

Project Design Phase-II

Solution Requirements (Functional & Non-functional)

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Nm ID	7264E40C79CF15DA21F41ABA4F4825CD
Project Name	Lease Management System

Functional Requirements

Following are the functional requirements (epics) and their sub-requirements for the Lease Management System.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Property Onboarding	Add new property with address, photos, amenities, lease terms and availability calendar. Bulk import of properties via CSV.
FR-2	User Onboarding & Verification	Tenant and landlord registration (form, social login). Identity verification via document upload and OTP.
FR-3	Lease Creation & e-Signature	Generate lease templates, populate terms, allow digital signatures for landlord & tenant, store executed lease PDF.
FR-4	Rent & Fee Payments	Integrate payment gateway for security deposit, rent, and fees; schedule recurring payments; handle refunds.
FR-5	Availability & Booking Workflow	Tenant can apply for an available unit; system handles application, landlord approval/rejection, and booking confirmation.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-6	Maintenance & Service Requests	Tenants can submit maintenance requests, attach images; landlords/agents can assign vendors and update status.
FR-7	Renewals & Termination	Automatic renewal reminders, tenant/landlord initiated termination flow, prorated calculations for early termination.
FR-8	Notifications & Communication	Email/SMS/in-app alerts for payments, approvals, maintenance updates, lease expiry, and messages between parties.
FR-9	Document Management & Audit Trail	Secure storage of leases, invoices, inspection reports; version history and audit logs of actions.
FR-10	Roles & Access Control	Role based access: Admin, Property Manager, Landlord, Tenant, Vendor with permission controls and activity logs.

Non-functional Requirements

Following are the non-functional requirements that ensure the system's quality, security and operational readiness.

NFR No.	Non-Functional Requirement	Description
NFR-1	Security	All sensitive data (IDs, bank details) must be encrypted at rest and in transit. Role-based access enforced; multi-factor authentication for admin accounts.
NFR-2	Compliance & Data Retention	System must support configurable retention policies and generate audit reports for compliance (e.g., local tenancy laws, GDPR where applicable).

NFR No.	Non-Functional Requirement	Description
NFR-3	Performance	The system must process tenant search and booking responses within 2 seconds under normal load and handle 1,000 concurrent sessions.
NFR-4	Availability	Target 99.9% uptime with automated failover for critical services (auth, payment, database).
NFR-5	Scalability	Architecture must scale horizontally to handle increased properties, users, and file storage without service degradation.
NFR-6	Reliability & Consistency	Transactions (payments, lease signing) must be atomic and durable; system must retry transient failures and report irrecoverable errors.
NFR-7	Usability & Accessibility	Intuitive UI for non-technical users; accessible per WCAG AA guidelines; mobile responsive for quick tenant actions.
NFR-8	Maintainability	Modular codebase and documented APIs to allow faster feature rollout and easier bug fixes.
NFR-9	Backup & Disaster Recovery	Nightly backups and a tested recovery plan to restore service within defined RTO/RPO targets.
NFR-10	Logging & Monitoring	Centralized logging, real-time monitoring and alerting for system errors, payment failures and security anomalies.