A Course Based Project Report on

E-ESTATE BUSINESS

Submitted to the

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING- (CyS, DS) AND AI&DS

in partial fulfilment of the requirements for the completion of course
SOFTWARE ENGINEERING AND STATISTICAL ANALYSIS USING PYTHON LABORATORY(A19PC2CS46)

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE AND ENGINEERING (DATA SCIENCE)

Submitted by

K. NANDINI	21071A67A5
P. RAGHAVENDRA	21071A67B1
P. LOKESH	21071A67B2
P. RAMA DEVI	21071A67B3

Under the guidance of

Dr. T Preethi

(Course Instructor)

Assistant Professor
Department of CSE- (CyS, DS) and AI&DS, VNRVJIET

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING- (CyS, DS) AND AI&DS

VALLURUPALLI NAGESWARA RAO VIGNANA JYOTHI INSTITUTE OF ENGINEERING & TECHNOLOGY

An Autonomous Institute, NAAC Accredited with 'A++' Grade, NBA

Vignana Jyothi Nagar, Pragathi Nagar, Nizampet (S.O), Hyderabad – 500 090, TS, India

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Vignana Jyothi Nagar, Pragathi Nagar, Nizampet(SO), Hyderabad-500090, TS, India

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING- (CyS, DS) AND AI&DS

CERTIFICATE

This is to certify that the project report entitled "**E-Estate Business**" is a bonafide work done under our supervision and is being submitted by **Miss. Nandini (21071A67A5), Mr. Raghavendra (21071A67B1), Mr. Lokesh (21071A67B2), Miss. Rama Devi (21071A67B3)** in partial fulfilment for the award of the degree of **Bachelor of Technology** in Computer Science and Engineering Data science, of the VNRVJIET, Hyderabad during the academic year 2022-2023.

Dr. T Preethi
Assistant Professor
Department of CSE- (CyS, DS) and AI&DS
VNRVJIET

Dr. M. Raja Sekar
Associate Professor & HOD
Department of CSE- (CyS, DS) and AI&DS
VNRVJIET

Course based Projects Reviewer

VALLURUPALLI NAGESWARA RAO VIGNANA JYOTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY

An Autonomous Institute, NAAC Accredited with 'A++' Grade,
Vignana Jyothi Nagar, Pragathi Nagar, Nizampet(SO), Hyderabad-500090, TS, India

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING- (CyS, DS) AND AI&DS

DECLARATION

We declare that the course based project work entitled "**E-Estate Business**" submitted in the Department of Information Technology, Vallurupalli Nageswara Rao Vignana Jyothi Institute of Engineering and Technology, Hyderabad, in partial fulfilment of the requirement for the award of the degree of **Bachelor of Technology in Computer Science and Engineering Data Science** is a bonafide record of our own work carried out under the supervision of **Dr. T Preethi, Assistant Professor, Department of CSE-(CyS, DS) and AI&DS, VNRVJIET.** Also, we declare that the matter embodied in this thesis has not been submitted by us in full or in any part thereof for the award of any degree/diploma of any other institution or university previously.

Place: Hyderabad.

K. Nandini	**P. Raghavendra**	**P. Lokesh**	**P. Rama Devi**
(21071A67A5)	(21071A67B1)	(21071A67B2)	(21071A67B3)

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We express our thanks to all those who contributed for the successful completion of our project work.

K. NANDINI	21071A67A5
P. RAGHAVENDRA	21071A67B1
P. LOKESH	21071A67B2
P. RAMA DEVI	21071A67B3

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AIM

The aim of the online real estate business project is to create a comprehensive and user-friendly platform that connects buyers, sellers, and real estate agents in a virtual marketplace. The primary goal is to streamline the process of buying, selling, and renting properties, making it more efficient and accessible for users while providing them with a reliable and secure environment.

PROBLEM STATEMENT

With the increase in the number of transactions at a branch, the total workload of the staff has become so big that the company is employing more staff to handle the ever increasing amount of paper work. There is also a legal requirement to produce detailed monthly, quarterly and annual reports. Management also needs summarized statistical data in order to have access to all the data pertinent to a decision. Inferential statistics always act as a tool to have a look at all the data of an organization in a precise, summarized form. Clearly, the manual system is inadequate for this type of work. The file system was originally developed in response to the needs of the company for more efficient data access. However, this kind of system has the following disadvantages.

i. Data is isolated making it more difficult to access.
ii. Most data items handled by more than one department are duplicated in each department leading to the wastage of time and resources.
iii. The data is not secure since any time the files can be stolen or can catch fire.

To become more effective, a computer-based information system can act as the most efficient way to handle all the information needs of Property Masters, using a database and a database management system. The advantages of using a computer in a management information system are:

i. When used as a data storage and retrieval device, the computer acts as the data librarian.
ii. The computer provides processing capabilities for the production of information.
iii. The computer serves as a communication device to obtain data or information from other computers.
iv. The computer provides information by producing tables, reports, charts, graphs, and formatted documents.
v. Statistical data can be easily analyzed using a computer.

CHAPTER 1

1.0 INTRODUCTION

Real Estate Management System has the main aim of to developing a system that is meant to provide an online platform estate agency that will help users to sell, buy, or rent houses. This web application will be as an alternative to the traditional estate agents encountered in some place in the street. In fact, many house occupants find difficulties to find the right, trustworthy, and honest estate agent who will help them to find the perfect client, and vice-versa. Moreover, it is difficult sometimes to find the location of these agents. Therefore, this application will be an intermediary between both clients and house sellers/renters as it is going to be along with both parts during the whole process of house renting, selling, or buying.

1.1 PURPOSE

- This is an Online real estate business website through which a user can access its information and manage all the adding, updating, deleting the assets and some of its tasks.
- The Admin can change the update the information regarding property selling and buying and cancellation.
- The system is very useful for the companies Who develop apartments, hotels, villa, residential properties and commercial properties. Companies or individual agents can also advertise their property.

1.2 SCOPE

The real of world wide web have spread across millions of house hold, so naturally, Internet has become by far the best platform for real estate marketing today.
Now a days when everything is online, how is it possible that real estate web application behind. There are lot of real estate companies who advertise their property online so idea behind developing this application is that their property can also sell, or buy rental property using this. These applications are not widely popular but in future, they have large scope of growth.

- This website is an online real estate management through which individual agents or buyer can maintain their property document keeping and managing property registration and also access its information and manage all the adding, updating, deleting and some of its tasks.
- The Admin can inform their agents for regarding to property and update the information regarding and cancellation of property or changing buyer choice.
- The system is very useful for the companies or builders that can post and edit their properties and their personal info and admin can monitor records of all of them.
- The system is also useful which also keeps track of Account details of buyers and Investors and also RES Industry.

1.3 DEFINITIONS, ACRONYMS AND THE ABBREVIATIONS

- **E-Estate**: Online Real estate business
- **HTML:** Hyper Text Markup Language
- **CSS**: Cascading Style sheets.
- **HTTP**: Hyper Text Transfer Protocol**.**

1.4 REFERENCES

- IEEE Software Requirement Specification format.

E-books:

- Software Engineering: A Practioner's Approach 6th edition by Roger Pressman, McGraw Hill international edition.
- The Object-Oriented Approach Concepts, System Development and Modeling with UML Satzinger, Onik, 2nd edition.

