

Garage Management system

Project Title : Garage Management system

College : Kg College of arts and science

Team ID : NM2025TMID23604

Team Size : 4

Team Member Details:

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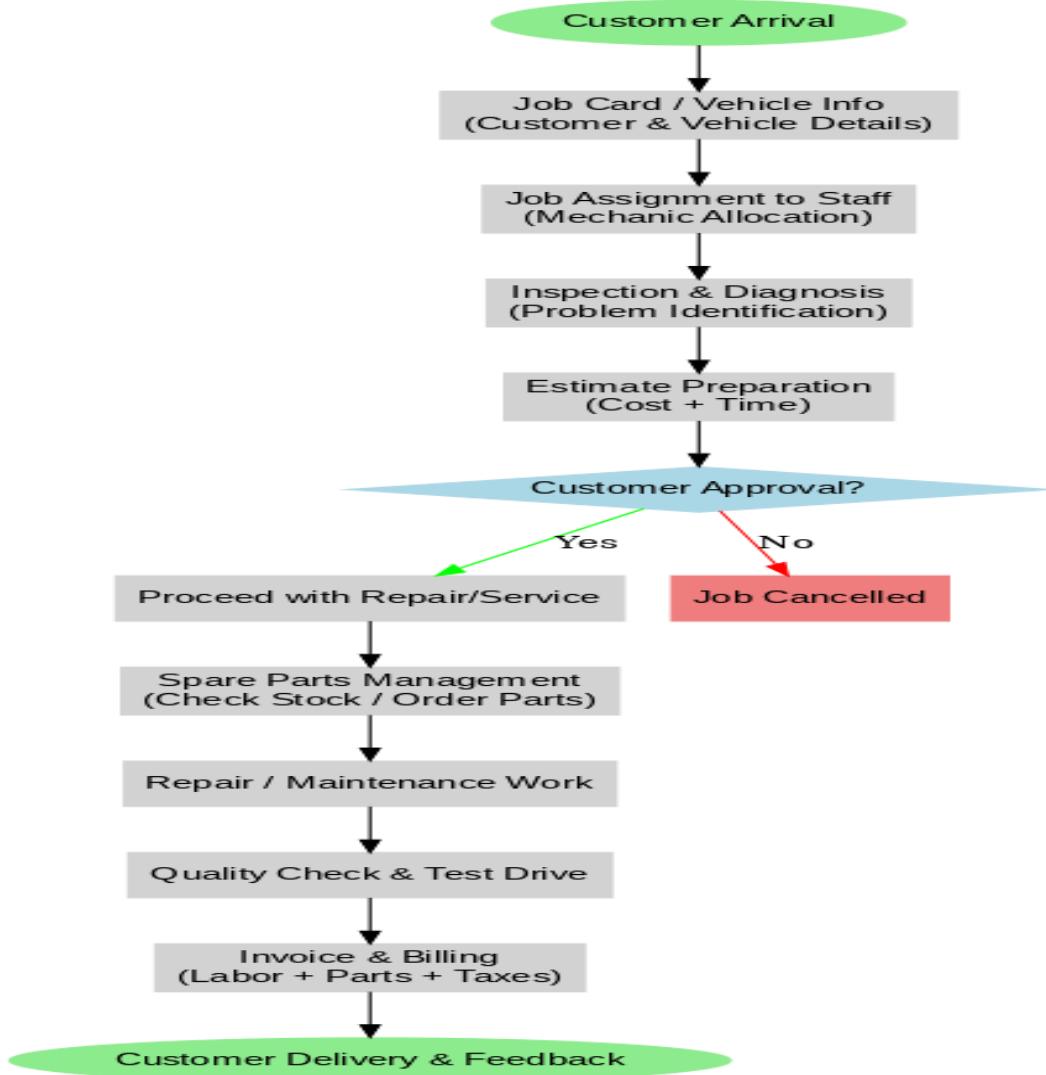
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INTRODUCTION:

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.



