



INSTITUTE FOR ADVANCED
COMPUTING AND
SOFTWARE DEVELOPMENT
AKURDI, PUNE

Documentation On

“PG – Booking System”
C-DAC March 2022

Submitted By:

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Project Guide

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From:

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1.Introduction

The "Paying Guest Booking System" has been developed to override the problems prevailing in the practicing manual system. This software is supported to eliminate and, in some cases, reduce the hardships faced by this existing system. Moreover, this system is designed to carry out operations in a smooth and effective manner. No formal knowledge is needed for the user to use this system. Thus, by this all it proves it is user-friendly. Paying Guest Booking System can lead to error free, secure, reliable, and fast management system.

This is a basic system that will keep record of housing properties available on rent and will work as connecting bridge between customer and property authorities.

Due to this system, there is no need to visit various places in search of desired property. The information of various properties in various locations can be accessible at one place.

This system will provide a platform for housing properties on rent. This will keep record of PG Houses and their rooms available for rent with their rates and other details and make this information available for customers. Also, will keep record of contact information of customers and will send necessary notices and/or reminders to customer.

2.Project Overview

2.1 Scope

This system is highly flexible, and it is well efficient to make interaction between customers and admin. The key focus of the system is to get room on rent in easy way. The speed and accuracy will be maintained in a proper way.

The PG-Booking System maintains all the property information online. It provides information to one and all who visit the site but to upload a PG for rent and to send a request to rent a desire PG only can be made who register with the site.

2.2 Aims & Objectives

Specific goals are: -

- Time Effective and Cost Effective -PG Booking System available to anybody and anywhere. This saves a lot of time of user and owner
- Mobility-Internet is available to everybody anywhere anytime here, this makes the system highly mobile
- Informative-This system shows all the necessary details about the concerned property therefore is informative
- Wide Approach –any person can visit it. User can search property and admin post any property with photo. Therefore, it has a wide Approach.
- Flexible

The main objective of the Project on Paying Guest Booking System is to manage the details of Paying Guest, Booking, Room, Customer, Payment. The purpose of the project is to build an application program to reduce the manual work for managing the system details. It tracks all the details about the Room, Customer, Payment.

2.3 Functionalities provided by PG Booking System follows:

- Provides the searching facilities based on various factors. Such as Paying Guest, Room, Customer, Payment
- Paying Guest Booking System also manage the Booking Receipt details online for Customer details, Payment details, Paying Guest.
- It tracks all the information of Booking, Booking Receipt, Customer etc.
- Manage the information of Booking, Paying Guest, Customer
- It deals with monitoring the information and transactions of Customer.

- Editing, adding and updating of Records is improved which results in proper resource management of Paying Guest data.
- Integration of all records of Payment

2.4Module of Paying Guest Booking System

- Paying Guest Management Module: Used for managing the Paying Guest details
- Payment Module: Used for managing the details of Payment
- Booking Receipt Module: Used for managing the details of Booking Receipt
- Booking Management Module: Used for managing the information and details of the Booking.
- Room Module: Used for managing the Room details
- Customer Module: Used for managing the Customer information
- Login Module: Used for managing the login details

2.5 Feasibility

- A feasibility study is an analysis that takes all of a project's relevant factors into account—including economic, technical, and scheduling considerations—to ascertain the likelihood of completing the project successfully.

- A feasibility study is simply an assessment of the practicality of a proposed plan or project.
- The following feasibility studies were conducted to make sure that our software is feasible.

2.5.1 Operational feasibility

As per this study, we concluded that the system is user-friendly and easy to maintain. The project offers a great deal of user experience and convenience to the target group.

2.5.2 Economical feasibility

As per this study, we concluded that the technology stack we are using in our project is open-sourced, freely available, and well-maintained by the community. This reduces the cost of the system as well as development cost, without compromising the quality of the product. This system was found to be ergonomic to the target customer base.

2.5.3 Technical feasibility

As per this study, we found that our choice of technology stack was conducive enough to bring the project to fruition. Irrespective of the system in which our backend ran, the results were as expected, and platform dependency was not found. The system catered to the requirement of the end-user.

3. Project Description

3.1 Operating Environment

Server Side:

Processor: Dual Core or above

HDD: Minimum 500GB Disk Space

RAM: Minimum 4GB

OS: Windows, Linux

Database: MySQL

Client Side:

Processor: Intel Dual Core

HDD: Minimum 80GB Disk Space

RAM: Minimum 1GB

OS: Windows 7, Linux

3.2 Technology Used

Backend:

| Category | Technology name |
|------------|-----------------|
| Framework | Spring Boot |
| ORM Tool | Hibernate |
| Database | MySQL |
| Build Tool | Maven |
| Language | Java |

Frontend:

| Category | Technology name |
|-----------|-----------------------|
| Framework | ReactJs |
| Language | Html, CSS, JavaScript |

3.3 Characteristics

Admin:

- Admin can login to the system
- View the list of all Users
- Publish PG
- Delete PG
- View the list of all the PGs and rooms

User:

- User can login/register to the system
- Search PG
- Rent Room In PG
- Get Booking Details
- cancel Booking

4. Benefits of PG Booking System

- This online PG Booking System is fully functional and flexible.
- It is very easy to use.
- This online PG Booking System helps in administration by streamlining and standardizing the procedures.
- It saves a lot of time, money.
- The PG Booking System and the overall business becomes easy and includes the least of paperwork.
- The application acts as an office that is open 24/7.
- It increases the efficiency of the management at offering quality services to the customers. It provides custom features development and support with the application

5. Diagrams

5.1 Data Flow Diagram

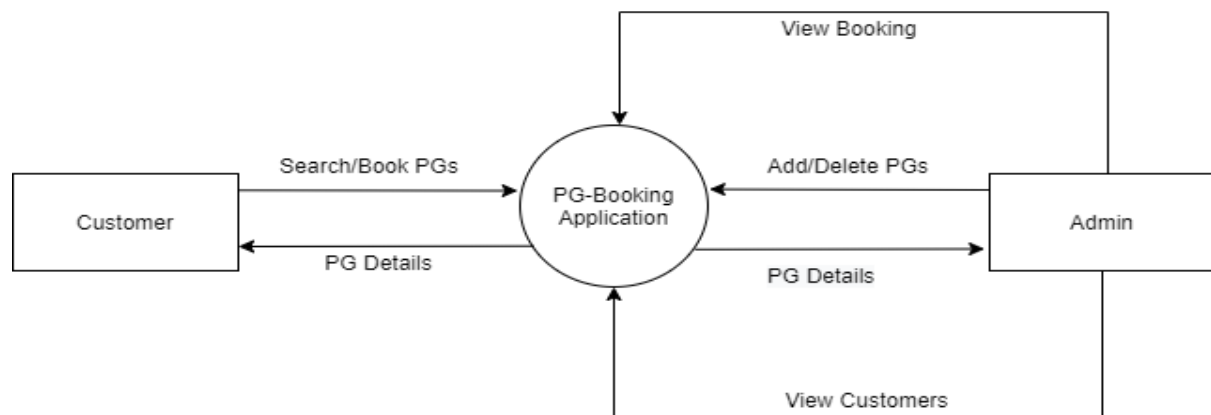


Fig1.1-level0 Data Flow Diagram

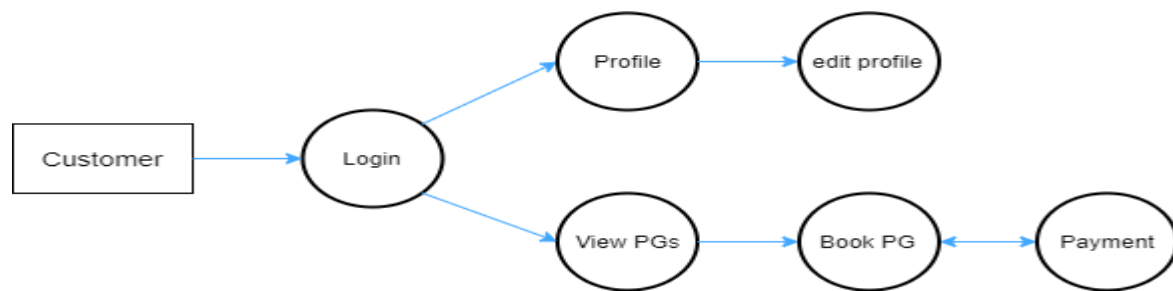


Fig1.2-level1 Data Flow Diagram (Customer)

