phone sign up and email sign up buttons. If agent(hotel owner) wants to sign up the he can check I am an agent check box and sign up.

8.1.3.Phone log in Activity

This is phone login activity. Here user enters phone number and click on send verification code then he receives OTP to his phone it validated and then user is send to user home activity.



8.1.4.Email Log in Activity



This is email login activity Here user enters his user email and password. If email and password valid then user is send to user home activity. If user email and password are invalid the a toast message is displayed “please enter valid details”.

8.2.ADMIN MODULE ACTIVITIES



8.2.1.Admin Log in activity

This is admin login activity where admin enters his username and password. If username and password valid then admin is send to admin home activity. Otherwise a toast message is displayed “please enter valid details”.

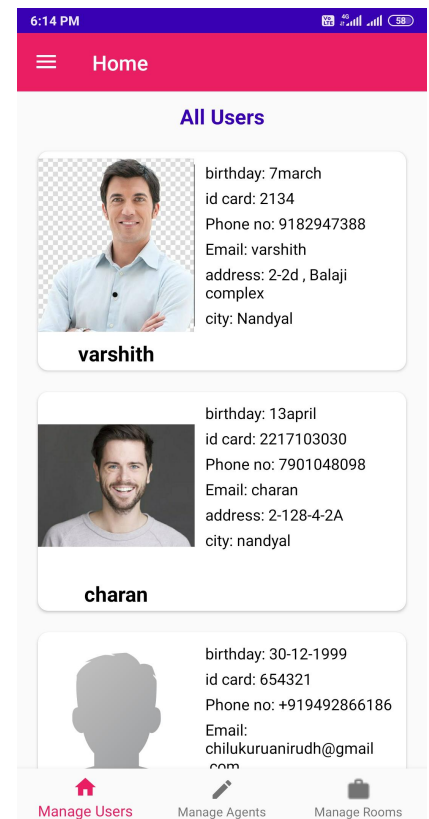
8.2.2.Admin Home Activity

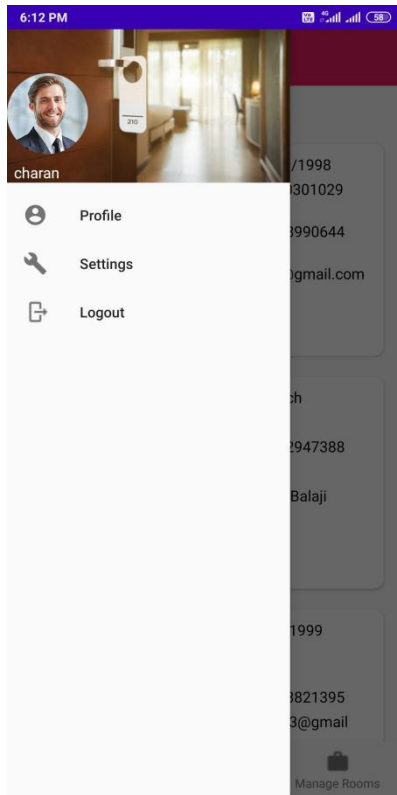
This is admin home activity it contains navigation drawer and bottom navigation bar. Bottom navigation bar contains

Manage user fragment

Manage agent fragment.

Manage room fragment.



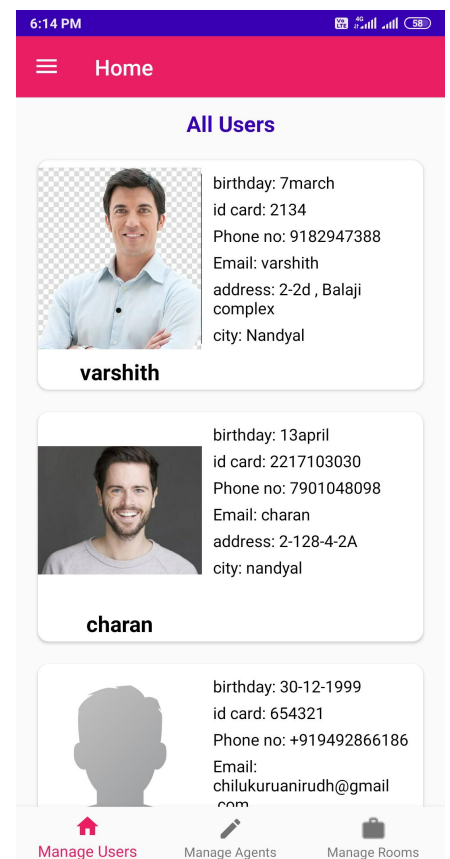


8.2.3.Admin navigation drawer

This is admin navigation drawer which contains profile settings and logout options. And navigation header contains admin name and profile picture .

8.2.4.Manage User fragment

This is manage user fragment here the admin can manage users accounts. He can check user details and user bookings and he can also delete user account.



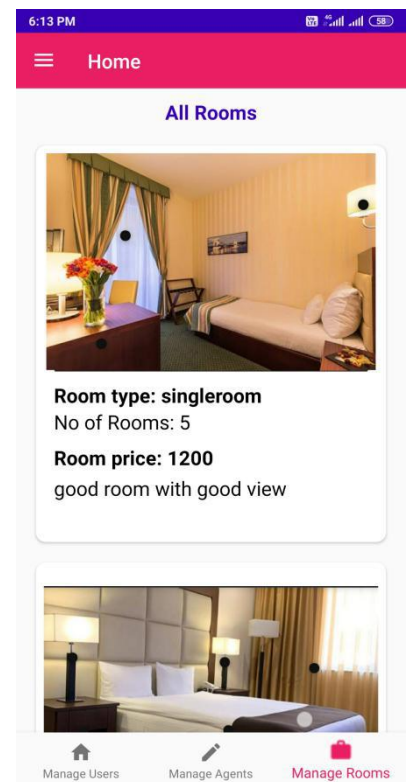


8.2.5.Manage agent fragment

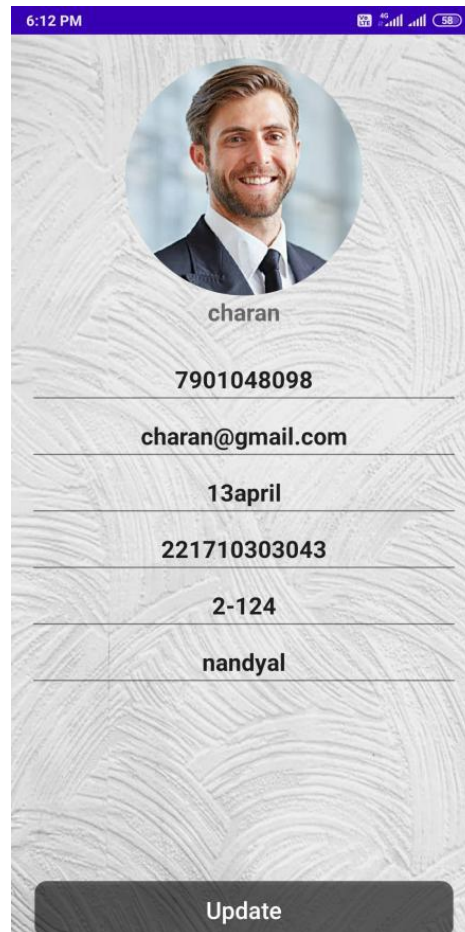
This is manage agent fragment where the admin can manage agent accounts.He can check agent details and he can delete agent account

8.2.6.Manage Rooms fragment

This is manage rooms fragment here the admin can check all the rooms added by all agents and can delete particular room



8.2.7.Admin profile activity

A screenshot of a mobile application interface for an admin's profile. At the top, a purple status bar shows the time as 6:12 PM and various icons. Below this is a circular profile picture of a man with a beard and a blue background. Under the picture, the name 'charan' is displayed. The form consists of several input fields, each with a horizontal line above it: a phone number field containing '7901048098', an email field containing 'charan@gmail.com', a date field containing '13april', a numeric field containing '221710303043', a numeric field containing '2-124', and a text field containing 'nandyal'. At the bottom of the form is a dark grey button with the word 'Update' in white text.