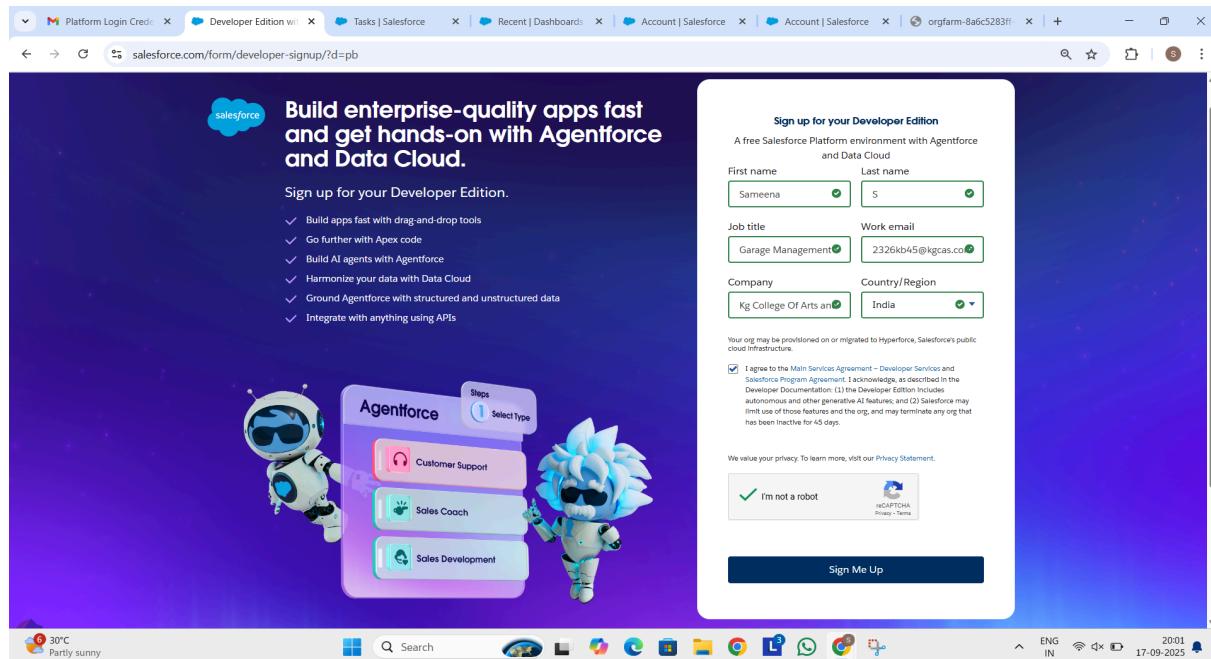
1.2 Purpose

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 interface. The top navigation bar includes links for Platform Login Credential, Tasks | Salesforce, Home | Salesforce, Object Manager | Salesforce, Recent | Dashboards, Account | Salesforce, and Home | Salesforce. The main area displays a table of objects with columns: NAME, TYPE, DESCRIPTION, LAST MODIFIED, and DEPLOYED. 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. A modal window titled 'Object Manager' is open, showing a list of recent records including Billing details and feedback, Service records, Appointment, Customer Details, and Customer Detail.

NAME	TYPE	DESCRIPTION	LAST MODIFIED	DEPLOYED
int	Standard Object			
ty	Standard Object			
Customer Detail	Standard Object			
Appointment	Custom Object		9/13/2025	
Appointment Category	Standard Object			
Appointment Invitation	Standard Object			
Appointment Invitee	Standard Object			
Appointment Topic Time Slot	Standard Object			
Approval Submission	Standard Object			
Approval Submission Detail	Standard Object			
Approval Work Item	Standard Object			
Asset	Standard Object			

Billing details and feedback:

The screenshot shows the 'Billing details and feedback' object details page in the Salesforce Object Manager. The top navigation bar and sidebar are identical to the previous screenshot. The main area displays a 'Details' section with fields for Description, API Name (Billing_details_and_feedback_c), Singular Label (Billing details and feedback), Plural Label (Billing details and feedback), and various checkboxes for Reports, Activities, Field History, Deployment Status, and Help Settings. The URL in the address bar is https://orgfarm-8a6c5283ff-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01gK000002EZ1Z/Details/view.

Service records:

The screenshot shows the Salesforce Setup interface for managing object settings. The top navigation bar includes tabs for Platform Login Credits, Tasks | Salesforce, Home | Salesforce, Service records | Sales, Recent | Dashboards, Account | Salesforce, and Home | Salesforce. The main title is "SETUP > OBJECT MANAGER" followed by "Service records".