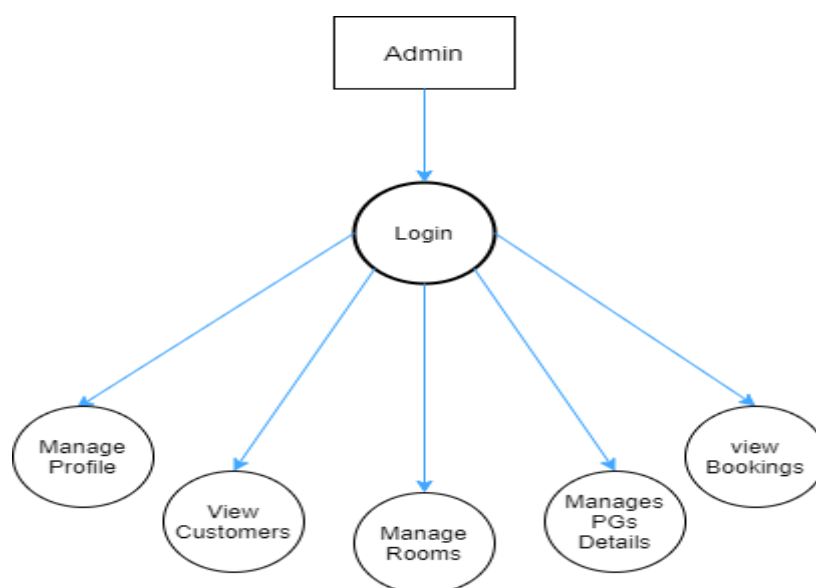


Fig1.3-level-0Data Flow Diagram (Admin)

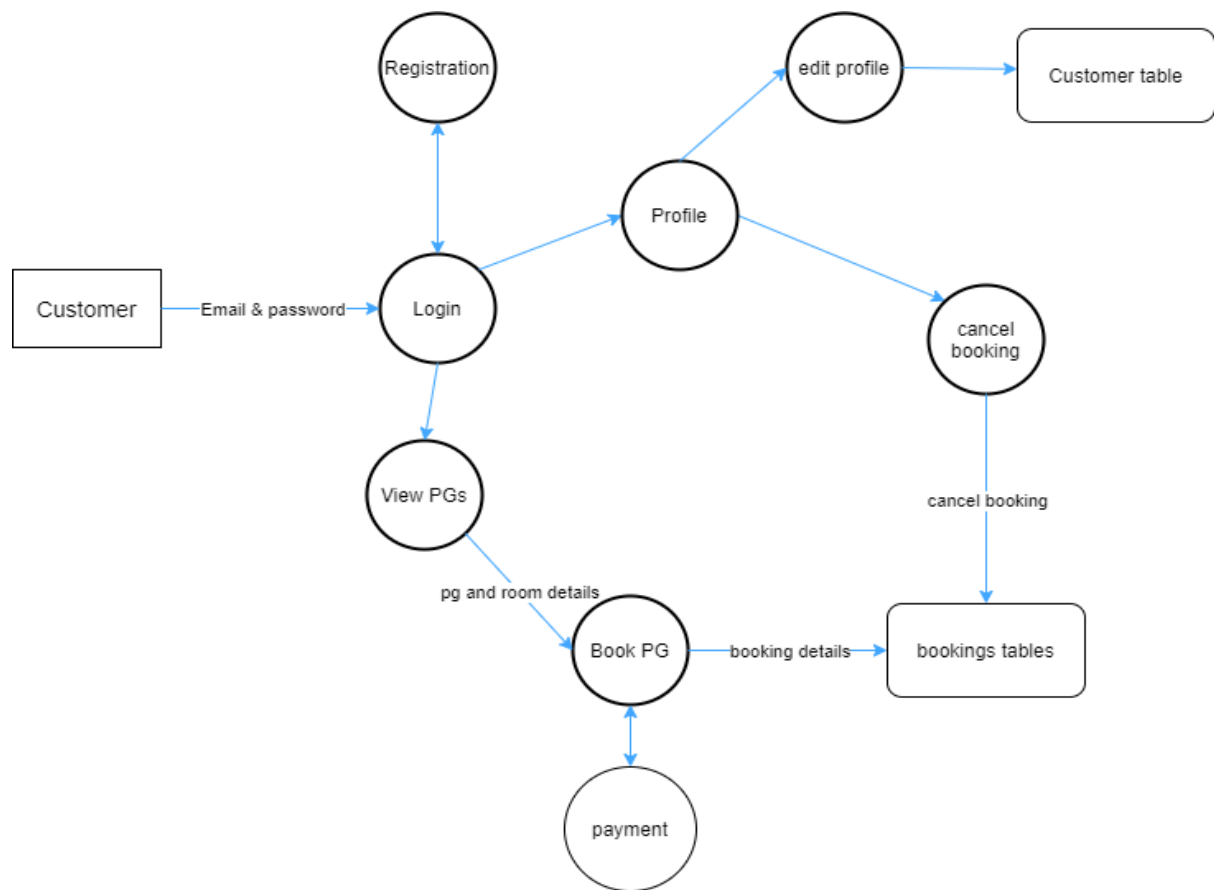


Fig1.4-level-2 Data Flow Diagram (Customer)

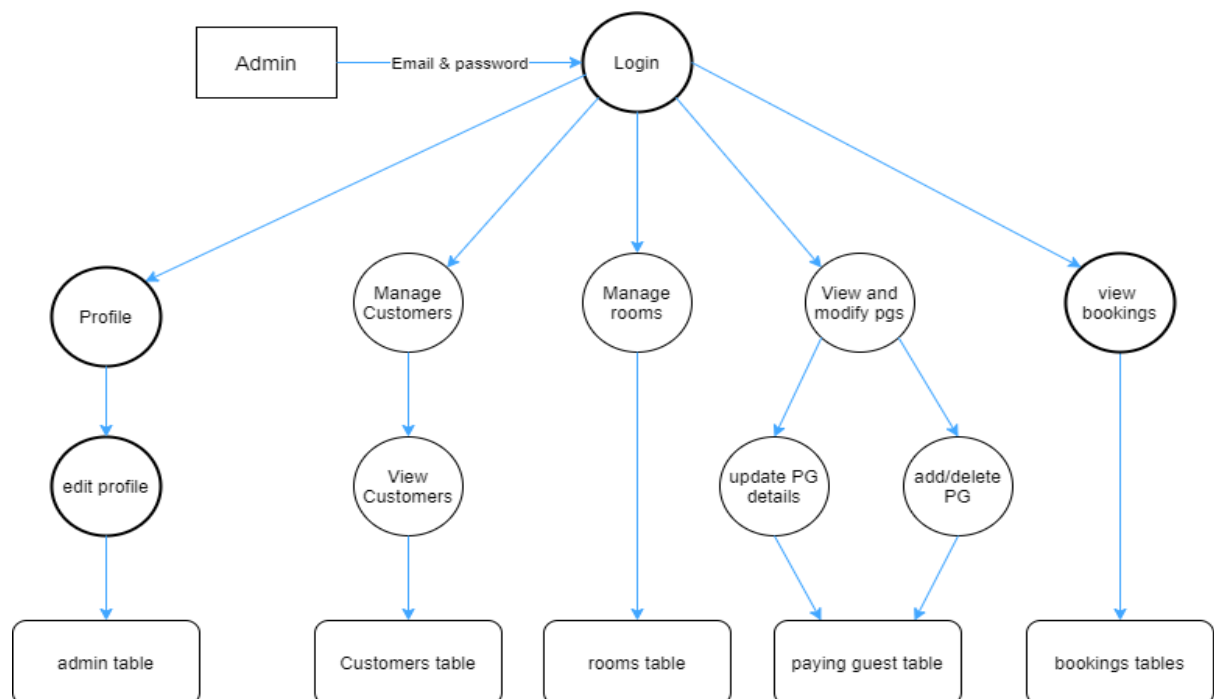


Fig1.5-level-2 Data Flow Diagram (Admin)

