# Project Report

## House Rent Web Application

SmartBridge Externship Modern Application Development

(Java Spring Boot)

**Group 258 : Team Members -**

Duggirala Harsha Vardhan Reddy - 20BCR7141

Gudivada Ram Nikhil - 20BCN7041

Talluri Jithendra Sai - 20BCI7099

Kore Deepesh Vamsi Saran – 20BCI7119

## 1. INTRODUCTION

### 1.1 Overview:

The House Rent Web Application is a modern application developed using Java Spring Boot as the backend and AngularJS as the frontend. It provides a platform for house owners and tenants to interact, search for houses, and make rental bookings. The application includes features such as user authentication, house listing and booking, and admin functionality for managing houses and bookings.

### 1.2 Purpose:

The purpose of the House Rent Web Application is to simplify the process of finding and renting houses. It aims to provide a user-friendly interface for tenants to search and book houses based on their preferences. Additionally, it offers administrative capabilities for house owners to manage their properties and oversee rental bookings.

## 2. LITERATURE SURVEY

### 2.1 Existing problem:

The traditional process of house hunting and rental bookings can be time-consuming and cumbersome. It often involves visiting multiple locations, communicating with various house

owners, and handling paperwork. This process lacks a centralized platform for searching and booking houses, leading to inefficiencies and delays.

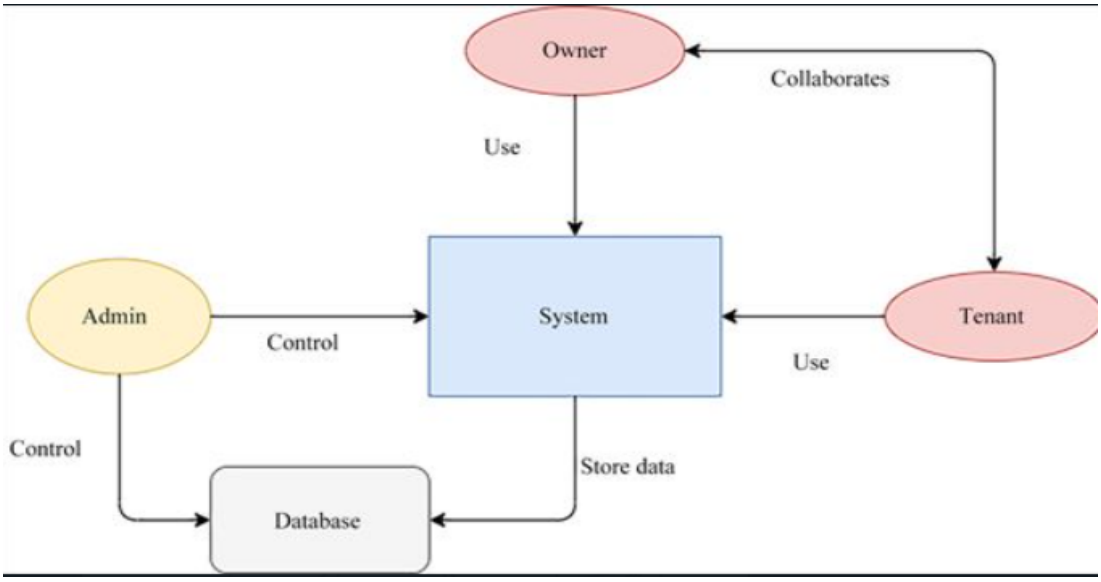
### 2.2 Proposed solution:

The House Rent Web Application addresses the existing problem by providing an online platform where users can search for houses, view details, and make rental bookings. The application streamlines the process by offering a centralized system that connects tenants with house owners. It facilitates quick and efficient bookings, eliminating the need for manual paperwork and in-person visits.

