

Project Design Phase

Problem – Solution Fit

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Team ID	LTVIP2025TMID29772
Project Name	GARAGE MANAGEMENT SYSTEM

Problem–Solution Fit:

The Problem–Solution Fit explains how the proposed solution (Salesforce-based Garage Management System) directly addresses the problems faced by garage businesses.

Problem Overview:

Garages that rely on **manual processes** for handling customer records, appointments, services, and billing face several operational issues:

1. **Manual record keeping** leads to errors and data loss.
2. **Disorganized appointments** result in overlaps and missed schedules.
3. **Billing is disconnected** from services rendered, creating confusion and delays.
4. **No structured customer feedback**, reducing service improvement potential.
5. **Uncontrolled data access** among staff increases risks.
6. **No reporting or performance analytics**, hindering business decision-making.

Proposed Solution:

The proposed solution is a **Salesforce-based Garage Management System** that digitizes and automates the core operations of a garage—including customer data, service appointments, billing, and feedback—using custom objects, Apex logic, Flows, and reports. It improves service efficiency, ensures data accuracy, provides role-based access, and offers actionable insights through dashboards and analytics. The proposed solution involves designing and deploying a **Garage Management System** on the **Salesforce Lightning Platform**, tailored specifically for automotive service centers. It replaces manual, error-prone methods with a structured, cloud-based solution that includes the following components:

1. Customer Module:

- Capture and manage customer details using a custom object with validations and duplicate prevention.

2. Appointment Management:

- Schedule vehicle service appointments with automatic formatting and logic to prevent date overlaps or data entry issues.

3. Service Record Tracking:

- Record and update service progress with checkbox selections (e.g., maintenance, repairs, replacements) and status tracking.

4. Automated Billing:

- Use Apex triggers to calculate service charges based on selected services, reducing manual billing errors.

5. Feedback Collection:

- Gather customer ratings and comments using text fields with regex validation, ensuring quality input.

6. Email Automation:

- Send thank-you or confirmation emails upon successful service or payment using Flows.

7. Role-Based Access:

- Define clear user roles (Manager, Salesperson) with Salesforce profiles, permissions, and sharing settings for secure access.

8. Reports & Dashboards:

- Generate real-time performance reports and dashboards showing key metrics like revenue, service types, and customer satisfaction.

This system improves operational workflow, enhances customer experience, strengthens data security, and enables smarter decision-making.

Problem	Solution	Salesforce Feature
Customer records are handwritten or in Excel; prone to errors	Store customer data in structured custom objects with validation and duplicate rules	Custom Objects, Validation Rules, Duplicate Rules
Appointments are booked without logic, causing clashes	Use appointment object with date fields, flows, and validation to prevent overlapping bookings	Record-Triggered Flows, Date Fields, Validation Rules
Billing is manual and not linked to services performed	Use checkboxes to select services and calculate automated billing using Apex	Apex Trigger, Currency Field, Checkbox Field
No proper way to collect or track customer feedback	Introduce a feedback object with ratings and comments; restrict to 1–5 using regex validation	Text Fields, Validation Rules, Flow-triggered Alerts
Everyone has the same access to all data	Assign roles and profiles (Manager, Salesperson) with specific permissions and object visibility	Profiles, Roles, Sharing Rules
Managers can't monitor business performance	Generate reports and dashboards showing payments, ratings, and service frequency	Reports, Dashboards, Lightning App Pages
No follow-up after payment or service	Automatically send a thank-you email to customers post-payment using flow automation	Record-Triggered Flow + Email Alert

Benefits of the Solution:

- Improved operational **efficiency**
- Accurate and automated **billing**
- Role-based **data security**
- Enhanced **customer satisfaction** through feedback and follow-ups
- Easy access to **performance insights** via reports and dashboards
- Future-ready platform with **low-code scalability**

Conclusion:

The Garage Management System achieves a strong Problem–Solution Fit by replacing fragmented, manual workflows with a unified, automated, and secure platform built on Salesforce. It aligns perfectly with the real needs of garage businesses—simplifying service delivery, increasing customer trust, and enabling data-driven decisions.