



VIT-AP UNIVERSITY

SOFTWARE ENGINEERING

LAB - L55 + L56

CSE 1005

HOUSE-HUB

BATCH-13

Submitted by

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Problem Statement

In today's fast-paced real estate market, both buyers and renters struggle to find suitable housing options that meet their specific needs, while sellers face challenges in efficiently reaching potential customers. The current online platforms often lack user-friendly interfaces, detailed property listings, and secure, streamlined processes for transactions. Additionally, the absence of tailored authentication systems for buyers and sellers leads to complications in managing accounts and property listings.

House-Hub aims to bridge this gap by creating a comprehensive web platform that provides a seamless interface between customers and sellers. It offers detailed listings of houses available for sale or rent, allowing customers to browse, compare, and complete transactions directly on the site. For sellers, **House-Hub** provides an easy-to-use account management system, enabling them to list their properties with all necessary details, ensuring they reach the right audience. The platform also incorporates distinct authentication mechanisms for users and sellers, ensuring that each group has access to the appropriate tools and features, with all login details securely stored in a database.

House-Hub addresses the need for a unified, secure, and efficient real estate platform that simplifies the buying, renting, and selling processes, ultimately enhancing the experience for all parties.

HOUSE-HUB

(WEB DEVELOPMENT)

SRS DOCUMENT

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1. Introduction

1.1 Purpose

House-Hub simplifies real estate by connecting buyers, renters, and sellers on a single platform. It enables easy property browsing, secure transactions, and efficient property management, enhancing the overall experience for all users.

1.2 Scope

House-Hub will offer a platform where users can browse and secure properties, and sellers can list and manage their offerings. It will include separate authentication for users and sellers, along with secure transaction processing. The platform will be mobile-responsive and scalable for future growth.

1.3 Definitions, Acronyms, and Abbreviations

User: An individual interacting with the House-Hub platform, either as a buyer/renter or a seller.

UI: User Interface, the visual elements of the House-Hub platform that users interact with.

DB: Database, the system used to store and manage user, seller, and property information.

Authentication: The process of verifying a user's identity to grant access to a system or application.

1.4 References

- Zillow Real Estate Data on Kaggle: [Link](#)
- U.S. Real Estate Data from Redfin: [Link](#)

1.5 Overview

This SRS document details the overall description of the system, specific functional and non-functional requirements, and other essential components for the successful development and deployment of the House-Hub system.

2. Overall Description

2.1 Product Perspective

The platform simplifies the real estate process by offering a unified interface for both buyers/renters and sellers. It enables users to browse, compare, and secure properties, while sellers can efficiently list and manage their offerings. With secure transactions and intuitive navigation, it enhances the overall real estate experience for all parties involved.

2.2 Product Functions

- **Property Listings:** Sellers can create and manage property details.
- **User Browsing:** Buyers/renters can search and view property listings.
- **Transaction Processing:** Securely handles property purchases and rentals.
- **Account Management:** Separate authentication for users and sellers.
- **Communication Tools:** Enables direct messaging between users and sellers.

2.3 User Classes and Characteristics

- **Buyers/Renters:** Search for properties, requiring easy browsing and secure transactions.
- **Sellers:** List and manage properties, needing tools for listings and transaction tracking.
- **Administrators:** Manage the platform, monitor activity, and ensure security and functionality.

2.4 Operating Environment

- **Hardware:** Servers for hosting, client devices like desktops and smartphones.
- **Software:** Database (MySQL), and web technologies (HTML, CSS, JavaScript, NODE.JS).
- **Platforms:** Node.js for back-end, React for front-end, AWS, Azure.

2.5 Design and Implementation Constraints

- **Performance:** Ensure the platform loads quickly and handles multiple users efficiently.
- **Security:** Implement strong measures to protect user data and transactions.
- **Compatibility:** Design for compatibility across various devices, OS and browsers
- **Scalability:** Build a scalable architecture to accommodate growth in users and data.

2.6 Assumptions and Dependencies

- **Internet Access:** Reliable internet for platform use.
- **Browser Compatibility:** Modern, updated browsers for full functionality.
- **Cloud Services:** Dependence on cloud services for hosting and scalability.
- **Third-Party Integrations:** Reliable payment and communication services.

3. Specific Requirements

3.1 Functional Requirements

- **FR1:** The system shall allow users to browse and filter property listings based on criteria such as location, price, and features.
- **FR2:** The system shall enable sellers to create, edit, and manage property listings, including adding descriptions, photos, and pricing information.
- **FR3:** The system shall provide secure transaction processing for purchasing or renting properties, ensuring a completion rate of at least 95%.
- **FR4:** The system shall support real-time updates for property availability and transaction status, with updates reflected within 1 minute.
- **FR5:** The system shall log all user actions, property listings, and transactions for auditing and reporting purposes.

- **FR6:** The system shall offer an API for integrating with third party services such as payment gateways and communication tools, to enhance functionality.

1.2 Non-Functional Requirements

- **NFR1:** The system shall ensure data privacy and comply with relevant data protection regulations GDPR, CCPA
- **NFR2:** The system shall be scalable to handle a large number of concurrent users and property listings.
- **NFR3:** The system shall be available 99.9% of the time to ensure reliability and uptime.
- **NFR4:** The system shall have a mean time to recovery (MTTR) of less than 2 hours in case of outages or disruptions.
- **NFR5:** The system shall provide detailed logging and monitoring capabilities to track user activity, system performance, and errors.

