

LEASE MANAGEMENT DESIGN SYSTEM

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Team ID	NM2025TMID07016
Project Name	Lease management
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PROJECT DESIGN PHASE

1. Problem-Solution Fit

The ideation phase revealed that organizations struggle with fragmented, manual, and error-prone lease management processes.

The key problems identified were:

- Inefficient lease tracking and document management.
- Missed renewals and payment deadlines.
- Compliance and audit risks due to poor visibility.

2. Proposed Solution

The proposed lease management system is a **web-based platform** designed to manage the entire lease lifecycle — from creation and approval to renewal and termination.

Key Features:

1. **Centralized Lease Repository:** Secure storage for all lease documents and metadata.
2. **Automated Notifications:** Alerts for key dates like renewals, payments, and expirations.
3. **Role-Based Access Control:** Different user levels for admin, legal, finance, and property managers.

3. Solution Architecture (Conceptual)

The system architecture follows a **three-tier architecture model**:

a. Presentation Layer (Frontend)

- **Technology:** ReactJS / Angular
- **Functions:** User interface for viewing and managing leases, dashboards, and reports.
- **Users:** Admin, Property Manager, Tenant, Legal/Finance Officer

b. Application Layer (Backend)

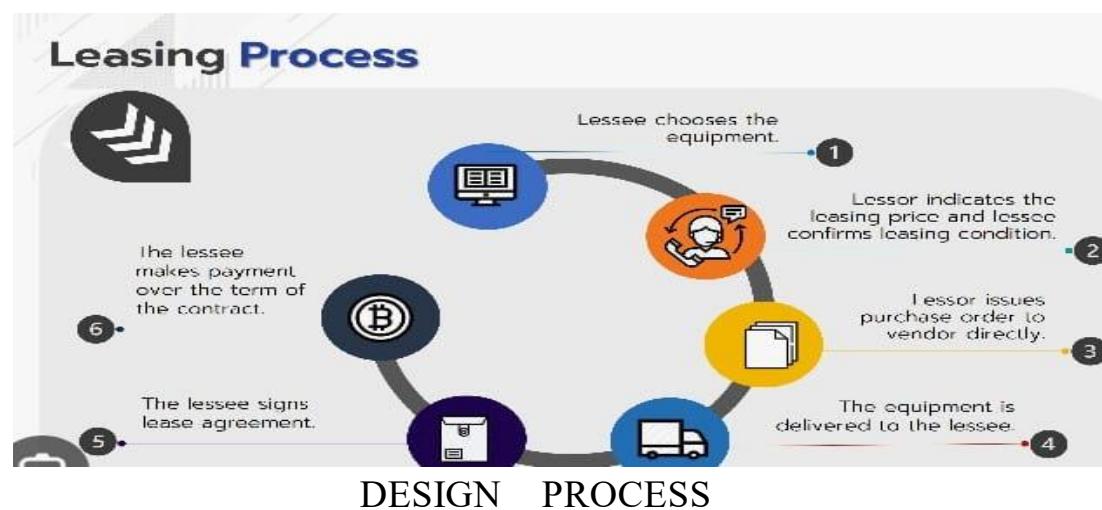
- **Technology:** Node.js / .NET / Java Spring Boot
- **Functions:**
 - Business logic for lease creation, approval, and tracking
 - API handling for data exchange
 - Notification and workflow automation

4. Database Design (Overview)

The database follows a **relational model**, consisting of multiple interrelated tables.

Key goals of the database design:

- Centralize all lease-related information.
- Reduce redundancy and maintain consistency.
- Support secure access and transaction logging.



5. Advantages

- Centralized storage for all lease, tenant, and property data.
- Automation of lease renewals, payment reminders, and compliance alerts.
- Reduced manual work and human errors in data entry
- Streamlined and standardized workflow for lease lifecycle management.
- Quick and easy access to lease information through search and filters.
- Improved coordination between departments (finance, legal, property).