

# **Garage Management system**

**Project Title** : Garage Management system

**College** : Kg College of arts and science

**Team ID** : NM2025TMID23813

**Team Size** : 4

## **Team Member Details:**

1. **Team Leader** : Sona S

**Email** : [2326jb46@kgcas.com](mailto:2326jb46@kgcas.com)

2. **Team Member** : Sri Ganesh Kumar M

**Email** : [2326jb47@kgcas.com](mailto:2326jb47@kgcas.com)

3. **Team Member** : Sri Raagavan M

**Email** : [2326jb48@kgcas.com](mailto:2326jb48@kgcas.com)

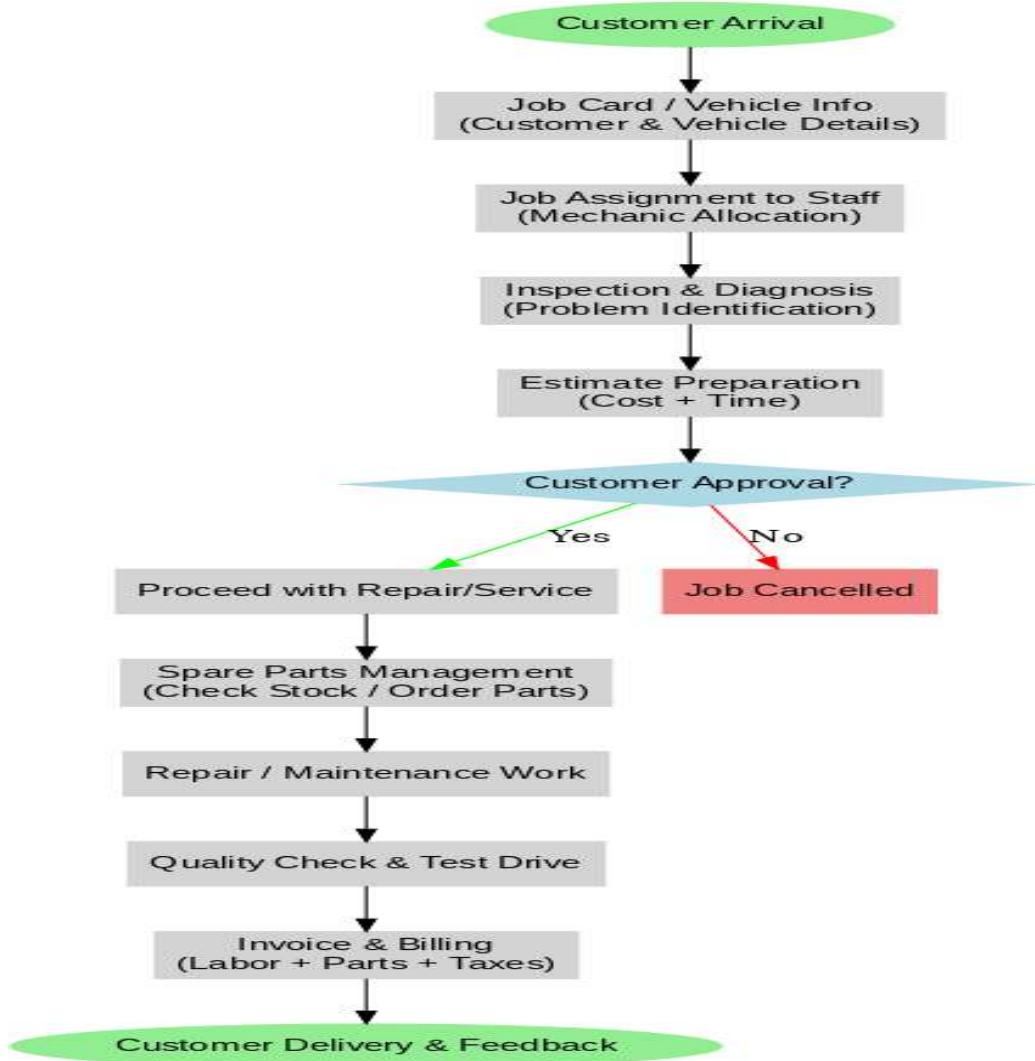
4. **Team Member** : Subathran S

**Email** : [2326jb49@kgcas.com](mailto:2326jb49@kgcas.com)

# INTRODUCTION:

## 1.1 Project Overview

The Garage Management System is a valuable tool for automotive repair facilities, helping them deliver top-notch service, increase operational efficiency, and build lasting customer relationships. With its user-friendly interface and powerful features, GMS empowers garages to thrive in a competitive market while ensuring a seamless and satisfying experience for both customers and staff.



