IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

# GEO CHECK WEB-APPLICATION

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***Abstract:*** This land management website is primarily functionally driven by Python, with HTML providing structure, CSS handling aesthetics, and JavaScript handling interactive features. It uses Google Maps APIs to provide accurate location and mapping. Stripe handles the money part, guaranteeing safe online transactions. Admins have a control center in the form of a rulebook for creating and managing user accounts. MySQL Workbench is used to manage data storage, acting as a virtual filing cabinet for user and land information. Flask serves as a development guide, which guarantees a smooth integration of various tools. In conclusion, this extensive website allows for safe online payments, effective user management, and land measuring verification.

***Keywords*** **– HTML, Stripe, MYSQL Work Bench, Google Map API, Cascading Style Sheet.**

## 1. INTRODUCTION

GPS provides the highest level of precision for geolocation, which is widely used in many applications, including emergency services and navigation. With two-step authentication bolstering security, a dynamic online application powered by Google Maps becomes the go-to tool in a world where precise land area measurements are critical for making informed judgments. Land management is made easier for farmers, urban planners, and real estate brokers like Alex with this software.


Figure 1.1: Geographic Information System

To ensure accurate property price and foster buyer confidence, imagine Alex, a real estate agent, use the application to input property details and instantaneously verify land area. A layer of protection is added by the two-step verification, protecting users' privacy, such as Mark, a landowner determining the extent of his property. For anyone looking to double-check land measurements and avoid mistakes that could affect planning and decision-making, this web application is an invaluable resource.

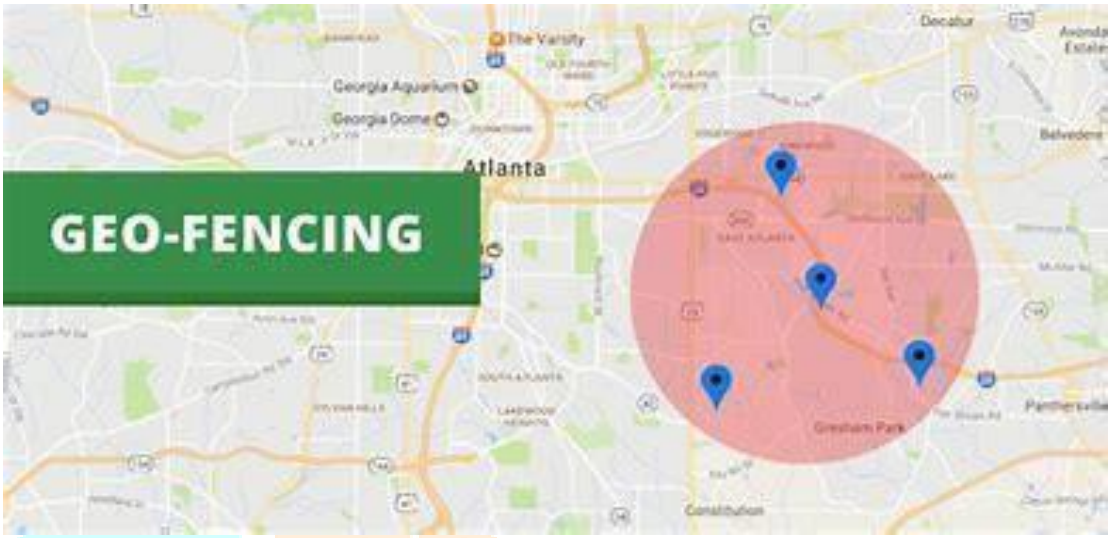


Figure 1.2: Geo-Fencing

Combining a variety of computer languages, the application is built using HTML for webpage structure, CSS for aesthetically pleasing and user-friendly design, and Python for functionality. This combination guarantees both precise measurements and a productive and enjoyable user experience.


Figure 1.3: Current Location

## 2. LITERATURE SURVEY

Sushant Suresh Yalgudkar and N. V. Dharwadkar, two researchers, suggest enhancing housing price projections with machine learning and deep learning. With an emphasis on Pune real estate, they compile information from numerous real estate websites in an effort to create a reliable model for precise predictions. Helping customers make knowledgeable decisions about real estate investments is the aim[1].

