

**Project Design Phase-II**  
**Solution Requirements (Functional & Non-functional)**

Date	27 OCTOBER 2025
Team ID	NM2025TMID05681
Project Name	Garage Management System
Maximum Marks	4 Marks

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Staff Management	Add new staff (mechanic, supervisor, service advisor) Update staff details Remove staff (if not assigned to active jobs)
FR-2	Vehicle Management	Register a new vehicle for service Capture customer & vehicle details Maintain service history
FR-3	Service Job Creation	Create a new job card for each vehicle service Select service category (e.g., oil change, repair) Set service priority & expected delivery time
FR-4	Job Assignment	Assign a mechanic to a service job Reassign jobs if mechanic unavailable Notify mechanic of new assignment
FR-5	Assignment Check & Restriction	System checks if staff is assigned to active service jobs Prevent deletion of assigned staff Display warning message if deletion attempted
FR-6	Safe Staff Deletion	If staff has no active jobs, allow deletion Archive completed job data history before deletion
FR-7	Service Status Tracking	Mechanic updates job status (In-Progress, Completed) Add service notes & spare parts used
FR-8	Billing & Invoice Generation	Generate invoice after service completion Auto-calculate labor + parts cost Provide print & digital copy

### Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	<b>Usability</b>	The system interface should be simple and user-friendly for admins, service advisors, and mechanics to use with minimal training.
NFR-2	<b>Security</b>	Only authorized personnel should be able to manage staff, vehicles, and service jobs. Role-based access control must be enforced.
NFR-3	<b>Reliability</b>	The system must accurately track job assignments, service status, and prevent data loss or inconsistencies.
NFR-4	<b>Performance</b>	Pages, job updates, and assignment checks should load and process within 2–3 seconds for smooth workflow.
NFR-5	<b>Availability</b>	The system should be available during working hours of the garage with minimal downtime to avoid service delays.
NFR-6	<b>Scalability</b>	The system should support increasing number of vehicles, jobs, staff, and branches as the garage expands.
NFR-7	<b>Data Backup &amp; Recovery</b>	Regular system backups should be maintained with the ability to restore data in case of system failure.
NFR-8	<b>Maintainability</b>	The system should be easy to maintain, update, and enhance without major downtime or technical complexity.