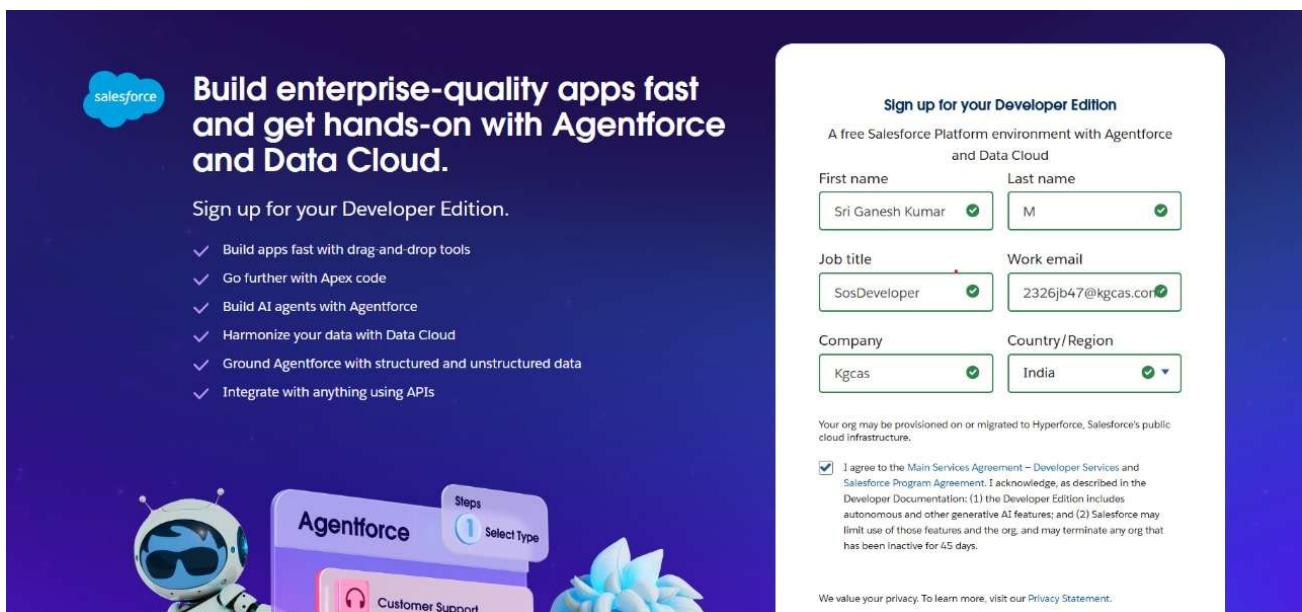
## 1.2 Purpose

The purpose of the Garage Management System is to streamline and automate the daily operations of automotive repair facilities. It provides a centralized platform for managing customer details, vehicle information, job assignments, repair workflows, spare parts inventory, billing, and customer feedback. By digitizing these processes, GMS enhances operational efficiency, reduces errors, ensures timely service delivery, and improves customer satisfaction. Ultimately, it empowers garages to deliver high-quality service, maintain better resource utilization, and thrive in a competitive automotive service industry.

# DEVELOPMENT PHASE

## Creating Developer Account:

By using this URL: <https://developer.salesforce.com/signup>



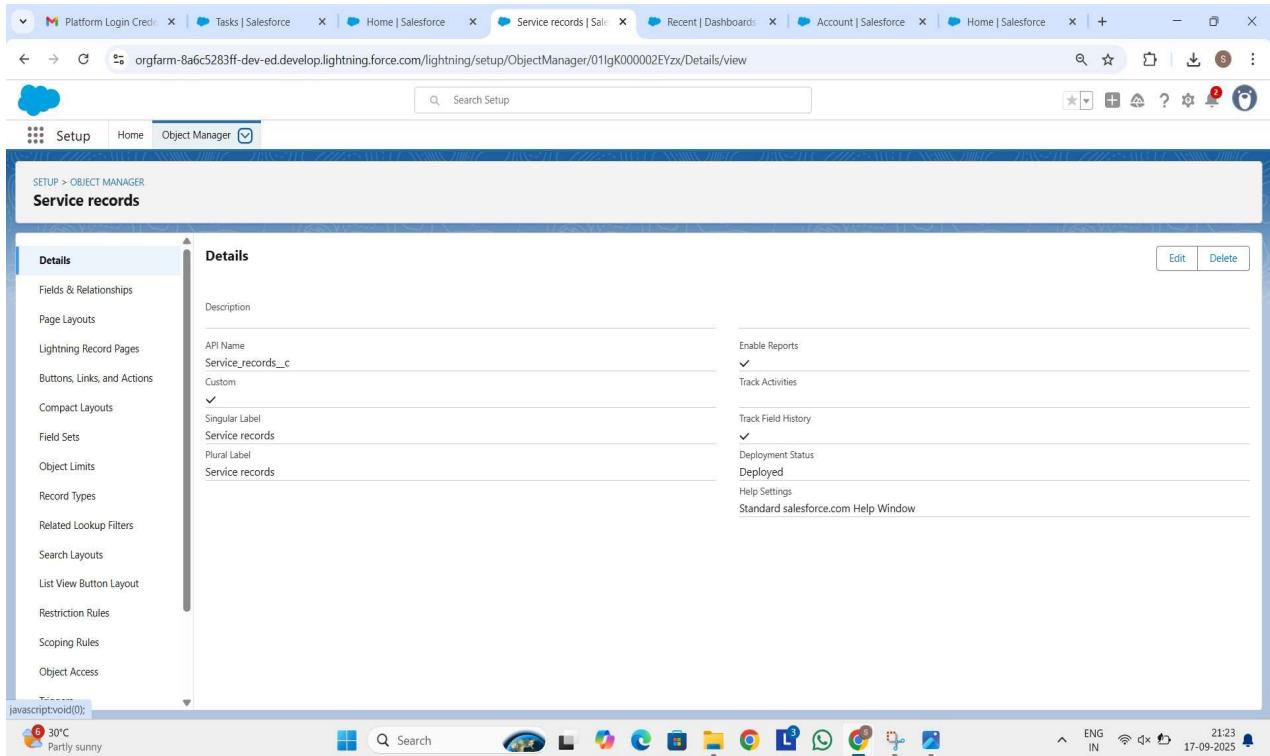
## Created objects:

The screenshot shows the Salesforce Object Manager page. The left sidebar lists various object types: Account, Activity, Address, Agent Work, Alternative Payment Method, API Anomaly Event Store, Appointment, Appointment Category, Appointment Invitation, Appointment Invitee, Appointment Topic Time Slot, Approval Submission, Approval Submission Detail, Approval Work Item, and Asset. The main area displays a table of objects with columns: NAME, TYPE, DESCRIPTION, LAST MODIFIED, and DEPLOYED. One row is selected, showing 'Appointment' as the name, 'Standard Object' as the type, and '9/13/2025' as the last modified date. The status bar at the bottom indicates it's 21:24 on 17-09-2025.