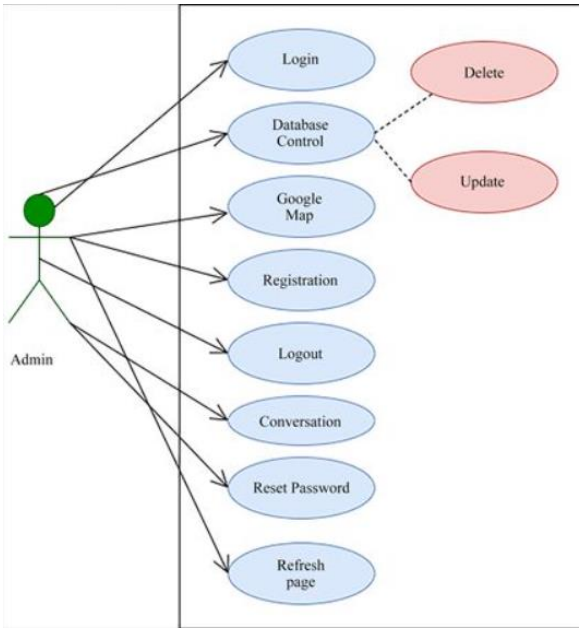
## 3. THEORETICAL ANALYSIS

### 3.1 Block diagram

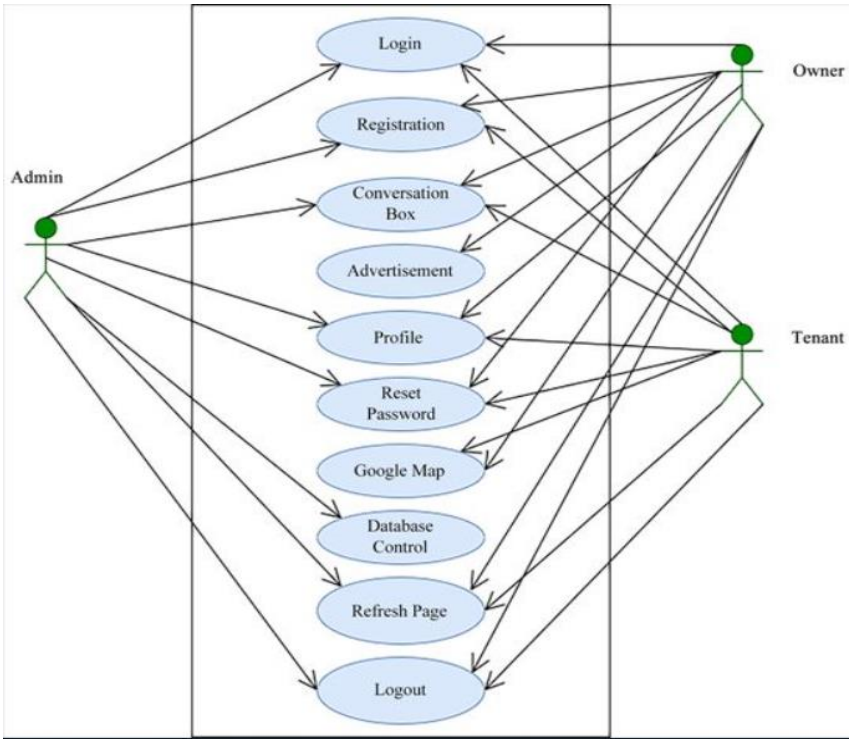
**Block Diagram :**



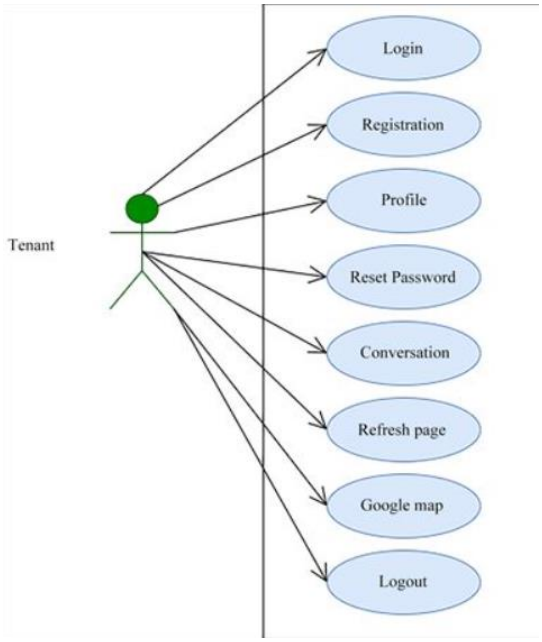
