A PROJECT ON

“ONLINE WEB PORTAL FOR PROPERTY SELLING”

SUBMITTED IN
PARTIAL FULFILLMENT OF THE REQUIREMENT
FOR THE COURSE OF
DIPLOMA IN ADVANCED COMPUTING FROM CDAC

SUNBEAM INSTITUTE OF INFORMATION TECHNOLOGY
Hinjawadi

SUBMITTED BY:

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UNDER THE GUIDENCE OF:
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CERTIFICATE

This is to certify that the project work under the title 'Web Portal for Property Selling' is done by Gaurav Rathore, Pritesh Naik, Saurabh Pable, and Chandan Dewangan in partial fulfillment of the requirement for the award of the Diploma in Advanced Computing Course.

Pooja Jaiswal
Project Guide

Mr. Yogesh Kolhe
Course Co-Coordinator

Date:

ACKNOWLEDGEMENT

A project usually falls short of its expectations unless aided and guided by the right persons at the right time. We offer this opportunity to express our deep gratitude towards Mr. Nitin Kudale (Center Coordinator, SIIT, Pune) and Mr. Yogesh Kolhe (Course Coordinator, SIIT, Pune).

We are deeply indebted and grateful to them for their guidance, encouragement and deep concern for our project. Without their critical evaluation and suggestions at every stage of the project, this project could never have reached its present form.

Last but not the least we thank the entire faculty and the staff members of Sunbeam Institute of Information Technology, Pune for their support.

1. INTRODUCTION TO PROJECT

The web-based **"Property Selling Website"** project is a comprehensive platform developed to facilitate the buying and selling of properties online. It aims to provide users with a user-friendly, secure, and feature-rich environment where they can manage all aspects of property transactions. The project leverages modern web technologies to ensure that the platform is both robust and scalable, meeting the needs of users who are looking for an efficient way to engage in real estate activities.

1. **User Registration and Profile Management:**

    - The platform allows users to easily register and create an account. Once registered, users can log in to access their personalized dashboard. They have the ability to edit their profile details, including updating their profile picture, and ensuring that their information is always current. This feature provides a personalized experience, enhancing user engagement and trust.

2. **Property Listings and Management:**

    - One of the core features of the platform is the ability for users to list their properties for sale. Users can upload details about the property, including images, descriptions, and pricing. This feature is designed to be intuitive, enabling users to manage their listings with ease. Additionally, users can view properties listed by other users, providing a comprehensive marketplace for property transactions. The platform's design ensures that property listings are easy to navigate, with clear categories and search functionalities.

3. **Advanced Search and Wishlist Functionality:**

    - The platform includes a powerful search feature that allows users to find properties based on various criteria such as location, price range, and property type. This helps users quickly locate properties that meet their needs. Additionally, the Wishlist functionality enables users to save properties they are interested in for future reference. This feature is particularly useful for users who are comparing multiple properties or who want to revisit potential options at a later time.

4. **Direct Communication Between Buyers and Sellers:**

    - The platform facilitates direct communication between potential buyers and property owners. This feature is crucial for negotiating deals and obtaining more detailed information about properties. Users can contact property owners through the platform, ensuring that all communications are secure and tracked. This direct interaction is designed to streamline the buying process and foster trust between users.

5. **Administrator Functionality:**

    - The platform includes an administrator module that provides advanced functionality for admin users. Administrators can view and manage user accounts, monitor property listings, and perform other administrative operations to ensure the platform runs smoothly. This includes managing content, overseeing transactions, and ensuring that all users adhere to the platform's guidelines.

Technical Implementation

- **Front-End Development:** The front-end of the platform is built using **React**, a powerful JavaScript library that enables the creation of dynamic and responsive user interfaces. React's component-based architecture allows for efficient development and easy maintenance, ensuring that the platform can be easily updated and scaled as needed.

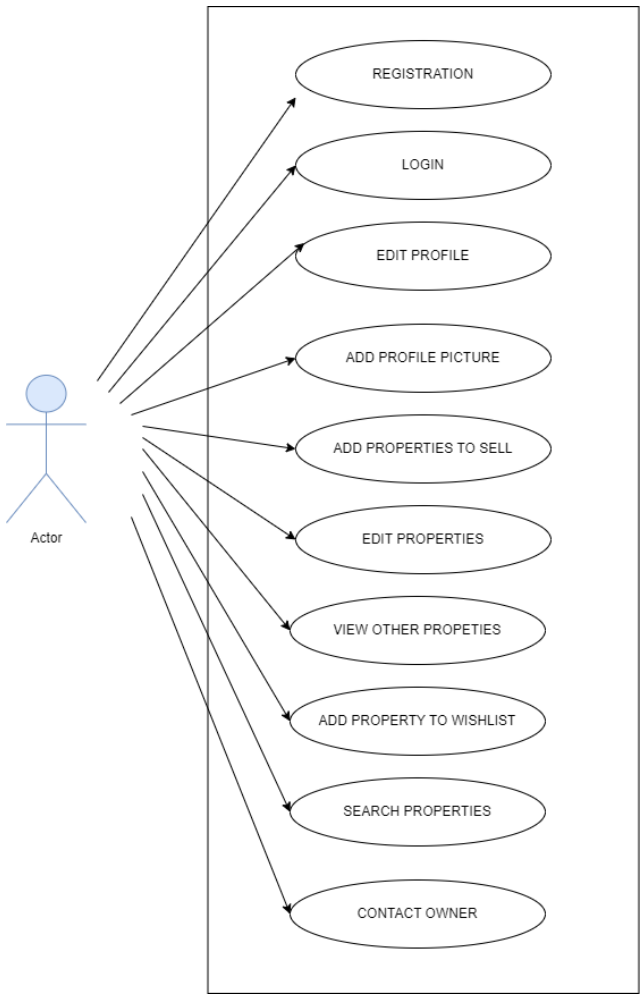
- **Back-End Development:** The back-end is developed using **Spring Boot**, which handles the core business logic of the platform. This includes functionalities such as user authentication, property management, and data processing. Spring Boot is chosen for its robustness and ability to handle complex business logic efficiently.

- **Database Management:** The platform uses **MySQL** for database management, storing all user and property-related data securely. MySQL is known for its reliability and performance, making it an ideal choice for handling the large volumes of data associated with property transactions.

- **Security: Spring Security** is integrated into the back-end to protect the platform from common server-side attacks. It ensures that all user data is kept secure and that only authorized users can access certain features of the platform. This includes secure login mechanisms, data encryption, and method-level security to protect the business logic.

2. REQUIREMENTS

2.1 FUNCTIONAL REQUIREMENTS



2.1 User Account

The Client, who will henceforth be called the ‘user’, will be presented with 2 choices by the online web portal, as the first step in the interaction between them. A user can choose one of these and his choice would be governed by whether he is a Customer/Buyer or an Owner/Seller user and whether he wants to check the availability of Properties or wants to register their own property on the portal. The terms ‘Customer user’ and ‘Owner user’ are described below.

A user who has registered into the portal by would have been given a **username** and a **password**. This ‘personal information’ would be henceforth referred to as ‘profile’. Such a user with a

profile in DB-user shall be called a ‘registered user’. A registered user further can be differentiated in ‘Customer user’ or ‘Owner User’ based on the operations that perform on the portal

A new user, on the other hand, would either have to:

a) register himself with the system by providing personal information or

b) log into the system as a guest.

In case of ‘a’, the new user becomes a registered user.

In case of ‘b’, the new user would remain a guest.

A guest can only check the list of added Properties but cannot proceed with communication to the property owner

But a registered Customer user can also act as a guest if he only wants to check the list of added properties on the portal without the Owner Communication and Using Wishlist functionality.

2.2 Registration and creation of user Dashboard

The system shall require a user to register, in order to carry out any communication or interaction with it except for checking the availability of tickets. It will ask the user for the following information at the least – a **username**, a **password**, first name, last name, city, state, phone number, email address and Date of Birth. The system will automatically create a ‘user Dashboard’.

2.3 Quick Search

Here we provided Quick facility for any user to search properties without login into account. This will provide user an option for searching properties and shortlist Properties to proceed with further Owner Communication

The System provides the Search functionality based on many factors such as Property City, Property Associated Tags, Property Title, Property State and Property Address Pin code.

‘Tag’ refers to Category the Property is Associated. This choice shall be made by the Seller user through a drop-down menu when En-listing a New Property on the portal indicating all the possible combinations of choices provided by the System.

Having taken all the above input from the user, the system checks for any false entries like the City Name, State, Tags or Title on the Property. In case of incompatibility, the system will not display any property as available.

The system queries the flights database ‘properties’ to check which of the Properties on the portal are available. The system displays the results in a suitable form (a card form) with the following information depicted for each Property: Property Title, Property Description, Property Estimate Price, Owner Name to give a rough estimate of the registered property.

2.4 Adding / Registering Property in the Portal

After having taken the user through the step 2.2, the system will now ask the user if he wishes to register their own Properties. If yes, and

a) if the user has been a guest, he will have to first register and become a registered user and then log onto the system.

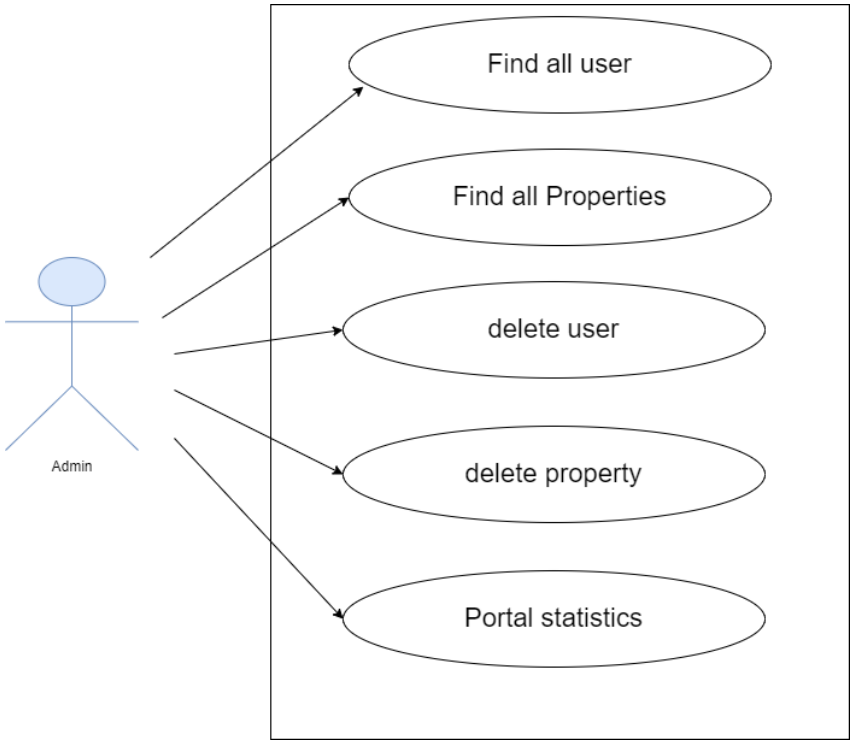
b) If the user is already a registered user, and if he has logged on already, he can register their property, but if he has been acting as a guest, he will have to log on.

Having ensured that the user is logged on validly according to 3.4.1, the system redirects the User to an Add Property Form. Where the Owner User has to provide Property Details Such as **Property Title, Property Description** (a Short Description of the Property) Basic Address Details such as **Address Line 1, Address Line 2, City, District and State.** Property Details such as **Number of Bedrooms, Number of Bathrooms, Property Type** (Such as 1 BHK, 2 BHK, Bungalow, Villa, Apartment etc), **Property Area and Property Estimated Price.** For Further Better Searchability, the Portal mandatory Requests to Add a Property **Tag** to the Registering Property from a List of pre-Configured Tag provided via Suggestion and at least One Image **Property Images** so Customer User to better Understand the Registered Property.