6:12 PM

charan

7901048098

charan@gmail.com

13april

221710303043

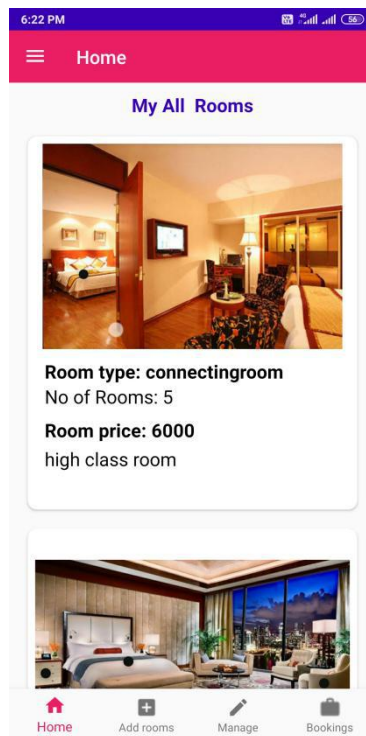
2-124

nandyal

Update

This is Admin profile activity. Here the admin can add / update his details like phone number name, email, address, city and hotel name and he can also add his profile picture.

8.3.AGENT MODULE ACTIVITIES

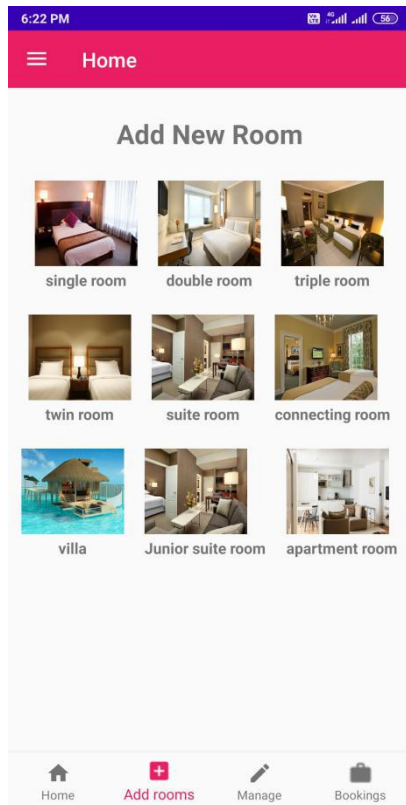


8.3.1.Agent home activity

This is Agent home activity after agent login it redirects to this activity. It contains side navigation drawer and bottom navigation bar. Bottom navigation bar contains four fragments.

- **Home fragment**
- **Add Room Fragment**
- **Manage Fragment**
- **Bookings Fragment.**

Home fragment contains all the rooms added by the particular agent.

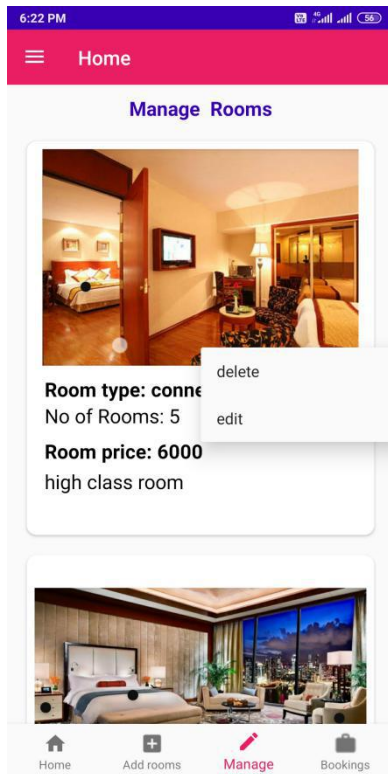


8.3.2.Agent add rooms fragment

This is agent add rooms fragment here the agent can select the type of room he wants to add and then he can add the selected type of room then it redirects to registration from to add room.

8.3.3.Add room activity

After select the type of room from the list of categories in add room fragment the he redirects to the this activity where the agent enters room type, description, ac or non ac, no of rooms and room picture and then by clicking on the add room button the room is added.

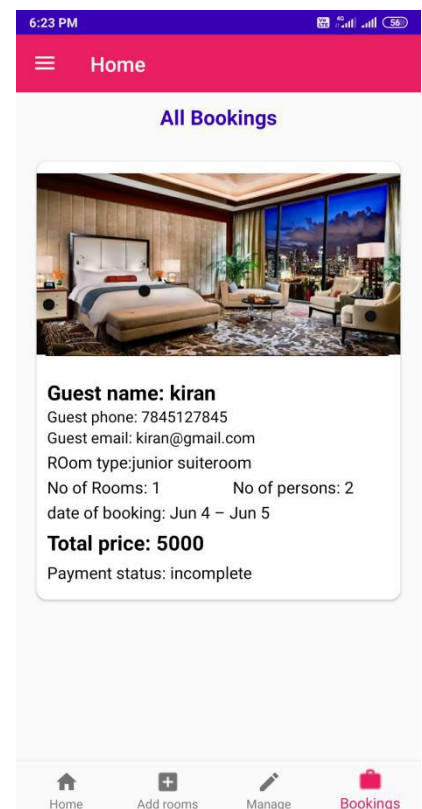


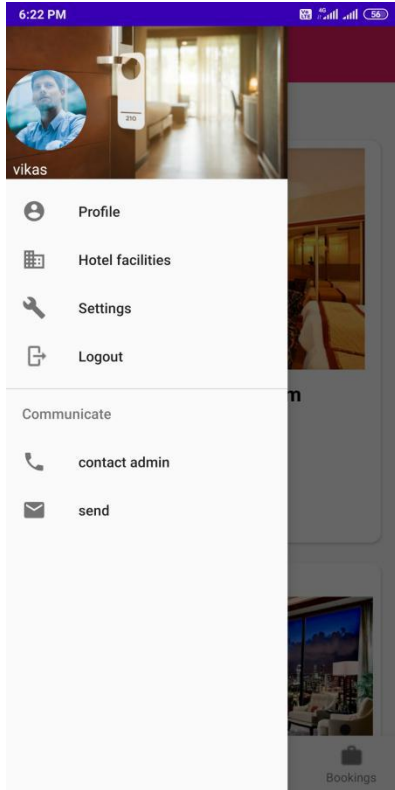
8.3.4. Manage Rooms Fragment

Here the agent can manage the rooms he has add previously by long clicking on the particular room it displays delete and edit options. If he selects edit the it redirects to another activity where he can edit his room details. If he selects delete option the the room is deleted.

8.3.5. Agent Bookings Fragment

This is agent bookings fragment. Here the agent can see all the bookings that he has got from users.