**Admin Use Case:**



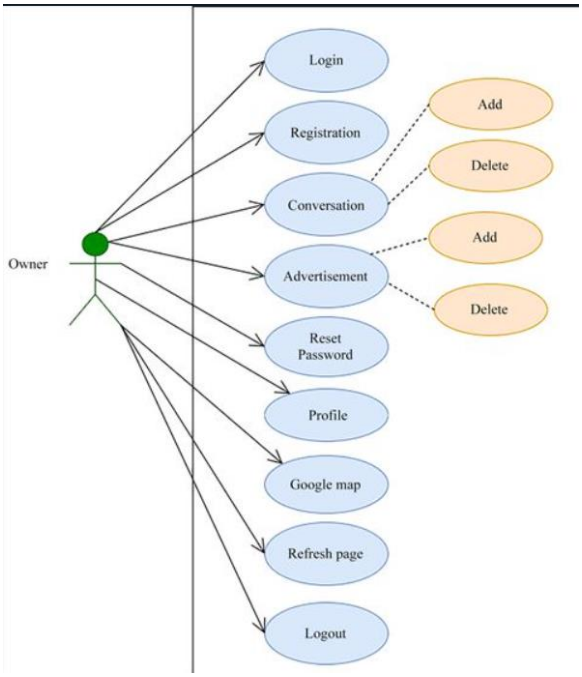

## Use Case ;



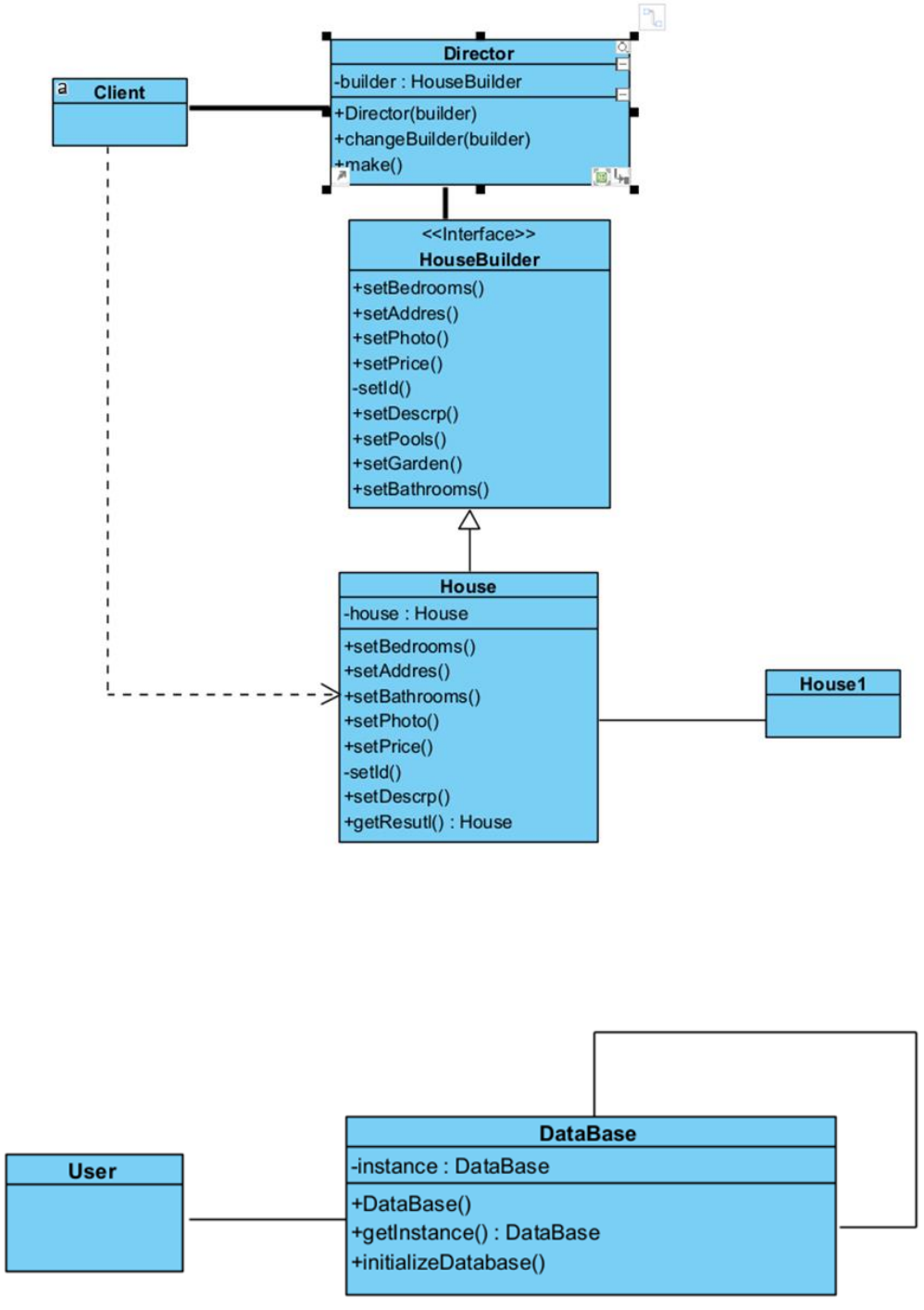
## Tenant Use Case:




