Project Design Phase

Solution Architecture

Date	2 November 2025
Team ID	NM2025TMID03296
Project Name	Lease Management System
Maximum Marks	4 Marks

Goals of the Architecture

• Automate lease, tenant, property, and payment management using Salesforce Lightning.

• Ensure data accuracy and integrity through validation rules and object relationships.

• Enable seamless approval workflows and email notifications for user actions.

• Provide real-time insights into lease and payment data through reports and dashboards**.**

Key Components

• **Property Object** – Stores property details like property name, location, and rent amount.
• **Tenant Object** – Captures tenant information and links tenants to specific properties.
• **Lease Object** – Maintains lease agreement details such as start date, end date, and amount, with validation rules for data accuracy.
• **Payment Object** – Tracks tenant rent payments and links them to their respective leases.
• **Approval Process** – Used for tenant approval and workflow automation.
• **Validation Rule (End Date > Start Date)** – Ensures logical lease data entry.
• **Email Notification** – Notifies users automatically upon lease or tenant approval/rejection.
• **Lightning App** – Integrates all objects into one user-friendly interface for managing operations.

Development Phases

1. **Create Custom Objects** – Property, Tenant, Lease, and Payment.
2. **Add Relationships** – Link objects using Lookup fields (e.g., Tenant → Lease, Lease → Property).
3. **Implement Validation Rules** – Ensure correct lease duration and data consistency.
4. **Design Approval Workflow** – Configure tenant approval with notification triggers.
5. **Create Reports and Dashboards** – Display real-time lease and payment insights.
6. **Test the System** – Verify all relationships, approval actions, and validation rules with sample records.

Solution Architecture Description

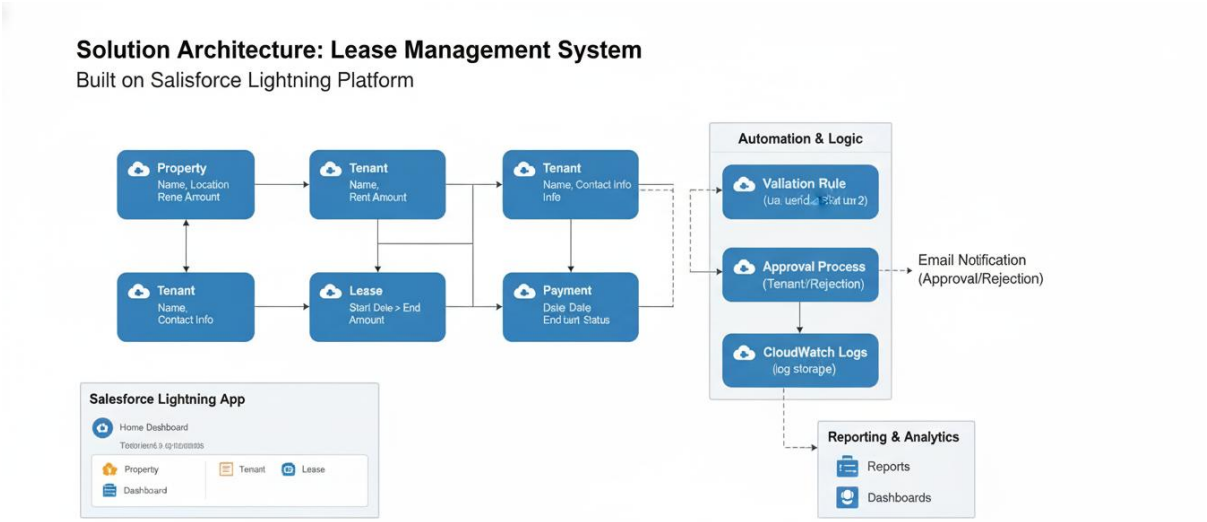
The **Lease Management System architecture** is designed to automate and streamline the management of properties, tenants, leases, and payments using **Salesforce Lightning**. The architecture leverages Salesforce's **object-based data model**, where each key entity — Property, Tenant, Lease, and Payment — is implemented as a **custom object**.

Relationships are established using **lookup fields**, ensuring smooth linkage across all records. A **validation rule** (End Date > Start Date) maintains data accuracy, while an **approval process** automates tenant verification and record approval. Upon approval or rejection, **email notifications** are sent to users, ensuring timely communication.

The **Lightning App interface** provides an organized workspace, allowing property managers to create, edit, and monitor records seamlessly. **Reports and dashboards** visualize key metrics like active leases, upcoming expirations, and pending payments.

Overall, the architecture ensures **data integrity, operational transparency, and efficient automation** — transforming traditional lease tracking into a centralized, intelligent, and scalable system that supports real-time decision-making for property managers.

Example - Solution Architecture Diagram



Key Components:

- Property Object...
- Name, Contanshi̇rs
- Valiament
- Approval Rule
- Email Notfcation
- Lightning App...

Development Phases:

- Create Custom Objects...
- Applemant Valiation Rules
- Design ent liation Rules
- Design Approval Workllw
- Create Reports and Dashboards...
- Test the System...