2. Appendices

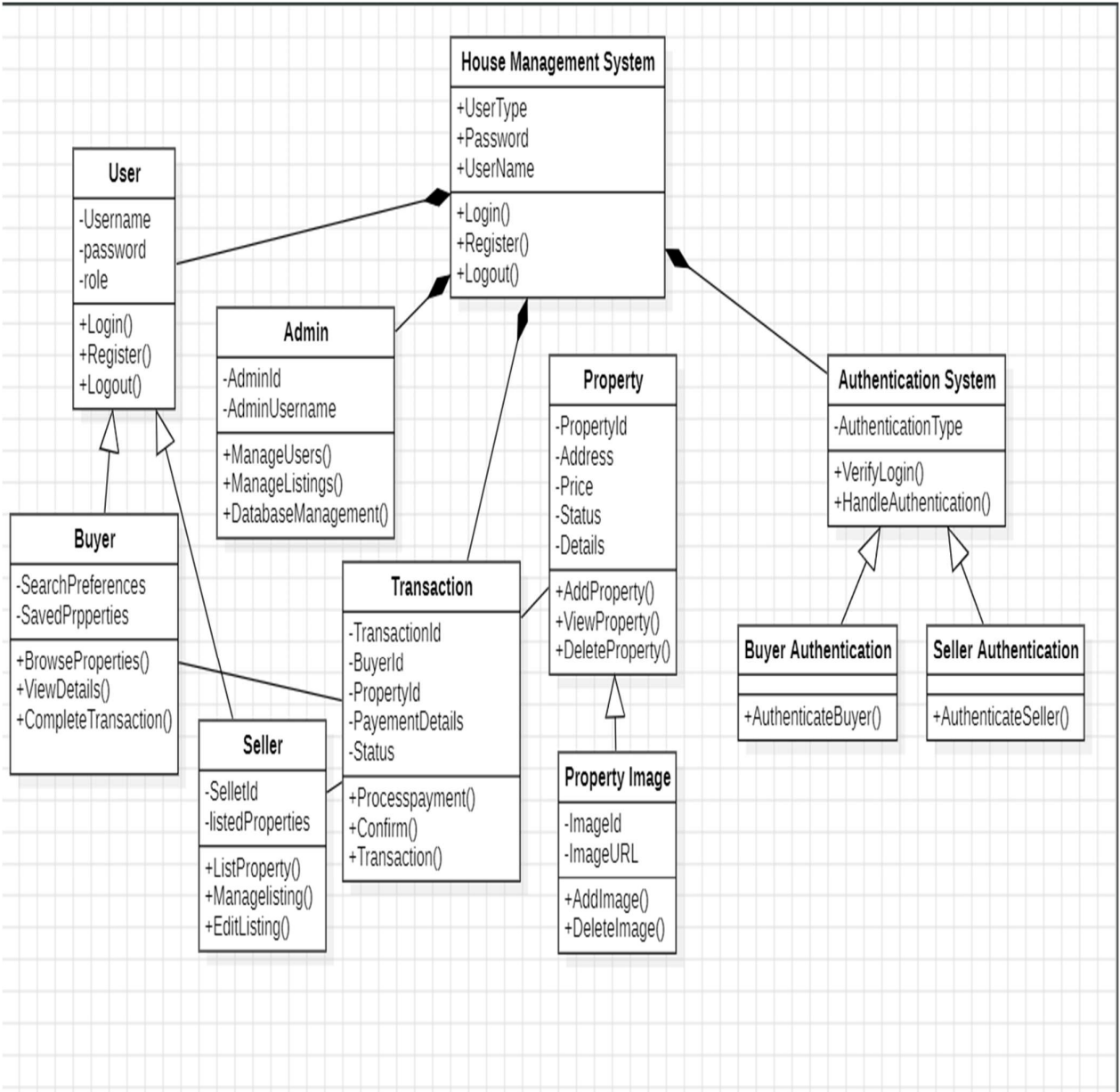
2.1 Glossary

- **Fraud Detection:** Identifying and preventing fraudulent activities.
- **Anomaly Detection:** Finding unusual patterns that may indicate fraud.
- **Data Integrity:** Ensuring data accuracy and consistency.
- **Transaction Monitoring:** Observing transactions to detect and prevent fraud.

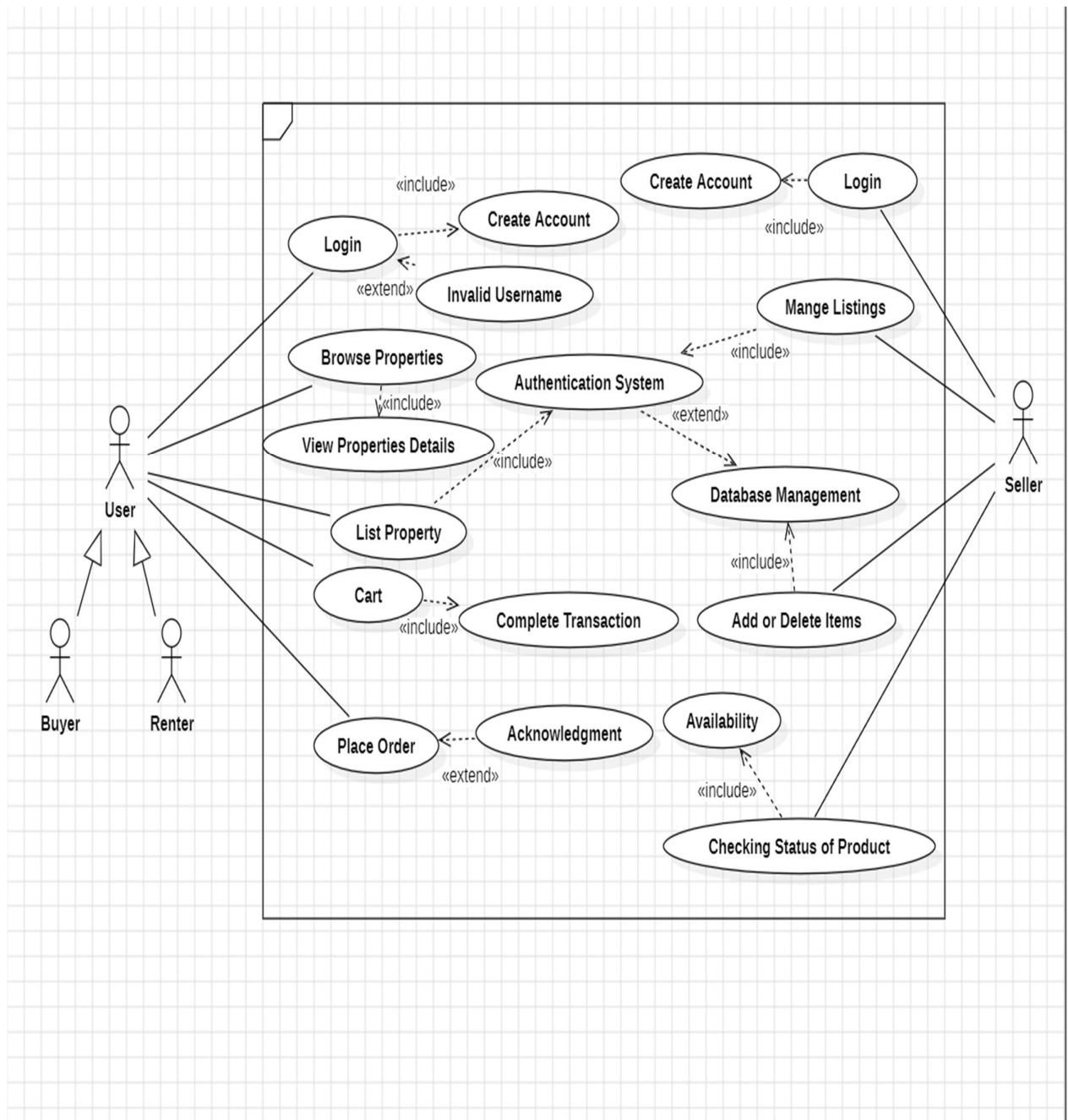
2.2 References

- Mozilla Developer Network Web Docs: <https://developer.mozilla.org/>
- Stack Overflow: <https://stackoverflow.com/>
- W3Schools: <https://www.w3schools.com/>