Web Links:

www.real-estate-managementsystem.nic.in
www.project-management-basics.com
https://www.javatpoint.com/uml-diagrams

1.5 TECHNOLOGIES TO BE USED

- **Front-End Technologies**: HTML5, CSS3, and JavaScript frameworks/libraries like React, Angular are commonly used to create interactive and responsive user interfaces.
- **Back-End Technologies**: Programming languages such as Java, Python, or Node.js can be utilized for server-side development, along with frameworks like Express.js or Flask.
- **Database Management Systems**: Relational databases like MySQL or PostgreSQL, or NoSQL databases like MongoDB or Cassandra, can be employed for storing and managing insurance-related data.
- **API Integration**: Integration with third-party services and APIs can be crucial for various functionalities, such as payment gateways, document management systems, or identity verification services.
- **Cloud Computing**: Utilizing cloud platforms like Amazon Web Services (AWS), Microsoft Azure, or Google Cloud Platform can provide scalable infrastructure, storage, and computing resources.
- **Security Measures**: Implementing security measures like encryption, secure user authentication, and authorization protocols (e.g., OAuth) to protect sensitive customer data and prevent unauthorized access.
- **Mobile Development**: Developing mobile applications for iOS and Android platforms, using technologies such as Swift, Kotlin, or React Native, to provide a mobile-friendly and convenient experience for users.
- **DevOps Tools**: Utilizing continuous integration and deployment tools like Jenkins or GitLab CI/CD pipelines, along with containerization platforms like Docker, for efficient development, testing, and deployment processes.

1.6 TOOLS TO BE USED

The development of an E-Estate platform can involve the use of various tools to support the development, testing, deployment, and management processes. Here are some common tools that can be utilized:

- Integrated Development Environments (IDEs):
  - Visual Studio Code
  - Eclipse

- Wireframing and Design Tools:
  - Sketch
  - Adobe XD
  - Figma
  - InVision

- Database Management Tools:
  - MySQL Workbench
  - pgAdmin
  - MongoDB Compass

- Automated Testing Tools:
  - Selenium
  - Jes
  - Junit
  - PyTest

- Continuous Integration/Continuous Deployment (CI/CD) Tools:
  - Jenkins
  - GitLab CI/CD
  - CircleCI
  - Travis CI

- Performance and Load Testing Tools:
  - Apache JMeter
  - Gatling
  - LoadRunner

- Monitoring and Logging Tools:
  - Prometheus
  - Grafana

- Security and Vulnerability Assessment Tools:
  - OWASP ZAP
  - Nessus
  - Burp Suite

- Documentation Tools:
  - Confluence
  - GitBook
  - Read the Docs

- Cloud Platforms and Services:
  - Amazon Web Services (AWS)
  - Microsoft Azure
  - Google Cloud Platform (GCP)

- Performance Optimization Tools:
  - CDN (Content Delivery Network) services like Cloudflare or Akamai
  - Caching mechanisms (e.g., Varnish, Redis)
  - Profiling tools (e.g., YourKit, JProfiler)

The selection of specific tools may depend on factors such as project requirements, team preferences, compatibility with the chosen technology stack, and budget constraints.

1.7 OVERVIEW

An online real estate business is a digital platform that facilitates property transactions, connecting buyers, sellers, and real estate agents through the internet. It offers a virtual marketplace for users to search, list, buy, sell, and rent properties online. The platform provides convenience, efficiency, and accessibility, transforming the traditional real estate industry. Users can explore property listings, view images, take virtual tours, and communicate with relevant parties in real-time. Secure payment gateways ensure smooth and safe financial transactions. Data analytics and insights offer market trends and user behavior information. The online real estate business caters to a global audience, revolutionizing the way properties are bought and sold, making it a dynamic and thriving sector in the digital age.

CHAPTER 2

2.0 OVERALL DESCRIPTION

2.1 PRODUCT PERSPECTIVE

Admin's interface: Admin is a person who will handle the entire website. For that, person has to give the username and password to enter the admin page. After entering right password admin can enter the admin home area. Here user buy different property & sell them to the system. Buyer selects property and builder verifies to make reliable communication to each other.

User's interface: User can visit the home page of real estate in which the introduction of the site mentioned. The registered user can login from the login module. Here guest can register free account to sell and buy property also buyer verify each other & make reliable communication to each other. User can search the property and also can select the type of property, its budget and also find the location of property.

2.2 PRODUCT FUNCTIONS

- Our system must save time and money: Accurate upfront software requirements definition helps ensure your team works on the business problems that matter most.
- Reduce rework: Early validation and agreement by stakeholder's means development and quality teams spend less time on rework.
- Improve requirement accuracy: Industry-unique collaborative storyboarding improves accuracy by promoting effective communication.

2.3 USER CHARACTERISTICS

1. **Buyers**: These are users who are interested in buying a property. They may have different requirements such as location, property type, size, amenities, and price range.
2. **Sellers**: These are users who want to sell their property. They may include individual property owners, real estate agents, or property developers.
3. **Renters**: These are users who are interested in renting a property. They may have different requirements similar to buyers.
4. **Real Estate Agents**: These are professionals who act as intermediaries between buyers and sellers. Agents can create and manage property listings on behalf of sellers, communicate with buyers, and facilitate transactions.
5. **Administrators**: These are users who manage and maintain the e-estate portal to all features of the portal and can approve listings, monitor user activity, and handle any technical issues.
6. **Investors**: These are users who are interested in investing in properties. They may use the portal to search for potential investment opportunities, monitor market trends, and connect with real estate agents.

2.4 SOFTWARE INTERFACE

1. **Supported Operating Systems:** The real estate management software should specify the operating systems it supports for both the server and client sides. This may include Windows, macOS, Linux for desktop clients, and specific mobile operating systems like iOS and Android for mobile applications.

2. **Third-Party Software Dependencies:**

   - **Database Management System:** The SRS should mention the specific DBMS (e.g., MySQL, PostgreSQL, MongoDB) that the real estate management software relies on to store and manage data.
   - **Web Servers:** The software interface should indicate the web server (e.g., Apache, Nginx) compatible with the application server to host and serve the real estate management system.
   - **Email Clients:** If the system requires email functionality for notifications or communication, the SRS should specify the supported email clients or protocols (e.g., SMTP, IMAP).
   - **Reporting Tools:** If the real estate management system generates reports, the SRS should specify the reporting tools used (e.g., Jasper Reports, Crystal Reports).

3. **Integration with External Services:**

   - **Online Listing Platforms:** If the real estate management system integrates with online listing platforms (e.g., Zillow, Realtor.com), the SRS should outline the specific platforms and the data exchange mechanisms.
   - **Payment Gateways:** If the system supports online rent payments or financial transactions, the SRS should list the supported payment gateways (e.g., PayPal, Stripe).
   - **CRM Systems:** If the software interfaces with customer relationship management (CRM) systems, it should specify the supported CRM software or APIs.

4. **Communication Protocols:**

   - **Data Exchange Protocols:** The SRS should define the communication protocols used for data exchange between the client applications and the server (e.g., HTTP, HTTPS, WebSocket).
   - **Security Protocols:** If the real estate management system handles sensitive data, the SRS should specify the security protocols used to ensure data confidentiality and integrity (e.g., SSL/TLS).

