

# PropEase - Real Estate Management System

## Weekly Progress Report – Sprint 2

(22 September – 28 September 2025)

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### Summary of Tasks Completed

This sprint expanded the **User-side module** by introducing property-related functionalities — listing, search, filtering, and detailed property viewing. Integration between the **frontend and backend** was also achieved for these components.

#### Frontend Development

- Designed and developed the following components:
  - **Property Listing Page:** Displayed multiple property cards with essential details (image, title, location, price, type).
  - **Property Detail Page:** Created a dedicated page to show detailed information of a selected property.
  - **Search & Filter Bar:** Implemented search functionality by location, budget, and property type.
- Added **dynamic routing** using for navigation between pages.
- Integrated **Axios** for API communication with the backend.
- Enhanced **UI responsiveness** for mobile and tablet layouts.
- Added **loading spinners** and error messages for better UX during API calls.

#### Backend Development (Node.js + Express.js + MongoDB)

- Designed and implemented **Property Schema** with fields: title, description, location, price, type, amenities, imageURL, ownerId.
- Developed and tested the following APIs:
  - **Add Property API (POST)**
  - **Get All Properties API (GET)**
  - **Get Property by ID API (GET)**
  - **Search Properties API (GET with query filters: location, price range, type)**
- Integrated property endpoints with the frontend interface.

#### Documentation

- Updated **API documentation** (Swagger + internal notes).
- Recorded all completed features in the **Sprint Progress**.

## Roadblocks / Challenges Faced

Issue	Description	Resolution
<b>API Filtering Issue</b>	Search filters initially returned incorrect or incomplete results.	Fixed MongoDB query syntax and added multiple conditional filters.
<b>State Sync</b>	Filters and search input were not updating results dynamically.	Implemented controlled components and for dependency updates.
<b>Image Rendering</b>	Property images not loading due to inconsistent URLs.	Added fallback images and validated URLs before rendering.
<b>UI Performance Lag</b>	Multiple re-renders when fetching large property data.	Optimized API calls with pagination and memoization.

## Upcoming Tasks

The next sprint will focus on **integrating user interactions** and **enhancing the user module** for the mid-semester demo.

### Planned Tasks:

- **Frontend:**
  - Develop **User Profile Settings Page**.
  - Implement **Favorite/Save Property** functionality.
  - Improve UI consistency and add icons/images for better visuals.
- **Backend:**
  - Add **Property Favorites API** for saving user-selected listings.
  - Begin implementing **Chat and Notification structure (initial setup)**.