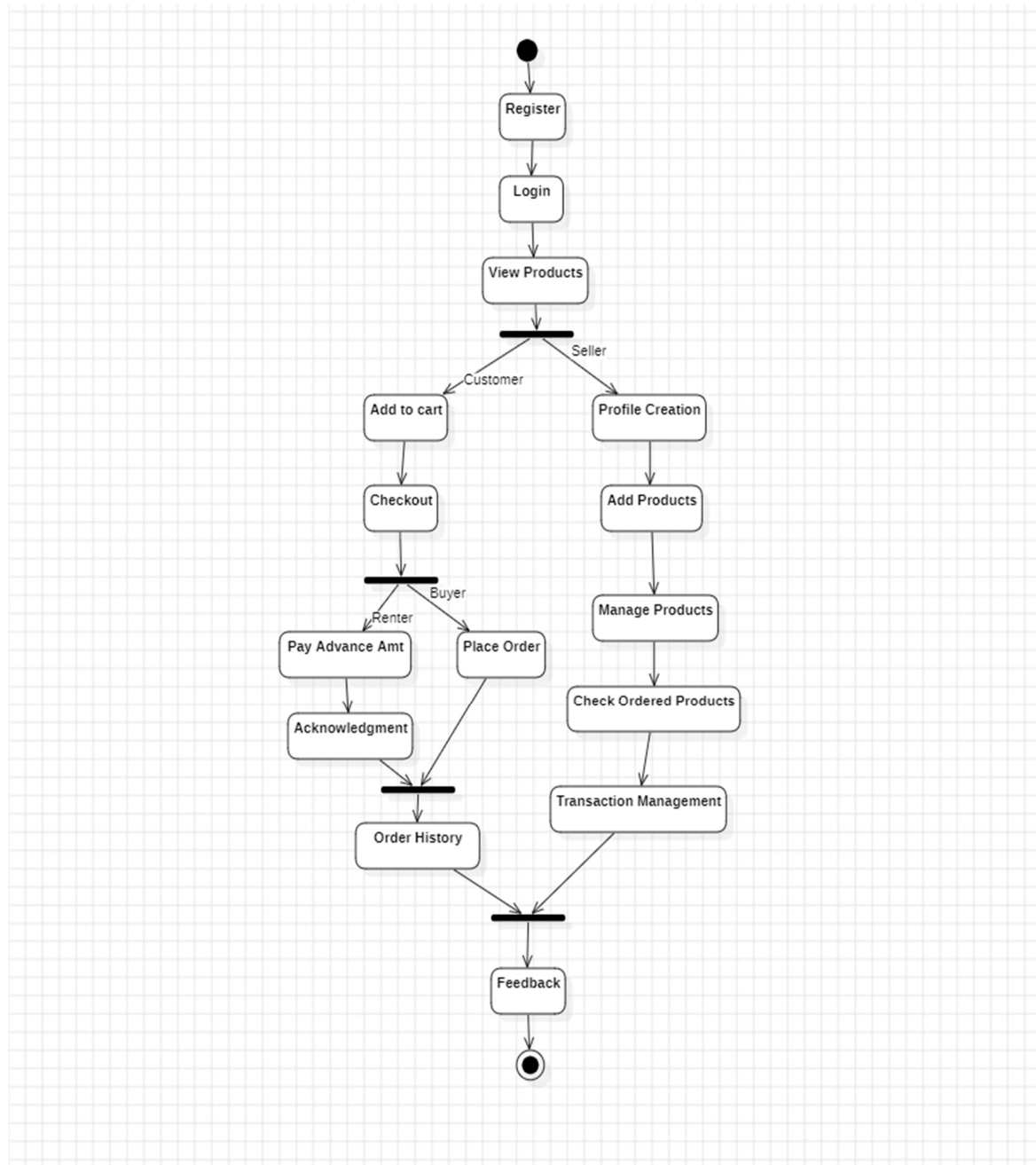
CLASS DIAGRAM



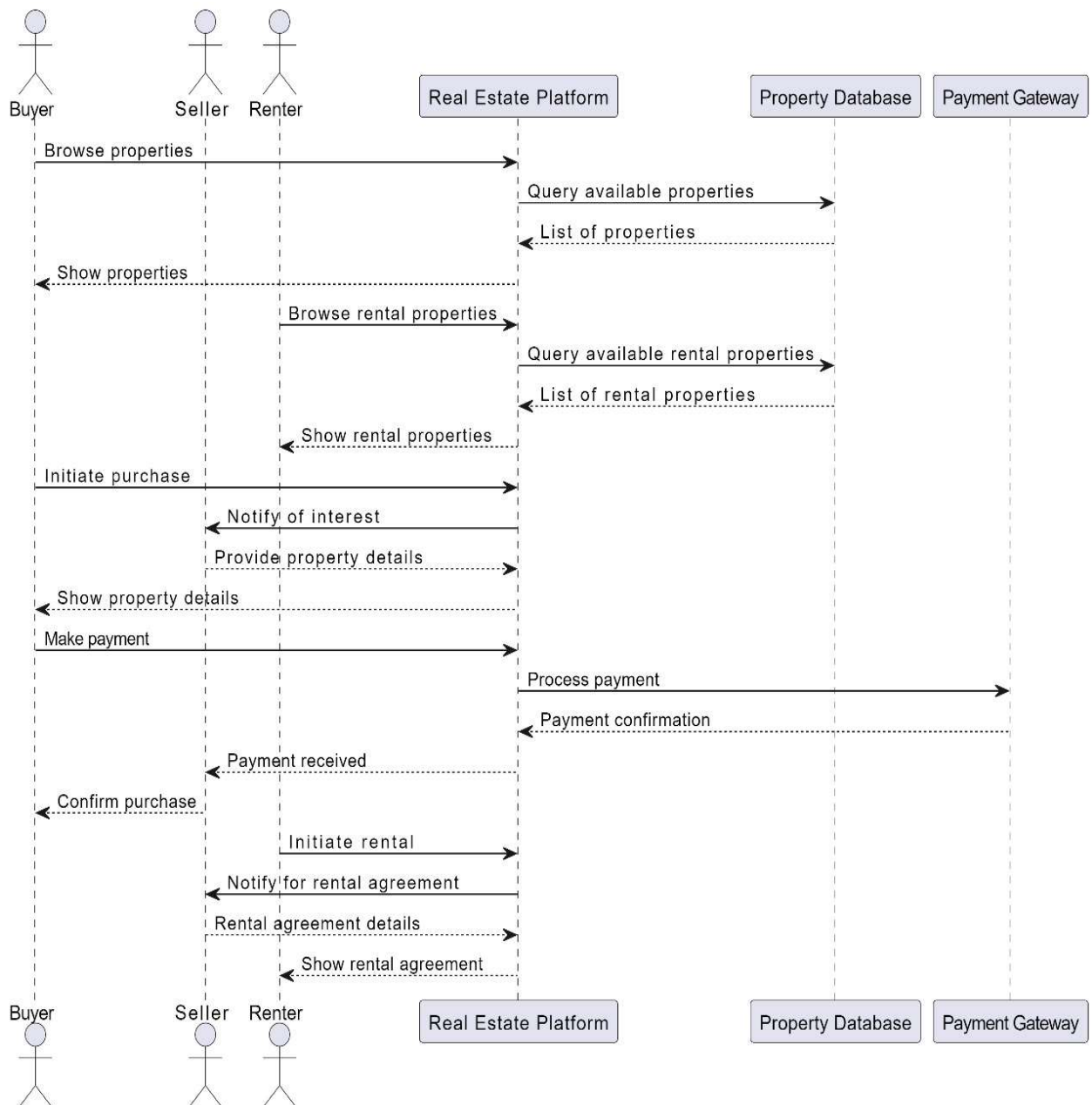
USE CASE DIAGRAM



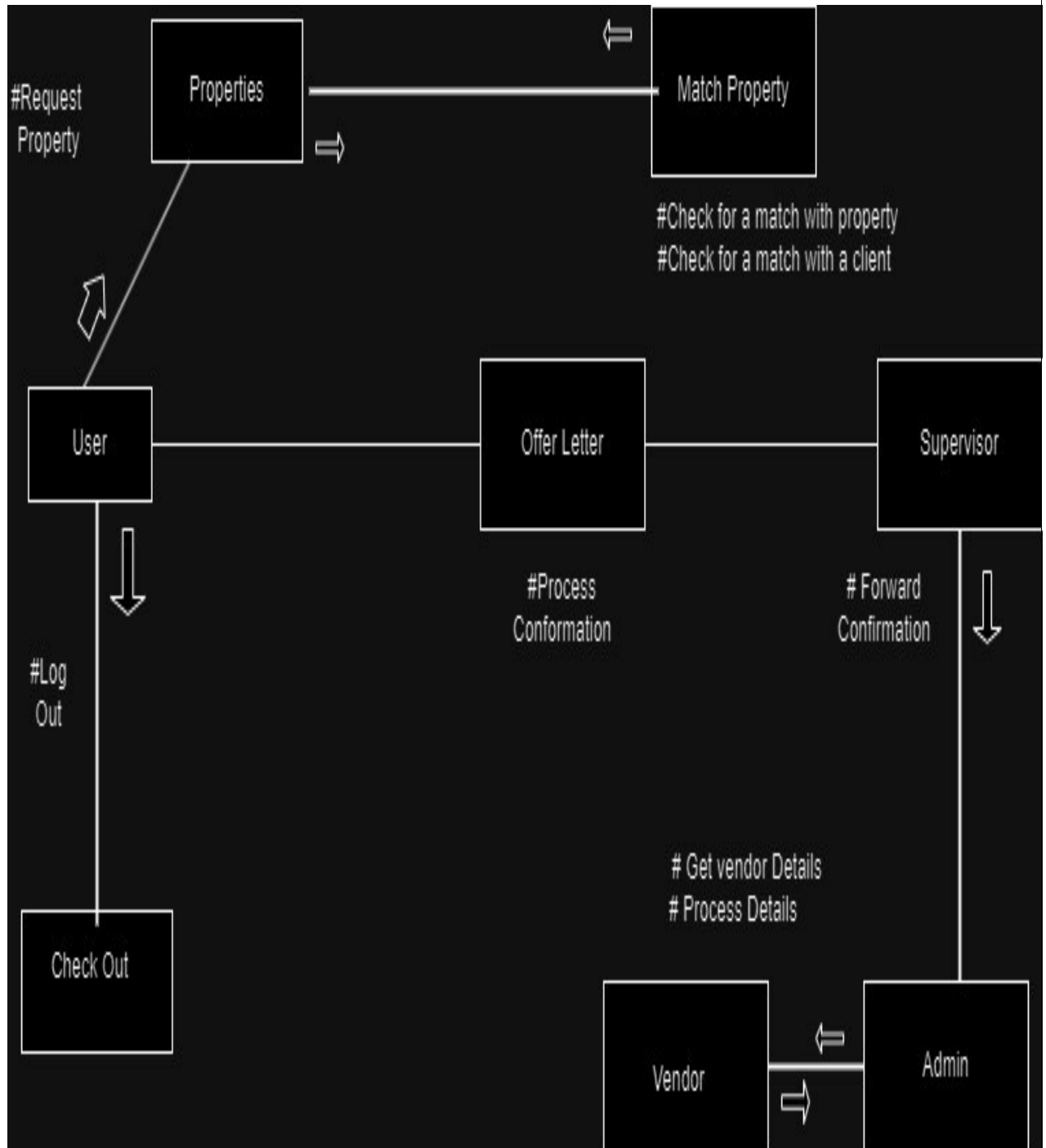
STATE CHART DIAGRAM



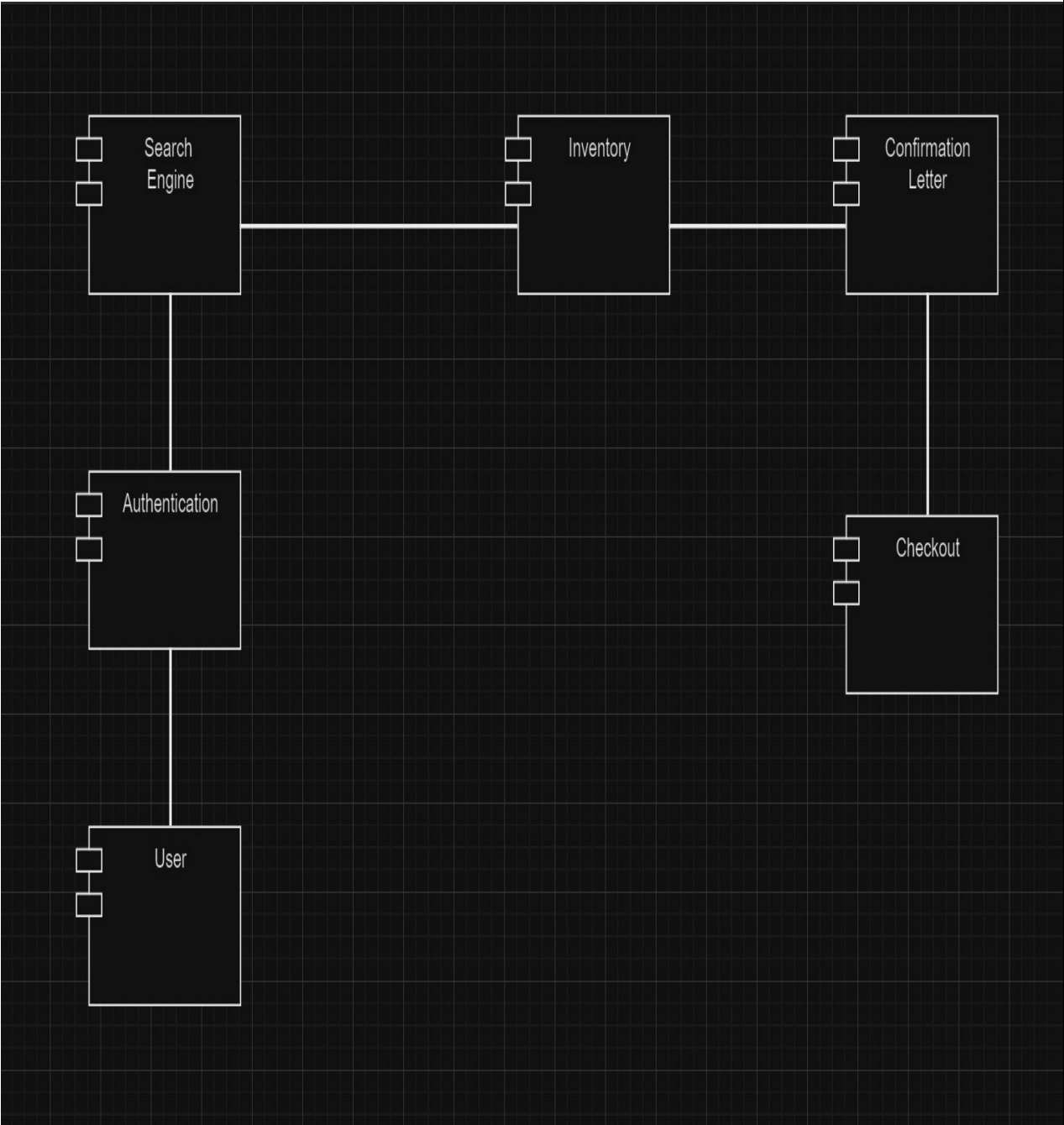
SEQUENCE DIAGRAM



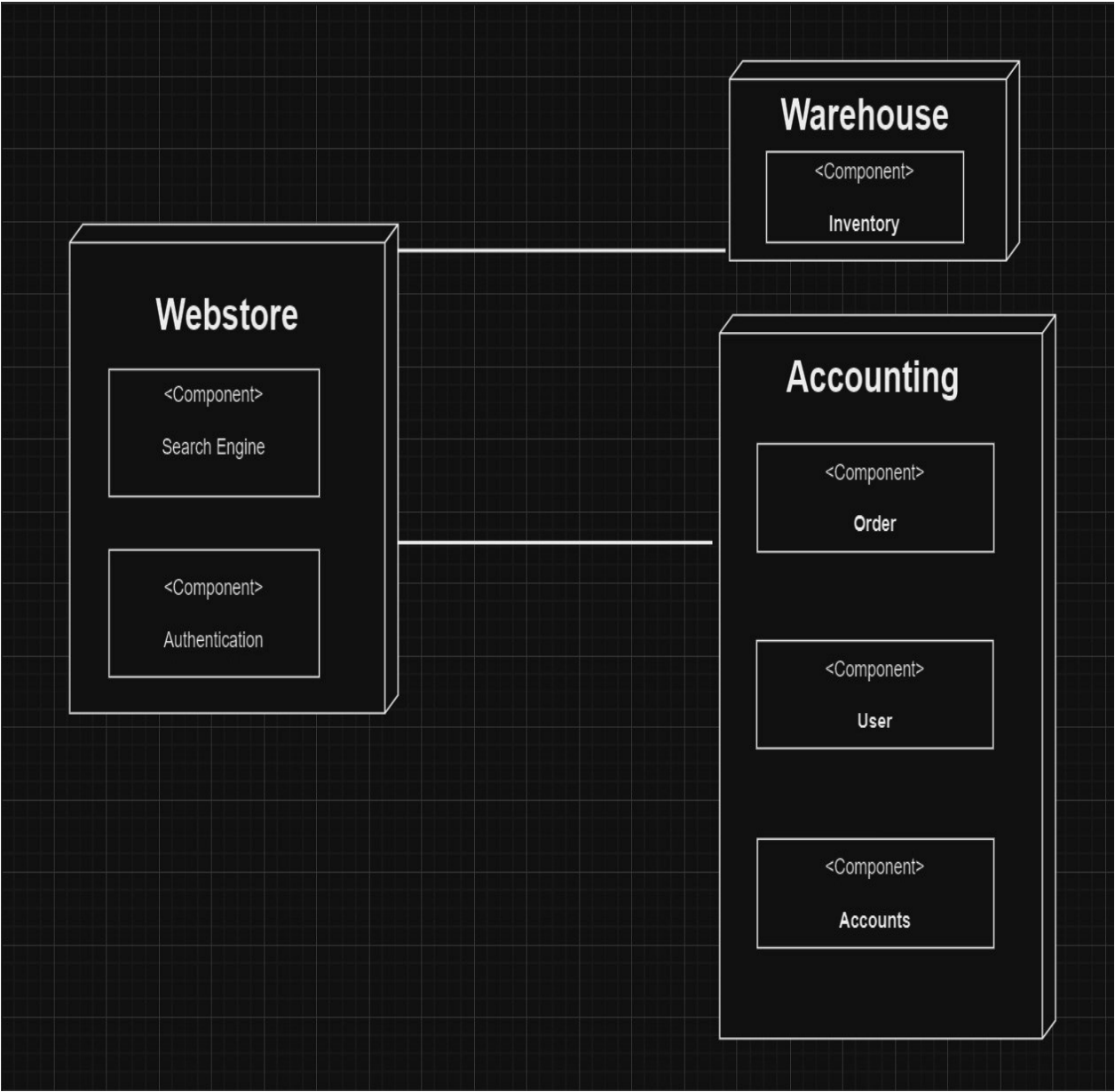
COLLABORATION DIAGRAM



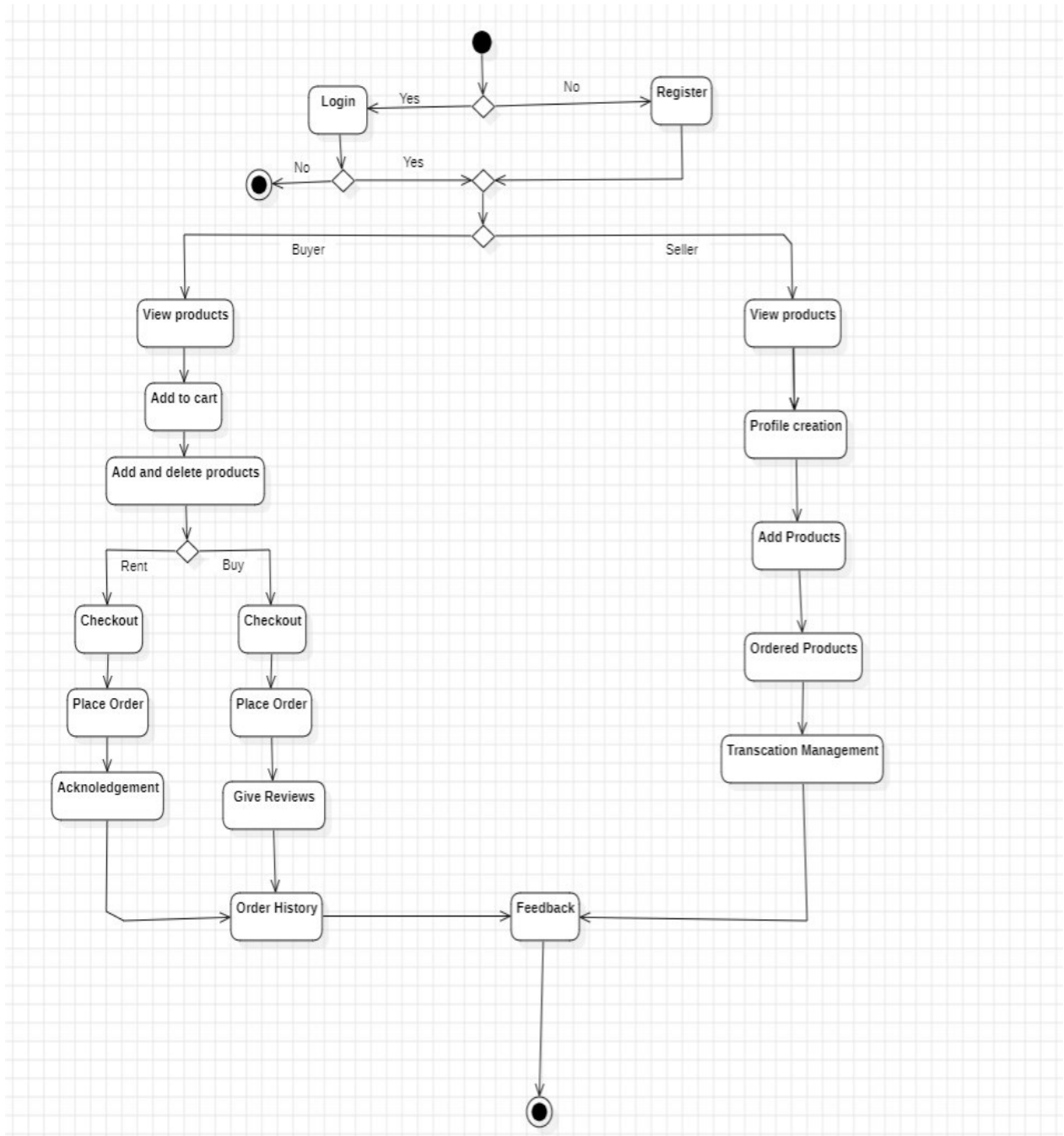
COMPONENT DIAGRAM



DEPLOYMENT DIAGRAM




ACTIVITY DIAGRAM



PROJECT CODING

1.TITLE PAGE:

House Hub



House-Hub aims to bridge this gap by creating a comprehensive web platform that provides a seamless interface between customers and sellers. It