A

PROJECT REPORT

ON

URBAN STAY: WEB BASED APPLICATION FOR HOSTEL BOOKING AND MANAGEMENT SYSTEM

Submitted in partial fulfillment for the award of

Post Graduate Diploma in Advance Computing

(PG-DAC) from

INSTITUTE OF EMERGING TECHNOLOGIES

Authorized Training Centre

Under the Guidance of

Mrs. Prachi Godbole

BY

Name of student/s and PRN

1. **SHUBHAM DIDDI 220945920096**
2. **PIYUSH GANDHI 220945920061**
3. **DNYANESHWARI SHINDE 220945920087**
4. **NILIMA SHIRSE 220945920089**
5. **SWAPNIL DESHMUKH 220945920104**

CERTIFICATE

This is to certify that the project report entitled **URBAN STAY-WEB BASED APPLICATION FOR HOSTEL BOOKING AND MANAGEMENT SYSTEM** is a bonfire work carried out by **1. Shubham Diddi, 2. Piyush Gandhi, 3. Dnyaneshwari Shinde, 4. Nilima Shirse, 5. Swapnil Deshmukh** submitted in partial fulfillment of the requirement for the C-DAC ACTS, DAC course in the Institute of Emerging Technology in the batch of Sept 2022.

Course Coordinator **External Examiner**

ACKNOWLEDGEMENT

This project **Urban Stay- Web Based Application for Hostel Booking and Management System** was a great learning experience for us and we are submitting this work to Advanced Computing Training School (CDAC).

We are very glad to mention **Mrs. Prachi Godbole** for her valuable guidance to work on this project. Her guidance and support helped us to overcome various obstacles and intricacies during the course of project work.

Our most heart full thanks goes to ***Mr. Sangram Patil*** **(Director ,IET)**who gave all the required support and kind coordination to provide all the necessities like required hardware , internet facility and extra lab hours to complete the project and throughout the course up to the last day here in C-DAC ACTS, Pune.

Sign of student

Name of Studen

Sr.No.	Name	PRN	Sign
1.	Shubham Diddi	220945920096	
2.	Piyush Gandhi	220945920061	
3.	Dnyaneshwari Shinde	220945920087	
4.	Nilima Shirse	220945920089	
5.	Swapnil Deshmukh	220945920104	

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1 INTRODUCTION

The Hostel Management System is a tool for booking the rooms of Hostel through online by the Customer. It provides the proper management tools and easy access to the customer information.

1.1 Purpose

This Hostel Management System Software Requirement Specification (SRS) main objective is to provide a base for the foundation of the project. It gives a comprehensive view of how the system is supposed to work and what is to be expected by the end users. Client's expectation and requirements are analyzed to produce specific unambiguous functional and non-functional requirements, so they can be used by development team with clear understanding to build a systemas per end user needs.

This SRS for HMS can also be used for future as basis for detailed understanding on how project was started. It provides a blueprint to upcoming new developers and maintenance teams to assist in maintaining and modifying this project as per required changeability.

1.2 Need Of Online Hostel Booking System

With the progressive change in the socio-economic fabric of the country more and more students, working professionals, women are leaving their homes in search of employment in big cities as well as urban and rural industrial clusters. One of the main difficulties faced by such women is lack of safe and conveniently located accommodation. The Government of India being concerned about the difficulties faced by such cases.
urban, semi urban, or even rural areas where employment opportunity exist

Students and working concern

- Users can easily find variety of hostels in respective area

- No need to pay anything extra to brokers and agents
- Flexible dates for short time and long-time stays
- Community presence in same atmosphere.
- Peaceful and Healthy atmosphere for students and hybrid working professionals.
- Safe and Hygienic atmosphere coz properties maintain by owners
- Lack of resource availability in near by area like food, Bus stand, shopping malls, pickup glossary stores, Internet café, others
- No value for money facilities or over cost rentals.

Hostel owners concerns

- Hostels not occupied by full capacity of fanatical loss
- Not able to keep track of payment, advance monthly rentals
- Keeping older records for safety getting difficult task work

  Payment for broker or agents to fill vacancies.

1.3 Overview

The remaining sections of this documentations describes the overall descriptions which includes product perspective and functions, characteristics of users. It also consists of Assumptions, and Constraints. Overall description is listed in section 2. Section 3 includes Specific Requirements which consists of Functional and Non-functional requirements, External Interface Requirements, Software System Attributes, Performance Requirements, Capacity Requirements, Availability Requirements, Safety Requirements and Requirement Traceability Matrix.

2 PROBLEM DEFINITION and Scope

2.1 Problem statement and Scope of the Project

Web based online Hostel management system is designed to manage various upcoming challenges from searching hostel to managing hostel from owner. This application is preferring design for tier one cities where we can see for last two decades number of Education Institutes, Private courses, Corporate Companies, solo travelers, is increasing rapidly so to fulfill needs we see number of hostels requirements also increasing in huge numbers.

So, it is getting difficult to find right convenient room for student, working professional or bachelor also it is tedious and difficult task to manage Hostel property, keep admission track, vacancies, payment schedule, defaulters whereas most of the hostel owner are maintaining records manually on paper hence it creates many drawbacks, dependency and strain on the person who manages it and there was not any uniform system to manage all those problem under the one umbrella.

2.2 Goals and Objective

The Web based and App based Hostel Booking & Management System is intended to provide complete solution for Tenants and Owners. It will enable Owners to manage hostel property, track all records, Tenants to search appropriate hostel browse through Website or app and book hostel room online without visiting hostel

2.3 Product Functions

Our Product General functions are:

- Tenant Registration,
- Brows and search rooms
- Check for Availability of Rooms
- Display the Rate
- Confirmation of Booking

- Email – SMS Notification
- Payment
- Set Room Details
- Manage Booking Details
- Generate Report
- Customer Service

2.4 User Characteristics

There are 3 user Levels in our Hostel Management System:

A. Tenant, Customer

B. Property owner

C. Admin – Support system

Tenant or Customer

Search for the appropriate property and book according

Provide the required details for user management payment track records.

Property (Hostel owner)

Add property to web application with app required details room details like dimensions, facilities and photographs

Update rates and maintain and update track of the empty and occupied rooms on portal

Admin – Support

They should be able to confirm the booking and cancel it if necessary. Customershave access to customer service desk portal to forward their inquiry. Customer should at least be capable to use the web UI interface.

2.5 Major Constraints and Outcomes

Major Constraints in Hostel Booking System

1. **Scalability:** The system needs to be able to handle a large number of users and bookings, as well as handle spikes in traffic during peak seasons.
2. **Security:** The system must ensure the security of user data, including personal information, payment details, and booking history.
3. **Reliability:** The system must be available and responsive at all times to ensure that users can make bookings and access their information without interruption.
4. **Integration:** The system must be able to integrate with other systems such as payment gateways, social media, and third-party APIs.
5. **User experience:** The system must be easy to use and navigate for both customers and staff to ensure a smooth booking process.
6. **Data privacy:** The system must comply with data privacy regulations such as GDPR and HIPAA.
7. **Customizability:** The system must allow for customization to meet the unique needs of different hostels and accommodation providers.
8. **Accessibility:** The system must be accessible for differently abled users and comply with web accessibility standards.
9. **Cost:** The system must be cost-effective and provide a good return on investment.
10. **Maintenance:** The system must be easy to maintain and update to ensure that it stays up-to-date with the latest technologies and features.

3. SOFTWARE REQIREMENT SPEIFICATION

3.1 Proposed System and Scope:

The scope of the system is to provide a user-friendly application that is easy to navigate and provides sufficient information about the hostels.

Two potential groups of viewers exist:

i. Owners: Who are seeking an automated system to manage their hostel.

ii. Tenants (Student/ Bachelor): Those who are looking for PGs, and hostel rooms can find the best room/hostel for them without wandering around in the city.

This system allows Owners to manage/maintain their hostel. Keep track of admissions, vacancies, and payments. This system also allows Tenants to search for accommodations and reserve rooms without visiting the hostel.

4. SYSTEM MODULES

1. **Booking Management:** This module allows users to make bookings, view their bookings, and cancel bookings. It also allows the admin to view and manage all the bookings.

2. **User Management:** This module manages all user-related activities such as registration, login, and profile management.

3. **Room Management:** This module allows the admin to add, edit, and delete rooms. It also shows the available rooms, booked rooms, and the room's occupancy status.

4. **Payment Management:** This module handles all financial transactions such as accepting payments, refunds, and generating invoices.

5. **Communication Module:** This module allows the user to communicate with the hostel staff through chat or email for any queries or issues.

6. **Security Module:** This module ensures the security of the system and user data by implementing various security measures such as encryption and authentication.

5. PERFORMANCE REQUIREMENTS

Performance requirements in a hostel booking system typically include fast loading times, reliable and secure data storage, and the ability to handle a high volume of simultaneous users and bookings. Other important factors may include user-friendly navigation and booking interface, mobile compatibility, and integration with payment systems. Additionally, a good hostel booking system should also have robust reporting and analytics capabilities to help the hostel management track occupancy, revenue, and other important performance metrics.