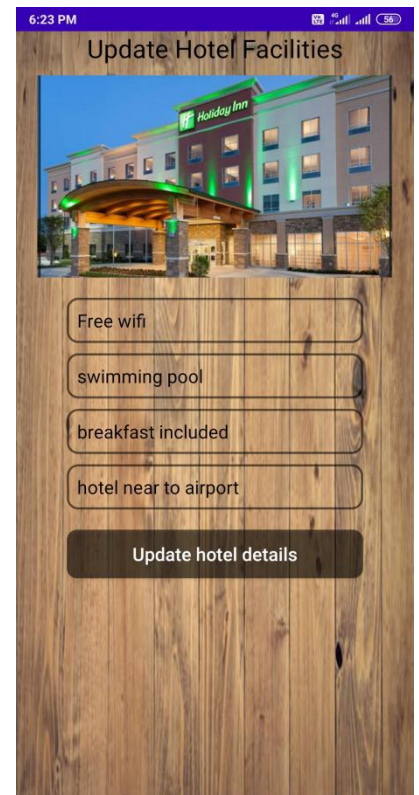


8.3.6.Navigation drawer

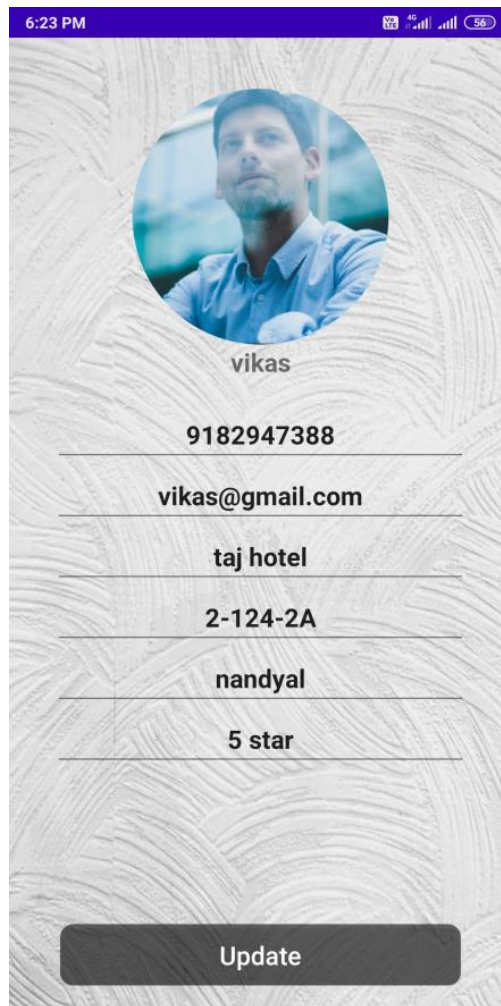
The side navigation drawer contains profile, settings, hotel facilities and logout options. Navigation header contains agent name and profile picture. Agent name and profile picture displayed be retrieving from database.

8.3.7.Hotel facilities activity

This is Hotel facilities activity. Here the user can add/update the facilities available at hotel like swimming pool, break fast, wifi etc and he can also add hotel picture.



8.3.8.Agent Profile Activity



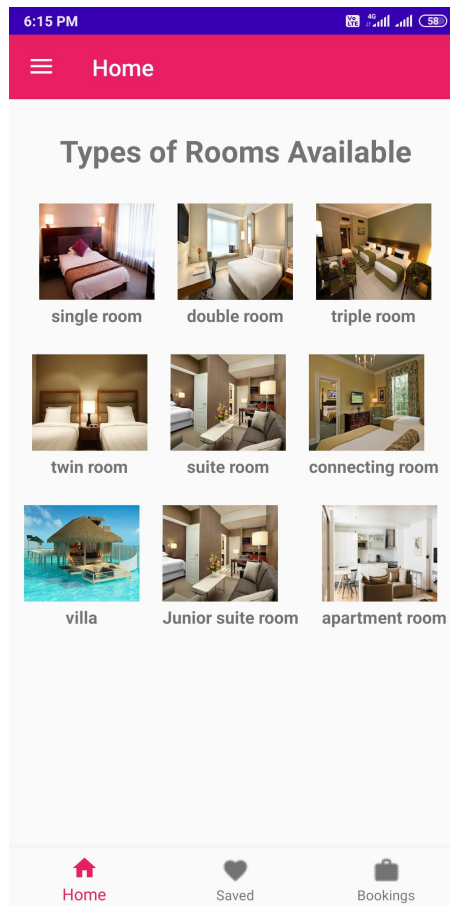
A mobile application interface for an agent's profile. At the top, a purple status bar shows the time as 6:23 PM and various icons. Below this is a circular profile picture of a man with a beard, wearing a blue shirt. Under the picture, the name 'vikas' is displayed. Below the name are several text input fields, each with a horizontal line underneath: '9182947388', 'vikas@gmail.com', 'taj hotel', '2-124-2A', 'nandyal', and '5 star'. At the bottom of the form is a dark grey button with the word 'Update' in white text. The background of the form has a subtle, repeating pattern of the word 'Agent'.

vikas
9182947388
vikas@gmail.com
taj hotel
2-124-2A
nandyal
5 star

Update

This is Agent Profile Activity. Here the agent can add / update his details like phone number name, email, address, city and hotel name and he can also add his profile picture.

8. 4.USER MODULE ACTIVITIES

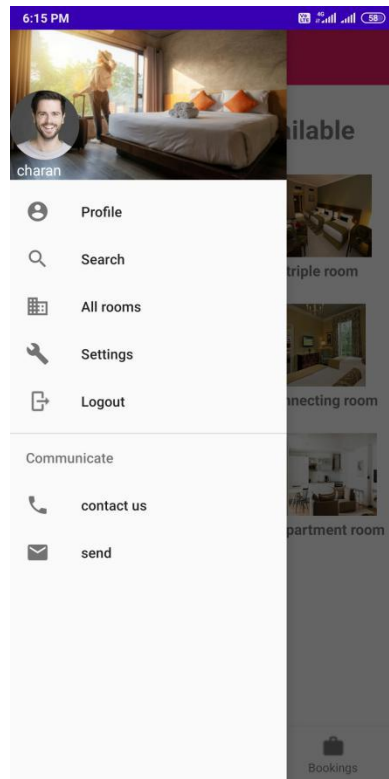


8.4.1.User home activity

This is User home activity. After the user login it redirects to this activity. It contains side navigation drawer and bottom navigation bar. Bottom navigation bar contains four fragments.

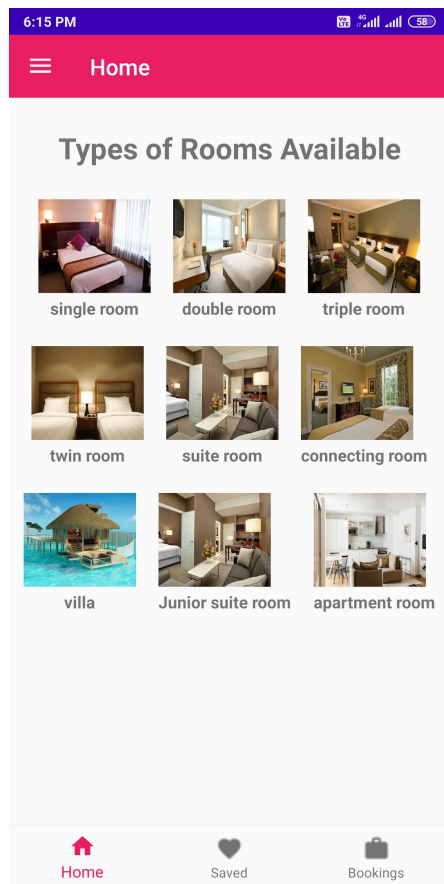
- **Home fragment**
- **Saved Fragment**
- **Bookings Fragment**

8.4.2.Navigation Drawer



This is Navigation drawer it is in user home activity. It contains

- **profile activity option**
- **Search activity option**
- **All rooms activity option**
- **Settings activity option**
- **Logout option**