2.5 View User Wishlist

The system shall allow a user to view all information about their previous Wishlisted Properties. After logging on, The user should navigate to their Wishlist Page from the Navbar. It accesses Wishlist table and retrieves the details of the Property and presents them to the user in a card format similar to that on the homepage.

2.6 Portal Administrator User



The Administrator User should be Able to Login through their Independent Login Portal, Supervise the Trade of Properties taking place on the portal. They have Also Access to View Individual Properties (Similar to Registered Customer User), Delete Properties, View User Info and Delete Users from the Portal

2.2 Non-Functional Requirements

2.2.1 Interface

Go to Appendix B for user interfaces

2.2.2 Software Interfaces

The SPMS shall work on MS Windows operating systems family (Windows 11) and Linux (Ubuntu). It is configured to work with the MySQL database. The Backend Server works on an Apache Tomcat server hosted by Spring Boot. It uses browser IE 5.0 & above.

3. DESIGN

3.1 Database Design

The following table structures depict the database design.

Table 1: Users

Key Type/ Constraint	Column Name	Data Type	Length (byte)	Allow Null (1=Yes;0=No)
4	userID	bigint	8	0
0	created_on	date	3	1
0	updated_on	date	3	1
0	city	Varchar	30	1
0	dob	Date	3	1
0	email	Varchar	50	1
0	First_name	Varchar	20	1
0	Last_name	Varchar	20	1
0	Is_deleted	Bit	1	0
0	password	Varchar	255	1
0	phone_number	Varchar	10	1
0	profile_pic	Longblob	-	1
0	role	Varchar	255	1
0	State	Varchar	20	1
1	User_name	Varchar	20	1

Table 2: Properties

Key Type/ Constraint	Column Name	Data Type	Length	Allow Null (1=Yes;0=No)
5	propertyID	bigint	8	0
0	created_on	date	6	1
0	updated_on	date	6	1

0	Bathroom	Int	4	1
0	Bedrooms	Int	4	1
0	Description	Tinyint	255	1
0	Is_deleted	Bit	1	0
0	Is_sold	Bit	1	1
0	Price	Double	8	1
0	Property_area	Double	8	1
0	Property_type	Enum	4	1
0	Title	Varchar	50	1
1	Address_id	Bigint	4	0
1	User_id	Bigint	4	0

Table 3: Tags

Key Type/ Constraint	Column Name	Data Type	Length	Allow Null (1=Yes;0=No)
1	ID	bigint	8	0
0	created_on	date	6	1
0	updated_on	date	6	1
3	Description	Varchar	255	1
1	Tag_name	Varchar	20	0

Table 4: Images

Key Type/ Constraint	Column Name	Data Type	Length	Allow Null (1=Yes;0=No)
2	ID	bigint	8	0

0	created_on	date	6	1
0	updated_on	date	6	1
0	Image_link	Varchar	255	1
0	Name	Varchar	255	1
1	Property_id	Bigint	4	0

Table 5: Address

Key Type/ Constraint	Column Name	Data Type	Length	Allow Null (1=Yes;0=No)
2	AddressID	bigint	8	0
0	created_on	date	6	1
0	updated_on	date	6	1
0	State	Varchar	30	1
0	Address_line1	Varchar	100	1
0	Address_line2	Varchar	100	1
0	City	Varchar	30	1
0	District	Varchar	30	1
0	Pincode	Varchar	6	1

Table 6: Wishlist

Key Type/ Constraint	Column Name	Data Type	Length	Allow Null (1=Yes;0=No)
1	WishlistID	bigint	8	0
0	On_cart	Int	4	0
1	Property_id	Bigint	8	0
1	User_id	Bigint	8	0
0	On_wishlist	Bit	1	0

Table 7: Tag-Property Junction Table

Key Type/ Constraint	Column Name	Data Type	Length	Allow Null (1=Yes;0=No)
2	Tags_id	bigint	8	0
1	Properties_id	Bigint	8	0

E-R Diagram,Dataflow diagram and Class Diagram:

Go to Appendix A

4. CODING STANDARDS IMPLEMENTED

Naming and Capitalization

Below summarizes the naming recommendations for identifiers in Pascal casing is used mainly (i.e. capitalize first letter of each word) with camel casing (capitalize each word except for the first one) being used in certain circumstances.

Identifier	Case	Examples	Additional Notes
Class	Pascal	User, WIshlist, Properties, Tags	Class names should be based on "objects" or "real things" and should generally be **nouns**. No '_' signs allowed
Method	Camel	getDetails, updateStatus	Methods should use **verbs** or verb phrases.
Parameter	Camel	userId, propertyId,TagId	Use descriptive parameter names. Parameter names should be descriptive enough that the name of the parameter and its type can be used to determine its meaning in most scenarios.
Interface	Pascal with "I" prefix	Disposable	Do not use the '_' sign
Property	Camel	getAddress, getProperty	Use a noun or noun phrase to name properties.
Exception Class	Pascal with "Exception" suffix	ResourceNotFoundException	

Comments

- Comment each type, each non-public type member, and each region declaration.
- Use end-line comments only on variable declaration lines. End-line comments are comments that follow code on a single line.
- Separate comments from comment delimiters (apostrophe) or // with one space.
- Begin the comment text with an uppercase letter.
- End the comment with a period.
- Explain the code; do not repeat it.

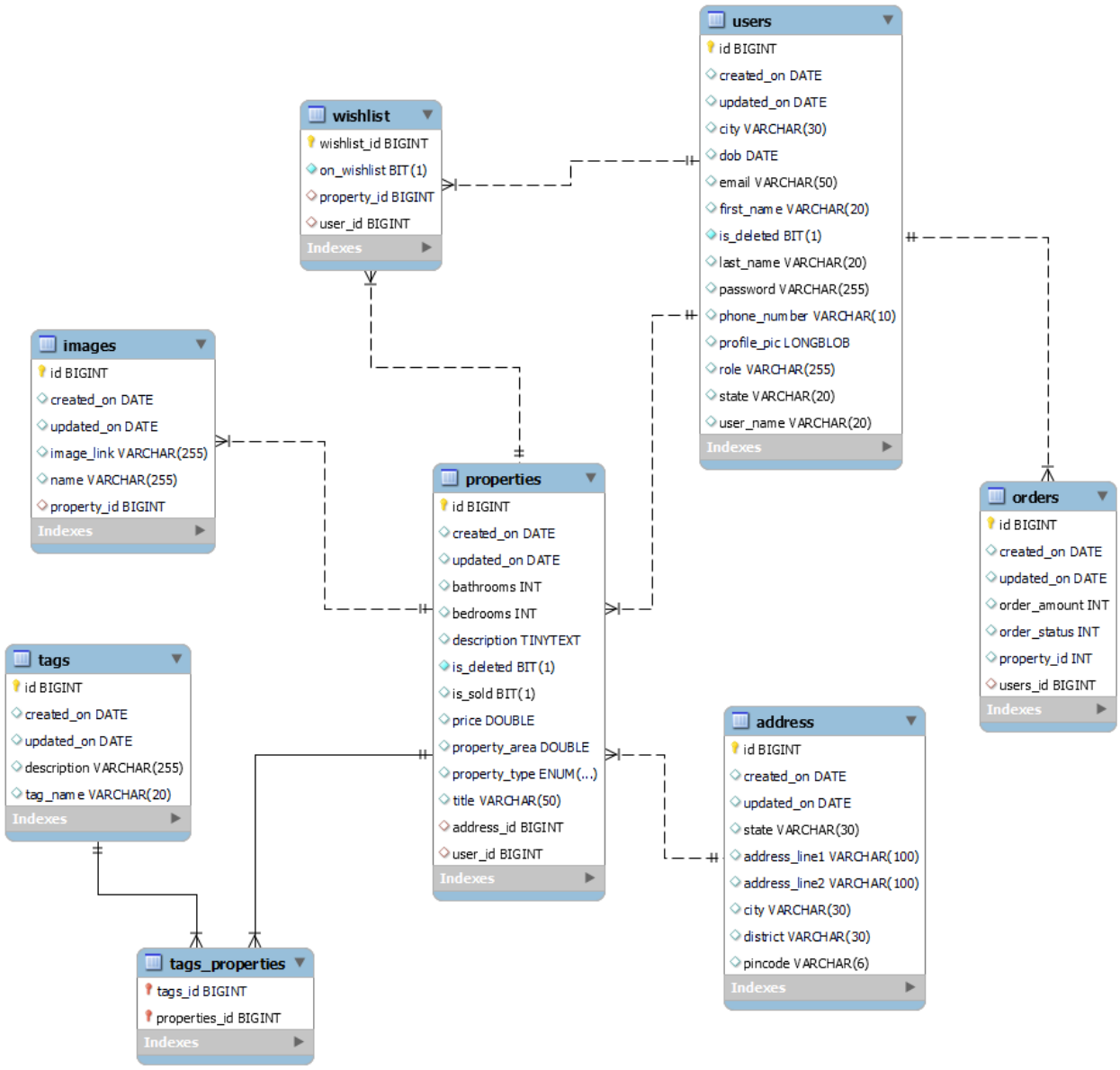
5. PROJECT MANAGEMENT RELATED STATISTICS

DATE	**WORK PERFORMED**	*SLC Phase*	**Additional Notes**
MAY 15,2024	Project Allotment and User Requirements Gathering	Feasibility Study	Our team decided what are the requirements for project.
MAY 16-22,2024	Initial SRS Document Validation And Team Structure Decided	Requirement Analysis (Elicitation)	The initial SRS was presented to the client to understand his requirements better
MAY 23-31,2024	Designing the use-cases, Class Diagram, Collaboration Diagram, E-R Diagram and User Interfaces	Requirement Analysis & Design Phase	Database Design completed
JUN 1-10,2024	Business Logic Component design Started	Design Phase	----------
JUN 11,2024	Front-End Coding Phase Started	Coding Phase	70% of React Components Library implemented.
JUN 12-18,2024	Implementation of Web Application and Window Application Started	Coding Phase	Class Library Development going on.
JUN 19-21, 2024	Implementation of Web Application and Testing with Express Server for Validation	Unit Testing	--
JUN 23 – JUL 17 , 2024	Front-End Development Freeze till Proposed Back-end Developed	Off	Class Library Modified as per the need.
JUL 18, 2024	Back-End Coding Phase Started	Coding Phase	50% of Java Classes and Interfaced Components created & implemented. Project Team divided into 2 Sub-Teams