2.5 HARDWARE INTERFACE

a. **Server Hardware Requirements:**
   - **Application Server:** This server hosts the real estate management software application and handles client requests, data processing, and database interactions.
   - **Database Server:** Responsible for storing and managing the system's data, including property details, tenant information, financial records, etc. It ensures data integrity, security, and efficient data retrieval.

b. **Client Hardware Requirements:**
   - **Desktop Computers:** These are the client machines used by real estate managers and employees to access the real estate management system through a web browser or dedicated software client.
   - **Laptops:** Similar to desktop computers, laptops offer portability and allow real estate managers to access the system remotely or while on the go.

c. Mobile Devices Requirements:

- **Smartphones:** Mobile devices such as smartphones provide mobility and enable real estate managers to access the system through dedicated mobile applications.
- **Tablets:** Tablets can be used as an alternative to smartphones for accessing the real estate management system while providing a larger display.

d. Networking Requirements:

- **Local Area Network (LAN):** A local area network connects all the client computers and servers within the real estate office or management facility, facilitating data sharing and communication between devices.
- **Internet Connectivity:** The real estate management system may require an internet connection for various purposes, such as accessing online listing platforms, email communication, and cloud-based features.

2.6 CONSTRAINTS

- **Legal and Regulatory Constraints**: Real estate portals are subject to various legal and regulatory requirements, such as property laws, contract guidelines, and consumer protection regulations. Adhering to these constraints is crucial for the portal's legitimacy and compliance.
- **Integration Constraints:** The estate portal may need to integrate with various third-party services, such as payment gateways, property databases, or mapping services. Ensuring smooth integration with external systems is essential for providing a seamless user experience**.**
- **Time Constraints:** The project may have a fixed timeline or deadlines that need to be met. This constraint can affect the development process, testing, and deployment phases. Meeting specific time constraints requires effective project planning and management**.**
- **Budget Constraints:** The project may have a predefined budget, and developers need to work within these financial limitations. It is essential to optimize resources and prioritize features to stay within the allocated budget.

CHAPTER 3

3.0 SPECIFIC REQUIREMENTS

3.1 EXTERNAL INTERFACE REQUIREMENTS

3.1.1 USER INTERFACE

- The user interface shall be implemented using any tool or software package like Java Applet, MS Front Page, EJB etc.
- The user interface should be able to enable user and administrator to sign up and login before availing the services.
- There should be an option of registering a complaint in the case of system failure.
- Moreover, the user should be notified through SMS in case of a general event (when operating in manual mode) and through SMS and Call in the case of any emergency.

3.1.2 Software requirements:

- Any Version of browser after Mozilla Firefox 4.0, Internet Explorer 6.0
- Adobe Flash Player 10.0

3.1.3 Hardware requirements:

- Any processor after Pentium 4.
- Any version of Windows XP or later.

3.2 FUNCTIONAL REQUIREMENTS

- **Property Listings**:
  - Users can create listings for properties with details like title, description, images, location, price, property type, size, and amenities.
  - Agents can also create listings on behalf of property owners.
  - All listings will be approved by the admin before being published on the portal.
- **Property Search**:
  - Users can search for properties based on location, price range, property type, and amenities.
  - Advanced search options like filters for property age, number of bedrooms, etc. will also be available.
  - Search results will be displayed with images, basic details, and price range.
- **User Accounts:**
  - Users can create accounts by providing their name, email, and password.
  - Users can view and edit their profiles, save searches, save properties, and subscribe to email alerts.
  - Agents will have additional features like managing property listings and communicating with clients from their dashboard.
- **Real Estate Agent Dashboard**:
  - Agents can create and manage property listings on behalf of property owners.
  - Agents can communicate with clients via messages, and receive notifications when a client contacts them or saves their listing.
- **Transaction Management**:
  - Users can initiate transactions by contacting the seller or real estate agent.
  - The portal will not handle any financial transactions, but will provide a platform for sellers and buyers to connect and communicate.

For the User

a. Register

-Registration will be based on the First and Last name, Email address, Password, Secret Question, and Secret Answer (for security matters).

-In addition to the date of birth and gender.

b. Login

-Login will be based on the Email address a long with the Password.

-An error message will be displayed in case one of the two does not match.

c. Book Property

d. Cancel Property

e. Enquiry

For the sellers

a. Register

b. Add property

c. Delete property

d. Receive Money

For the Admin/Employees

a. Manage Users
   i. Add User
   ii. Modify User
   iii. Delete User
   iv. Search for User
      1. By First Name
      2. By Last Name
      3. By Date of Registration

b. Manage Testimonials:
   i. Add Testimonial
   ii. Delete Testimonial
   iii. Modify Testimonial
   iv. Search for testimonial
      1. By User
      2. By Date

c. Manage Announcements
   i. Add Announcement
   ii. Modify announcement
   iii. Delete announcement
   iv. Search for announcement
      1. By Address or city
      2. By Category
      3. By Price

d. Manage Employees: (Exclusive for the admin)
   i. Add Employee
   ii. Modify Employee
   iii. Delete Employee
   iv. Search for Employee
      1. By First Name
      2. By Last Name
      3. By ID

e. Manage transactions:
    i. Add Transaction
    ii. Modify Transaction
    iii. Delete Transaction
    iv. Search for Transaction
        1. By Date
        2. By Registration

3.3 NONFUNCTIONAL REQUIREMENTS

- The website must be responsive and work well on all devices.
- The website must be easy to use with clear navigation and intuitive user interface.
- The website must be secure, reliable, easily accessible to users, as well as scalable and portable. So that we can run the software on other platforms easily.
- The portal must be secure with appropriate measures like HTTPS encryption and protection from hacking attempts.

3.4 SOFTWARE SYSTEM ATTRIBUTES:

- **Usability:** The interface should use terms and concepts which are drawn from the experience of the people who will make most of the system. Accessibility considerations should also be taken into account.
- **Efficiency:** The system must provide easy and fast access without consuming more cost.
- **Security:** This system is provided with authentication without which no user can pass. So only the legitimate users are allowed to use the application. If the legitimate users share the authentication information then the system is open to outsiders.
- **Maintainability:** The software should be designed with modularity and maintainability in mind, making it easier for developers to update, add new features, and fix issues.
- **Performance**: The system should be highly responsive, with low latency and quick load times for various tasks, such as property search, listing updates, and user interactions.
- **Scalability:** The portal should be able to handle a growing number of users, properties, and concurrent transactions without significant degradation in performance.
- **Reliability:** The system should be robust and dependable, ensuring minimal downtime or disruptions. It should also have mechanisms to recover from failures gracefully.
- **Compatibility**: The portal should be compatible with various web browsers, devices (desktop, tablets, smartphones), and operating systems.
- **Availability**: The system should be available to users 24/7, with minimal planned downtime for maintenance and updates.