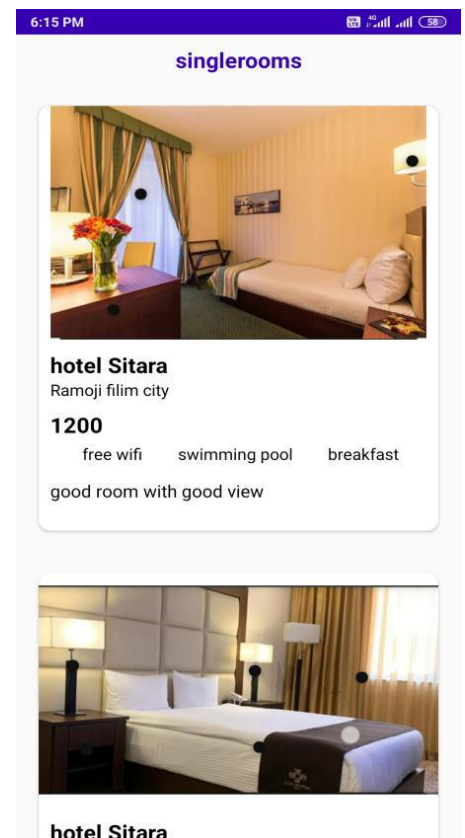


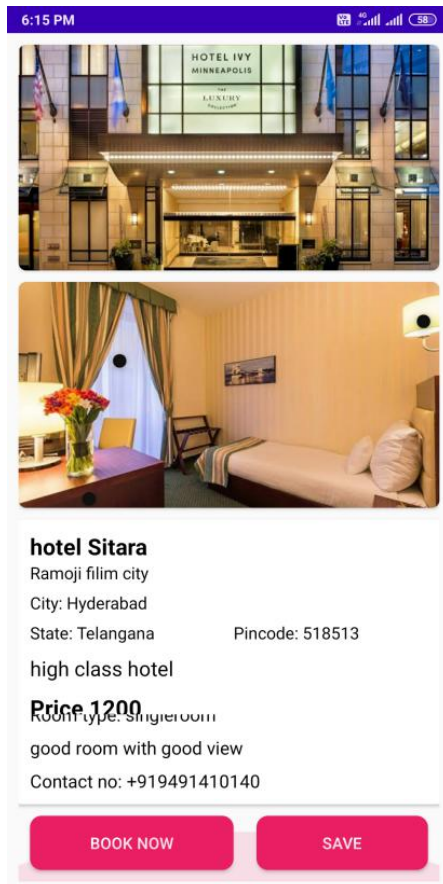
8.4.3.Home fragment activity

Home fragment contains all the category of rooms available here user can select the type of room he want. After selecting type of room it redirects to another activity where he can sell all the rooms of selected category.

8.4.4.Particular room activity

Here the user is displayed with all the rooms of a particular category the user has selected in previous activity. User can select the room here by clicking on particular room then all the details of that room is Displayed in next activity.





8.4.5.Room Preview Activity

Here the use can view all the details of room and hotel. He can view room price, hotel facilities, contact no, room picture and hotel picture. If the user want to book the room he can book it by clicking on book now button or else He can save it he can save it to wish list.

8.4.6.Book Room Activity

Here the user needs to enter the guest details, name, phone no, email, and select no of rooms he want to book, no of persons and dates for booking the room then he can click proceed to book for payment options.

Hotel Booking

Book Room

no of rooms: - 1 +

no of persons: - 1 +

select dates below

select date

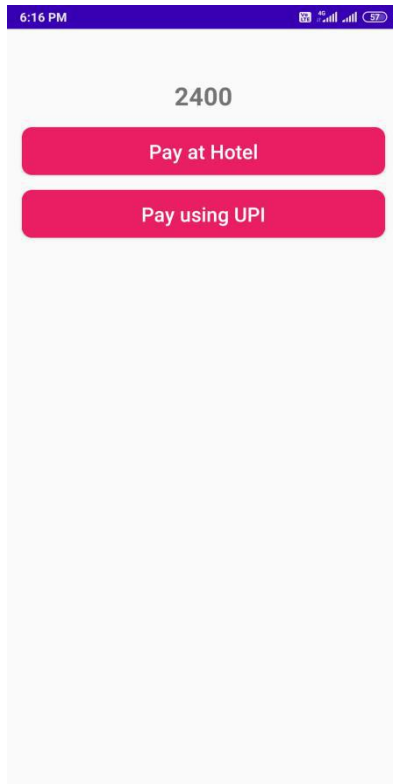
Guest name:

Guest Email:

Guest Phone no:

Price: 5000

Proceed to book

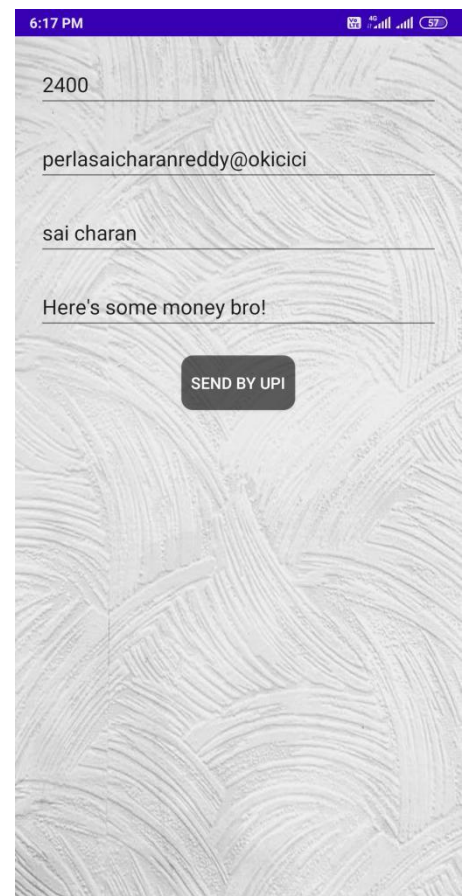


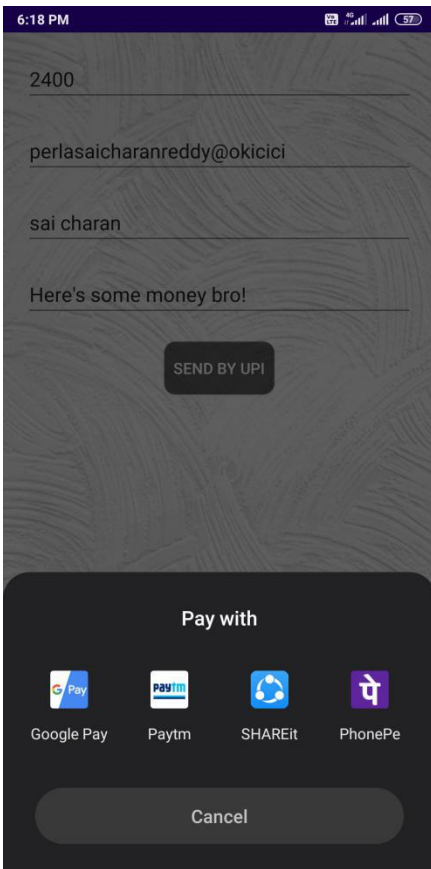
8.4.7.Payment Options

Here the user has two options he can pay using upi by the available apps on his phone or he can pay at hotel.

8.4.8.Payment activity.

This is Payment activity. Here the amount is calculated automatically based on no of rooms selected and cost of each room and displayed. then user can pay by clicking send by upi button..



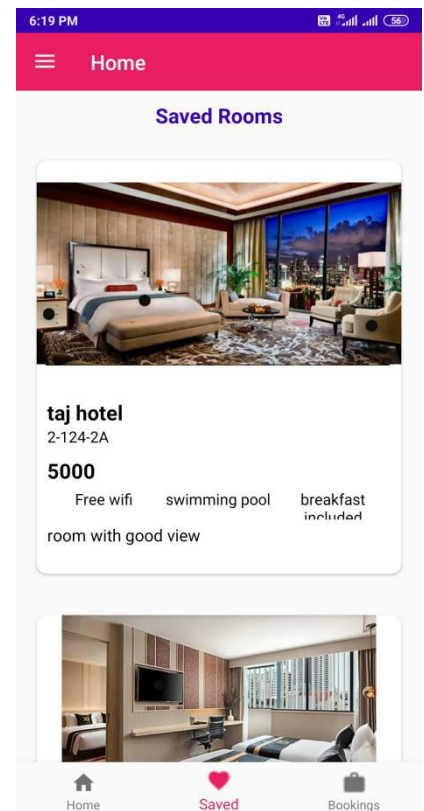


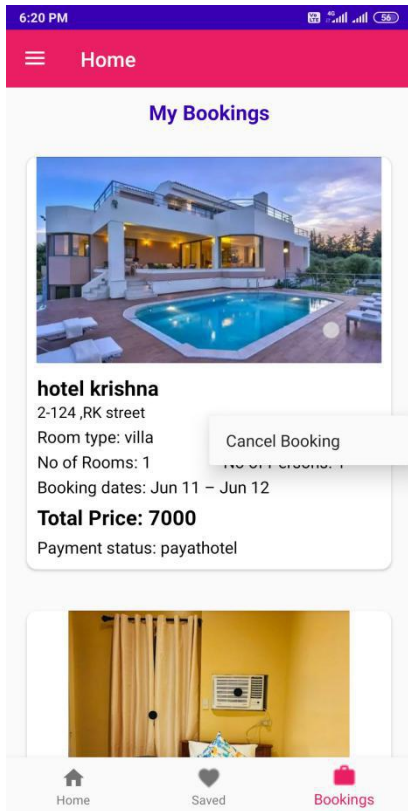
8.4.9.Payment activity

User can select any upi app by which he wants to pay and pay amount if the transaction is successful then a toast message is displayed “booking successful”.