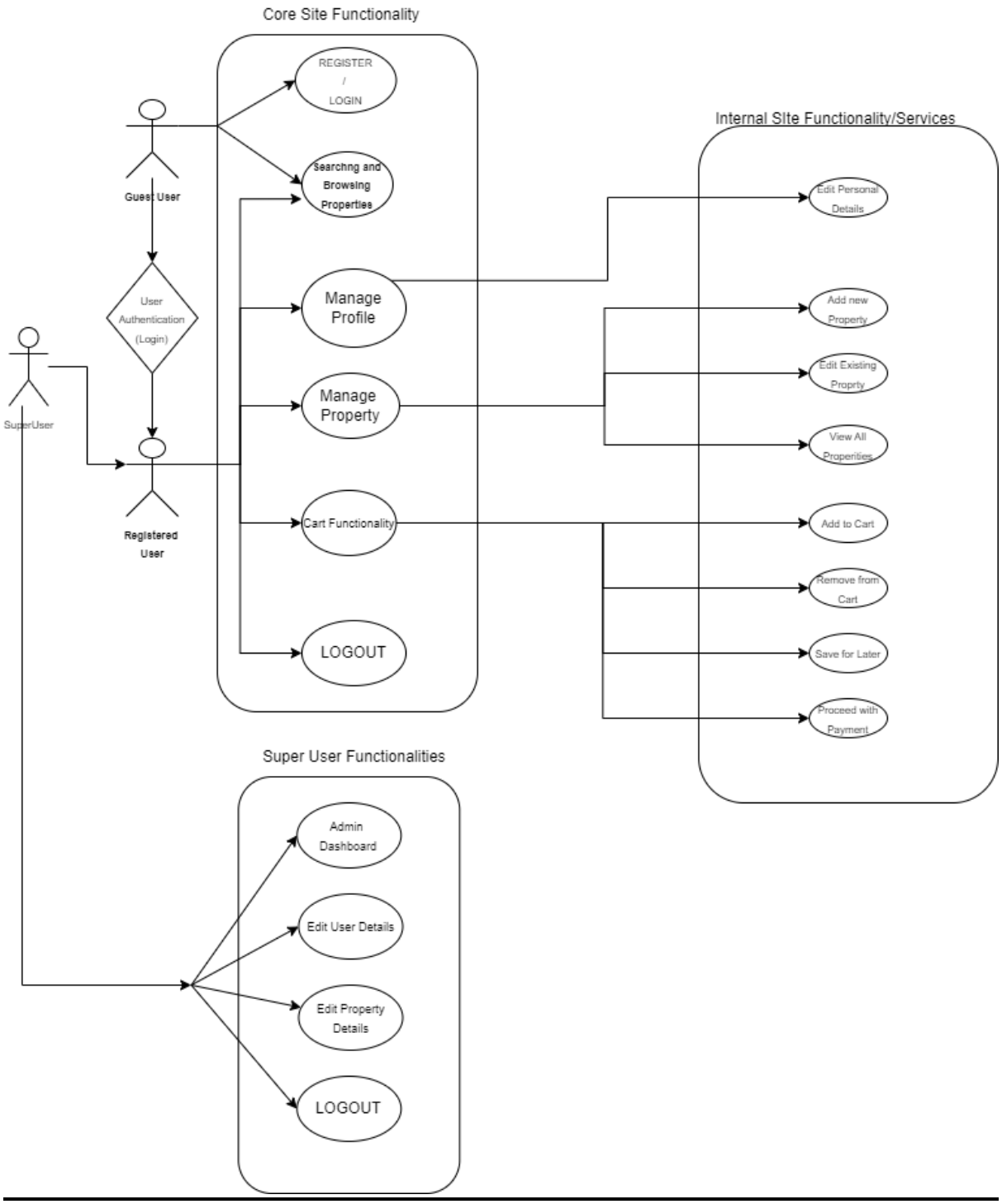
JUL 19-31, 2024	After Ensuring Proper Functioning the Required Validations were Implemented	Coding Phase and Unit Testing	Module Testing was Done by Respective Team Member per Module Assignment
AUG 1-7, 2024	The Back-End was Tested by the Team Leaders and Issues were fixed	Testing Phase (Module Testing)	Full Back-end Independent Module were Integrated and Tested
AUG 8, 2024	Front-End and Back-End Integration Started	Integration Testing	The Project Team Worked on The Module Integration as per Assigned Done in Front-End
AUG 9-14, 2024	The Issues faced while Integration were resolved and Entire Application was Integrated	Integration Testing	The Project was complete for submission
AUG 15 , 2024	Final Application Testing and DeBugging Activity	Acceptance Testing	The Project was Run and Tested by All Team Members and Functionality were Verified and Validated
AUG 16, 2024	Final Submission of Project		

Appendix A

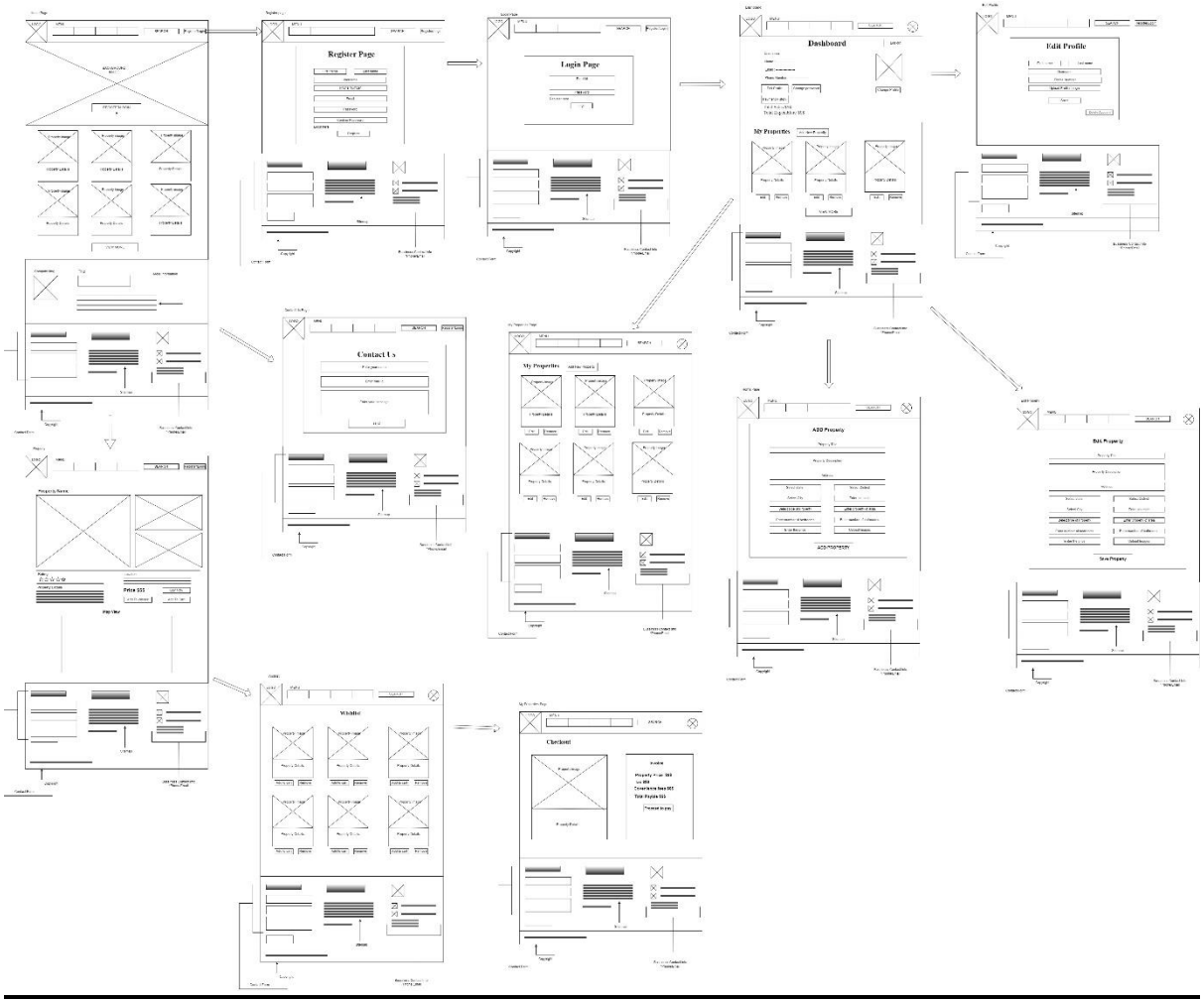
Entity Relationship Diagram



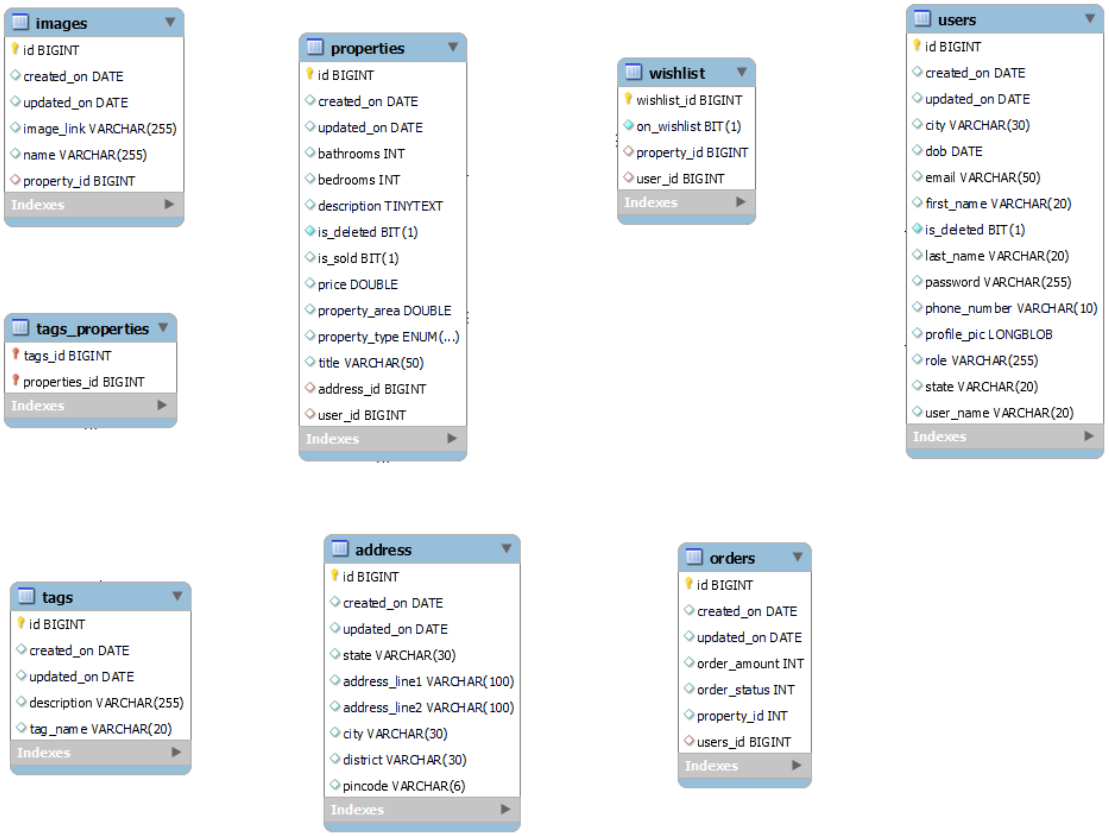
Data Flow Diagram:



Wireframe :

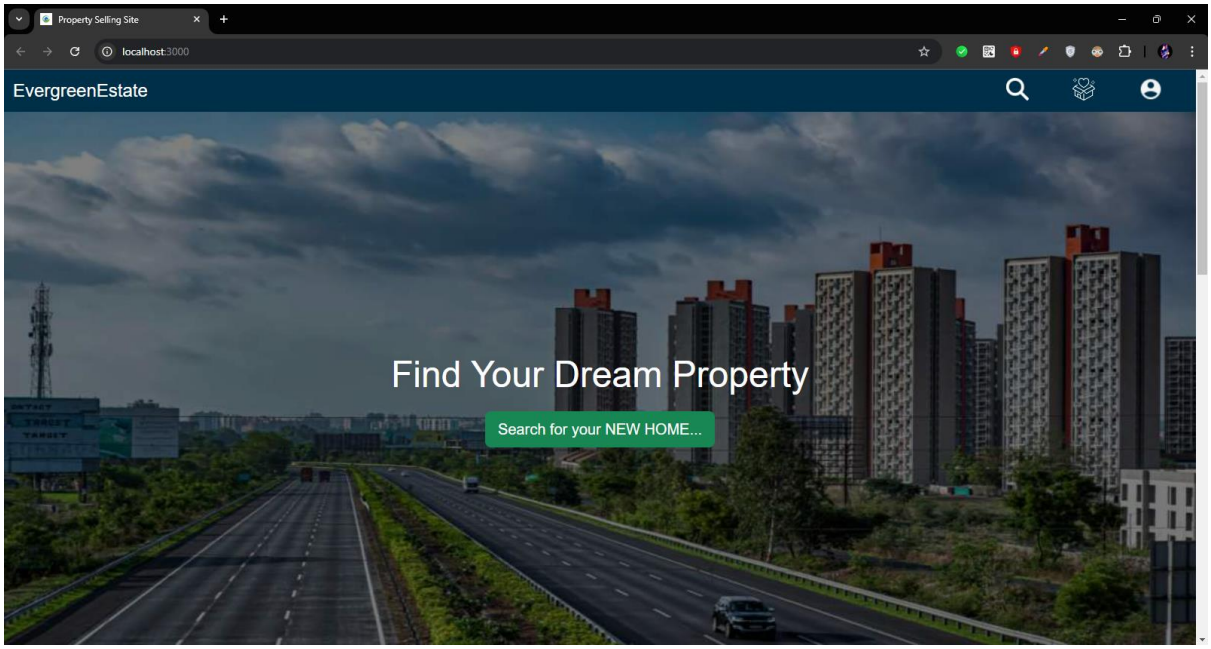

Register Page
Login Page
Dashboard
Edit Profile
Contact Us
My Properties
ADD Property
Edit Property
Wishlist
Checkout