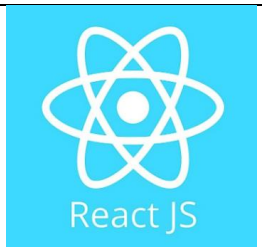
5.1 Hardware and Software REQUIREMENTS

External Interface Requirements

User Interfaces

The user interface for system shall be compatible to any type of web browser such as MozillaFirefox, Google Chrome, and Microsoft EDGE, Opera, BING

Software Interfaces

	FRONT END	BACKEND	DATABASE
1	 REACT JS	 J2EE	 MySQL

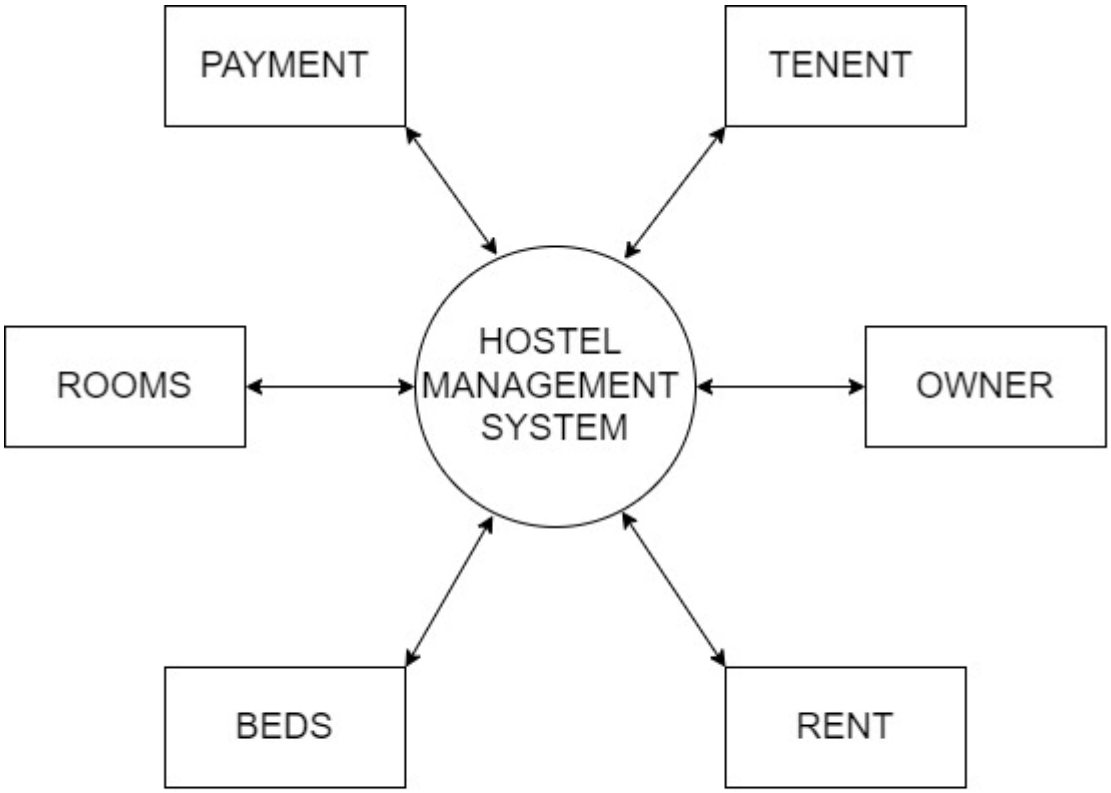
Hardware Interfaces

Server Side			
Monitor	Processor	RAM	Disk Space
Resolution: 1024x768	Intel or AMD 2GHZ OR HIGHER	4GB	10GB
Client Side			
Monitor	Processor	RAM	Disk Space
Resolution: 1024x768	Intel or AMD 1GHZ DUAL CORE MIN	2 GB	128 GB

