Software Requirements Specification Report

for

Real Estate Website

Submitted by:-

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Revision History

Name	Date	Reason For Changes	Version

1.Introduction

1.1Purpose

The Real Estate Website is a web-based software solution designed to facilitate property buying, selling, and renting. It aims to provide a user-friendly platform for real estate agents, property owners, and potential buyers/renters to interact and engage in property-related transactions. This document outlines the functional and non-functional requirements of the website.

1.2 Intended Audience and Reading Suggestions

The document is intended for a broad audience, including developers, students, and educationalinstitutes.

For developers, the SRS document serves as a comprehensive guide for the design and development of the system. It outlines the functional and non-functional requirements, performance expectations, and security considerations, providing a clear understanding of thescope of the project. Developers should read the document carefully to ensure that their work aligns with the specified requirements and meets the expectations of all stakeholders.

For students, the SRS document provides an overview of the system's capabilities and the submission and review process, helping them to understand how to use the system effectively.They should read the document to gain a general understanding of the system's functionalitiesand how they can benefit from it.

For educational institutes, the SRS document outlines the goals and objectives of the project and provides a clear understanding of the system's capabilities, helping them to determine whether the system is suitable for their needs. The document should be read by relevant decision-makers to ensure that the system meets their requirements and expectations.

1.3 Product Scope

The scope of the Real Estate Website project defines the boundaries of the project, outlining what the system will and will not do. The scope of the project includes the following:

• User registration and authentication for users and administrators
• Property listings with details such as property type, location, price, amenities, and images.
• Advanced search and filtering options for users to find suitable properties
• Property details pages with comprehensive information about each listing.
• Property comparison feature to compare multiple properties side by side.
• User communication functionality to inquire about properties and schedule viewings.
• User profiles for managing preferences and interactions.
• Admin panel for managing listings, users, and reported content.

1.4 References

- https://www.w3schools.com/asp/webpages_intro.asp
- https://dotnet.microsoft.com/en-us/
- https://dotnettutorials.net/

2. Overall Description

2.1 Product Perspective

The Real Estate Website will be a standalone web application accessible through standard web browsers. It will interact with users and the database to facilitate property-related activities. The website's design will focus on ease of use, responsiveness, and efficient property search and management.

2.2 Product Functions

The Real Estate Website will offer the following key functions:

2.2.1 User Registration and Authentication

- Users can create accounts and log in securely using their credentials.
- Administrators will have elevated access and permissions for managing the system.

2.2.2 Property Listings

- Property owners or real estate agents can list properties for sale or rent.
- Each listing will include property details, images, and contact information.

2.2.3 User Communication

- Users can inquire about properties or schedule viewings through the website.
- Property owners/agents can respond to user inquiries.

2.2.4 User Profiles

- Registered users will have personalized profiles to manage preferences and interactions.
- Users can view their activity history and track property interactions.

2.2.5Admin Panel

- An admin panel will be provided for website administrators to manage listings, users, and reported content.
- Administrators will have authority to verify property listings and approve user registrations.

2.3 User Classes and Characteristics

The Real Estate Website has three main user classes:

1. **Users:**
   - Characteristics: General users looking to buy or rent properties.
   - Requirements: Users should be able to register, log in, search for properties, and communicate with property owners/agents.
2. **Property Owners/Agents:**
   - Characteristics: Individuals or entities with properties to list
   - Requirements: Property owners/agents should be able to create property listings, manage their listings, a nd respond to user inquiries.

3. **Administrators:**
   • Characteristics: Website administrators responsible for system management.
   • Requirements: Administrators should have access to all system data and functionalities, including managing users, listings, and reported content.

2.4 Operating Environment

• Hardware Platform:
The Real Estate Website will run on standard computer hardware, including desktop computers, laptops, tablets, and smartphones.

• Operating System:
The website will be compatible with major operating systems, including Windows, macOS, iOS, and Android.

• Web Browser Compatibility:
The website will be accessible through popular web browsers, such as Google Chrome, Mozilla Firefox, Safari, and Microsoft Edge.

• Database Management System:
The website will rely on a database management system (DBMS) to store and manage data. MySQL will be used as the database engine.

• Web Server:
The website will be hosted on a web server, ensuring its availability over the internet.