Class Diagram

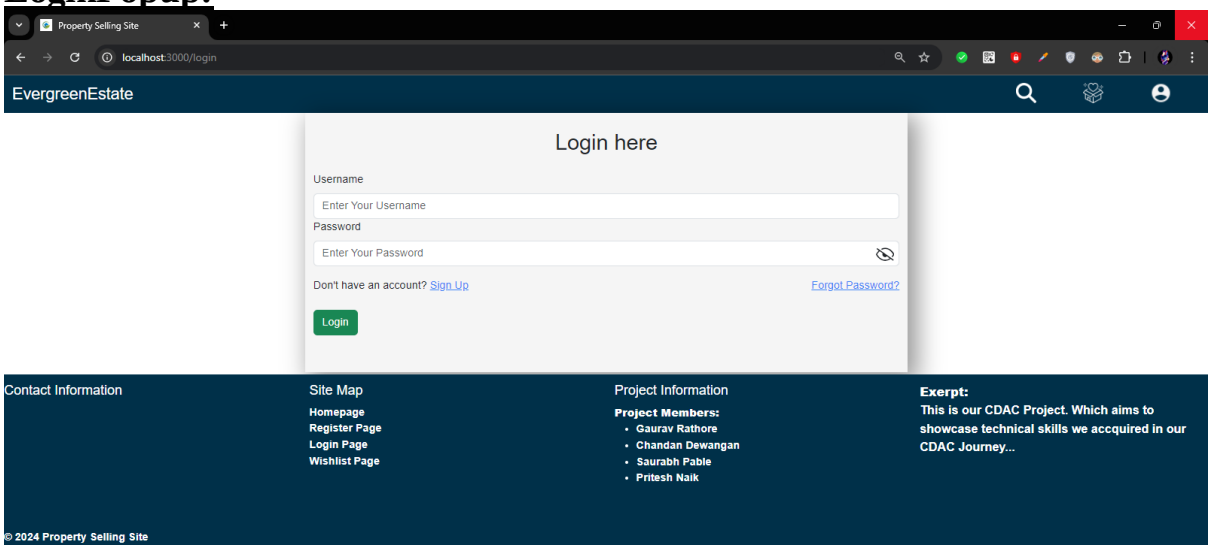


Appendix B

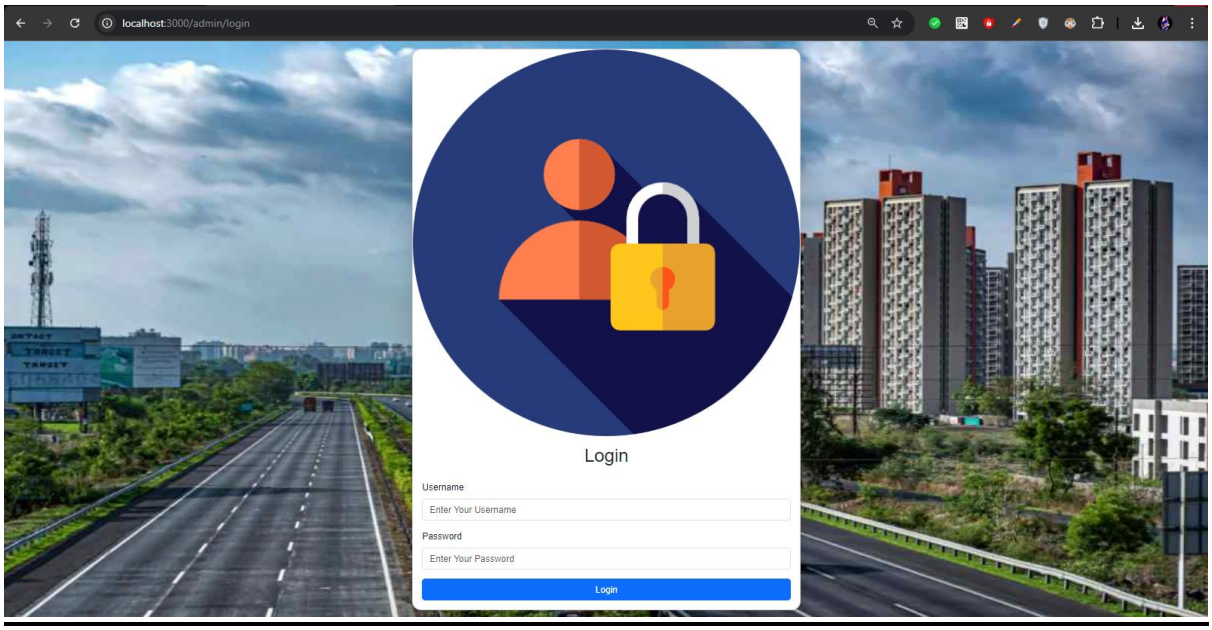
Homepage:



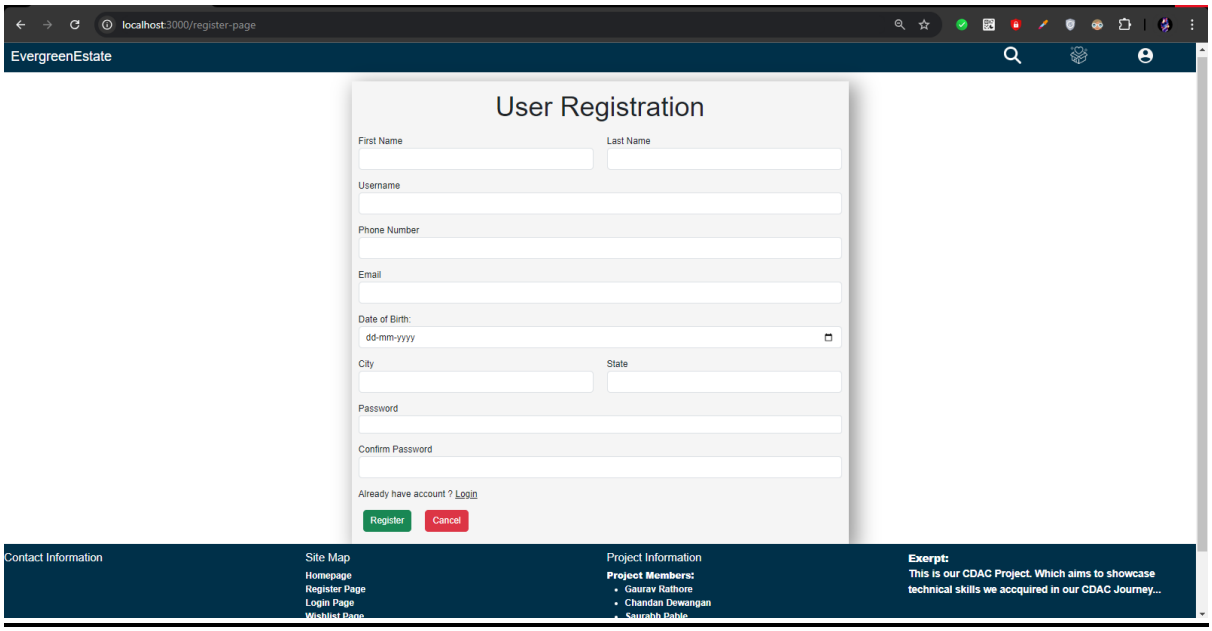
LoginPopup:



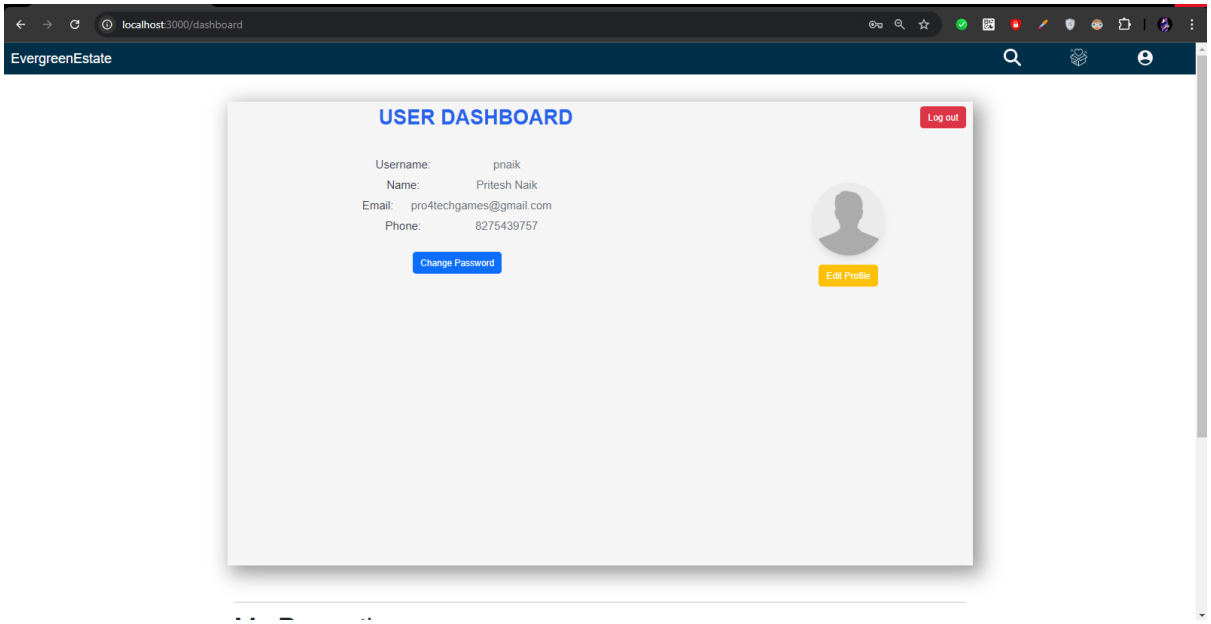
Administrators Login:

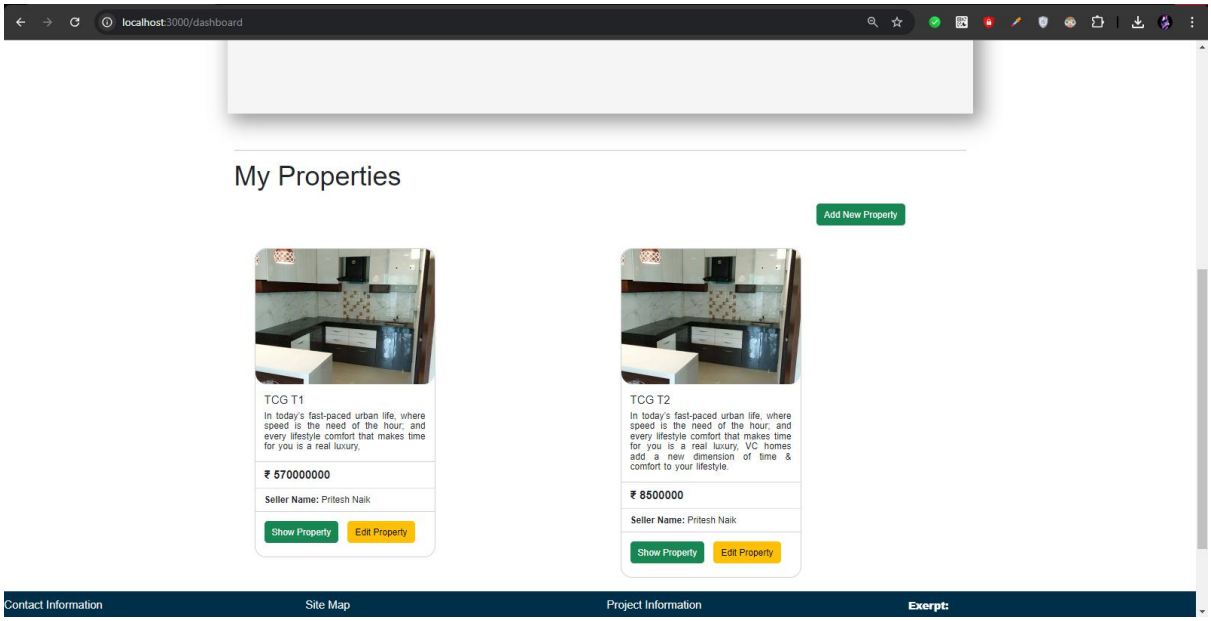


User Registration:

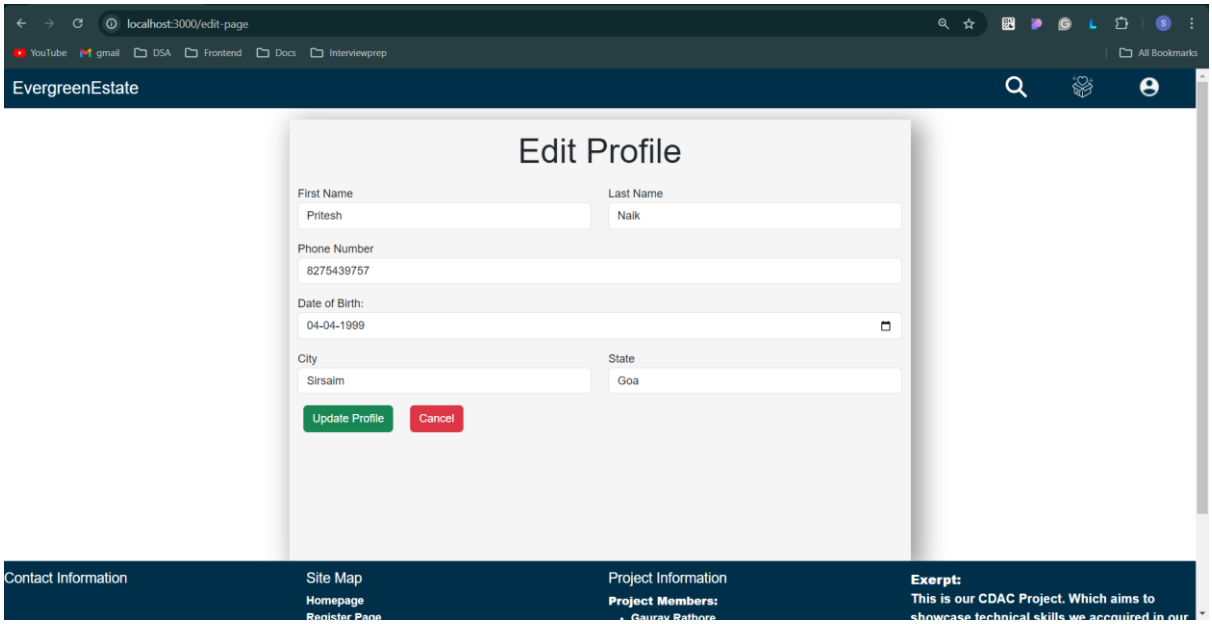


User Dashboard:

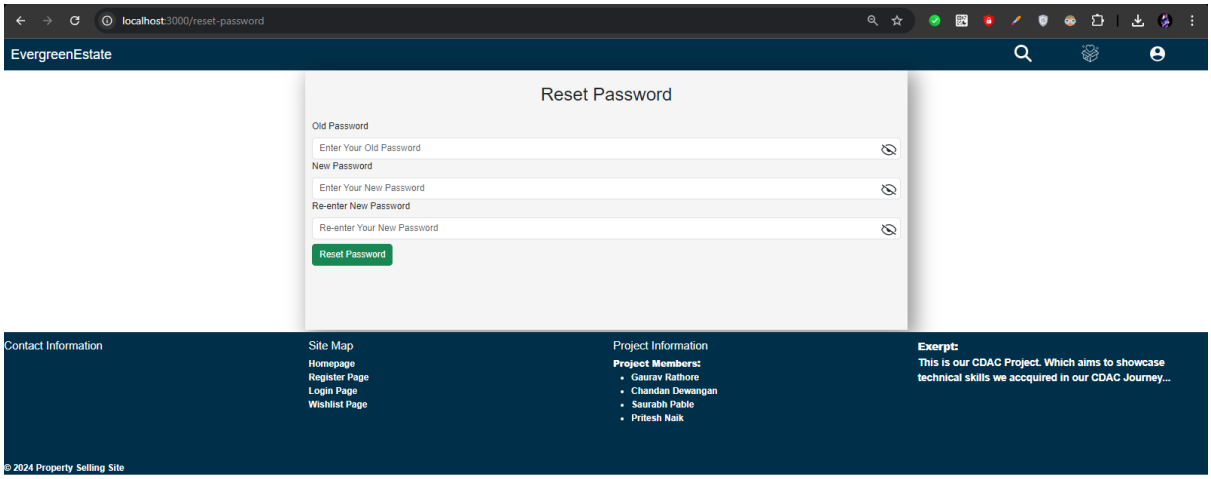




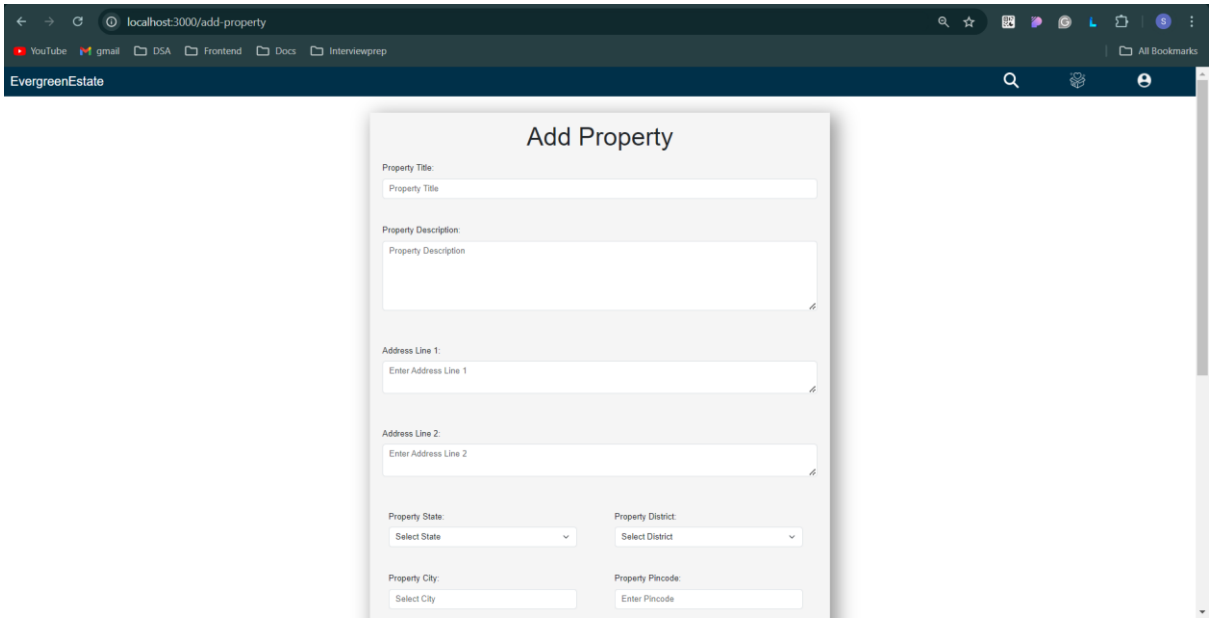
Update User Details:

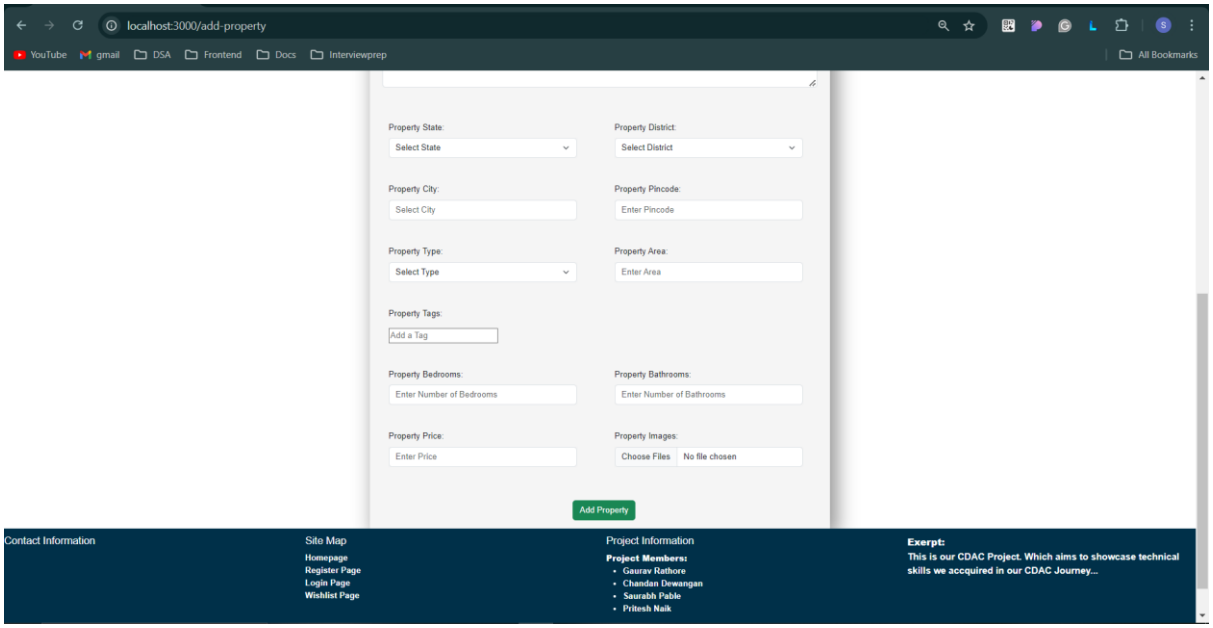


Change Password:

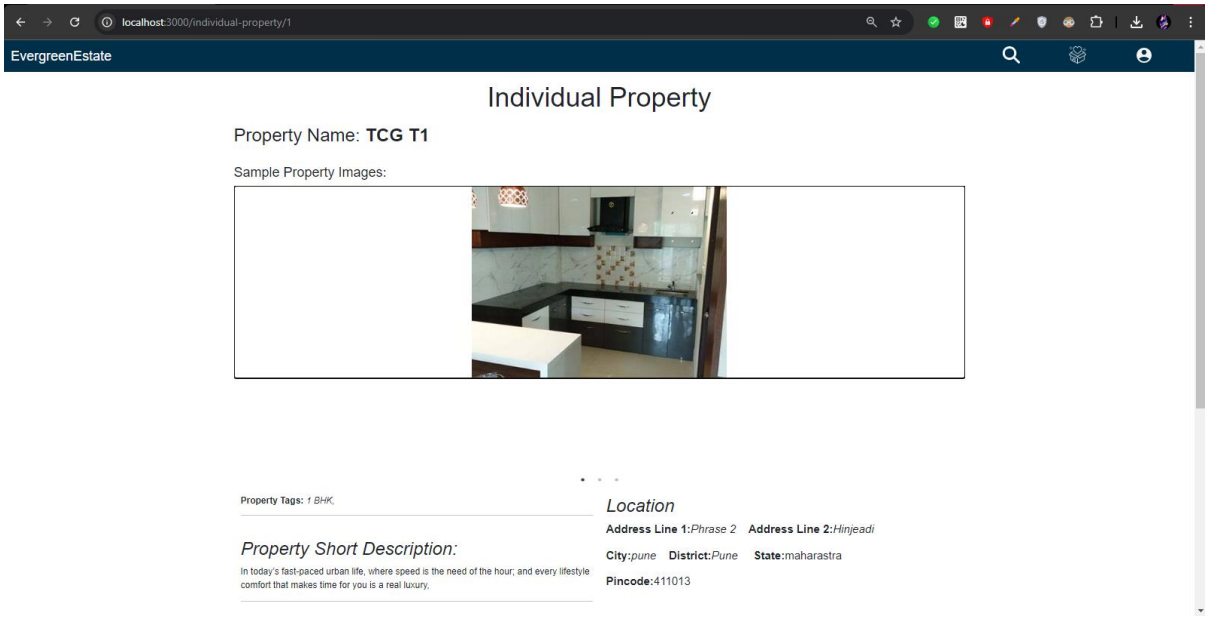


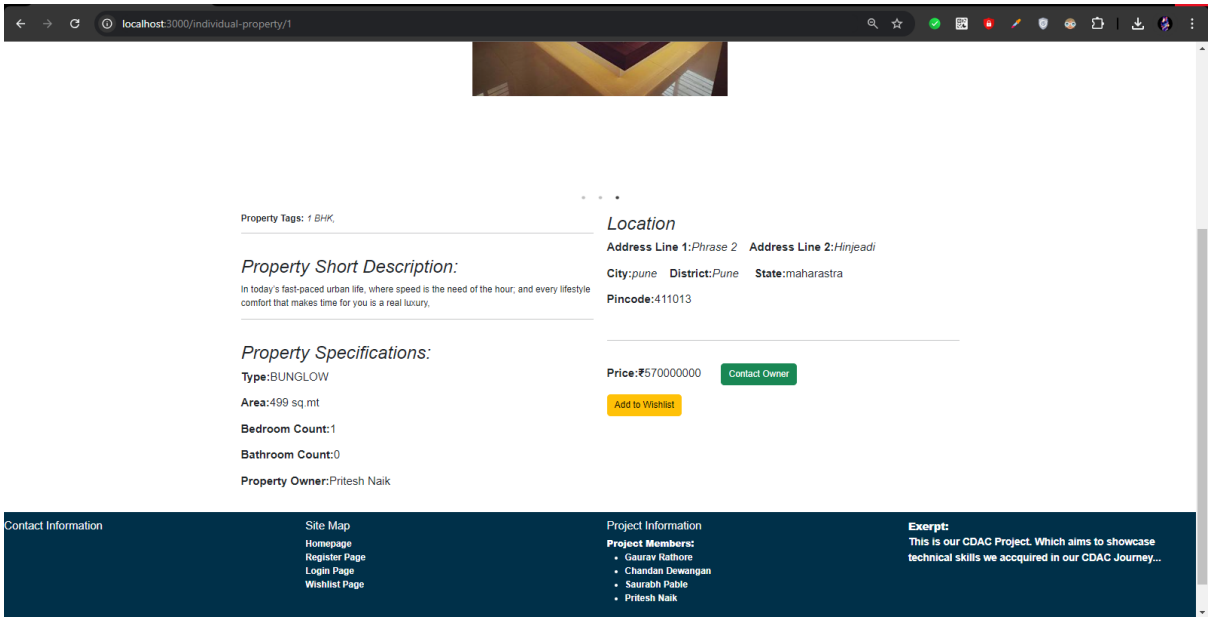
Add Property:



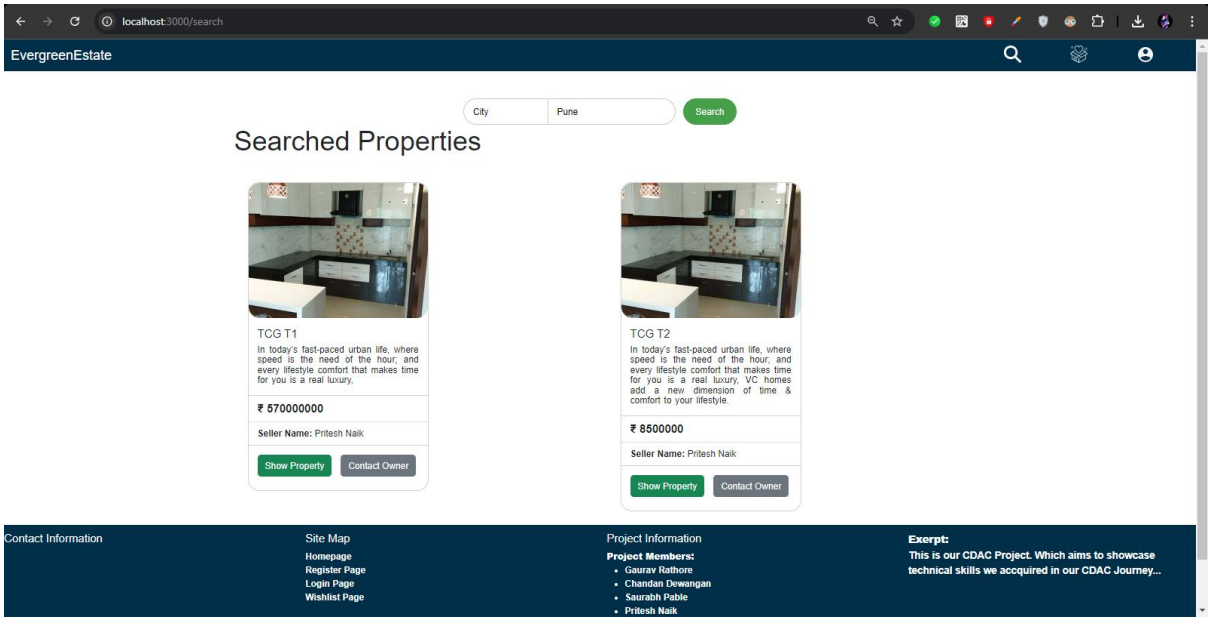


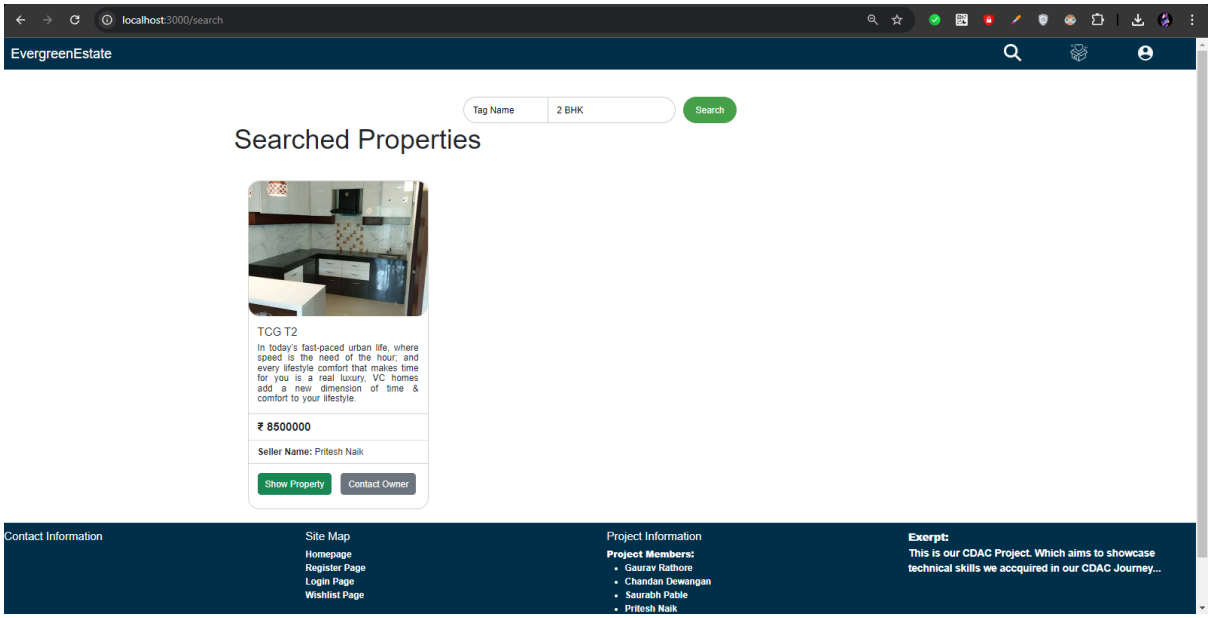
Individual Property Details:

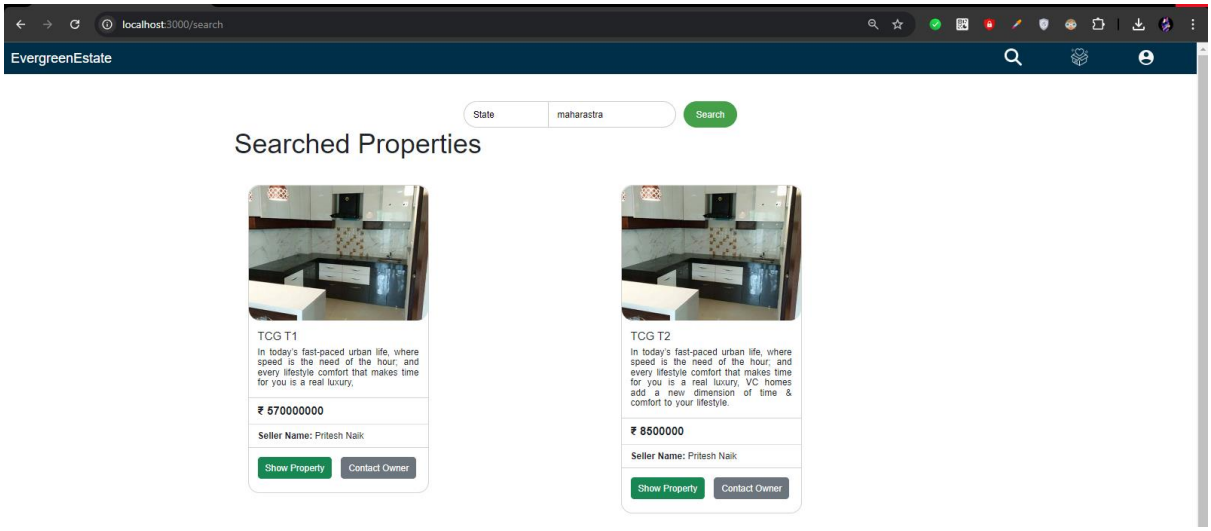




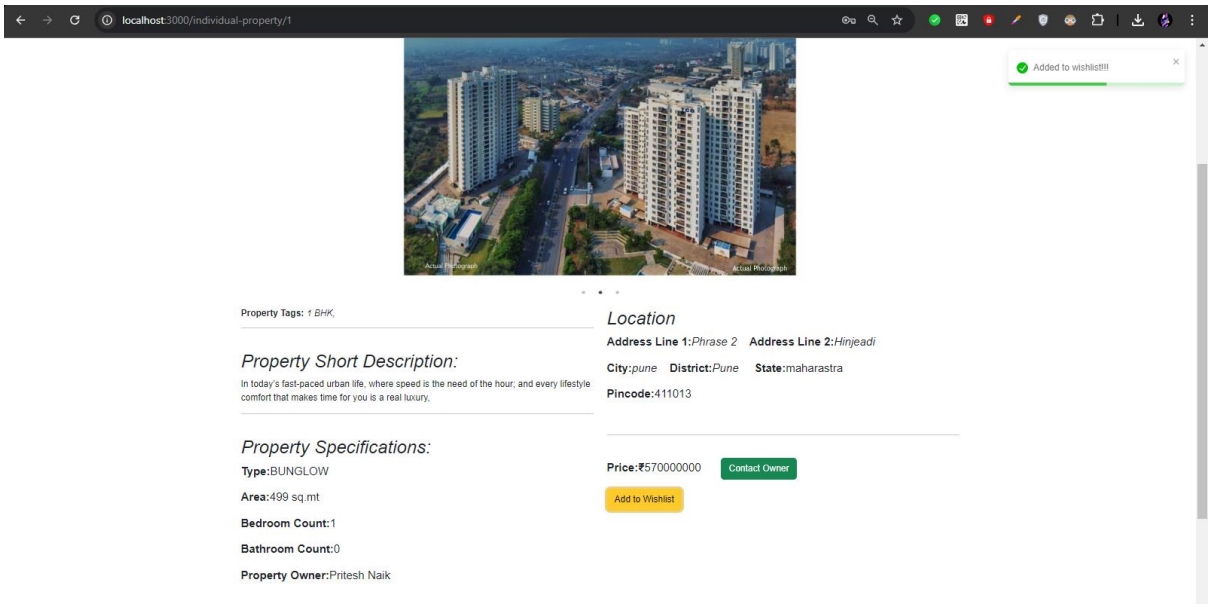
Search Property:

