#### **Dream Home Rentals**

### A Project Report

Submitted for the partial fulfillment for the award of degree of

### BACHELOR OF COMPUTER SCIENCE

By

### PRASANTH P (BU200501)

Under the Guidance of

### Prof P. KARTHIK M.Sc., BEd., MPhil.,



## DEPARTMENT OF COMPUTER SCIENCE SACRED HEART COLLEGE (AUTONOMOUS)

**Tirupattur - 635 601.** 

**APRIL 2023.** 

## **CERTIFICATE**

Head of the Department

At the very outset, I offer my sincere thanks to Almighty God for the grace and blessings that made me complete the project successfully.

I sincerely thank my parents, who have gifted me this life to attain many achievements.

As I submit the project report, it is a great pleasure to acknowledge my gratitude to various instrumental persons in completing this project.

I offer my humble gratitude to **Rev. Dr. John Alexandar, SDB**, the Rector and Secretary and **Rev. Dr. D. Maria Antony Raj, SDB**, Principal, Sacred Heart College Tirupattur, for permitting me to have my project work.

I wish to convey my deep sense of gratitude to **Prof**. **Mrs. A. Josephine Sahaya Mala, MCA., M.Phil.,** Head of the Department, belongs to Computer Science Shift-II, Sacred Heart College Tirupattur.

I express my deep sense of gratitude to my project guide **Prof. P. KARTHIK** who is the source of inspiration that makes me pursue this work successfully. I thank him for his valuable guidance, encouragement and support in doing this project.

I want to thank the entire teaching and non-teaching staff of the Department of Computer Science for helping me complete the project successfully.

Finally, I thank my friends, especially those who gave me motivation and ideas to complete my project work.

## **TABLE OF CONTENTS**

S.NO.	CONTENTS	PAGE NO.
1.	PROJECT PROPOSAL	2
2.	SYSTEM REQUIREMENTS	
	2.1 VISION DOCUMENT	7
	2.2 SYSTEM STUDY	11
	2.3 USE CASE SPECIFICATION	18
3.	ANALYSIS AND DESIGN	
	3.1 ARCHITECTURE DIAGRAM	29
	3.2 DATA FLOW DIAGRAM	30
	3.3 ENTITY-RELATIONSHIP DIAGRAM	31
	3.4 USE CASE DIAGRAM	32
	3.5 DATABASE DESIGN	33
	3.6 TEST CASE DESIGN	36
4.	IMPLEMENTATION	
	4.1 SOURCE CODE	41
	4.2 UI DESIGNS	52
5.	CONCLUSION	61
6.	BIBLIOGRAPHY	62

# CHAPTER-I

## PROJECT PROPOSAL

#### **Executive Summary (Abstract)**

"Dream Home Rentals" is a website that allows users to look for available rental houses. The platform typically includes a user-friendly search module that allows users to enter different criteria such as location, state, district, city, house type and other specifics, to narrow down the search results. The results are presented in a clean and well-organized list format, complete with a detailed view button for each house, making it easy for users to navigate and filter through the results to find their ideal rental house. To ensure privacy and security for tenants and house owner, the website or application typically includes a registration module based on phone number and One-time password (OTP) authentication. To protect the platform from fraud and fake listings, the website also includes a validation module that can only be accessed by designated super users, such as site administrators. This module allows them to review, verify and approve or reject the listing of houses added by other users.

#### **INTRODUCTION**

Sacred Heart College (Autonomous) is affiliated first grade college of Thiruvalluvar university. It is a minority institution established and administrated by the Salesians of Don Bosco. The college is offering various programs at the UG, PG, M.Phil and Ph.D levels. This is Prasanth P working on this project, doing III year B.Sc (Computer Science) in Sacred Heart College(Autonomous), Tirupattur.

This document of "Dream Home Rentals" is designed to simplify the process of searching and renting a home. The platform streamlines the process, making it easier, faster, and more convenient for tenants to find their dream home, and for homeowners to rent out their properties securely. With a user-friendly search module, registration process based on phone number and OTP authentication, and a validation module accessible by designated super users, "Dream Home Rentals" is a comprehensive and secure solution for both tenants and homeowners.

#### PROBLEM STATEMENT

- Finding and renting a home can be a challenging and time-consuming process for tenants.
- Homeowners also struggle with finding suitable tenants and managing their properties.
- The current process of finding and renting a home involves multiple steps and parties, making it cumbersome and inefficient.
- There is a lack of transparency in the rental market, with hidden fees and unclear terms and conditions causing frustration for both tenants and homeowners.
- The lack of standardization in the rental market leads to confusion and inefficiency in the rental process.
- There is a need for a platform that brings all stakeholders in the rental process together, providing a simplified and transparent process for finding and renting a home.

#### PROPOSED SOLUTION(S)

The proposed solution is:

- The "Dream Home Rentals" website offers an efficient and secure solution for home rental needs.
- Tenants can easily search for available properties using the platform's user-friendly search module, which allows for searching based on location, house type, and other criteria.
- Homeowners can list their properties and manage the rental process. Once a tenant books the
  home, the homeowner will receive an SMS notification and can then manage the rental process
  accordingly. This allows for a seamless and convenient experience for both homeowners and
  tenants.
- The website includes a phone number and OTP-based registration process and a validation module accessible only by designated super users to ensure privacy and security for both tenants and homeowners.
- The aim of the website is to simplify the home rental process and make it secure for all parties involved.

#### **TECHNICAL REQUIREMENTS**

**1. Project Title** : Dream Home Rentals

**2. Modules** : User, Admin, House Listing, House Search, Booking, Payment

3. Database : MYSQL

**4.** Packages/GUI Tools: VS Code, Mysql Work bench, Postmon

**5.** Server Side : Python(Django Framework) and MySQL database

**6.** Client Side : A GUI based JavaScript supported web browser.

#### Hardware/Software Requirements

**1. Hardware** : AMD Ryzen 7 with 8 GB RAM.

2. Operating System: Windows 10

**3. Software** : Visual Studio code

#### A. Web Server Specification

#### Hardware

Intel Pentium/512MB RAM with an Internet connection.

#### **Operating System**

Windows or Linux

#### **B.** Client Specification

#### Hardware

Intel Pentium/512MB RAM with an Internet connection.

#### **Operating System**

Platform Independent – Run on any browser.

#### Software

A GUI based JavaScript supported web browser.

#### **TERMS AND CONDITIONS**

- **1. Project Duration -** The duration of the academic project is five months.
- **2. Project Initiation -** The student will begin the requisite study and analysis after getting approval from the Project Guide and complete it according to the Department's agreed-upon project schedule.
- **3. Development -** The project development also can be done in the college.

Signature:	Signature:
Guide Name: P. KARTHICK	Proposer Name: P. PRASANTH
Date:	Date:

# CHAPTER-II

## SYSTEM REQUIREMENTS

#### 1. Introduction

The purpose of this document is to outline the vision for the Dream Home Rentals platform, which aims to simplify the process of finding and renting a home for both tenants and homeowners. The platform will provide a user-friendly interface for tenants to browse and search for available homes, as well as for homeowners to list and manage their properties. Through the use of modern technology and streamlined processes, Dream Home Rentals seeks to revolutionize the home rental industry and become the go-to platform for tenants and homeowners alike. This document outlines the key objectives, requirements, and strategies for achieving this vision.

#### 2. Problem Statement

The problem of	inefficient and time-consuming house searching process not only involves the need for a broker, but also requires manual effort of searching houses
Affects	both tenants and the house owners
The impact of which is	spending more time and brokerage to find houses based on their expectations and also the house owners may experience a potential loss of rental income due to the extended vacancy of the property
A successful solution would be	Dream Home Rentals website

## 3. Problem Position Statement

For	both tenants and the house owners
Who	are seeking an efficient and convenient way to find rental houses, as well as for house owners who are looking for a platform to list their rental properties
The Dream Home Rentals	is a website
That	Provides a platform for house owners to advertise their houses for renting and provide a convenient way for tenants to find houses for rent
Unlike	the traditional manual searching process which can be time consuming, unreliable and also needs brokers to find rental houses which may lead to spend more money on brokerage
Our product	Dream Home Rentals allows house owners to easily upload their rental properties, while tenants can search and book houses based on their requirements. With high-quality photos and detailed descriptions, tenants have a clear understanding of the rental properties before booking.

