

Project Design Phase-II

Technology Stack (Architecture & Stack)

Date: 01 November 2025

Team ID: NM2025TMID05757

Project Name: Lease Management System

Maximum Marks: 4 Marks

Technical Architecture:

The deliverable includes the **architectural diagram and technology stack** for the Lease Management System.

This system automates property leasing operations—managing tenants, leases, payments, and approvals—using **Salesforce** as the primary cloud platform.

Reference:

<https://developer.salesforce.com>

Guidelines Followed:

Includes all major application logic blocks.

Shows infrastructural demarcation (**Cloud-based Salesforce platform**).

Indicates **external integrations** (Email, Payment Gateway, ERP).

Specifies **data storage** and automation components.

Component	Technology / Tool Used	Description
Frontend (UI Layer)	Salesforce Lightning App	Provides the user interface for managing properties, tenants, leases, and payments.
Backend (Business Logic)	Apex Classes, Triggers	Implements automation, validation, approval logic, and trigger-based business rules.
Database Layer	Salesforce Objects (Property, Tenant, Lease, Payment)	Stores core application data in Salesforce's cloud-based database.
Automation / Workflow	Salesforce Flows, Approval Processes	Automates approvals, notifications, and recurring monthly tasks.
Integration Layer	Salesforce APIs, Webhooks	Integrates with external ERP systems and Payment Gateways.
Email Services	Salesforce Classic Email Templates	Sends payment reminders, confirmations, and approval/rejection notifications.
Scheduler / Jobs	Apex Scheduler	Runs scheduled jobs such as monthly rent reminders.
Authentication / Security	Salesforce User Profiles, Permission Sets	Manages secure user access, roles, and data protection.
Deployment & Environment	Salesforce Cloud Platform	Fully cloud-based, scalable, and managed environment.
Reporting & Dashboards	Salesforce Reports & Dashboards	Provides real-time visibility into payments, leases, and occupancy analytics.

Cloud Architecture Overview

1. **Users** (Admin, Property Manager, Finance Team) access the **Lightning App** via browser or mobile.
2. The **Business Logic Layer** (Apex, Triggers, Flows) manages automation and validation.
3. The **Data Layer** stores and secures all records in Salesforce's cloud database.
4. The **Integration Layer** connects Salesforce with Email, Payment, and ERP systems via APIs.
5. The **Automation Layer** executes approvals, reminders, and notifications.
6. **Reports & Dashboards** visualize property occupancy, rent collection, and pending approvals.