

## Project Design Phase

### Proposed Solution

Date	5 November 2025
Team ID	NM2025TMID04471
project name	Garage management system
Maximum Marks	2 Marks

#### **Proposed Solution Template:**

S.No	Parameter	Description
1	Customer Management	Centralized storage of customer profiles, contact details, and vehicle history to ensure accurate and easily accessible records.
2	Vehicle Management	Register and track vehicle information, service history, and repair records to streamline garage operations.
3	Service Booking	Online or in-app booking system for customers to schedule appointments, reducing waiting times and improving communication.
4	Job Card Management	Generate and assign service job cards to technicians, track progress, and ensure accountability for each task.
5	Inventory Management	Monitor spare parts and supplies, automatically update stock levels, and alert staff when items run low.
6	Billing & Invoicing	Automate invoice generation and payment recording to reduce errors and speed up financial processes.
7	Notifications & Alerts	Send real-time SMS/email notifications to customers about service status, due dates, or promotions.
8	Reports & Analytics	Dashboard for garage owners to analyze revenue, service trends, and performance metrics for informed decision-making.
9	User Roles & Permissions	Define access levels for admin, staff, and technicians to maintain security and proper workflow.

## Solution Description

The proposed **Garage Management System (GMS)** is a comprehensive digital platform designed to automate and streamline garage operations. It centralizes customer and vehicle information, enabling accurate record-keeping and easy access to service histories. The system facilitates **online service booking, job card management, and inventory tracking**, ensuring efficient workflow and optimal use of spare parts. **Billing and invoicing modules** automate financial processes, while **notifications and alerts** improve customer communication. Additionally, a **reports and analytics dashboard** provides garage owners with insights into revenue, service trends, and performance, supporting informed decision-making. The system also incorporates **role-based access control** to maintain security and proper authorization for staff and administrators.

## Conclusion

The Garage Management System effectively addresses the key challenges faced by traditional garages, including manual record-keeping, delayed customer communication, inefficient inventory management, and billing errors. By automating these processes and providing real-time visibility into operations, the system enhances overall efficiency, reduces errors, and improves customer satisfaction. With data-driven insights from reports and dashboards, garage owners can make better business decisions, optimize resource utilization, and improve service quality. Overall, the proposed solution provides a robust, user-friendly, and scalable platform to modernize garage management and support long-term growth.