

# **Garage Management system**

**Project Title :** Garage Management system

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

**Team ID :** NM2025TMID23720

**Team Size :** 4

## **Team Member Details:**

1. **Team Leader :** Andriya R

**Email :** [2326ka05@kgcas.com](mailto:2326ka05@kgcas.com)

2. **Team Member :** Angelin Shreya S

**Email :** [2326ka06@kgcas.com](mailto:2326ka06@kgcas.com)

3. **Team Member :** Bhavadharani M S

**Email :** [2326ka07@kgcas.com](mailto:2326ka07@kgcas.com)

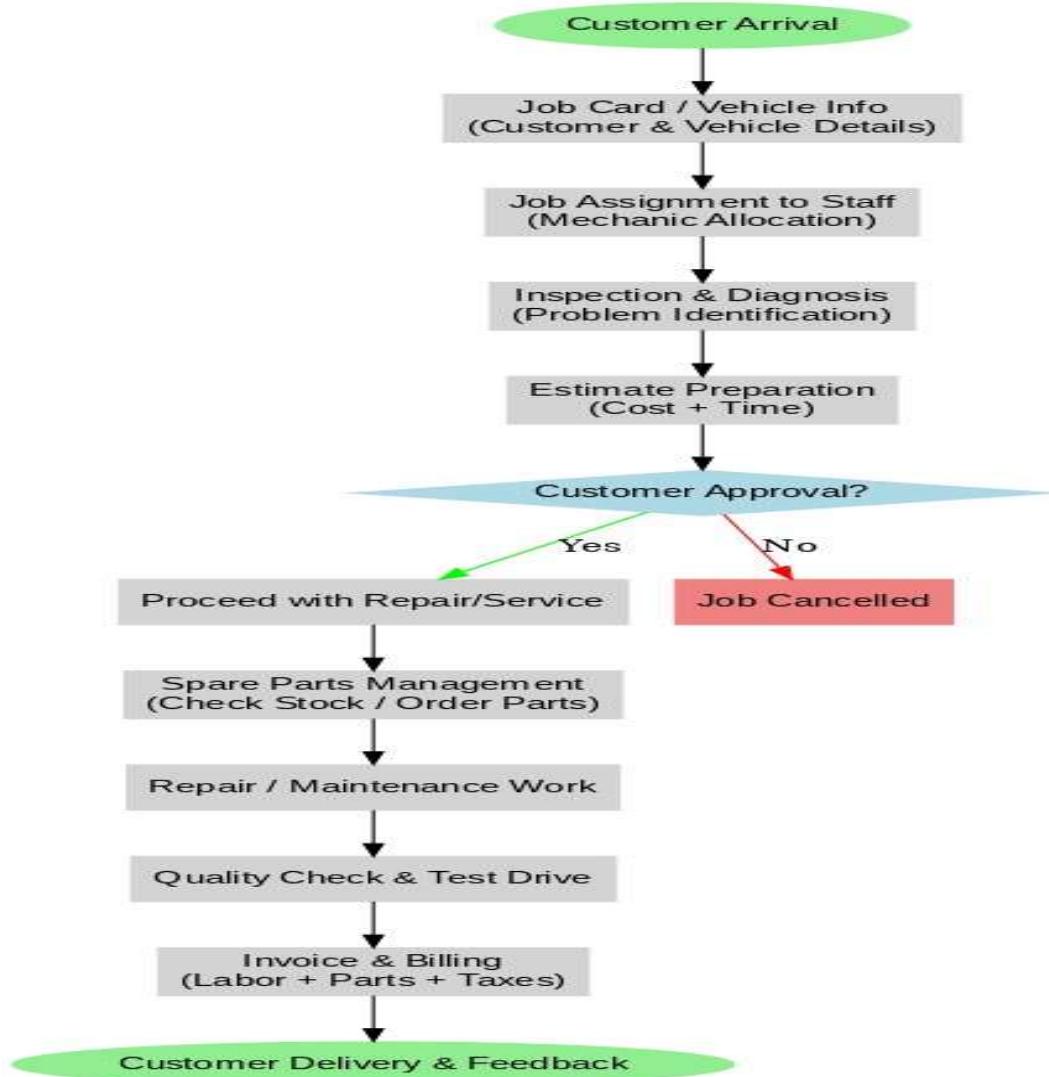
4. **Team Member :** Dakshata S

**Email :** [2326ka08@kgcas.com](mailto:2326ka08@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

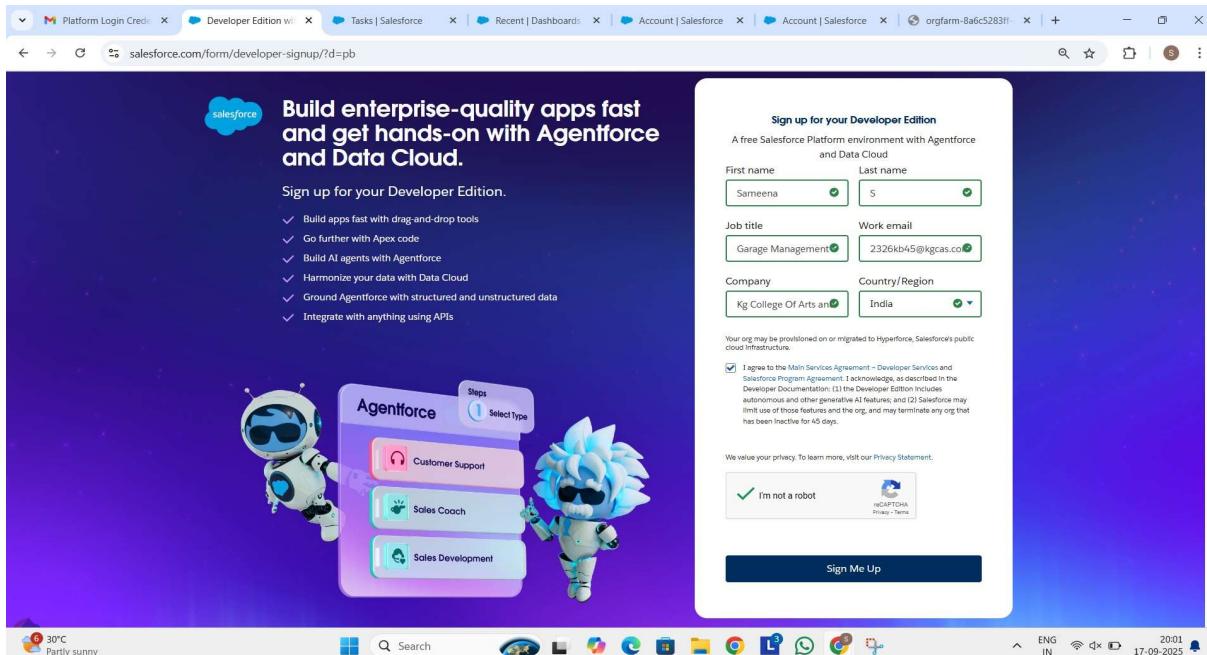
The purpose of the Garage Management System is to streamline and automate the daily operations of automotive repair facilities. It provides a centralized platform for managing customer details, vehicle information, job assignments,

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 top navigation bar includes tabs for Setup, Home, Object Manager, and a search bar. A sidebar on the left lists various object labels such as 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 content area displays a table of objects with columns for Label, Name, Type, Description, Last Modified, and Deployed. The table shows entries like 'Appointment' (Type: Standard Object), 'Customer Detail' (Type: Standard Object), and 'AgentWork' (Type: Standard Object). The status bar at the bottom indicates it's 30°C and partly sunny.

