

# Unified Property Management System

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## ABSTRACT

*The Unified Property Management System is a comprehensive web-based platform designed to streamline and centralize real estate operations. It connects property owners, buyers, and administrators in a secure and efficient environment, offering a range of features to enhance user experience. Unlike traditional property listing platforms, this system introduces role-based workflows, property verification, advertisement management, and appointment scheduling, ensuring reliable and trustworthy interactions.*

*The platform allows administrators to manage employee roles and oversee property listings, while authorized employees verify and inspect properties to ensure their authenticity. Property owners and seekers can easily register, list properties, search for available listings, schedule visits, and track visitor history. The system fosters secure communication between buyers, sellers, and administrators, reducing risks associated with unverified or inaccurate property information.*

*With an emphasis on usability, data security, and real-time updates, the platform provides a scalable and efficient solution for managing property transactions. By integrating these core features, the system aims to improve the property rental and sale process, offering a reliable framework for both buyers and sellers to connect with confidence.*

in a structured real estate environment. The Unified Property Management System is developed to address these limitations by introducing a streamlined, role-based solution for managing property-related activities.

This system brings together administrators, employees, property owners, and seekers within a unified digital environment. It enables administrators to oversee platform operations and manage employee roles, while employees are responsible for verifying property details and maintaining listing accuracy. Property owners and buyers benefit from features such as easy registration, property listing, advanced search capabilities, appointment scheduling, and visitor tracking.

By providing structured workflows, secure access controls, and real-time interactions, the system enhances transparency and accountability in property dealings. It not only simplifies the process of buying, selling, and renting properties but also builds trust among users through verified listings and managed communications. The Unified Property Management System is designed to offer a reliable, scalable, and user-friendly solution that meets the evolving demands of the real estate sector.

## 2-REQUIREMENT ANALYSIS

### Functional Requirements

The Unified Property Management System is a web-based application developed to streamline and manage real estate operations through a centralized platform. It enables secure interactions between administrators, employees, property owners, and

## 1. INTRODUCTION

This Property Management System is a web-based platform that connects admins, employees, and users

seekers, offering features like property listing, verification, advertisement management, appointment scheduling, and visitor tracking. The system provides role-based access and real-time updates to ensure transparency, accountability, and efficiency across all users.

### 1. Admin Module:

Admin is responsible for managing employee information and controlling property advertisements within the system. The admin ensures that the platform operates efficiently by maintaining records and overseeing promotional listings.

### 2. Employee Module:

The Employee is responsible for verifying property details submitted by users. They manage property verification, update statuses, and upload reports to ensure only legitimate listings are approved.

- Login
- Update verification status
- Upload report
- Logout

### 3. User Module:

Users, including property owners and seekers, interact with the platform to either list properties or search for available ones. Owners can manage their property listings, while seekers can book appointments and track visit history for listed properties.

- Login
- View Advertisement
- Add property
- View property
- Update property

### Software Architecture

- Delete property
- Search property
- Book appointments
- View appointments
- Update appoint status
- View visitor's history
- Logout

### Non - Functional Requirements

- **Maintainability:** The system architecture and codebase should be modular and well-documented to facilitate easy updates, debugging, and maintenance.
- **Performance:** The system should be responsive and capable of handling multiple simultaneous users without significant latency. Property search, listing, and updates should be processed within 2 seconds under normal load.
- **Security:** The application must ensure secure access through authentication and role-based authorization. User data, especially personal and property details, must be protected using encryption and secure communication protocols.
- **Usability:** The interface should be intuitive and user-friendly, allowing users of varying technical backgrounds to navigate and use all features effectively.