The left sidebar lists various 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 "Details" tab is selected.

The right panel displays the "Service records" object details. The API Name is set to "Service_records__c". The singular label is "Service records" and the plural label is also "Service records". Under the "Details" section, checkboxes are checked for "Enable Reports" and "Track Activities". Other settings include "Track Field History" (checked), Deployment Status (set to "Deployed"), and Help Settings (link to "Standard salesforce.com Help Window").

The bottom status bar shows the weather as "30°C Partly sunny", system icons, and the date/time as "17-09-2025 21:23".

Appointment:

The screenshot shows the Salesforce Setup interface for managing object settings. The top navigation bar includes tabs for Platform Login Credits, Tasks | Salesforce, Home | Salesforce, Appointment | Sales, Recent | Dashboards, Account | Salesforce, and Home | Salesforce. The main title is "SETUP > OBJECT MANAGER" followed by "Appointment".

The left sidebar lists various 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 "Details" tab is selected.

The right panel displays the "Appointment" object details. The API Name is set to "Appointment__c". The singular label is "Appointment" and the plural label is "Appointments". Under the "Details" section, checkboxes are checked for "Enable Reports" and "Track Activities". Other settings include "Track Field History" (checked), Deployment Status (set to "Deployed"), and Help Settings (link to "Standard salesforce.com Help Window").

The bottom status bar shows the weather as "30°C Partly sunny", system icons, and the date/time as "17-09-2025 21:23".

Customer Details:

The screenshot shows the Salesforce Object Manager interface. The left sidebar lists various setup categories like Fields & Relationships, Page Layouts, and Buttons, with 'Fields & Relationships' currently selected. The main pane displays the 'Customer Details' object's details. The 'Details' tab is active, showing fields such as API Name (Customer_Details__c), Singular Label (Customer Details), Plural Label (Customer Details), and various track and deployment settings. The status bar at the bottom indicates it's 30°C and partly sunny.

Configured fields and relationship:

Billing details and feedback:

The screenshot shows the Salesforce Object Manager interface. The left sidebar lists various setup categories, with 'Fields & Relationships' selected. The main pane displays the 'Billing details and feedback' object's fields & relationships. A table lists fields like Name, CreatedBy, LastModifiedBy, Owner, Payment_Paid, Payment_Status, Rating_for_service, and Service_records, along with their data types (Auto Number, Lookup(User), etc.). The status bar at the bottom indicates it's 30°C and partly sunny.

Service records:

Platform Login Cred | Tasks | Salesforce | Home | Salesforce | Service records | Sales | Recent | Dashboards | Account | Salesforce | Home | Salesforce

orgfarm-8a6c5283ff-dev-ed.lightning.force.com/lightning/setup/ObjectManager/01IgK000002EYzx/FieldsAndRelationships/view

Search Setup

Setup Home Object Manager

SETUP > OBJECT MANAGER
Service records

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 Object Access Triggers

Fields & Relationships
8 Items, Sorted by Field Label

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		

Quick Find New Deleted Fields Field Dependencies Set History Tracking

30°C Partly sunny Search ENG IN 21:40 17-09-2025

Appointment:

Platform Login Cred | Tasks | Salesforce | Home | Salesforce | Appointment | Sales | Recent | Dashboards | Account | Salesforce | Home | Salesforce

orgfarm-8a6c5283ff-dev-ed.lightning.force.com/lightning/setup/ObjectManager/01IgK000002EYv7/FieldsAndRelationships/view

Search Setup

Setup Home Object Manager

SETUP > OBJECT MANAGER
Appointment

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 Object Access Triggers

Fields & Relationships
11 Items, Sorted by Field Label

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)		✓

Quick Find New Deleted Fields Field Dependencies Set History Tracking

30°C Partly sunny Search ENG IN 21:41 17-09-2025

Customer Details:

Customer Details

Fields & Relationships

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Customer Name	Name	Text(80)		✓
Gmail	Gmail__c	Email		
Last Modified By	LastModifiedById	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...	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 ac...	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	✓

Screenshot of the Salesforce Setup interface showing the "New Lightning App" configuration page.

