PROJECT DESIGN PHASE

Solution Architecture

Date	01 November 2025
Team ID	NM2025TMID01280
Project Name	Garage Management System – Digitalization of Garage Operations

Solution Architecture:

Goals of the Architecture:

- Establish a centralized digital system for managing garage operations within Salesforce.
- Maintain data integrity across customers, appointments, services, and billing records.
- Automate key workflows to reduce manual effort and improve operational efficiency.
- Provide accurate real-time reporting and performance tracking for managerial insights.

Key Components:

- Customer Details Object – Stores customer contact information and personal details.
- Appointment Object – Handles service bookings with validation and automated numbering.

- Service Records Object – Tracks each service's progress, quality check status, and completion.
- Billing & Feedback Object – Manages payment details, service ratings, and payment status.
- Validation Rules – Ensure accuracy for date, rating, and vehicle number entries.
- Record-Triggered Flows – Automate payment confirmation and service completion updates.
- Apex Trigger (AmountDistribution) – Automatically calculates total service charges based on selected services.
- Reports and Dashboards – Visualize service performance, payment status, and customer feedback.

Development Phases:

1. Create and configure custom objects with appropriate fields and relationships.
2. Set up validation rules for data consistency.
3. Implement automation using Flows for service and payment updates.
4. Develop and test Apex Trigger for service amount calculation.
5. Create profiles, roles, and sharing rules to define access levels.
6. Build reports and dashboards for visual performance tracking.
7. Perform testing and deploy in the Salesforce environment.

Solution Architecture Description:

The Garage Management System architecture is designed to automate and streamline garage operations through Salesforce's low-code and programmable capabilities.

It establishes a multi-object relational structure connecting customers, appointments, services, and billing records to ensure data consistency and visibility at all levels.

Automation is achieved using Record-Triggered Flows for service completion and payment updates, and an Apex Trigger to calculate service amounts dynamically.

Validation Rules maintain data quality, while Sharing Rules and Role Hierarchies ensure secure and appropriate access across the organization.

The architecture supports scalability by allowing new modules—such as inventory or employee scheduling—to be added seamlessly.

Overall, this design promotes efficiency, reliability, and transparency across garage operations, reducing manual errors and improving customer satisfaction.