## 4. Stakeholder Summary

Name	Description	Responsibilities
Website Admin	The website admin is responsible for managing the Dream Home Rental website.	Verify the information provided by the users before it is posted on the website.  Respond to user inquiries and resolve any issues or concerns.  Monitor the website's performance and make any necessary improvements.
Home Owners	Home owners are individuals who have a property they would like to rent out.	Provide accurate information about their property when posting it on the website.  Respond to inquiries from potential tenants.  activating and deactivating the house's visibility to tenants.
Tenants	Tenants are individuals looking for a home to rent.	Browse the website to find properties that meet their needs.  Contact Home Owners to inquire about properties they are interested in.  Communicate with Home Owners to arrange a rental agreement.

## 5. User Summary

Name	Description	Responsibilities	Stakeholder
	People looking for a place to rent for their home.	Search for available homes on the platform.	Tenants
Tenants		Contact the home owners to request information or schedule a visit.	
		Submit rental applications and payment.	
		Provide feedback on the properties they have rented.	
	People who own properties that they want to rent out.	List their properties on the platform	
		Respond to inquiries from tenants.	
Home Owners		Manage the rental process including accepting applications and rent payments.	Home Owners
		Maintain the property and resolve any issues that arise during the rental period.	
	People who manage the platform and enforce the terms and conditions.	Verify the authenticity of the properties listed by the home owners.	
Administrator		Approve or reject rental listings based on the information provided.	
Administrator		Respond to user complaints and resolve disputes.	
		Monitor the platform to ensure that users are following the terms and conditions.	

#### 1. Introduction

The Dream Home Rentals project aims to simplify the process of finding and renting a home for both tenants and homeowners. The system will provide a platform for users to list and search for available houses, manage bookings, and make payments. The project will be developed to provide an efficient and convenient way for all stakeholders to interact and manage their activities. This system study will provide a detailed analysis of the requirements, objectives, and scope of the Dream Home Rentals project. It will outline the functionalities and features of the system, as well as the technologies and tools that will be used to implement it. The study will also identify the potential challenges and risks associated with the project and propose strategies to mitigate them.

#### 1.1 Reference

This section contains a complete list of all documents mentioned in the Vision document. Each should be identified by its title, report number, date, and publishing organization. Indicate where the references can be obtained. This information could be provided by linking to an appendix or another document.

#### 2. List of modules

- 1. User Management Module
- 2. Admin Module
- 3. House Listing Module
- 4. House Update Module
- 5. House Search Module
- 6. House Booking Module
- 7. Payment Management Module

#### 2.1 Description of modules

#### Module 1:

User Management

#### **Purpose:**

The purpose of this module is to manage user accounts, user authentication, and authorization.

#### **Description:**

In this module, users can register and log in to their accounts. Once logged in, they can view their profile, update their personal information, and change their password.

#### **Entry Criteria:**

The user needs to access the application to register and login.

#### **Input:**

- 1. User's personal information including name, email address, and phone number.
- 2. User's desired username and password.

#### **Output:**

- 1. User accounts are created and stored in the database.
- 2. User authentication and authorization are managed.

#### **Exit Criteria:**

Users can log out of their accounts.

#### **Module 2:**

Admin

#### **Purpose:**

The purpose of this module is to manage the application's content and functionality.

#### **Description:**

In this module, administrators can view and manage all users' accounts, including creating, editing, and deleting user accounts. They can also view and manage house listings and bookings. Administrators can validate the post of house listings before they are made public to ensure they meet the platform's standards.

#### **Entry Criteria:**

The administrator needs to access the application and authenticate themselves.

#### **Input:**

- 1. Admin's username and password for authentication.
- 2. New house listing details for validation.

#### **Output:**

- 1. Admin can view and manage all user accounts.
- 2. Admin can view and manage house listings and bookings.
- 3. Admin can create, edit, and delete user accounts.
- 4. Admin can validate new house listings before they are made public.

#### **Module 3:**

**House Listing** 

#### **Purpose:**

The purpose of this module is to allow homeowners to upload details of their houses for rent.

#### **Description:**

In this module, homeowners can upload their house details including house images, location, rent price, and additional information.

#### **Entry Criteria:**

- 1. The homeowner needs to access the application and authenticate themselves.
- 2. Home owner needs to be a Premium user to upload their house details for rent.

#### **Input:**

- 1. House details including images, location, rent price, and additional information.
- 2. Homeowner's username and password for authentication.

#### **Output:**

- 1. House details are stored in the database.
- 2. House listing is visible in the house search module.

#### Exit Criteria:

Homeowner logs out of their account.

#### **Module 4:**

House Update Module:

#### **Purpose:**

The purpose of this module is to allow homeowners to update their house details.

#### **Description:**

In this module, homeowners can edit their house details including house images, location, rent price, and additional information.

#### **Entry Criteria:**

The homeowner needs to access the application and authenticate themselves.

#### **Input:**

- 1. House details including images, location, rent price, and additional information.
- 2. Homeowner's username and password for authentication.

#### **Output:**

- 1. House details are updated in the database.
- 2. House details are updated in the house search module.

#### **Exit Criteria:**

Homeowner logs out of their account.

#### **Module 5:**

House Search

#### **Purpose:**

The purpose of this module is to allow users to search for houses based on their preferences.

#### **Description:**

In this module, users can search for houses based on location, rent price, number of rooms, and other filters.

#### **Entry Criteria:**

The user needs to access the application and log in to their account.

#### Input:

User's search criteria including location, rent price, number of rooms, and other filters.

#### **Output:**

List of houses based on the user's search criteria.

#### **Exit Criteria:**

The user logs out of their account.

#### **Module 6:**

House Booking

#### **Purpose:**

The purpose of this module is to allow users to book a house for rent.

#### **Description:**

In this module, users can select a house from the house search module and book it for rent.

#### **Entry Criteria:**

The user needs to access the application and log in to their account.

#### **Input:**

- 1. User's selected house for rent.
- 2. User's payment information.

#### **Output:**

- 1. House booking details are stored in the database.
- 2. User's payment is processed.

#### **Exit Criteria:**

The user logs out of their account.

#### Module 7:

Payment Management

#### Purpose:

The purpose of this module is to handle all payment transactions between tenants and homeowners using the Cash free payment gateway.

#### **Description:**

In this module, users can make payments for their bookings and homeowners can receive payments for their listed properties. The module integrates with the Cashfree payment gateway to process payments using various payment methods, including credit/debit cards, UPI, and net banking.

#### **Entry Criteria:**

The user must have a valid booking ID, and the homeowner must have a valid property listing ID to make or receive payments.

#### **Input:**

- 1. Booking ID or Property listing ID
- 2. Payment amount
- 3. Payment method (credit/debit card, UPI, net banking, etc.)
- 4. Payment gateway credentials

#### **Output:**

- 1. Payment confirmation message
- 2. Transaction ID
- 3. Receipt generation for the payment made

#### **Exit Criteria:**

Payment made and received successfully.

Use Case Name: User Registration

#### **Use Case Description:**

This use case describes how a user can register for an account on Dream Home Rentals.

#### Actor:

User

#### **Precondition:**

User should be in the registration page.