offers detailed listings of houses available for sale or rent, allowing customers to browse, compare, and complete transactions directly on the site. For sellers, House-Hub provides an easy-to-use account management system, enabling them to list their properties with all necessary details, ensuring they reach the right audience. The platform also incorporates distinct authentication mechanisms for users and sellers, ensuring that each group has access to the appropriate tools and features, with all login details securely stored in a database.

[Register](#)[Login](#)

2.REGISTRATION PAGE:

Registration Form

First Name

Last Name

Please fill out this field.

Email

Mobile Number

Address

Register

3.LOGIN PAGE:

Login

Username

Enter your username

Password

Enter your password

Login


4.HOME PAGE:

HouseHub

Search for houses...

LoginRegister

HomeBuyRentSellContact Us




Luxury Villa

★★★★★

Location: New York, USA

View More




Modern Apartment

★★★★★

Location: New York, USA

View More




Maplewood Cottage

★★★★★

Location: New York, USA

View More




Rosewood Manor

★★★★★

Location: New York, USA

View More




Willowbrook Estate

★★★★★

Location: New York, USA

View More




Sunnyvale Residence

★★★★★

Location: New York, USA

View More




Bluebird Haven

★★★★★

Location: New York, USA

View More




Oakridge Villa

★★★★★

Location: New York, USA

View More




Pinecrest Lodge

★★★★★

Location: New York, USA

View More




Stonegate House

★★★★★


Location: New York, USA

View More




John Doe

View More




Mustaq

View More




Joseph Paul

View More



Sunny Dayal

View More



Ramakanth

View More

Customer Reviews

"This website has been amazing for finding my new home. The quality of listings is top-notch and the user experience is smooth."