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: Name your app...
- *Developer Name: Enter a developer name...
- Description: Enter a description...

App Branding

- Image: Upload
- Primary Color Hex Value: #0070D2

Org Theme Options

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

App Launcher Preview

Next

Lightning App Home Object Manager

Quick Find Search Setup

Setup Home Service Setup Commerce Setup Lead Service Setup Salesforce Analytics Database Updates Salesforce Marketing Lightning Usualizer Sales Cloud E MINISTR Users Data Email

PLATFORM Subscription Management Apps App Manager AppExchange Marketplace

ID	Name	Type	Description	Created Date	Last Modified Date	Status	Action
25	Service Console	LightningService	(Lightning Experience) Lets support agents work with multiple records ac...	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	▼

Screenshot of the Lightning App Builder interface showing the "App Details & Branding" configuration page.

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: Garage Management Application
- *Developer Name: Garage_Management_Application
- Description: Enter a description...

App Branding

- Image: Upload
- Primary Color Hex Value: #0070D2

Org Theme Options

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

App Launcher Preview

Garage Management Application

Lightning App Builder App Settings Pages Garage Management Application Help

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

30°C Partly sunny

Search

21:52 17-09-2025 ENG IN

The screenshot shows the Lightning App Builder interface with the 'Garage Management Application' selected. The left sidebar has 'App Settings' and 'App Options' expanded. Under 'App Options', 'Utility Items (Desktop Only)' is selected. The main content area displays 'App Options' settings, including 'Navigation and Form Factor' (Standard navigation selected), 'Setup and Personalization' (Setup selected), and 'App Personalization Settings' (checkboxes for disabling end-user customization and temporary tabs are unchecked). The status bar at the bottom shows a weather icon for 30°C and Partly sunny.

The screenshot shows the 'Utility Items (Desktop Only)' configuration screen. The 'Utility Items (Desktop Only)' section is highlighted in the sidebar. A modal window titled 'Utility Items (Desktop Only)' is open, showing a search bar and a list of standard utility items like Chatter Feed, Chatter Publisher, Connection Status, etc. Below the list is a note: 'that opens components in docked panels. Available only when the app is viewed in Lightning Experience on a desktop.' At the bottom of the modal, it says 'To enable the utility bar for this app, add a utility item.' The status bar at the bottom shows a weather icon for 30°C and Partly sunny.

Screenshot of the Lightning App Builder interface showing the "Navigation Items" configuration screen.

App Settings

Navigation Items

User Profiles

Navigation Items

Available Items

Selected Items

Toolbar: Platform Login, Tasks | Salesforce, Home | Salesforce, Lightning Usage, Garage Manager, Recent | Dashboard, Account | Salesforce, Home | Salesforce, +, Help, Search, Refresh, Save, Open, Close, Minimize, Maximize, Close All.

System Status Bar: 30°C, Partly sunny, ENG IN, 22:00, 17-09-2025, Bell icon.

Screenshot of the Lightning App Builder interface showing the "User Profiles" configuration screen.