## Owner Use Case:



**UML Diagram :**


Director
-builder : HouseBuilder
+Director(builder)
+changeBuilder(builder)
+make()
Client
<<Interface>>
HouseBuilder
+setBedrooms()
+setAddres()
+setPhoto()
+setPrice()
-setId()
+setDescrp()
+setPools()
+setGarden()
+setBathrooms()
House
-house : House
+setBedrooms()
+setAddres()
+setBathrooms()
+setPhoto()
+setPrice()
-setId()
+setDescrp()
+getResutl() : House
House1
DataBase
-instance : DataBase
+DataBase()
+getInstance() : DataBase
+initializeDatabase()
User

## 3.2 Hardware/Software designing:

**Hardware Requirements:**

- Computer system capable of running the chosen IDE and Docker

- Sufficient RAM and storage capacity for development and testing purposes

Software Requirements:

- Java Development Kit (JDK)

- Integrated Development Environment (IDE) such as Eclipse

- Spring Boot framework

- MySQL Database Server

- MySQL Connector/J for Java

- AngularJS framework

- Docker for containerization

- Kubernetes for deployment

## 4. EXPERIMENTAL INVESTIGATIONS:

During the development of the House Rent Web Application, various investigations and analyses were conducted. These include:

- Designing and implementing the frontend user interface using AngularJS

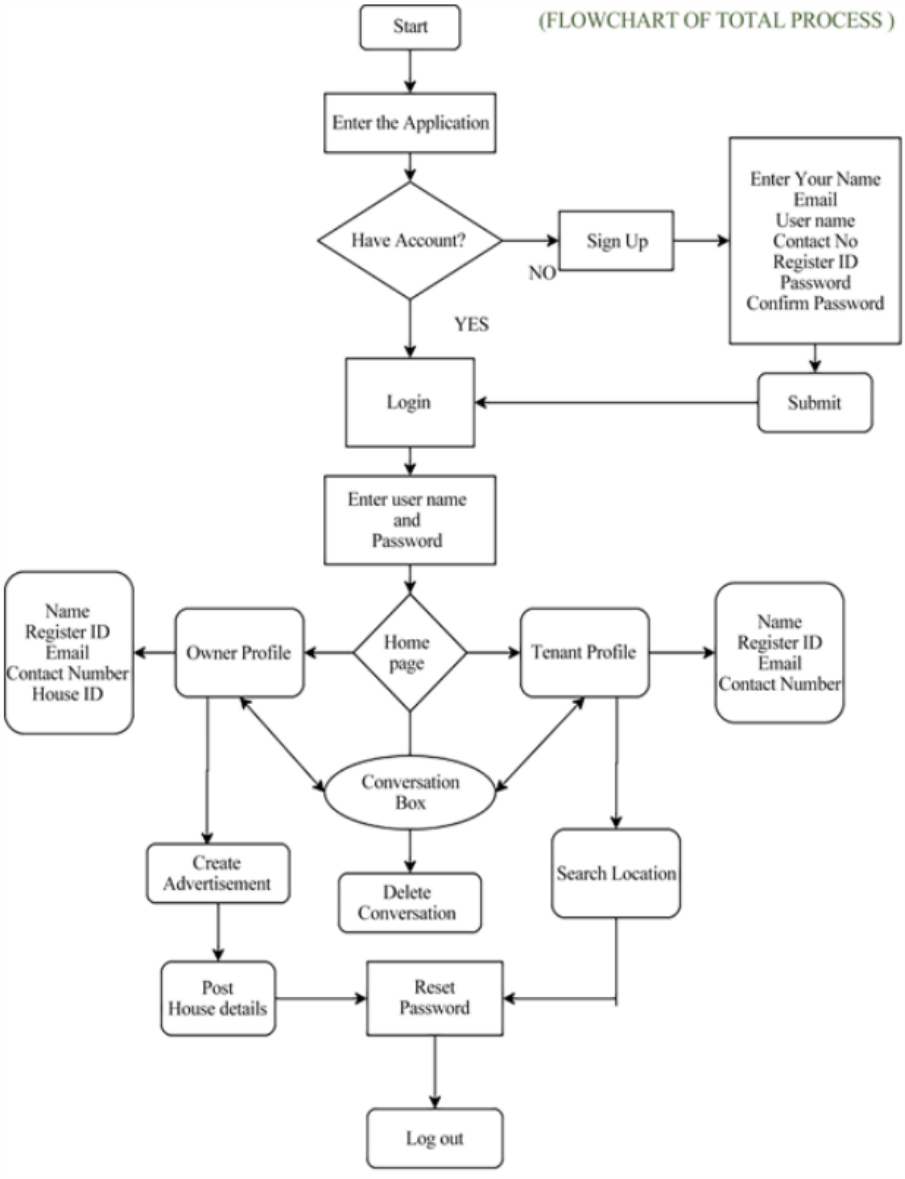
- Developing RESTful APIs and backend logic using Java Spring Boot