### 3-DESIGN

Project architecture represents number of components we are using as a part of our project and the flow of request processing i.e. what components in processing the request and in which order. An architecture description is a formal description and representation of a system organized in a way that supports reasoning about the structure of the system

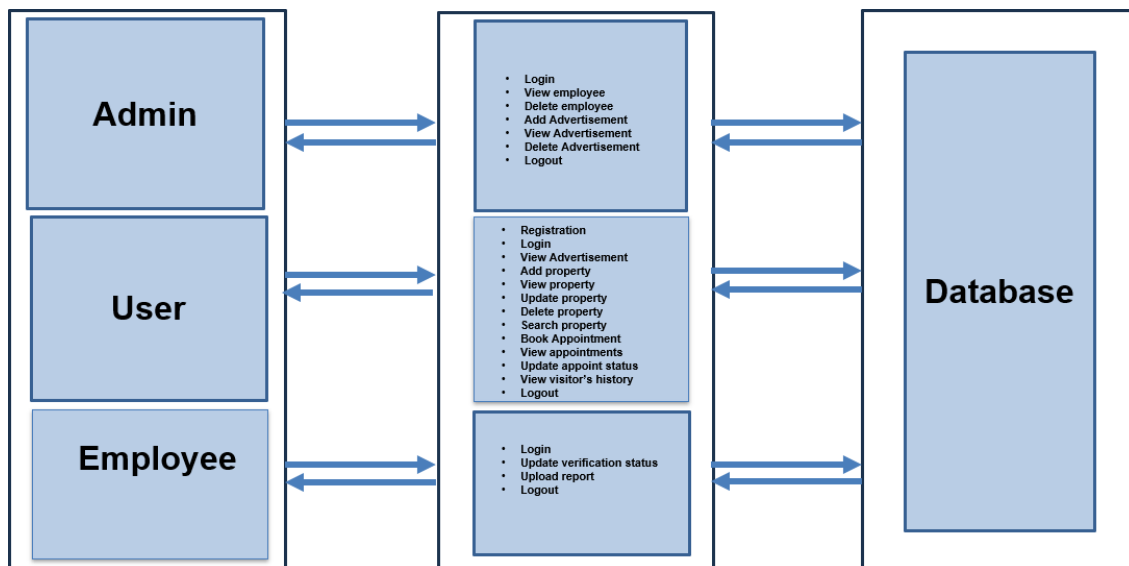


Fig 3.1 Software architecture

#### Technical Architecture:

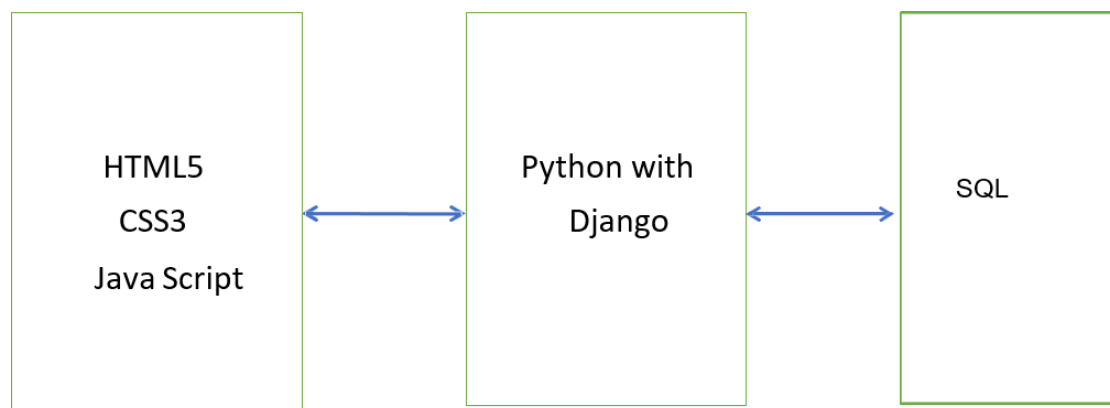


Fig 3.2 Technical architecture

#### 4.

##### IMPLEMENTATION

##### Technologies

This system is developed using Python programming language using Django framework.