## Billing details and feedback:

The screenshot shows the 'Billing details and feedback' object setup page. The top navigation bar includes tabs for Setup, Home, Object Manager, and a search bar. The left sidebar shows options like 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 content area displays the object's details, including its API name 'Billing\_details\_and\_feedback\_c', singular label 'Billing details and feedback', and plural label 'Billing details and feedback'. It also shows settings for Enable Reports, Track Activities, Track Field History, Deployment Status (Deployed), and Help Settings (Standard salesforce.com Help Window). The status bar at the bottom indicates it's 30°C and partly sunny.

## Service records:

The screenshot shows the Salesforce Setup interface with the 'Object Manager' selected. The main page title is 'Service records'. The left sidebar lists various object configuration options: 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 Description, API Name (Service\_records\_\_c), Singular Label (Service records), Plural Label (Service records), and several checkboxes for Reports, Activities, and Field History. Deployment status is set to 'Deployed'. A help link points to the standard Salesforce Help Window.

## Appointment:

The screenshot shows the Salesforce Setup interface with the 'Object Manager' selected. The main page title is 'Appointment'. The left sidebar lists the same configuration options as the previous screenshot. The right panel displays the 'Details' section for the 'Appointment' object. It includes fields for Description, API Name (Appointment\_\_c), Singular Label (Appointment), Plural Label (Appointments), and several checkboxes for Reports, Activities, and Field History. Deployment status is set to 'Deployed'. A help link points to the standard Salesforce Help Window.

## Customer Details:

**Customer Details**

**Details**

Description

API Name  
Customer\_Details\_\_c

Custom:

- Singular Label: Customer Details
- Plural Label: Customer Details

Enable Reports: ✓

Track Activities: ✓

Track Field History: ✓

Deployment Status: Deployed

Help Settings: Standard salesforce.com Help Window

Configured fields and relationship:

Billing details and feedback:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
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)		✓
Service records	Service_records__c	Lookup(Service records)		✓

Service records:

Screenshot of the Salesforce Setup Object Manager showing the Service records object.

**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:

Screenshot of the Salesforce Setup Object Manager showing the Appointment object.

**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:

**Customer Details**

**Fields & Relationships**  
6 items. Sorted by Field Label

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:

**Lightning Experience App Manager**

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 screen.	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 at once.	9/10/2025, 11:45 AM	Lightning	✓
26 Site.com	Sites	Build pixel-perfect, data-rich websites using the drag-and-drop Site.com builder.	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.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 Find Search Setup

Up Home Salesforce Service Setup Commerce Service Service A Release Update Salesforce M Lightning Us timer Cloud MINISTR Users Data Email ATFORM Subscription Management Apps App Manager AppExchange Marketplace

Order	Name	Type	Description	Created Date	Modified Date	Status	Action
25	Service Console	LightningService	(Lightning Experience) Lets support agents work with multiple records acr...	9/10/2025, 11:45 AM	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	9/10/2025, 11:45 AM	Classic	▼
27	Subscription Management	RevenueCloudConsole	Get started automating your revenue processes	9/10/2025, 11:45 AM	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.lightning.force.com/visualEditor/appBuilder.app?id=02ugK000006cW7eQAE&retUrl=https%3A%2Fforgfarm-8a6c5283ff-dev-ed.develo...

## Lightning App Builder

### 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 Appl...

App Settings App Options Utility Items (Desktop Only) Navigation Items User Profiles