## Billing details and feedback:

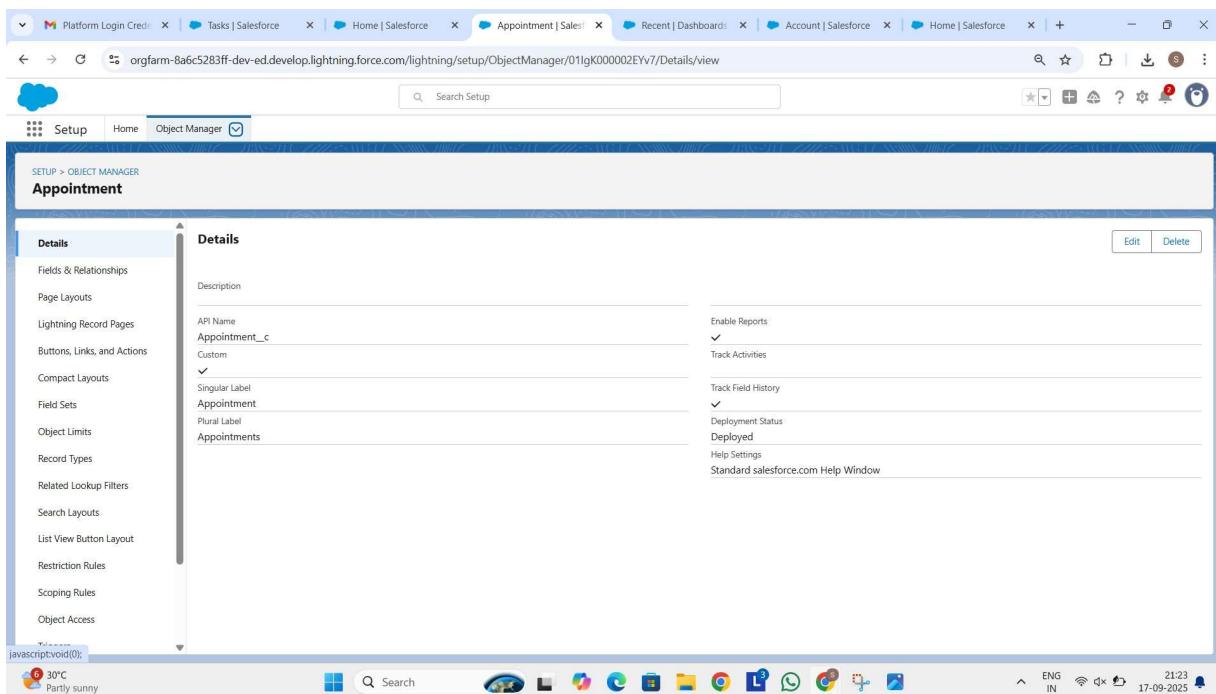
The screenshot shows the 'Billing details and feedback' object details page. The left sidebar lists various object settings: Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, List View Button Layout, Restriction Rules, Scoping Rules, and Object Access. The main area displays the object's details under the 'Details' tab. The API Name is 'Billing\_details\_and\_feedback\_\_c'. The object is custom, singular label is 'Billing details and feedback', and plural label is also 'Billing details and feedback'. Under the 'Enable Reports' section, 'Track Activities' and 'Track Field History' are checked. Deployment status is 'Deployed'. Help settings point to the 'Standard salesforce.com Help Window'. The status bar at the bottom indicates it's 21:22 on 17-09-2025.

## Service records:



The screenshot shows the Salesforce Setup interface for managing object settings. The top navigation bar includes tabs for Platform Login Credential, Tasks | Salesforce, Home | Salesforce, Service records | Sales, Recent | Dashboards, Account | Salesforce, and Home | Salesforce. The main title is "Service records". The left sidebar lists various configuration options under "Details": Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, List View Button Layout, Restriction Rules, Scoping Rules, and Object Access. The right panel displays the "Details" section for the "Service records" object. It includes fields for API Name (Service\_records\_c), Singular Label (Service records), and Plural Label (Service records). Under "Enable Reports", "Track Activities", and "Track Field History", there are checkboxes. Deployment Status is set to "Deployed". Help Settings point to the "Standard salesforce.com Help Window". The bottom status bar shows the date and time as 17-09-2025, 21:23, and weather information indicating 30°C and partly sunny.

## Appointment:



The screenshot shows the Salesforce Setup interface for managing object settings. The top navigation bar includes tabs for Platform Login Credential, Tasks | Salesforce, Home | Salesforce, Appointment | Sales, Recent | Dashboards, Account | Salesforce, and Home | Salesforce. The main title is "Appointment". The left sidebar lists various configuration options under "Details": Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, List View Button Layout, Restriction Rules, Scoping Rules, and Object Access. The right panel displays the "Details" section for the "Appointment" object. It includes fields for API Name (Appointment\_c), Singular Label (Appointment), and Plural Label (Appointments). Under "Enable Reports", "Track Activities", and "Track Field History", there are checkboxes. Deployment Status is set to "Deployed". Help Settings point to the "Standard salesforce.com Help Window". The bottom status bar shows the date and time as 17-09-2025, 21:23, and weather information indicating 30°C and partly sunny.

## Customer Details:

The screenshot shows the Salesforce Setup interface for the 'Customer Details' object. The left sidebar lists various setup categories like Fields & Relationships, Page Layouts, and Buttons, with 'Fields & Relationships' currently selected. The main pane displays the 'Details' section of the object configuration, which includes fields for API Name (Customer\_Details\_\_c), Singular Label (Customer Details), Plural Label (Customer Details), and various deployment and tracking settings. The top navigation bar shows multiple tabs open, including 'Customer Details | S' and 'Recent | Dashboard'. The bottom status bar shows the date as 17-09-2025 and the time as 21:23.

## Configured fields and relationship:

Billing details and feedback:

The screenshot shows the Salesforce Setup interface for the 'Billing details and feedback' object. The left sidebar shows 'Fields & Relationships' selected. The main pane displays a table of fields and their properties, such as Name, Type, Controlling Field, and Indexing status. The table includes fields like 'Billing details and feedback Name' (Name, Auto Number), 'Created By' (CreatedBy, Lookup(User)), 'Last Modified By' (LastModifiedBy, Lookup(User)), 'Owner' (OwnerId, Lookup(User/Group)), 'Payment Paid' (Payment\_Paid\_\_c, Currency(18, 0)), 'Payment Status' (Payment\_Status\_\_c, Picklist), 'Rating for service' (Rating\_for\_service\_\_c, Text(1)), and 'Service records' (Service\_records\_\_c, Lookup(Service records)). The top navigation bar shows multiple tabs open, including 'Billing details and fe' and 'Recent | Dashboard'. The bottom status bar shows the date as 17-09-2025 and the time as 21:35.