App Settings

User Profiles

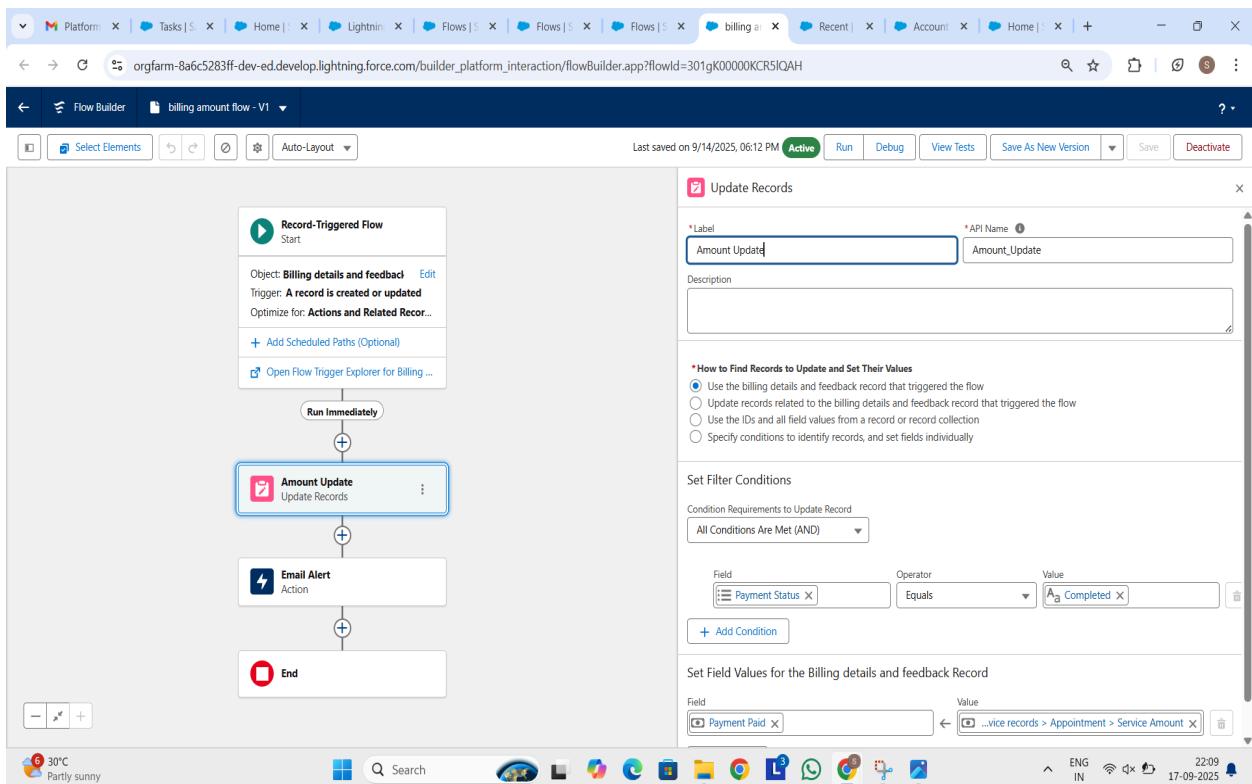
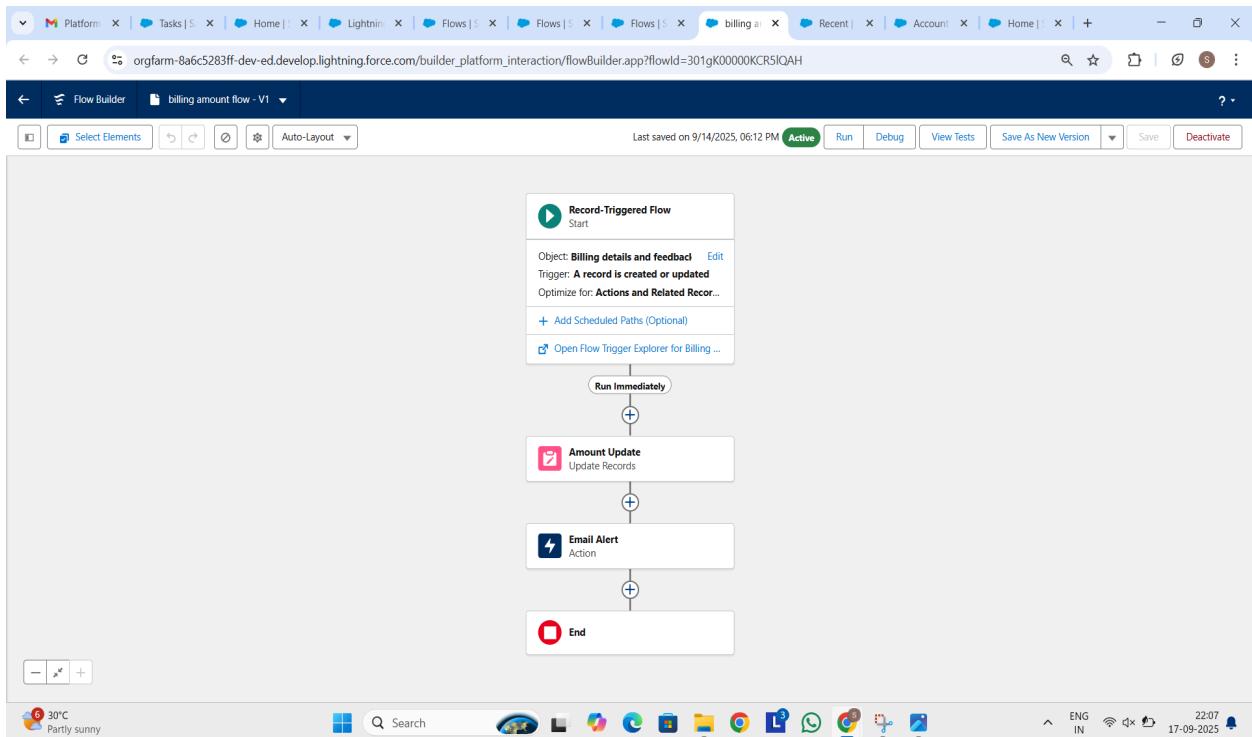
Available Profiles