The goal of Srivastava and Sharma is to enhance real estate platforms for tenants. They recommend improving the information on these sites so that people are better equipped to make decisions. Their goal is to improve the efficiency and educational value of the real estate search process for prospective buyer[2].

## PROBLEM STATEMENT:

Accurate land area measurements are necessary for prudent land management and decision-making[3]. Urban planning, real estate transactions, and resource allocation are all unpredictable due to the imprecision of many present approaches. Inefficiencies and security risks also arise from the absence of a centralized platform for secure transactions, precise measurement verification, and user management. The challenge at hand is developing a comprehensive web application that seamlessly integrates accurate geographic data validation, safe online transactions, and effective user management[4].

## WHY GEO CHECK WEB APPLICATION:

In addition to providing a smooth user experience, the "Geo Check" online application serves as a centralized marketplace where brokers and administrators can list properties at a reasonable cost. With dynamic pricing, users may make informed judgments by having access to competitive property prices[5]. As a result of its robust technological foundation—which is reinforced by the MySQL Workbench server and the Python-Flask Framework—this approach offers dependability and scalability in addition to encouraging business growth for brokers and administrators. "Geo Check" essentially streamlines real estate transactions for the benefit of all involved parties.

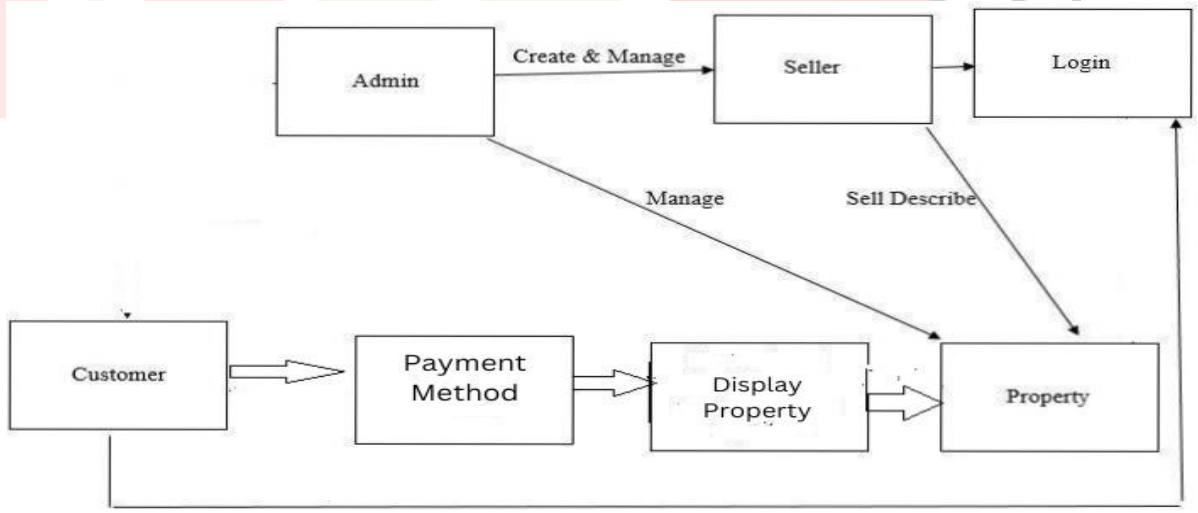


Figure 2.2: Architecture of Geo Check Web-Application

## SURVEY QUESTIONNAIRE

In order to gauge public awareness and opinions on land management approaches, we conducted a local survey with 20 participants in our Hyderabad neighborhood. The survey focused mostly on applications of land management. Important findings and insights from the survey improved understanding of the community's outlook on land management and the opportunities found in land management techniques.