5.2 Use Case Diagram

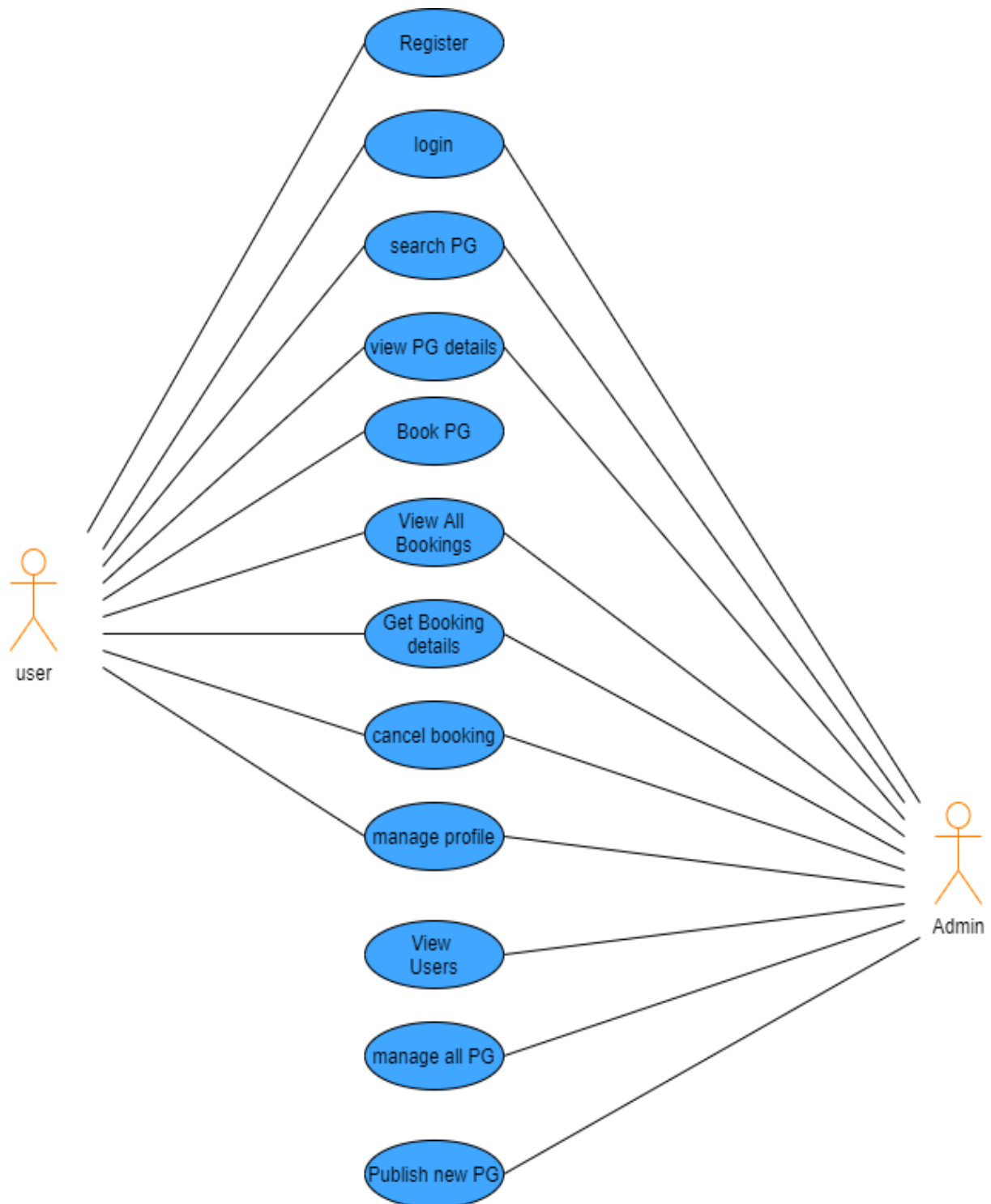


Fig2-Use case Diagram

5.3 Entity relationship Diagram

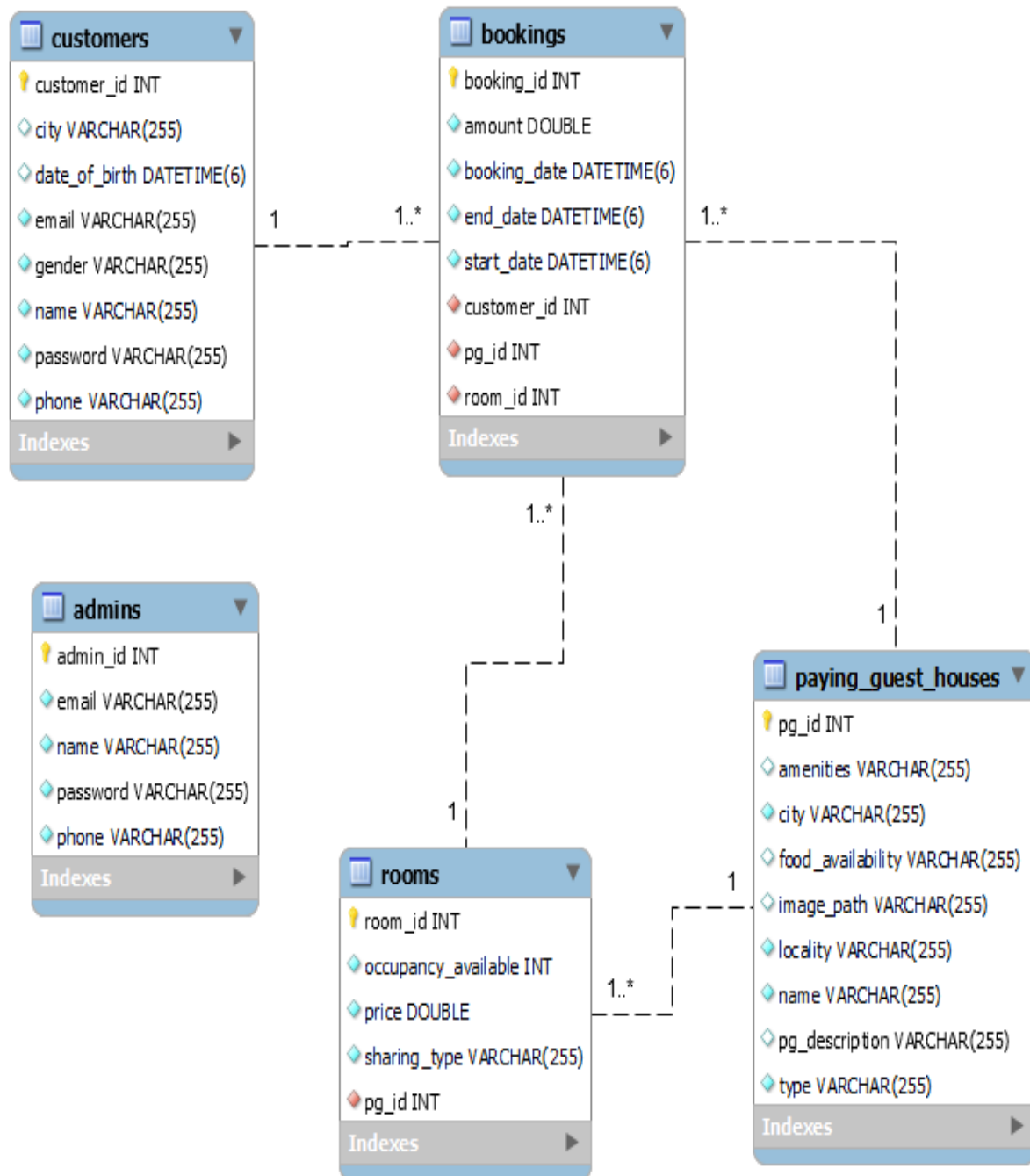


Fig3-ER Diagram

5.4 Class Diagram

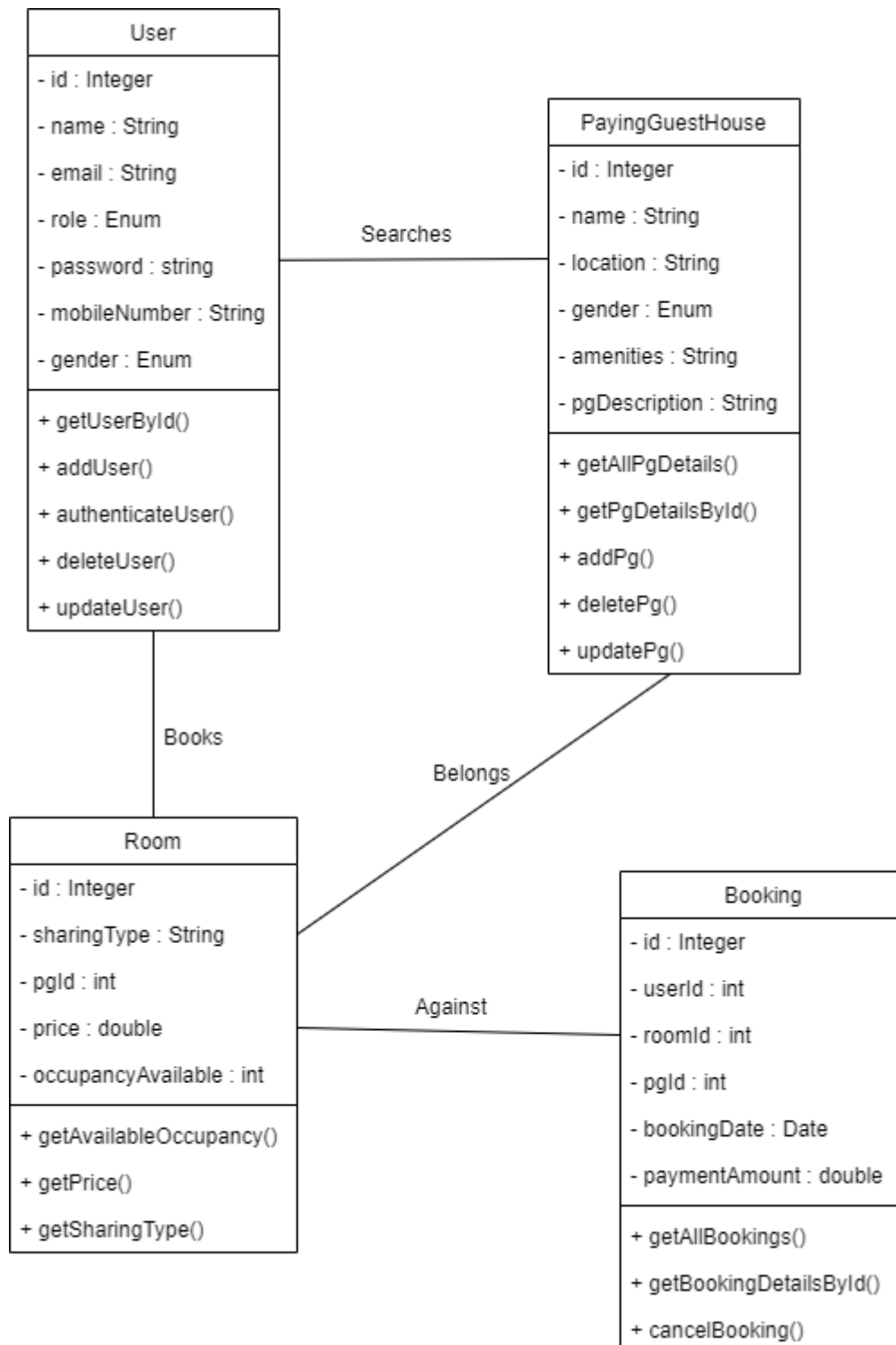


Fig4-Class Diagram

6. Table Structure

Admin Table:

```
mysql> desc admins;
```

| Field | Type | Null | Key | Default | Extra |
|----------|--------------|------|-----|---------|----------------|
| admin_id | int | NO | PRI | NULL | auto_increment |
| email | varchar(255) | NO | | NULL | |
| phone | varchar(255) | NO | UNI | NULL | |
| name | varchar(255) | NO | | NULL | |
| password | varchar(255) | NO | | NULL | |

5 rows in set (0.04 sec)

Customer Table:

```
mysql> desc customers;
```

| Field | Type | Null | Key | Default | Extra |
|---------------|--------------|------|-----|---------|----------------|
| customer_id | int | NO | PRI | NULL | auto_increment |
| city | varchar(255) | YES | | NULL | |
| date_of_birth | datetime(6) | YES | | NULL | |
| email | varchar(255) | NO | UNI | NULL | |
| gender | varchar(255) | NO | | NULL | |
| phone | varchar(255) | NO | UNI | NULL | |