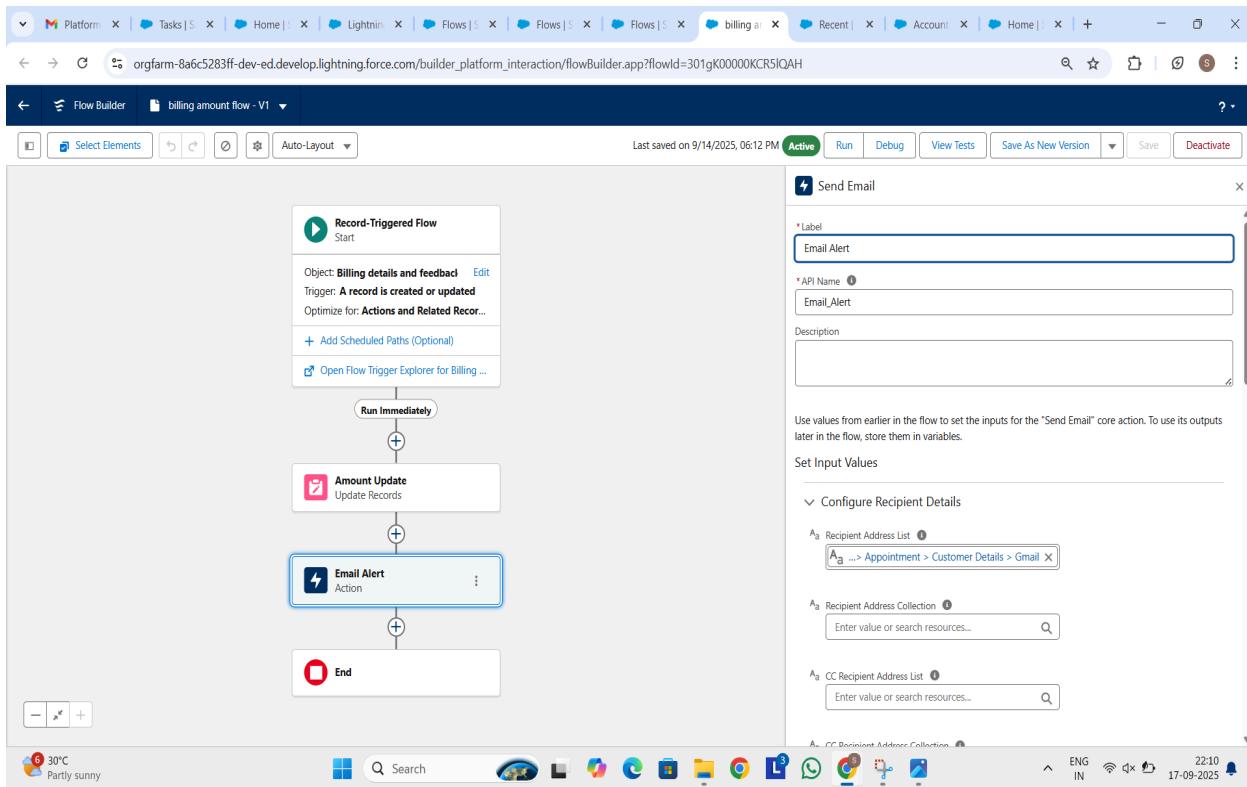
Selected Profiles

Toolbar: Platform Login, Tasks | Salesforce, Home | Salesforce, Lightning Usage, Garage Manager, Recent | Dashboard, Account | Salesforce, Home | Salesforce, +, Help, Search, Refresh, Save, Open, Close, Minimize, Maximize, Close All.

