Find Your Home

(Smart Property Dealing App)

Project Proposal Report

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1. Introduction

Finding a house for rent or sale is a common problem, often complicated by manual record-keeping, unreliable data, and dependency on property agents. With the rise of digital solutions, there is a strong need for a smart, user-friendly platform that connects buyers, sellers, and tenants directly.

The proposed system, Find Your Home (FYH), is a mobile application that will serve as a centralized platform for property dealing. It will allow users to register, list properties, search for properties, communicate with owners via chat, view property locations on maps, and even predict property prices using integrated AI features.

2. Problem Statement

Current property dealing methods involve several challenges:

- Manual data management, leading to inefficiency and data loss.
- No secure, centralized electronic platform for property records.
- Dependence on third-party agents, increasing costs and delays.
- Difficulty in predicting fair property prices.

There is a need for a mobile-based system that addresses these issues by providing automation, security, and efficiency.

3. Objectives

The objectives of the FYH project are to:

- Develop a mobile app for property buyers and sellers.
- Provide CRUD (Create, Read, Update, Delete) operations for property management.
- Integrate Google Maps for property location marking and searching.
- Include a chatbot to assist users and predict property prices.
- Ensure secure authentication and data storage using Firebase & JWT.
- Apply best practices in software project management for effective delivery.

4. Project Scope

In-Scope Features:
- User Registration/Login (Buyer & Seller).
- Property Listing (Add, Edit, Delete).
- Search and filter properties.
- Integrated Google Maps API for property location.
- Chatbot for FAQs and price prediction.
- Firebase integration for authentication and database management.

Out of Scope (for current version):
- Full-scale web application.
- Global deployment with multi-language support.
- Advanced AI-based property recommendations.

5. Literature Review (Summary)

Existing property management systems provide listing and searching functionalities but often lack intelligent features such as chatbots, automated price prediction, and secure centralized records. The proposed solution improves on these systems by combining user-friendly UI (React Native) with robust back-end technologies (Firebase, MySQL, Slim Framework) and advanced tools like DialogFlow chatbot for real-time assistance.

6. Methodology

The project will follow the Agile Software Development Life Cycle (SDLC) with iterative increments. Key steps:
1. Requirement Gathering (SRS documentation).
2. System Design (Use Case, ERD, Architecture diagrams).
3. Development (React Native, Firebase integration, Google Maps API, Chatbot).
4. Testing (Unit, Integration, System, User Acceptance Testing).
5. Deployment (Local deployment on Android devices).
6. Maintenance & Improvements (Future scalability).

7. Tools & Technologies

- **Frontend**: React Native (Mobile App).
- **Backend**: Node.js, PHP (Slim Framework).
- **Database**: Firebase, MySQL.
- **APIs**: Google Maps, DialogFlow.
- **IDE/Tools**: Android Studio, Visual Studio Code, Navicat, GitHub.
- **Project Management**: Gantt Chart, Trello/Jira (Agile Sprints).

8. Expected Outcomes

- A fully functional Android mobile application.
- Secure login & authentication for users.
- Property listing and searching features.
- Real-time map integration.
- Chatbot with price prediction.
- Tested and verified system using Black-box, Integration, and UAT methods.

9. Limitations

- Currently deployed locally (not on global servers).
- Limited to Android platform.
- Data storage capped at Firebase free-tier and Raspberry Pi (64GB).
- Limited AI capabilities in chatbot.

10. Future Work

- Expand to global deployment with cloud-based hosting.
- Add a web application version.
- Improve chatbot with advanced NLP models.
- Enhance UI/UX for better accessibility.
- Integrate secure payment gateways.

Conclusion

The "Find Your Home" application is designed to provide a smart, reliable, and efficient property dealing solution. By eliminating the dependency on agents, securing data digitally, and integrating modern technologies such as chatbots, AI-based price prediction, and map integration, this project aims to revolutionize the property market experience for both buyers and sellers.