

## Ideation Phase

### Empathy Map Canvas

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<b>Team ID</b>	NM2025TMID05731
<b>Project Name</b>	GARAGE MANAGEMENT SYSTEM

### **Introduction**

The Empathy Map Canvas helps in understanding the customer's feelings, needs, and expectations in a structured manner. It focuses on what the customer thinks, feels, says, and does throughout their experience. By identifying pain points and motivations, businesses can design improved and customer-centric services. In a Garage Management System, it highlights issues like booking difficulties, waiting time, and transparency to create a more user-friendly and efficient system.

### **Purpose:**

- To understand the customer's thoughts, feelings, and behaviors.
- To identify customer pain points and challenges.
- To gain insights into customer needs and motivations.
- To help businesses design better and more user-friendly services.
- To improve customer satisfaction and overall experience.

### **Users of GMS:**

1. Administrator / Manager
2. Mechanic / Technician
3. Customer / Vehicle Owner
4. Receptionist / Front Desk Staff
5. Inventory Manager / Storekeeper
6. Accountant / Billing Staff

## **Detailed User Personas**

### **1. Administrator / Manager**

**Role:** Oversees the entire garage operations and manages user access.

**Goals:** Ensure smooth workflow, monitor performance, and improve efficiency.

**Challenges:** Managing multiple departments, tracking performance, and maintaining customer satisfaction.

### **2. Mechanic / Technician**

**Role:** Performs vehicle repairs and maintenance tasks.

**Goals:** Complete assigned jobs accurately and on time.

**Challenges:** Lack of parts availability or unclear job details can delay work.

### **3. Customer / Vehicle Owner**

**Role:** Uses the system to book services and track vehicle status.

**Goals:** Get quick, reliable service and clear billing.

**Challenges:** Long waiting times, unclear updates, and lack of transparency in repair charges.

### **4. Receptionist / Front Desk Staff**

**Role:** Handles service bookings, customer queries, and billing coordination.

**Goals:** Maintain organized scheduling and customer satisfaction.

**Challenges:** Managing peak hours and coordinating between customers and mechanics.

## **5. Inventory Manager / Storekeeper**

**Role:** Manages spare parts stock, requests new supplies, and tracks usage.

**Goals:** Ensure parts availability and minimize inventory wastage.

**Challenges:** Keeping track of real-time stock levels and supplier delays.

## **6. Accountant / Billing Staff**

**Role:** Prepares invoices, tracks payments, and manages financial reports.

**Goals:** Maintain accurate financial records and ensure timely billing.

**Challenges:** Handling multiple payment methods and preventing billing errors.

## **Empathy Map Table**

### **EMPATHY MAP GARAGE MANAGEMENT**

Role	Says	Thinks	Does	Feels
<b>Administrator / Manager</b>	"We need efficient operations."	Plans for productivity and customer satisfaction	Oversees all departments and sets goals.	Feels responsible for success smooth workflow.
<b>Mechanic / Technician</b>	"I need proper tools and parts."	Focuses on completing repairs accurately.	Repairs and maintains vehicles.	Feels pressure to deliver quality work on
<b>Customer / Vehicle Owner</b>	"I want my vehicle repaired quickly."	Thinks about cost and service reliability	Brings vehicle for service. provides feedback	Feels anxious until the vehicle is fixed
<b>Receptionist / Front Desk Staff</b>	"I must handle customer queries efficiently."	Aims to maintain good customer communication	Manages inventory, orders, and receipts	Feels satisfaction from smooth interactions
<b>Inventory Manager / Storekeeper</b>	"We must not run out of spare parts!"	Focuses on financial accuracy and reporting	Manages billing, payments, and receipts	Feels confident when accounts are balanced

## **Observations and Insights**

- Manual Processes Cause Delays
- Many garages still rely on paper-based booking and billing, leading to errors and slow service.
- Lack of Real-Time Updates
- Customers are often unaware of their vehicle's service status, which reduces transparency and trust.
- Inventory Mismanagement
- Spare parts are not always tracked efficiently, causing delays when required parts are unavailable.
- Poor Communication Between Staff
- Coordination gaps between receptionists, mechanics, and managers result in confusion and service backlogs.
- Limited Data Analytics
- Without digital reports, managers struggle to analyze performance, expenses, and customer trends.
- Customer Expectations Increasing
- Customers now prefer digital booking, faster service, and online payment options for convenience.