- Integrating the frontend and backend components to ensure seamless communication and data exchange

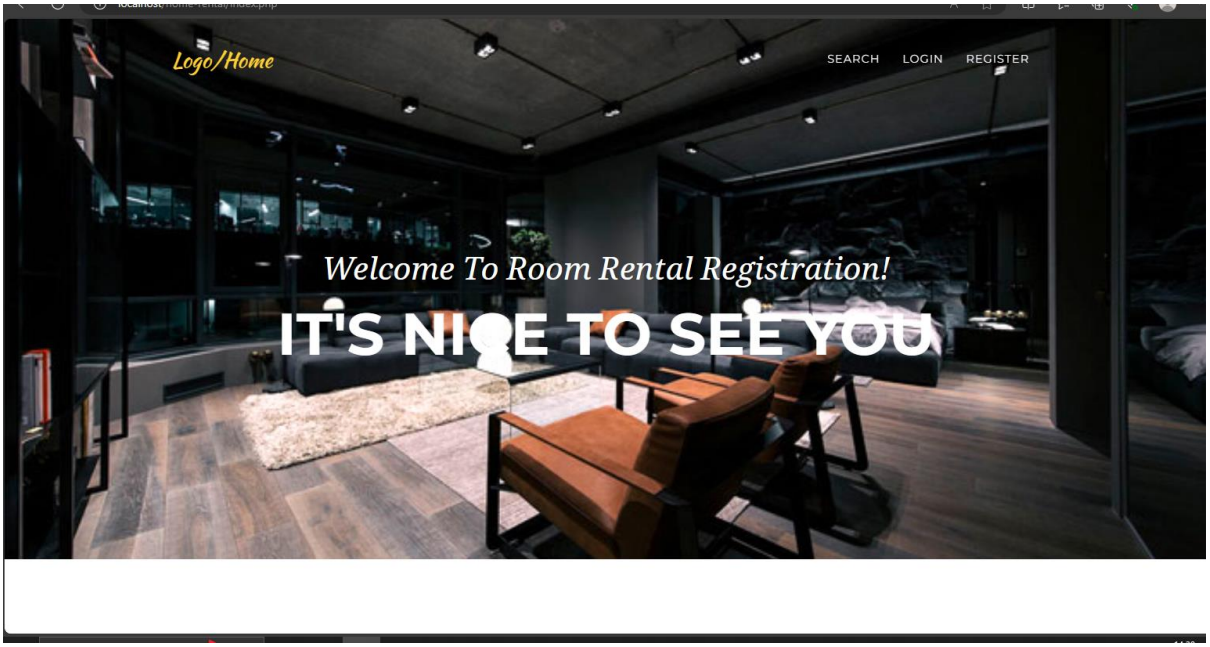
- Testing the application for functionality, performance, and usability

- Containerizing the application using Docker and deploying it to a Kubernetes cluster

**5.FLOWCHART ;**

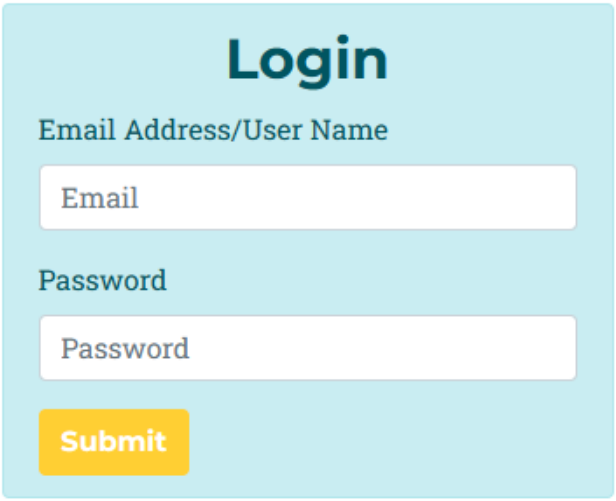

(FLOWCHART OF TOTAL PROCESS )
Start
Enter the Application
Have Account?
Sign Up
NO
Enter Your Name
Email
User name
Contact No
Register ID
Password
Confirm Password
YES
Login
Submit
Enter user name
and
Password
Name
Register ID
Email
Contact Number
House ID
Owner Profile
Home
page
Tenant Profile
Name
Register ID
Email
Contact Number
Conversation
Box
Create
Advertisement
Delete
Conversation
Search Location
Post
House details
Reset
Password
Log out