5.PRODUCT PAGE:

House-Hub

Search for houses.

LoginRegister

HomeBuyRentSellContact Us



Beautiful Family House

Location: New York, USA

Features: Spacious living area, modern kitchen, garden, and parking space. The house is located in a peaceful neighborhood with easy access to schools, shopping centers, and public transportation.

Physical Details: 3500 sq ft, 2 floors, modern architecture.

Rooms: 4 Bedrooms, 3 Bathrooms, 1 Kitchen, 1 Living Room.

Cost: 500,000/-

Owner Details: Experienced real estate owner with over 10 years in the business. Specialized in high-end properties across the USA.


Number of Houses Owned: 2

Rating: ★★★★★

Buy Now

Rent Now

Similar Houses You May Like




Luxury Villa

★★★★★

Location: Los Angeles, USA

[View More](#)




Modern Apartment

★★★★★

Location: Los Angeles, USA

[View More](#)




Maplewood Cottage

★★★★★

Location: Los Angeles, USA

[View More](#)




Rosewood Manor

★★★★★

Location: Los Angeles, USA

[View More](#)



Willowbrook Estate

★★★★★


Location: Los Angeles, USA

[View More](#)

6.BUY PAGE:

Payment Page

Payment Methods




Credit/Debit Card

Name on Card

Card Number


Expiry Date

CVV



Net Banking

Enter Bank Name



UPI

UPI ID

Delivery Address

Full Name

Address Line 1

Address Line 2

City

Zip Code

Order Summary


Product	Quantity	Price	Total
House 1	1	500,000/-	500,000/-
		Subtotal	500,000/-
		Shipping	0/-
		Total	500,000/-



Place Order



7.ACKNOWLEDGEMENT PAGE:

House-Hub
Login
Register

Home
Buy
Rent
Sell
Contact Us



About Us :



Contact Us :




[FAQ'S](#)
[Privacy & Policy](#)

©. 2024 House-Hub Website

10.SELLER PAGE:


House-Hub
Login
Register

Home
Buy
Rent
Sell
Contact Us




Mustaq
Number of Houses: 2
Mobile No. +917013596448
★★★★★

Houses Listed by Mustaq



Maplewood Cottage
★★★★★
Location: Beverly Hills, USA
[View More](#)




Rosewood Manor
★★★★★
Location: New York, USA
[View More](#)

Customer Reviews


Alice Smith: John is an amazing seller. His properties are top-notch, and he was very helpful throughout the process.

Michael Johnson: I had a great experience working with John. His attention to detail and professionalism is outstanding.


Similar Houses You May Like




Luxury Villa
★★★★★
Location: Los Angeles, USA
[View More](#)




Modern Apartment
★★★★★
Location: Los Angeles, USA
[View More](#)



Maplewood Cottage
★★★★★
Location: Los Angeles, USA
[View More](#)



Rosewood Manor
★★★★★
Location: Los Angeles, USA
[View More](#)



Willowbrook Estate
★★★★★
Location: Los Angeles, USA
[View More](#)

11.RENT PAGE:

Rent Payment Page

Renting Details

Delivery Address

Enter your full address

Advance Amount

Enter advance amount (e.g. 5000)

Select Payment Method

☒ Credit Card ☐ Debit Card ☐ UPI

Card Number / UPI ID

Name on Card

Expiry Date (MM/YY)

CVV

Confirm Renting Decision & Payment

By clicking on 'Pay & Confirm Rent', you agree to rent this property, pay the specified advance amount, and see the owner's details.

Pay & Confirm Rent

Rent Payment Page

Renting Details

Delivery Address

Enter your full address

Advance Amount

Enter advance amount (e.g. 5000)

Select Payment Method

☒ Credit Card ☐ Debit Card ☐ UPI

Card Number / UPI ID

Name on Card

Expiry Date (MM/YY)

CVV

Owner's Details

Name: John Doe
Contact Number: +917013596447
Email: john.doe@email.com
Address: 1234 Main Street, Anytown, USA
Note: From the next month onwards, you must contact the owner directly for all rent payments and property-related discussions. Further transactions will not be handled through this site.
[Please provide your valuable feedback here!](#)

12.THANKING PAGE:

House-Hub

Search for houses...

Login Register

Home Buy Rent Sell Contact Us

Thank you for your valuable feedback

Your submission is recorded

PROJECT TESTING

1.REGISTRATION PAGE

Action	Expected Constraints	If result meets expected Result/Constraint
when you click on first name input tag	The tag should not be empty. the length of the text should be more than 2. There would be no numbers, no special characters in the text.	Test Successful
when you click on last name input tag	The tag should not be empty. No special characters like (@, etc.) are allowed, Numbers also not allowed.	Test Successful
when you click on email input tag	The tag should not be empty. check for the @symbol and a domain name (Ex: dotcom). Check if the email is already registered or not?	Test Successful
when you click on phone number input tag	The tag should not be empty. Check for valid 10 digits number. No characters, Symbols are allowed.	Test Successful
when you click on address input tag	The tag should not be empty. Check for valid characters, no special characters are allowed.	Test Successful
when you click on Register button element	Check the above conditions if all conditions are satisfied then display the home page	Test Successful
when you click on Reset button element	Clear the input tags which are filled above	Test Successful

2.FEEDBACK FORM

Action	Expected Constraints	If result meets expected Result/Constraint
when you click on first name input tag	The tag should not be empty. the length of the text should be more than 2. There would be no numbers, no special characters in the text.	Test Successful
when you click on email input tag	The tag should not be empty. check for the @symbol and a domain name (Ex: dotcom). Check if the email is already Exist or not?	Test Successful
when you click on Feedback input tag	The tag should not be empty. Check for valid characters, no special characters are allowed.	Test Successful
when you click on Submit button element	Check the above conditions if all conditions are satisfied then display the Thanking page	Test Successful

3.LOGIN PAGE

Action	Expected Constraints	If result meets expected Result/Constraint
when you click on username input tag	Username field should accept alphanumeric characters only, Username field should not accept special characters, Username field should enforce minimum length (e.g., at least 3 characters), Username field should not be empty,	Test Successful
when you click on password input tag	Password field should hide characters (masked as dots or asterisks), the text should not be empty There must be a at least one	Test Successful

	upper case. The length should be 8. there must be characters, numbers and at least one special character is required.	
when you click on login button element	Login button should be disabled when either username or password is empty, Login button should be enabled only when both fields are valid and non-empty, System should handle account lockout after a specified number of failed attempts, Successful login should redirect to the correct homepage or dashboard.	Test Successful