## **Example Insights:**

- ✓ Digital Booking Improves Efficiency
- ✓ Implementing an online booking system reduces waiting times and helps allocate mechanics more effectively.
- ✓ Automated Inventory Tracking Minimizes Downtime
- ✓ Real-time stock updates ensure required spare parts are always available, improving service speed.
- ✓ Customer Transparency Builds Trust
- ✓ Providing live service status updates and clear billing increases customer satisfaction and loyalty.

## User Scenarios

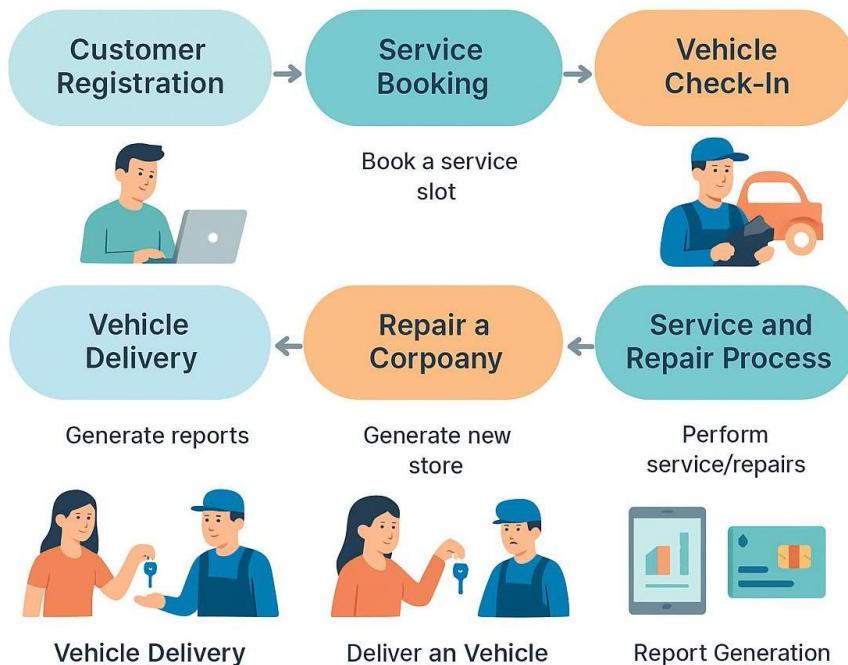
### Scenario 1: Customer Booking and Service Update

A customer logs into the Garage Management System to book a car servicing appointment. They choose a convenient date and time, and the system automatically assigns an available mechanic. Once the vehicle is checked in, the customer receives real-time notifications about the service progress. After completion, they get an invoice and make payment online, ensuring a smooth and transparent experience.

### Scenario 2: Mechanic Task Management

A mechanic logs into the system to view their daily assigned jobs. The system displays detailed information about each vehicle, including the type of service required and parts needed. As the mechanic completes each task, they update the status in the system, which instantly notifies the manager and customer. This helps streamline workflow, reduce manual communication, and improve overall service efficiency.

## Garage Management System



## **Conclusion**

The Empathy Map Canvas provides valuable insights into customer behavior, needs, and challenges. It helps in understanding what customers truly expect from garage services and highlights areas needing improvement. By applying these insights, the Garage Management System can enhance customer satisfaction through efficient service booking, transparent communication, and timely delivery. Overall, it bridges the gap between customer expectations and service performance, leading to a more user-centered and effective system.