#### **Basic Flow:**

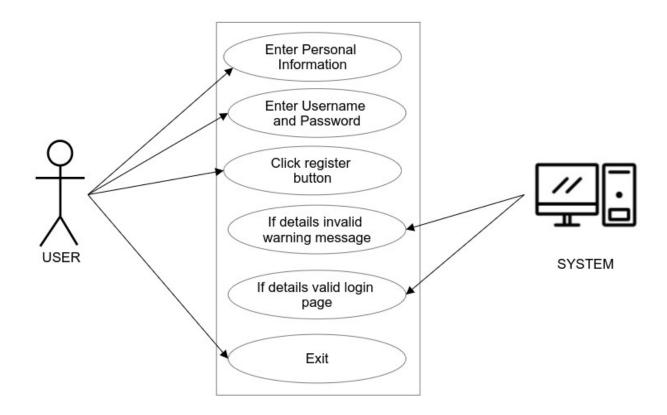
- Enter personal information.
- Enter email address and password.
- Click the "Register" button.
- System will verify the user's information and creates a new account.

#### **Alternative Flow:**

The user can exit the registration page.

#### **Post Condition:**

The user can view the details of all available houses and also list their own house.



Use Case Name: User Login

#### **Use Case Description:**

This use case describes how a user can log in to their account on Dream Home Rentals.

#### Actor:

User

#### **Precondition:**

User should be in the login page.

#### **Basic Flow:**

- Enter phone number and password.
- Click the "Log In" button.
- System will verify the user's credentials and redirect to home page.

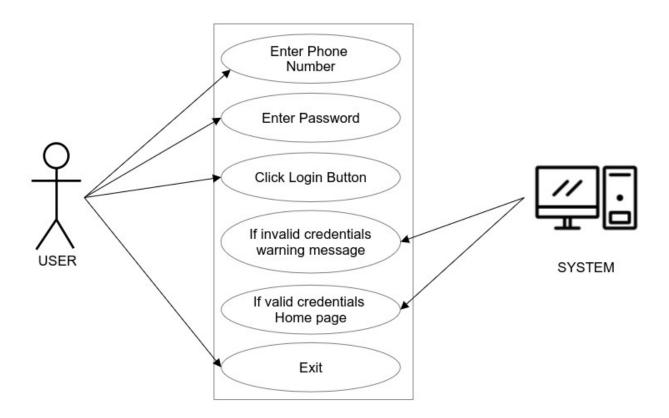
#### **Alternative Flow:**

The user can exit the login page.

#### **Post Condition:**

The user can view the details of all available houses and also list their own house.

#### **Use Case Diagram:**



Use Case No: DHR\_3

Use Case Name: Search Houses

#### **Use Case Description:**

This use case describes how a user can search for houses on Dream Home Rentals.

#### Actor:

User

#### **Precondition:**

User should be logged in.

#### **Basic Flow:**

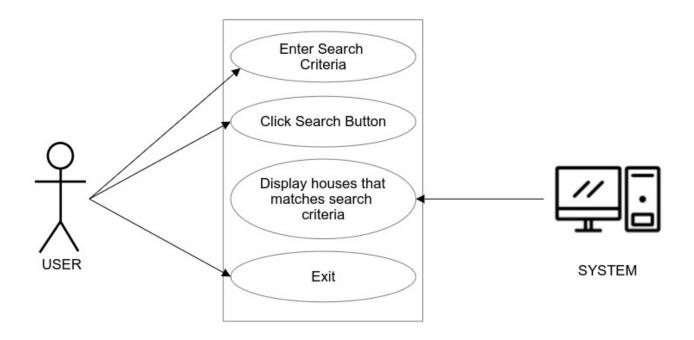
- Enter search criteria, such as location and price range.
- Click the "Search" button.
- System will display a list of houses that match the search criteria.

#### **Alternative Flow:**

The user can exit from the search page.

#### **Post Condition:**

The user can see the list of houses that match their search criteria.



Use Case Name: View House Details

#### **Use Case Description:**

This use case describes how a user can view the details of a house on Dream Home Rentals.

#### Actor:

User

#### **Precondition:**

The user should be logged in.

#### **Basic Flow:**

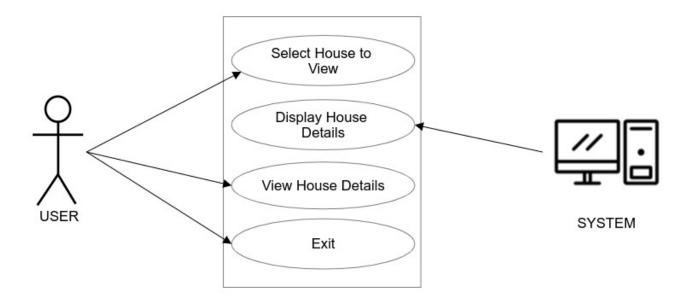
- Click on a house from the search results.
- System will display the details of the house, such as description, photos, and location.

#### **Alternative Flow:**

The user can exit from the house details page.

#### **Post Condition:**

The can view the details of the house.



Use Case Name: Book a house

#### **Use Case Description:**

This use case describes how the user can book a house from the available listing.

#### Actor:

User

#### **Precondition:**

The user should be logged in.

#### **Basic Flow:**

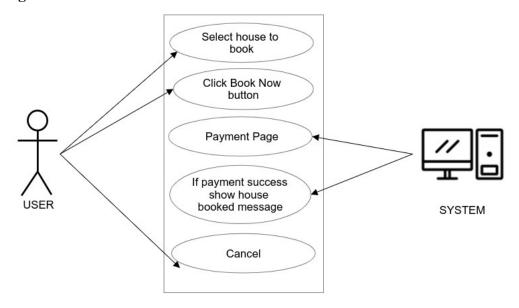
- Select the desired house from the list of houses.
- Click Book Now button.
- Confirm the booking by making the payment.
- System will display the confirmation message and sends a confirmation SMS to the user.

#### **Alternative Flow:**

The user can cancel the booking before making the payment.

#### **Post Condition:**

The house is booked and the user receives a confirmation message.



Use Case Name: Add House Listing

#### **Use Case Description:**

This use case describes how a house owner can add a new house listing to the website for rental.

#### Actor:

House Owner

#### **Precondition:**

House owner should be logged in

#### **Basic Flow:**

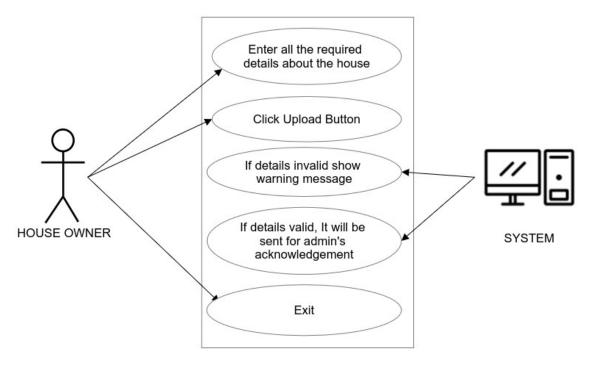
- Enter the required information about the house.
- The system will save the information to the database.

#### **Alternative Flow:**

House owner can exit from the Add House Listing page.

#### **Post Condition:**

The new house listing will be added to the website and can be searched and viewed by users.



Use Case Name: Edit House Listing

#### **Use Case Description:**

This use case describes how the user can edit an existing house listing.

#### Actor:

House owner

#### **Precondition:**

House owner must be logged in and have at least one house listing available.

#### **Basic Flow:**

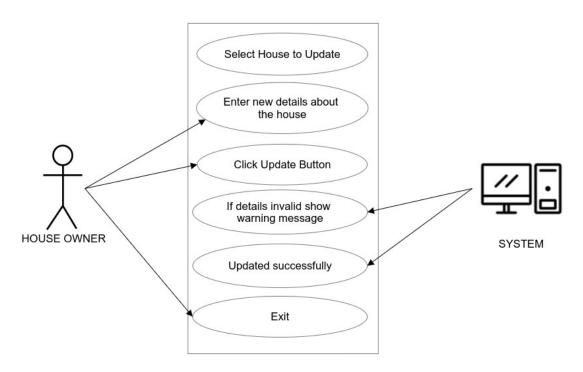
- Select "Edit House Listing" option from the menu.
- System will display a list of the user's existing house listings.

#### **Alternative Flow:**

The user can cancel the editing process.

#### **Post Condition:**

The user can makes changes to the existing house details and saves the changes.