| name | varchar(255) | NO | | NULL | |
| password | varchar(255) | NO | | NULL | |

8 rows in set (0.00 sec)

Paying Guest Houses Table:

```
mysql> desc paying_guest_houses;
```

| Field | Type | Null | Key | Default | Extra |
|-------------------|--------------|------|-----|---------|----------------|
| pg_id | int | NO | PRI | NULL | auto_increment |
| amenities | varchar(255) | YES | | NULL | |
| city | varchar(255) | NO | | NULL | |
| food_availability | varchar(255) | YES | | NULL | |
| image_path | varchar(255) | YES | UNI | NULL | |
| locality | varchar(255) | NO | | NULL | |
| name | varchar(255) | NO | | NULL | |
| pg_description | varchar(255) | YES | | NULL | |

8 rows in set (0.00 sec)

Rooms Table:

```
mysql> desc rooms;
```

| Field | Type | Null | Key | Default | Extra |
|---------------------|--------------|------|-----|---------|----------------|
| room_id | int | NO | PRI | NULL | auto_increment |
| occupancy_available | int | NO | | NULL | |
| price | double | NO | | NULL | |
| sharing_type | varchar(255) | NO | | NULL | |
| pg_id | int | NO | MUL | NULL | |

```
5 rows in set (0.04 sec)
```