Service records:

**Service records**

**Fields & Relationships**

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Appointment	Appointment_c	Lookup(Appointment)		✓
Created By	CreatedById	Lookup(User)		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Quality Check Status	Quality_Check_Status_c	Checkbox		
service date	service_date_c	Formula (Date)		
Service records Name	Name	Auto Number		✓
Service Status	Service_Status_c	Picklist		

## Appointment:

**Appointment**

**Fields & Relationships**

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Appointment Date	Appointment_Date_c	Date		
Appointment Name	Name	Auto Number		✓
Created By	CreatedById	Lookup(User)		
Customer Details	Customer_Details_c	Lookup(Customer Details)		✓
Last Modified By	LastModifiedById	Lookup(User)		
Maintenance Service	Maintenance_service_c_c	Checkbox		
Owner	OwnerId	Lookup(User,Group)		✓
Repairs	Repairs_c	Checkbox		
Replacement Parts	Replacement_Parts_c	Checkbox		
Service Amount	Service_Amount_c	Currency(18, 0)		
Vehicle number plate	Vehicle_number_plate_c	Text(10) (Unique Case Insensitive)		✓

## Customer Details:

The screenshot shows the Salesforce Setup interface under Object Manager. The left sidebar lists various setup categories like Page Layouts, Lightning Record Pages, and Field Sets. The main content area is titled "Customer Details" and displays a table of "Fields & Relationships". The table has columns for FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. It lists fields such as Created By, Customer Name, Gmail, Last Modified By, Owner, and Phone number.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedBy	Lookup(User)		
Customer Name	Name	Text(80)		✓
Gmail	Gmail_c	Email		
Last Modified By	LastModifiedBy	Lookup(User)		
Owner	OwnerId	Lookup(User/Group)		✓
Phone number	Phone_number_c	Phone		

## Developed Lightning App:

The screenshot shows the Salesforce Setup interface under the App Manager category. The left sidebar lists various app-related categories like Service Setup Assistant, Commerce Setup Assistant, and Administration. The main content area is titled "Lightning Experience App Manager" and displays a table of installed apps. The table has columns for App Name, Developer Name, Description, Last Modified Date, App Type, and Visible. Apps listed include Digital Experiences, Garage Management Application, Lightning Usage App, Marketing CRM Classic, My Service Journey, Platform, Queue Management, Sales, Sales, LightningSales, Sales Cloud Mobile, Sales Console, Salesforce Chatter, Salesforce Scheduler Setup, Service, Service Console, Site.com, and Subscription Management.

App Name	Developer Name	Description	Last Modified Date	App Type	Visible
11 Digital Experiences	SalesforceCMS	Manage content and media for all of your sites.	9/10/2025, 11:45 AM	Lightning	✓
12 Garage Management Application	Garage_Management_Application		9/13/2025, 11:08 PM	Lightning	✓
13 Lightning Usage App	LightningInstrumentation	View Adoption and Usage Metrics for Lightning Experience	9/10/2025, 11:45 AM	Lightning	✓
14 Marketing CRM Classic	Marketing	Track sales and marketing efforts with CRM objects.	9/10/2025, 11:45 AM	Classic	✓
15 My Service Journey	MSIApp	Discover new customer service capabilities.	9/10/2025, 11:45 AM	Lightning	✓
16 Platform	Platform	The fundamental Lightning Platform	9/10/2025, 11:45 AM	Classic	✓
17 Queue Management	QueueManagement	Create and manage queues for your business.	9/10/2025, 11:45 AM	Lightning	✓
18 Sales	Sales	The world's most popular sales force automation (SFA) solution	9/10/2025, 11:45 AM	Classic	✓
19 Sales	LightningSales	Manage your sales process with accounts, leads, opportunities, and more	9/10/2025, 11:45 AM	Lightning	✓
20 Sales Cloud Mobile	SalesCloudMobile	New seller focused mobile first experience	9/10/2025, 11:45 AM	Lightning	✓
21 Sales Console	LightningSalesConsole	(Lightning Experience) Lets sales reps work with multiple records on one s...	9/10/2025, 11:45 AM	Lightning	✓
22 Salesforce Chatter	Chatter	The Salesforce Chatter social network, including profiles and feeds	9/10/2025, 11:45 AM	Classic	✓
23 Salesforce Scheduler Setup	LightningScheduler	Set up personalized appointment scheduling.	9/10/2025, 11:49 AM	Lightning	✓
24 Service	Service	Manage customer service with accounts, contacts, cases, and more	9/10/2025, 11:45 AM	Classic	✓
25 Service Console	LightningService	(Lightning Experience) Lets support agents work with multiple records acr...	9/10/2025, 11:45 AM	Lightning	✓
26 Site.com	Sites	Build pixel-perfect, data-rich websites using the drag-and-drop Site.com ...	9/10/2025, 11:45 AM	Classic	✓
27 Subscription Management	RevenueCloudConsole	Get started automating your revenue processes	9/10/2025, 11:45 AM	Lightning	✓

Platform Login | Tasks | Salesforce | Home | Salesforce | Lightning Usage | App Manager | Recent | Dashboard | Account | Salesforce | Home | Salesforce | +

orgfarm-8a6c5283ff-dev-ed.develop.lightning.force.com/lightning/setup/NavigationMenus/home

## New Lightning App

### App Details & Branding

Give your Lightning app a name and description. Upload an image and choose the highlight color for its navigation bar.

**App Details**

\*App Name

\*Developer Name

Description

**App Branding**

Image  Primary Color Hex Value

Org Theme Options  Use the app's image and color instead of the org's custom theme

App Launcher Preview

Next

Setup Home Object Manager

Quick

Up Home Salesforce Setup Service Setup Commerce Setup Service Setup Service Update Salesforce App Update Ease Update Salesforce Maintenance Lightning Us Optimizer Sales Cloud MINISTR Users Data Email ATFOR Subscription Management Apps App Manager AppExchange Marketplace

Service Console	Sites	(Lightning Experience) Lets support agents work with multiple records acr...	9/10/2025, 11:45 AM	Lightning	✓
Site.com	Sites	Build pixel-perfect, data-rich websites using the drag-and-drop Site.com ...	9/10/2025, 11:45 AM	Classic	▼
Subscription Management	RevenueCloudConsole	Get started automating your revenue processes	9/10/2025, 11:45 AM	Lightning	✓

Platform Login | Tasks | Salesforce | Home | Salesforce | Lightning Usage | Garage Manager | Recent | Dashboard | Account | Salesforce | Home | Salesforce | +

orgfarm-8a6c5283ff-dev-ed.develop.lightning.force.com/visualEditor/appBuilder.app?id=02ugK000006cW7eQAE&retUrl=https%3A%2F%2Forgfarm-8a6c5283ff-dev-ed.develo... ?

## Garage Management Application

### App Settings

#### App Details & Branding

Give your Lightning app a name and description. Upload an image and choose the highlight color for its navigation bar.

**App Details**

\*App Name

\*Developer Name

Description

**App Branding**

Image  Primary Color Hex Value

Org Theme Options  Use the app's image and color instead of the org's custom theme

App Launcher Preview

GM Garage Management Appli...