System Status Bar: 30°C, Partly sunny, ENG IN, 22:01, 17-09-2025, Bell icon.

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	Amount	64.0	Active	1,069	Sameena_S	9/14/2025, 6:19 AM	<input type="checkbox"/>

The screenshot shows the Salesforce Setup interface with the 'Apex Classes' page selected. The sidebar on the left has sections for Email, Custom Code, Environments, and a search bar. The main area displays the 'AmountDistributionHandler' class detail. The class is active and has 0% code coverage. The code body contains logic for calculating service amounts based on maintenance and repair flags.

```

1 public class AmountDistributionHandler {
2
3     public static void amountDistListAppointment_c(List<Appointment> c) {
4         for (Appointment__c app : c) {
5             if (app.Maintenance_Service_c == true && app.Repairs_c == true && app.Replacement_Parts_c == true) {
6                 app.Service_Amount__c = 1000;
7             } else if (app.Maintenance_Service_c == true && app.Repairs_c == true && app.Replacement_Parts_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 = 300;
13            } else if (app.Maintenance_Service_c == true) {
14                app.Service_Amount__c = 100;
15            } else if (app.Repairs_c == true) {
16                app.Service_Amount__c = 300;
17            } else if (app.Replacement_Parts_c == true) {
18                app.Service_Amount__c = 500;
19            }
20        }
21    }
22 }

```

Created Triggers:

The screenshot shows the Salesforce Setup interface with the 'Apex Triggers' page selected. The sidebar on the left has sections for Email, Custom Code, Environments, and a search bar. The main area displays the 'AmountDistribution' trigger. It is listed in the table with details such as Action, Name, Namespace Prefix, sObject Type, API Version, Status, Size Without Comments, Last Modified By, and Has Trace Flags.

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 screenshot shows the Apex Triggers setup page in Salesforce. The left sidebar has a search bar and sections for Email, Custom Code, Apex Classes, Apex Settings, Apex Test Execution, Apex Test History, and Apex Triggers, which is currently selected. The main content area displays the Apex Trigger Detail for 'AmountDistribution'. It shows the trigger's name, code coverage (0%), created by Sameena S. on 9/14/2025 at 6:02 AM, and last modified by Sameena S. on 9/14/2025 at 6:21 AM. The trigger code is listed as:

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

The status is Active. The system tray at the bottom shows a weather icon (30°C, Partly sunny), a search bar, and various application icons.

Created Public Groups:

The screenshot shows the Public Groups setup page in Salesforce. The left sidebar has a search bar and sections for Users and Public Groups, with 'Public Groups' currently selected. The main content area displays the Public Groups list. A message states: 'A public group is a set of users. It can contain individual users, other groups, the users in a particular role or territory, or the users in a role or territory plus all of the users below that role or territory in the hierarchy.' Below this, there is a table with one row:

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

The system tray at the bottom shows a weather icon (30°C, Partly sunny), a search bar, and various application icons.

Screenshot of the Salesforce Lightning 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	sales_person
Modified By	Sameena S, 9/14/2025, 12:40 AM	Sharing Groups	Role, Role and Internal Subordinates
Opportunity Access	Users in this role can edit all opportunities associated with accounts that they own, regardless of who owns the opportunities		
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	sam37004@gmail.com	✓
Edit	Elijah Smith	esmit	samjusami@gmail.com	✓

Users in sales person Role Help

javascipt:srcUp(%27%2F00EgK000004AJIR%3FisDtp%3Dp1%27);

30°C Partly sunny

Custom Report Types:

Screenshot of the Salesforce Lightning setup interface showing the 'CustomReportTypeLightning' 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

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)

Fields

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

javascipt:srcUp(%27%2F00EgK000004AJIR%3FisDtp%3Dp1%27);

30°C Partly sunny

Dashboard:

The screenshot shows the Salesforce Lightning Experience interface. The top navigation bar includes tabs for Platform Login Creds, Tasks | Salesforce, Recent | Dashboards, Home | Salesforce, Lightning Usage | Sales, Flows | Salesforce, and Flows | Salesforce. The main content area is titled "Dashboards" and "Recent". A table lists one dashboard entry:

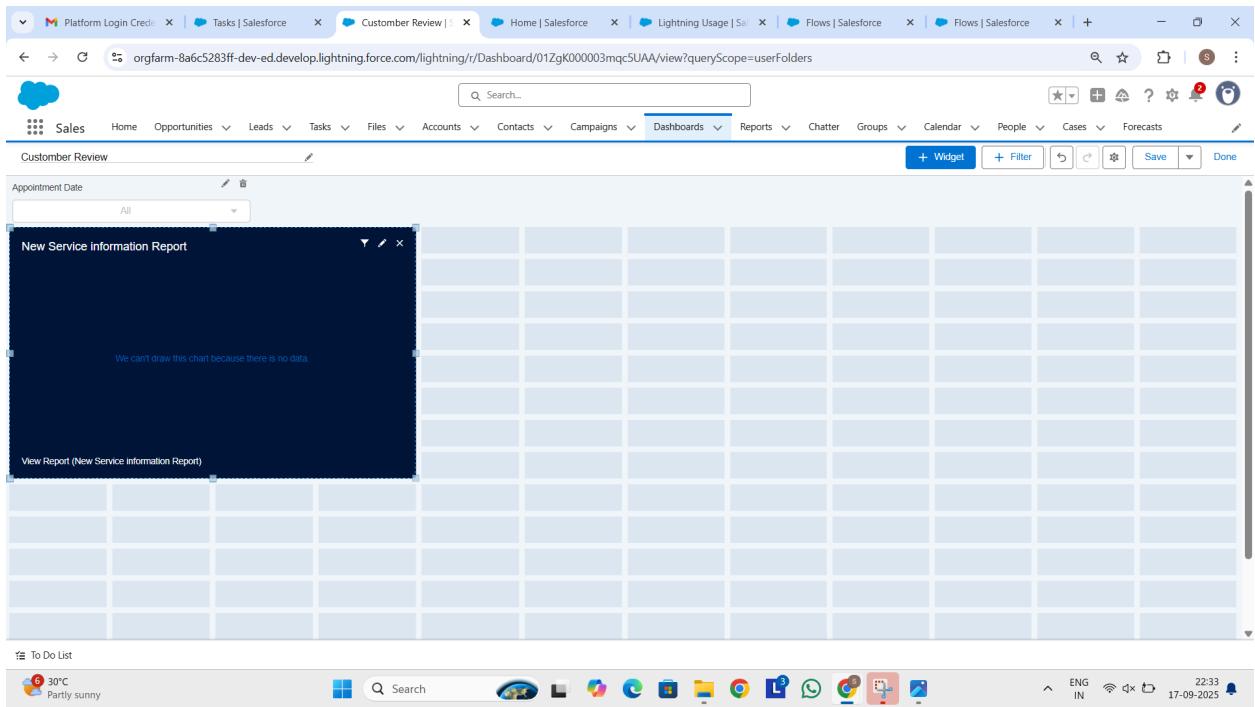
DASHBOARDS	Dashboard Name	Description	Folder	Created By	Created On	Subscribed
Recent	Customer Review	Service Rating dashboard	Sameena S	9/16/2025, 11:51 PM		

The sidebar on the left contains links for Sales, Home, Opportunities, Leads, Tasks, Files, Accounts, Contacts, Campaigns, Dashboards, Reports, Chatter, Groups, Calendar, People, Cases, Forecasts, and To Do List. 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 Salesforce Lightning Experience interface. The top navigation bar includes tabs for Platform Login Creds, Tasks | Salesforce, Customer Review |, 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 titled "Add Filter" is open, prompting the user to "Select Field to Filter By (Required)". The "Appointment Date" field is selected. The filter configuration shows:

- Operator: equals
- Date Type: Calendar
- Value: Pick a date
- Display Name: Appointment Date
- Filter Values (0): 1 New Filter Value
- Display Text: New Filter Value

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);
    }
}
```