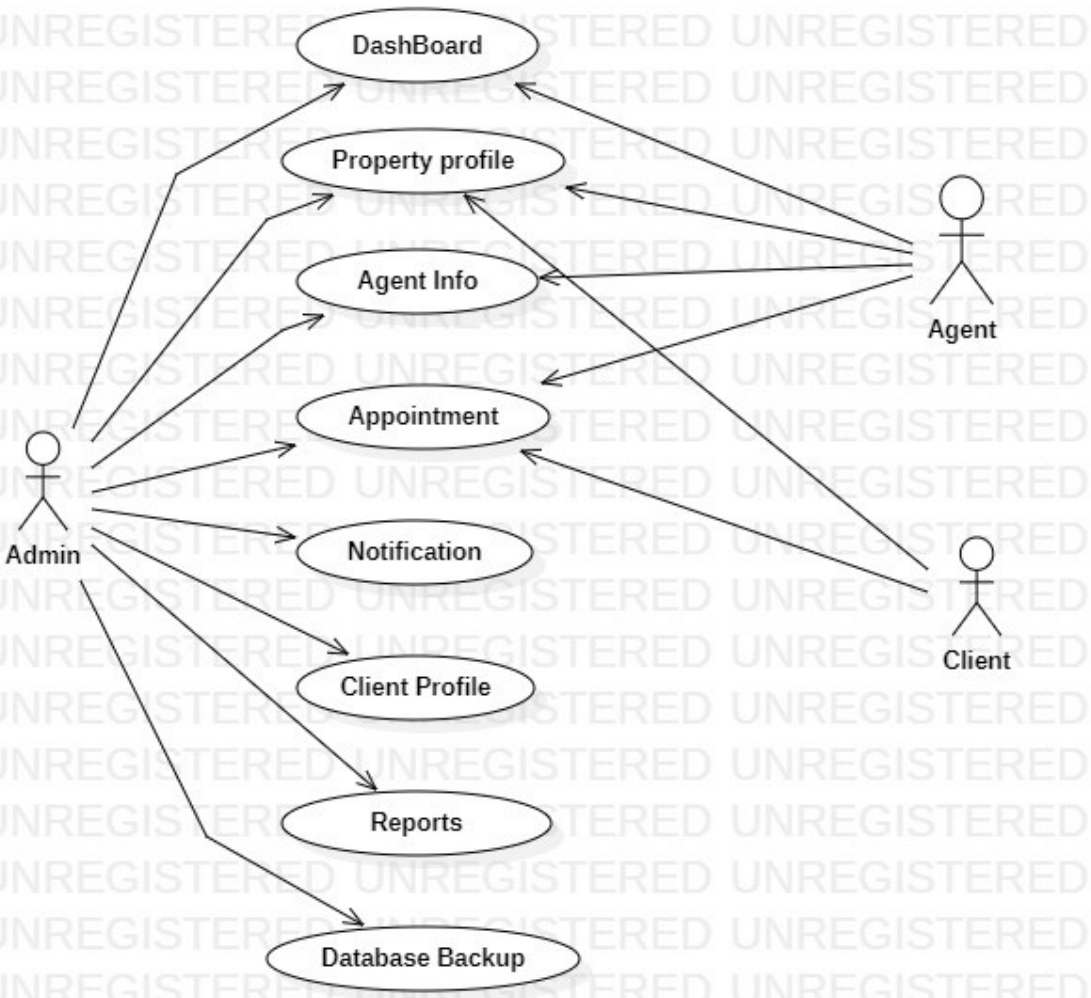
3.5 DESIGN CONSTRAINTS

- User/ Administrator must register to access the portal. The mobile number must be a 10 digit number.
- Login information consists of email address and password Standard Development Tools

CHAPTER 4

4.0 USE CASE DIAGRAM

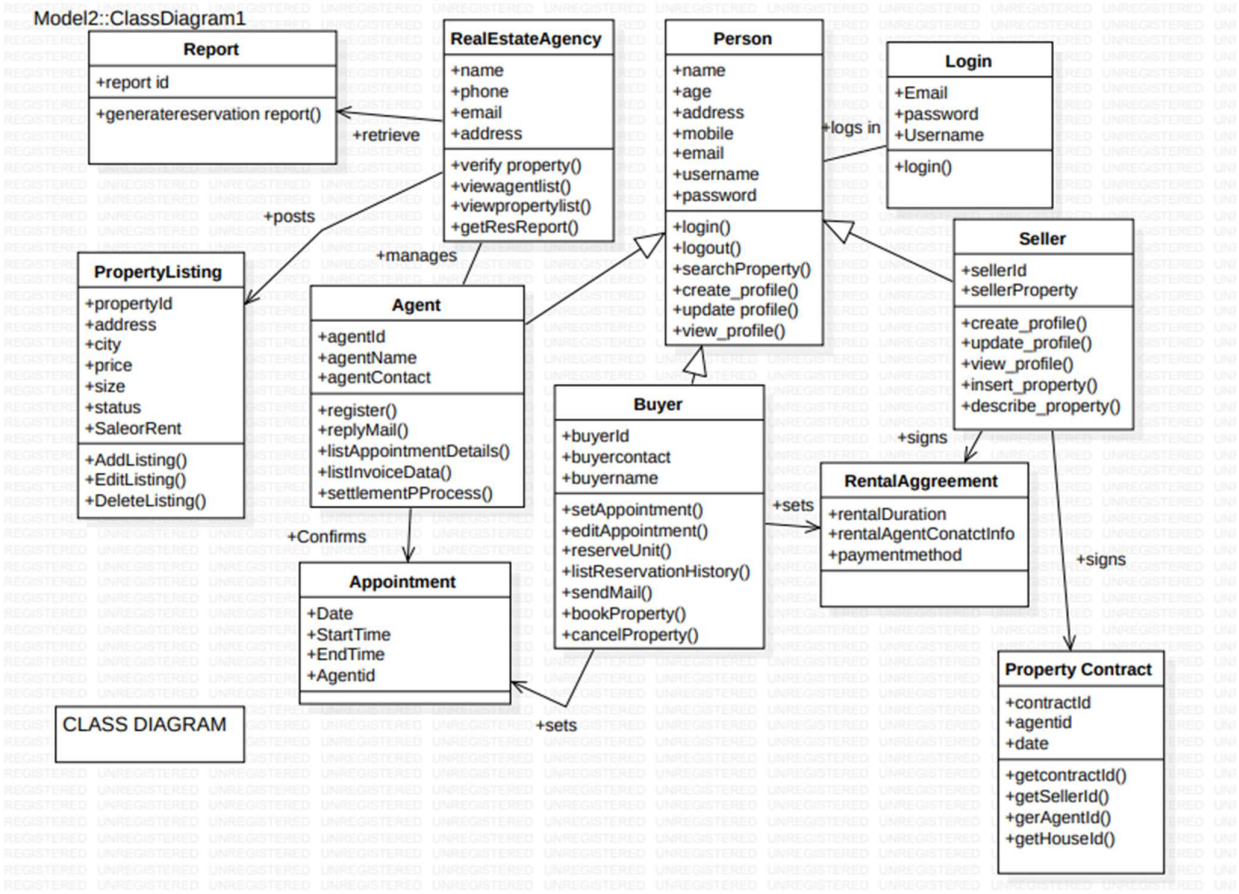
Use Case diagram is that which can provide common understanding for the end-users, developers, and the domain experts. It is used to capture the basic functionality i.e., use cases, and the users of those available functionality i.e., actors from a given problem statement.



CHAPTER 5

5.0 CLASS DIAGRAM

A class diagram is a visual representation that illustrates the structure and relationships among classes in a system. It provides a static view of the system's entities, their attributes, methods, and associations. Class diagrams are widely used during the design phase of software development to communicate the system's architecture and help in the implementation process.

