

Design Doc

1. Project Overview

Purpose:

The purpose of this application is to assist users, particularly international students and remote workers, in managing their apartment searches by aggregating listings from multiple sources into a single platform where they can compare features, book tours, and make informed decisions about rentals.

Target Users:

- International students looking for convenient housing options near universities.
- Remote workers interested in finding optimal living spaces that suit their mobile lifestyle.
- Relocation consultants who manage housing options for multiple clients.

2. System Architecture

Frontend:

- **Technology:** React.js
- **State Management:** Redux for managing global state across the app.
- **Routing:** React Router for navigation between different components/pages.

Backend:

- **Technology:** Node.js with Express.js
- **API:** RESTful APIs to facilitate front-end and back-end communication.
- **Authentication:** Implementation of JWT (JSON Web Tokens) for secure user authentication.

Database:

- **Technology:** MongoDB
- **Details:** To store user profiles, apartment listings, preferences, and booking details.

Additional Tools:

- **Vite:** Used for optimizing the development and build process.
- **CSS Framework:** Tailwind CSS for utility-first styling to accelerate UI development.

3. Core Features

Apartment Listing Management:

- Users can input, update, and manage apartment listings they find.
- Integration of an intuitive interface to add and edit listings with ease.

Search and Filter:

- Advanced search options to filter apartments by price, location, amenities, etc.
- Customizable filters based on user preferences.

Comparison Tool:

- Feature to compare multiple apartments side-by-side.
- Comparative analysis based on customizable parameters like price, amenities, and distance to key locations.

Tour Booking System:

- Integrated scheduling tool for booking apartment tours.
- Calendar view to manage and schedule tours.

User Dashboard:

- Personal dashboard for managing searches, saved listings, and scheduled tours.
- Notifications and alerts on new listings or changes in selected apartments.

4. User Roles

General User:

- Can register and login.
- Manage apartment listings, book tours, and access comparison tools.

Admin:

- Monitor and manage user activities.
- Handle site-wide settings and approve or remove listings as needed.

5. Mock

Dashboard	Name Rental Name	City City
My Rentals	Official Website URL	Property Type Please choose
Add a rental	Room Type Please choose	Room Type Please choose