2.5 User Documentation

The Real Estate Website will include user documentation to guide users through its functionalities. The documentation will be accessible through the website and will provide instructions on registration, property search, listing management, and communication.

2.6 Assumptions and Dependencies Assumptions:

Assumptions:

• Users have basic computer literacy and can navigate web-based applications.

• Property owners/agents will provide accurate and up-to-date information for property listings. • Users will have access to modern web browsers and stable internet connections.

Dependencies:

• Availability of a web server and hosting infrastructure.

• Access to user contact information and details.

3.External Interface Requirements

3.1 User Interfaces

• The user interface of the Real Estate Website will be intuitive, user-friendly.

• Users will interact with the system through web browsers on various devices, including desktops, laptops, tablets, and smartphones.

• The web application provides a good graphical interface to ensure that the new users can make use of system with ease.

3.2Hardware Interfaces

1. **Client Devices:**
   - Supported Device Types: Desktop computers, laptops, tablets, and smartphones.
   - Operating System: Windows, macOS, iOS, and Android.
   - Web Browser: Google Chrome, Mozilla Firefox, Safari, and Microsoft Edge.
   - Display and Input: The user interface should adapt to different screen sizes and resolutions, providing optimal user experience on various devices.

2. **Server Infrastructure:**
   - Database Server: MySQL database server

3. **Networking:**
   • Internet Connectivity: The system operates over the internet, requiring reliable internet connectivity on both client devices and the server infrastructure for seamless communication.

3.3 Software Interfaces

The Real Estate Website will interact with various software components and technologies to facilitate its functionality:

1. Console Interface:
   • The website's user interface uses Dot Net framework to build the user interfaces.
   • The backend will be built using ASP.NET and C# to handle user requests and process data.
2. Database Interface (MySQL):
   • The website will communicate with the MySQL database to perform CRUD (Create, Read, Update, Delete) operations on data entities such as property listings and user profiles.
3. Operating System Interface (Windows):
   • The Real Estate Website is developed and deployed on a Windows operating system environment.

4.System Features

4.1 Description and Priority

The Property Tracking feature is of High priority. It allows property owners and real estate agents to monitor and manage various properties listed on the website. The system will track key details and activities related to each property, providing valuable insights to property owners and facilitating efficient property management.

4.2 Stimulus/Response Sequences

• Property owners and agents can add new properties to the website's database, providing essential information such as property type, location, price, area, and amenities.
• When a property is successfully added, the system will display a confirmation message.
• In case of any errors during property addition, the system will show appropriate error messages to users.

4.3 Functional Requirements

• REQ-1: The system must accurately track and store property details, including property type, location, price, area, and amenities.
• REQ-2: Property owners/agents can update and edit property information as needed.
• REQ-3: The system will provide a search and filtering functionality for property owners/agents to easily find and manage their listed properties.
• REQ-4: Property owners/agents can view analytics and insights related to their listed properties, such as the number of views, inquiries, and interactions.
• REQ-5: The system will calculate and display relevant metrics for each property, such as average price per square foot or average inquiry response time.

5.Other Nonfunctional Requirements

5.1 Performance Requirements

- **Response Time:** The system should respond to user actions within 2 seconds to ensure a smooth user experience.
- **Database Performance:** Database queries and operations should have optimal response times to efficiently handle data retrieval and updates.
- **Error Handling:** The system should handle errors gracefully and provide informative error messages without impacting performance

5.2 Safety Requirements

- Data Security: User data, including personal information and financial details, is securely stored and protected from unauthorized access
- Authentication and Authorization: Implemented a robust system for user authentication and authorization to prevent unauthorized access.