6 UML DIAGRAMS

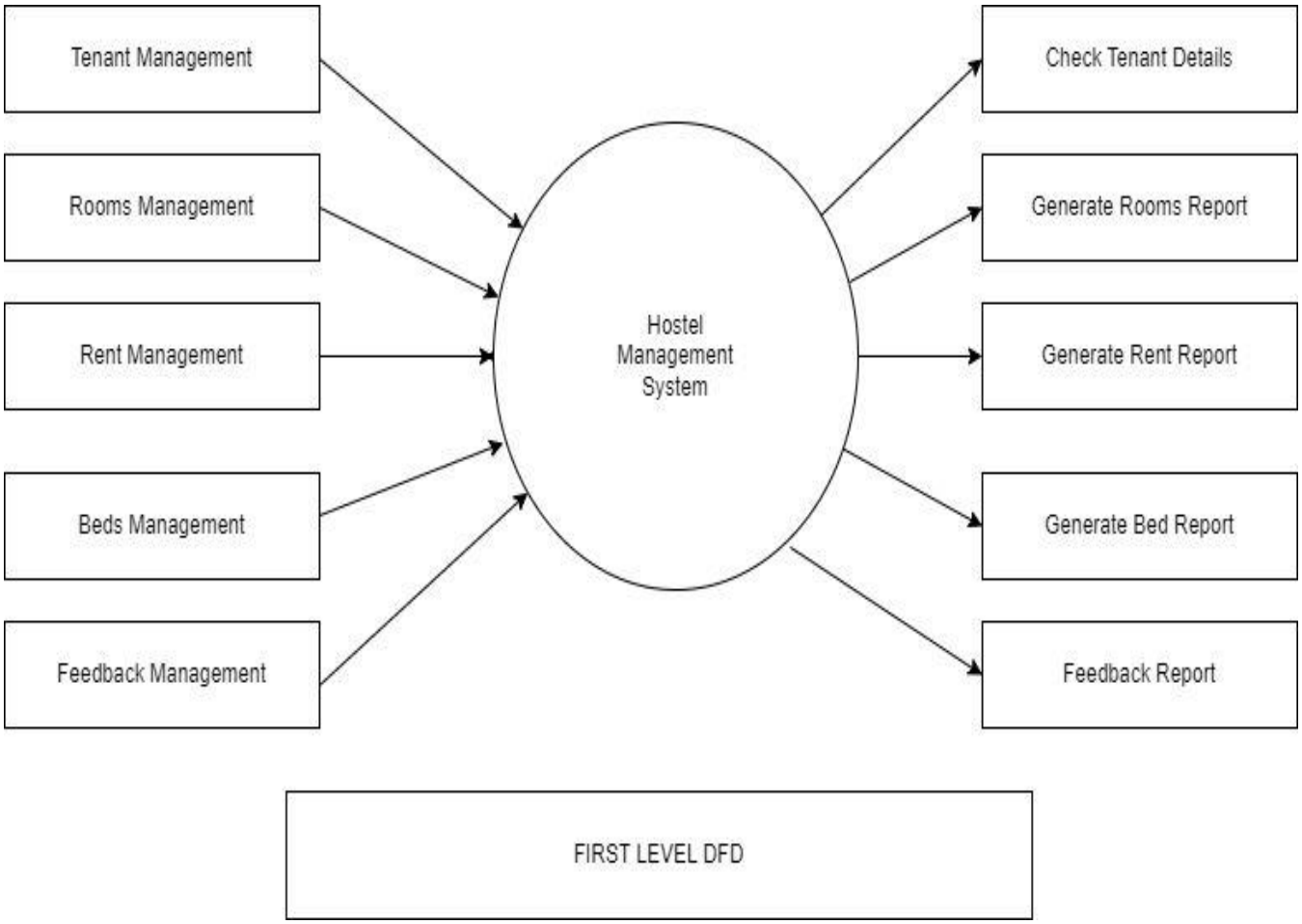
6.1 Data Flow Diagram

6.1.1 Zero Level Data Flow Diagram



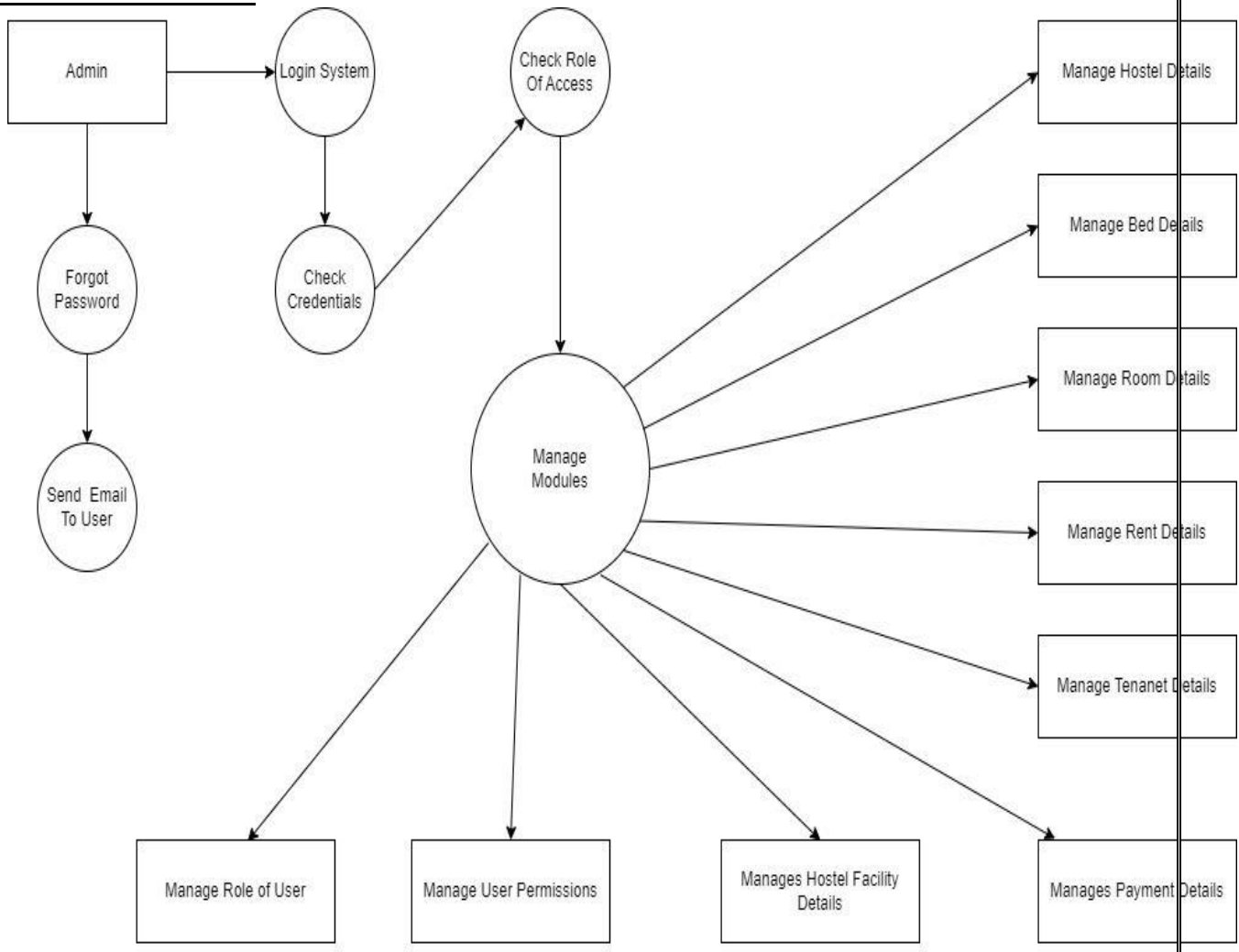
ZERO LEVEL DFD

6.1.2 First Level DFD:



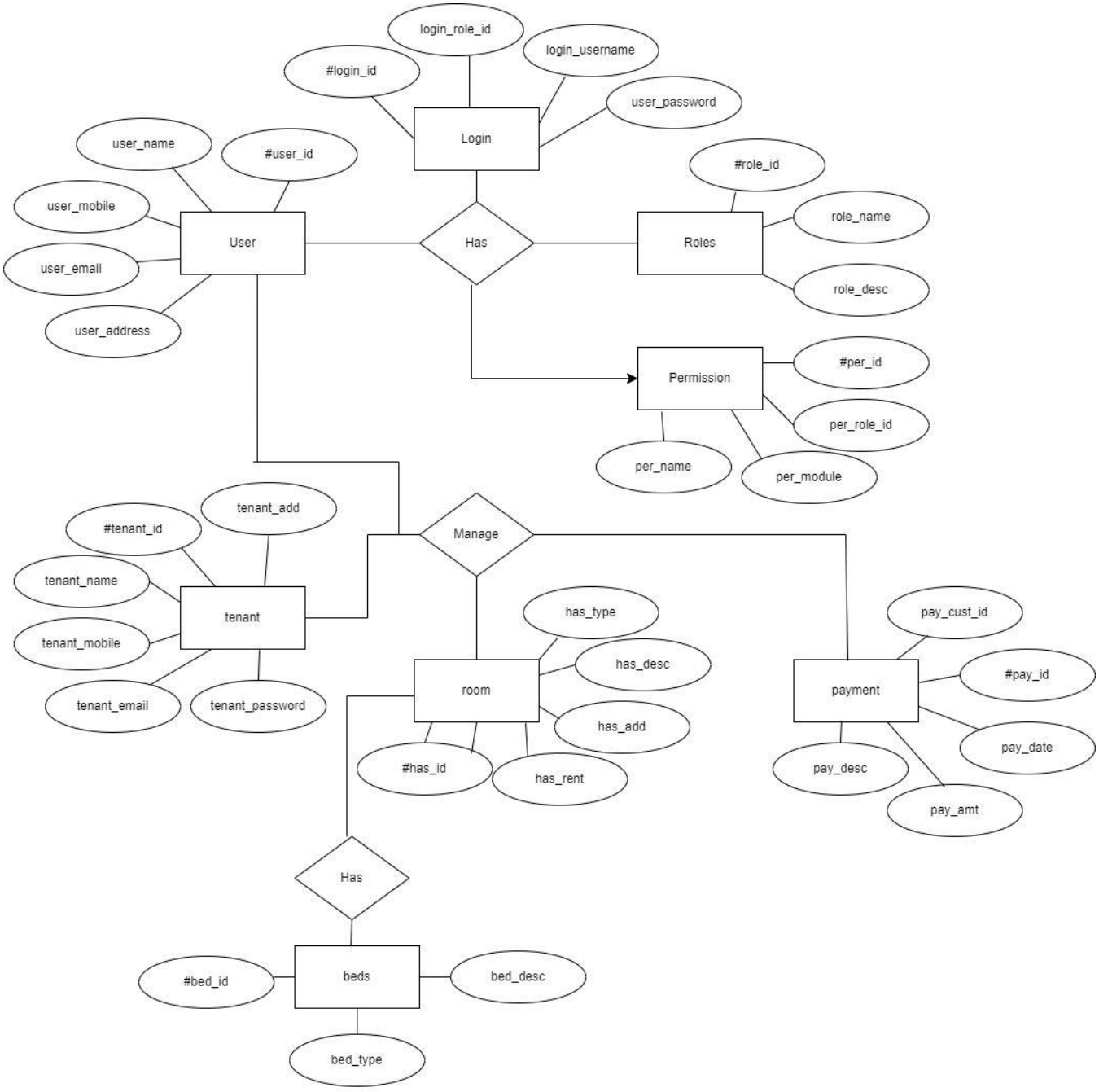
FIRST LEVEL DFD

6.1.3 Second Level DFD:



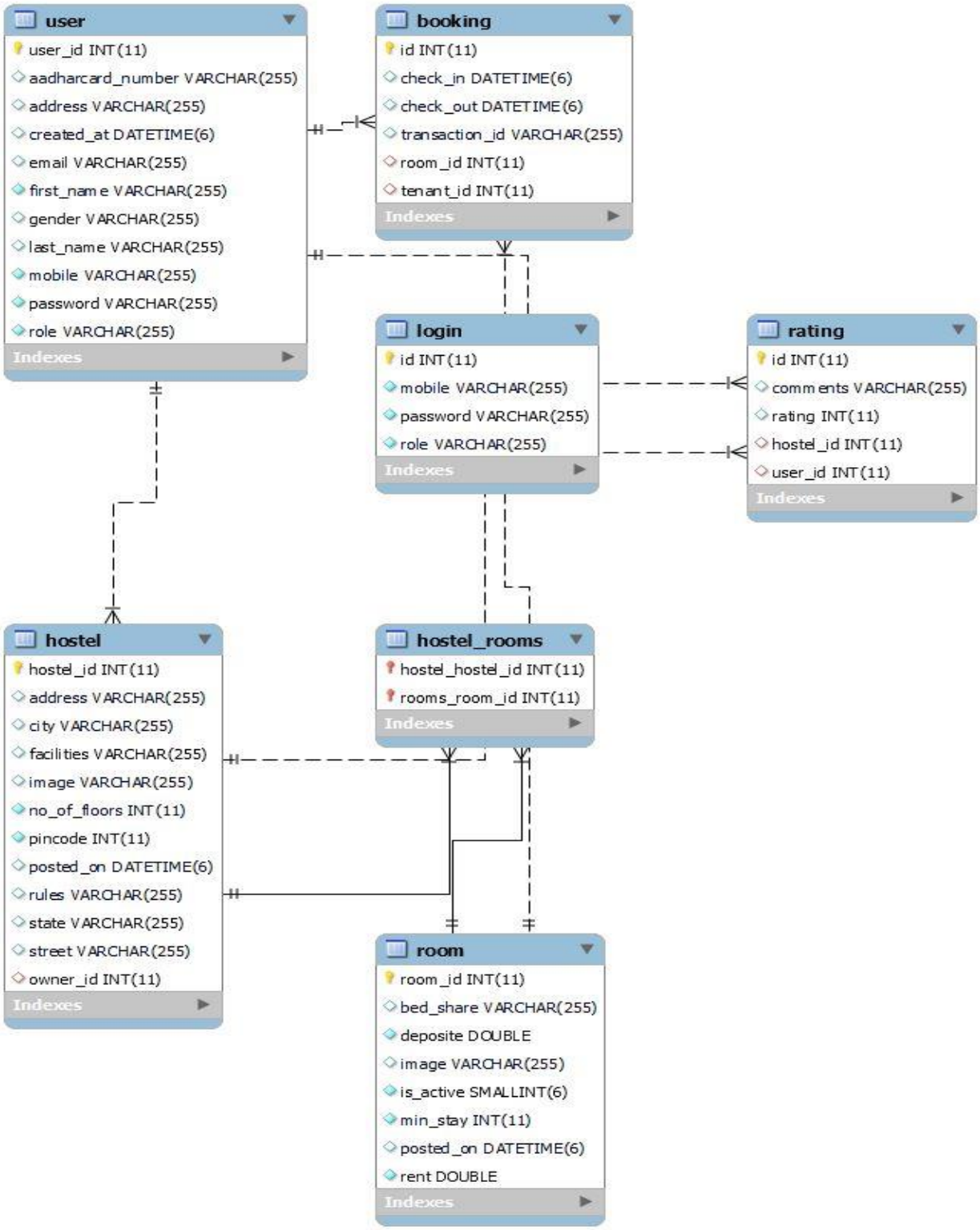
Second Level DFD Hostel Booking and Hostel Management