Booking Table:

```
mysql> desc bookings;
```

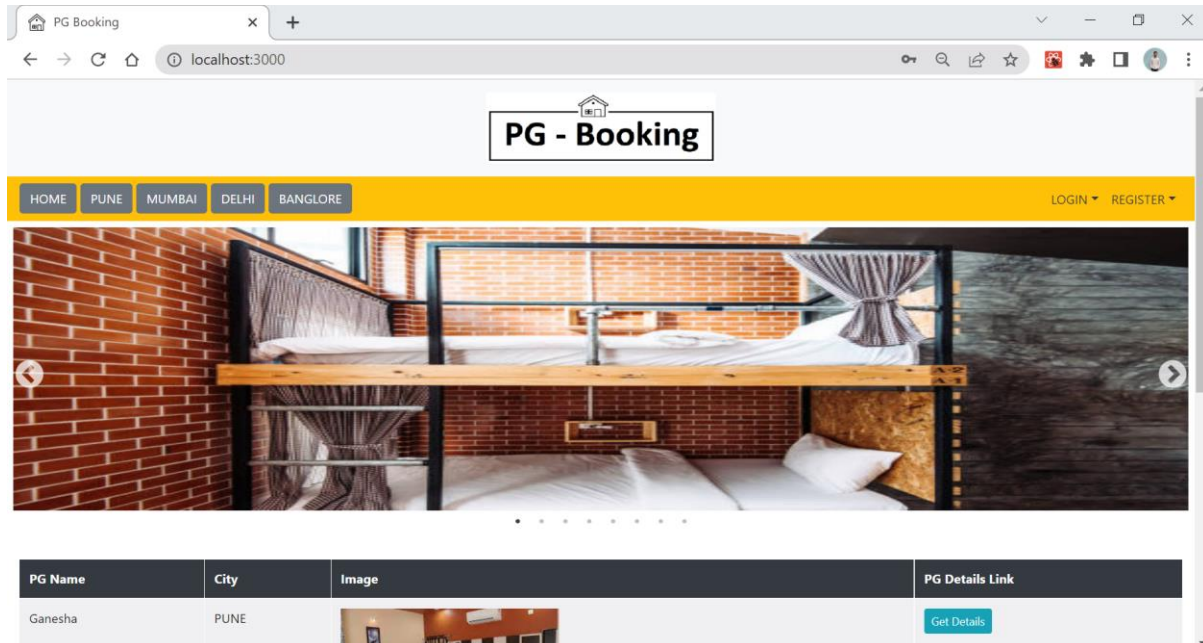
| Field | Type | Null | Key | Default | Extra |
|--------------|-------------|------|-----|---------|----------------|
| booking_id | int | NO | PRI | NULL | auto_increment |
| amount | double | NO | | NULL | |
| booking_date | datetime(6) | NO | | NULL | |
| end_date | datetime(6) | NO | | NULL | |
| start_date | datetime(6) | NO | | NULL | |
| customer_id | int | NO | MUL | NULL | |
| pg_id | int | NO | MUL | NULL | |
| room_id | int | NO | MUL | NULL | |

```
8 rows in set (0.04 sec)
```

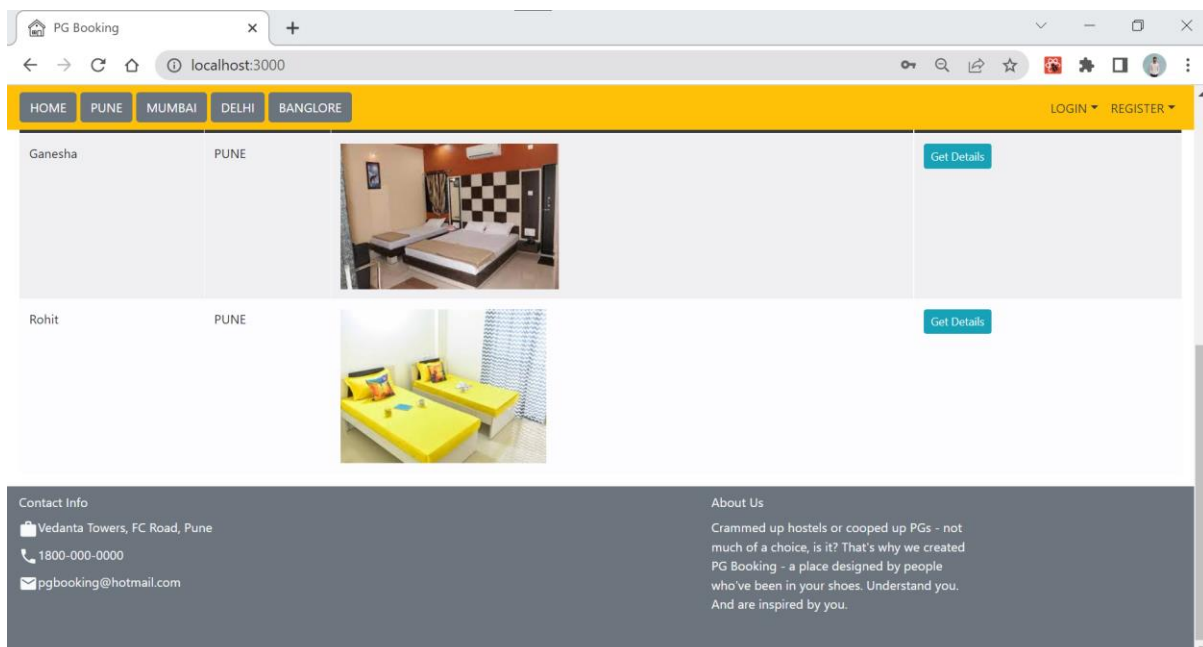
7.User Interface

Home Page

a. Header



b. Footer



Admin Login Page

Admin Login Form

Email Id

Password

Admin home page

| PG Name | City | Image | PG Details Link |
|---------|------|-------|---|
| Ganesha | PUNE | | Get Details |

Admin Profile page

Email ID

User Name

Phone

Add New PG

Add New PG

PG Name

City

Select City

Locality

Amenities Provided In PG

PG Description

Is Food Available In PG?

Select

No of Single Sharing Rooms

Single Sharing Price

No of Double Sharing Rooms

Double Sharing Price

No of Triple Sharing Rooms

Triple Sharing Price




Image

Choose file

No file chosen

Add PG

Manage all PGs

| PG Booking | | | | | | |
|---|---------|----------|----------|---|---------------------------------|---------------------------|
| localhost:3000/manageallpgs | | | | | | |
| HOME PUNE MUMBAI DELHI BANGLORE Profile Add New PG Manage PGs Customers Bookings Logout | | | | | | |
| PG ID | PG Name | City | Locality | Image | Edit Details | Delete Details |
| 1 | Jeevan | BANGLORE | Hadapsar |  | Edit PG Details | Delete PG |
| 8 | Ganesha | PUNE | Aundh |  | Edit PG Details | Delete PG |
| 9 | Reddy | DELHI | Noida |  | Edit PG Details | Delete PG |

Edit PG Details

| Edit PG Details | |
|--|--|
| PG Name | <input type="text" value="Jeevan"/> |
| City | <input type="text" value="BANGLORE"/> |
| Locality | <input type="text" value="Hadapsar"/> |
| Amenities Provided In PG | <input type="text" value="all"/> |
| PG Description | <input type="text" value="fully furnished, new construction"/> |
| Is Food Available In PG? | <input type="text" value="YES"/> |
| No of Single Sharing Rooms | <input type="text" value="1"/> |
| Update Single Sharing Price | <input type="text" value="6000"/> |
| No of Double Sharing Rooms | <input type="text" value="1"/> |
| Update Double Sharing Price | <input type="text" value="5000"/> |
| No of Triple Sharing Rooms | <input type="text" value="1"/> |
| Update Triple Sharing Price | <input type="text" value="4500"/> |
| <input type="button" value="Update PG Details"/> | |

