

Garage Management System

Phase 4: Project Planning Phase

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1. Project Objectives

The main objective of the Project Planning Phase is to outline how the Garage Management System will be implemented using Salesforce development tools and methodologies. This phase defines the roadmap, resource allocation, timeline, risk analysis, and development practices.

2. Project Scope

- **Platform:** Salesforce CRM and Salesforce Platform (Lightning Components, Apex, Visualforce)
 - **Modules to be Developed:**
 - Customer Management
 - Job Card and Technician Assignment
 - Inventory and Spare Parts Tracking
 - Billing and Payments
 - Dashboard and Reports
 - **Users:** Admin, Technicians, Inventory Manager, Customers
 - **Device Support:** Desktop and Mobile via Salesforce Mobile App
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3. Roles and Responsibilities

Role	Responsibility
Project Manager	Oversee overall project, scheduling, and QA
Salesforce Developer	Build Apex classes, triggers, LWC components
Admin	Configure objects, workflows, and automation
QA/Test Engineer	Perform functional and integration testing
UI/UX Designer	Design intuitive, responsive interfaces

4. Work Breakdown Structure (WBS)

Phase 1: Environment Setup and Custom Object Creation - Set up Salesforce Developer Org - Create custom objects: Job, Vehicle, Service History, Parts, Technician

Phase 2: UI Development (Lightning Web Components) - Appointment Booking LWC - Job Card Generation UI - Inventory Management Screens - Billing Page and Dashboard Components

Phase 3: Backend Logic (Apex Development) - Apex triggers for stock updates, service logging - Batch classes for inventory checks - Scheduled classes for notifications

Phase 4: Automation (Process Builder / Flow) - Auto-email reminders for appointments - Auto-assignment of technician - Update inventory automatically after job completion

Phase 5: Testing & QA - Unit testing of Apex classes and components - Integration testing for workflow execution - UAT with test users

Phase 6: Deployment - Metadata deployment via Change Sets - Final sandbox testing - Deployment to production org

5. Timeline and Milestones

Milestone	Duration
Requirements Review	2 Days
Org Setup and Object Modeling	3 Days
UI and Apex Development	10 Days
Automation & Workflows	5 Days
Testing and Bug Fixes	5 Days
Final Deployment	2 Days
Total Estimated Duration: ~27 Days	

6. Tools and Technologies

- **Salesforce Platform:** Lightning App Builder, Flow Builder, Apex, LWC
- **Version Control:** GitHub
- **Testing:** Apex Test Classes, Salesforce DX
- **Project Tracking:** Jira or Trello (Kanban Board)
- **Deployment:** Change Sets, Salesforce CLI (SFDX)

7. Risk Management Plan

Risk	Mitigation Strategy
Apex governor limit breaches	Optimize queries and use bulk-safe operations
Delay in UI delivery	Agile sprint planning with daily standups
Deployment issues	Use sandbox testing and validated change sets
User adoption challenges	Provide training and user manuals

8. Deliverables

- Salesforce Custom Objects and Schema
- Lightning Web Components for UI

- Apex Logic and Automation Scripts
 - Test Cases and QA Reports
 - Deployment Package
 - User Documentation and Admin Guide
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Conclusion

This planning document outlines the structured approach to implement a Garage Management System on the Salesforce platform. With clear timelines, roles, and deliverables, the project ensures high-quality outcomes aligned with business goals.