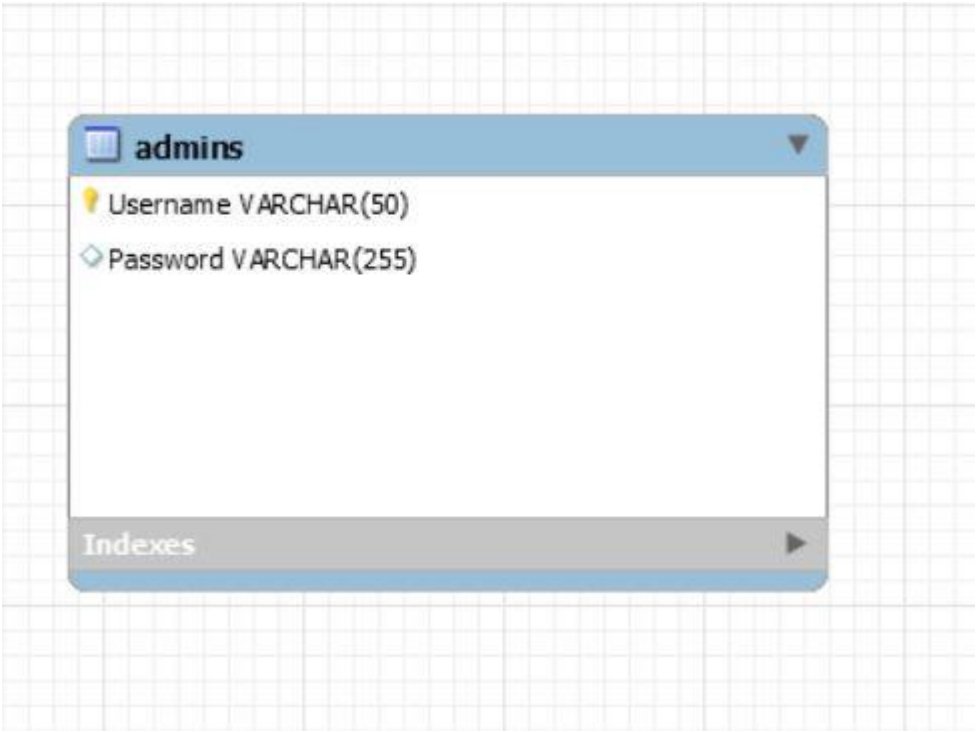
5.3 Security Requirements

- Implemented secure user authentication.
- Uses access control to restrict user access based on roles.