8.4.10Saved bookings fragment

This is Saved bookings fragment. It contains all the rooms the user has saved to wish list. If he wants to remove he can remove by long pressing on the particular room delete option appears if he click on it then the room will be deleted from saved list.



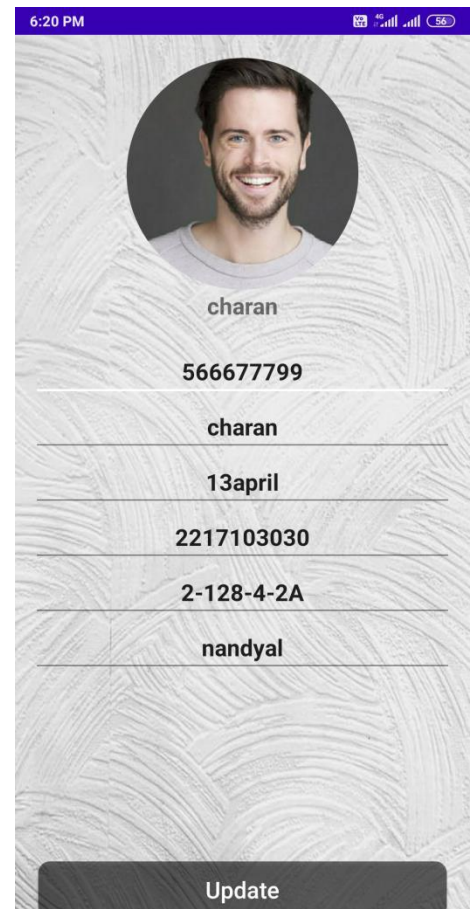


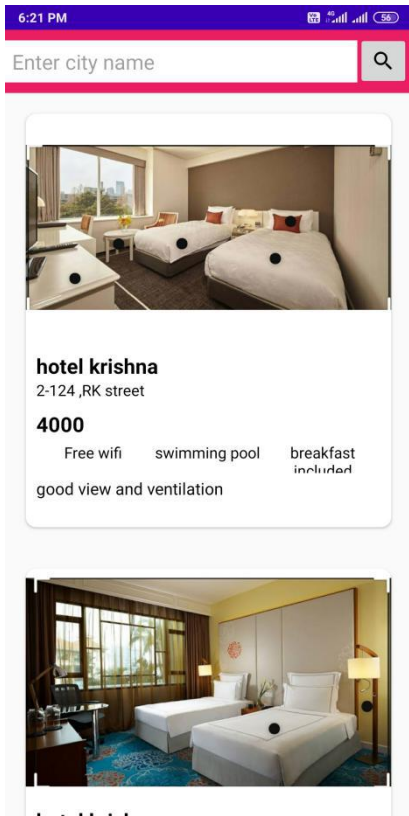
8.4.11.Booking fragment

This is Booking fragment. It contains all the bookings the user has done previously. He can cancel booking from here if he wishes to cancel booking.

8.4.12.User Profile Activity

This is User Profile Activity. Here the user can add/update his details like phone number name, email, date of birth, address, city and he can also add his profile picture.



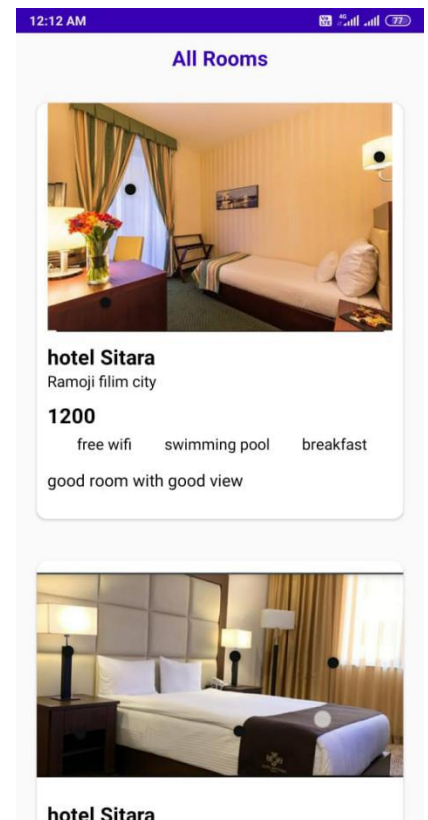


8.4.13.Search Activity

Here the user can search the rooms by the city name in the search box. then all the rooms available in that city is displayed to the user.

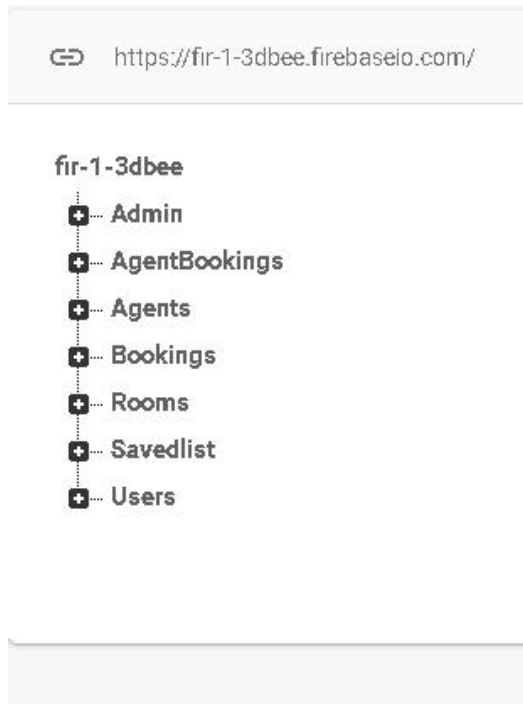
8.4.14.All rooms Activity

This is All rooms activity. Here the user can see all the rooms available in the app. He can view full details by selecting a particular room.