Lightning App Builder App Settings Pages Garage Management Application

Partly sunny 30°C

Search

21:52 17-09-2025 ENG IN

The screenshot shows the Lightning App Builder interface with the URL <https://orgfarm-8a6c5283ff-dev-ed.lightning.force.com/visualEditor/appBuilder.app?id=02ugK000006cW7eQAE&retUrl=https%3A%2F%2Forgfarm-8a6c5283ff-dev-ed.develop.lightning.force.com/visualEditor/appBuilder.app>. The left sidebar is titled "App Settings" and includes sections for "App Details & Branding", "App Options", "Utility Items (Desktop Only)", "Navigation Items", and "User Profiles". The "App Options" section is currently selected. It contains tabs for "App Options" (selected), "Navigation and Form Factor", and "Setup and Personalization". Under "Navigation and Form Factor", the "Navigation Style" is set to "Standard navigation" (radio button selected). Under "Supported Form Factors", "Desktop and phone" is selected. In the "Setup and Personalization" tab, "Setup Experience" is set to "Setup (full set of Setup options)" (radio button selected). Under "App Personalization Settings", there are three checkboxes: "Disable end user personalization of nav items in this app" (unchecked), "Disable temporary tabs for items outside of this app" (unchecked), and "Use Omni-Channel sidebar" (unchecked). The bottom of the screen shows a Windows taskbar with various icons and a system tray indicating the date as 17-09-2025.

The screenshot shows the Lightning App Builder interface with the same URL as the previous screenshot. The left sidebar is titled "App Settings" and includes sections for "App Details & Branding", "App Options", and "Utility Items (Desktop Only)". The "Utility Items (Desktop Only)" section is currently selected. It contains a "Utility Items (Desktop Only)" heading and a sub-section titled "Utility Bar Alignment" with a dropdown menu set to "Default". Below this, there is a search bar labeled "Q Search..." and a list of utility items under the "Standard (24)" category. The list includes: Chatter Feed, Chatter Publisher, Connection Status, CRM Analytics Dashboard, Einstein Next Best Action, Flow, History, Invoice Preview, List View, and LWC CRM Analytics Dashboard. A tooltip for the utility bar states: "that opens components in docked panels. Available only when the app is viewed in Lightning Experience on a desktop." At the bottom of the utility item list, a note says: "To enable the utility bar for this app, add a utility item." The bottom of the screen shows a Windows taskbar with various icons and a system tray indicating the date as 17-09-2025.

The screenshot shows the Lightning App Builder interface with the title "Garage Management Application". The left sidebar has "Navigation Items" selected. The main area shows "Available Items" on the left and "Selected Items" on the right. The "Selected Items" list contains:

- Customer Details
- Appointments
- Service records
- Billing details and feedback
- Reports
- Dashboards

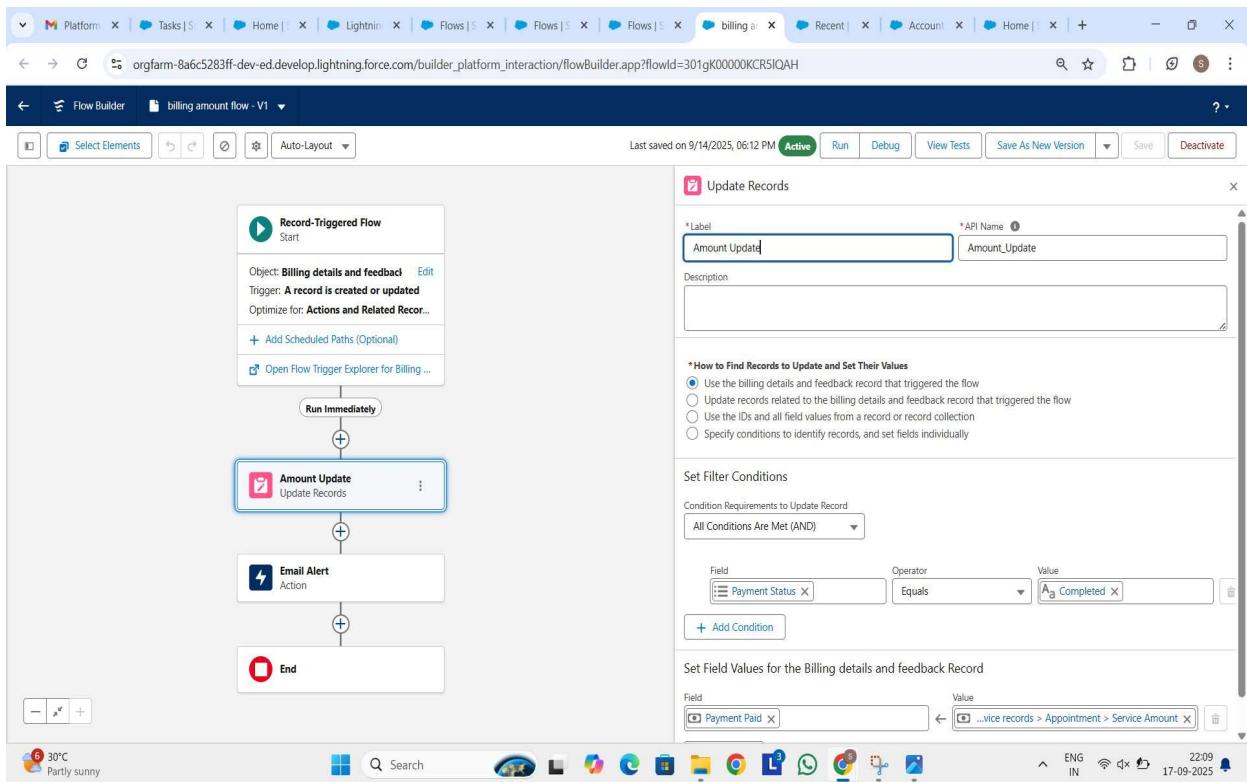
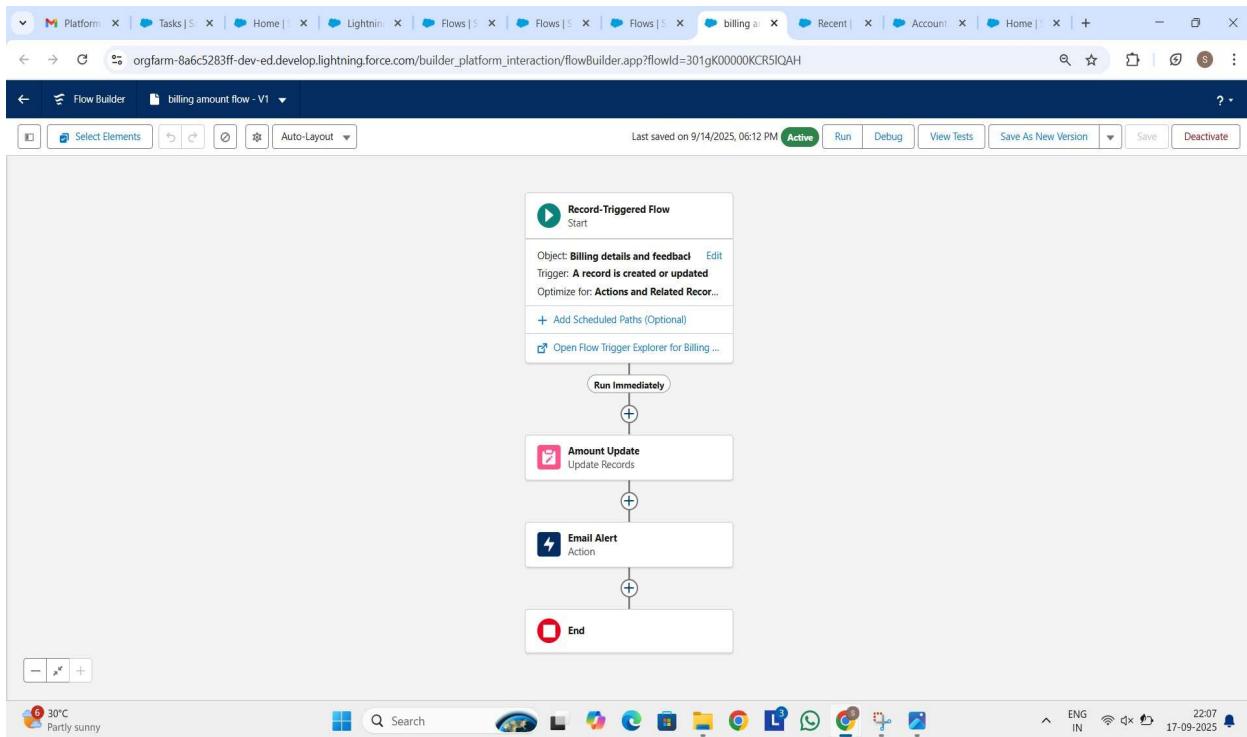
Below the "Selected Items" list are up and down arrow buttons for reordering.

