Find Your Home

(Smart Property Dealing App)

Feasibility Study Report

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1. Introduction

The feasibility study determines whether the “Find Your Home” (FYH) mobile application is viable in terms of **technical, economic, operational, schedule, and legal feasibility**. The study evaluates if the project can be successfully developed and deployed within available resources, time, and organizational constraints.

2. Types of Feasibility

2.1. Technical Feasibility

- **Available Technologies:**
- Mobile Development: React Native, Android Studio
- Backend: Node.js, Slim Framework, PHP
- Database: Firebase (authentication & real-time DB), MySQL
- APIs: Google Maps API, DialogFlow Chatbot
- **Compatibility:** Tools and technologies are widely used, open-source, and well-documented.
- **Risk:** Medium. Mobile app development is straightforward, but chatbot training and real-time map integration may require additional testing.

2.2. Economic Feasibility

Development Cost:

- Tools/Software: Mostly free (React Native, Firebase free tier, Android Studio).
- Hosting & Deployment: Minimal costs initially (Firebase free limits, local deployment).
- Human Resources: Handled by student developers (no major labor cost).

Expected Benefits:

- Reduces dependency on agents, saving commission fees for users.
- Provides centralized property listings, increasing efficiency.
- Can be scaled into a commercial product for real estate companies.

2.3. Operational Feasibility

- **Usability:** The application is designed with a simple and intuitive UI.
- **End Users:** Buyers, sellers, and tenants with Android smartphones.
- **Training Requirements:** Minimal; basic app usage can be learned quickly.
- **Operational Risks:** Limited deployment environment (currently local).

2.4. Schedule Feasibility

- **Proposed Timeline:** ~12–14 weeks (3–3.5 months).
- **Development Phases:** Planning (2 weeks), Design (2 weeks), Development (6 weeks), Testing (2 weeks), Deployment (2 weeks).
- **Risk:** Low. Agile methodology allows iteration and adjustment in case of delays.

2.5. Legal & Ethical Feasibility

Legal Concerns:

- Must comply with data protection (user data stored securely in Firebase).
- Google Maps API and Firebase licensing terms followed.
- No copyright infringement (code and assets are original or open-source).

Ethical Concerns:

- Protecting user privacy and data security.
- Preventing misuse of chatbot predictions.

3. Risk Analysis

Risk	Probability	Impact	Mitigation
Firebase free-tier limits exceeded	Medium	Medium	Upgrade to paid plan if needed
Google Maps API billing issues	Low	Medium	Use API quotas & free-tier carefully
Chatbot misinterpretation	Medium	Low	Continuous training & improvements
Deployment issues	Medium	Medium	Local testing before wider rollout

Security threats	Medium	High	Use JWT, Firebase Auth, and encryption

4. Cost-Benefit Analysis

Estimated Cost:

- Development: Free (open-source tools).
- Deployment: $0–50 (depending on Firebase/Google API usage).
- Maintenance: Minimal, handled by developers.

Benefits:

- Saves time for buyers/sellers.
- Reduces cost by eliminating agents.
- Provides reliable property data.
- Scalable into a commercial product.

Conclusion

The feasibility analysis indicates that the “Find Your Home” project is **technically, economically, operationally, and legally feasible**. The risks are manageable, the costs are low, and the expected benefits are high. With proper project management and agile development, the system can be successfully implemented within the given schedule.