4.HOME PAGE

Action	Expected Result	If result meets expected Result/Constraint
when you click on Product "View More" button	By clicking itself should open the Product page. Verify correct page loads and displays product details.	Test Successful
when you click on Seller "View More" button	By clicking itself should open the Seller page. Verify correct page loads and displays seller information.	Test Successful
when you click on Register anchor tag	By clicking itself should open the Register page. Verify correct page loads and displays registration details.	Test Successful

when you click on Login anchor tag	By clicking itself should open the Login page. Verify correct page loads and displays login details.	Test Successful
when you click on home anchor tag	By clicking itself should open the Home page. Verify correct page loads and displays home page details.	Test Successful
when you click on Contact Us anchor tag	By clicking itself should open the contact page. Verify correct page loads and displays contact details.	Test Successful

5.BUY PAGE

Action	Expected Constraints	If result meets expected Result/Constraint
when you click on card name input tag	Accept only alphabetic characters, spaces, max length 50.	Test Successful
when you click on card number input tag	Numeric only, exactly 16 digits, masked for security.	Test Successful
when you click on expiry date input tag	Valid date format (MM/YY), not in the past.	Test Successful
when you click on CVV input tag	Numeric only, exactly 3 digits.	Test Successful
when you click on bank name input tag	Alphabetic characters and spaces, max length 50.	Test Successful
when you click on UPI ID input tag	Alphanumeric with special characters (@), standard format (e.g., name@upi).	Test Successful

when you click on full name of customer input tag	Alphabetic characters, spaces, max length 50.	Test Successful
when you click on address line 1 input tag	Alphanumeric, spaces, and special characters (., #), max length 100.	Test Successful
when you click on address line 2 input tag	Optional, Alphanumeric, spaces, and special characters (., #), max length 100.	Test Successful
when you click on city input tag	Alphabetic characters, spaces, max length 50.	Test Successful
when you click on zip code input tag	Numeric only, 5 or 6 digits based on country.	Test Successful
when you click on Place Order button element	Check the above conditions if all conditions are satisfied then display the Acknowledgment page.	Test Successful

6.TITLE PAGE

Action	Expected Result	If result meets expected Result/Constraint
when you click on Register button element	By clicking itself should open the Register page. Verify correct page loads and displays registration details.	Test Successful
when you click on Login button element	By clicking itself should open the Login page. Verify correct page loads and displays login details.	Test Successful

7.PRODUCT PAGE

Action	Expected Result	If result meets expected Result/Constraint
when you click on Buy Now button element	By clicking itself should open the Buy page. Verify correct page loads and displays Buying details.	Test Successful
when you click on Rent Now button element	By clicking itself should open the Rent page. Verify correct page loads and displays Renting details.	Test Successful
when you click on View More button element	By clicking itself should open the Product page. Verify correct page loads and displays product details.	Test Successful
when you click on Register anchor tag	By clicking itself should open the Register page. Verify correct page loads and displays registration details.	Test Successful
when you click on Login anchor tag	By clicking itself should open the Login page. Verify correct page loads and displays login details.	Test Successful
when you click on Contact Us anchor tag	By clicking itself should open the Contact us page. Verify correct page loads and displays contact details.	Test Successful
when you click on home anchor tag	By clicking itself should open the Home page. Verify correct page loads and displays home page details.	Test Successful

8.SELLER PAGE

Action	Expected Result	If result meets expected Result/Constraint
when you click on similar product View More button element	By clicking itself should open the Product page. Verify correct page loads and displays product details.	Test Successful
when you click on his product View More button element	By clicking itself should open the Product page. Verify correct page loads and displays product details.	Test Successful
when you click on Register anchor tag	By clicking itself should open the Register page. Verify correct page loads and displays registration details.	Test Successful
when you click on Login anchor tag	By clicking itself should open the Login page. Verify correct page loads and displays login details.	Test Successful
when you click on Contact Us anchor tag	By clicking itself should open the Contact us page. Verify correct page loads and displays contact details.	Test Successful
when you click on home anchor tag	By clicking itself should open the Home page. Verify correct page loads and displays home page details.	Test Successful

9.CONTACT PAGE

Action	Expected Result	If result meets expected Result/Constraint
--------	-----------------	--

when you click on Wikipedia Icon	By clicking itself VIT-AP details page should open in Wikipedia in a new tab.	Test Successful
when you click on Instagram Icon	By clicking itself VIT-AP Instagram account page should open in new tab.	Test Successful
when you click on Email Icon	By clicking itself Gmail Inbox should in new tab.	Test Successful
when you click on Register anchor tag	By clicking itself should open the Register page. Verify correct page loads and displays registration details.	Test Successful
when you click on Login anchor tag	By clicking itself should open the Login page. Verify correct page loads and displays login details.	Test Successful
when you click on Contact Us anchor tag	By clicking itself should open the Contact us page. Verify correct page loads and displays contact details.	Test Successful
when you click on home anchor tag	By clicking itself should open the Home page. Verify correct page loads and displays home page details.	Test Successful

10.RENT PAGE

Action	Expected Constraints	If result meets expected Result/Constraint
when you click on Address input tag	Alphanumeric, spaces, and special characters (., #), max length 100.	Test Successful

when you click on Advance amount input tag	Numeric only, based on product.	Test Successful
when you click on Radio button	By clicking itself should display card details form	Test Successful
when you click on card name input tag	Accept only alphabetic characters, spaces, max length 50.	Test Successful
when you click on card number/UPI ID input tag	For card: Numeric only, exactly 16 digits, masked for security. For UPI: Alphanumeric with special characters (@), standard format (e.g., name@upi).	Test Successful
when you click on expiry date input tag	Valid date format (MM/YY), not in the past.	Test Successful
when you click on CVV input tag	Numeric only, exactly 3 digits.	Test Successful
when you click on Pay & Confirm Rent button element	By clicking itself should display owner details and feedback form link	Test Successful
when you click on anchor tag	By clicking itself should open the Feedback page. Verify correct page loads and displays feedback form.	Test Successful

FOR PROJECT CODES AND DETAILS CLICK BELOW GITHUB LINK: <https://github.com/md-afnan-2005/se-project>