##### Python

Python is a high-level, interpreted, general-purpose programming language known for its simplicity, versatility, and readability. Python was created by **Guido van Rossum** and was first released in 1991. It is now maintained by the Python Software

Foundation. The language was named after the British comedy group "Monty Python," not the snake, which reflects the creator's intent to make programming fun. Python supports multiple programming paradigms, including procedural, object-oriented, and functional programming.

Python is one of the most popular languages used across various domains like web development, data science, artificial intelligence, machine learning, automation, scripting, and scientific computing. Due to its clear syntax and dynamic typing, Python allows developers to write less code and achieve more, which makes it an excellent choice for beginners and professionals alike. Python comes with a rich standard library and thousands of third-party packages that simplify many programming tasks.

Python emphasizes code readability and uses indentation instead of braces or semicolons to define code blocks. It also handles memory management automatically using a built-in garbage collector. Unlike compiled languages, Python is interpreted, meaning code is executed line by line, which allows for quicker debugging and development cycles. Python is platform-independent and can run on various operating systems like Windows, macOS, and Linux without modification.

Its versatility and ease of integration with other languages and tools make Python a favourite choice in both academic and industrial settings. From building simple scripts to complex web applications and advanced AI models, Python continues to be a dominant force in modern software development.

### Features of Python

- **Interpreted Language:**

Python is an interpreted language, meaning that code is executed line by line by the interpreter. This makes debugging easier, as you can quickly test portions of the code without waiting for the entire program to compile.

- **Dynamic Typing:**

Python uses dynamic typing, meaning that you do not need to declare the type of a variable. The interpreter determines the type at runtime, providing greater flexibility and ease of use for developers.

- **Extensive Standard Library:**

Python comes with a large and comprehensive standard library that provides modules for file I/O, regular expressions, networking, web development, databases, and much more. This makes Python a versatile language for a variety of tasks.

- **Garbage Collection:**

Python has automatic memory management, including a built-in garbage collector that automatically manages memory allocation and deallocation. This helps developers focus on writing code rather than managing memory manually.

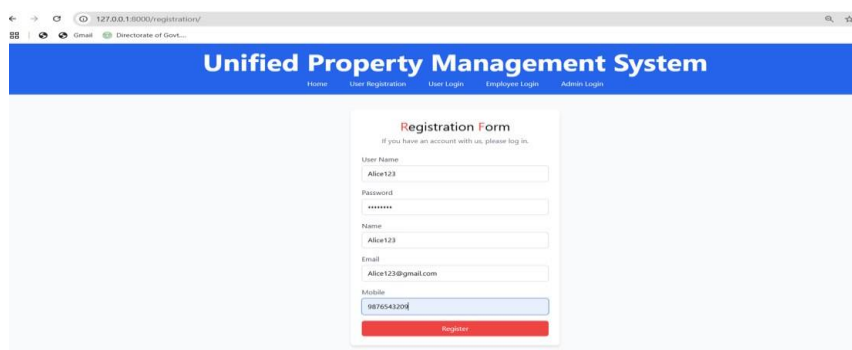
- **Easy Integration:**

Python easily integrates with other languages such as C, C++, and Java. Python allows the use of libraries from other languages, giving developers the ability to call functions written in these languages when needed.