6.2.1 Entity Relationship Diagram



Entity Relationship Diagram

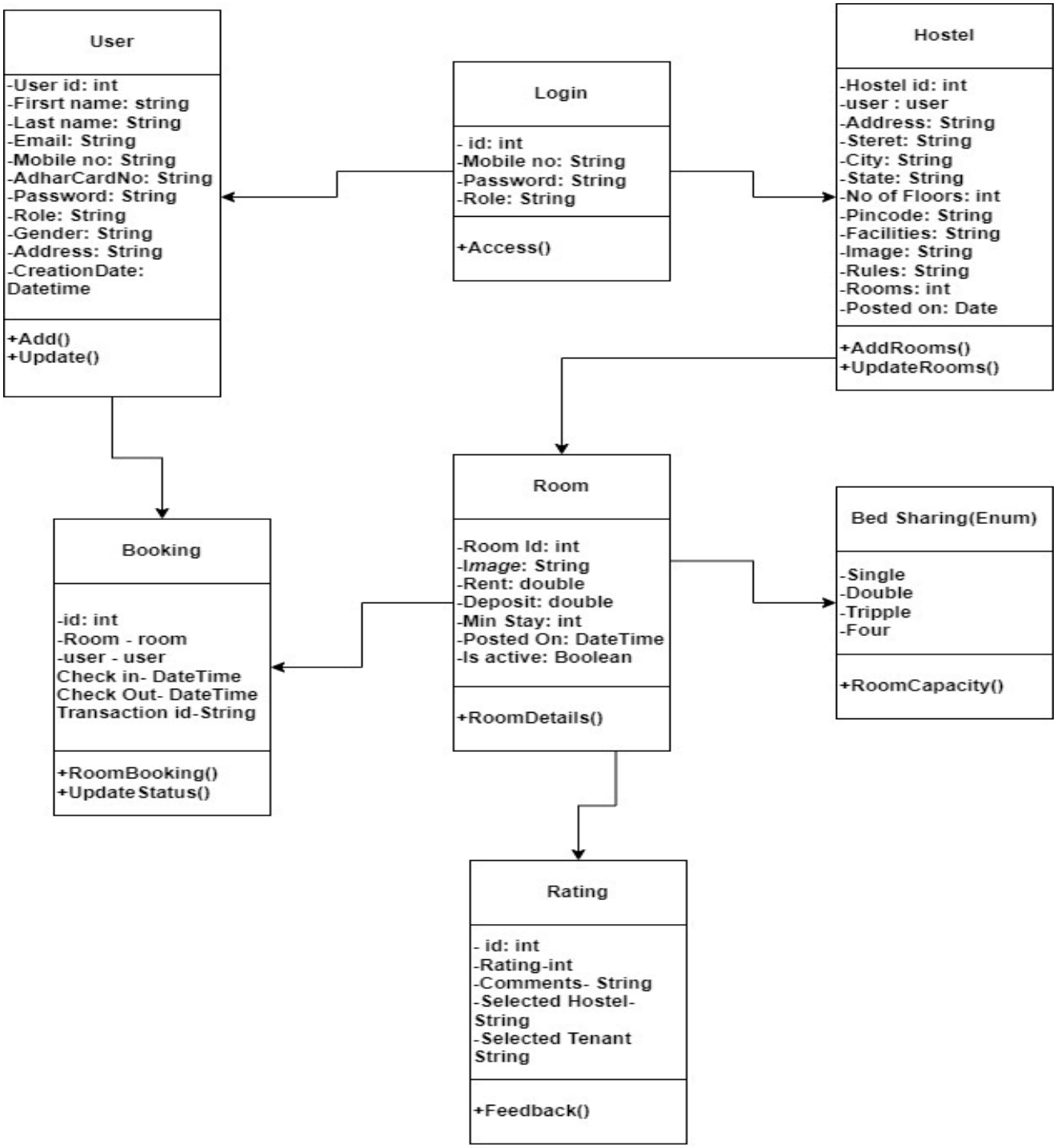
6.2.2 Entity Relationship Diagram



6.3 Usecase Diagram

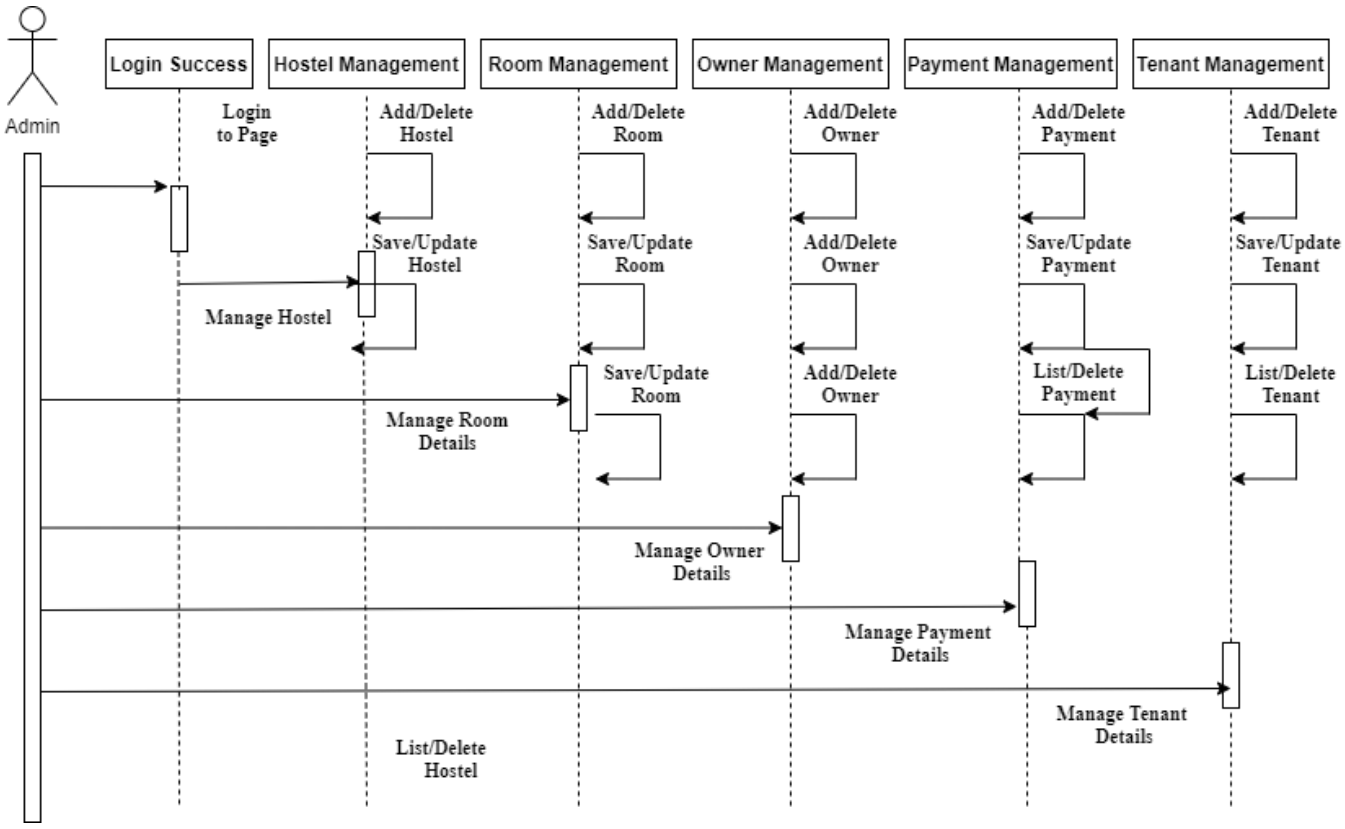
Usecase Diagram

6.4 Class Diagram

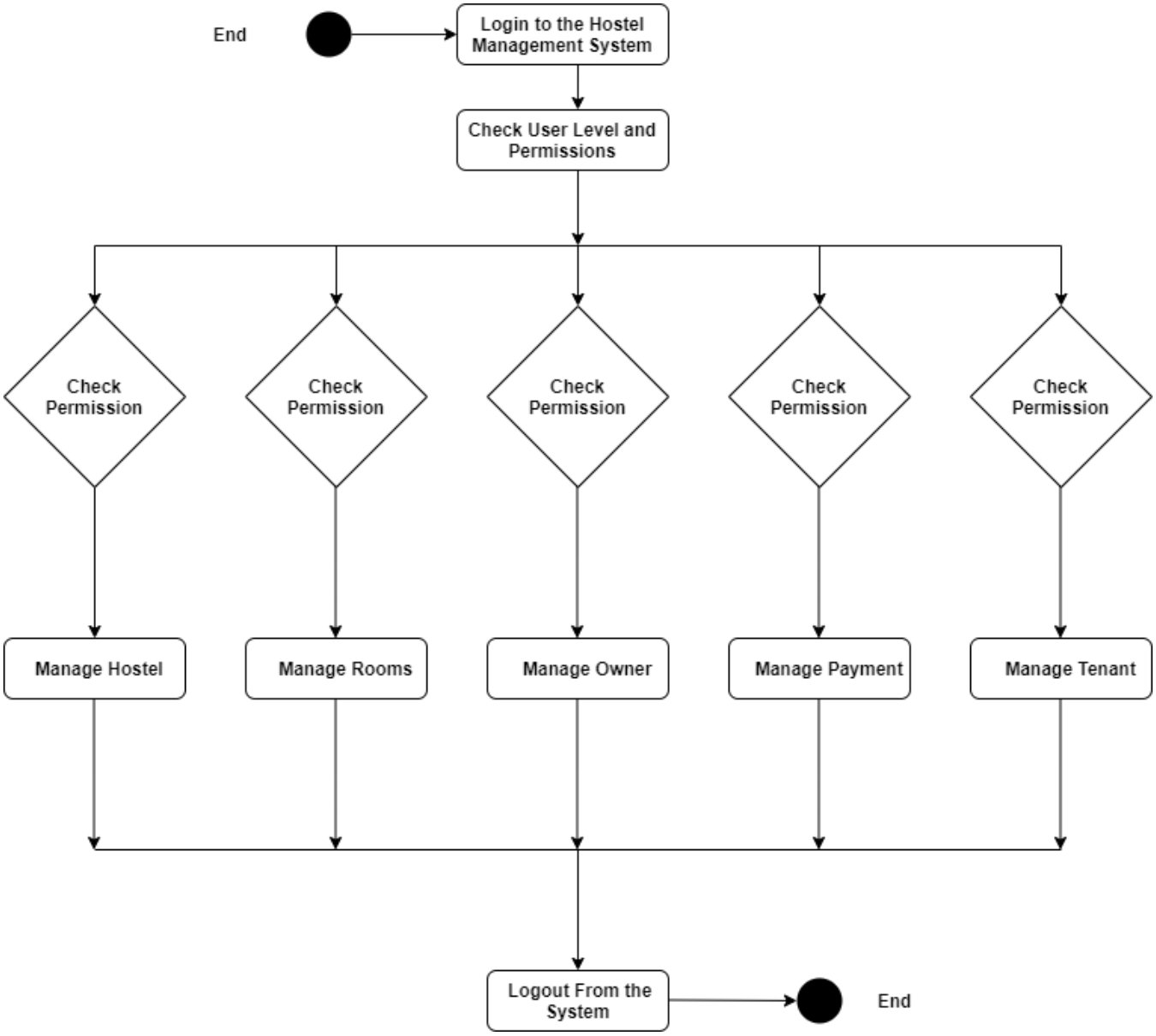


CLASS DIAGRAM

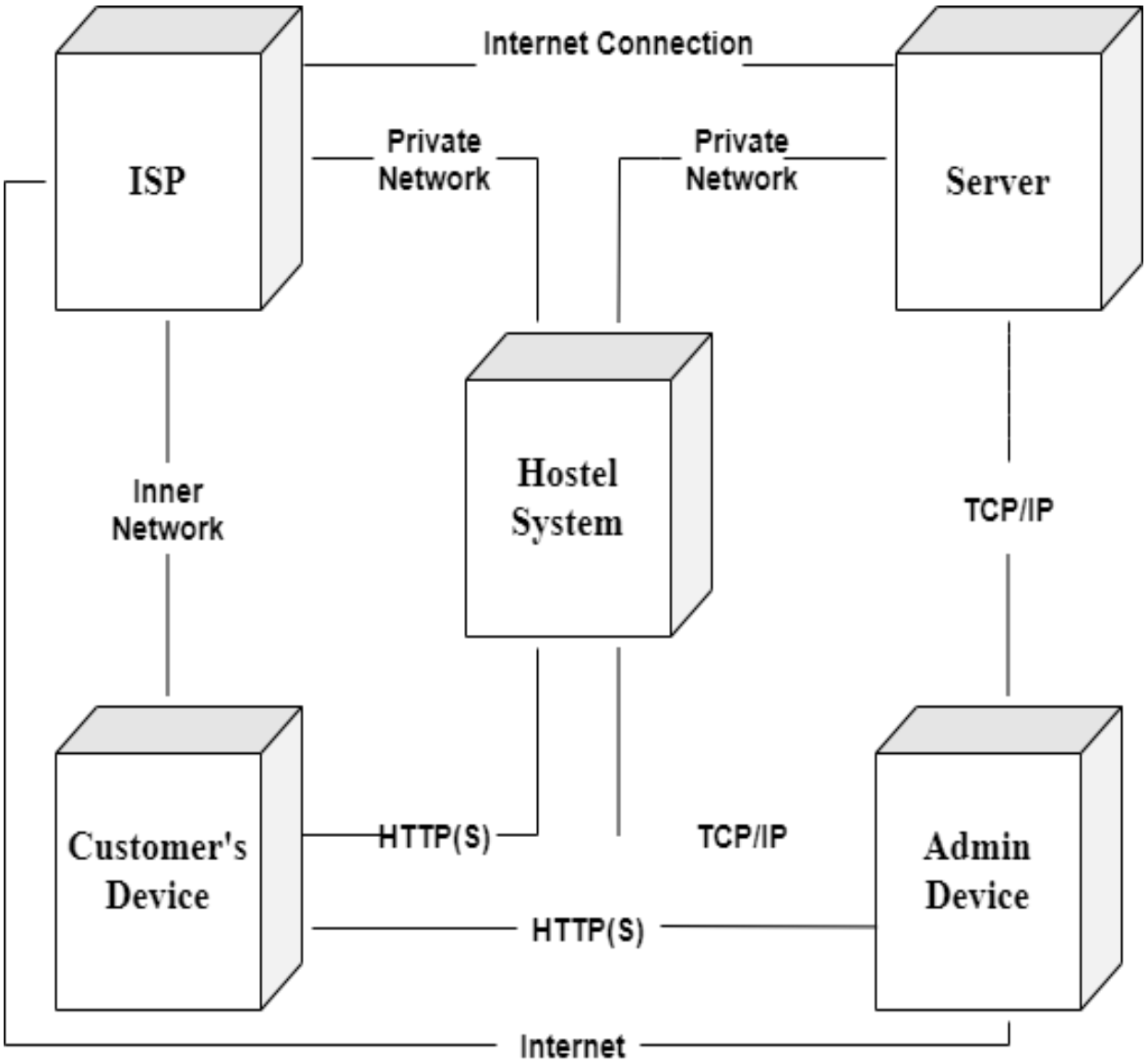
6.5 Sequence Diagram



6.6 Activity Diagram



6.7 Deployment Diagram



7. Test Cases

Test Case ID	Test Case	Test Case I/P	Actual Result	Expected Result	Test case criteria(P/F)
001	Admin enter the correct username or password click on submit button	Username or password	Accept	Accept	P
001	Admin enter the wrong username or password click on submit button	Username or password	Error come	Accept	P
002	Owner enter the correct username or password click on submit button	Username or password	Accept	Accept	P
002	Owner enter the wrong username or password click on submit button	Username or password	Error come	Accept	P
003	Tenant enter the correct username or password click on submit button	Username or password	Accept	Accept	P
003	Tenant enter the wrong username or password click on submit button	Username or password	Error come	Accept	P

Login Test Cases

Registration Test Cases

Test Case ID	Test Case	Test Case I/P	Actual Result	Expected Result	Test case criteria(P/F)
001	Enter the number in username, middle name, last name field	Number	Error Comes	Error Should Comes	P
