# Solution Requirements – Lease Management System

**📅 Date:** 27 June 2025  
**📌 Project Name:** Lease Management System  
**🧑 Team ID:** **Team ID :** LTVIP2025TMID30244  
**🎯 Maximum Marks:** 4 Marks

**✅ Functional Requirements**

| **FR No.** | **Functional Requirement (Epic)** | **Sub Requirement / User Story (Story/Sub-Task)** |
| --- | --- | --- |
| **FR-1** | **User Registration** | - Registration through Form, Gmail, LinkedIn - Field validation for phone/email - Password strength indicator |
| **FR-2** | **User Confirmation & Login** | - Email confirmation with token validation - OTP via SMS or email - Secure login with forgot password & MFA |
| **FR-3** | **Lease Agreement Management** | - Create, edit, or delete leases - Attach scanned documents (PDF/JPG) - Set lease start/end date and terms - Lease history tracking |
| **FR-4** | **Rent Management** | - Monthly rent scheduling - Late fee calculation - Auto reminders to tenants - Rent status: paid/unpaid/overdue - Rent receipt generation & download |
| **FR-5** | **Notifications & Alerts** | - Email/SMS notifications - Push notifications for mobile users - Alerts for upcoming lease renewals - Missed payment notices |
| **FR-6** | **Tenant Portal** | - View lease details - Download rent receipts - Submit maintenance requests - Message property manager |
| **FR-7** | **User Role Management** | - Role-based access control (Admin, Property Manager, Tenant) - Custom permissions for sub-users |
| **FR-8** | **Maintenance Request System** | - Tenants raise service requests - Assign vendor/technician - Track request status and resolution timeline |
| **FR-9** | **Lease Renewal / Termination** | - Notify tenant and manager 30 days in advance - Auto-generate renewal contracts - Move-out inspection checklist and form |
| **FR-10** | **Reporting & Analytics Dashboard** | - View payment trends, lease occupancy, upcoming renewals - Export data in CSV/PDF - Admin summary of monthly collections |
| **FR-11** | **Document Storage & Retrieval** | - Secure cloud-based lease storage - Searchable document archive - Version control on contract edits |
| **FR-12** | **Audit Logs & Activity Tracking** | - Log user actions (logins, edits, uploads) - Track changes for legal compliance - Admin access to activity history |

**⚙️ Non-Functional Requirements**

| **NFR No.** | **Requirement** | **Detailed Description** |
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| **NFR-1** | **Usability** | - Intuitive UI/UX for non-technical users - Mobile-responsive design - Accessibility features for visually impaired users |
| **NFR-2** | **Security** | - HTTPS encryption - Role-based access - Two-Factor Authentication (2FA) - Data stored with AES-256 encryption - Regular vulnerability scans |
| **NFR-3** | **Reliability** | - 99.9% uptime guarantee - Cloud backup every 12 hours - Failover system for high availability |
| **NFR-4** | **Performance** | - <2-second average page load time - Optimized API responses - Caching for frequently accessed data |
| **NFR-5** | **Availability** | - SaaS-based, 24x7 access - Hosted on scalable cloud infrastructure (e.g., AWS/Azure) |
| **NFR-6** | **Scalability** | - Support from 1 to 10,000+ units/properties - Modular design to plug in additional features - Multi-property and multi-manager support |
| **NFR-7** | **Maintainability** | - Codebase structured for easy updates - API documentation for third-party integration - Admin panel for configuration without coding |
| **NFR-8** | **Interoperability** | - Integration-ready with CRMs, payment gateways, and accounting tools (e.g., Razorpay, QuickBooks) |
| **NFR-9** | **Localization** | - Multi-language support - Localized currencies, rent frequency (monthly, quarterly) |

**🚀 Optional Advanced Features (Nice to Have)**

* **Chatbot Integration** for lease queries
* **E-signature integration** (e.g., DocuSign)
* **Tenant Rating System** for landlords
* **Mobile App with biometric login**
* **Smart reminders** using machine learning to predict delays