

Real Estate Rental- Problem Statement

Project Title: Analyze, Design, and Implement an Enterprise Software Solution for a Real Estate Listing & Rental Platform.

For this project, you are required to undertake **Requirements Analysis, System Design, and Implementation** of a **Real Estate Listing & Rental Platform** based on the problem statement provided below.

Problem Statement

The real estate rental industry is rapidly growing, with increasing demand for digital solutions to streamline property management and acquisition of rental places. Currently, many **landlords, property managers, and tenants** rely on **manual processes, classified ads, phone calls, and in-person transactions** to find each other to get properties for rent. This **fragmented and time-consuming** approach results in inefficiencies, poor tenant-landlord communication, and difficulties in finding and booking rental properties.

The **Real Estate Management Company** has approached your team to design and develop a **web-based rental platform** to centralize the property listing, booking and lease management. The system should allow **property owners to list and manage rentals, tenants to search and book properties, and administrators to oversee platform operations.**

The goal is to **automate the rental process**, making it more **efficient, secure, and user-friendly** for both property owners and tenants.

System Features and Functionality

1. **Property Listing Management** – Property owners can add, edit, and delete listings with images, pricing, and property details.
2. **Tenant Search & Booking** – Tenants can search properties by **location, price, amenities, and availability**, and request bookings.
3. **Lease Agreement Management** – A **digital lease contract** will be generated and signed electronically by both parties.
4. **User Authentication & Role Management** – The system will support different user roles:
 - **Property Owners:** Manage listings, approve bookings, and receive rent payments.
 - **Tenants:** Search for properties, book rentals, sign lease agreements, and make payments.
 - **Administrators:** Monitor platform activities, manage disputes, and ensure compliance.
5. **Admin Dashboard** – Platform-wide moderation, and reporting.

Business Rules & Constraints

1. **Booking Limitations** – A property can only be booked by one tenant at a time.
2. **Maximum Lease Duration** – Lease agreements are **capped at 12 months** before renewal is required.
3. **Property Visit Scheduling** –

1. Tenants can request up to 3 property visits per week before making a booking.
2. Landlords must confirm visit requests within 48 hours.
3. Verified tenants receive a "Verified Tenant" badge on their profile.
4. **Booking Cancellation Rules** –
 1. Tenants can cancel bookings up to 3 days before moving in.
 2. Landlords can reject a booking request but must provide a reason.
5. **Lease Agreement Constraints** –
 1. Lease agreements must be signed within 7 days after approval, or the booking will be
6. **Inactive Listing Policy** –
 1. Listings with no activity for 6 months will be automatically marked inactive until the owner updates them.