Get All Customers


| ID | Name | Email Id | Phone | Gender | City | Date Of Birth |
|----|------------------|------------------------------|------------|--------|----------|-----------------|
| 1 | customer | customer@gmail.com | 1231231230 | MALE | Delhi | Mon Aug 08 2022 |
| 2 | customer2 | customer2@gmail.com | 1231231231 | MALE | Delhi | Mon Aug 08 2022 |
| 3 | customer3 | customer3@gmail.com | 1231231232 | MALE | Delhi | Mon Aug 08 2022 |
| 4 | customer4 | customer4@gmail.com | 9876543210 | MALE | Pune | Sat Dec 12 2020 |
| 5 | Swapnil Shirsath | swapnilshirsath246@gmail.com | 9809801230 | MALE | Nashik | Thu Sep 01 2022 |
| 7 | Pritesh | pritesha@gmail.com | 1234567890 | MALE | Banglore | Wed Sep 07 2022 |
| 8 | Rohit | rohit@gmail.com | 8888888888 | MALE | satara | Thu Sep 29 2022 |

PG Booking

localhost:3000/allcustomers

HOME PUNE MUMBAI DELHI BANGLORE

Profile Add New PG Manage PGs Customers Bookings Logout



| ID | Name | Email Id | Phone | Gender | City | Date Of Birth |
|----|------------------|------------------------------|------------|--------|----------|-----------------|
| 1 | customer | customer@gmail.com | 1231231230 | MALE | Delhi | Mon Aug 08 2022 |
| 2 | customer2 | customer2@gmail.com | 1231231231 | MALE | Delhi | Mon Aug 08 2022 |
| 3 | customer3 | customer3@gmail.com | 1231231232 | MALE | Delhi | Mon Aug 08 2022 |
| 4 | customer4 | customer4@gmail.com | 9876543210 | MALE | Pune | Sat Dec 12 2020 |
| 5 | Swapnil Shirsath | swapnilshirsath246@gmail.com | 9809801230 | MALE | Nashik | Thu Sep 01 2022 |
| 7 | Pritesh | pritesha@gmail.com | 1234567890 | MALE | Banglore | Wed Sep 07 2022 |

All Bookings


PG Booking

localhost:3000/allbookings

Welcome admin !

HOME PUNE MUMBAI DELHI BANGLORE

Profile Add New PG Manage PGs Customers Bookings Logout



| Booking ID | Customer ID | PG ID | Room ID | Booking Date | Start Date | End Date | Amount Paid |
|------------|-------------|-------|---------|-----------------|-----------------|-----------------|-------------|
| 6 | 3 | 1 | 30 | Thu Sep 22 2022 | Fri Aug 12 2022 | Wed Oct 12 2022 | 5000 |
| 7 | 4 | 1 | 31 | Thu Sep 22 2022 | Fri Aug 12 2022 | Wed Oct 12 2022 | 5000 |
| 16 | 5 | 10 | 59 | Mon Sep 26 2022 | Fri Sep 30 2022 | Sat Oct 08 2022 | 6000 |

| Booking ID | Customer ID | PG ID | Room ID | Booking Date | Start Date | End Date | Amount Paid |
|------------|-------------|-------|---------|-----------------|-----------------|-----------------|-------------|
| 6 | 3 | 1 | 30 | Thu Sep 22 2022 | Fri Aug 12 2022 | Wed Oct 12 2022 | 5000 |
| 7 | 4 | 1 | 31 | Thu Sep 22 2022 | Fri Aug 12 2022 | Wed Oct 12 2022 | 5000 |
| 16 | 5 | 10 | 59 | Mon Sep 26 2022 | Fri Sep 30 2022 | Sat Oct 08 2022 | 6000 |

Get PG Details

| PG Name | City | Locality | Amenities | PG Description | Is Food Available | Image | Price(per Month) | Action |
|---------|-------|----------|------------------------------------|---|-------------------|-------|--|--------------------------|
| Reddy | DELHI | Noida | Good food, wifi, cleaning, parking | New Construction, homely food, nice environment | YES | | Single Sharing : ₹7000 Double Sharing : ₹6000 Triple Sharing : ₹5000 | Book Now |

Login Prompt When Customer is not logged in and tries to book PG

localhost:3000 says
Please Login First!

[OK](#)

| PG Name | City | Locality | Amenities | PG Description | Is Food Available | Image | Price(per Month) | Action |
|---------|-------|----------|------------------------------------|---|-------------------|-------|--|--------------------------|
| Reddy | DELHI | Noida | Good food, wifi, cleaning, parking | New Construction, homely food, nice environment | YES | | Single Sharing : ₹7000 Double Sharing : ₹6000 Triple Sharing : ₹5000 | Book Now |