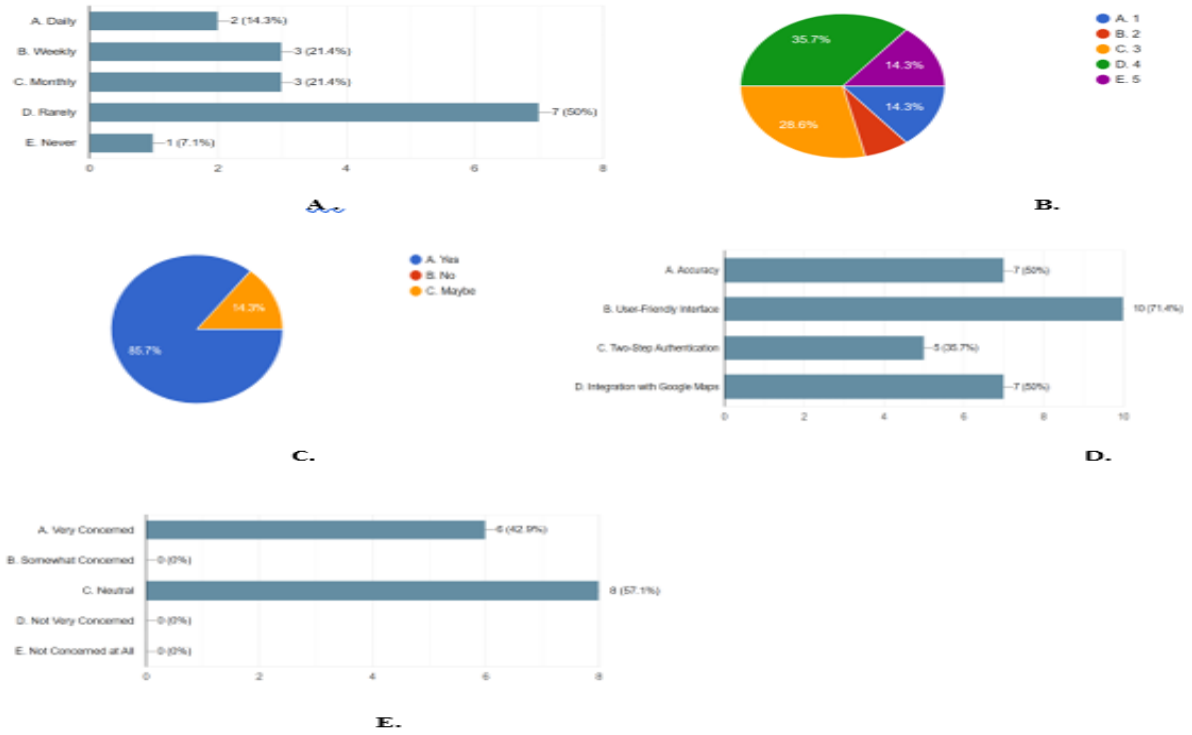


Figure 1 shows a summary of the extensive survey questions.

The conclusions drawn from Figure 1 provide a wealth of knowledge on consumer preferences and land management techniques. Interestingly, Figure 1.a shows that a sizable majority (50%) hardly ever double-check land area measurements, with 21.4% doing so on a weekly or monthly basis. With 35.7% indicating a satisfaction level of 4 on a scale of 1 to 5 and 28.6% at 3, Figure 1.b shows that satisfaction with present land measurement methods is reasonably high. A strong general interest in dynamic land measurement applications is shown in Figure 1.c, where 83% of respondents expressed enthusiasm and some were investigating it. According to Figure 1.d, a land area measurement application must have the following features: two-step authentication, a highly desired user-friendly interface (71.4%), accuracy (50%), and connectivity with Google Maps (50%). Furthermore, Figure 1e shows how important people believe their land-related data is to be secure, with a sizable share (57%) adopting a neutral position. As a result of the data presented in Figure 1, it can be concluded that 57.3% of respondents indicated that they would be willing to use the suggested land measurement application. This indicates a promising level of market interest and prospective adoption.

## 3. PROPOSED SYSTEM

Enhancing measurement accuracy, safe online payments, user control, and mapping tools are the main points of emphasis in this unique web application proposal that aims to revolutionize land management[6]. Precise land measures, safe Stripe transactions, administrator-friendly user management, and real-time mapping tools for visual insights are all goals of this all-inclusive system. The web application, which prioritizes data security through two-step authentication, seeks to empower administrators and users by promoting educated decision-making for land-related decisions**.**

The model's general outline operation is as follows:

1. First Stage of Planning: Project objectives, stakeholders, and resource requirements are specified at the planning stage. A thorough analysis determines possible hazards and strategies for mitigating them, as well as the project's budget, schedule, and strategy.