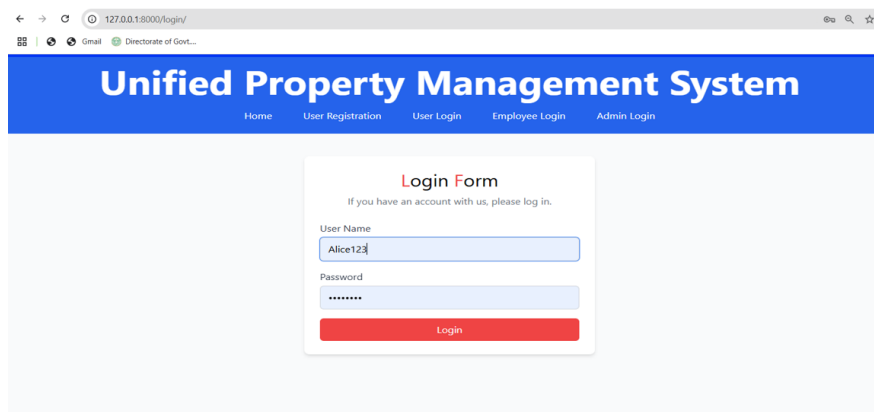
## 5- SCREENSHOT



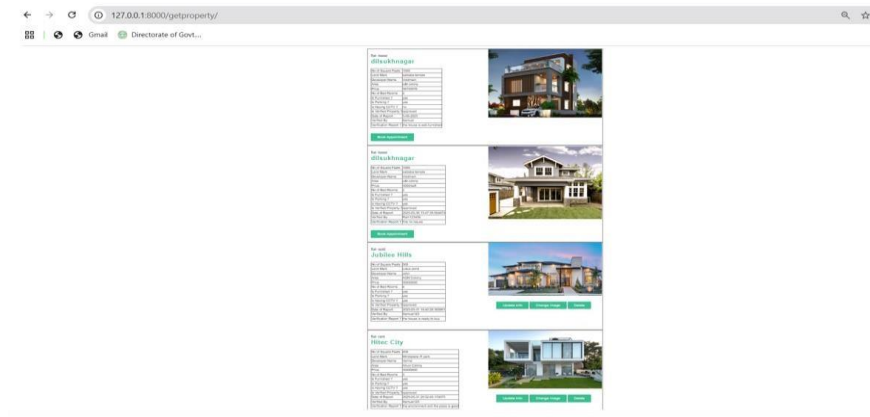
Screenshot 1 Main Page



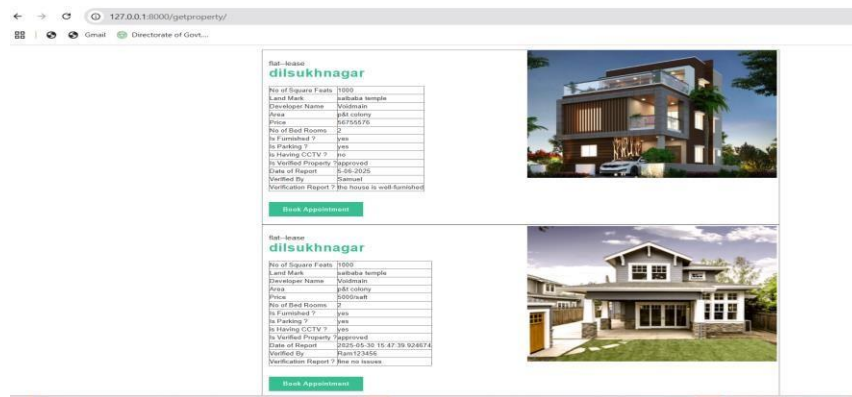
Screenshot 2 User Registration



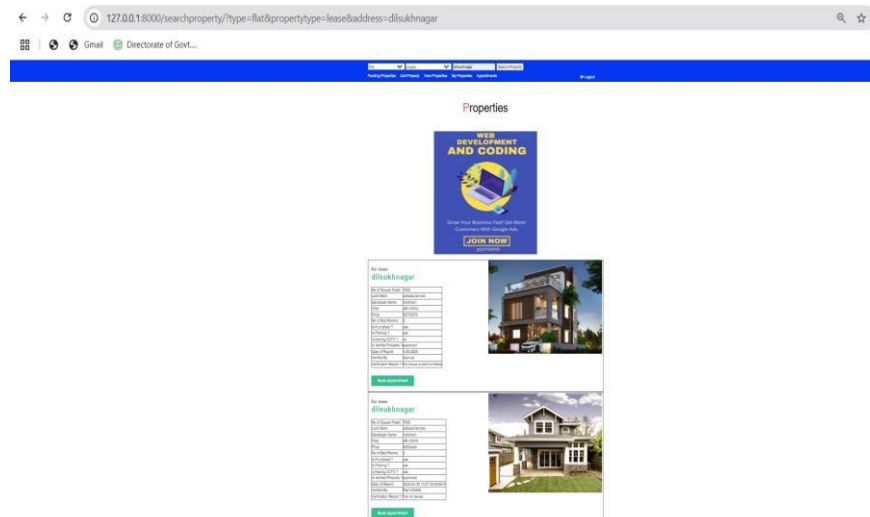
Screenshot 3 User Login



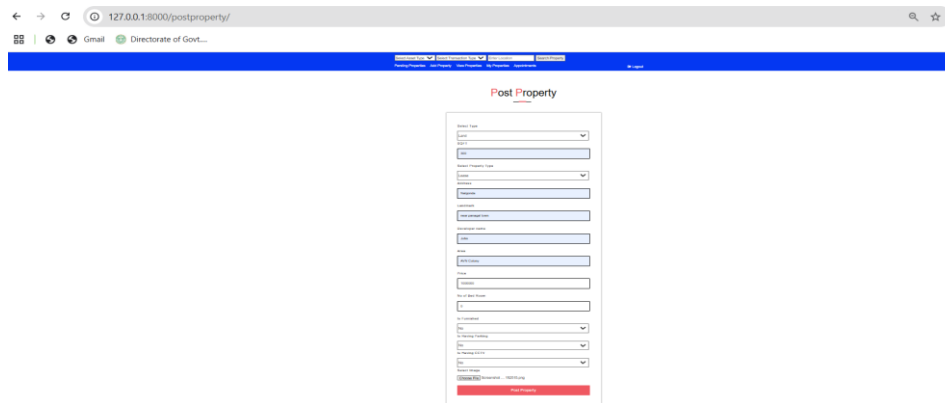
