Project Title: Garage Management System
Platform: Salesforce CRM

---

1. Introduction

The Garage Management System was designed to automate and manage day-to-day operations of a vehicle service garage. The system tracks customers, vehicles, spare parts, repair jobs, invoices, and staff assignments.

Business Objectives:

Digitize and manage vehicle service bookings.

Maintain detailed records of customers and their vehicles.

Track spare parts stock and generate low-stock alerts.

Automate billing and maintain service history.

Improve efficiency and reduce manual errors.

Tools & Features Used: Salesforce Custom Objects, Flows, Validation Rules, Approval Processes, Apex Triggers, Reports & Dashboards.

---

2. App Overview

A custom app named Garage Management was developed and made available in the App Launcher.

Custom Objects Created

1. Customer – Stores customer information (Name, Contact, Email, Address).

2. Vehicle – Records details of vehicles (Vehicle No., Model, Owner, Type).

3. Service Job – Job card with service type, status, assigned mechanic, cost.

4. Spare Parts – Tracks part name, number, stock quantity, and unit price.

5. Invoice – Generates invoice with service and parts cost.

Standard Objects Used

Users

Reports

Dashboards

---

3. User Interface Demonstration

Customer & Vehicle Management: Create and link vehicles with customer records.

Job Card Creation: Service Job records created for each service.

Validation Rules:

Service Job cannot be closed without assigning a mechanic.

Invoice cannot be generated if spare part stock is insufficient.

Dynamic Forms: Service type selection shows relevant fields automatically.

---

4. Business Process Automation

Flows:

Auto-generate a Service Job record when a booking is made.

Auto-update Spare Parts stock after usage.

Workflow Rules:

Email notification to customers when service is completed.

Approval Process:

Approval for discounts above a specified limit.

Apex Triggers:

Automatic calculation of invoice total (service cost + parts cost).

---

5. Reports & Dashboards

Reports:

Daily and monthly service jobs completed.

Spare parts usage and low-stock alerts.

Mechanic performance and workload.

Dashboards:

Real-time overview of revenue, pending jobs, and stock status.

---

6. User Management & Security

Profiles & Permission Sets:

Service Advisor: Create bookings and jobs.

Mechanic: Update job status only.

Manager: Full access including approvals.

Role Hierarchy: Ensures access control and accountability.

Field History Tracking: Applied to Invoices and Spare Parts objects.

---

7. Error Handling & Debugging

Debug logs were used to fix automation issues.

Service job flow errors resolved using Flow Debugger.

Test cases created to check invoice generation and stock updates.

---

8. Highlights

Automatic job card generation for every service booking.

Low-stock alerts for spare parts.

Auto-generated invoices with detailed breakdown.

Centralized tracking of customer and vehicle history.

---

9. Testing Approach

Functional Testing: Verified workflows, validations, and reports with sample data.

Integration Testing: Checked linkage between Service Jobs, Spare Parts, and Invoices.

User Acceptance Testing: Simulated end-user roles (mechanic, manager) for accuracy.

---

10. Future Enhancements

Integration with online payment gateways.

Mobile app for customers to book and track services.

AI-based spare parts demand forecasting.

Integration with barcode/QR scanners for faster stock updates.

---

11. Conclusion

The Garage Management System successfully digitalizes and automates garage operations. It improves efficiency, ensures transparency, reduces manual workload, and enhances customer satisfaction. The project was fully developed, tested, and documented, with scope for future enhancements.