2. Design Stage: After planning, the project concept is translated into concrete structures during the design phase. This covers system architecture, user interface designs, and technical specs. It entails defining database structures, prototyping, and wireframing software models.

3. Evaluation Stage: During the testing phase, the model is put through a rigorous performance, reliability, and functionality review. Defects are found and fixed using a variety of testing techniques, such as unit and integration testing. This stage guarantees a final product of the highest caliber prior to deployment or completion.

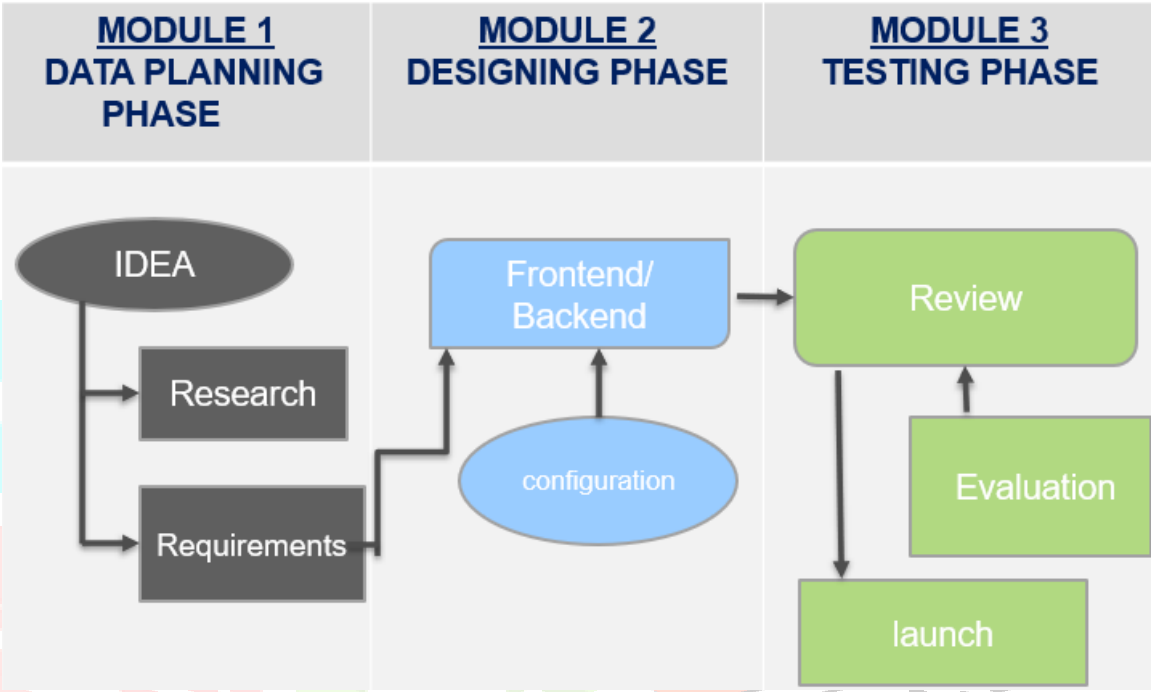


Figure 3.1: Phases of Application

## 4. RESULTS & DISCUSSION

The goal of this initiative is to establish a centralized marketplace that provides an inexpensive platform for property sales, so benefiting administrators and brokers alike. Improving the customer experience while maintaining flexible and affordable pricing is the main goal. Developing applications with the Python-Flask Framework guarantees effectiveness and functionality. Furthermore, the MySQL Workbench server is utilized for strong data storage on the backend, offering a dependable basis for handling user data and property listings. In addition to helping the administrator expand their business, the dynamic pricing mechanism guarantees that end users have access to the most competitive property prices so they may make well-informed selections. This strategy presents the app as a useful and intuitive tool for the real estate industry.