001	Enter the character in username, middle name, last name field	Character	Accept	Accept	p
002	Enter the invalid email id format in email id field	ppgmail,com	Error comes	Error Should Comes	P
002	Enter the valid email id format in email id field	pp@gmail.com	Accept	Accept	P
003	Enter the invalid digit no in phone no field	99999	Error comes	Error Should Comes	P
003	Enter the 10 digit no in phone no field	9999999999	Accept	Accept	P
006	Enter the 8 digit password	44444444	Accept	Accept	P

System Test Cases

Test Case ID	Test Case	Test Case I/P	Actual Result	Expected Result	Test case criteria(P/F)
001	Tenant login into the system	Username or password	Accept	Accept	P
001	Search for Rooms	Display all rooms within city	Accept	Accept	P
001	Tenant will book the room	Booking redirect to payment page	Accept	Accept	P
001	Payment Page	Payment Success.	Accept	Accept	P
001	Owner login to the system	Username or password	Accept	Accept	P
001	Owner will list his Hostel and Rooms into the system	Hostel Details	Accept	Accept	P
001	Owner can check tenant details	Tenant table	Accept	Accept	P
001	Admin login into system	Username or password	Accept	Accept	P
002	Admin Dashboard	Dashboard	Accept	Accept	P
002	Admin can see users table	Users table	Accept	Accept	P
003	Admin can see listed properties	Properties Table	Accept	Accept	P
003	Admin can see Booking table	Bookings Table	Accept	Accept	P