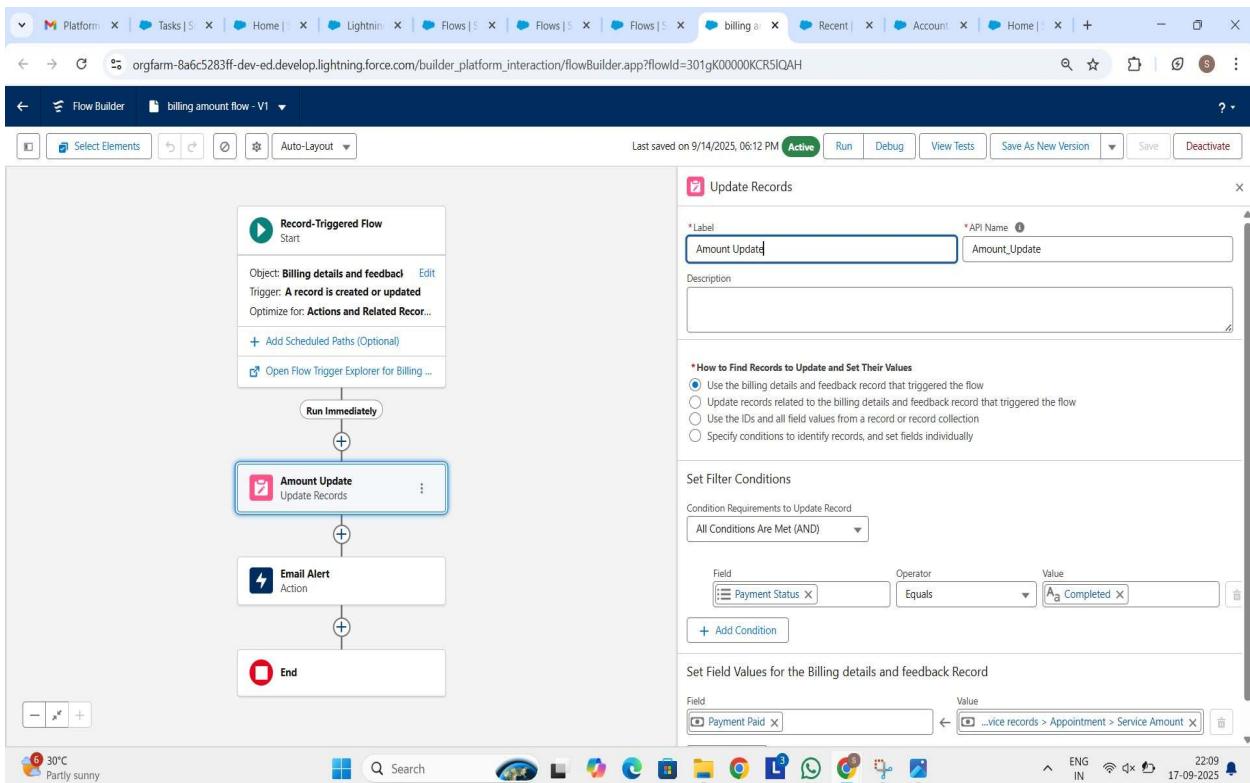
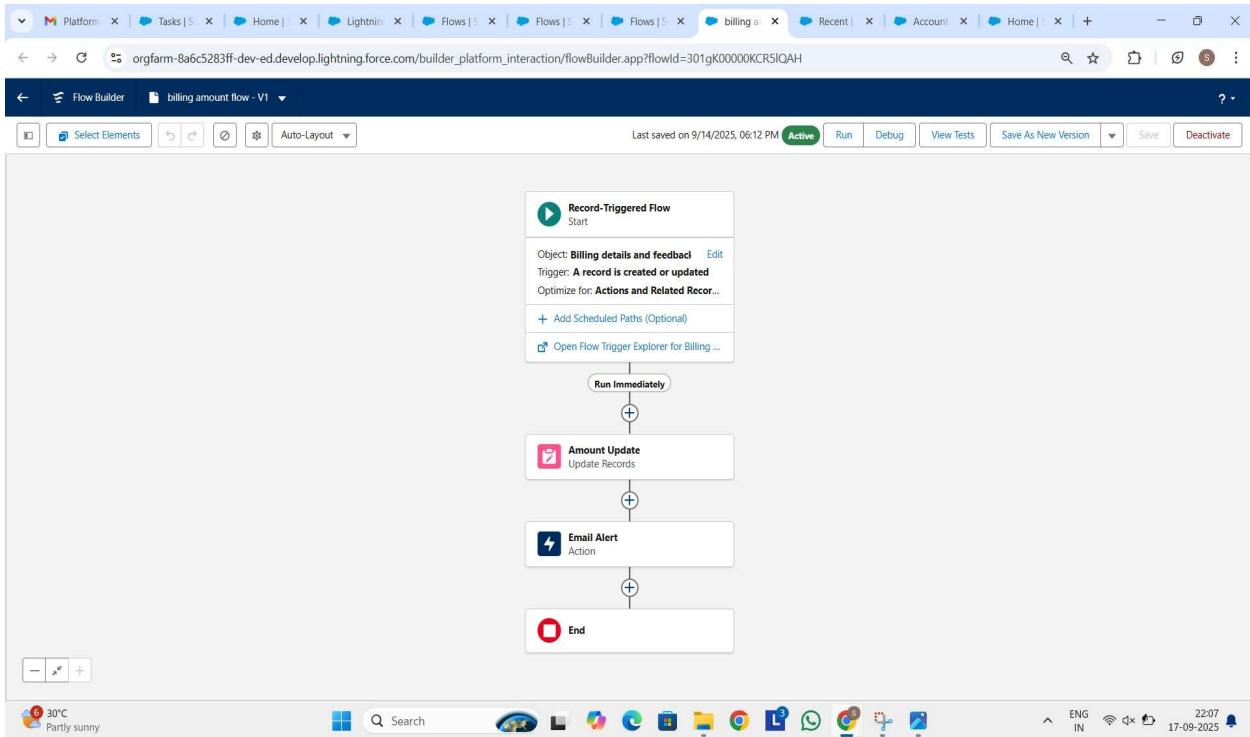
The screenshot shows the Lightning App Builder interface with the 'Garage Management Application' selected. The left sidebar has 'App Options' selected under 'App Settings'. The main content area displays 'App Options' settings, including 'Navigation and Form Factor' (set to 'Standard navigation' and 'Desktop and phone'), 'Setup and Personalization' (with 'Setup Experience' set to 'Setup (full set of Setup options)'), and 'App Personalization Settings' (checkboxes for disabling end user personalization, temporary tabs, and Omni-Channel sidebar). The status bar at the bottom shows system icons and the date/time.