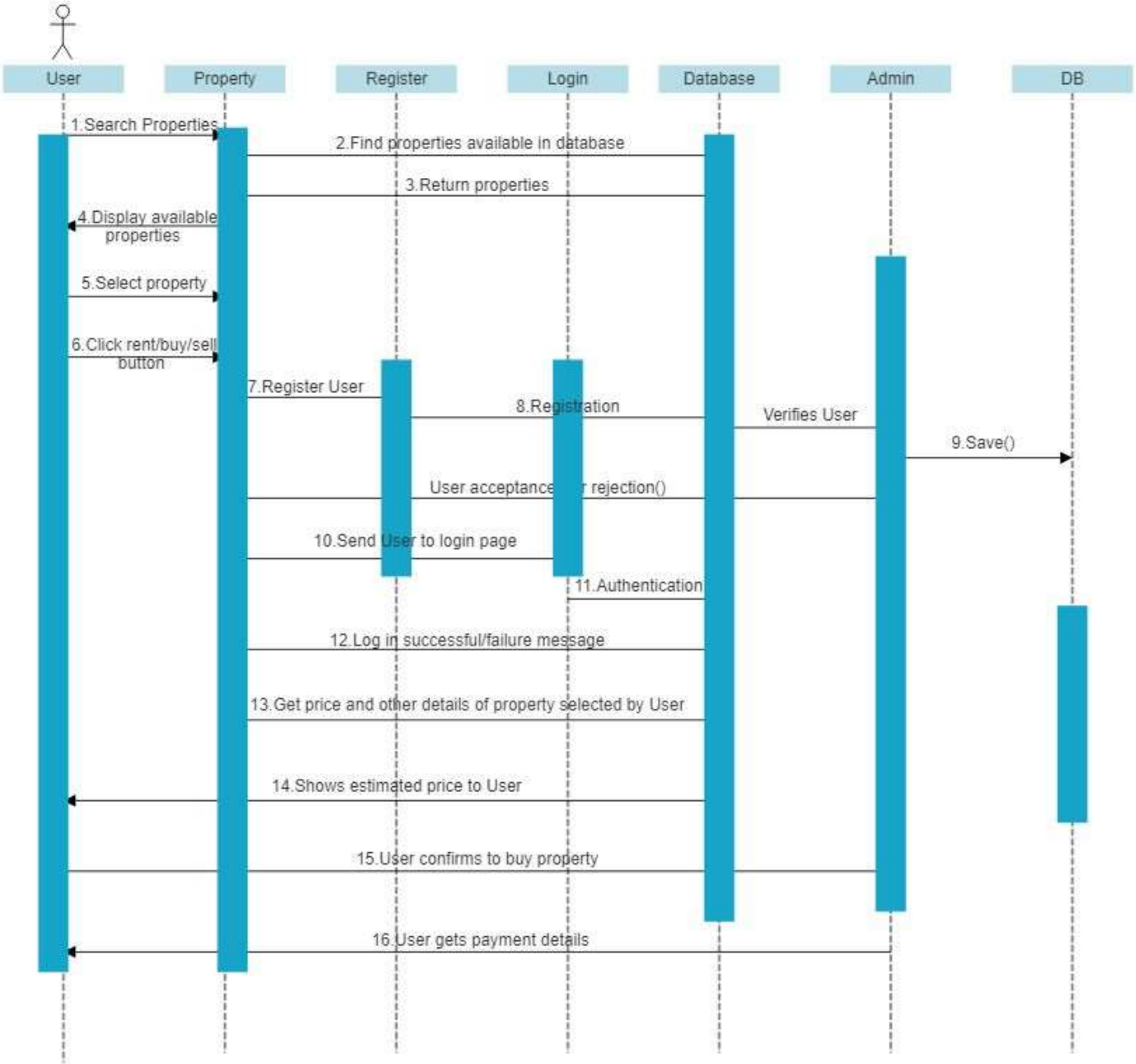


- From customer, user name, user id, gender, address and user mobile number are collected.

CHAPTER 6

6.0 SEQUENCE DIAGRAM

A sequence diagram shows object interactions arranged in a time sequence. It depicts the objects and classes involved in the scenario and the sequence of messages exchanged between the objects needed to carry out the functionality of the scenario. Sequence diagrams are typically associated with use case realizations in the system under development. Sequence diagrams are sometimes called event diagrams or event scenarios.

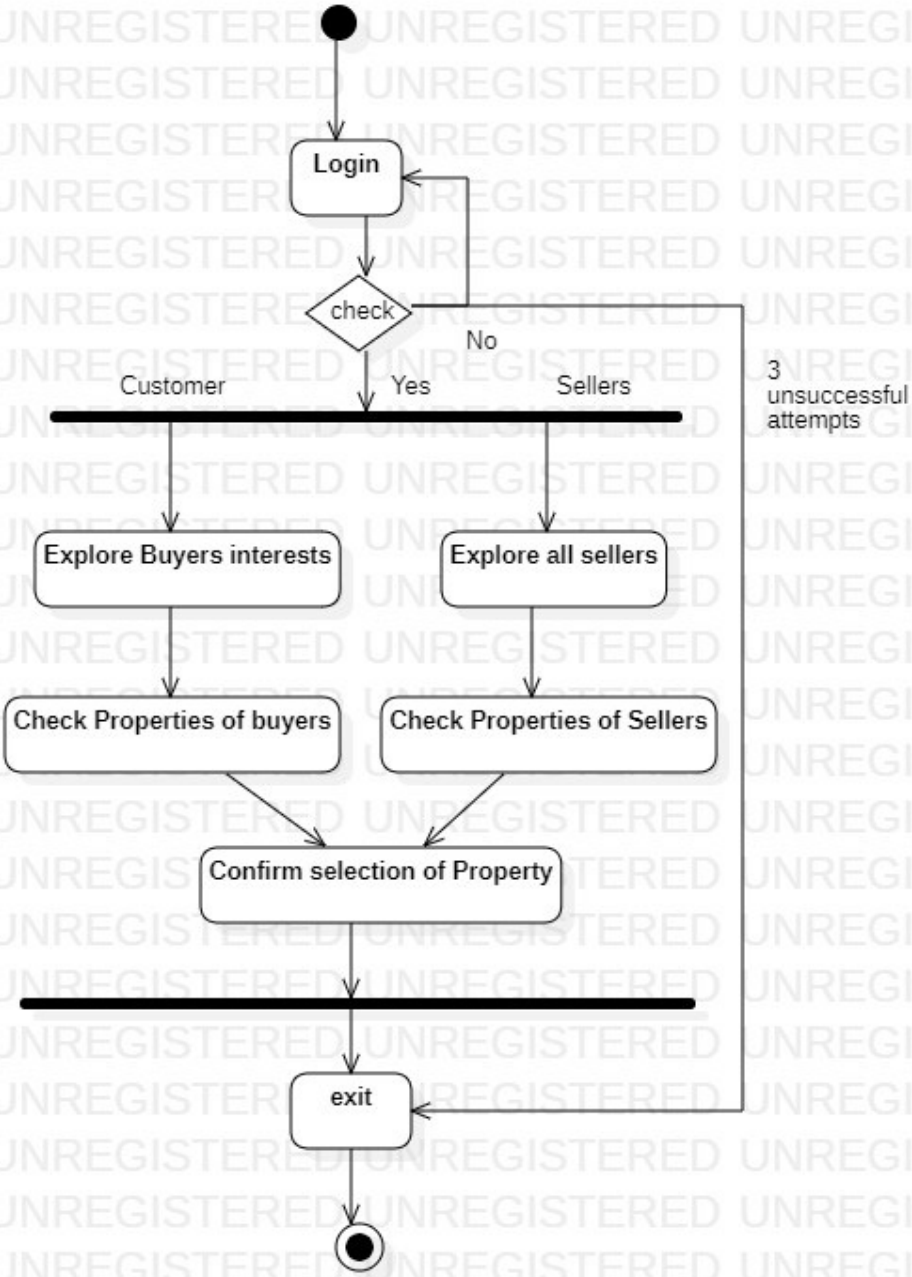


- The user or customer sends a message to the admin server for a login request and in return, it sends back the successful message of login.
- The user sends a request to the payment server, then it sends a message of the transaction to the seller, then the seller verifies and gives access sends a message to user saying purchase is done.

CHAPTER 7

7.0 ACTIVITY DIAGRAM

An activity diagram is basically a flowchart to represent the flow from one activity to another activity. The activity can be described as an operation of the system. The control flow is drawn from one operation to another. This flow can be sequential, branched, or concurrent. Activity diagrams deal with all types of flow control by using different elements such as fork, join, etc.



