

## Project Design Phase

### Problem – Solution Fit Template

|               |                          |
|---------------|--------------------------|
| Date          | 5 November 2025          |
| Team ID       | NM2025TMID00401          |
| Project Name  | Garage management system |
| Maximum Marks | 2 mark                   |

#### Problem – Solution Fit Template:

Traditional garages face several operational challenges such as manual record-keeping, which often leads to data inaccuracy and misplaced service information. Customers frequently experience delays and poor communication regarding the status of their vehicles, resulting in dissatisfaction. Inventory tracking for spare parts is inefficient, leading to shortages or overstocking. Billing and payment processes are also slow and prone to human error, while garage owners struggle to obtain meaningful insights due to a lack of reporting tools. To address these issues, the proposed solution is a Garage Management System (GMS) that automates and digitizes all operations. This system will securely store customer and vehicle data, provide real-time service tracking, and enhance communication with customers. It will also include inventory and billing modules to ensure smooth workflow and financial accuracy. Overall, the GMS directly aligns its features to solve real garage management problems, improving efficiency, accuracy, and customer satisfaction.

#### Purpose:

1. Identify and validate real-world problems faced by garages and customers.
2. Align proposed solutions (features, system capabilities) with those problems.
3. Ensure that the system design focuses on solving actual pain points, not just implementing technology for its own sake.
4. Guide the project design phase, ensuring all stakeholders have a clear understanding of what the system will achieve and why it matters.
5. Serve as a foundation for subsequent design and development, including feature prioritization, prototyping, and testing.

## Template:



The use of the Problem–Solution Fit in a Garage Management System project is to ensure that the proposed system truly addresses real, existing problems faced by garages and their customers. It helps project designers and developers clearly understand the issues—such as manual errors, poor communication, and inefficient inventory tracking—and align each of these problems with a targeted solution. By doing this, the team can prioritize essential features, avoid unnecessary development, and create a system that adds real value. In short, the Problem–Solution Fit is used to validate that the Garage Management System being designed is practical, relevant, and capable of improving operational efficiency, customer satisfaction, and overall business performance.