Use Case Name: Delete House Listing

#### **Use Case Description:**

This use case describes how the owner can delete their listed house from the platform.

#### Actor:

House Owner

#### **Precondition:**

User must have logged in to their account.

#### **Basic Flow:**

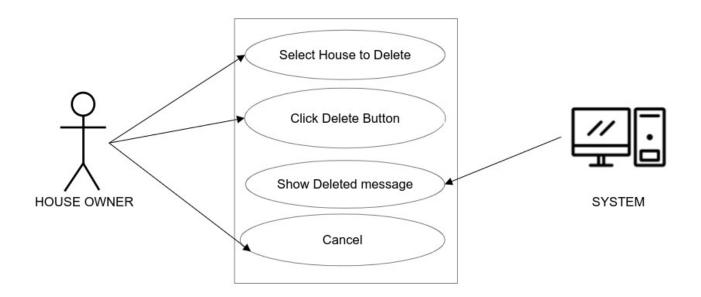
- Select the desired house to be deleted.
- Click the delete button.

#### **Alternative Flow:**

The user can cancel the deletion process.

#### **Post Condition:**

User's house is deleted from the platform.



Use Case Name: Validate house

#### **Use Case Description:**

This use case describes how the admin validates the houses listed on the platform.

#### Actor:

Admin

#### **Precondition:**

Admin must be in the login page.

#### **Basic Flow:**

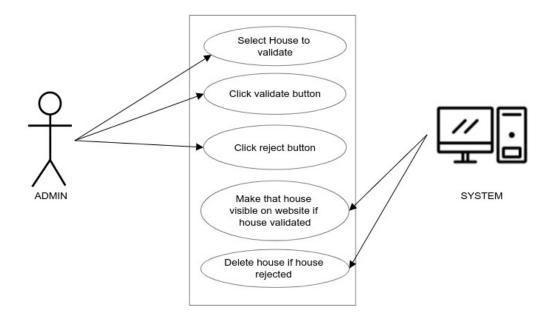
- Enter admin username and password.
- Click login button.

#### **Alternative Flow:**

The admin can exit from the login page.

#### **Post Condition:**

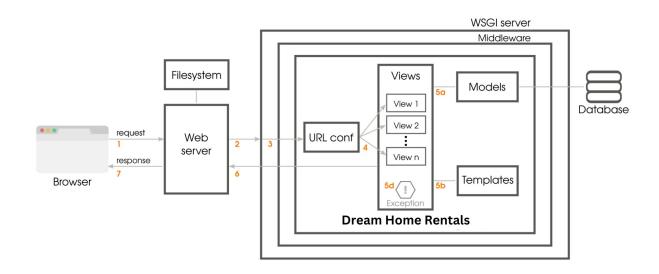
Admin can verify the house details and validate the house.

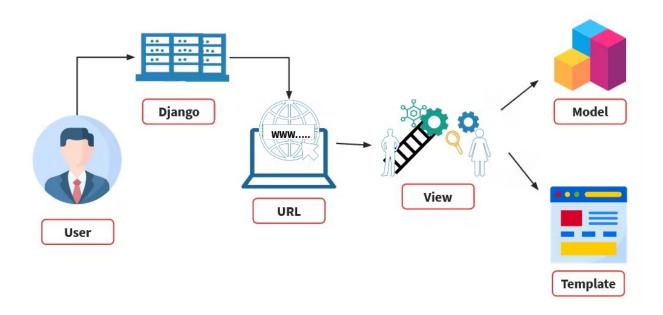


# CHAPTER-III

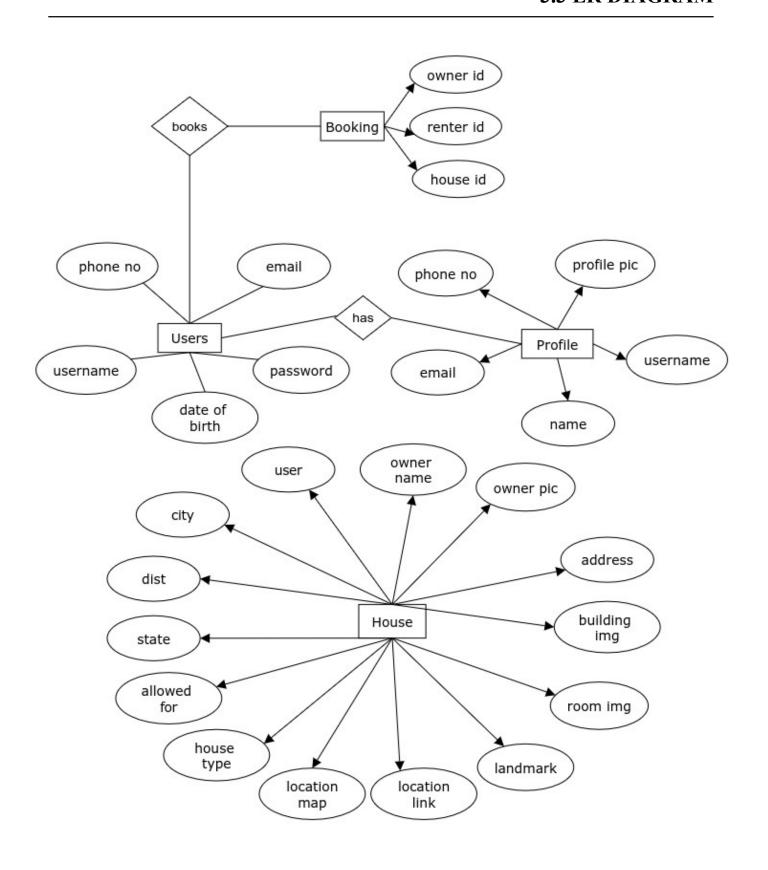
## ANALYSIS AND DESIGN

## 3.1 ARCHITECTURAL DIAGRAM





#### Level 0: 0 Confirmation Message-List of houses\_ House Owner House Renter Dream Home Rentals System –Upload House Details–**→** -Search House. Level 1: 1.0 3.0 -House-House Owner House Renter \_Upload—**▶ Upload House** Search House Details Search-Uploaded House Details Temp DB -Search Result--Search House In DB-House Details 2.0 Receive Email \_Validated-▶ House DB Validate House Details 4.0 6.0 5.0 Payment **Booking House** Send Email Process Booking DB



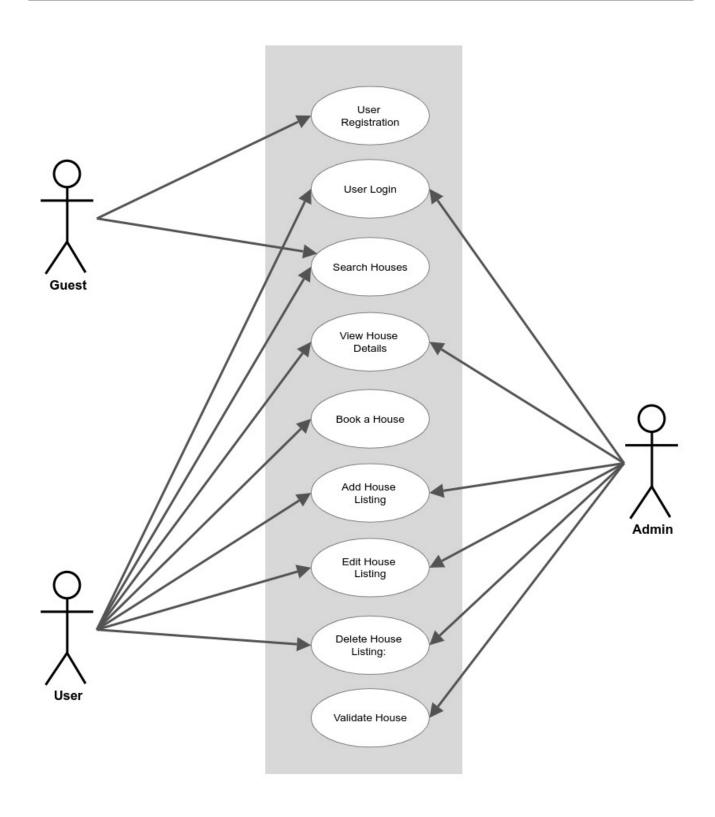


Table Name: Account\_users

## **Description:**

This table to store the user details.