## 6. RESULT



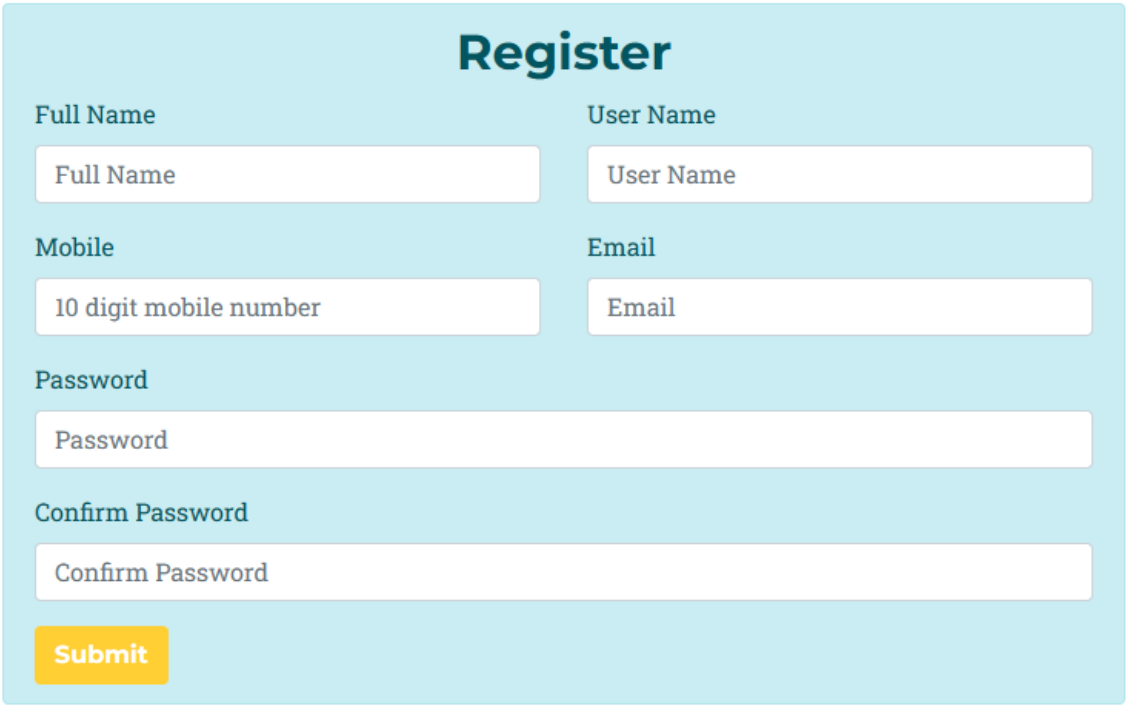

If you are a new user you can register by clicking the register option, if you are a existing user you can directly login