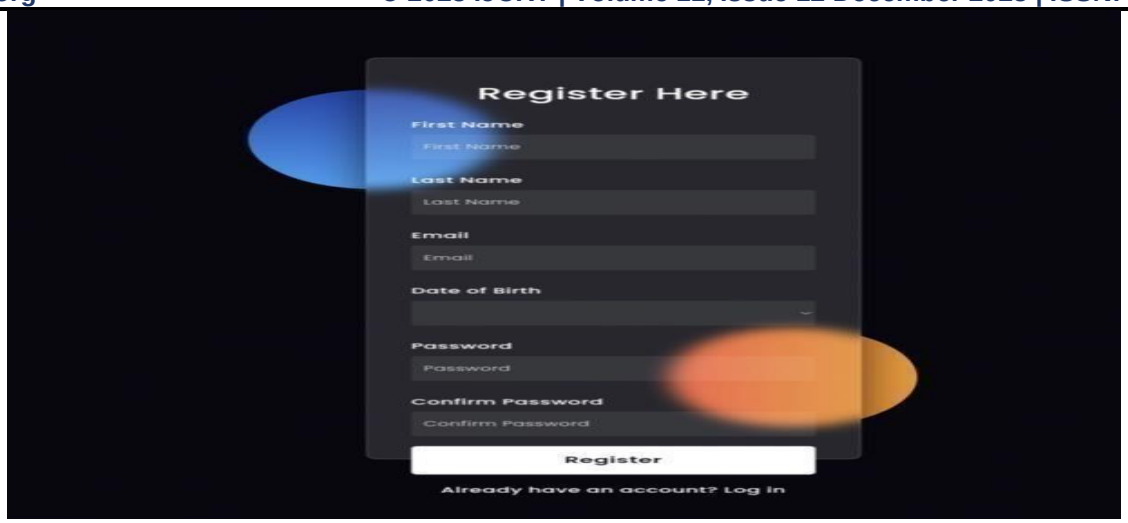


Figure 4.1 Register Page


Figure 4.2 OTP Verification

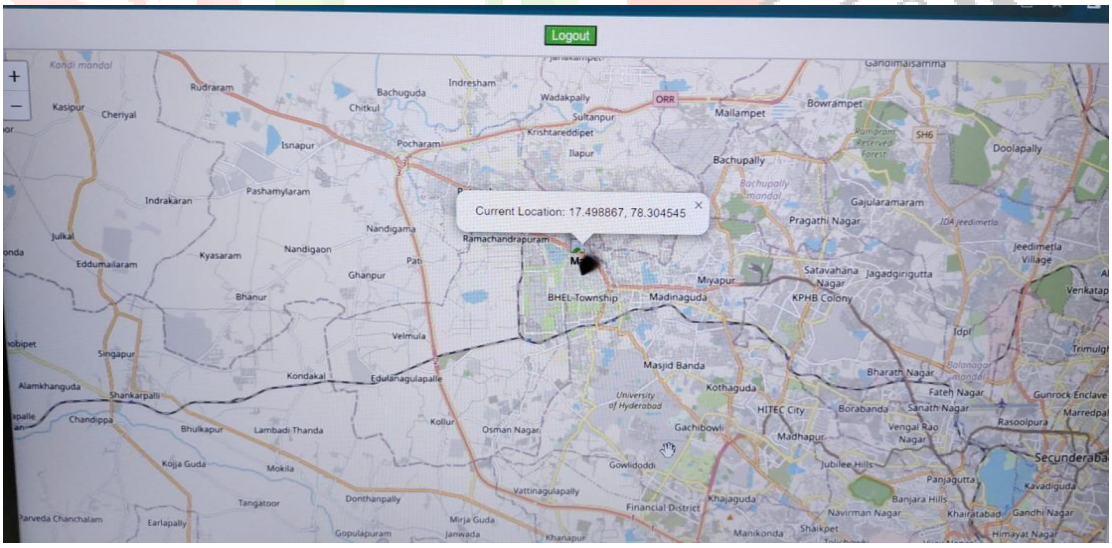


Figure 4.3: User Location

