# **Technical Design Document of HomeFinder**

1. **Introduction**

The HomeFinder Project is designed to find a Flat or PG or Hostel.This project provide a platform that lets you rent a property without paying any brokerage. You can use their verified listing to ensure you get your dream property by contacting the property owner directly.

## **Architecture Overview**

### **2.2 Backend**

* **Framework:** FastAPI framework
* **Database:** PostgreSQL for storing data securely.

### **2.1 Frontend**

* **Technology:** React.js for the user interface.
* **Authentication:** JWT-based authentication for secure user access.
* **UI Components:** Create intuitive interfaces for users in various roles (User, Owner and Admin).

### **2.3 Database**

* Use PostgreSQL as the relational database management system (RDBMS) for data storage.
* Create tables to store user profiles, property details, owner details, history.

### **2.4 Deployment**

* Deploy the system on cloud-based platforms such as AWS or Azure.

## **3.Use Cases**

### **User Use Cases**

#### **Use Case 1: User Login and Profile Management**

* **Actor:** User
* **Description:** User can log in and search property on the basis of location and rent.

### **Owner Use Cases**

#### **Use Case 4: Add, Update and Delete property details**

* **Actor:** Owner
* **Description:** Owner can Add, update and delete property details.

### **Admin Use Cases**

#### **Use Case 5: Add, Update and Delete property details**

* **Actor:** Admin
* **Description:** Admin can approve and block owners property details.

## **Database Design**

### **4.1 Tables**

1. **User Profiles:** Stores user profiles, including basic information.
2. **Room details:** Stores available room details.
3. **History**: stores searched property history.

## **5. Non-Functional Requirements**

* **Security:** Implement data encryption, access controls, and user authentication.
* **Performance:** Optimize database queries and use caching for quick response times.
* **Scalability:** Design the system to find best home for user.
* **Usability:** Ensure an intuitive user interface and user-friendly interactions.
* **Maintenance:** Plan for regular updates, bug fixes, and user support.

## **6.Project Timeline and Budget**

The project timeline for developing this project could be around 3 weeks depending on factors like complexity and resources.