S. No	Field Name	Field Type	Size	Constraints	Description
1	username	Varchar	100	Not Null	User Name
2	password	Varchar	128	Not Null	Password
3	email	Varchar	255	Not Null	Email
4	phone	Varchar	10	Not Null	Phone number
5	date_of_birth	Datetime	-	Not Null	Date of Birth

Table Name: Account\_profile

## **Description:**

This table to store the profile details.

S. No	Field Name	Field Type	Size	Constraints	Description
1	user_id	Int	11	Not Null	User Name
2	FullName	Varchar	100	Not Null	Name
3	Email	Varchar	100	Not Null	Email
4	Profile_pic	Varchar	255	Not Null	Profile picture
5	address	Longtext	-	Not Null	Address

Table Name: Rent\_room

## **Description:**

This table to store the house details.

S. No	Field Name	Field Type	Size	Constraints	Description
1	Id	Int	11	Not Null	Id
2	Owner_Name	Varchar	20	Not Null	Owner Name
3	Owner_pic	Varchar	50	Not Null	Owner Picture
4	House_address	Varchar	30	Not Null	Address
5	Building_img1	Varchar	50	Not Null	Building Image
6	Room_img1	Varchar	50	Not Null	Room Image
7	Landmark	Varchar	20	Not Null	Landmark
8	Location_link	Varchar	30	Not Null	Google Map link
9	location_map	Varchar	50	Not Null	Google Map Embed Code
10	House_type	Varchar	20	Not Null	House Type
11	AllowedFor	Varchar	20	Not Null	Allowed for
12	state	Varchar	15	Not Null	State
13	district	Varchar	15	Not Null	District
14	city	Varchar	15	Not Null	City

Table Name: Booking

## **Description:**

This table to store the booking details.

S. No	Field Name	Field Type	Size	Constraints	Description
1	tenant_id	Int	4	Not Null	Tenant Id
2	owner_id	Int	4	Not Null	Owner Id
3	house_id	Int	4	Not Null	House Id

### **Introduction:**

This purpose of these documents is providing the case specification for the user, cases captured in the case specification.

### **Scope:**

This document applies to the "Dream Home Rentals" website.

### **Overview:**

The following document contains the case's specification for the various use case identified in software requirement specification.

**Test Case 1: (User Management Module)** 

Test Case	Scenario	Selected Option	Condition	Expected Result
1	User attempts to log in to their account.		password entered are	Display an error message indicating that the username or password is incorrect and prompt the user to try again
			If the username and password entered are correct and recognized by the system	the website, allowing the

**Test Case 2: (Admin Module)** 

Test Case	Scenario	Selected Option	Condition	Expected Result
2	Admin attempts to access the admin panel	_	If the admin credentials entered are incorrect or not recognized by the system	
			If the admin credentials entered are correct and recognized by the system	Grant access to the admin panel and display the validate navigation link to validate the post

Test Case 3: (House Listing Module)

Test Case	Scenario	Selected Option	Condition	Expected Result
3	House owner adds a new property listing	Add Property button	If the property details entered are incomplete or invalid	Display an error message indicating that the property details are incomplete or invalid and prompt the house owner to enter valid details
			If the property details entered are complete and valid	Add the new property listing to the system and display a success message to the house owner

Test Case 4: (House Update Module)

Test Case	Scen	nario	, , , ,	ected otion	Condition		Expected Result
4	House updates existing listing	owner an property	button	Property	entered for the	update	Display an error message indicating that the property details are incomplete or invalid and prompt the house owner to enter valid details
					If the property deta entered for the upd are complete and v	late	Update the existing property listing in the system and display a success message to the house owner

Test Case 5: (House Search Module)

User searches for rental houses  If the search criteria entered by the user are invalid or incomplete Expected result  Expected result  Display an error indicating that the invalid or incomplete and prouser to enter valid criteria.	esult
If the search criteria entered by the user are valid and complete search criteria and a user to view detailed information about eaproperty	ne search valid or rompt the criteria  ntal g the allow the

Test Case 6: (House Booking Module)

Test Case	Scenario	Selected Option	Condition	<b>Expected Result</b>
6	User books a rental property	Book Property button	information entered by	Display an error message indicating that the booking information is incomplete or invalid and prompt the user to enter valid information
			If the booking information entered by the user is complete and valid	Book the rental property for the specified dates and display a confirmation message to the user

**Test Case 7: (**Payment Management Module)

Test Case	Scenario	Selected Option	Condition	Expected Result
7		Make Payment button	information entered by	Display an error message indicating that the payment information is incomplete or invalid and prompt the user to enter valid information
			If the payment information entered by the user is complete and valid	Process the payment and confirm the successful completion of the transaction to the user

# CHAPTER-IV

## **IMPLEMENTATION**

### **User Management Module:**

from django.shortcuts import render,redirect

from rest\_framework.views import APIView,Response

from rest framework import permissions, status, generics

from django.views.decorators.csrf import csrf exempt

from django.utils.decorators import method decorator

from django.contrib.auth import login,logout

from .serializers import ChangePasswordSerializer

from rest framework.permissions import IsAuthenticated

from rest framework.parsers import MultiPartParser,FormParser

from datetime import date

from django.core.mail import send\_mail

from datetime import datetime, timedelta

import calendar

import re

# Create your views here.

from twilio.rest import Client

from decouple import config

from django.core.mail import send mail

# for paymnet handling

import stripe

from decouple import config

from django.http import JsonResponse

```
from .serializers import
CreateUserSerializer, LoginSerializer, EditProfileSerializer, UserAvatarSerializer, PremiumPlanSerializer, UserAvatarSerializer, UserAvatarSeriali
r,AddPremiumSerializer
import json
import requests
from . models import User, OTP, Profile, Premium Plan
from rent.models import room
import random
from django.contrib.auth.decorators import login required
from knox.views import LoginView,LogoutView
from knox.auth import TokenAuthentication
from knox.models import AuthToken
@method decorator(csrf exempt,name='dispatch')
class SendOTPphone(APIView):
        def send otp(self, phone,otp):
                print("8"*70)
                print("Ye Send OTP TO PHONE NUMBER CALL HUA HAI")
                Account sid = config('Account sid')
                print(Account sid,"SID no")
                auth token = config('auth token')
                print(auth token,"auth TOken ")
                client = Client(Account sid, auth token)
                print(Client)
                message = client.messages \
                       .create(
```

body="Your One Time Password For DreamHomeRentals.com is {} Please do not share your OTP with Any one ".format(otp), to='+91{}'.format(phone), from =config('from'), ) print(message) print(message.sid) print("8"\*70) return def post(self,request,\*args,\*\*kwargs): data = request.bodydict data = json.loads(data) print(dict data) phone\_number = dict\_data["phone"] print(phone number) if phone number: user = User.objects.filter(phone iexact = phone number) if user.exists(): return Response({ 'status': False, 'Detail': "Failed to enroll as phone number already taken " }) else: key = SendOTP(phone number) if key:

print(key)

```
old otp = OTP.objects.filter(phone = phone number)
if old otp.exists():
  old = old_otp.first()
  count = old.count
  print(count)
  if count > 4:
    return Response({
       'status': False,
       'Detail': 'OTP sending limit is crossed contact to customer care on 8340312640'
    })
  else:
    old.count = count+1
    old.otp = key
    old.save()
    self.send_otp(phone_number,key)
    return Response({
       "status": True,
       "OTP": key,
       "Detail": "OTP sent Successfully "
    })
OTP.objects.create(
  phone = phone number,
  otp = key,
  count = 1
)
```

```
self.send otp(phone number, key)
           return Response({
              "status": True,
              "OTP" : key,
              "Detail": "OTP sent Successfully "
           })
         else:
           return Response({
              'status': False,
              'Detail': 'Something Went Wrong please contact customer support
           })
    else:
       return Response({
         'status': False,
         'Detail': 'Phone Number Not Given plz input valid phone number'
       })
def SendOTP(phone):
  if phone:
    key = random.randint(999,9999)
    return key
  else:
    return False
class validateOTP(APIView):
  def post(self,request,*args,**kwargs):
    data = request.body
```

```
data dict = json.loads(data)
     phone = data dict["phone"]
    sent otp = data dict["otp"]
     if phone and sent otp:
       old = OTP.objects.filter(phone iexact = phone)
       old = old.first()
       if str(sent_otp) == old.otp :
          old.validated = True
          old.save()
          return Response({
            "status": True,
            "Message ": "OTP Matched proceed for registration "
         })
       else:
          return Response({
            "status": False,
            "Message": "OTP Not Matched Try Again with valid otp"
         })
     else:
       return Response({
          "status": False,
          "Message": "Enter valid phone number in valid json format"
       })
class Register(APIView):
  def post(self,request,*args,**kwargs):
    print("Register call hua hai ")
```

```
data = json.loads(request.body)
phone = data["phone"]
password = data["password"]
print(data ,"register form se aaya hai ")
if phone and password:
  old = OTP.objects.filter(phone iexact = phone)
  if old.exists():
    old = old.first()
    if old.validated:
       temp data = \{
          "phone":data['phone'],
          "password":data['password'],
          "email" :data['email'],
          "date_of_birth":data['DOB'],
          "username":data["username"]
       }
       serializer = CreateUserSerializer(data=temp data)
       serializer.is valid(raise exception=True)
       user = serializer.save()
       old.delete()
       return Response({
         "status": True,
         "message": "Account created",
          "token": AuthToken.objects.create(user)[1]
       })
     else:
```

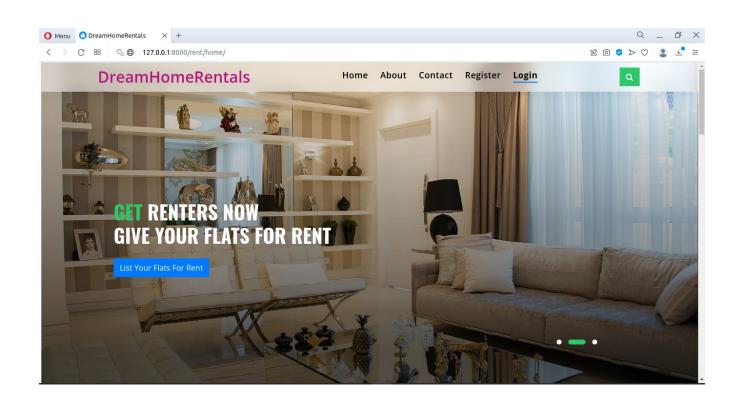
```
return Response({
              "status": False,
               "message": "Account not created First verify ur phone"
            })
       else:
         return Response({
            "status": False,
            "message": "Account not created First verify ur phone"
         })
    else:
       return Response({
         "status": False,
          "message": "Enter valid phone or password in json format"
       })
class LoginAPI(LoginView):
  permission classes = (permissions.AllowAny,)
  def post(self,request, format = None):
    data = request.body
    data = json.loads(data)
    serializer = LoginSerializer(data=data)
    serializer.is valid(raise exception=True)
    user = serializer.validated data['user']
    login(request,user)
    res =super().post(request, format=None)
    print(res.data)
    print(super().post(request, format=None),"ye super method wala ha")
```

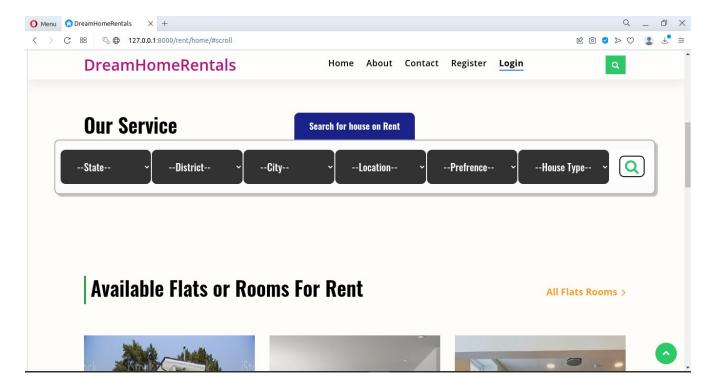
```
if user.is authenticated:
       print("user is logged in ")
       return Response({
          'status': True,
         'token': res.data['token']
       })
    else:
       return Response({'status' : False})
@method decorator(login required, name ="dispatch")
class ChangePasswordView(generics.UpdateAPIView):
  serializer class = ChangePasswordSerializer
  model = User
  permission classes = (IsAuthenticated,)
  def get object(self, queryset=None):
    obj = self.request.user
    print(obj)
    return obj
  def put(self, request, *args, **kwargs):
    self.object = self.get object()
    data = json.loads(request.body)
    print(data,"cOMING FROM CHANGE PASSW FORM")
    serializer = self.get serializer(data=data)
    if serializer.is valid():
       # Check old password
       if not self.object.check password(serializer.data.get("old password")):
```

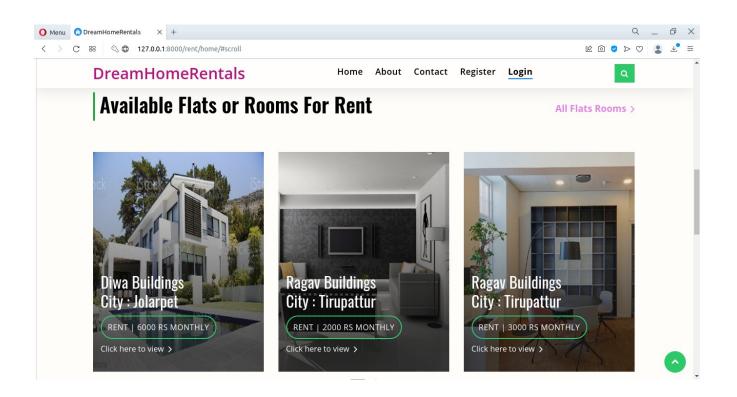
```
return Response({"old password": ["Wrong password."]},
status=status.HTTP 400 BAD REQUEST)
       # set password also hashes the password that the user will get
       self.object.set password(serializer.data.get("new password"))
       self.object.save()
       response = {
          'status': True,
          'code': status.HTTP 200 OK,
          'message': 'Password updated successfully',
          'data': []
       return Response(response)
     return Response(serializer.errors, status=status.HTTP 400 BAD REQUEST)
@method decorator(login required, name ="dispatch")
class EditProfile(APIView):
  permission classes = (IsAuthenticated,)
  parser classes = (MultiPartParser,FormParser)
  def put(self, request, format=None):
     data = request.body
     data = json.loads(data)
     # print(type(data['Profile pic']))
     queryset = Profile.objects.get(id =data['id'])
     serializer = EditProfileSerializer(queryset,data=data)
     serializer.is valid(raise exception=True)
     if serializer.is valid():
       serializer.save()
       return Response({
```

