Project Design Phase-II

Technology Stack / Architecture Stack

Date	04-11-2025
Team ID	NM2025TMID04228
Project Name	Lease Management System Using Salesforce

Technical Architecture Overview

The architecture for the Lease Management System leverages Salesforce's cloud-based CRM platform with integrated declarative and programmatic automation, robust data modeling, and secure, scalable infrastructure.
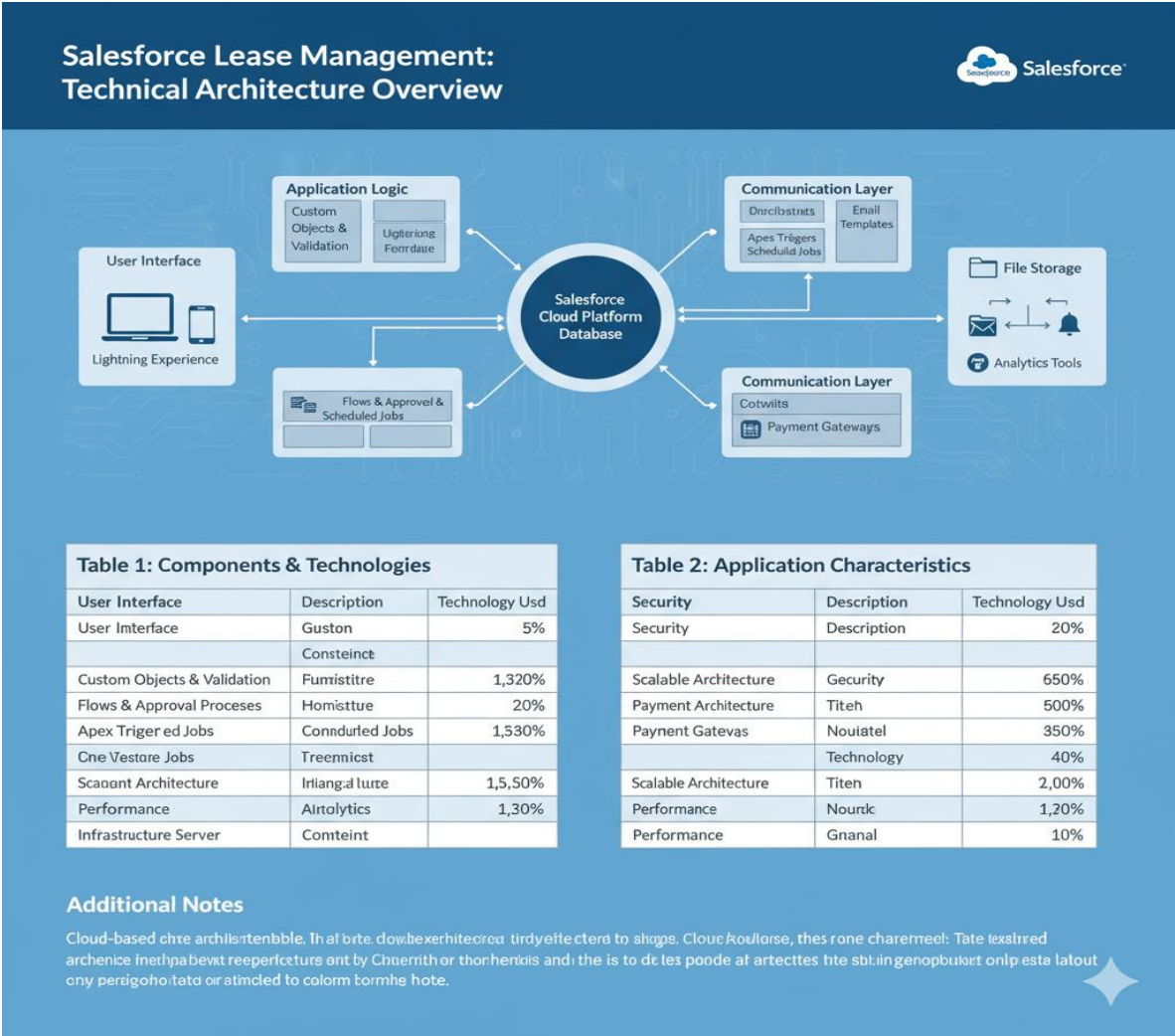

Salesforce Lease Management: Technical Architecture Overview

Table 1: Components & Technologies

S.No	Component	Description	Technology Used
1	User Interface	Admins and users interact via Salesforce Lightning Web UI	Salesforce Lightning Experience, App Tabs
2	Application Logic-1	Data model, validation, field/update and assignment management	Salesforce Custom Objects, Fields, Validation Rules
3	Application Logic-2	Process automation, approval and leave workflows	Salesforce Flows, Approval Processes
4	Application Logic-3	Automated business logic for data integrity	Apex Triggers, Scheduled Apex, Process Builder
5	Communication Layer	Automated notification and emails for payment, approval and reminders	Salesforce Email Templates, Flow Email Action
6	Database	Stores tenant, property, lease, payment, user, and audit data	Salesforce Cloud Platform Database
7	File Storage	Attachments (lease docs, payment receipts)	Salesforce Files
8	External API-1	Integration with payment gateways (if needed)	Salesforce REST API, External Services
9	Integration Layer	Future expansion to property portals or analytics tools	Salesforce Integration APIs, Outbound Messaging
10	Infrastructure Server	SaaS cloud infrastructure, managed by Salesforce	Salesforce (multi-tenant SaaS)

Table 2: Application Characteristics

S.No	Characteristic	Description	Technology
1	Open-Source Frameworks	Not applicable; platform is proprietary	Salesforce
2	Security	Role-based access, field-level security, audit trails	Profiles, Permission Sets, Sharing Rules
3	Scalable Architecture	SaaS-based, multi-tenant, scalable to thousands of users/records	Salesforce Cloud Platform
4	Availability	High availability, disaster recovery provided by Salesforce	Multi-region cloud, automated backups
5	Performance	Optimized via indexed objects, asynchronous flows, caching	Indexed Objects, Salesforce Flow, Apex Batch
6	Monitoring & Logging	Audit logs for all critical changes and approvals	Salesforce Setup Audit Trails

Additional Notes

- The technology stack is fully cloud-based, minimizing infrastructure management and maximizing reliability and security.

- Integrations and automation are designed to ensure easy extensibility and future-proofing for new business requirements (property types, payment integrations, document management).