

Project Design Phase

Proposed Solution

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Team ID	LTVIP2025TMID29772
Project Name	GARAGE MANAGEMENT SYSTEM

Overview of the Proposed Solution:

The proposed solution is to develop a cloud-based, end-to-end Garage Management System on the Salesforce Lightning Platform. The system is designed to digitize, automate, and manage key garage functions such as customer handling, appointment booking, service tracking, billing, feedback, and reporting, all while ensuring data accuracy and security through role-based access.

This solution uses Salesforce's low-code/no-code tools combined with custom Apex logic to deliver a scalable and secure application tailored for small to medium-sized garage businesses.

Key Components of the Solution:

1. Customer Management:

- A custom object called **Customer Details** will be created to store:
 - Customer name, phone number, email
 - Vehicle number (with validation for correct format)
- **Duplicate rules** will prevent multiple records for the same customer.
- This module serves as the foundation for all service, billing, and feedback records.

2. Appointment Booking System:

- A custom object called **Appointment** will:
 - Record appointment date (with validations)
 - Include service types selected via checkboxes (e.g., Maintenance, Repairs, Replacement)

- Auto-generate appointment names using an auto-number format
- **Flows** and **validation rules** will ensure valid dates and prevent overlaps.

3. Service Record Management:

- A **Service Records** object will track:
 - The progress and status of each service
 - Whether quality checks are completed
 - Automatically update status fields (e.g., “Started” → “Completed”) using **Record-Triggered Flows**

4. Automated Billing:

- A **Billing & Feedback** object will:
 - Store billing information, payment status, and service feedback
 - Link with service records to fetch billing amount
- **Apex Trigger and Handler** will calculate the **Service Amount** based on selected checkboxes (e.g., maintenance + repair = ₹5000).

5. Email Notification System:

- Once a payment is completed, a **Flow** sends a thank-you email to the customer.
- Email content includes the customer’s name, amount paid, and service acknowledgment.

6. Feedback Collection:

- Customers can give **ratings (1 to 5)** and feedback comments.
- **Validation rules** ensure correct rating input.
- This data helps assess customer satisfaction.

7. Security & Role-Based Access:

- **Custom profiles and roles** will be defined:
 - *Manager* (Full access)
 - *Salesperson* (Restricted access)
- **Sharing settings** ensure proper data visibility per role.

8. Reports & Dashboards:

- The system provides real-time business insights through:
 - Reports on services performed, customer ratings, and total revenue
 - Dashboards with visual elements (line charts, bar graphs, pie charts)
- These help garage owners make data-driven decisions.

Business Value Delivered:

Benefit	How It's Achieved
Centralized customer & service data	Custom objects and structured record relationships
Automated billing	Apex trigger calculates amount based on service selection
Improved Accuracy	Validation rules and flows prevent incorrect data entry
Role-based security	Profiles, roles, and sharing rules manage who sees what
Enhanced customer engagement	Email alerts and feedback forms improve customer communication
Operational visibility	Reports and dashboards show performance and satisfaction metrics

Conclusion:

The proposed Salesforce-based Garage Management System **replaces outdated manual methods** with a robust digital solution. It ensures:

- Operational efficiency
- Secure and accurate data handling
- Customer satisfaction through automation
- Scalable architecture suitable for long-term growth

This system is ideal for garages aiming to **modernize their workflow** and deliver **professional, data-driven services** in a competitive market.