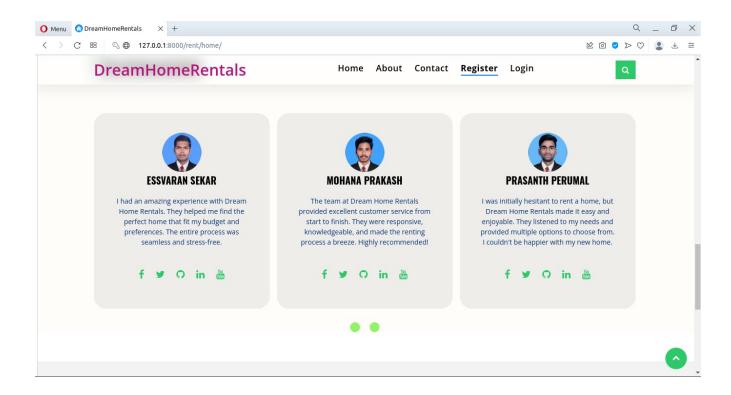
```
"UpdatedData":serializer.validated data,
          'status': True,
          "msg": "Data successfully updated"
     else:
       return Response({
          "msg": "something went wrong",
          "status": False
       })
def logoutview(request):
  logout(request)
  return redirect('/')
@login required()
def ProfileView(request):
  user = Profile.objects.filter(id = request.user.id)
  context = {'data': room.objects.all().filter(user=request.user.profile).order_by("-id"),
         'users': user
         }
  return render(request,'UserProfile.html',context)
```

