# Ideation Phase – Garage Management System

## 1.Introduction

- The **Garage Management System (GMS)** is a Salesforce-based application designed to simplify garage operations such as **customer management, appointment scheduling, service tracking, billing, and reporting**.

- It leverages Salesforce's **CRM capabilities, automation tools, and dashboard analytics** to improve efficiency and customer satisfaction.

- The system provides a **centralized platform** for garages to manage vehicles, mechanics, and customer interactions, minimizing manual work and human error.

## 2.Problem Identification

- Garages face issues managing daily operations manually, such as:
    - Difficulty tracking **appointments** and **service records**.
    - Inefficient **billing and payment management**.
    - Lack of visibility into **mechanic performance** and **customer feedback**.
    - No centralized **vehicle and customer database**.
    - Time lost in paper-based record keeping.
- These challenges lead to delays, miscommunication, and reduced customer satisfaction.

# 3.Objectives of the System

- To create a **Salesforce-based system** that automates and streamlines all garage operations.
- Major objectives:
    1. Manage **customer details** and **vehicle information** effectively.
    2. Schedule and track **appointments** and **service records**.
    3. Automate **billing, payments, and feedback collection**.
    4. Maintain **data accuracy** using validation and duplicate rules.
    5. Generate **custom reports** and **dashboards** for better decision-making.
    6. Secure data using **roles, profiles, and sharing settings**.
    7. Enable **automated workflows** through **Flows** and **Apex triggers**.

# 4.Idea Generation

Based on Salesforce capabilities, the following ideas were conceptualized:

- **Custom Objects:**
    - **`Customer_Details__c`** – Store customer contact and email.
    - **`Appointment__c`** – Manage service appointments with vehicle details.
    - **`Service_Records__c`** – Track service status and quality checks.
    - **`Billing_Details_and_Feedback__c`** – Record payments and customer ratings.
- **Automation Tools:**
    - Use **Flows** to update payment details and send email notifications.

    - Use **Apex Trigger** to automatically calculate service costs.

- **Access Control:**
    - Implement **Profiles, Roles, and Sharing Settings** to maintain data security.
- **Data Insights:**
    - Build **Reports** (e.g., Service Information Report) and **Dashboards** (e.g., Service Rating Dashboard) for visualization.

# 5.Feasibility Study

| Type | Feasibility Description |
|---|---|
| **Technical Feasibility** | Salesforce supports custom object creation, automation (Flow, Apex), and data analytics through Reports/Dashboards. |
| **Operational Feasibility** | Easy for garage staff to use Salesforce's Lightning interface; roles and profiles make management simple. |
| **Economic Feasibility** | Can be developed in **Salesforce Developer Edition** (free) for testing before deployment. |
| **Schedule Feasibility** | Core modules (objects, validation, automation) can be built within **4–6 weeks**. |

**Conclusion:** The system is **highly feasible** for Salesforce implementation.

# 6.Proposed System Overview

- **System Vision:**
  To provide a unified digital platform that handles all garage operations efficiently using Salesforce CRM.

- **Main Functional Modules:**
    - **Customer Management** – Store and manage customer data.
    - **Appointment Scheduling** – Manage vehicle service bookings.
    - **Service Tracking** – Record service details, parts, and quality checks.
    - **Billing & Feedback** – Handle payments and customer ratings.
    - **Automation & Validation** – Ensure data accuracy using flows and triggers.
    - **Reports & Dashboards** – Provide analytical insights for managers.
- **Key Salesforce Features Used:**
    - Custom Objects, Tabs, Validation Rules, Duplicate Rules
    - Profiles and Roles
    - Public Groups and Sharing Settings
    - Flows and Apex Triggers
    - Reports and Dashboards
- **Actors Involved:**
    - **Manager** – Oversees operations and reviews reports.
    - **Sales Person** – Handles appointments and billing.
    - **Customer** – Provides feedback and payments.
    - **System Administrator** – Manages Salesforce setup.

# 7.Expected Outcomes

- Centralized storage of all garage-related data.

- Automated service pricing and payment updates.
- Reduced human errors through validation and duplication rules.
- Improved customer communication using automated email alerts.
- Real-time visualization of performance metrics using dashboards.
- Enhanced security and role-based access to sensitive data.

# 8.Conclusion

- The ideation phase establishes a clear **blueprint** for the Garage Management System on Salesforce.
- The system is **technically feasible**, **cost-effective**, and **scalable** for real-world garage operations.
- By combining CRM functions with automation tools, GMS ensures **better service quality**, **faster operations**, and **data-driven decision-making**.
- Next step: proceed to the **Design Phase**, including UML diagrams (Use Case, Class, and Sequence) for Salesforce GMS implementation.