

GaragePro Intelligent Vehicle Management System

Garage Management System (GMS)

1. Project Overview

The GaragePro Intelligent Vehicle Management System project is focused on delivering a robust, all-in-one platform tailored for automotive repair facilities. It's designed to streamline operational processes, optimize service quality, and enhance customer satisfaction. Leveraging Salesforce's powerful CRM and process automation tools, GMS empowers garages to excel in a competitive market by providing a user-friendly, efficient, and effective management system. This project aims to bolster operational efficiency, improve data accuracy, and strengthen customer relationships, aligning with long-term business objectives in the automotive service industry.

2. Objectives

- **Business Goals:**
 - Improve service management and streamline workflow within automotive repair facilities.
 - Increase customer retention and satisfaction by ensuring a seamless experience.
- **Specific Outcomes:**
 - Implement a user-friendly interface for garage staff to manage appointments, inventory, and customer details efficiently.
 - Automate customer follow-ups, feedback collection, and reminders for recurring services.

3. Salesforce Key Features and Concepts Utilized

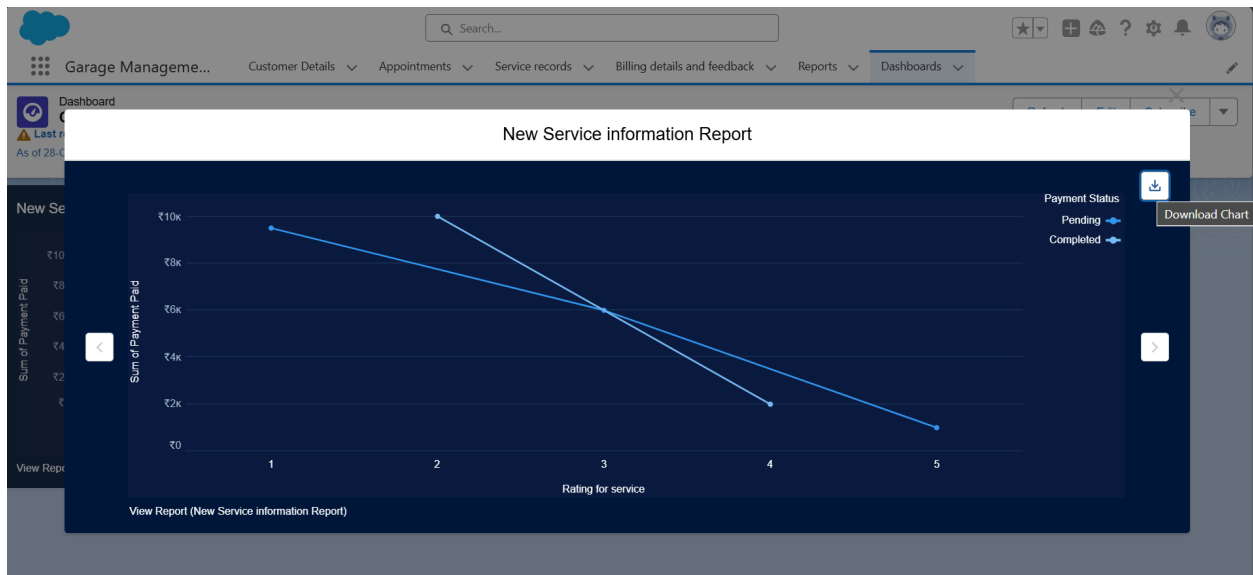
- **Salesforce CRM:** Centralized database to manage customer interactions, repair history, and customer preferences.
- **Process Automation:** Automated workflows for service reminders, inventory alerts, and customer follow-ups.
- **Reports and Dashboards:** Visual tools to track performance, monitor inventory levels, and analyze customer service patterns.
- **Lightning Web Components (LWC):** Enhanced UI for intuitive and responsive customer and staff interaction.
- **Apex Triggers:** Custom business logic to manage complex data updates and handle specific use cases.
- **Security and Permissions:** Role-based access controls to protect sensitive information while ensuring accessibility for authorized personnel.

4. Detailed Steps to Solution Design

- **Data Models:**

- Defined entities for customer data, vehicle information, service history, and inventory details.
- Established relationships between customers and their associated repair jobs, invoices, and feedback.
- **User Interface Design:**
 - Developed with Lightning Web Components to ensure a responsive and intuitive experience for staff.
 - Included dashboard elements with quick access to daily appointments, active repair jobs, and customer queries.
- **Business Logic:**
 - Apex triggers implemented for automatic inventory adjustments following each service.
 - Automated notifications for customers regarding service completion, reminders for vehicle check-ups, and post-service feedback.
- **Screenshots:**

Screenshots include the service appointment scheduler, customer profile management, and the inventory tracking interface.



Garage Manage...

Customer Details

Appointments

Service records

Billing details and feedback

Reports

Dashboards

Q Search...

★

+

🏠

?

⚙️

🔔

👤

Report: Service Information

New Service Information Report

Enable Field Editing

Q

🔍

📄

🔄

Edit

<input type="checkbox"/> Rating for service	<input type="checkbox"/> Payment Status	<input type="checkbox"/> Customer Name	<input type="checkbox"/> Appointment Date	<input type="checkbox"/> Service Status	<input type="checkbox"/> Payment Paid
Subtotal					₹9,500
<input type="checkbox"/> 2 (1)	Completed (1)	Ronaldo Foot	08/09/2024	Completed	₹10,000
Subtotal					₹10,000
Subtotal					₹10,000
<input type="checkbox"/> 3 (1)	Pending (1)	Sara Tendulkar	15/09/2024	Completed	₹6,000
Subtotal					₹6,000
Subtotal					₹6,000
<input type="checkbox"/> 4 (1)	Completed (1)	M S Dhoni	01/09/2024	Completed	₹2,000
Subtotal					₹2,000
Subtotal					₹2,000
<input type="checkbox"/> 5 (1)	Pending (1)	Amkara Messi	07/09/2024	Completed	₹1,000
Subtotal					₹1,000
Subtotal					₹1,000
Total (5)					₹28,500

Row Counts

☒ Detail Rows

☒ Subtotals

☒ Grand Total

Garage Manage...

