Comprehensive Software Requirements Specification for an Online Land Trading Platform in India

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Abstract

This Software Requirements Specification (SRS) document delineates the meticulous requirements for the development of a sophisticated software platform aimed at facilitating the buying and selling of land in India. The platform serves as an online marketplace, providing a myriad of features such as land listing, search and filter functionality, transaction management, and commission calculation. Additionally, it offers value-added services including land soil quality testing through laboratory and geological tests. This document comprehensively outlines the functional and non-functional requirements, user interfaces, external interfaces, constraints, and appendices, providing a detailed guide for the development and implementation of the software platform.

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1 Introduction

1.1 Purpose

The purpose of this document is to outline the requirements for the development of a software platform designed to facilitate the buying and selling of land in India.

1.2 Scope

The software platform will serve as an online marketplace where users can list lands for sale, search for available properties based on various criteria, negotiate and finalize transactions, and obtain relevant information such as land location, height from sea level, soil quality, suitability for construction, and environmental factors.

1.3 Intended Audience

The intended audience for this document includes development team members, project stakeholders, and testing and quality assurance personnel.

1.4 Document Structure

The document is organized into several sections covering functional requirements, non-functional requirements, user interfaces, external interfaces, constraints, assumptions, and dependencies.

2 Functional Requirements

2.1 Land Listing Functionality

2.1.1 Description

Users (sellers) should be able to list lands for sale on the platform.

2.1.2 Details to Capture

- Location of the land (using Google Maps API).
- Height of the land from sea level.
- Soil quality (fertile, rocky, sandy, etc.).
- Suitability for construction (fit or unfit).
- Environmental factors (presence of water bodies, vegetation, etc.).

2.1.3 Input Methods

Text fields, dropdown menus, map integration for location selection.

2.1.4 Output

A detailed listing visible to potential buyers, including all captured details.

2.2 Search and Filter Functionality

2.2.1 Description

Users (buyers) should be able to search for lands based on various criteria.

2.2.2 Search Criteria

Location, height from sea level, soil quality, suitability for construction, environmental factors.

2.2.3 Filtering Options

Narrow down search results based on specified criteria.

2.2.4 Output

List of land listings matching the search and filter criteria.

3 Non-Functional Requirements

3.1 Performance

3.1.1 Description

The system should perform efficiently under expected load conditions.

3.1.2 Requirements

Response time for search and listing operations should be within acceptable limits.

3.2 Security

3.2.1 Description

The system should ensure the confidentiality, integrity, and availability of user data.

3.2.2 Requirements

Implementation of secure authentication mechanisms to prevent unauthorized access.

4 User Interfaces

4.1 Land Listing Page

4.1.1 Description

A user-friendly interface for sellers to input land details and list properties for sale.

5 External Interfaces

5.1 Google Maps API Integration

5.1.1 Description

Integration with Google Maps API to provide location-based services and mapping functionalities.

6 Constraints

6.1 Legal Compliance

6.1.1 Description

The system must adhere to legal regulations and compliance standards governing land transactions in India.

7 Appendices

7.1 Glossary

7.1.1 Entries

- API: Application Programming Interface - a set of protocols, tools, and definitions that allows different software applications to communicate with each other.

7.2 References

7.2.1 References

- Google Maps API Documentation: https://developers.google.com/maps/documentation/javascript
- Indian Real Estate Regulations: https://www.icsi.edu/media/portals/86/bare%20acts/THE%20REAL%20ESTATE%20(REGULATION%20AND%20DEVELOPMENT)%20ACT,%202016.pdf
- Soil Testing Standards: https://law.resource.org/pub/in/bis/S03/is.2720.1.1983.pdf