

# Ideation Phase

## Brainstorm & Idea Prioritization Template

Date	07NOV2025
TeamID	NM2025TMID06118
ProjectName	Garage Management System
MaximumMarks	4Marks

### GarageManagementSystemTemplate:

This guided project demonstrates how to design and implement a Garage Management System (GMS) that helps automate and organize daily garage operations. The system focuses on managing customer details, vehicle information, service records, billing, and inventory in a single integrated platform.

The GMS ensures efficient workflow between mechanics, service advisors, and customers by maintaining real-time updates on vehicle service status and inventory availability. It reduces manual paperwork, prevents scheduling conflicts, and improves overall service quality.

The workflow also includes test scenarios such as adding new customer records, assigning vehicles for servicing, and generating invoices. This ensures that every module of the system—customer management, vehicle tracking, and service scheduling—works smoothly together. The system ultimately helps garage owners improve productivity, maintain accurate records, and deliver better customer satisfaction.

The screenshot shows the SH GARAGE MANAGEMENT SYSTEM dashboard. On the left, there's a sidebar with navigation links for DASHBOARD, REPAIR ORDERS, COUNTER SALE, INVENTORY, ACCOUNTS, REPORTS, EMPLOYEE, VENDOR, ITEM MASTER, USERS, and OTHERS. There are also links for RESET PASSWORD, MANAGE PROFILE, SETTINGS, and LOGOUT. At the bottom of the sidebar is a "GET ON Google Play" button.

The main content area has a header with "SH GARAGE MANAGEMENT SYSTEM" and a "TOTAL REPAIR ORDERS: 114". Below the header, there are six cards: "CREATED 17" (blue), "IN PROGRESS 3" (orange), "COMPLETED 94" (green), "PAYMENT DUE (66) 49147.48" (red), "TOTAL EXPENSE 0.00" (dark blue), and "TOTAL INCOME 0.00" (black).

Under "ONGOING REPAIRS ORDERS", there's a table with columns: STATUS, INVOICE NUMBER, INVOICE DATE, VEHICLE NUMBER, BRAND - MODEL, CUSTOMER NAME, TOTAL AMOUNT, PAID AMOUNT, DUE AMOUNT, and ACTION. The table lists several entries, including:

STATUS	INVOICE NUMBER	INVOICE DATE	VEHICLE NUMBER	BRAND - MODEL	CUSTOMER NAME	TOTAL AMOUNT	PAID AMOUNT	DUE AMOUNT	ACTION
Created	INV103	20 Nov 2019	MH858585	Alfa Romeo-147 3 Doors	Shabbir	0	0	0	<a href="#">View</a>
Created	INV104	20 Nov 2019	...	Audi-A4	...	0	0	0	<a href="#">View</a>
Created	INV105	21 Nov 2019	MH25652652	Audi-A4	Mohammad Ali	0	0	0	<a href="#">View</a>
Created	INV106	22 Nov 2019	JFJIFGJF	Acura-Mdx	Shabbir	0	0	0	<a href="#">View</a>
Created	INV107	22 Nov 2019	GJ1556955	Honda-City ZX	Shabbir Hasan	0	0	0	<a href="#">View</a>
In Progress	INV108	23 Nov 2019	MH4545652	Audi-A4	Shabbir Hasan	1789.75	0	1789.75	<a href="#">View</a>
Created	INV110	23 Nov 2019	MH56AF6565	Audi-A6	Google User	0	0	0	<a href="#">View</a>
Created	INV112	23 Nov 2019	MH456562	Honda-City	Abbas Ali	0	0	0	<a href="#">View</a>
Created	INV114	23 Nov 2019	MH85855	Acura-Mdx	Shabbir	0	0	0	<a href="#">View</a>
In Progress	INV134	21 Oct 2020	MH01AE1010	Hyundai -HD 68	Dhrava	3381.53	0	3381.53	<a href="#">View</a>

At the bottom of the dashboard, it says "Showing 1 to 10 of 20 entries" and "Go to Settings to activate Windows". There are also "Previous" and "Next" buttons.

## **Step-1: Team Gathering, Collaboration, and Selecting the Problem Statement:**

The team collaborated to identify common issues faced in garage operations such as inefficient record management, loss of service data, and poor customer follow-up. After group discussions and idea comparison, the team selected the Garage Management System as the primary problem statement to address these inefficiencies using a structured digital solution.

**Reference:** <https://www.mural.co/templates/brainstorm-and-idea-prioritization>



## **Step-2: Brainstorm, Idea Listing, and Grouping:**

**Brainstorm:** Team members freely contributed ideas on improving garage operations—from online booking systems and service tracking to automated billing and reminders.