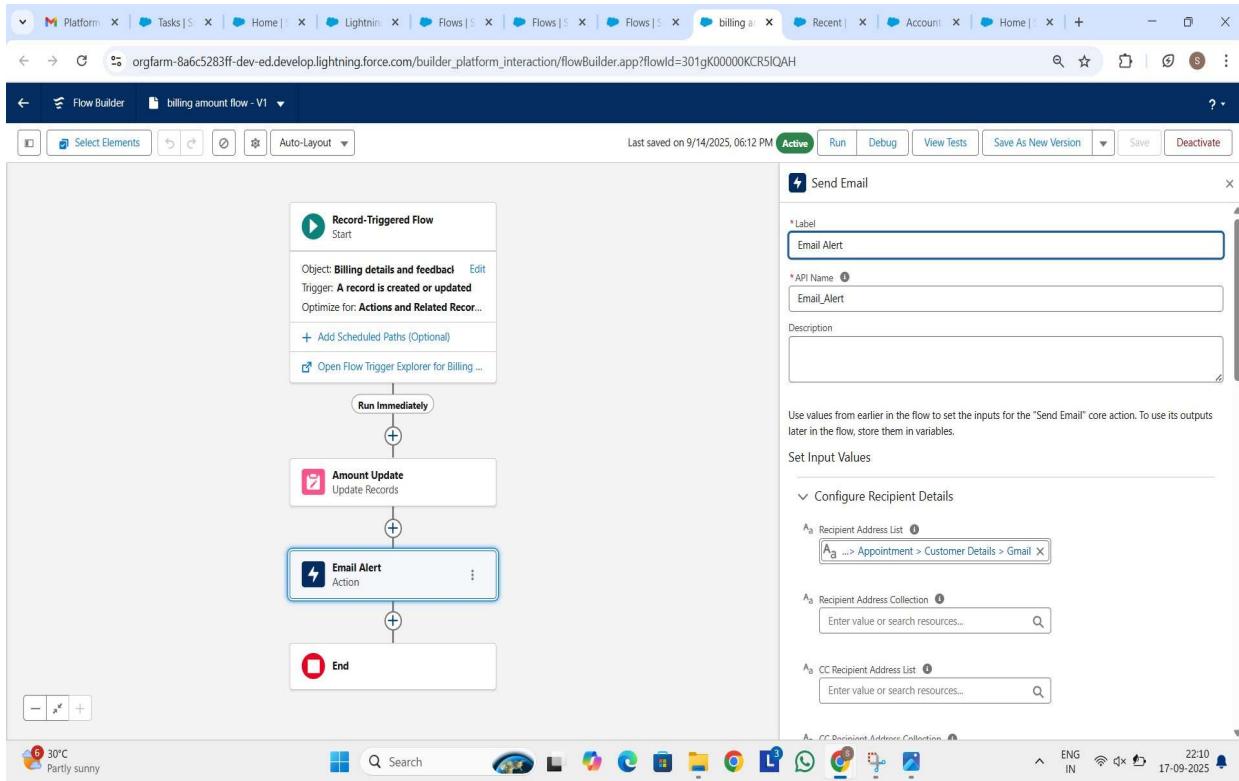
The screenshot shows the Lightning App Builder interface with the title "Garage Management Application". The left sidebar has "User Profiles" selected. The main area shows "Available Profiles" on the left and "Selected Profiles" on the right. The "Selected Profiles" list contains:

- System Administrator
- Manager
- Sales Person

Below the "Selected Profiles" list are up and down arrow buttons for reordering.