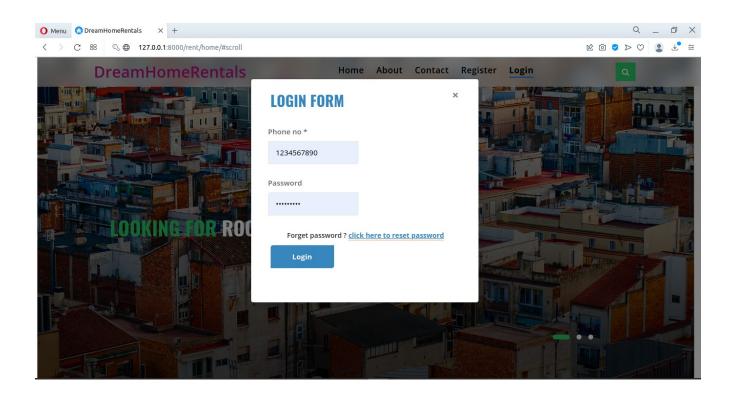
#### 4.2 UI DESIGNS

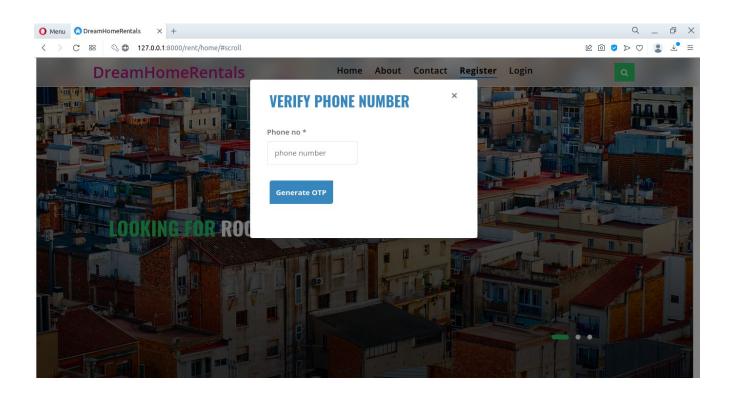


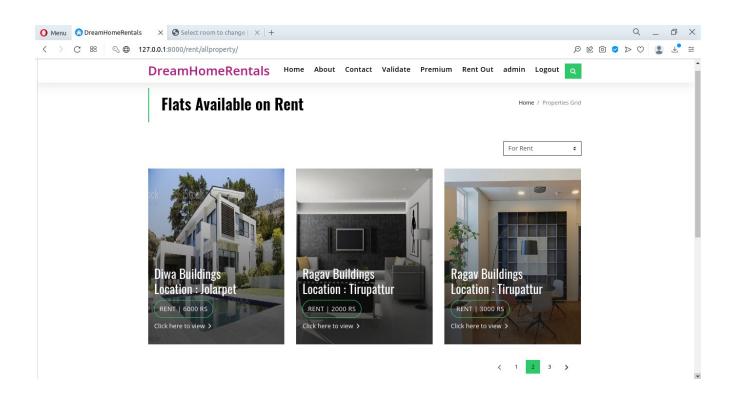


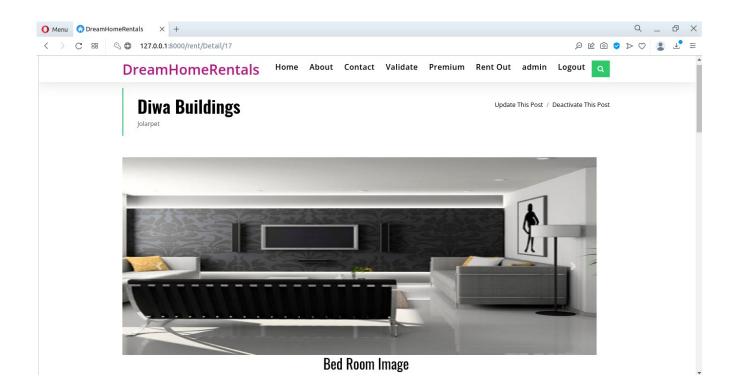


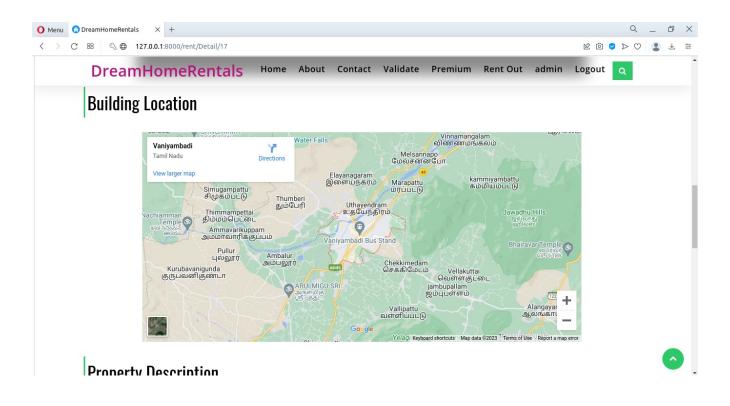


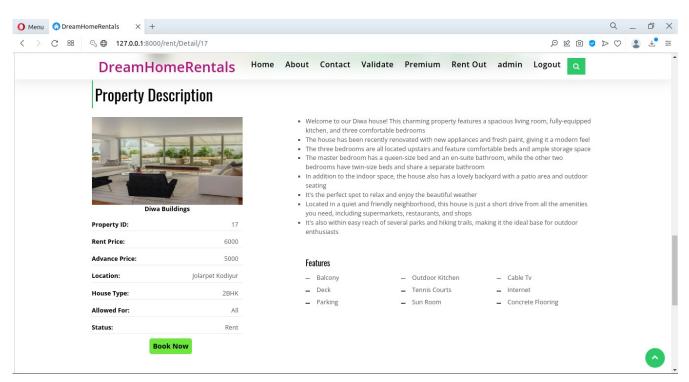


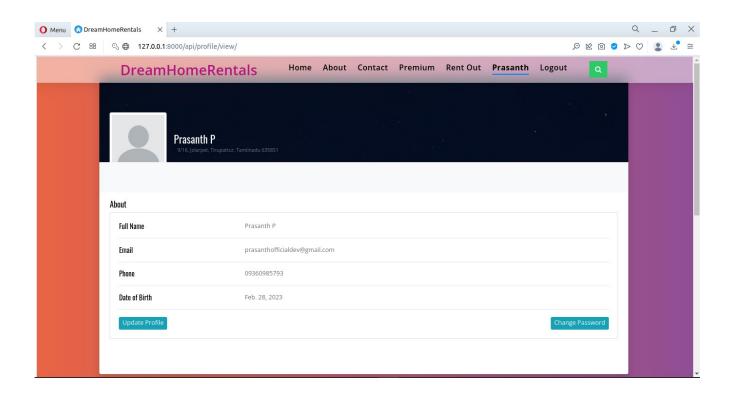


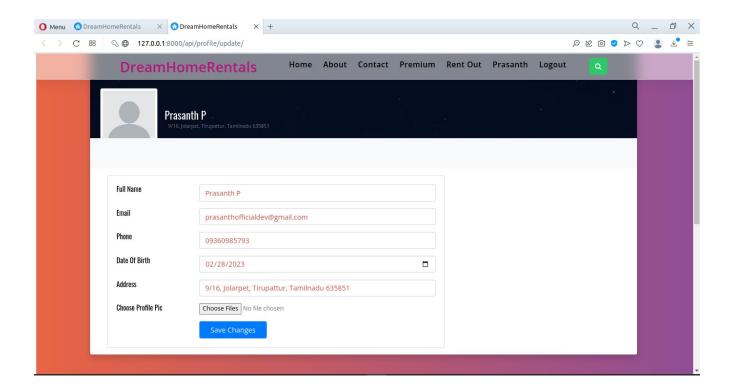


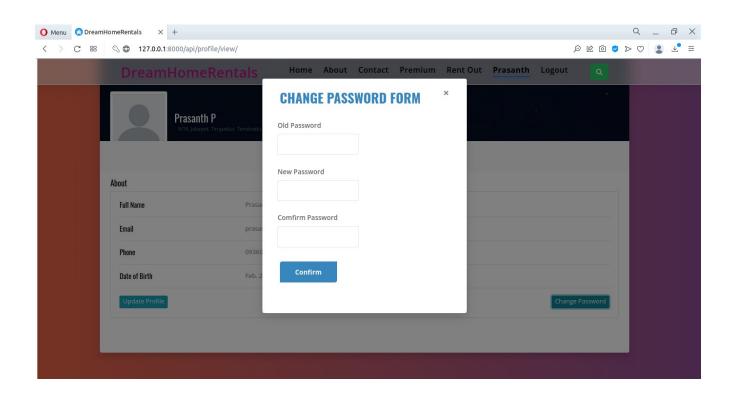


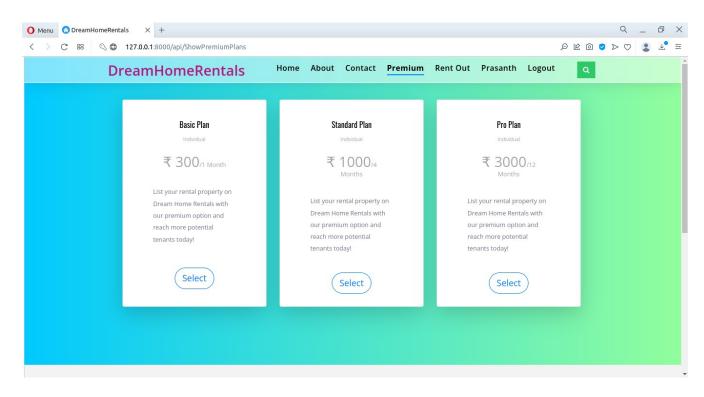


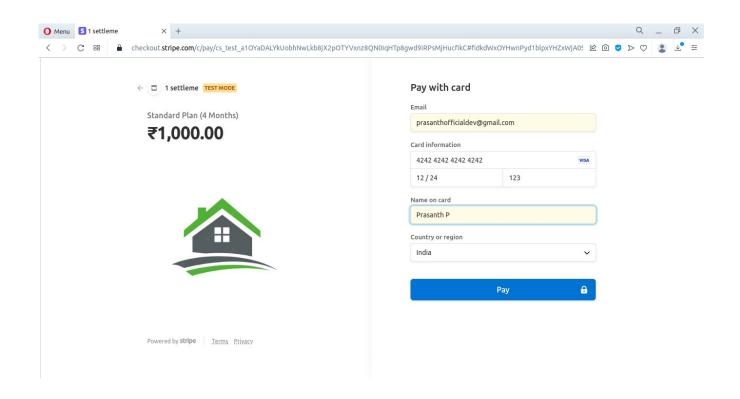


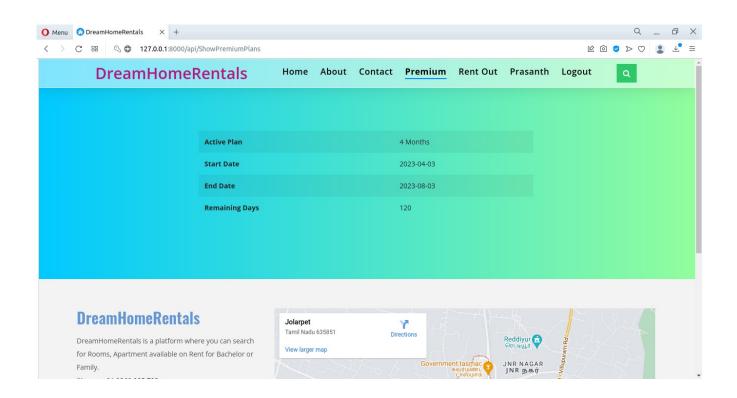


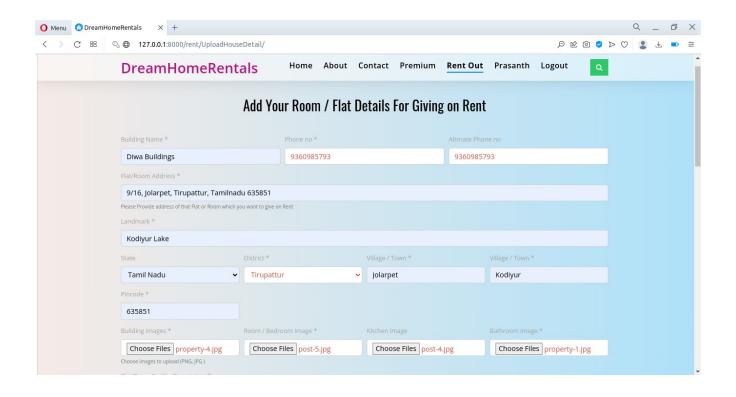


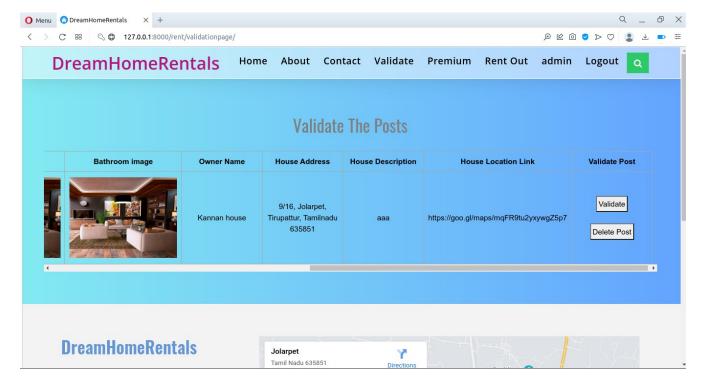












The Dream Home Rentals project is developed to provide an easy and convenient platform for tenants to find their next rental house and for house owners to list their rental house. It offers a secure login system and a validated post module to ensure the accuracy of house information, saving both tenants and house owners valuable time. The system has been developed based on the specifications and requirements of the target users, with a focus on user-friendly interface and efficient functionality. The project has been developed in such a way that it can be easily updated and expanded to include new features.

### **Future Enhancement:**

- Implementation of a recommendation system to suggest properties to users based on their search history and preferences.
- Integration with social media platforms to provide users with more options for sharing and promoting their rental listings.
- Use of machine learning algorithms to optimize search results and provide more relevant property listings to users.
- Implementation of a chat bot system to provide 24/7 support to users and answer their questions in a timely manner.

### **BOOKS:**

1. Django for APIs: Build web APIs with Python & Django by William S. Vincent

### **ONLINE REFERENCE:**

- 1. <a href="https://chat.openai.com/chat/">https://chat.openai.com/chat/</a>
- 2. <a href="https://getbootstrap.com">https://getbootstrap.com</a>
- 3. <a href="https://www.w3schools.com">https://www.w3schools.com</a>
- 4. <a href="https://docs.djangoproject.com/en/4.1/">https://docs.djangoproject.com/en/4.1/</a>
- 5. <a href="https://www.twilio.com">https://www.twilio.com</a>