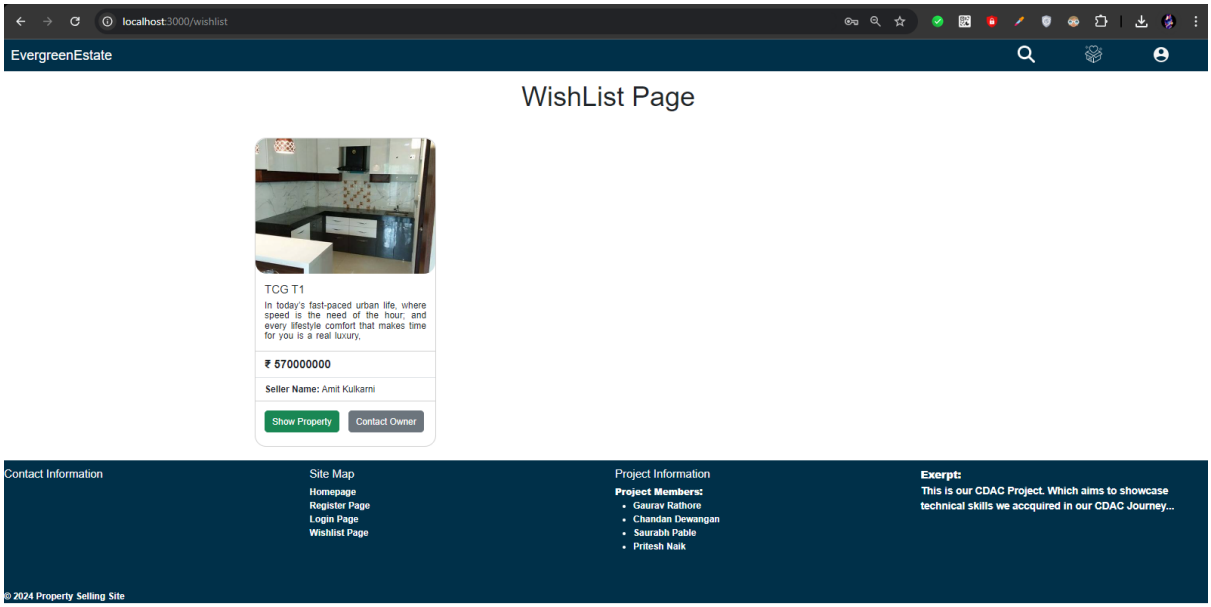




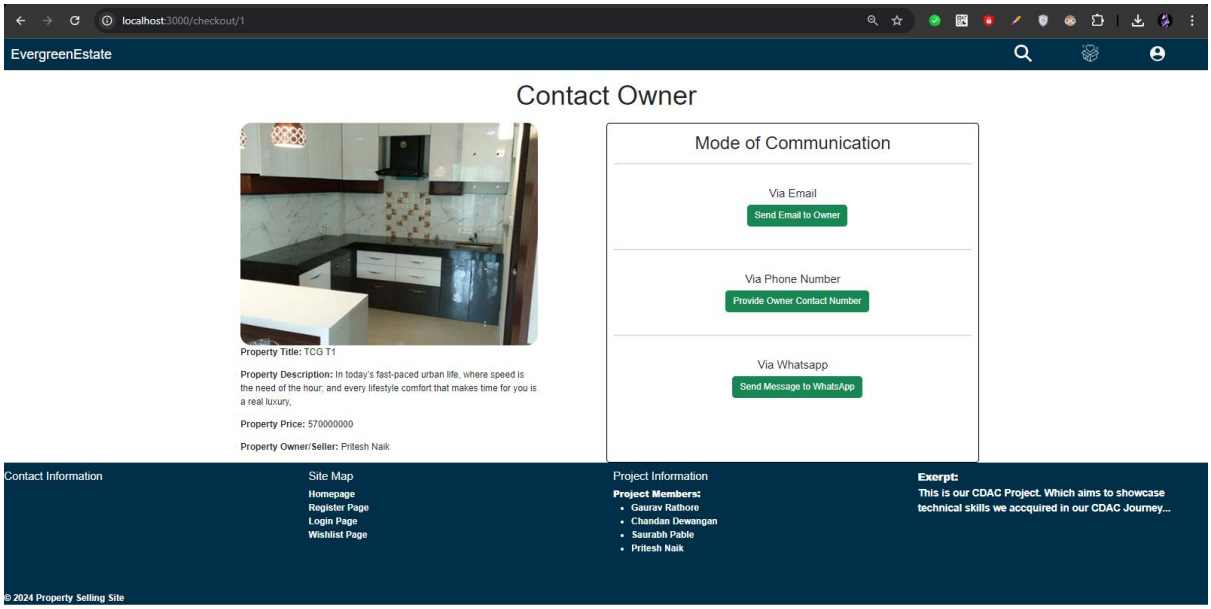

localhost:3000/search
EvergreenEstate
State
maharastra
Search
Searched Properties
TCG T1
In today's fast-paced urban life, where speed is the need of the hour, and every lifestyle comfort that makes time for you is a real luxury.
₹ 570000000
Seller Name: Pritesh Naik
Show Property
Contact Owner
TCG T2
In today's fast-paced urban life, where speed is the need of the hour, and every lifestyle comfort that makes time for you is a real luxury. VC homes add a new dimension of time & comfort to your lifestyle.
₹ 8500000
Seller Name: Pritesh Naik
Show Property
Contact Owner

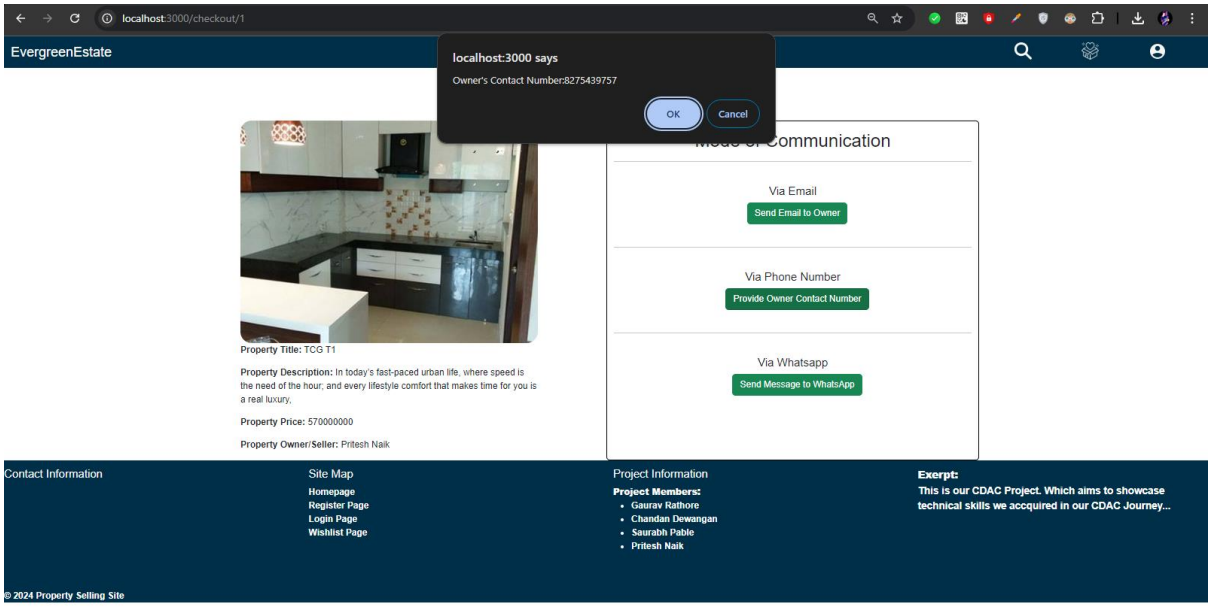
Wishlist:


localhost:3000/individual-property/1
Added to wishlist!!!
Property Tags: 1 BHK,
Property Short Description:
In today's fast-paced urban life, where speed is the need of the hour, and every lifestyle comfort that makes time for you is a real luxury.
Property Specifications:
Type:BUNGLOW
Area:499 sq.mt
Bedroom Count:1
Bathroom Count:0
Property Owner:Pritesh Naik
Location
Address Line 1:Phrase 2 Address Line 2:Hinjeadi
City:pune District:Pune State:maharastra
Pincode:411013
Price:₹570000000
Contact Owner
Add to Wishlist



Contact User:




localhost:3000/checkout/1
EvergreenEstate
localhost:3000 says
Owner's Contact Number:8275439757
OK
Cancel
Property Title: TCG T1
Property Description: In today's fast-paced urban life, where speed is the need of the hour, and every lifestyle comfort that makes time for you is a real luxury,
Property Price: 570000000
Property Owner/Seller: Pritesh Naik
Via Email
Send Email to Owner
Via Phone Number
Provide Owner Contact Number
Via Whatsapp
Send Message to WhatsApp
Contact Information
Site Map
Homepage
Register Page
Login Page
Wishlist Page
Project Information
Project Members:
Gaurav Rathore
Chandan Dewangan
Saurabh Pable
Pritesh Naik
Exerpt:
This is our CDAC Project. Which aims to showcase technical skills we acquired in our CDAC Journey...
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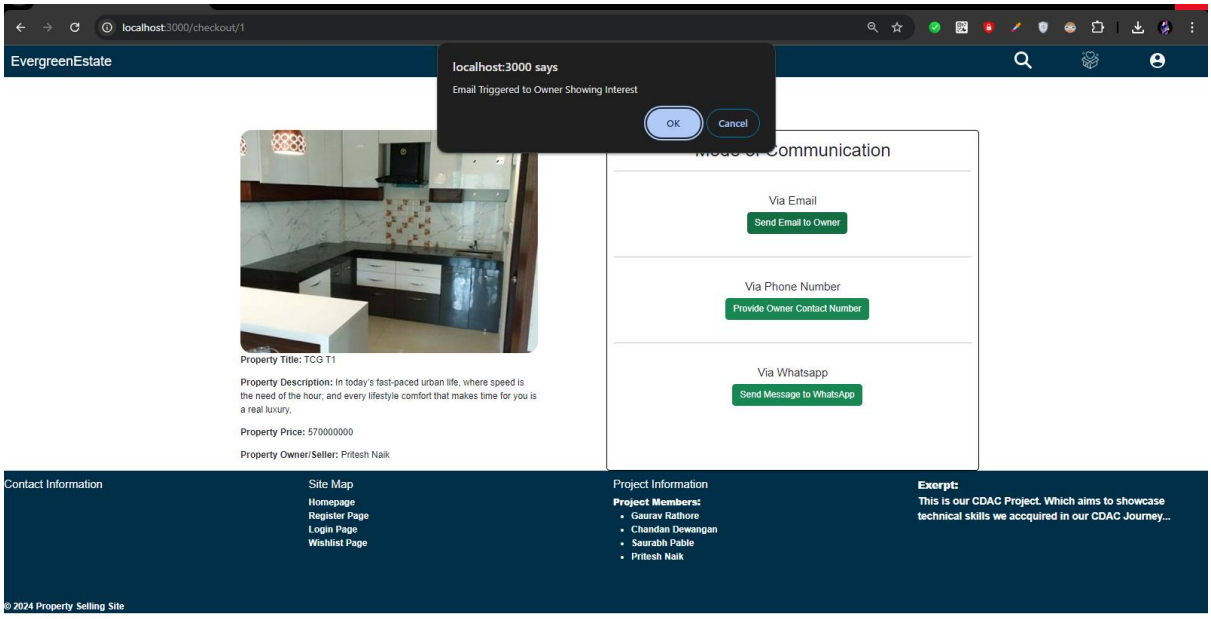
localhost:3000/checkout/1
EvergreenEstate
localhost:3000 says
Email Triggered to Owner Showing Interest
OK
Cancel
Property Title: TCG T1
Property Description: In today's fast-paced urban life, where speed is the need of the hour, and every lifestyle comfort that makes time for you is a real luxury,
Property Price: 570000000
Property Owner/Seller: Pritesh Naik
Via Email
Send Email to Owner
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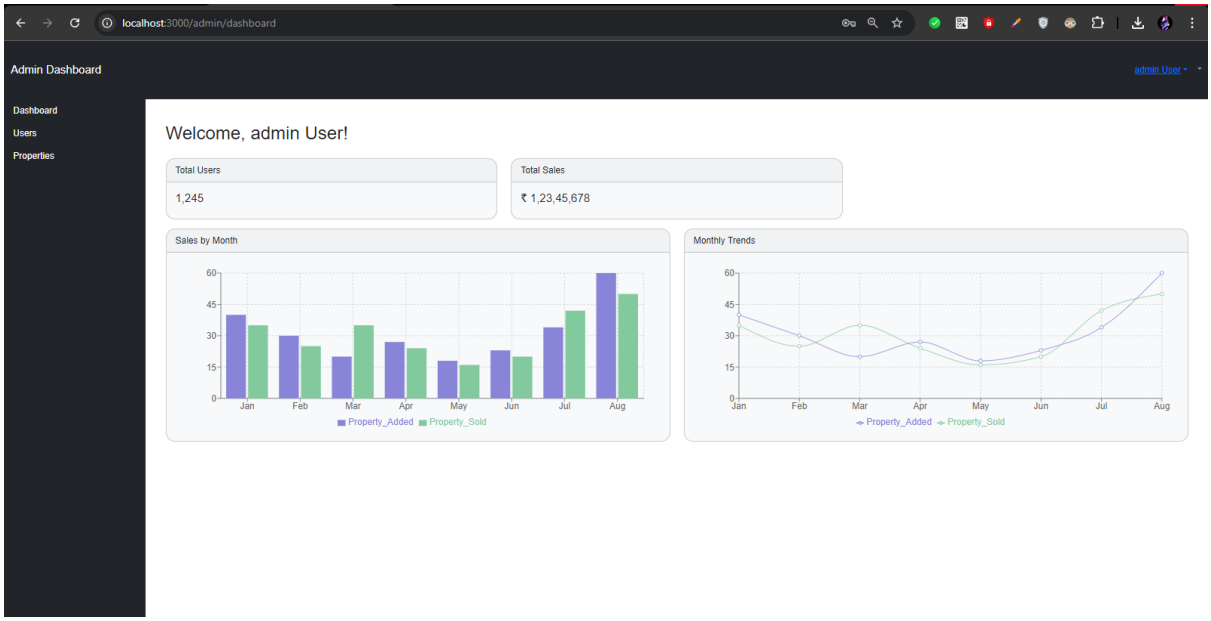
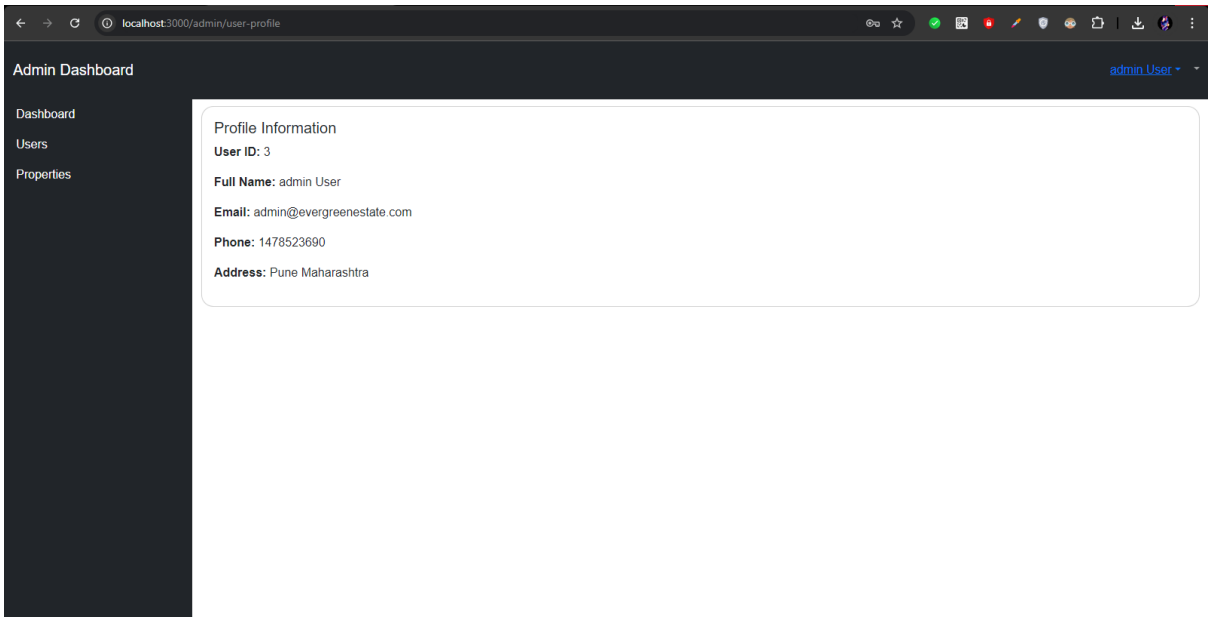
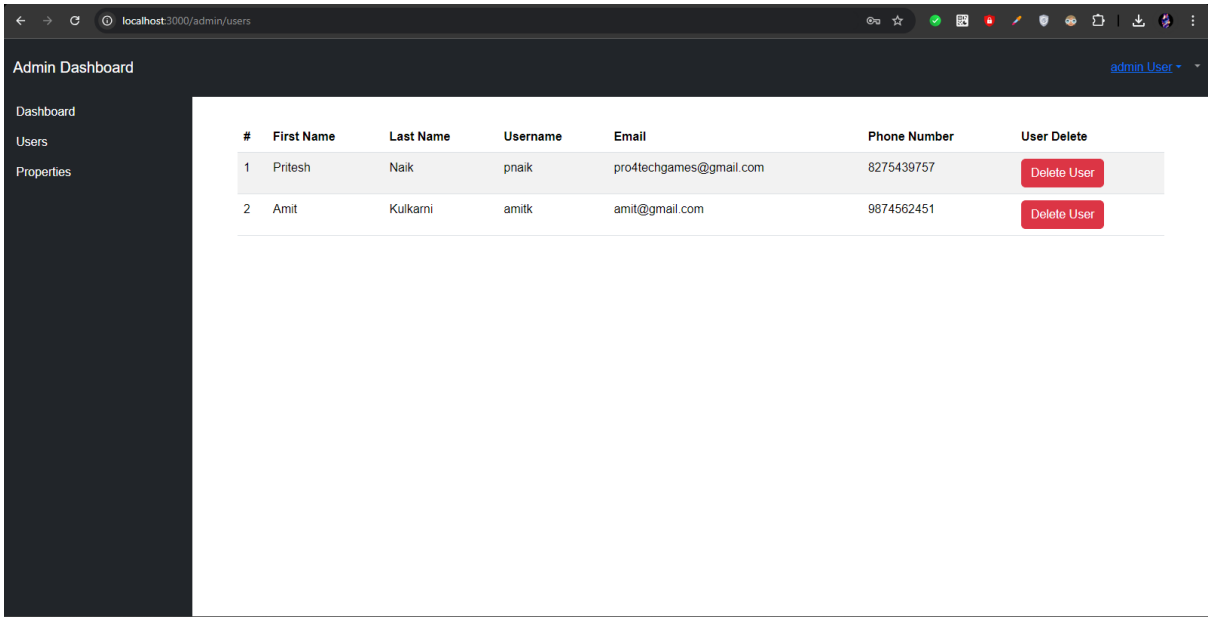
Admin Dashboard:



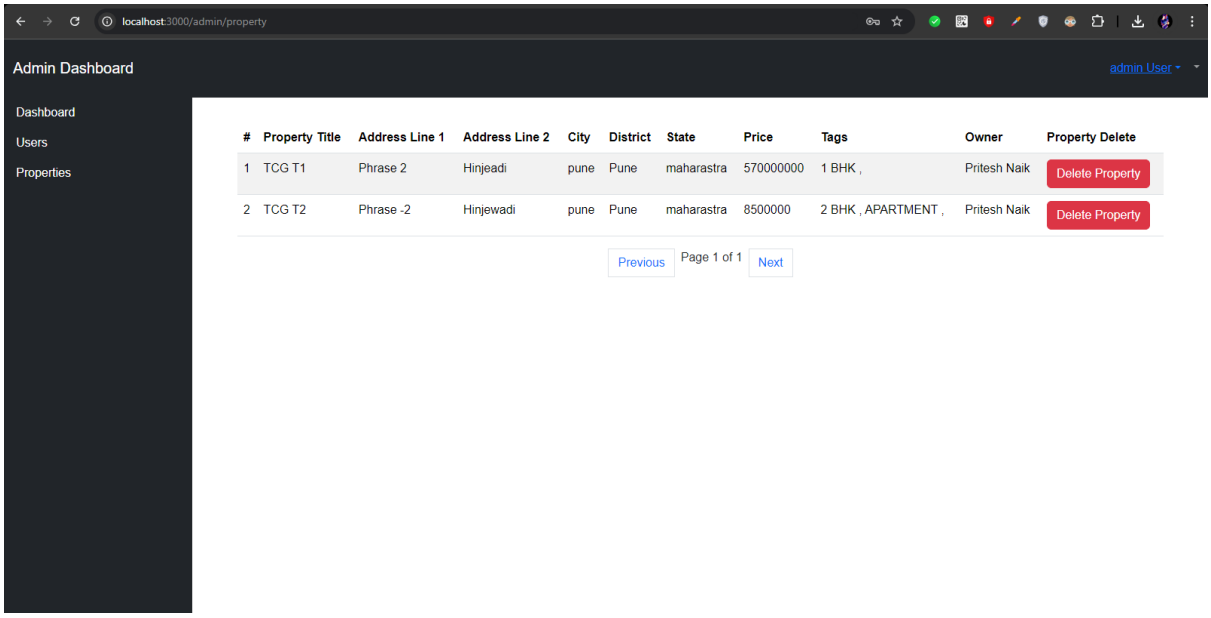
Admin Profile:



User List:



Property List:



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