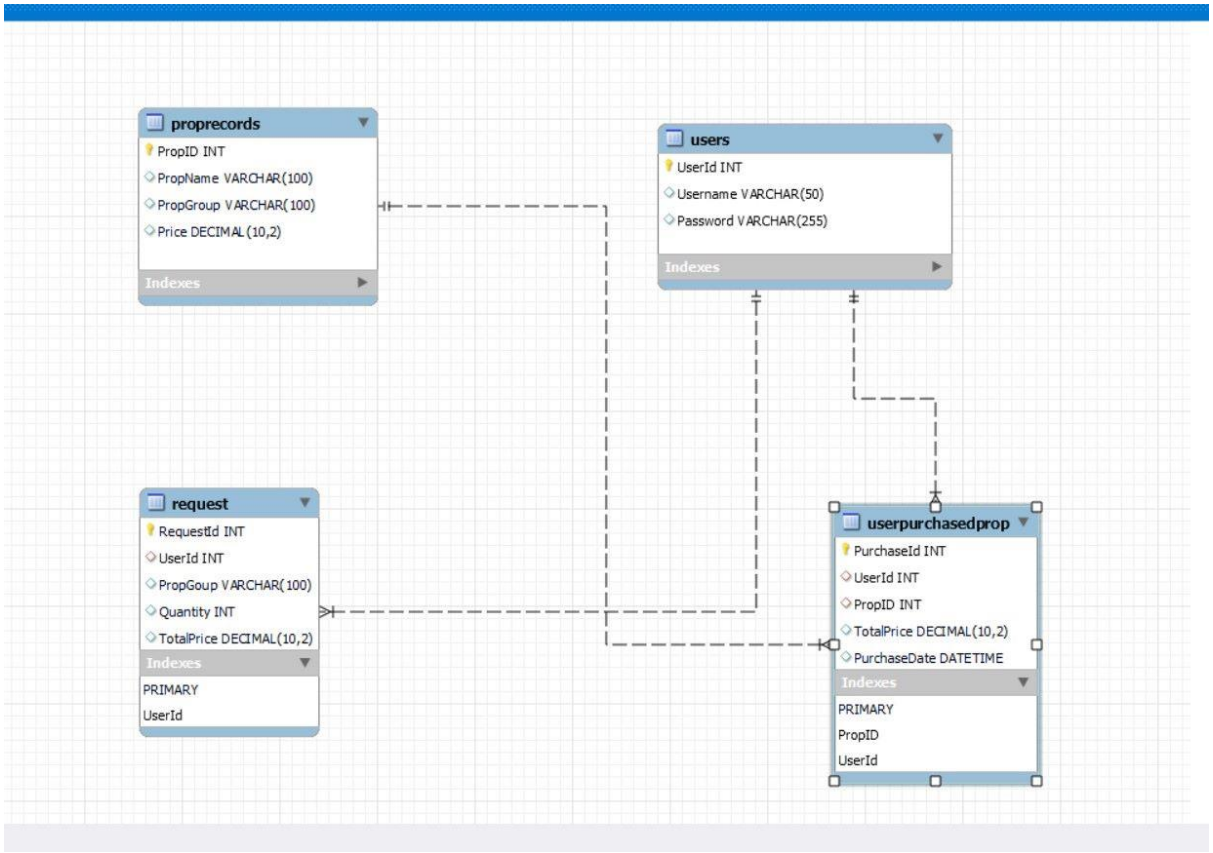
Appendix A: Glossary

Sr. No.	Abbreviation	Full Form
1.	API	Application Programming Interface
2.	AWS	Amazon Web Service
3.	CLI	Command line Argument
4.	GB	Gigabyte
5.	HTML	Hypertext Markup Language
6.	ID	Identification
7.	JS	JavaScript
8.	OS	Operating System
9.	RAM	Random Access Memory
10.	SQL	Structured Query Language
11.	SRS	Software Requirement Specification
12.	URL	Uniform Resource Locator
13.	ER	Entity Relationship