Customer Details

Appointments

Service records

Billing details and feedback

Reports

Dashboards

Q Search...

★

+

🏠

?

⚙️

🔔

👤

Appointments

Recently Viewed

New

Import

Change Owner

Assign Label

10 items • Updated a few seconds ago

Q Search this list...

⚙️

📄

🔄

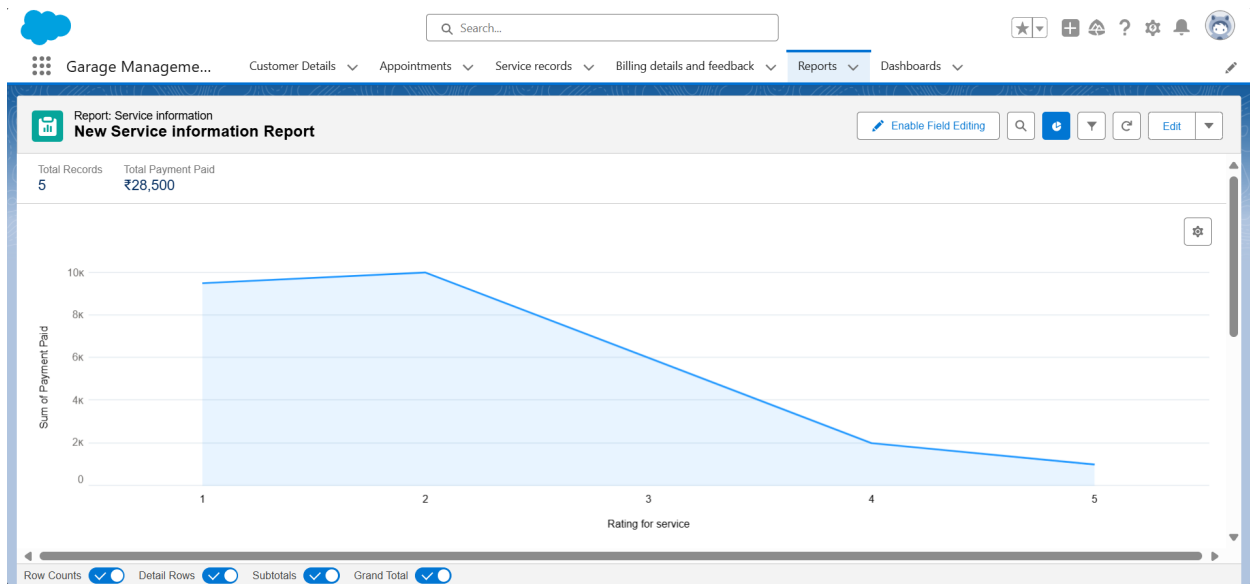
✏️

🗑️

🔍

<input type="checkbox"/> Appointment Name
1 <input type="checkbox"/> app-010
2 <input type="checkbox"/> app-008
3 <input type="checkbox"/> app-006
4 <input type="checkbox"/> app-003
5 <input type="checkbox"/> app-002
6 <input type="checkbox"/> app-001
7 <input type="checkbox"/> app-009
8 <input type="checkbox"/> app-007
9 <input type="checkbox"/> app-005
10 <input type="checkbox"/> app-004

https://lnc238-dev-ed.develop.lightning.force.com/lightning/o/Custom_Details_c/home



Customer Details
Recently Viewed

10 items • Updated a few seconds ago

Search this list...

	Customer Name	
1	<input type="checkbox"/> Pankaj Singh	▼
2	<input type="checkbox"/> M S Dhoni	▼
3	<input type="checkbox"/> Amkara Messi	▼
4	<input type="checkbox"/> Ronaldo Foot	▼
5	<input type="checkbox"/> Yuvraj Singh	▼
6	<input type="checkbox"/> Bumrah Bowler	▼
7	<input type="checkbox"/> Gautum Gambhir	▼
8	<input type="checkbox"/> Sara Tendulkar	▼
9	<input type="checkbox"/> Rishabh Pant	▼
10	<input type="checkbox"/> Virat Kohli	▼

5. Testing and Validation

- **Unit Testing:**

- *Apex Classes*: Thoroughly tested for accurate customer and service data handling.
- *Triggers*: Verified each trigger to ensure proper data updates without duplication.

- **User Interface Testing:**

- Ensured the responsiveness and usability of Lightning Web Components across devices.
- Conducted user testing sessions with potential end-users to validate usability

and efficiency.

6. Key Scenarios Addressed by Salesforce in the Implementation Project

- **Service Management:** Automated scheduling and tracking of repair jobs, enabling staff to manage multiple appointments efficiently.
- **Customer Communication:** Streamlined notifications for service completion, reminders, and feedback requests to maintain strong customer relations.
- **Inventory Tracking:** Real-time updates on inventory usage and automated alerts when stock reaches reorder levels, helping avoid shortages and delays.

7. Conclusion

- **Summary of Achievements:**
Successfully developed the GaragePro Intelligent Vehicle Management System, a comprehensive platform that enhances operational efficiency, customer satisfaction, and service quality in automotive repair facilities. Through Salesforce's CRM, automation, and robust data management, the project achieves a seamless, intuitive user experience that benefits both garage staff and customers.