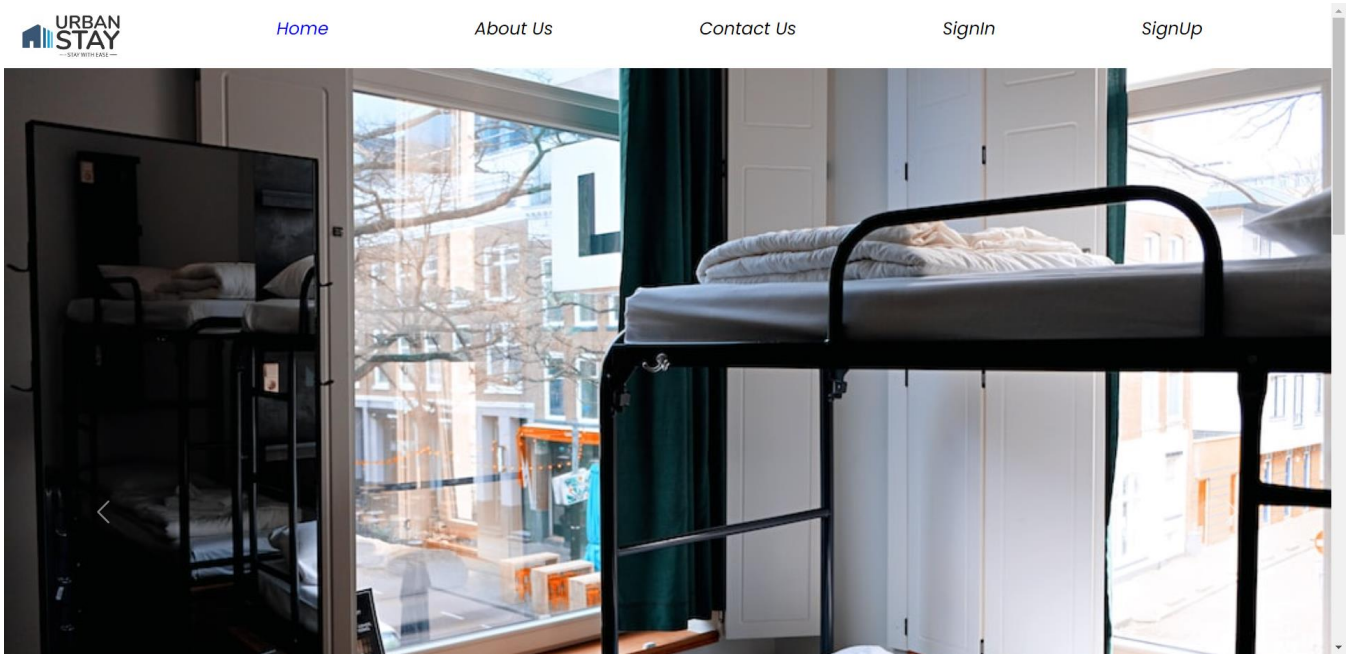
Logout Test Cases

Test case ID	Test case	Test case I/P	Actual Result	Expected Result	Test cases criteria(P/F)
001	Logout	User exit	Session exit	Logout successfully	P

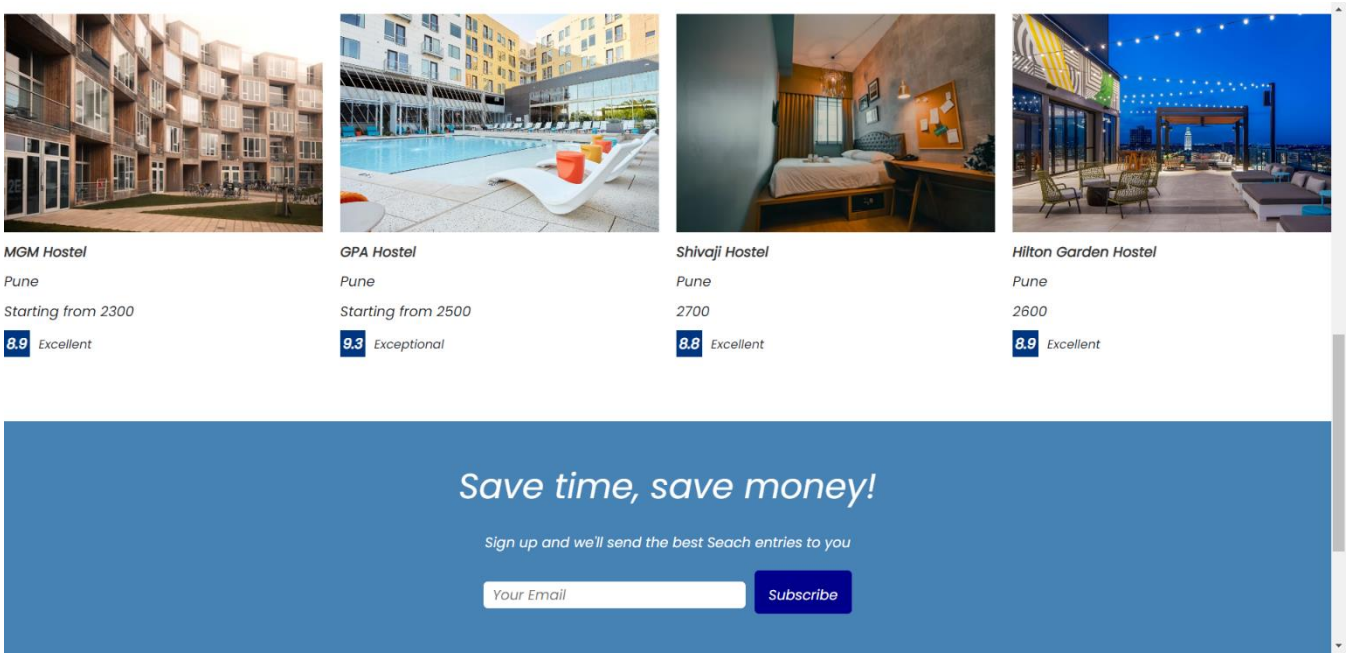
GUI Testing

Test case	Login Screen- Sign up
Objective	Click on sign up button then check all required/ mandatory fields with leaving all fields blank
Expected Result	All required/ mandatory fields should display with symbol "*". Instruction line "* field(s) are mandatory" should be displayed
Test case	Create a Password >>Text Box Confirm Password >>Text Box
Objective	Check the validation message for Password and Confirm Password field
Expected Result	Correct validation message should be displayed accordingly or "Password and confirm password should be same" in place of "Password mismatch".