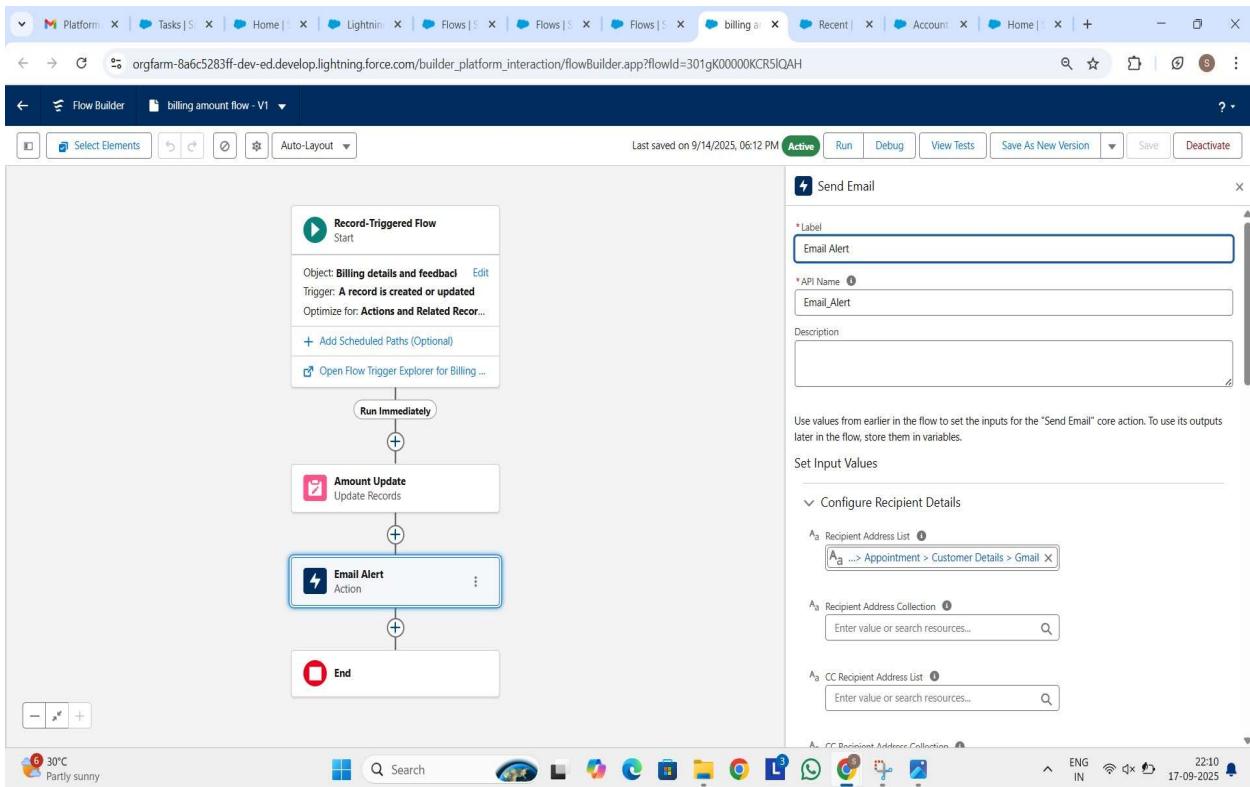
The screenshot shows the Lightning App Builder interface with the 'Utility Items (Desktop Only)' tab selected under 'App Settings'. The main content area displays a list of standard utility items such as Chatter Feed, Chatter Publisher, Connection Status, CRM Analytics Dashboard, Einstein Next Best Action, Flow, History, Invoice Preview, List View, and LWC CRM Analytics Dashboard. A search bar and an 'Add Utility Item' button are visible. The status bar at the bottom shows system icons and the date/time.