Screenshot 4 View property



Screenshot 5 Book Appointment



Screenshot 6 Search property



Post Property

Project Name:

Location:

Project Type:

Area:

Price:

Is Furnished?

Is Parking?

Is Having CCTV?

Is Verified Property?

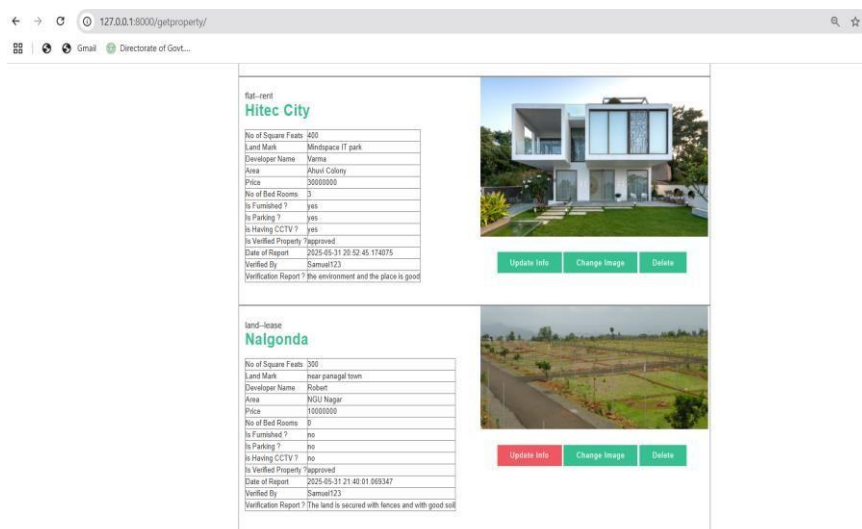
Date of Report:

Verified By:

Verification Report?