## Implemented flow for billing details and feedback:





## Created Apex Class:

The screenshot shows the Salesforce Setup interface with the 'Apex Classes' section selected. The main page displays the 'AmountDistributionHandler' class. The code editor shows the following Apex code:

```

1 public class AmountDistributionHandler {
2
3     public static void amountDist(List<Appointment> lstApp) {
4         for (Appointment__c app : lstApp) {
5             if (app.Maintenance_Service__c == true && app.Repairs__c == true) {
6                 app.Service_Amount__c = 1000;
7             } else if (app.Maintenance_Service__c == true && app.Repairs__c == true) {
8                 app.Service_Amount__c = 500;
9             } else if (app.Maintenance_Service__c == true && app.Replacement_Parts__c == true) {
10                app.Service_Amount__c = 700;
11            } else if (app.Repairs__c == true && app.Replacement_Parts__c == true) {
12                app.Service_Amount__c = 2000;
13            } else if (app.Repairs__c == true) {
14                app.Service_Amount__c = 3000;
15            } else if (app.Replacement_Parts__c == true) {
16                app.Service_Amount__c = 5000;
17            }
18        }
19    }
20
21 }
22

```

The class has a namespace prefix of 'AmountDistributionHandler'. It was created by 'Sameena S.' on 9/14/2025, 6:01 AM. The status is 'Active' with 0% code coverage. The last modified by 'Sameena S.' on 9/14/2025, 6:19 AM.

## Created Triggers:

The screenshot shows the Salesforce Setup interface with the 'Apex Triggers' section selected. The main page displays the 'AmountDistribution' trigger. A message box indicates 'Percent of Apex Used: 0.02%', noting usage of 1,284 characters out of 6,000,000. The trigger table shows the following data:

Action	Name	Namespace Prefix	sObject Type	Api Version	Status	Size Without Comments	Last Modified By	Has Trace Flags
Edit   Del	AmountDistribution		Appointment	64.0	Active	215	Sameena S.	9/14/2025, 6:21 AM

The URL at the bottom of the browser is <https://orgfarm-8a6c5283ff-dev-ed.lightning.force.com/lightning/setup/ApexTriggers/home>.

The screenshot shows the Salesforce Setup interface for Apex Triggers. The left sidebar is expanded to show categories like Email, Custom Code, Apex Classes, Apex Settings, Apex Test Execution, Apex Test History, and Apex Triggers. Under Apex Triggers, the 'AmountDistribution' trigger is selected. The main content area displays the Apex Trigger Detail for 'AmountDistribution'. The trigger details include:

Name	AmountDistribution	sObject Type	Appointment
Code Coverage	0% (0/2)	Status	Active
Created By	Sameena.S. 9/14/2025, 6:02 AM	Last Modified By	Sameena.S. 9/14/2025, 6:21 AM
Namespace Prefix			

The trigger code is displayed in the code editor:

```
trigger AmountDistribution on Appointment__c (before insert, before update) {
    if (Trigger.isBefore && (Trigger.isInsert || Trigger.isUpdate)) {
        AmountDistributionHandler.amountDist(Trigger.new);
    }
}
```

Below the code editor are buttons for Edit, Delete, Download, and Show Dependencies.

## Created Public Groups:

The screenshot shows the Salesforce Setup interface for Public Groups. The left sidebar is expanded to show categories like Users and Public Groups. Under Public Groups, the 'sales\_team' group is selected. The main content area displays the Public Groups list. The table shows one group entry:

Action	Label	Group Name	Created By	Created Date
Edit   Del	sales team	sales_team	S.Sameena	9/14/2025, 1:15 AM

Below the table are navigation links for View: All, Edit, and Create New View, along with letter-based navigation buttons (A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z) and an All button.

Screenshot of the Salesforce Setup interface showing the Roles page.

**Role: sales person**

Below is the list of users assigned to this role. Click Edit to modify the role name. Click Assign Users to Role to assign existing users to this role. Click New User to create a user for this role.

Hierarchy: Kg College Of Arts and Science » Manager » sales person

**Role Detail**

Label	sales person	Role Name	sales_person
This role reports to	Manager	Role Name as displayed on reports	
Modified By	Sameena S. 9/14/25, 12:40 AM	Sharing Groups	
Opportunity Access	Users in this role can edit all opportunities associated with accounts that they own, regardless of who owns the opportunities	Role	Role and Internal Subordinates
Case Access	Users in this role can edit all cases associated with accounts that they own, regardless of who owns the cases		

**Users in sales person Role**

Action	Full Name	Alias	Username	Active
Edit	Rebekah Johnson	rjohn	sami37004@gmail.com	✓
Edit	Elijah Smith	esmit	samiusami@gmail.com	✓

Help for this Page

javascipt:srcUp(%27%2F00EgK000004AjlR%3Fsdtp%3Dp1%27);

30°C Partly sunny ENG IN 22:21 17-09-2025

## Custom Report Types:

Screenshot of the Salesforce Setup interface showing the Custom Report Type page.

**Service information**

Below is the information for this custom report type. You can click the buttons on this to preview or update information for the custom report type

**Details**

Display Label	Service information
API Name	Service_information
Description	Service information
Created By	Sameena S. 9/14/25, 7:05 PM
Store in Category	other
Deployment Status	Deployed
Modified By	Sameena S. 9/14/25, 7:05 PM

**Fields**

Source Object	Included Fields
Customer Details	9
Appointments	13
Service records	10
Billing details and feedback	10

**Object Relationships**

Customer Details (A) with at least one related record from Appointments (B)

... with at least one related record from Service records (C)

... with at least one related record from Billing details and feedback (D)