The screenshot shows the 'Navigation Items' section of the Lightning App Builder. On the left, under 'Available Items', there is a list of various navigation items such as Accounts, Activation Targets, Activations, All Sites, Alternative Payment Methods, Analytics, App Launcher, Appointment Categories, Appointment Invitations, Approval Requests, Approval Submission Details, and Approval Submissions. On the right, under 'Selected Items', several items are listed: Customer Details, Appointments, Service records, Billing details and feedback, Reports, and Dashboards. Navigation arrows between the two lists allow users to move items between them.

The screenshot shows the 'User Profiles' section of the Lightning App Builder. On the left, under 'Available Profiles', a list of user profiles is shown, including Analytics Cloud Integration User, Analytics Cloud Security User, Anypoint Integration, Authenticated Website, B2B Reordering Portal Buyer Profile, Contract Manager, Custom: Marketing Profile, Custom: Sales Profile, Custom: Support Profile, Customer Community Login User, Customer Community Plus Login User, and Customer Community Plus User. On the right, under 'Selected Profiles', three profiles are listed: System Administrator, Manager, and Sales Person. Navigation arrows between the two lists allow users to move profiles between them.

Implemented flow for billing details and feedback:





## Created Apex Class:

Action	Name	Namespace Prefix	Api Version	Status	Size Without Comments	Last Modified By	Has Trace Flags
Edit   Del   Security	AmountDistributionHandler		64.0	Active	1,069	Sameena_S	9/14/2025, 6:19 AM