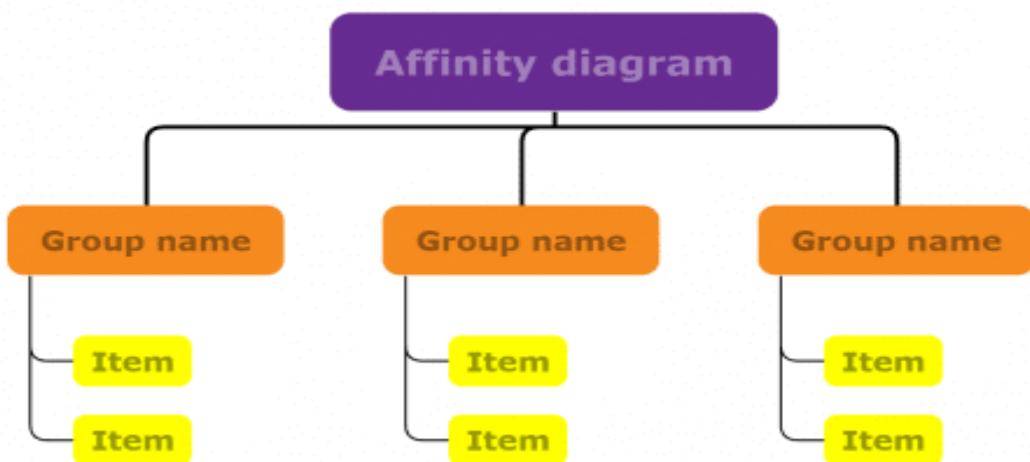
**Idea Listing:** All proposed ideas were documented, including:

- Vehicle service history tracking
- Digital invoicing system
- Mechanic performance monitoring
- Real-time service status updates
- Customer feedback integration

**Grouping:** Ideas were grouped under key modules:

- Customer Management
- Service Scheduling
- Inventory Control
- Billing & Payment
- Reports & Analytics

**Action Planning:** Each module was assigned to team members with clear goals and deadlines for implementation and testing.



### Step-3:IdeaPrioritization:

Idea prioritization helps break down the Garage Management System into focused, manageable modules. The main goal is to ensure all vehicle and customer records are centralized, making garage operations transparent and efficient. Prioritizing features such as services scheduling and digital billing ensures that critical functionalities are developed first.

The screenshot shows the "Garage Management System Menu" window. The title bar reads "Garage Management System". Below the title bar are five buttons: "Add Vehicle" (car icon), "Update Vehicle Status" (document icon), "Make Action" (key icon), "Print By Vehicle Status" (print icon), and "View Full Vehicle Details" (document icon). The main area contains a form with the following fields:

Plate Number:	Type here
Type:	Select
Model:	Type here
License Type:	Select
Engine Type:	Select
Engine Capacity:	Type here
Number of wheels:	Select
Wheels' Manufacturer:	Type here
Wheels' Air Pressure:	Type here
Number Of Doors:	Select
Submit	

By prioritizing ideas effectively, the team can:

- Streamline workflow between mechanics and customers
- Improve data integrity and tracking accuracy
- Enhance user experience through automation

Visual flowcharts and process diagrams will be created to show how each module interacts. This clarity in planning strengthens project execution and ensures smooth collaboration among team members.

## Define the Problem Statements

### Customer Problem Statement Template:

Garage owners and service managers often face issues managing customer records, vehicle information, and service tracking manually. This leads to confusion, misplaced service data, and delays in repair or delivery. It creates frustration among both mechanics and customers who expect timely updates and accurate billing.

They need a digital Garage Management System that centralizes all operations – from customer registration and service scheduling to billing and inventory tracking. Such a system ensures smooth workflow, improves customer satisfaction, and minimizes operational delays.

By introducing automation and real-time record management, garages can enhance efficiency, reduce paperwork, and maintain accurate service histories. This solution will improve productivity, transparency, and service reliability for both staff and customers.

Reference:<https://miro.com/templates/customer-problem-statement/>

### Problem Statement PS1:

As a garage owner, I am trying to manage customer information and vehicle service histories efficiently. However, I struggle because all data – including customer details, invoices, and service records – is stored manually in paper files.

This leads to errors, missing information, and delays in communicating service updates to customers. It also affects customer trust and the overall professionalism of the garage. I need an automated system to store and retrieve data easily, ensuring faster and more accurate service management.

### Problem Statement PS2:

As a service manager, I want to schedule and track ongoing repairs and assign tasks to mechanics efficiently. But since there is no digital system, it's hard to monitor service progress, spare part usage, or time spent on each task. This causes confusion, delays, and customer dissatisfaction.

A centralized Garage Management System would allow real-time tracking of jobs, automatic notifications, and better workload management – improving coordination and service quality.

## Empathize & Discover

### Empathy Map Canvas:

In the Empathize & Discover phase, the team studies how garage owners, mechanics, and customers interact during daily