

LEASE MANAGEMENT ANALYSIS SYSTEM

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Team ID	NM2025TMID07016
Project Name	Lease management
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REQUIREMENT ANALYSIS PHASE

1. Functional Requirements

- User Management:** Register, login, and manage user roles (Admin, Landlord, Tenant).
- Property Management:** Add, edit, delete, and view property details.
- Lease Management:** Create, update, and terminate lease agreements.
- Rent Tracking:** Generate invoices, track payments, and record transactions.
- Maintenance Requests:** Tenants can raise requests; landlords can update status.

2. Non-Functional Requirements

- Performance:** Supports up to 500+ users simultaneously.
- Security:** Role-based access, encryption, and secure login (JWT/OAuth).
- Usability:** Intuitive and responsive user interface.
- Reliability:** 99.5% uptime with daily data backups.

3. Technology Stack

- **Frontend:** React.js / Angular / HTML5 / CSS3 / Bootstrap
- **Backend:** Node.js (Express.js) or Django (Python)
- **Database:** MySQL / PostgreSQL / MongoDB
- **Authentication:** JWT / OAuth 2.0
- **Hosting:** AWS / Azure / Google Cloud
- **Version Control:** Git & GitHub
- **API Type:** RESTful APIs

4. User Stories

- **Admin:**
 - Manage all users and roles.
 - Generate reports and monitor activity.
- **Landlord:**
 - Add and manage properties.
 - View rent payments and lease agreements.
- **Tenant:**
 - View lease details and payment history.
 - Make payments and raise maintenance requests.

The complete lease management process



ANALYSIS PROCESS

5. Data Flow Diagram (Conceptual Description)

Level 0 (Context Diagram):

- Tenant, Landlord, and Admin interact with the Lease Management System.

Level 1 (Detailed Flow):

- Tenant → Login/Register → Authentication Module.
- Tenant ↔ Lease Module ↔ Landlord.
- Tenant → Payment Module → Payment Records.
- Tenant → Maintenance Module → Requests/Updates.
- System → Notification Module → Sends Alerts/Reminders.