Save Property

Screenshot 7 Add property



stat-rent

Hitec City

No of Square Feet: 400

Land Mark: Mindspace IT park

Developer Name: Varna

Area: Khushi Colony

Price: 20000000

No of Bed Rooms: 3

Is Furnished? yes

Is Parking? yes

Is Having CCTV? yes

Is Verified Property? Approved

Date of Report: 2025-05-31 20:52:45 174075

Verified By: Samuel123

Verification Report? The environment and the place is good

Update Info

Change Image

Delete

land-lease

Nalgonda

No of Square Feet: 200

Land Mark: Near paragal town

Developer Name: Robert

Area: NGU Nagar

Price: 50000000

No of Bed Rooms: 5

Is Furnished? no

Is Parking? no

Is Having CCTV? no

Is Verified Property? Approved

Date of Report: 2025-05-31 21:40:01 080347

Verified By: Samuel123

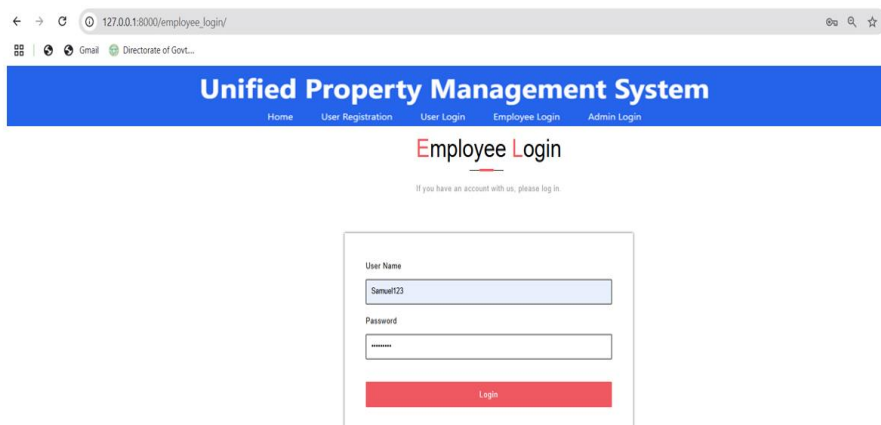
Verification Report? The land is secured with fences and with good soil

Update Info

Change Image

Delete

Screenshot 8 Update and delete property



Unified Property Management System

Home User Registration User Login Employee Login Admin Login

Employee Login

If you have an account with us, please log in.