The screenshot shows the Salesforce Setup interface with the 'Apex Classes' section selected. The page title is 'Apex Classes'. The 'AmountDistributionHandler' class is displayed under the 'Apex Class Detail' tab. The code for the class is as follows:

```

1 public class AmountDistributionHandler {
2     public static void amountDist(List<Appointment> listApp) {
3         for (Appointment__c app : listApp) {
4             if (app.Maintenance_Service__c == true && app.Repairs__c == true && app.Replacement_Parts__c == true) {
5                 app.Service_Amount__c = 10000;
6             } else if (app.Maintenance_Service__c == true && app.Repairs__c == true) {
7                 app.Service_Amount__c = 5000;
8             } else if (app.Maintenance_Service__c == true && app.Replacement_Parts__c == true) {
9                 app.Service_Amount__c = 7000;
10            } else if (app.Maintenance_Service__c == true) {
11                app.Service_Amount__c = 3000;
12            } else if (app.Repairs__c == true) {
13                app.Service_Amount__c = 3000;
14            } else if (app.Replacement_Parts__c == true) {
15                app.Service_Amount__c = 5000;
16            }
17        }
18    }
19 }
20
21
22

```

The status is 'Active' and the last modified by user was Sameena S. on 9/14/2025 at 6:19 AM.

## Created Triggers:

The screenshot shows the Salesforce Setup interface with the 'Apex Triggers' section selected. The page title is 'Apex Triggers'. A message box indicates 'Percent of Apex Used: 0.02%' and 'You are currently using 1,284 characters of Apex Code (excluding comments and @isTest annotated classes) in your organization, out of an allowed limit of 6,000,000 characters. Note that the amount in use includes both Apex Classes and Triggers defined in your organization.' Below this, there is a table for the 'AmountDistribution' trigger:

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	<input type="checkbox"/>

The status is 'Active' and the last modified by user was Sameena S. on 9/14/2025 at 6:21 AM.

The screenshot shows the Salesforce Setup Apex Triggers page. The trigger listed is 'AmountDistribution'.

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

**Apex Trigger Detail:**

```

1trigger AmountDistribution on Appointment {
2    if (Trigger.isBefore && (Trigger.isInsert || Trigger.isUpdate)) {
3        AmountDistributionHandler.amountDist(Trigger.new);
4    }
5}

```

## Created Public Groups:

The screenshot shows the Salesforce Setup Public Groups page. There is one group listed:

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

The screenshot shows the Salesforce Setup Roles page. On the left, there's a sidebar with a search bar and sections for Users and Public Groups. The main area displays the 'Sales person' role details. It includes fields for Label (sales person), This role reports to (Manager), Modified By (Sameena S.), Opportunity Access, Case Access, Role Name (sales\_person), and Sharing Groups. Below this is a table titled 'Users in sales person Role' showing two users assigned to the role: Rebekah Johnson and Elijah Smith.

## Custom Report Types:

The screenshot shows the Salesforce Setup Custom Report Type page for 'Service information'. The sidebar on the left has sections for Feature Settings, Analytics, Reports & Dashboards (with Report Types selected), Reporting Snapshots, Reports and Dashboards, and Settings. The main area shows 'Service information' details, including its Display Label (Service information), API Name (Service\_information), Description (Service information), Created By (Sameena S.), Store in Category (other), Deployment Status (Deployed), and Modified By (Sameena S.). It also shows object relationships with Customer Details (A) and various service records. Below this is a 'Fields' section listing Source Object (Customer Details, Appointments, Service records, Billing details and feedback) and Included Fields (9, 13, 10, 10 respectively).

## Dashboard:

The screenshot shows the Salesforce Lightning Home page. The top navigation bar includes links for Platform Login Creds, Tasks | Salesforce, Recent | Dashboards, Home | Salesforce, Lightning Usage | Sales, Flows | Salesforce, and Flows | Salesforce. The main content area displays the 'Recent' dashboard, which lists one item: 'Customer Review'. The dashboard details are as follows:

DASHBOARD	Dashboard Name	Description	Folder	Created By	Created On	Subscribed
Recent	Customer Review	Service Rating dashboard	Sameena S	9/16/2025, 11:51 PM		