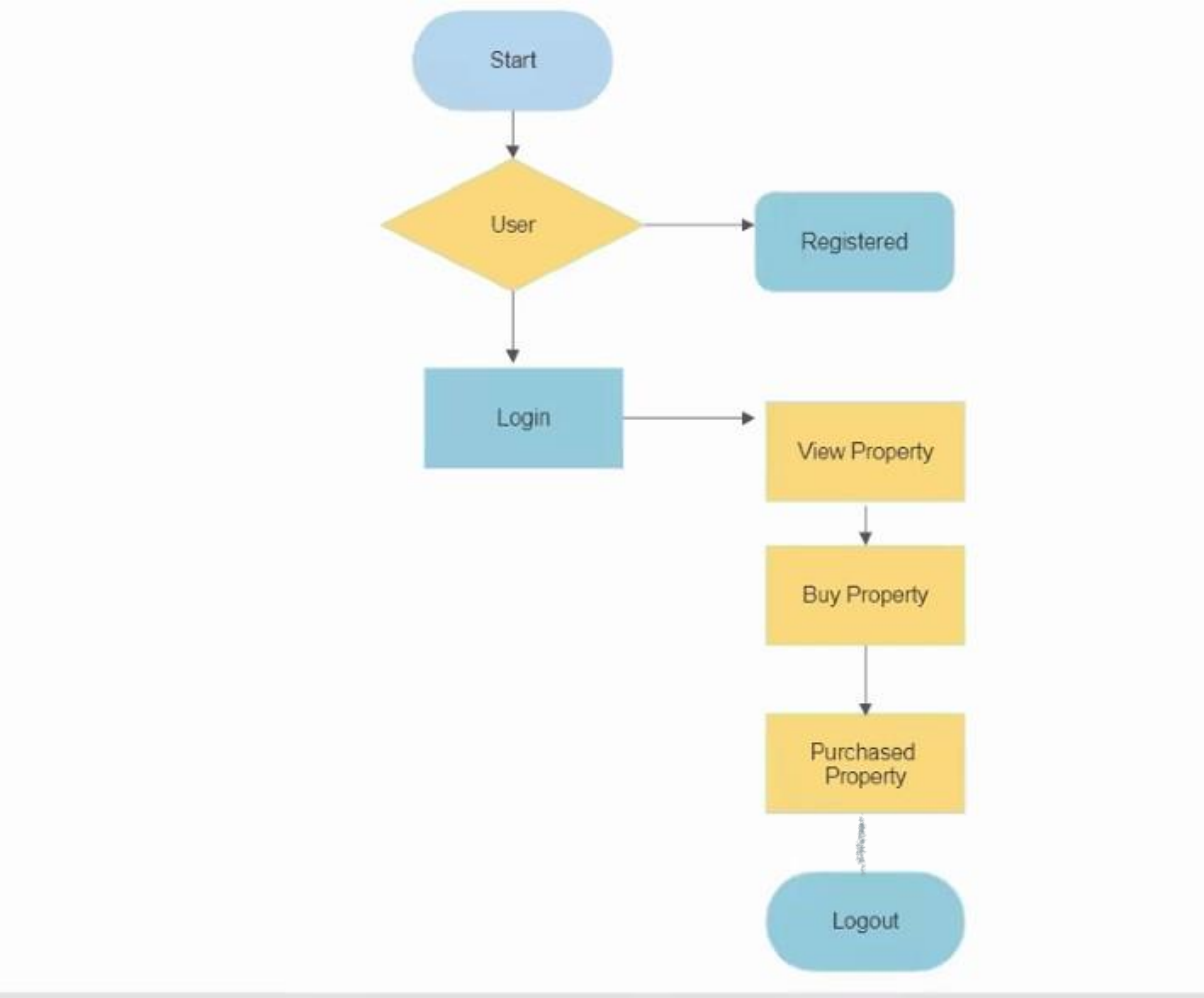
Appendix B: Analysis Models



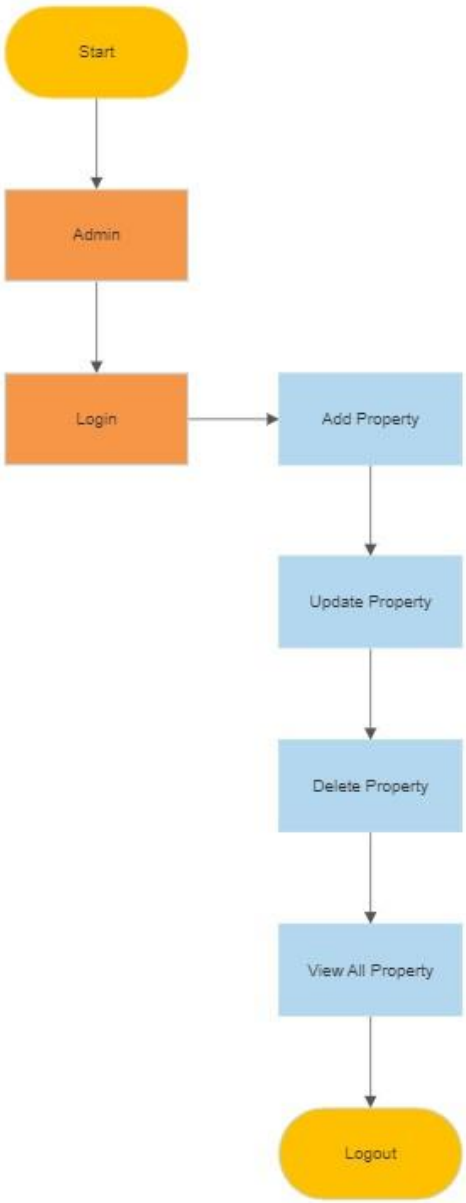
Entity Relationship Diagram:



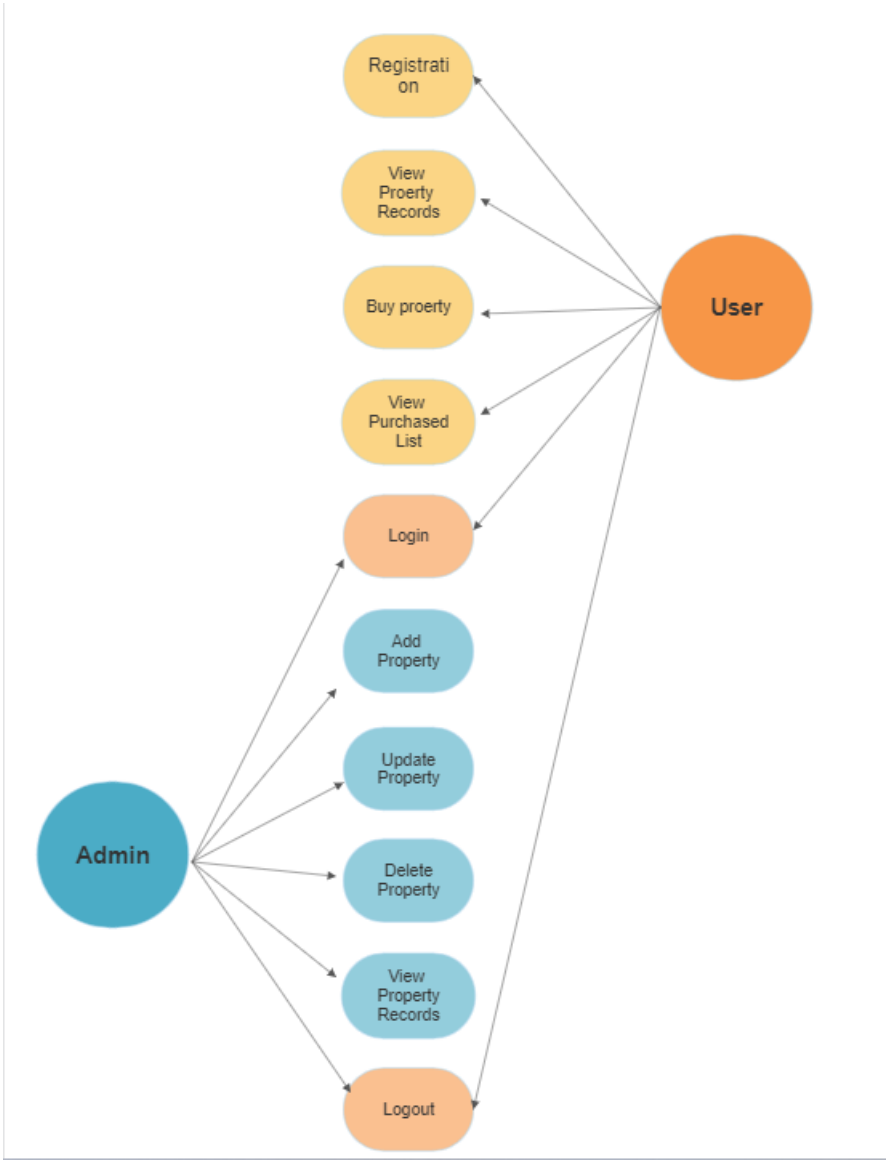
User Flow Chart :



Admin Flow Chart :



Use case diagram:



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        $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
        $$$                                                 $$$
        $$$             Real Estate Website                 $$$
        $$$                                                 $$$
        $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$

1. Admin Login
2. User Registration
3. User Login
4. Exit
Enter your choice:
Invalid input. Please enter a valid integer choice.
1. Admin Login
2. User Registration
3. User Login
4. Exit
Enter your choice: 1
Enter Admin Username: Pradip
Enter Admin Password: pradipddd

Admin login successful............