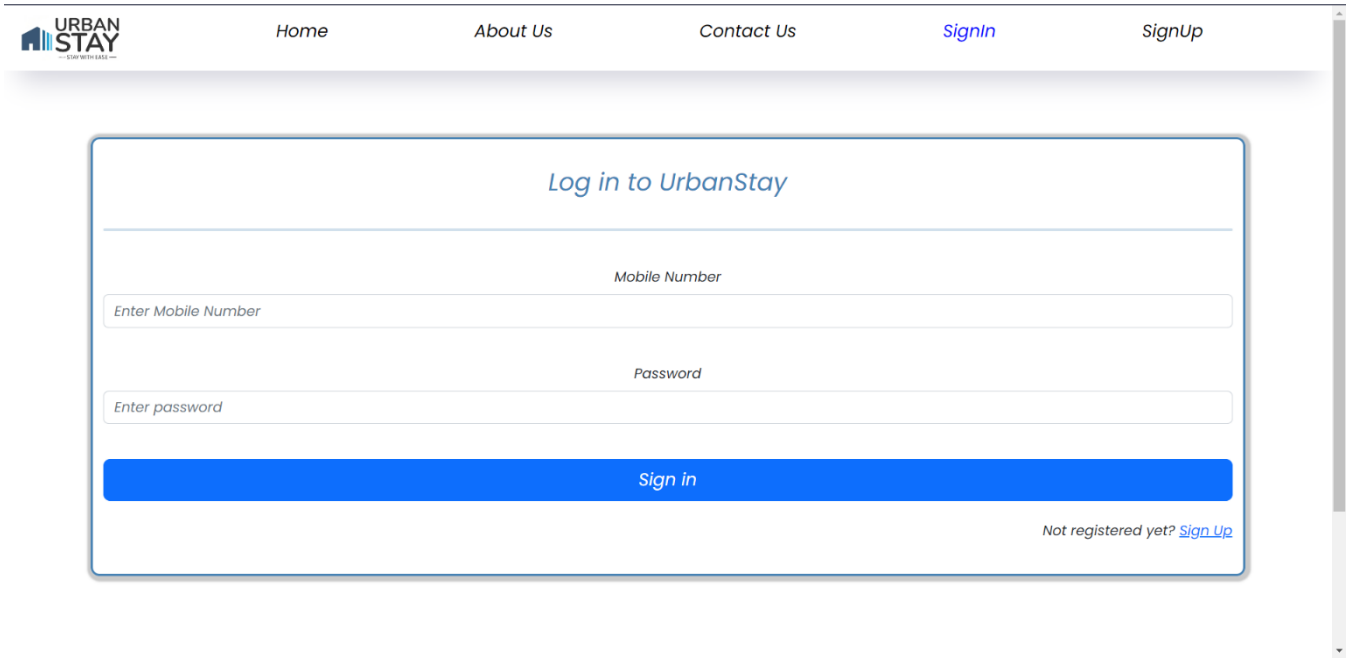
8. Screenshots



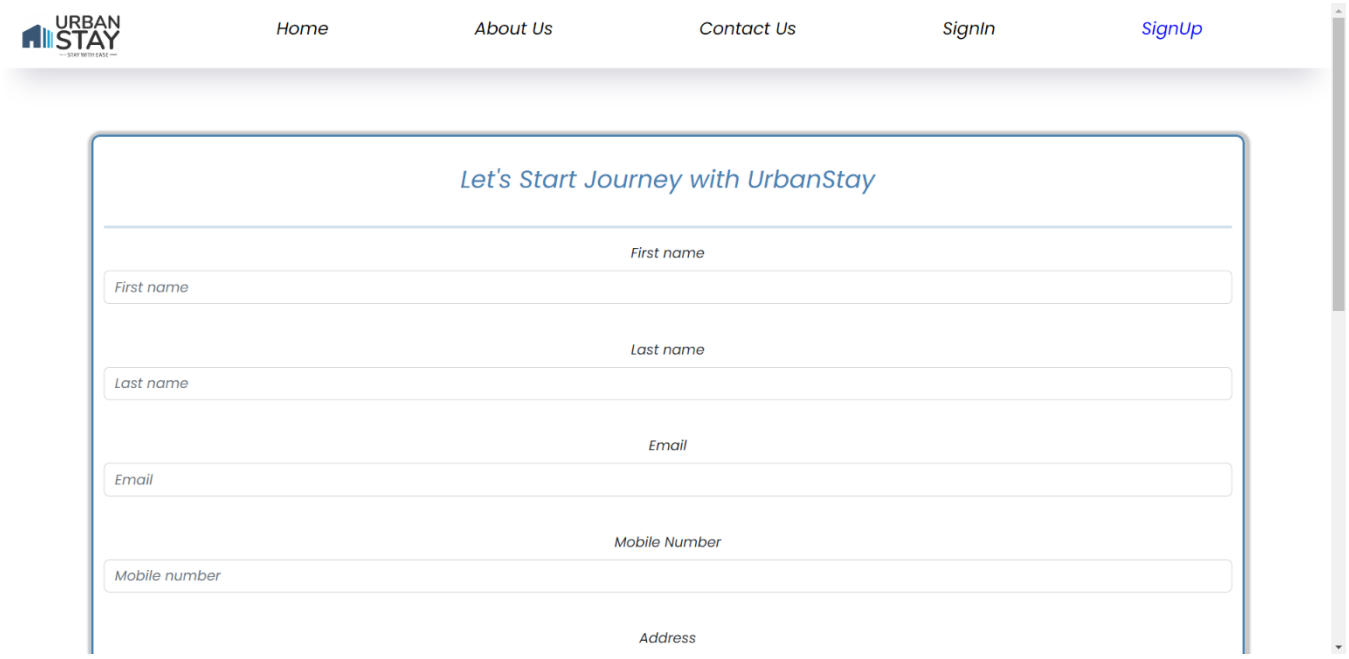
Home Page-1



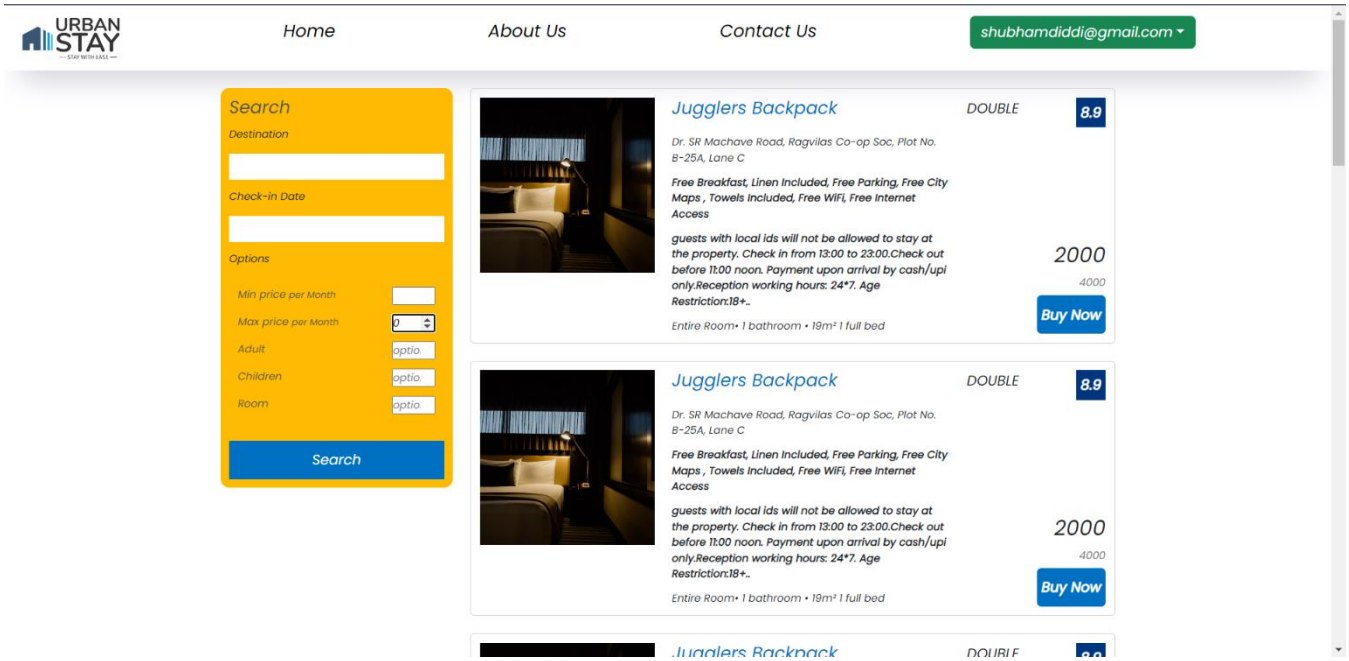
Home Page-2



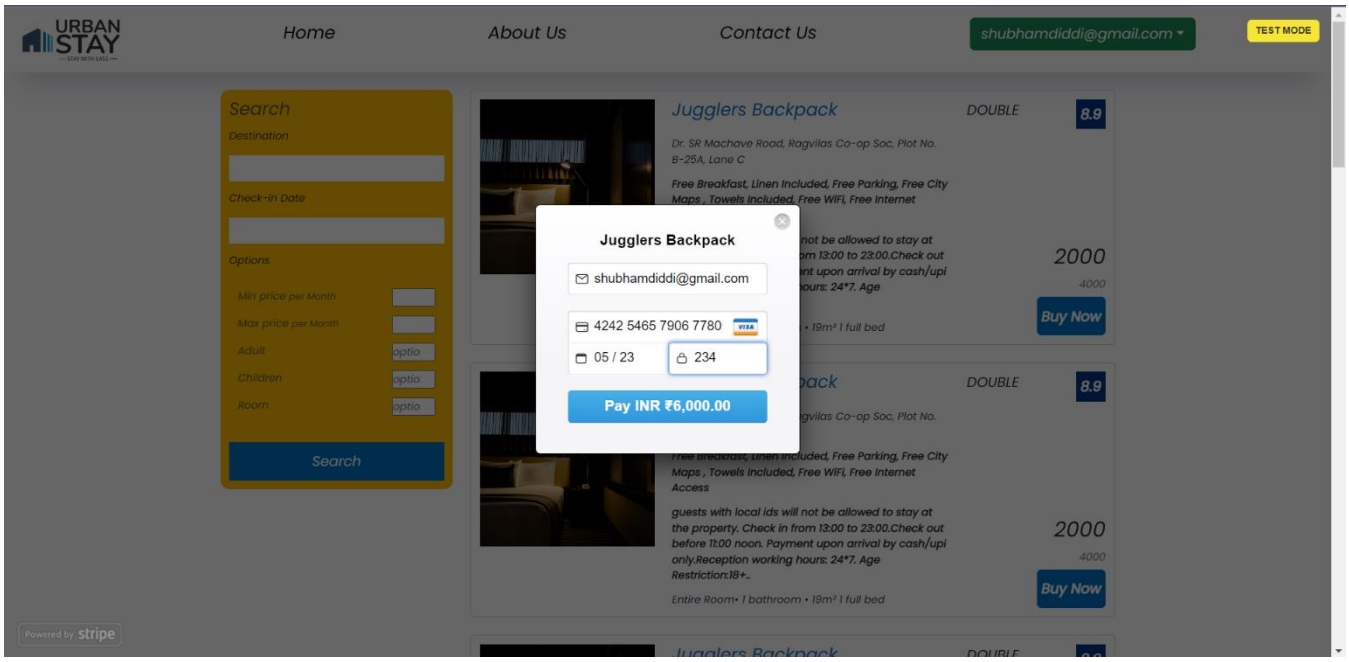
Sign-In page



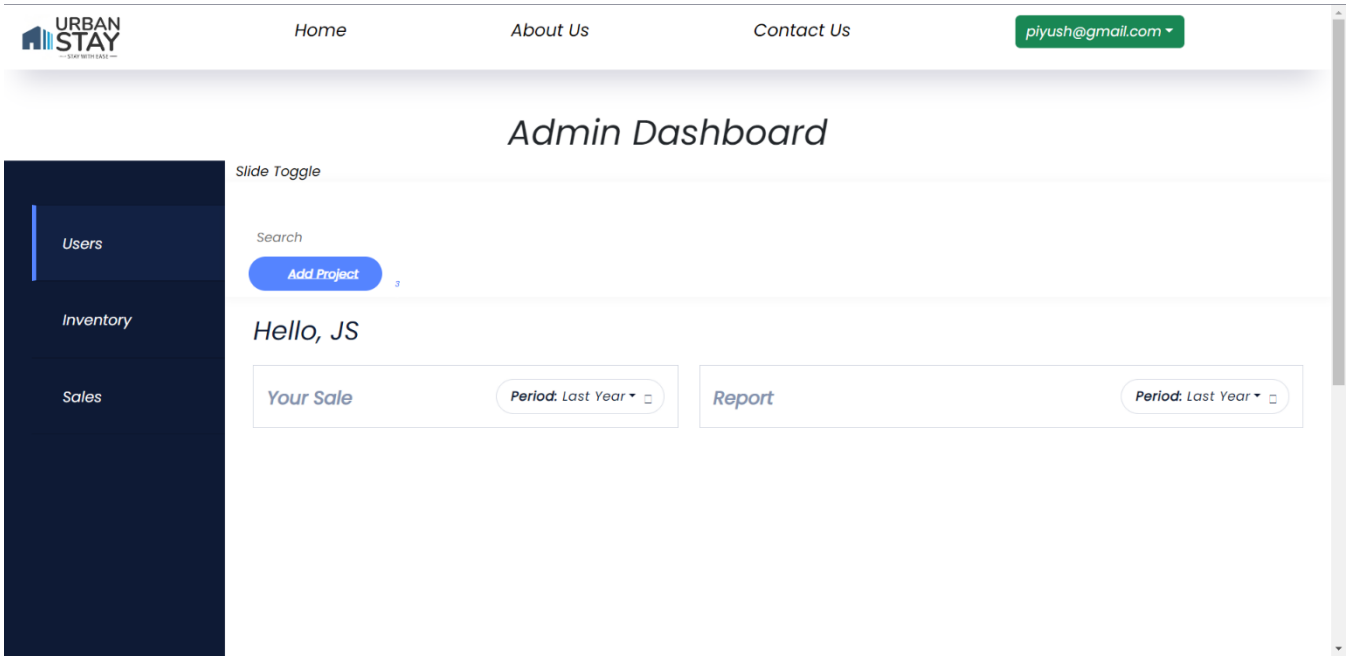
Sign-Up page