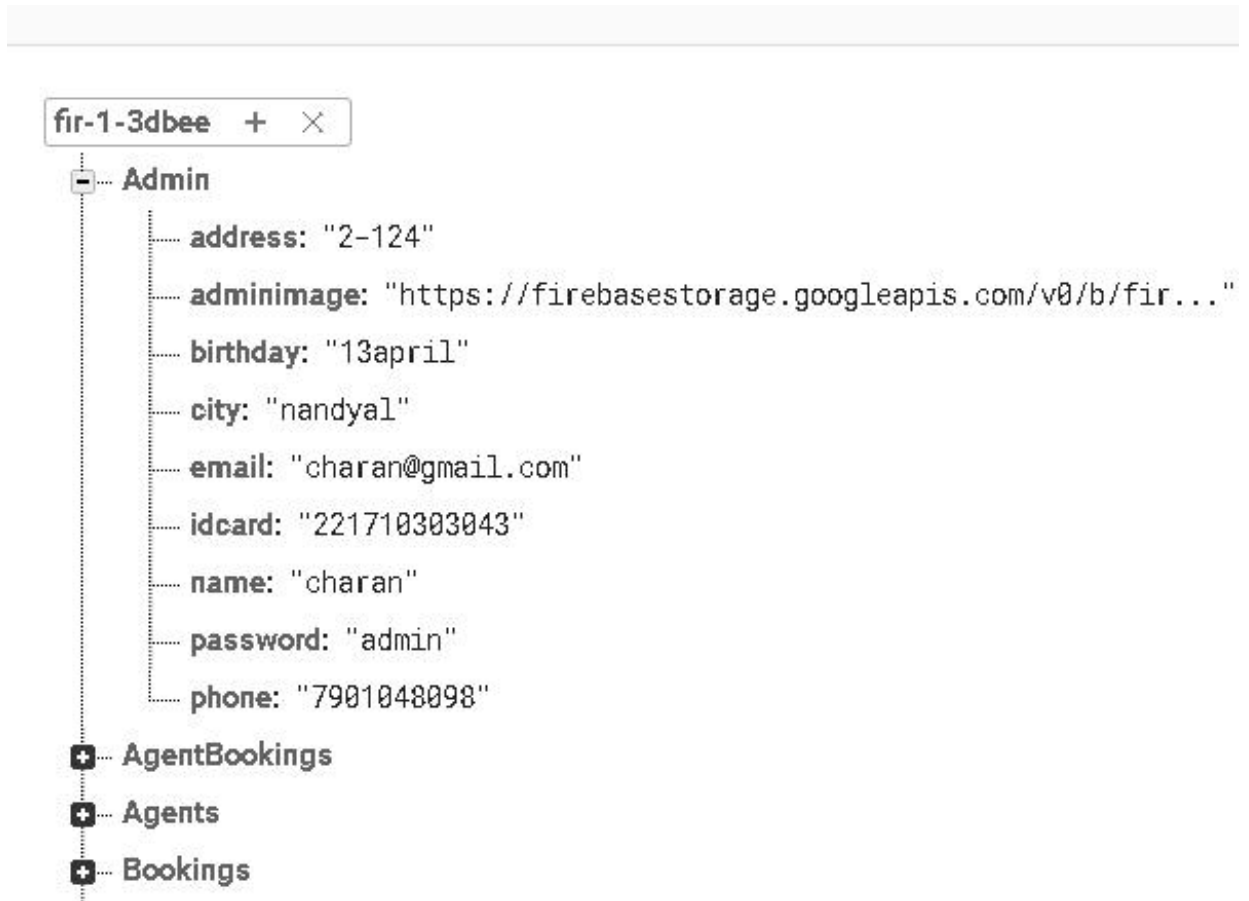
9.DATABASE

9.1.ROOT



The above shown are the childs of the root database. The root contains the following childs admin, agent, agent bookings, agents, Bookings, Rooms, Saved list, Users. These all childs contains again sub childs .Where admin contains data of admin. Agents Child contains data of agents as childs and Users child Contains data of users as sub child. And rooms contain the data of all the rooms added by agents. And Bookings contain data of user bookings. Saved list contain users wish list data. And Agent bookings child contains the particular agent bookings data from all users.

9.2.ADMIN CHILD



The admin child contains the admin details and link to profile picture in firebase storage and admin id as sub child. The data include address of admin, admin image, date of birth, city, email, idcard, name, password phone number.

9.3.AGENT CHILD



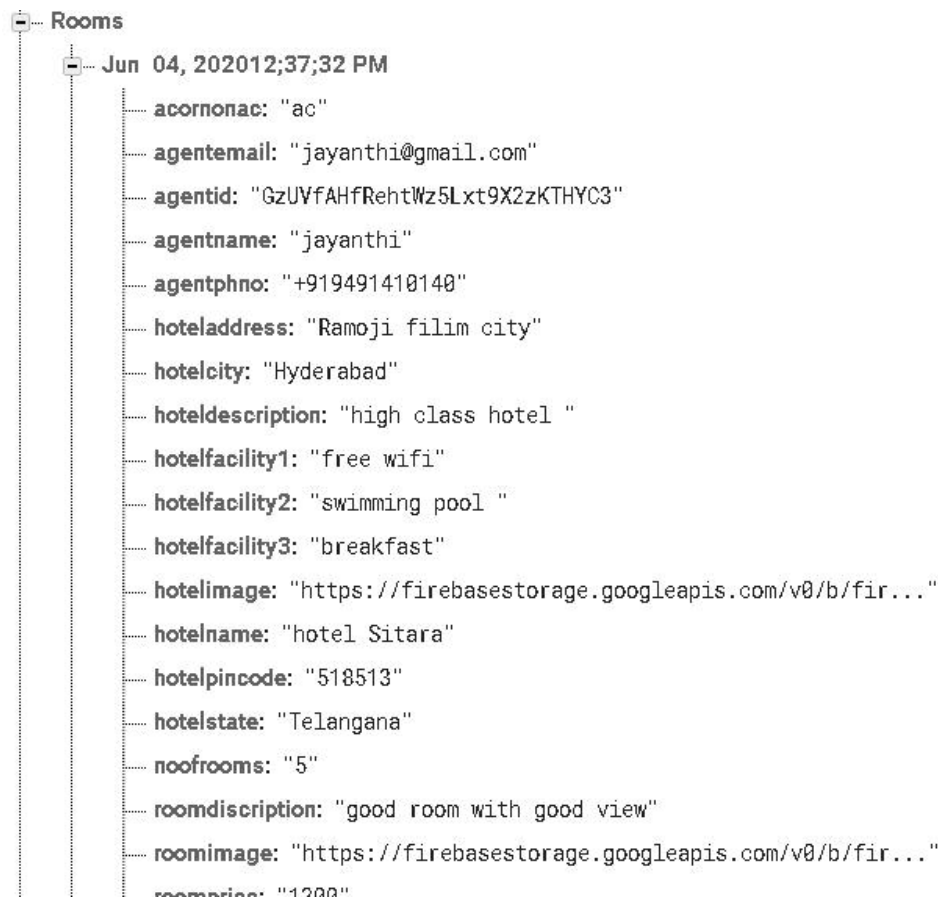
The agent child contains the unique ids of each agent as sub child and each agent id has agent details and link to profile picture in firebase storage as children.

9.4.USER CHILD



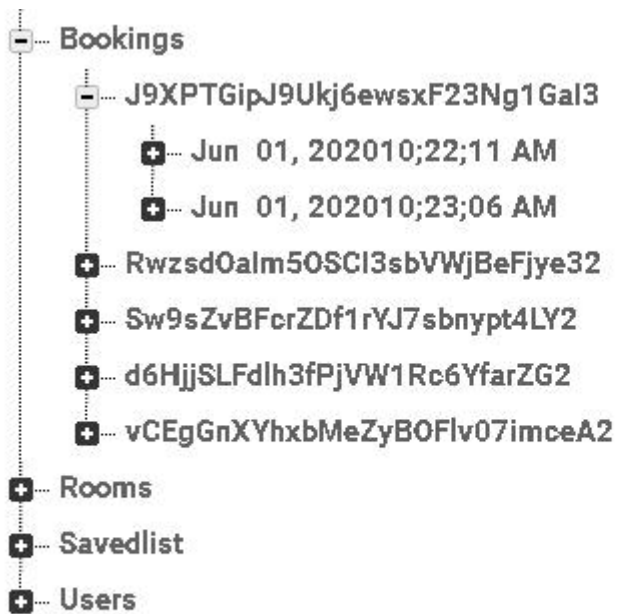
The user child contains the unique user ids of each user as subchild and each userid has user details and link to profile picture in firebase storage as children. New user unique id is created for each new user.

9.5.ROOMS CHILD



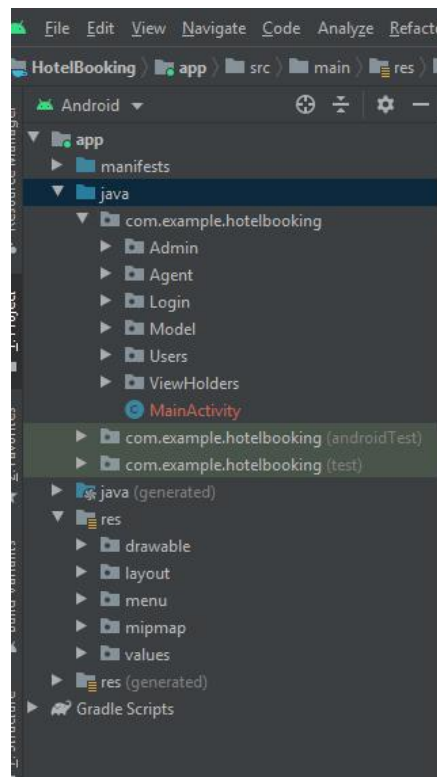
Room child contains list of all rooms. Each room has unique room id as child of rooms. Room id contains all the details of room and link to room picture in firebase storage as children. New room id is created each time the agent adds the new room and the details are stored here as child of roomid and this room id is stored as child of that agent id in agents child.