==============Admin Menu===================
1. Add New Property record
2. Update Property record
3. Delete Property record
4. View All available Property records
5. Logout
```

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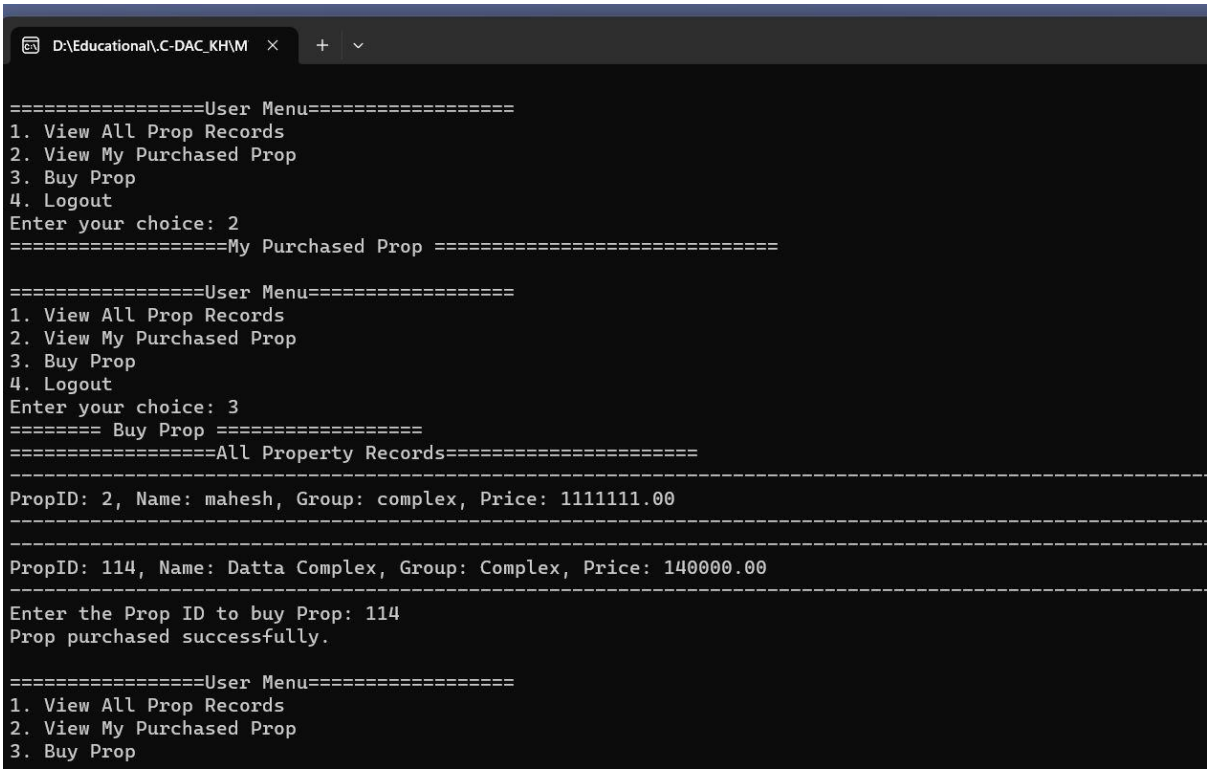
```
1. Admin Login
2. User Registration
3. User Login
4. Exit
Enter your choice: 1
Enter Admin Username: Pradip
Enter Admin Password: Pradip@12

Admin login successful............


==============Admin Menu===================
1. Add New Property record
2. Update Property record
3. Delete Property record
4. View All available Property records
5. Logout
Enter your choice: 1

--- Add New Prop Record ---
Enter Prop Record:
Enter the Prop ID : 114
Enter Prop name : Datta Complex
Enter Prop Type : Complex
Enter  Price : 140000