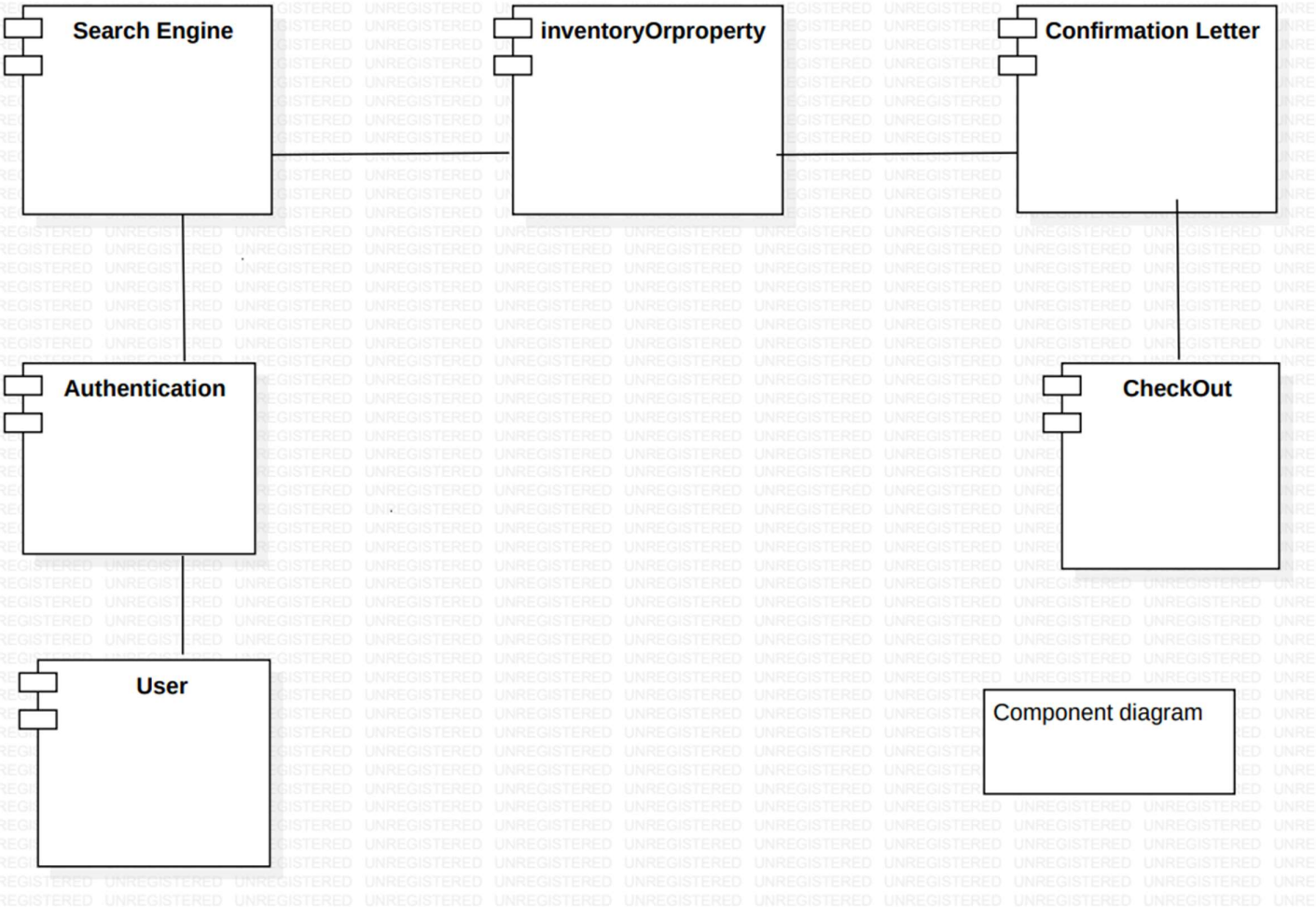
CHAPTER 8

8.0 COMPONENT DIAGRAM

A component diagram describes the organization and wiring of the physical components in a system. Component diagrams are often drawn to help model implementation details and double-check that every aspect of the system's required functions is covered by planned development. Components included in these diagrams were physical: documents, database table, files, and executables, all physical elements with a location.

Basic Component Diagram symbols and Notation:

- Component
- Interface
- Dependencies
- Port



CHAPTER 9

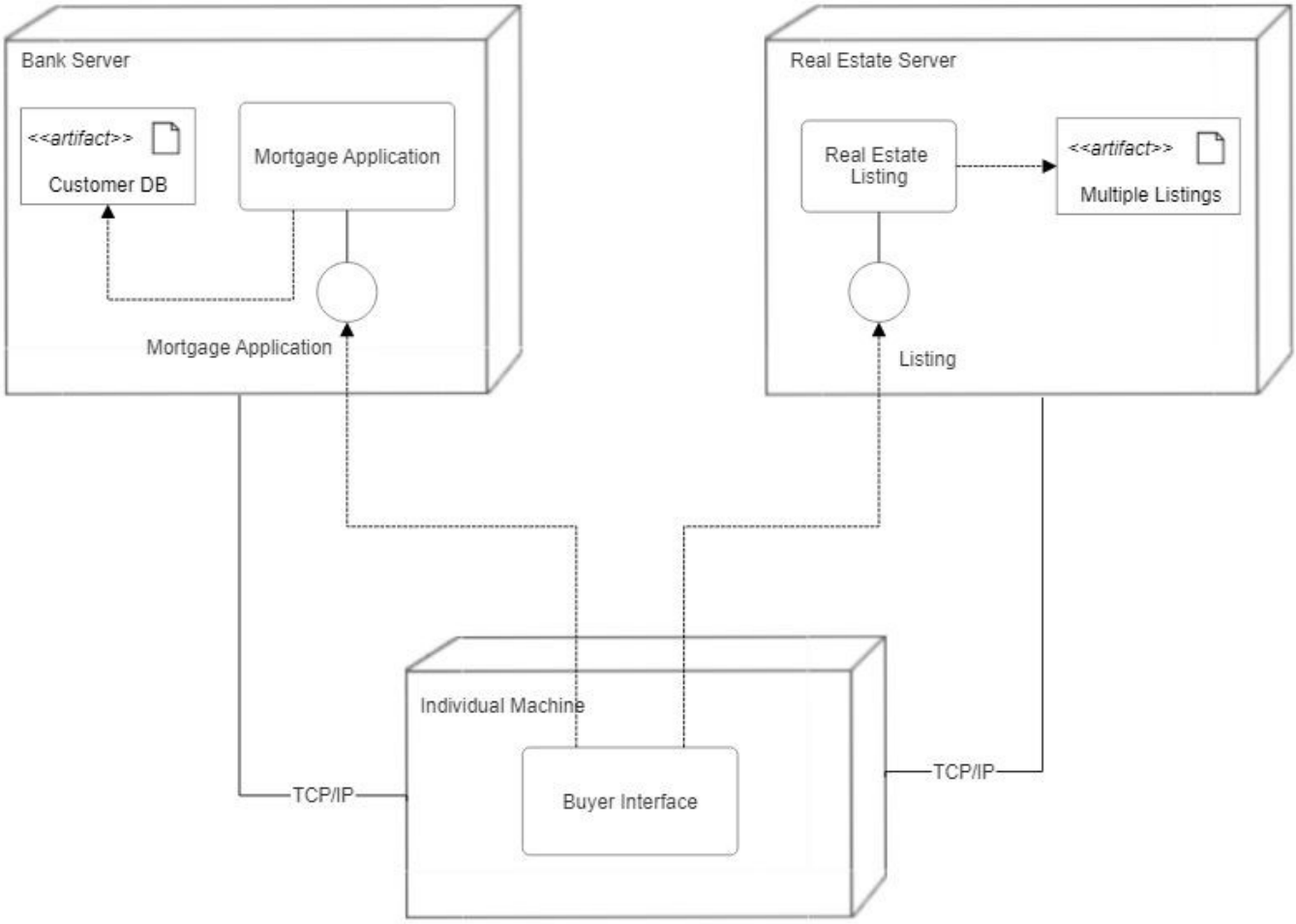
9.0 DEPLOYMENT DIAGRAM

A Deployment Diagram is a type of diagram that specifies the physical hardware on which the software system will execute. It also determines how the software is deployed on the underlying hardware. It maps software pieces of a system to the device that is going to execute it.

