Requirement Analysis Phase

Functional Requirements

Requirement Analysis Phase

Team ID : NM2025TMID05586

Project Title: Garage Management System

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4.1 Purpose of the Phase

The Requirement Analysis Phase identifies, documents, and validates the system requirements for the Garage Management System (GMS) built on Salesforce. This phase ensures that both functional and non-functional needs are clearly defined and aligned with business goals, enabling accurate configuration and customization of Salesforce components.

4.2 Functional Requirements

The Garage Management System consists of several functional modules derived from the reference implementation. Each requirement corresponds to a Salesforce component or automation element.

ID	Feature	Description
FR1	Customer Management	Store and manage customer data (name, phone, email) via the Customer Details object.
FR2	Vehicle & Service Tracking	Maintain service and vehicle history through Service Records and Appointment objects.
FR3	Appointment Scheduling	Enable users to create, modify, and cancel appointments; reminders sent via Flows.
FR4	Billing & Feedback	Capture payments and feedback; trigger-based automation sends thank-you emails.

FR5	Reporting & Analytics	Generate performance and revenue reports using Report Types and Dashboards.
FR6	User Roles & Permissions	Define profiles and access controls for Managers and Salespersons.

4.3 Non-Functional Requirements

- **Usability:** The Lightning interface provides intuitive navigation and real-time updates.
- **Performance:** System should handle concurrent operations from multiple users without delay.
- **Security:** Data integrity ensured using Role Hierarchy, Profiles, and Field-Level Security.
- **Scalability:** Custom objects and relationships designed for future enhancements such as new service types or branches.
- **Reliability:** Automation ensures consistent and error-free operations for billing, feedback, and notifications.

4.4 System Requirements Mapping

Each business requirement is mapped to corresponding Salesforce features.

Salesforce Component	Mapped Functionality
Custom Objects	Store customer, vehicle, service, billing, and feedback data.
Flows	Automate appointment and billing notifications.
Apex Trigger	Automate service amount calculations.
Validation Rules	Ensure correct data entry and logical consistency.
Profiles & Roles	Control access based on job function.
Reports & Dashboards	Provide analytical insights and KPIs.

4.5 User Requirements

The system supports multiple user roles with different permissions and access scopes.

User Role	Access Level	Responsibilities

Manager	Full Access	Oversees entire system; manages reports, dashboards, and service approvals.
Sales Person	Read/Write	Creates and updates appointments, service records, and billing details.
Technician	Limited Access	Updates service progress and quality check status.
Receptionist	Restricted Access	Handles customer data entry and appointment scheduling.

4.6 Validation & Data Rules

Validation rules are configured to ensure data quality and enforce logical constraints:
- **Appointment Object:** Vehicle Number Plate must follow the pattern (e.g., KA12AB1234).
- **Service Records:** Service Status cannot be marked 'Completed' until all dependent fields are updated.
- **Billing Details & Feedback:** Ratings must be between 1–5; Payment Status can only be 'Completed' when Payment Paid field is updated.
- **Duplicate Rules:** Prevents multiple records for the same customer based on email and phone number.

4.7 Dependencies & Assumptions

- Salesforce Developer Org is active and configured for the project.
- All required permissions are granted to users according to their roles.
- Email notifications depend on valid customer email addresses.
- Automation assumes consistent field naming conventions and data integrity.
- Internet connectivity is required for access to Salesforce Cloud.

4.8 Expected Outcome

At the end of the Requirement Analysis Phase, all system requirements—functional, non-functional, and technical—are well-documented and validated. This ensures a clear understanding of the Garage Management System’s expected behavior, preparing the team for the next implementation and testing phases.