User Name

Samuel123

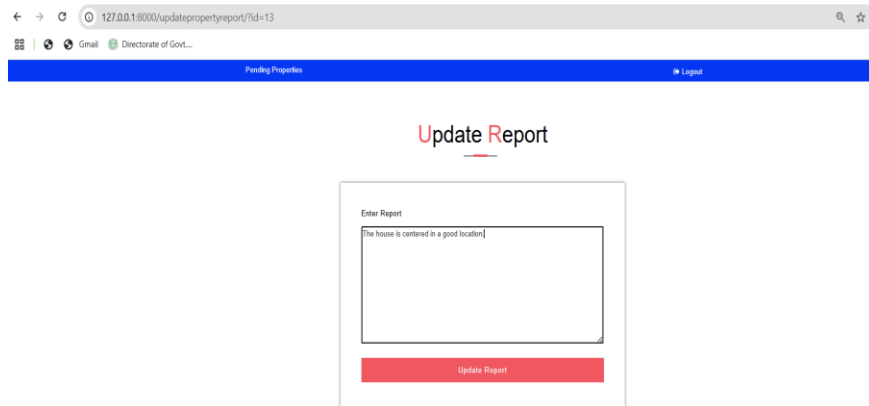
Password

\*\*\*\*\*

Login

Screenshot 9 Employee Login





127.0.0.1:8000/updatepropertyreport/?id=13

Pending Properties Login

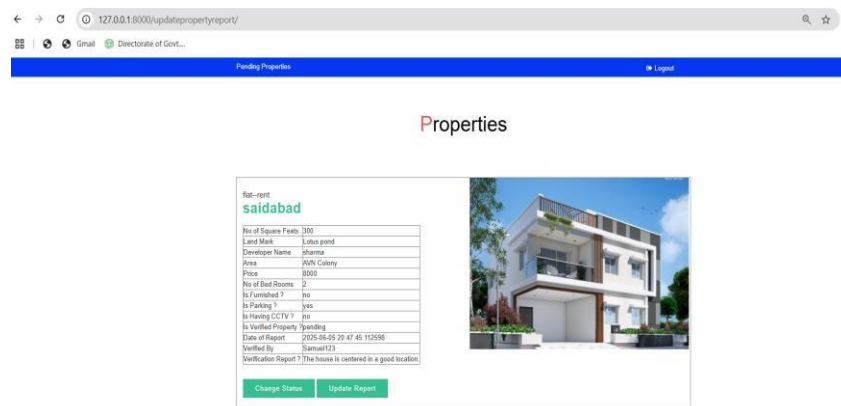
### Update Report

Enter Report

The house is centered in a good location

Update Report

Screenshot 10 Upload Report



127.0.0.1:8000/updatepropertyreport/


Pending Properties Login

### Properties

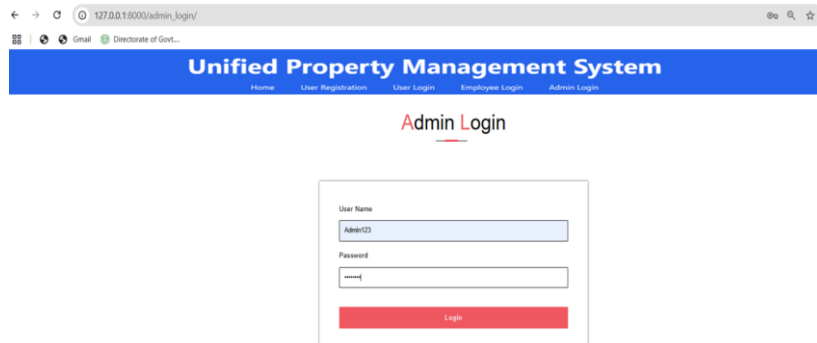
flat--report  
saidabad

No of Square Feets	100
Land Mark	Lotus pond
Developer Name	shame
Area	AWN Colony
Price	8000
No of Bad Rooms	2
Is Furnished ?	no
Is Parking ?	yes
Is Having CCTV ?	no
Is Verified Property ?	pending
Date of Report	2025-06-05 20:47:45 112598
Verified By	Samsad123
Verification Report ?	The house is centered in a good location

Change Status Update Report



Screenshot 11 Update verification Status



127.0.0.1:8000/admin\_login/

Directorate of Govt...

### Unified Property Management System

Home User Registration User Login Employee Login Admin Login

### Admin Login

User Name

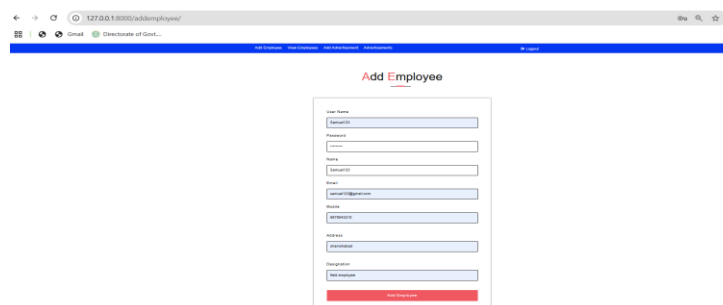
Admin123

Password

\*\*\*\*\*

Login

Screenshot 12 Admin Login



127.0.0.1:8000/addemployee/

Add Employee

User Name

Samsad123

Password

\*\*\*\*\*

Phone

9876543210

Address

1234567890

DOB

12/12/1990

Gender

Male

Designation

Software Engineer

Salary

100000

Add Employee

Screenshot 13 Add Employee



## 6-CONCLUSION

This system eliminates the risks found in OLX-like platforms by introducing role-based workflows, document verification, and real-world inspections. It builds trust between buyers and sellers while maintaining a secure and user-friendly experience.

## REFERENCES

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