9.6.BOOKINGS CHILD



Bookings child contains all the booking of all the users it contains children of user ids and below each userid it contains booking id where each booking id has details of bookings as sub child.

10.DIRECTORIES CREATED IN PROJECT



1.Admin Directory

2.Agent Directory

3.Users Directory

4.Login Directory

5.Model Directory

6.View Holder Directory

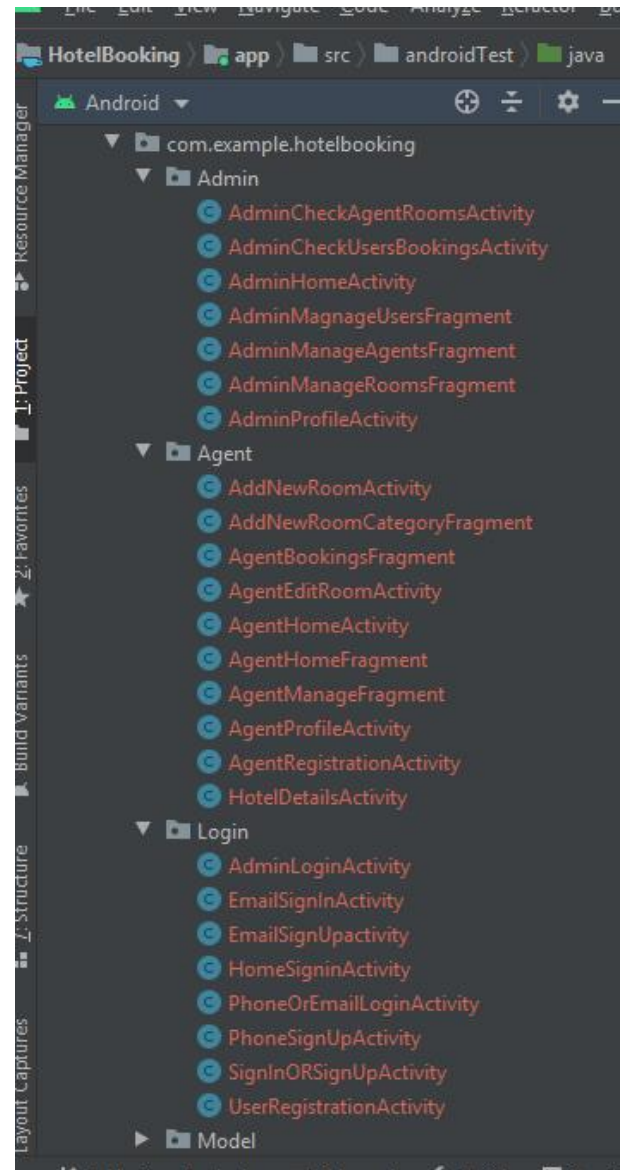
11.ACTIVITIES CREATED IN PROJECT

11.1.ADMIN DIRECTORY

- 1.Admin Check Agent Rooms Activity
- 2.Admin Check Users Bookings Activity
- 3.Admin Home Activity
- 4.Admin Manage Users Fragment
- 5.Admin Manage Agents Fragment
- 6.Admin Manage Rooms Fragment
- 7.Admin Profile Activity

11.2.AGENT DIRECTORY

- 1.Add New Room Activity
- 2.Add New Room Category Fragment
- 3.Agents Bookings Fragment
- 4.Agent Edit Room Activity
- 5.Agent Home Activity
- 6.Agent Home Fragment
- 7.Agent Manage Fragment