There are two forms of a deployment diagram.

Descriptor form: It contains nodes, the relationship between node and artifact. Instance form: It contains node instance, the relationship between node instances, and artifact instance. A deployment diagram consists of the following notations:

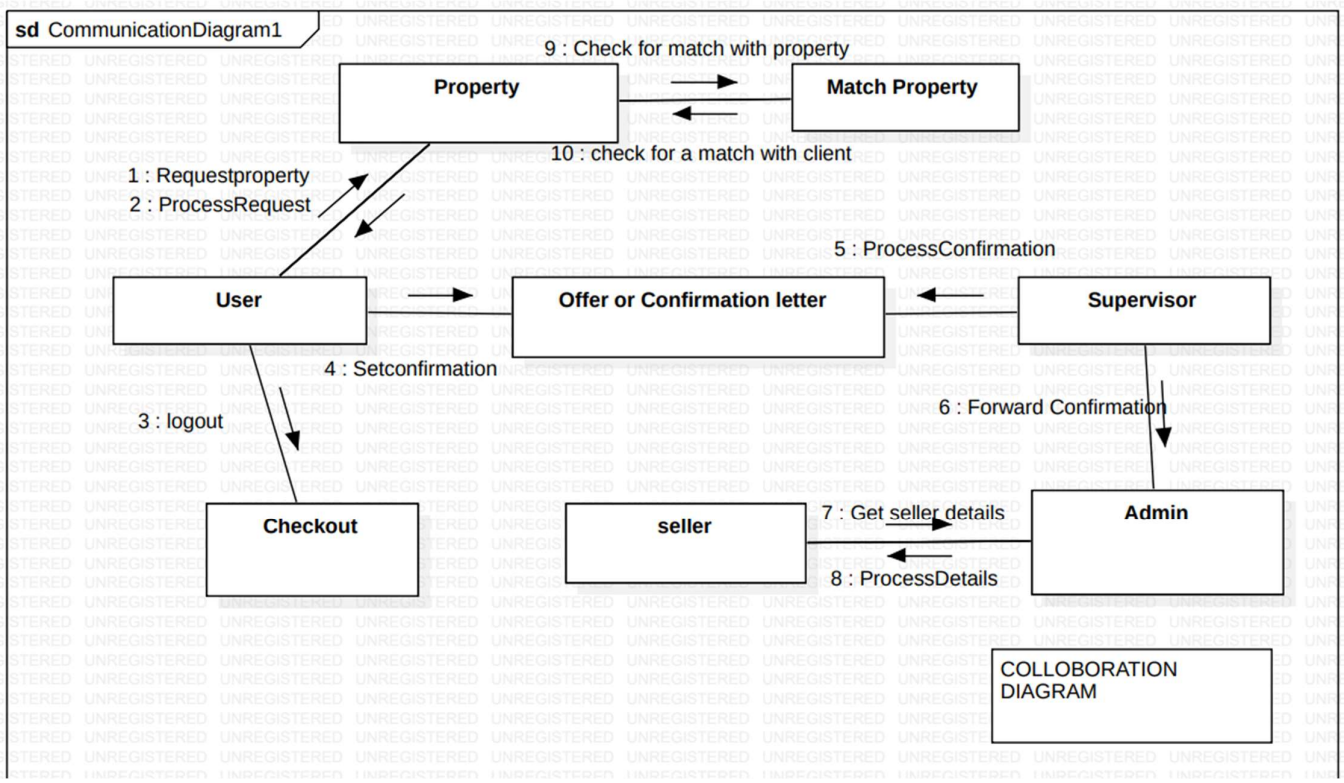
- A node
- A component
- An artifact
- An interface



CHAPTER 10

10.0 COLLABORATION DIAGRAM

The collaboration diagram is used to show the relationship between the objects in a system. Both the sequence and the collaboration diagrams represent the same information but differently. Instead of showing the flow of messages, it depicts the architecture of the object residing in the system as it is based on object-oriented programming. An object consists of several features. Multiple objects present in the system are connected to each other. The collaboration diagram, which is also known as a communication diagram, is used to portray the object's architecture in the system.



CHAPTER 11

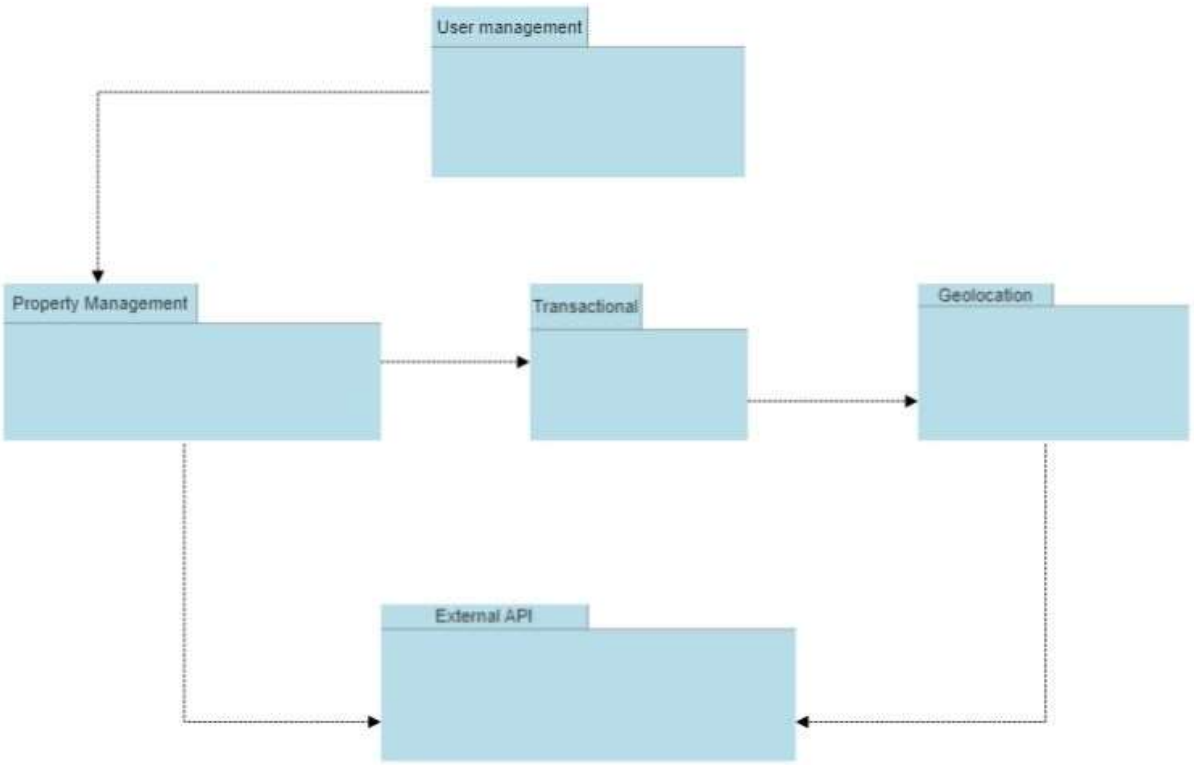
11.0 PACKAGE DIAGRAM

Package diagrams are used to structure high level system elements. Packages are used for organizing large system which contains diagrams, documents and other key deliverables.

