PROJECT DESIGN PHASE

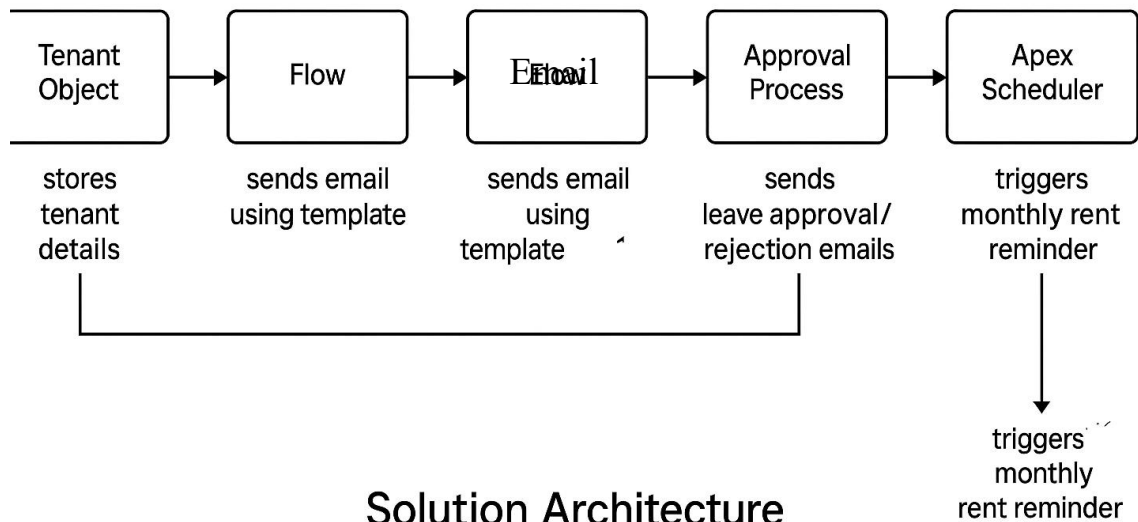| Team ID	**NM2025TMID01504**
Project Name	**LEASE MANAGEMENT**
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1. System Overview:

The **Salesforce Lease Management System Architecture** integrates multiple Salesforce components — objects, automation tools, and Apex logic — to create a seamless workflow between tenants, properties, and payments.

It combines declarative (Flows, Approval Process) and programmatic (Apex Classes, Triggers) approaches for optimal performance and flexibility.

2. System Components:

Component	Function
Custom Objects	Property, Tenant, Lease, and Payment store all business data.
Relationships	Lookup and Master-Detail relationships connect objects.
Validation Rules	Ensure correct and consistent field values (e.g., date validation).
Flows	Automate payment confirmation and communication.
Approval Process	Handles tenant leave request approvals.
Apex Trigger	Prevents multiple tenants for the same property.
Apex Scheduler	Automates monthly rent reminders.
Email Templates	Used for automated communication.

3. Workflow Diagram:

Tenant Object	→	Flow	→	Email	→	Approval Process	→	Apex Scheduler
stores tenant details		sends email using template		sends email using template		sends leave approval/ rejection emails		triggers monthly rent reminder

triggers monthly rent reminder

Solution Architecture

4. Technical Architecture Description

1. **Data Layer**
   - o Custom Objects: Property, Tenant, Lease, and Payment.
   - o Lookup relationships ensure referential integrity.

2. **Business Logic Layer**
   - o Apex Triggers prevent multiple tenants per property.
   - o Validation rules maintain data accuracy.
   - o Flows automate repetitive actions.

3. **Process Layer**
   - o Approval process routes requests for admin authorization.
   - o Scheduled Apex executes time-based events.

4. **Presentation Layer**
   - o Lightning App "Lease Management" gives users easy navigation between Properties, Tenants, Payments, and Leases.

5. Integration Flow Summary

- **Step 1:** Admin creates property and tenant records.

- **Step 2:** Tenant makes payment → Flow triggers email confirmation.

- **Step 3:** Tenant requests leave → Approval Process begins.

- **Step 4:** Admin approves or rejects → Email alert sent.

- **Step 5:** Apex Scheduler runs monthly → sends rent reminders.

6. Architecture Advantages

- Modular and scalable.

- High maintainability through Salesforce declarative tools.

- Real-time communication with automated emails.

- Time-based process execution ensures consistency.