8.Agent Profile Activity

9.Agent Registration Activity

10.Hotel Details Activity

11.3.LOGIN DIRECTORY

1.Admin Login Activity

2.Email Sign in Activity

3.Email Sign up Activity

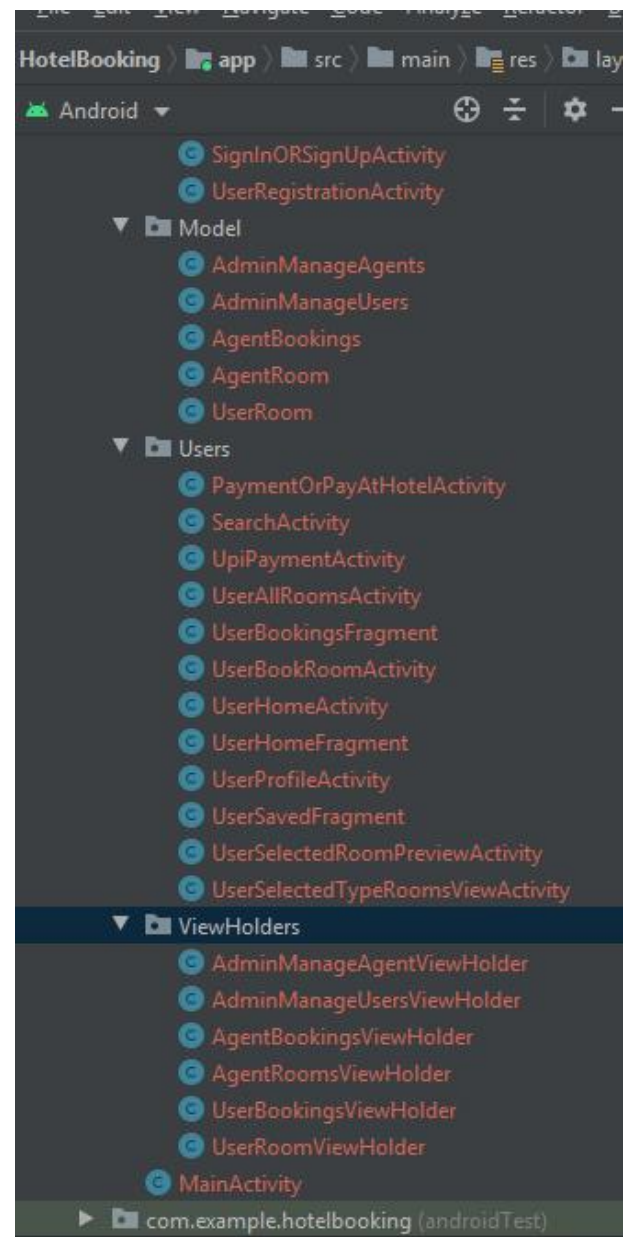
4.Home Sign in Activity

5.Phone or Email Login Activity

6.Phone Sign up Activity

7.Signin or signup Activity

8.User Registration Activity

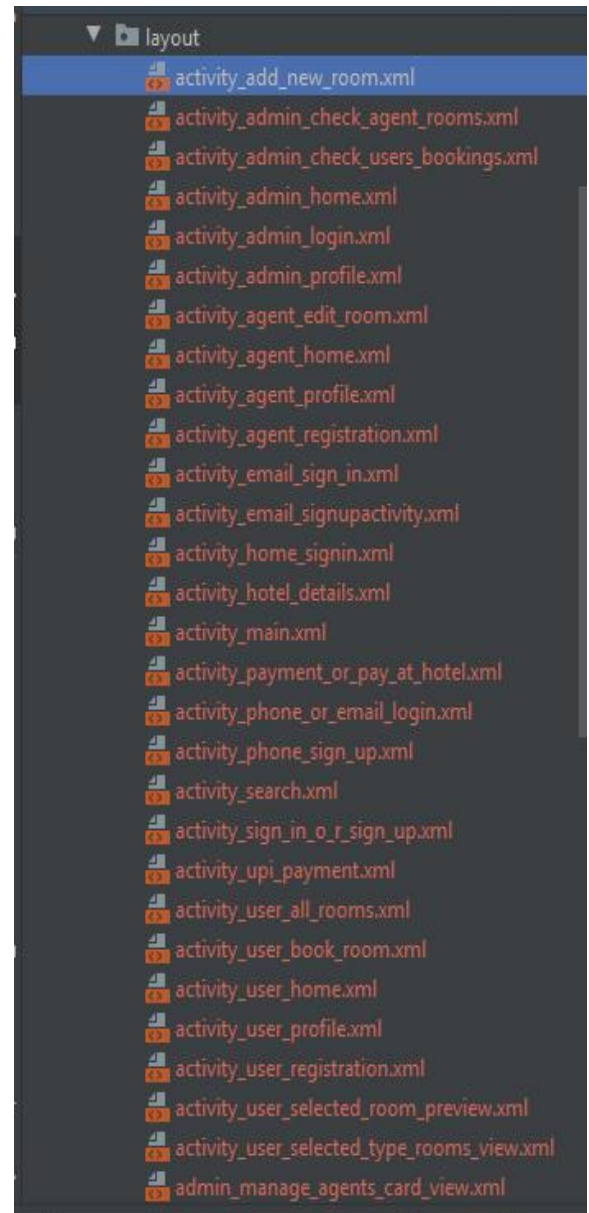


11.4.USER DIRECTORY

- 1.Payment Or pay at hotel Activity
- 2.Search Activity
- 3.Upi Payment Activity
- 4.User All Rooms Activity
- 5.User Bookings Fragment
6. User Home Activity
- 7.User Home Fragment
- 8.User Profile Activity
- 9.User Saved Fragment
- 10.User Selected Room Preview Activity
- 11.User Selected Type Rooms view Activity

12.XML FILES CREATED

1. Activity Admin Check Agent Rooms.xml
2. Activity Admin Check Users Bookings.xml
3. Activity Admin Home.xml
4. Fragment Admin Manage Users.xml
5. Fragment Admin Manage Agents .xml
6. Fragment Admin Manage Rooms.xml
7. Activity Admin Profile.xml
8. Activity Add New Room.xml
9. Fragment Add New Room Category.xml
10. Fragment Agents Bookings.xml
11. Activity Agent Edit Room.xml
12. Activity Agent Home.xml
13. Fragment Agent Home.xml
14. Fragment Agent Manage.xml
15. Activity Agent Profile.xml
16. Activity Agent Registration.xml
17. Activity Hotel Details.xml
19. Activity Admin Login.xml



20. Activity Email Sign in.xml

21. Activity Email Sign up.xml

22. Activity Home Sign in.xml

23. Activity Phone or Email Login.xml

24. Activity Phone Sign up.xml

25. Activity Signin or signup.xml

26. Activity user registration.xml

27. Activity Payment or pay at hotel.xml

28. Activity Search.xml

29. Activity Upi Payment.xml

30. Activity User All Rooms .xml

31. Fragment User Bookings.xml

32. Activity User Home .xml

33. Fragment User Home.xml

34. Activity User Profile.xml

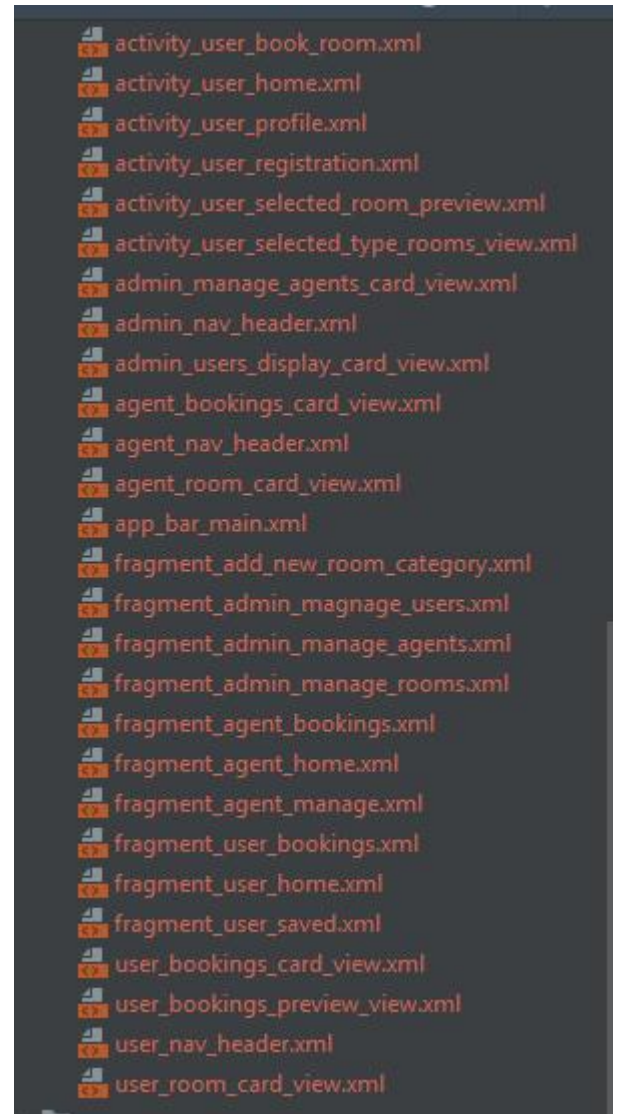
35. Fragment User Saved.xml

36. Activity User Selected Room Preview.xml

37. Activity User Selected Type Rooms view.xml

38. activity main.xml

40. admin bottom navigation.xml



13.EXPECTATIONS CONSIDERED

Customers will have expectations on the app I have considered the following expectations while designing the application.

- Easy navigation.
- Superb site speed
- Intuitive booking process.
- Professional, in-depth photos.
- Enticing text that fully describes property.
- Information about the area.
- In-depth info on amenities.
- Full cost info.
- Available specials.
- Good user interface.
- Communication if any problem.
- Fast booking confirmation.

14.TESTING

I have tested this app during step by step implementation of each activity, module by using emulator in android studio. I have tested the user login activity by giving invalid input and I have tested admin and agent login activities with invalid input. I have added the rooms from agent module in the app and checked in user and admin module which is working correctly. I have tested this app in my phone also which worked completely fine.

SL NO	TEST CASE	RESULT
1	Invalid Username in Login details	passed
2	Invalid password in login details	passed
3	Invalid admin username in Login details	passed
4	Invalid admin password in login details	passed
5	Invalid agent username password in login	passed
6	Adding rooms to app	passed
7	Booking room from user end	passed
8	Payment activity	passed

15.CONCLUSION

The Online Hotel Reservation System was developed to replace the manual process of booking for a hotel room or any other facility of the hotel. The old system does not serve the customer in a better way; rather it makes customer data vulnerable. The new system keeps proper records of customers for emergency and security purposes. The hotel's advertising effort is now accompanied by a virtual tour created on the system.

With this online hotel booking system Customers can easily go online with their mobile phones or tablets to browse about hotels within their vicinity. Guests can be able to book for rooms within their budgets after seeing and accessing these hotels within their vicinity. Receptionists can easily access customer's information online without delay. Thus it simplifies complicated work into simple and easy way through this app.

16.REFERENCES

Youtube :

Link:https://www.youtube.com/watch?v=6keVIot98QU&list=PLxefhmF0pcPlqmH_VfWneUjfuqhreUz-0

Udemy:

Link:<https://www.udemy.com/course/the-complete-android-oreo-developer-course/>

Stack overflow:

Link: <https://stackoverflow.com/>

I have searched on google while I get doubts and errors in middle while doing project. Like stack overflow .from which I could clarify solve an error or problem.

17.LINK TO CODE AND EXECUTABLE FILE

Code Link:

https://drive.google.com/drive/folders/1rbN2SkGg3aGCKcVfLPuQ6S-Ej_xNpfSz?usp=sharing

Executable file link:

https://drive.google.com/file/d/1GEs6tPI88h7Hkg_N5X1qEXSu8PGxe8bW/view?usp=sharing