- Package Diagram can be used to simplify complex class diagrams, it can group classes into packages.
- A package is a collection of logically related UML elements.
- Packages are depicted as file folders and can be used on any of the UML diagrams.

The diagram below is a business model in which the classes are grouped into packages:

- Packages appear as rectangles with small tabs at the top.
- The package name is on the tab or inside the rectangle.
- The dotted arrows are dependencies.
- One package depends on another if changes in the other could possibly force changes in the first.



CHAPTER 12

12.0 STATE MACHINE DIAGRAM

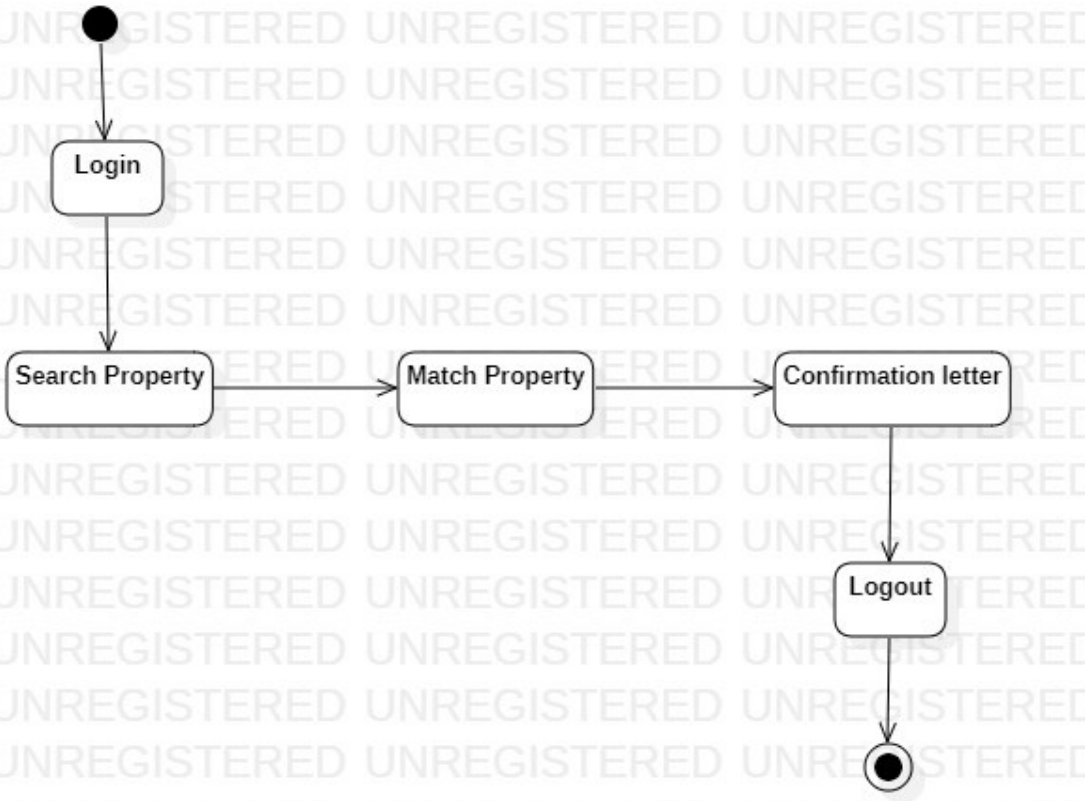
State-chart diagram is one of the five UML diagrams used to model the dynamic nature of a system. They define different states of an object during its lifetime and these states are changed by events. State-chart diagrams are useful to model the reactive systems. Reactive systems can be defined as a system that responds to external or internal events.

State-chart diagram describes the flow of control from one state to another state. States are defined as a condition in which an object exists and it changes when some event is triggered. The most important purpose of State-chart diagram is to model lifetime of an object from creation to termination.

State-chart diagrams are also used for forward and reverse engineering of a system. However, the main purpose is to model the reactive system.

Following are the main purposes of using State-chart diagrams −

- To model the dynamic aspect of a system.
- To model the life time of a reactive system.
- To describe different states of an object during its life time.
- Define a state machine to model the states of an object.



CHAPTER 13

13.0 TEST CASES

Test Case ID	Test Case Description	Test case Input	Expected Result	Actual Result	Test Case Status PASS/FAIL
TC01	Verify user registration	User provides valid name, email, Password, secret Q&A	User registration is successful	User registration is successful	PASS
TC02	Verify admin login	Valid username and invalid password	User login fails with an error message indicating invalid credentials	User login fails with an error message indicating invalid credentials	FAIL
TC03	Verify user login	Valid email and password	Logged in successfully	Logged in successfully	PASS
TC04	Forgot Password	Email account	Mail generated	Mail not received	FAIL
TC05	Verify system security	Attempt to access the admin dashboard without valid credentials	Access is denied	Access is denied, and an error message is displayed	PASS
TC06	Verify property listing creation	User provides property details such as title, description, Images, Location, Price, Type etc.	Property listing created successful	Pending admin approval	PASS
TC07	Verify property search	Search based on location, price range, property type, and amenities	Matching results are displayed	Properties matching the search criteria are displayed	PASS
TC08	Verify property listing creation	A property listing with incomplete or invalid details	Admin should not Approve incomplete or invalid details	Admin approves	FAIL
TC09	Verify unsuccessful property transaction	User attempts to initiate a transaction, but the seller or agent is unresponsive	The transaction cannot be completed, and the user receives appropriate notification	The transaction cannot be completed, but the user does not receive any notification	FAIL

Test Case ID	Test Case Description	Test case Input	Expected Result	Actual Result	Test Case Status PASS/FAIL
TC10	Verify system downtime handling	Introduce a planned system maintenance period and observe system behavior	The system displays a maintenance message and prevents user access	The system does not display a maintenance message, and users can still access the system during maintenance	FAIL
TC11	Verify system reliability	Introduce a system failure scenario and observe system recovery	The system recovers gracefully from the failure and resumes normal operation	The system recovers gracefully from the failure and resumes normal operation	PASS
TC12	Verify system scalability	Simulate a large number of users accessing the system simultaneously	The system maintains acceptable performance and responsiveness	The system maintains acceptable performance and responsiveness	PASS

CHAPTER 14

CONCLUSION

E-estate is a resident management solution built on a mobile and web platform for residents and estate managers in gated communities. The E-estate app is an Estate and community management application, built specifically for gated communities and estates.

It provides a centralized platform for managing properties, handling transactions, and connecting buyers and sellers. With features like property listings, online booking, and payment processing, a real estate application streamlines the real estate process and makes it more efficient and convenient. By incorporating modern technologies like mobile apps and data analytics, real estate applications are becoming increasingly sophisticated and offering new opportunities for growth in the industry. Overall, a real estate application plays a vital role in the modern real estate landscape, helping individuals and businesses to achieve their goals and succeed in the fast-paced world of real estate.

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