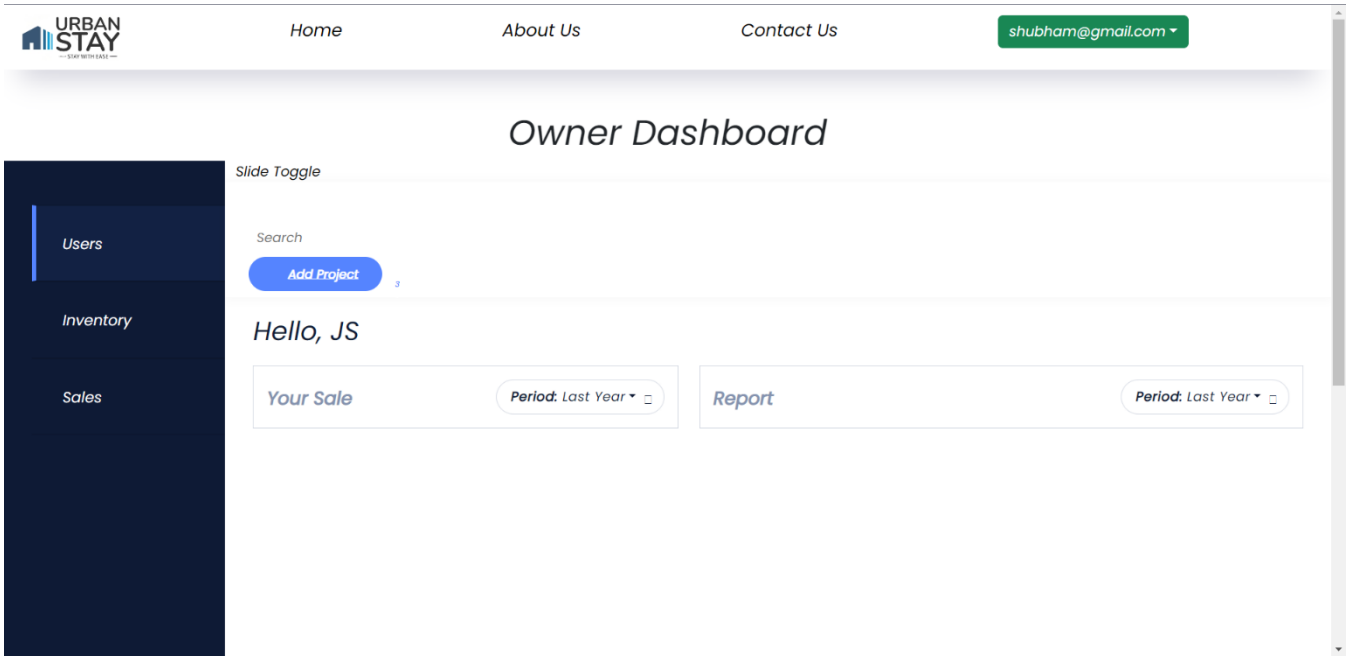
Hostel Page



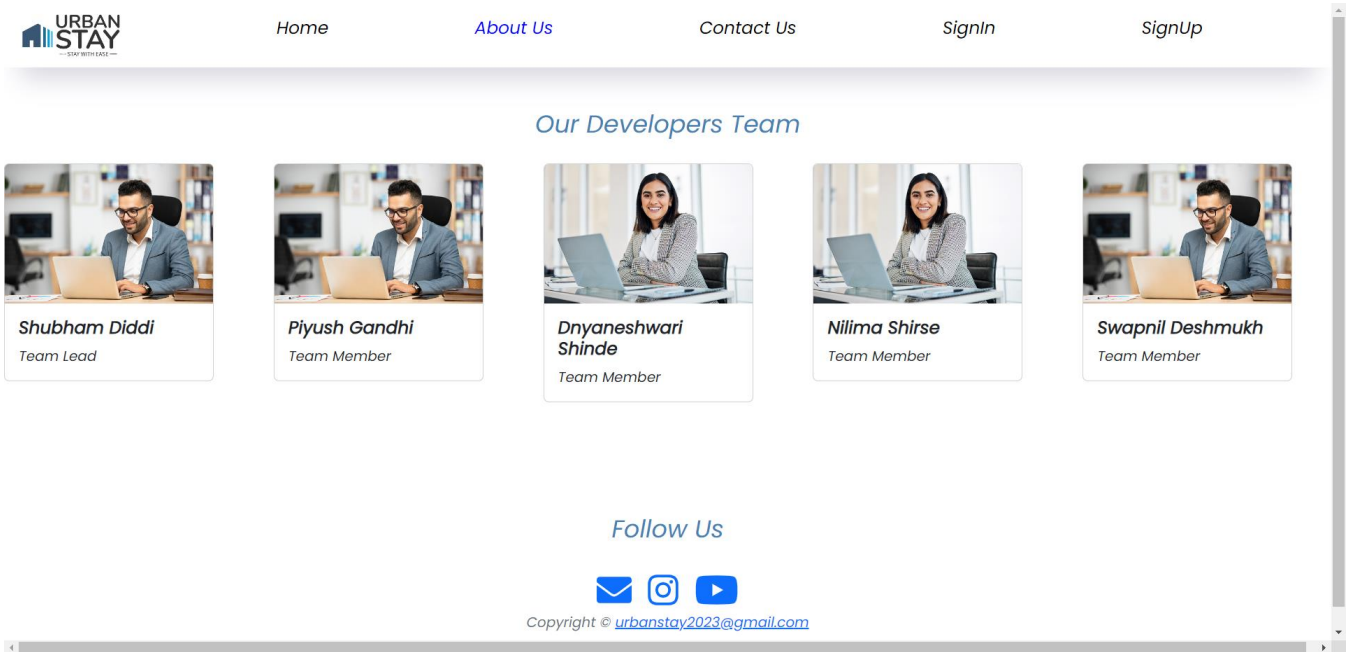
Payment Details



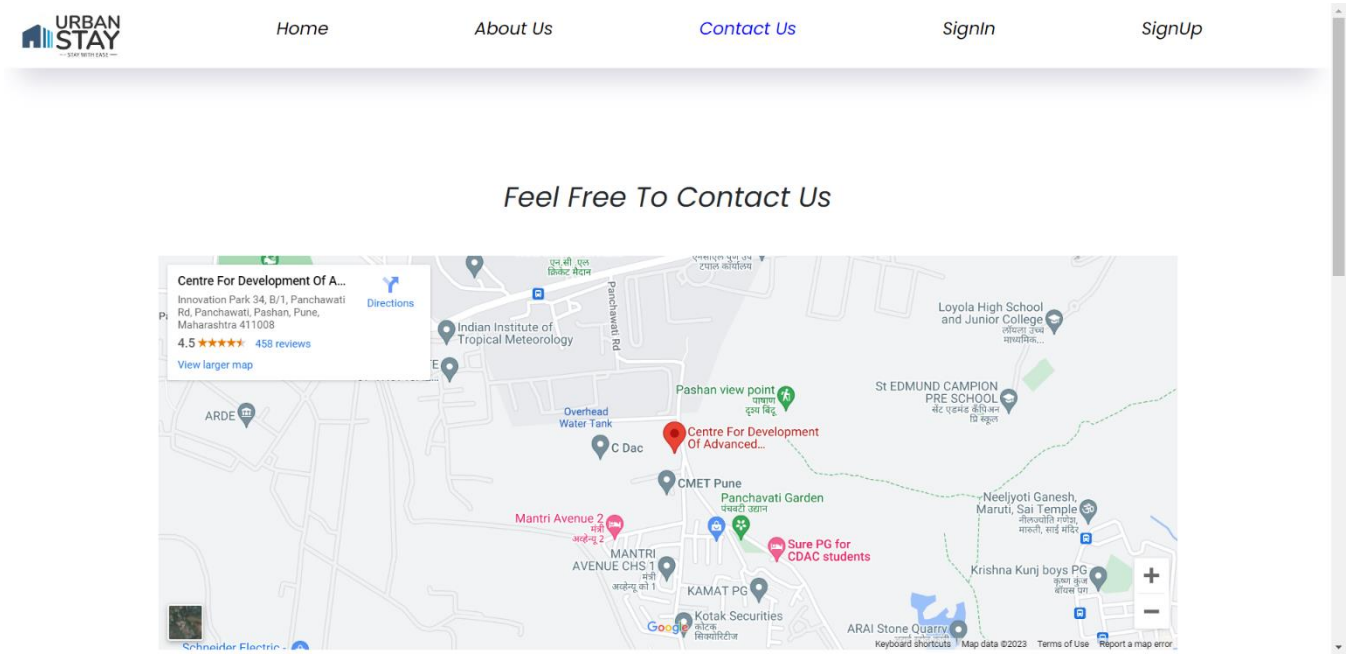
Admin Dashboard



Owner Dashboard



About Us Page



Contact Us Page

9. References

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