

Ideation Phase

1. Introduction

In today's fast-paced automotive industry, efficient management of garage operations plays a crucial role in customer satisfaction and business success. Traditional manual methods often lead to miscommunication, service delays, and poor record-keeping. To address these challenges, the Garage Management System (GMS) is conceptualized as a digital solution that streamlines all garage-related activities through a unified Salesforce-based platform.

This project aims to automate essential operations such as service booking, vehicle tracking, job assignment, billing, and customer relationship management. By integrating these features into a centralized system, garages can improve service quality, operational transparency, and overall productivity.

Problem Statement

Garages and automotive service centers often struggle with:

- Manual record management and loss of data.
- Inefficient customer communication and scheduling.
- Lack of real-time updates on job status and inventory.
- Difficulty in tracking employee performance and payments.

These issues directly impact the business's efficiency and customer trust. Therefore, the **Garage Management System** is designed to provide a cloud-based, automated environment for managing all garage operations effectively.

2. Problem Statement

Traditional garage operations often rely on manual logs, fragmented communication, and inconsistent service tracking. These limitations lead to:

- Missed appointments and poor customer follow-up
- Inefficient inventory usage and stockouts
- Lack of real-time visibility into service progress
- Inaccurate billing and delayed invoicing

- No centralized system for customer history or loyalty tracking

The GMS project seeks to address these gaps by building a scalable, automated platform using Salesforce.

3. Objectives

The primary goals of the Garage Management System are:

-  **Customer & Vehicle Management:** Maintain detailed records of customers, vehicles, and service history.
-  **Service Booking & Tracking:** Enable seamless appointment scheduling, mechanic assignment, and real-time status updates.
-  **Inventory Control:** Track spare parts, tools, and consumables with automated stock alerts.
-  **Billing & Invoicing:** Generate accurate service estimates and invoices using Salesforce flows and Apex logic.
-  **Reporting & Analytics:** Provide dashboards for garage performance, customer retention, and revenue trends.
-  **Role-Based Access:** Ensure secure access for admins, mechanics, and receptionists.

4. Stakeholder Analysis

Stakeholder Role & Needs

Garage Owner	Wants visibility into operations, revenue, and customer satisfaction
Receptionist	Needs a simple interface for booking, billing, and customer communication
Mechanics	Require task assignments, service history, and inventory access
Customers	Expect timely updates, transparent billing, and service history
Admin/IT Staff	Responsible for system configuration, user access, and data integrity

5. Feature Brainstorming

Core Modules

- **Customer Module:** Contact info, vehicle details, service history
- **Service Module:** Booking, status updates, mechanic assignment
- **Inventory Module:** Parts catalog, stock levels, reorder triggers
- **Billing Module:** Estimate generation, invoice creation, payment tracking
- **Notification Module:** Email/SMS alerts for service updates and reminders
- **Reports Module:** Custom dashboards for KPIs and trends

Optional Add-ons

- Loyalty program tracking
- UPI payment integration
- Android app for customer self-service
- WhatsApp chatbot for booking and updates

6. Technical Vision

Salesforce Tools to Be Used

- **Custom Objects:** Vehicles, Service Records, Parts, Appointments
- **Flows:** Booking automation, status updates, inventory alerts
- **Apex Triggers:** Complex logic for service completion, billing, and stock deduction
- **Email Templates & Process Builder:** Automated communication
- **Reports & Dashboards:** Visual insights for stakeholders
- **Permission Sets & Profiles:** Role-based access control

Integration Possibilities

- **Android App (Compose UI):** For customer booking and service tracking
- **Clappia Forms:** For quick intake forms and feedback collection
- **UPI Gateway:** For digital payments and invoice settlement

7. Naming & Branding Ideas

Project Name: “AutoPulse” – symbolizing the heartbeat of garage operations

- **Modules:**
 - “DriveTrack” – Service tracking
 - “PartVault” – Inventory control
 - “BillMate” – Invoicing engine
 - “MechBoard” – Mechanic dashboard

8. Success Metrics

- 30% reduction in service turnaround time
- 50% increase in customer retention via automated follow-ups
- 20% improvement in inventory utilization
- 90% delivery rate for service notifications
- Real-time visibility into garage KPIs

9. Risks & Mitigation

Risk	Mitigation Strategy
Data inconsistency	Use validation rules and record-triggered flows
User resistance to change	Provide training and intuitive UI
Inventory mismanagement	Automate stock alerts and reorder flows
Integration challenges	Use modular APIs and test environments

10. Conclusion

The **Garage Management System** represents a significant step toward digital transformation in the automotive service sector. By combining automation, cloud computing, and customer relationship management, this project aims to revolutionize garage operations and set a new benchmark for service efficiency and quality.