**Login page:-**



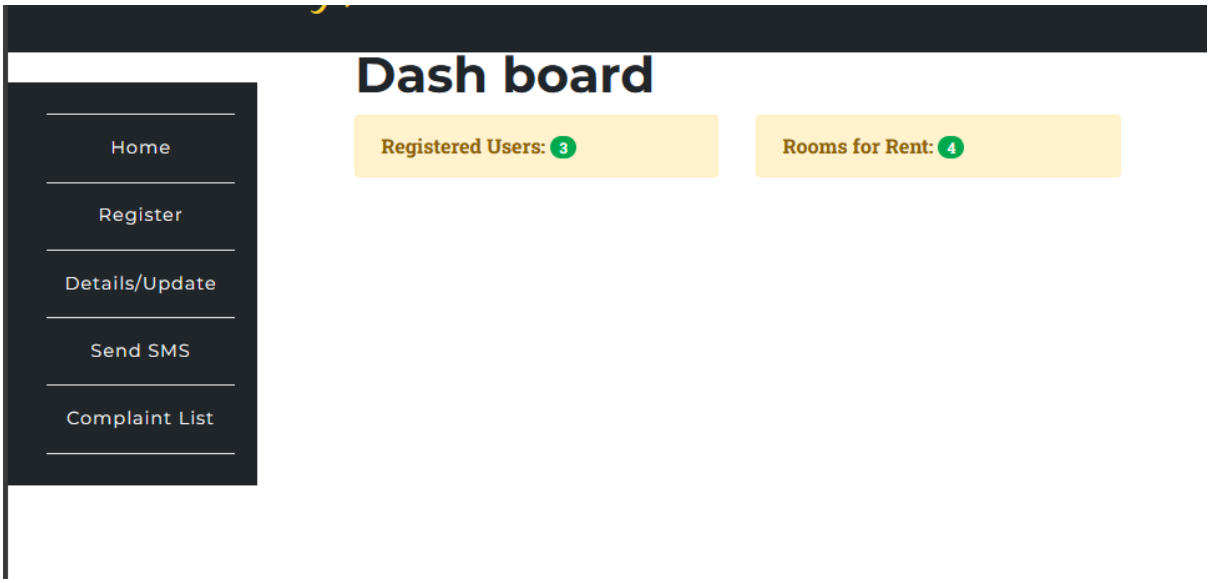
**Register page:-**

---



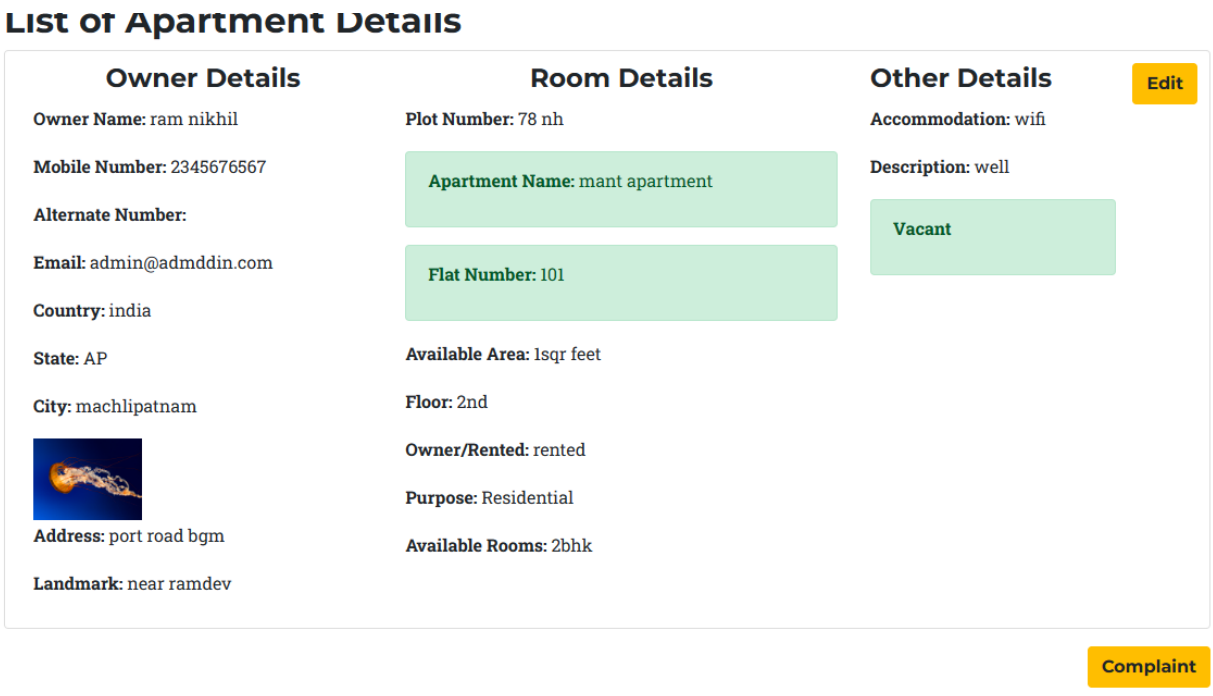

You are asked to fill all fields

Dashboard after successful login:-

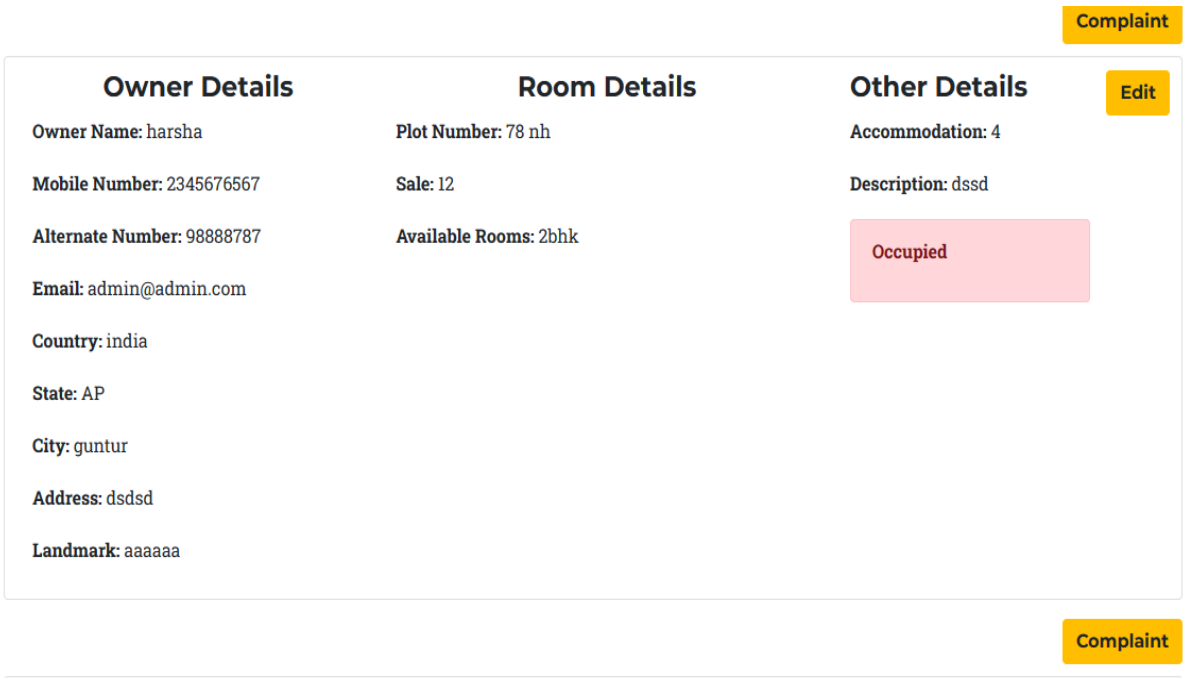



Click on the rooms for rent to see the types of rooms available

Types of rooms page:-




It shows the details of owner and room type and either its vacant or not in this is a room is occupied it shows as OCCUPIED in red color like this



## 7. ADVANTAGES & DISADVANTAGES:

**Advantages:**

- Streamlined house searching and booking process

- Centralized platform for tenants and house owners to interact

- Efficient administration of house properties and rental bookings

- Improved user experience with a user-friendly interface

- Enhanced scalability and deployment flexibility with containerization

**Disadvantages:**

- Initial setup and configuration may require technical expertise

- Dependency on internet connectivity for accessing the application

- Potential security concerns related to user data and transactions (addressed through proper security measures)

## 8. APPLICATIONS:

The House Rent Web Application can be applied in various scenarios, including:

- Real estate agencies or property management companies for managing rental properties

- Online rental platforms for connecting tenants with house owners

- Housing societies or communities for facilitating house renting within the community