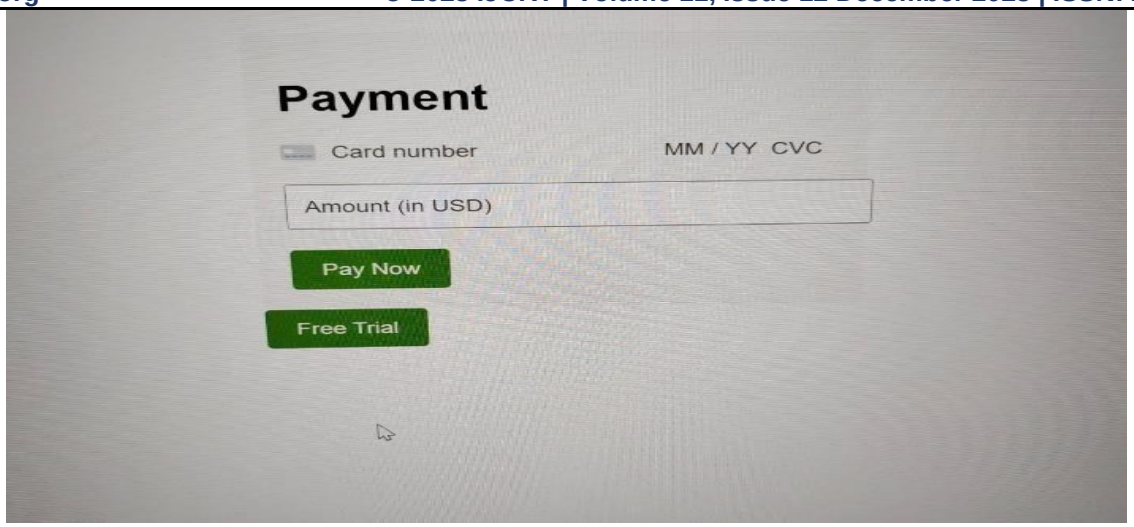


Figure 4.4: Payment Page

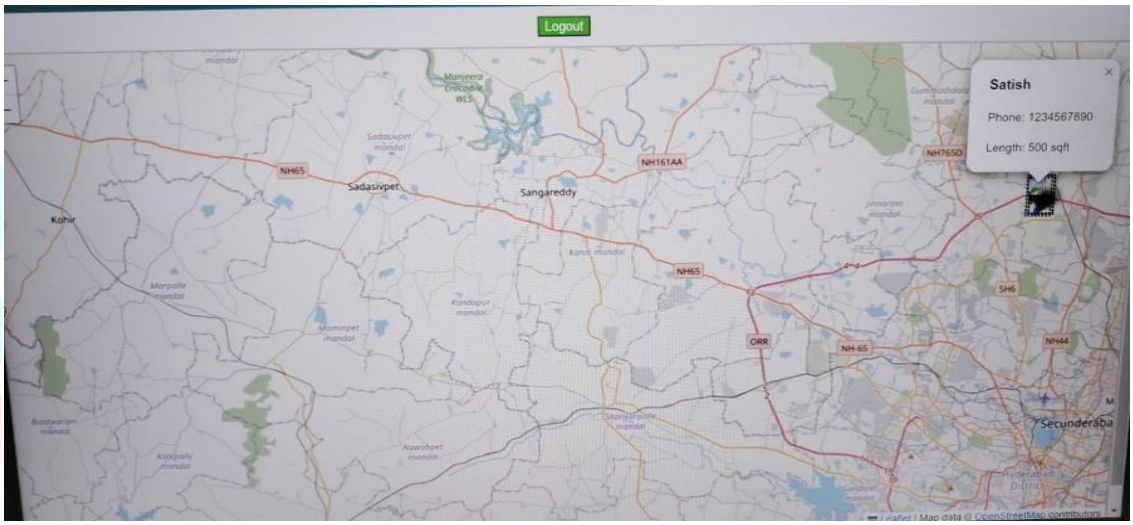


Figure 4.5: Owner Page

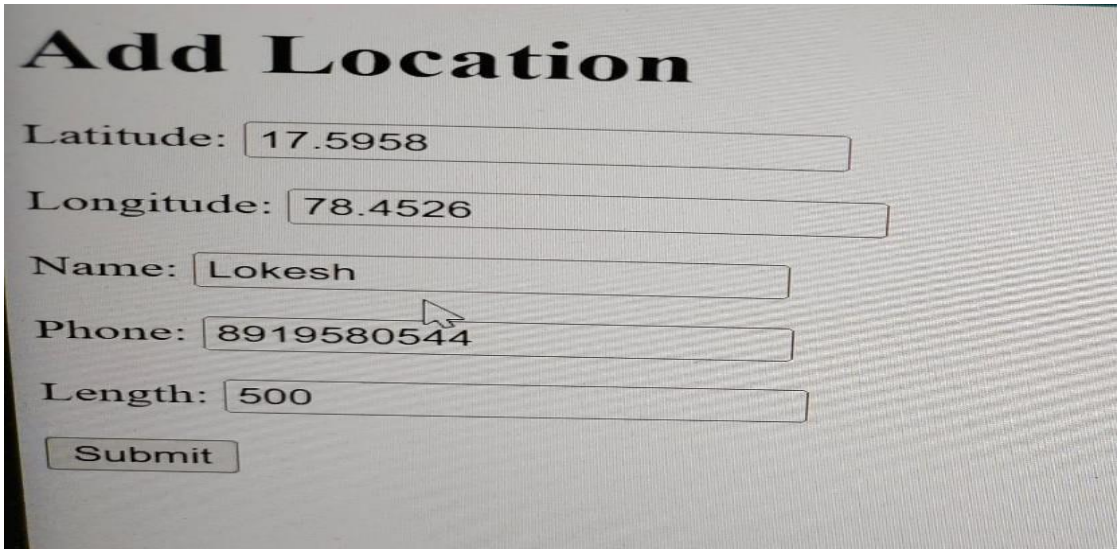


