
Proposal for Guesthouse Management System

Project Overview

We propose the development of a comprehensive Guesthouse Management System that will include both mobile and web applications. This system will streamline the management of guesthouses, providing an efficient platform for various users, including Admins, Operators, Guesthouse Owners, and Customers. The system will ensure secure and user-friendly interactions, with features designed to enhance user experience and operational efficiency.

System Features

● User Roles & Privileges

- ❖ **Admin** :-- : Admins will have overarching control of the system, including user management, system configurations, and the ability to oversee all activities within the platform.
- ❖ **Operator** :-- : Operators will review and verify guesthouse owner details, ensuring that all necessary documentation and specifications are met before the property is listed.
- ❖ **Guesthouse Owner** :-- : Owners will post details about their properties, including descriptions, amenities, and pricing. They must provide verified documentation, such as IDs and property ownership proofs, to maintain the integrity and trustworthiness of the platform.
- ❖ **Tenant**: Tenant can browse and rent guesthouses. They will be required to complete ID verification and provide personal details to secure bookings.

● Core Functionalities

- ❖ **Map Integration** :-- : The system will include map integration to allow customers to view the location of guesthouses and find properties in their desired areas.
- ❖ **Language Support** :--: The platform will support multiple languages, including English and Amharic, to cater to a broader audience.
- ❖ **Payment Integration** :--: Customers will have the flexibility to pay using various payment gateways, including Telebirr, Mastercard, and PayPal. Additional payment gateways can be integrated as required, potentially increasing the project's cost.

● Technology Stack

- ❖ **System Architecture** :--: The system will be designed using Hexagonal Architecture, which is widely adopted by enterprise companies in America and China. This architecture ensures maintainability, testability, and flexibility in adapting to future requirements.
- ❖ **Frontend** :--: The frontend of the system will be developed using Angular, providing a responsive and dynamic user interface.
- ❖ **Backend** :--: The backend will be powered by Spring Boot, offering robust and scalable service architecture.
- ❖ **Mobile Application** :--: Flutter will be used for developing the mobile application, leveraging its versatility to support both Android and iOS platforms with a single codebase.
- ❖ **Additional Tools** :--: Redis will be utilized for caching to improve performance, and the Elastic Stack will be implemented for comprehensive logging and monitoring.
- ❖ **Deployment** :-: Docker and Kubernetes will be employed to containerize the applications and manage deployments. This approach will allow for replication, preventing single points of failure and ensuring high availability.

● Project Timeline

The development of the Guesthouse Management System is estimated to take 6 months. The timeline includes the following phases:

1. Requirement Analysis & Design: 1 month
2. Frontend & Backend Development: 3 months
3. Integration & Testing: 1 month
4. Deployment & Final Review: 1 month

● Cost Estimate

The estimated cost for the complete development of the Guesthouse Management System is 700,000 Ethiopian Birr. This cost includes the core functionalities outlined above. However, the integration of additional payment gateways or other custom features may incur additional costs.

NOTE: The cost did not include VAT.

● Conclusion

This Guesthouse Management System will provide a modern, efficient, and secure platform for managing guesthouses. By leveraging advanced technologies and a robust architecture, the system will be capable of meeting the needs of all users while ensuring scalability and reliability. We are confident that this project will be delivered on time and within the specified budget, with the potential for future enhancements as needed.