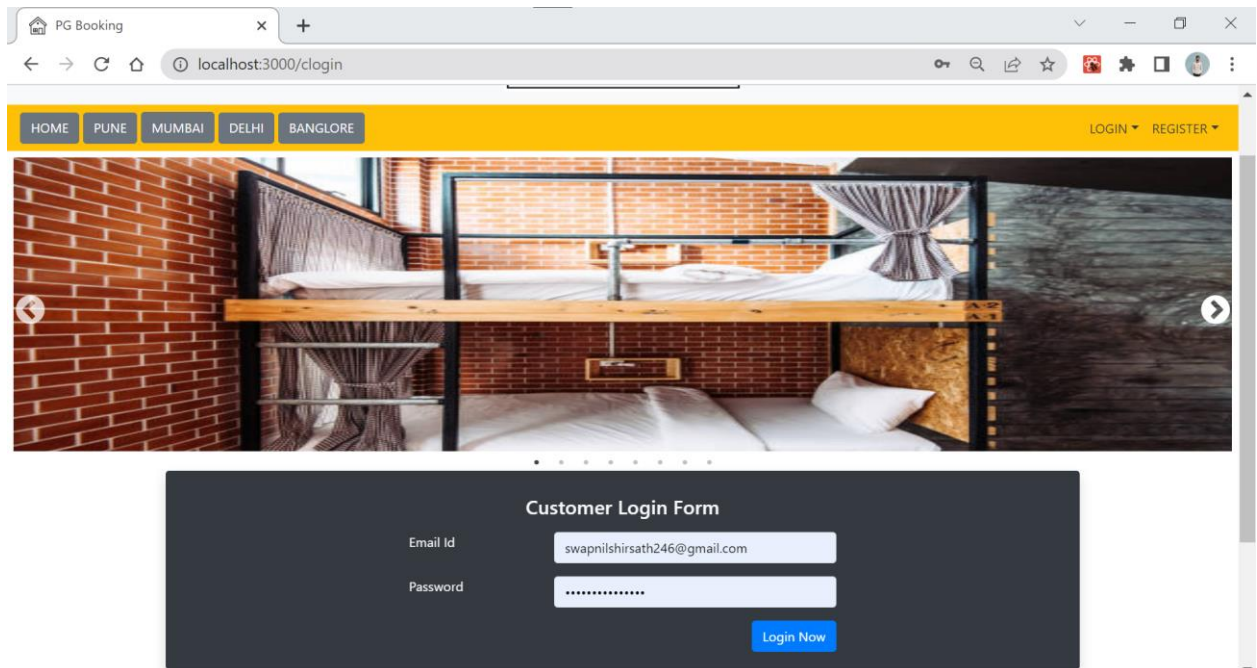
Customer Login Page

Customer Login Form

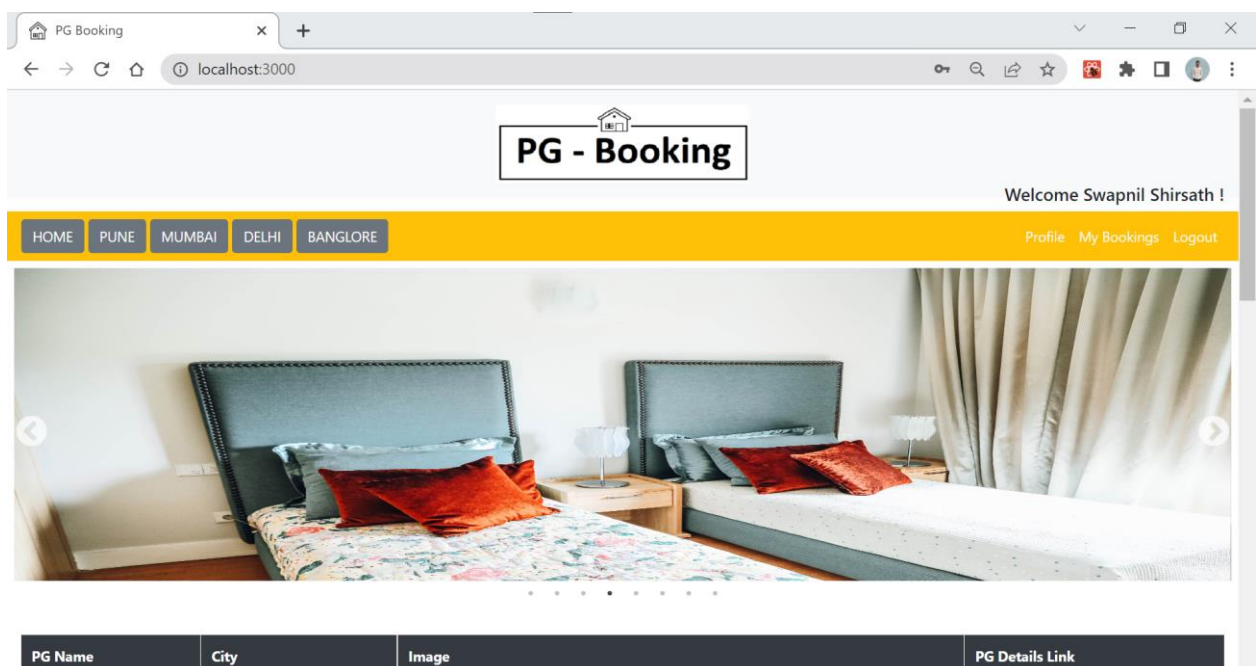
Email Id

Password

[Login Now](#)



Customer Home Page

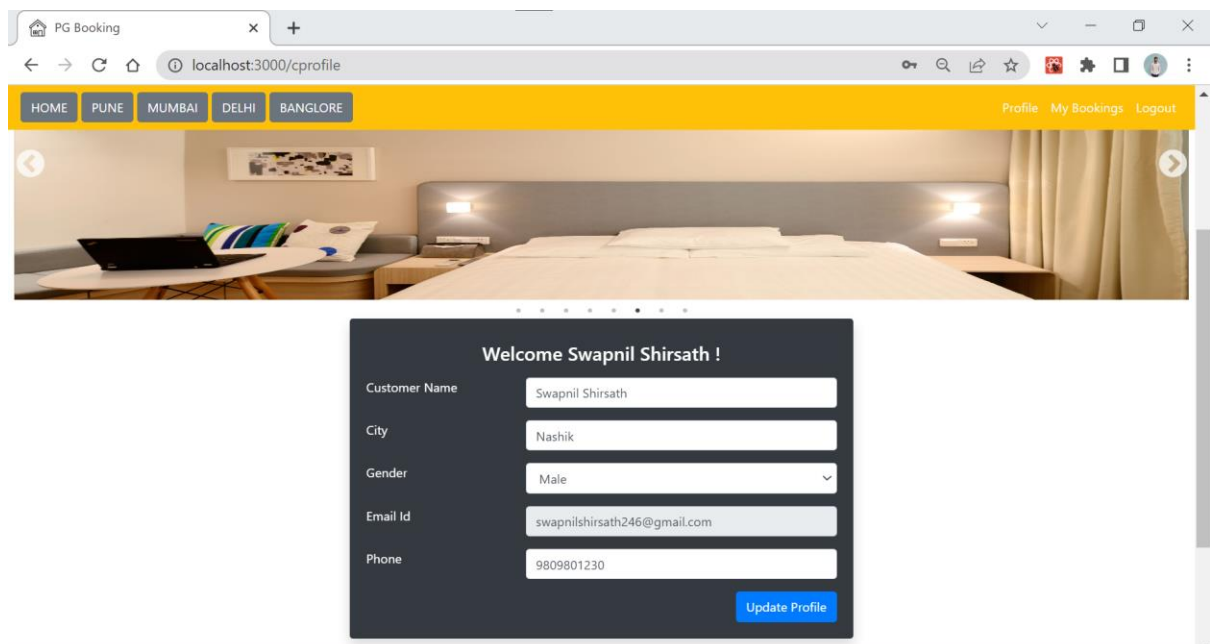


Customer Profile Page

Welcome Swapnil Shirsath !

| | |
|---------------|---|
| Customer Name | <input type="text" value="Swapnil Shirsath"/> |
| City | <input type="text" value="Nashik"/> |
| Gender | <input type="text" value="Male"/> ▾ |
| Email Id | <input type="text" value="swapnilshirsath246@gmail.com"/> |
| Phone | <input type="text" value="9809801230"/> |

Update Profile



Customer’s All Bookings

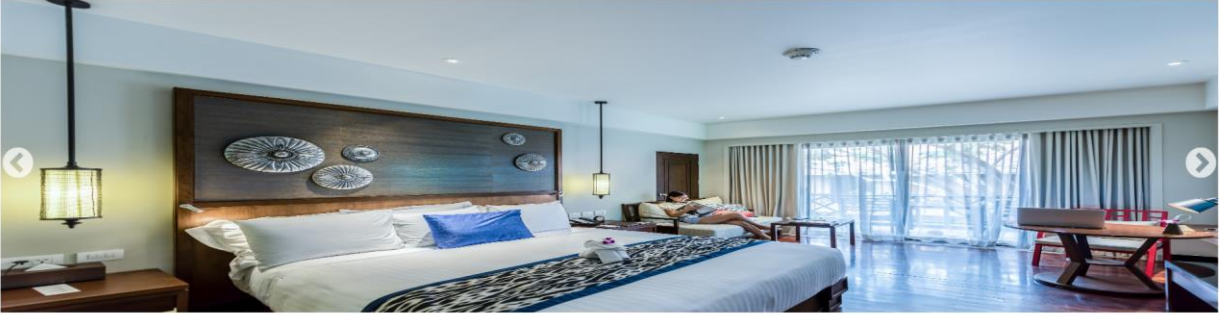
PG Booking

localhost:3000/mybookings

Welcome Swapnil Shirsath !