Figure 4.6: Admin Page

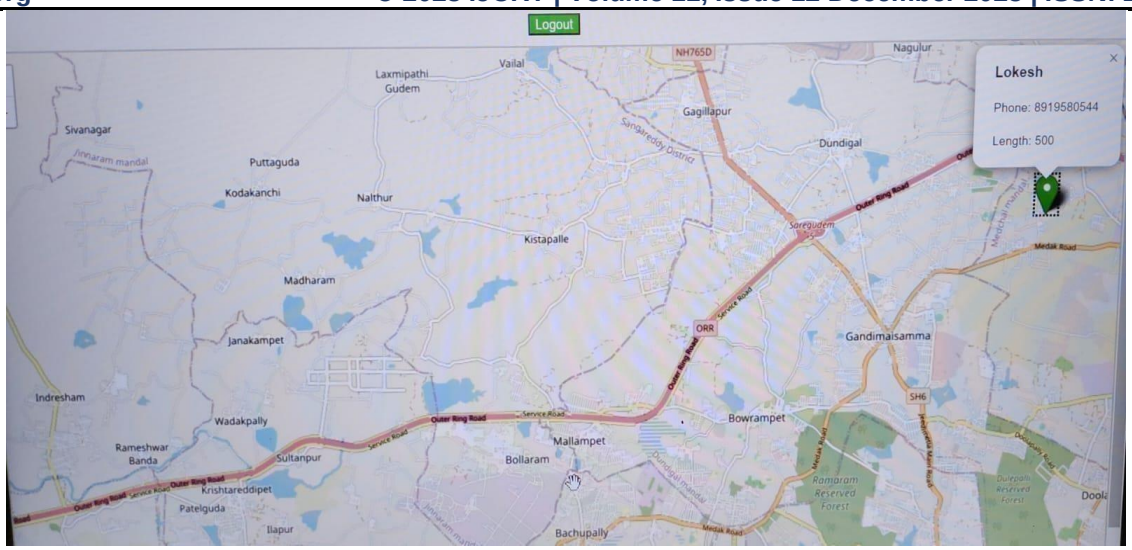


Figure 4.7: Land Owner Details

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