

Final Project Report

Project Title: Lease Management

College Name: swarnandhra college of engineering and technology,narsapur

Academic Year: 2022–2026

Team ID: LTVIP2025TMID30534

Team Members:

1. Guddati Rajeswari devi (Team Leader)
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1.Technology Stack Used

- Salesforce CRM Platform
- Apex (Triggers & Classes)
- Lightning App Builder
- Validation Rules
- Reports & Dashboards
- Record-Triggered Flows & Approval Processes
- Permission Sets & Roles

- Schema Builder

2. Project Modules

- Developer Account Creation & Setup
- Custom Object Creation: Lease Property, Tenant, Lease Agreement, Payment, Maintenance Request
- Tabs & Lightning App Configuration
- Field Types: Text, Phone, Email, Number, Currency, Picklist, Checkbox, Date, Formula
- Relationships: Lookup & Master-Detail
- Schema Builder Design
- Field Dependencies Setup
- Validation Rules (e.g., Lease End Date > Start Date)
- Profiles & Permission Sets: Property Manager, Leasing Agent, Maintenance Officer
- Apex Triggers: Auto-calculate rent due, prevent duplicate lease overlaps
- Reports: Expiring Leases, Pending Payments
- Dashboards: Property Occupancy Rate, Monthly Revenue
- Flow Automation: Auto-Email Reminders, Maintenance Request Routing

3. Project Phases

3.1 Ideation Phase

- Brainstormed operational needs for managing rental properties, tenants, agreements, and payments within Salesforce
- Developed an Empathy Map for Leasing Agents and Tenants

- Problem Statement: “How might we streamline the property leasing lifecycle by managing lease records, tenant profiles, payment tracking, and communication in a unified Salesforce system?”

3.2 Requirement Analysis

- Customer Journey Map:
 - Inquiry →
 - Application Submission →
 - Lease Agreement Creation →
 - Payment Tracking →
 - Maintenance Request Handling →
 - Lease Renewal or Exit
- Data Flow Diagram:
 - External Entities: Tenant, Property Manager
 - Processes: Lease Management System (LMS)
 - Objects: Lease Agreement, Payment, Property, Maintenance
 - Data Stores: Lease DB, Tenant Info, Maintenance Log
- Technology Stack:
Salesforce Enterprise Edition with customization using Apex, Flows, Reports

3.3 Design & Planning Phase

- Proposed Solution:
A Salesforce-native Lease Management CRM system for real-time lease tracking, auto-renewals, and tenant communication
- Architecture:

- Data Layer: Custom Objects (Lease Agreement, Tenant, Property, Payment, Maintenance)
- Logic Layer: Apex Classes, Validation Rules, Flows
- UI Layer: Lightning Pages and Tabs
- Security: Profiles, Permission Sets, Role Hierarchy
- Integration: Email Alerts, Optional Payment Gateway (Future Scope)
- Project Plan:
 - Divided work by modules (Accounts, Leasing, Automation, Reporting); used ClickUp/Excel to track progress

3.4 Development Phase

- Created custom objects and fields for Lease Agreement, Property, Tenant, and Payment
- Implemented relationships: Tenant → Lease → Property → Payment
- Designed Page Layouts for each user role (Property Manager, Leasing Agent)
- Implemented Record Types (e.g., Residential, Commercial Lease)
- Developed Apex Triggers:
 - To prevent overlapping lease periods
 - Auto-calculate rent based on lease duration
- Flows:
 - Auto-email notification 15 days before lease expiry
 - Maintenance requests routed based on property type
- Reports:
 - Upcoming Lease Expiry
 - Outstanding Payments

- Property Occupancy
- Dashboards:
 - Lease Pipeline
 - Monthly Rent Collection

3.5 Testing & Validation Phase

- Validation Rules:
 - Lease End Date must be after Start Date
 - Rent cannot be zero or negative
- Functional Testing:
 - Lease Agreement creation
 - Rent payment record entry
 - Auto-emails via Flow
 - Maintenance request handling
- Captured screenshots of each module and tested output

3.6 Final Output

- Fully functional Salesforce-based Lease Management System
- Created sample data:
 - 10+ Property Records
 - 5+ Lease Agreements
 - 10+ Payment Logs
 - Maintenance Requests

- Verified automation, UI flows, and report dashboards

4. Screenshots (to be inserted manually)

Insert visuals for:

- Object Setup: Lease, Property, Tenant
- Field Configuration (e.g., Rent, Lease Dates)
- Validation Rules Setup
- Flows (e.g., Lease Expiry Email)
- Reports & Dashboards
- Sample Data Views