## 9. CONCLUSION:

In conclusion, the House Rent Web Application offers a comprehensive solution for house searching and rental bookings. It simplifies the process for both tenants and house owners, providing a centralized platform for efficient communication and transactions. The application demonstrates the benefits of modern application development using Java Spring Boot and AngularJS, along with containerization and deployment using Docker and Kubernetes.

## 10. FUTURE SCOPE:

There are several possible enhancements and future scope for the House Rent Web Application, including:

- Integration with third-party payment gateways for seamless online transactions

- Implementation of advanced search filters and recommendations for personalized house suggestions

- Incorporation of social media integration for easy sharing and promotion of available houses

- Integration of virtual reality (VR) or 360-degree tours for a more immersive house viewing experience

- Development of mobile applications for broader accessibility and convenience

## 11. BIBLIOGRAPHY:

**Books Used:**

JavaScript by McGraw-Hill Publication

Learning Spring Boot 3.0: Simplify the development of production-grade applications using Java and Spring

Front-End Web Development: The Big Nerd Ranch Guide

**References Used:**

https://www.w3schools.com/

https://www.javatpoint.com/spring-boot-tutorial

**GitHub repository Link ;**

https://github.com/Deepesh108/HOUSE-RENTAL-WEB-APPLICATION-USING-SPRINGBOOT