HOME PUNE MUMBAI DELHI BANGLORE




Profile My Bookings Logout



| Customer Name | Customer ID | Email | Booking ID | PG ID | Room ID | Booking Date | Start Date | End Date | Amount Paid | Actions |
|------------------|-------------|------------------------------|------------|-------|---------|--------------|------------|------------|-------------|---|
| Swapnil Shirsath | 5 | swapnilshirsath246@gmail.com | 16 | 10 | 59 | 2022-09-26 | 2022-09-30 | 2022-10-08 | 6000 | <button>Get PG Details</button> <button>Cancel Booking</button> |

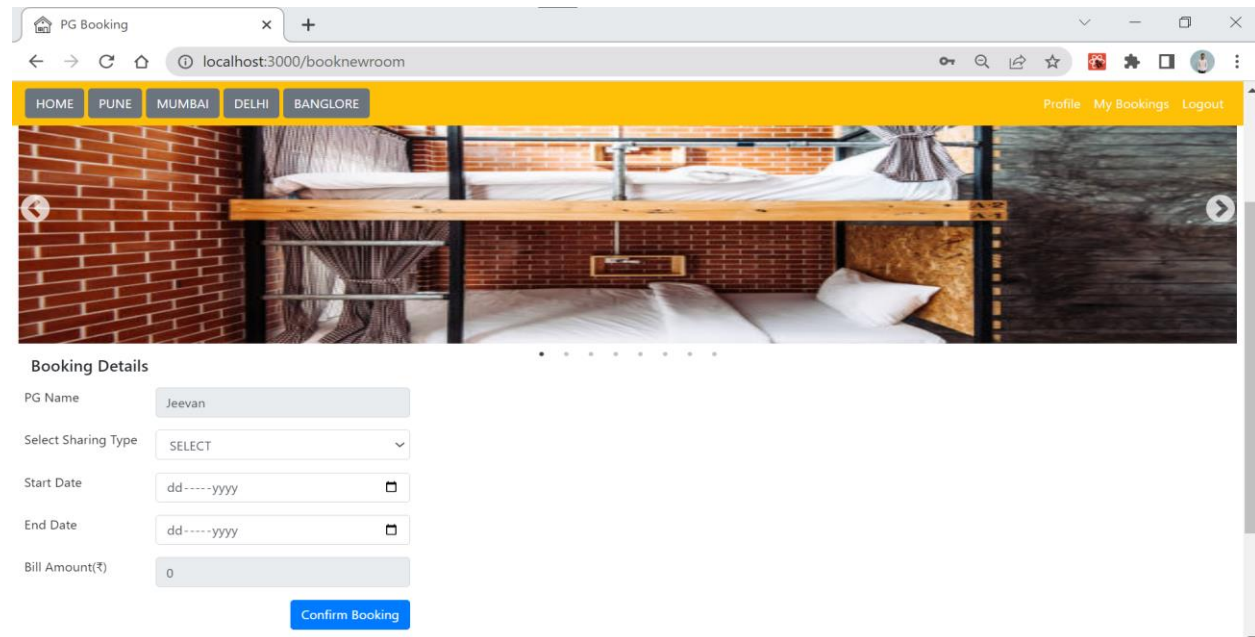
| Customer Name | Customer ID | Email | Booking ID | PG ID | Room ID | Booking Date | Start Date | End Date | Amount Paid | Actions |
|------------------|-------------|------------------------------|------------|-------|---------|--------------|------------|------------|-------------|---|
| Swapnil Shirsath | 5 | swapnilshirsath246@gmail.com | 16 | 10 | 59 | 2022-09-26 | 2022-09-30 | 2022-10-08 | 6000 | <button>Get PG Details</button> <button>Cancel Booking</button> |

Booking Flow

| PG Name | City | Image | PG Details Link |
|---------|----------|---|------------------------------|
| Jeevan | BANGLORE |  | <button>Get Details</button> |
| Ganesha | PUNE |  | <button>Get Details</button> |
| Reddy | DELHI |  | <button>Get Details</button> |

| PG Name | City | Locality | Amenities | PG Description | Is Food Available | Image | Price(per Month) | Action |
|---------|----------|----------|-----------|-----------------------------------|-------------------|--|--|--------------------------|
| Jeevan | BANGLORE | Hadapsar | all | fully furnished, new construction | YES |  | Single Sharing : ₹6000 Double Sharing : ₹5000 Triple Sharing : ₹4500 | Book Now |

Booking Page



The screenshot shows a web browser window with the URL `localhost:3000/booknewroom`. The page has a yellow header with navigation links: HOME, PUNE, MUMBAI, DELHI, BANGLORE. On the right of the header are links for Profile, My Bookings, and Logout. Below the header is a large image of a PG room with bunk beds. Under the image, the 'Booking Details' section contains the following form elements:

- PG Name:
- Select Sharing Type:
- Start Date:
- End Date:
- Bill Amount(₹):
- [Confirm Booking](#)

Booking Details

PG Name

Select Sharing Type

Start Date

End Date

Bill Amount(₹)

[Confirm Booking](#)

Booking Details

PG Name

Jeevan

Select Sharing Type

DOUBLE

Start Date

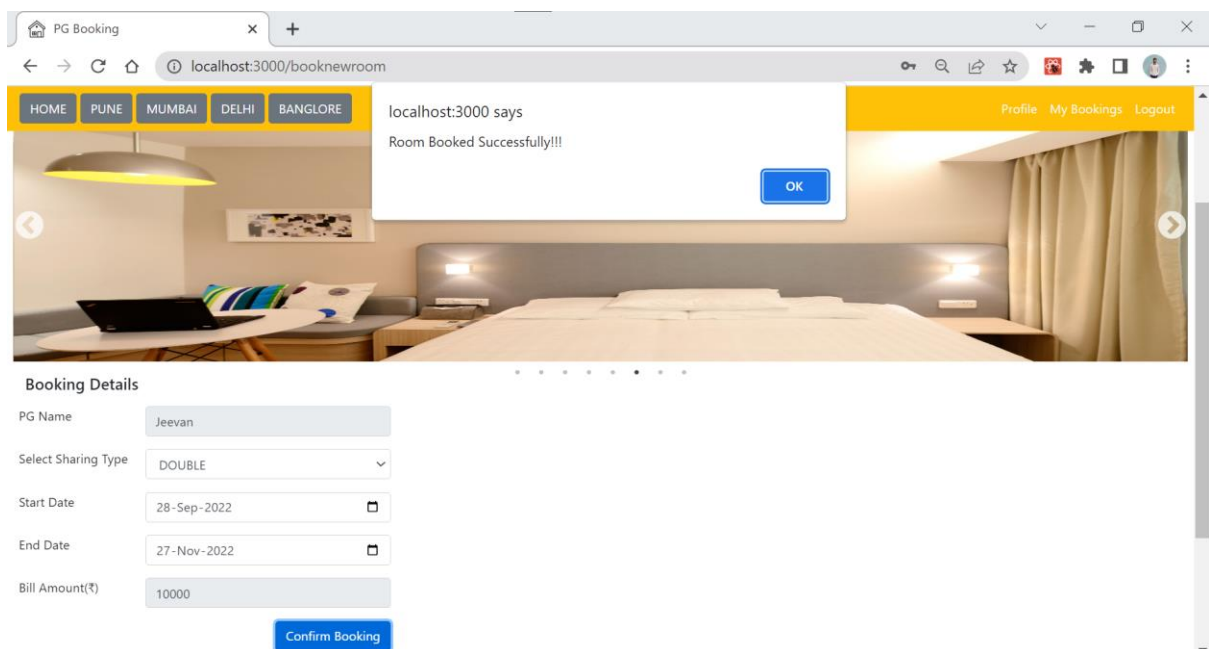
28-Sep-2022

End Date

27-Nov-2022

Bill Amount(₹)

10000

[Confirm Booking](#)

8. Future Scope

It can be summarized that the future scope of the project revolves around maintain information regarding:

- We can give more advance software for PG-Booking System including more facilities
- We will host platform on online servers to make it accessible worldwide
- We can add more cities and make this system more convenient and user friendly
- Implement the backup mechanism for taking backup of codebase and database on regular basis on different servers

The above-mentioned points are the enhancements which can be done to increase the applicability and usage of the project. We have left all the option so that if there is any other future requirement in the system by the user for the enhancement of the system then it is possible to implement them.

9. References

1. Stack Overflow: <https://stackoverflow.com/>
2. GitHub: <https://github.com/>
3. Java Docs:
<https://docs.oracle.com/javase/8/docs/technotes/tools/windows/javadoc.html>
4. Spring Boot Docs: <https://docs.spring.io/spring-boot/docs/current/reference/htmlsingle/>
5. Hibernate Docs: <https://hibernate.org/orm/documentation/5.4/>
6. ReactJS Docs: <https://reactjs.org/docs/getting-started.htm>