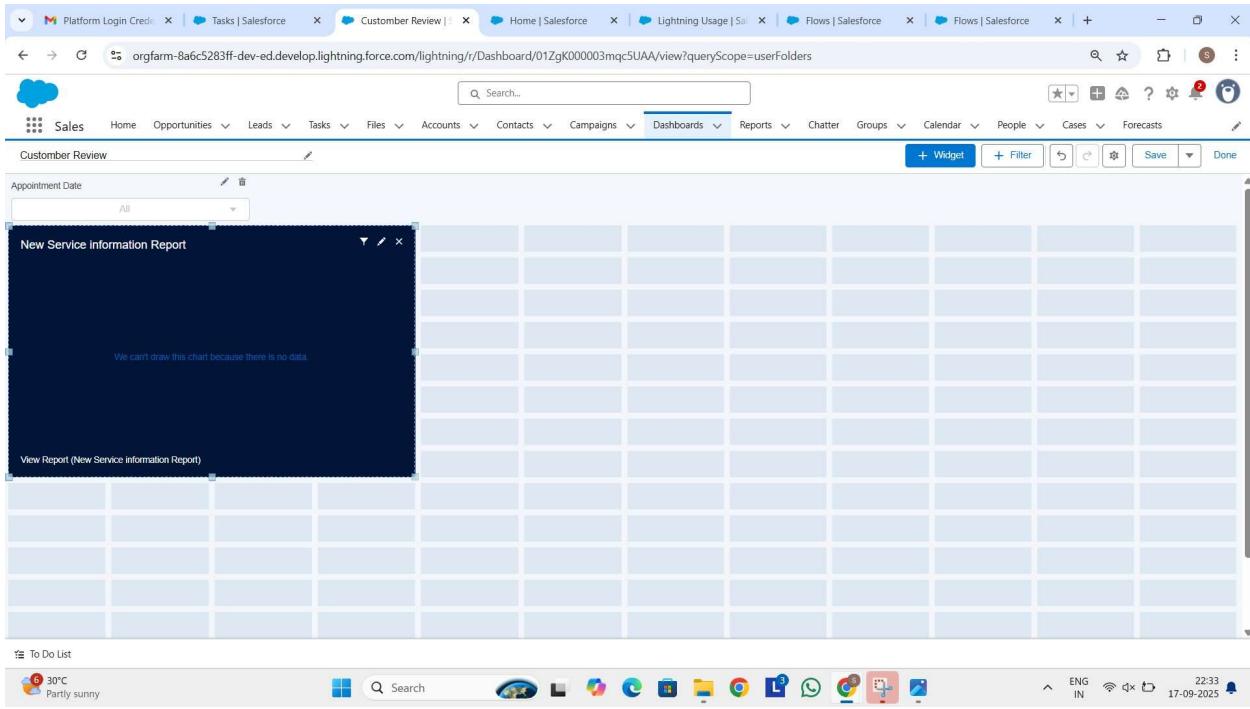
On the left sidebar, there are filters for 'Created by Me', 'Private Dashboards', 'All Dashboards', 'Folders', 'All Folders', 'Created by Me', 'Shared with Me', and 'Favorites', 'All Favorites'. The bottom status bar shows weather (30°C, Partly sunny), system icons, and the date/time (17-09-2025, 22:29).

The screenshot shows the 'Customer Review' dashboard. A modal window titled 'Add Filter' is open, prompting the user to 'Select Field to Filter By (Required)'. The selected field is 'Appointment Date'. The filter configuration is as follows:

- Operator:** equals
- Date Type:** Calendar (selected)
- Value:** Pick a date

Below the filter configuration, there is a 'Display Text' field containing 'New Filter Value'. At the bottom of the modal are 'Cancel' and 'Apply' buttons.

The background dashboard shows a chart titled 'New Service Information Report' with the message 'We can't draw this chart because there is no data.' Below the chart is a link 'View Report (New Service Information Report)'. The bottom status bar shows weather (30°C, Partly sunny), system icons, and the date/time (17-09-2025, 22:31).



## 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);  
}  
}
```