

Requirement Analysis phase

Non-Functional Requirements

Date	25 October 2025
Team ID	NM2025TMID02695
Project Name	Garage Management system
Maximum Mark	4 Marks

1. Purpose

To define all non-functional constraints that govern security, performance, reliability, usability, and maintainability of the Garage Management System built on Salesforce.

2.1 Security and Access

Req ID	Requirement Description	Salesforce Implementation
NFR-1.1	Service Records and Billing data must be private by default.	Set <i>Organization-Wide Defaults (OWD)</i> for Service Records to Private .
NFR-1.2	A custom <i>Manager Profile</i> must have full control over Service and Billing data.	Create a new profile “Garage Manager” with CRUD and View All permissions.
NFR-1.3	Sales Staff should access only their own records.	Use Role Hierarchies and OWD settings.
NFR-1.4	Managers can view subordinates' records.	Create <i>Sharing Rules</i> based on Role Hierarchy.
NFR-1.5	Ensure user authentication through Salesforce login and MFA.	Enable MFA and assign user roles via Setup.

2.2 Data Integrity and Validation

Req ID	Requirement Description	Implementation Detail
NFR-2.1	Vehicle number must follow 10-character format (e.g., TN07AB1234).	Create Validation Rule using REGEX formula.

NFR-2.2	Appointment must exist before Service creation.	Use <i>Required Lookup Filter</i> on Service Record.
NFR-2.3	Rating must be 1–5 only.	Use Validation Rule: `NOT(ISNUMBER(Rating__c))`
NFR-2.4	Service Amount cannot be edited by users manually.	Make <i>Read-Only</i> field and populate via Flow.
NFR-2.5	Prevent deletion of customer if appointments exist.	Create <i>Validation Rule</i> or use <i>Master-Detail Relationship</i> .

2.3 Usability and Performance

Req ID	Requirement Description	Implementation Detail
NFR-3.1	Application must be easy to navigate.	Build a <i>Lightning App: Garage Management Application</i> grouping related tabs.
NFR-3.2	Page layouts should be simple for non-technical users.	Optimize page layouts with sections and conditional visibility.
NFR-3.3	Search performance should allow locating customers within 2 seconds.	Use indexed fields (Name, Vehicle No.) and list views.
NFR-3.4	All reports should load within 3 seconds for up to 500 records.	Optimize report filters and indexing.

2.4 Maintainability

Req ID	Requirement Description	Implementation Detail
NFR-4.1	All configuration changes must be documented.	Maintain <i>Change Log Document</i> in each sprint.

NFR-4.2	Backup of all metadata weekly.	Use <i>Salesforce Data Export</i> or <i>Sandbox Refresh</i> .
NFR-4.3	Validation Rules and Flows should be labeled clearly.	Use naming conventions like "VR_App_VehicleNoFormat".

3. Acceptance Criteria

- User data must remain secure and consistent.
- UI must be user-friendly and accessible.
- All validation rules must trigger correct error messages.