A B C D

Help for this Page

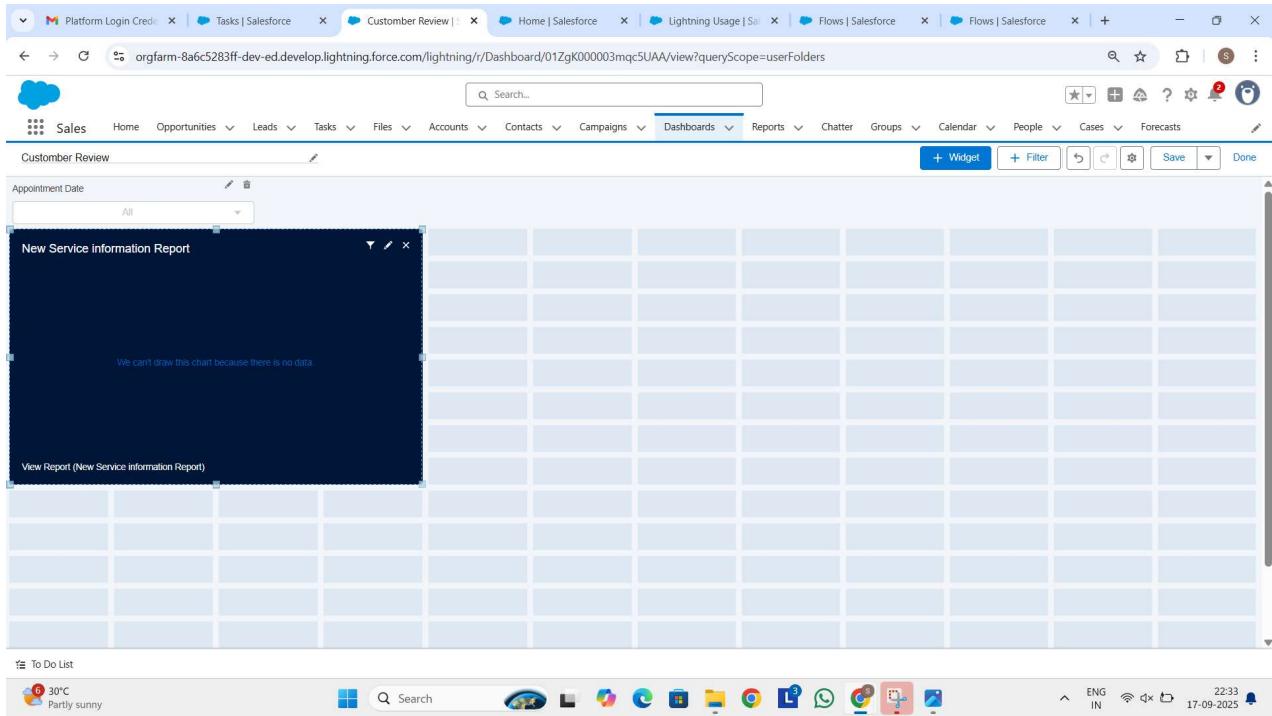
javascipt:srcUp(%27%2F00EgK000004AjlR%3Fsdtp%3Dp1%27);

30°C Partly sunny ENG IN 22:23 17-09-2025

## Dashboard:

The screenshot shows the Salesforce Lightning Experience interface. The top navigation bar includes links for Platform Login Credit, Tasks | Salesforce, Recent | Dashboards, Home | Salesforce, Lightning Usage | Sales, Flows | Salesforce, and Flows | Salesforce. The main content area is titled "Recent" under "Dashboards". A search bar at the top right says "Search...". Below it is a table with columns: Dashboard Name, Description, Folder, Created By, Created On, and Subscribed. One row is visible: "Customer Review" (Description: Service Rating dashboard), created by Sameena S on 9/16/2025, 11:51 PM. To the left of the table is a sidebar with sections: Recent, Created by Me, Private Dashboards, All Dashboards, Folders, All Folders, Created by Me, Shared with Me, Favorites, and All Favorites. At the bottom of the screen is a Windows taskbar showing various application icons and system status.

The screenshot shows the Salesforce Lightning Experience interface. The top navigation bar includes links for Platform Login Credit, Tasks | Salesforce, Customer Review | D, Home | Salesforce, Lightning Usage | Sales, Flows | Salesforce, and Flows | Salesforce. The main content area is titled "Customer Review" and displays a report titled "New Service Information Report". A modal dialog box is open, titled "Add Filter". The dialog has several input fields: "Select Field to Filter By (Required)" with "Appointment Date" selected; "Operator" set to "equals"; "Date Type" set to "Calendar" with "Pick a date" as the value; and "Display Name" set to "Appointment Date". There is also a "Filter Values (0)" section with a "New Filter Value" button. At the bottom of the dialog are "Cancel" and "Apply" buttons. The background shows a grid of data rows. The bottom of the screen features a Windows taskbar with various application icons and system status.



## Advantages:

### Improved Efficiency:

Automates job cards, billing, and inventory, reducing manual workload.

### Better Customer Service:

Stores service history, sends reminders, and ensures timely updates.

### Accurate Billing:

Reduces errors in labor charges, parts costs, and taxes.

### Inventory Control:

Tracks spare parts availability and prevents stockouts or overstocking.

### Data Management & Reporting:

Provides detailed reports on jobs, revenue, and performance.

## **Disadvantages:**

### **Initial Setup Cost:**

Purchasing or developing the system can be expensive.

### **System Dependency:**

Heavy reliance on the software may cause disruptions if technical issues occur.

### **Maintenance & Updates:**

Requires regular software updates and possible IT support.

### **Data Security Risks:**

Sensitive customer and financial data must be properly secured.

### **Internet/Power Dependency:**

Cloud-based or online systems may face downtime without connectivity.

## **Conclusion:**

The Garage Management System (GMS) plays a vital role in modernizing and streamlining the operations of automotive repair facilities. By automating job scheduling, inventory tracking, billing, and customer communication, it enhances efficiency, accuracy, and service quality. While the system may require initial investment, training, and ongoing maintenance, the long-term benefits—such as improved customer satisfaction, optimized resource management, and increased profitability—far outweigh the challenges. Overall, GMS provides a reliable and effective solution for garages to stay competitive in the rapidly evolving automotive service industry.

## Appendix:

**Source code:** Apex class and triggers

**Apex classes:** AmountDistributionHandler

```
public class AmountDistributionHandler {  
  
    public static void amountDist(List<Appointment__c> listApp) {  
        for (Appointment__c app : listApp) {  
            if (app.Maintenance_Service__c == true && app.Repairs__c ==  
true && app.Replacement_Parts__c == true) {  
                app.Service_Amount__c = 10000;  
            } else if (app.Maintenance_Service__c == true &&  
app.Repairs__c == true) {  
                app.Service_Amount__c = 5000;  
            } else if (app.Maintenance_Service__c == true &&  
app.Replacement_Parts__c == true) {  
                app.Service_Amount__c = 8000;  
            } else if (app.Repairs__c == true && app.Replacement_Parts__c  
== true) {  
                app.Service_Amount__c = 7000;  
            } else if (app.Maintenance_Service__c == true) {  
                app.Service_Amount__c = 2000;  
            } else if (app.Repairs__c == true) {  
                app.Service_Amount__c = 3000;  
            } else if (app.Replacement_Parts__c == true) {  
                app.Service_Amount__c = 5000;  
            }  
        }  
    }  
}
```

```
}
```

## Apex Triggers: AmountDistribution

```
trigger AmountDistribution on Appointment__c (before insert, before  
update) {  
    if (Trigger.isBefore && (Trigger.isInsert || Trigger.isUpdate)) {  
        AmountDistributionHandler.amountDist(Trigger.new);  
    }  
}
```