Property Record added successfully...
```



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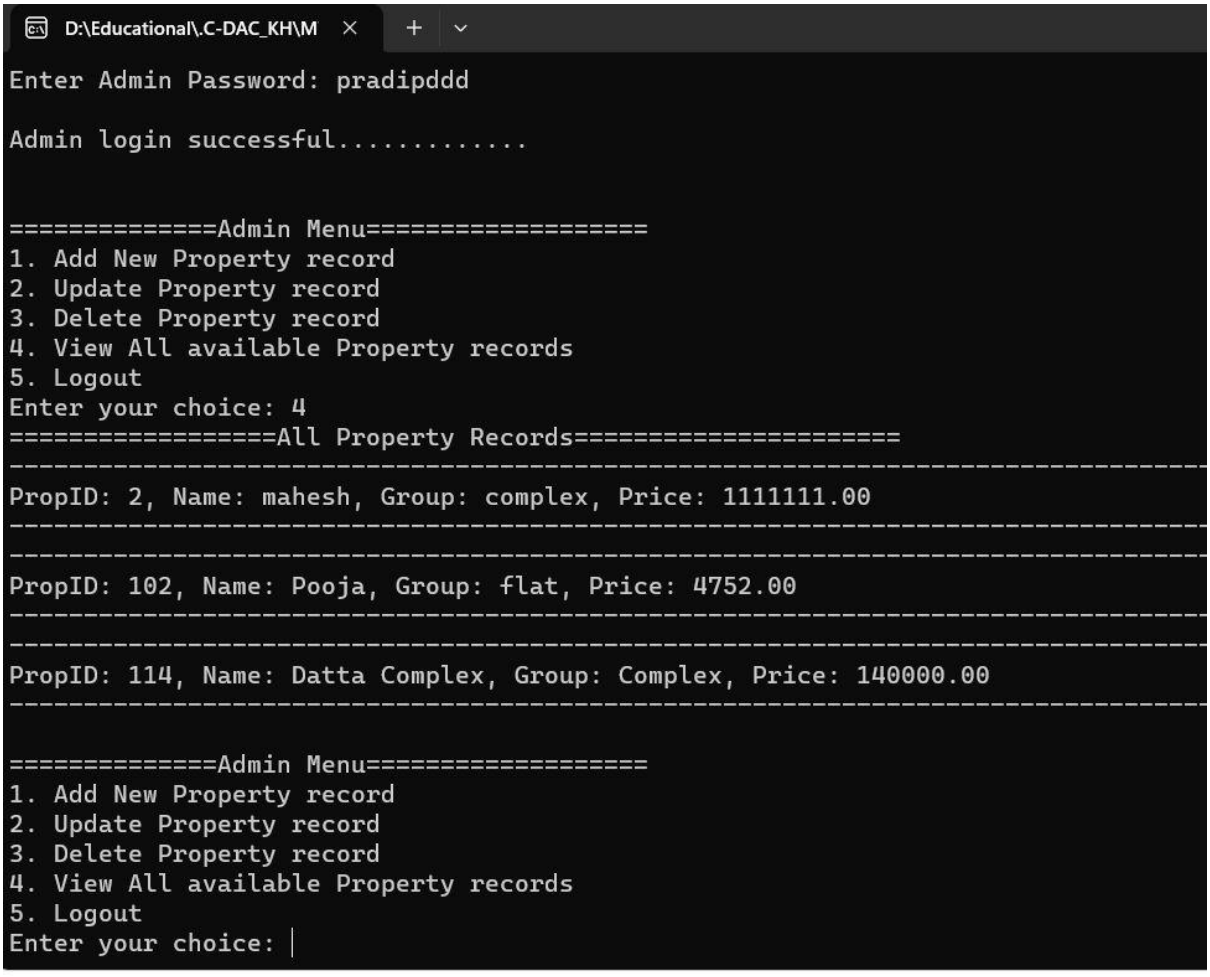
=================User Menu==================
1. View All Prop Records
2. View My Purchased Prop
3. Buy Prop
4. Logout
Enter your choice: 2
==================My Purchased Prop ============================

=================User Menu==================
1. View All Prop Records
2. View My Purchased Prop
3. Buy Prop
4. Logout
Enter your choice: 3
======== Buy Prop ==================
==================All Property Records======================
-------------------------------------------------------------------------------------------------------------
PropID: 2, Name: mahesh, Group: complex, Price: 1111111.00
-------------------------------------------------------------------------------------------------------------
-------------------------------------------------------------------------------------------------------------
PropID: 114, Name: Datta Complex, Group: Complex, Price: 140000.00
-------------------------------------------------------------------------------------------------------------
Enter the Prop ID to buy Prop: 114
Prop purchased successfully.

=================User Menu==================
1. View All Prop Records
2. View My Purchased Prop
3. Buy Prop
```



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Enter Admin Password: pradipddd

Admin login successful.............


==============Admin Menu====================
1. Add New Property record
2. Update Property record
3. Delete Property record
4. View All available Property records
5. Logout
Enter your choice: 4
==================All Property Records======================
-------------------------------------------------------------------------------------------------------------
PropID: 2, Name: mahesh, Group: complex, Price: 1111111.00
-------------------------------------------------------------------------------------------------------------
-------------------------------------------------------------------------------------------------------------
PropID: 102, Name: Pooja, Group: flat, Price: 4752.00
-------------------------------------------------------------------------------------------------------------
-------------------------------------------------------------------------------------------------------------
PropID: 114, Name: Datta Complex, Group: Complex, Price: 140000.00
-------------------------------------------------------------------------------------------------------------

==============Admin Menu====================
1. Add New Property record
2. Update Property record
3. Delete Property record
4. View All available Property records
5. Logout
Enter your choice:
```

Appendix C: TestCases

```
[TestFixture]
public class TestClasses
{
 [Test]
 public void TestUserClass()
 {
 // Arrange
 var user = new User
 {
 Username = "john_doe",
 Password = "strongPassword123",

};
 // Assert
 Assert.AreEqual("john_doe", user.Username);
 Assert.AreEqual("strongPassword123", user.Password);
```