

GARAGE MANAGEMENT SYSTEM

COLLEGE NAME: L.R.G.Government Arts College for Women-Tirupur.

COLLEGE CODE: bru07

TEAM ID:NM2025TMID28045

TEAM MEMBERS:-

TEAM LEADER NAME: YUVARAJI C

EMAIL:yuvachandru2006@gmail.com

TEAM MEMBER1: DEVAYANI E

EMAIL:e.devayani0064@gmail.com

TEAM MEMBER2: DHARSHINI SHREE K

EMAIL:rr6709922@gmail.com

TEAM MEMBER3: DHARSINIPRIYA G

EMAIL:dharshinipriya88811@gmail.com

TEAM MEMBER4: DIVYADHARSHINI S

EMAIL:dividivya978@gmail.com

1. INTRODUCTION:-

1.1 Project Overview:-

The Garage management System is a software application designed to manage and streamline the day-to-day operations of a garage or vehicle service center. It helps automate processes such as customer details, appointments, service records, billing and reports.

1.2 Purpose:-

The main purpose of the project is to:

- ❖ Track vehicle services and spare parts inventory.
- ❖ Maintain accurate records of customers and their vehicles.
- ❖ Simplify job scheduling and mechanic assignments.
- ❖ Generate quick and error-free bills and invoices.
- ❖ Automate and streamline the operations of a vehicle service center or garage.
- ❖ Provide useful reports for management decisions.



2. DEVELOPMENT PHASE:-

Creating Developer Account:

The project was developed on salesforce developer org, created via:

[https://developer.salesforce.com/signup.](https://developer.salesforce.com/signup)

- Created objects: Customer Details, Appointment, Service record,Billing Details.

The screenshot shows the Salesforce Setup interface with the following details:

Object Manager - Appointment

Details (Left sidebar)

- Fields & Relationships
- Page Layouts
- Lightning Record Pages
- Buttons, Links, and Actions
- Compact Layouts
- Field Sets
- Object Limits
- Record Types
- Related Lookup Filters

Details (Main pane)

Description:

API Name: **Appointment_c**

Custom:

Singular Label: **Appointment**

Plural Label: **Appointments**

Actions (Top right): Edit, Delete

System Information (Bottom right): ENG IN, 17:08, 06-09-2025

The screenshot shows the Salesforce Setup interface with the following details:

Object Manager - Service records

Details (Left sidebar)

- Fields & Relationships
- Page Layouts
- Lightning Record Pages
- Buttons, Links, and Actions
- Compact Layouts
- Field Sets
- Object Limits
- Record Types
- Related Lookup Filters

Details (Main pane)

Description:

API Name: **Service_records_c**

Custom:

Singular Label: **Service records**

Plural Label: **Service records**

Actions (Top right): Edit, Delete

System Information (Bottom right): ENG IN, 17:09, 06-09-2025

The screenshot shows the Salesforce Setup interface under the 'Object Manager'. A sidebar on the left lists various setup categories like Fields & Relationships, Page Layouts, Lightning Record Pages, etc. The main panel displays the 'Billing details and feedback' object's details. The 'Details' tab is selected, showing fields such as API Name (Billing_details_and_feedback__c), Singular Label (Billing details and feedback), Plural Label (Billing details and feedback), and various configuration options like Enable Reports, Track Activities, and Deployment Status (Deployed). Buttons for Edit and Delete are at the top right.

- Create the Tabs for the objects, they are “Customer Details, Appointment, Service Record and Billing Details and feedback”.

The screenshot shows the 'Custom Tabs' page in the Salesforce Setup. The left sidebar has a search bar and links for User Interface, Rename Tabs and Labels, and Tabs. The main content area is titled 'Custom Tabs' with a sub-section 'Custom Object Tabs'. It lists four tabs: Appointments (Bank icon), Billing details and feedback (Airplane icon), Customer Details (Bell icon), and Service records (Apple icon). Below this is a 'Web Tabs' section which is currently empty. The status bar at the bottom indicates it's 17:20 on 06-09-2025.

Action	Label	Tab Style	Description
Edit Del	Appointments		Bank
Edit Del	Billing details and feedback		Airplane
Edit Del	Customer Details		Bell
Edit Del	Service records		Apple

- Lightings App: Developed Lighting App with relevant tabs.

The screenshot shows the 'Lightning Experience App Manager' page in the Salesforce Setup. The left sidebar has 'App Manager' selected under 'Apps'. The main area displays a table of available apps, sorted by name. The table includes columns for App Name, Developer Name, Description, Last Modified, App Type, and Version. Apps listed include All Tabs, Analytics Studio, App Launcher, Approvals, Automation, Bolt Solutions, Community, Content, and Data Cloud. A message in the sidebar says 'Didn't find what you're looking for? Try using Global Search.'

App Name	Developer Name	Description	Last Modified	App Type	Version
All Tabs	AllTabSet	Build CRM Analytics dashboards and apps	8/25/2025, 1:20 A...	Classic	
Analytics Studio	Insights	Build CRM Analytics dashboards and apps	8/25/2025, 1:20 A...	Classic	
App Launcher	AppLauncher	App Launcher tabs	8/25/2025, 1:20 A...	Classic	
Approvals	Approvals	Manage approvals and approval flows	8/25/2025, 1:20 A...	Lightning	
Automation	FlowsApp	Automate business processes and repetitive tasks.	8/25/2025, 1:27 A...	Lightning	
Bolt Solutions	LightningBolt	Discover and manage business solutions designed for your industry.	8/25/2025, 1:20 A...	Lightning	
Community	Community	Salesforce CRM Communities	8/25/2025, 1:20 A...	Classic	
Content	Content	Salesforce CRM Content	8/25/2025, 1:20 A...	Classic	
Data Cloud	Audience360	Build a thorough and complete understanding of your customers.	8/25/2025, 1:20 A...	Lightning	

Fields:

- Create a fields for the customer detail objects

The screenshot shows the 'Customer Detail' object's 'Fields & Relationships' page in the Salesforce Setup. The left sidebar lists various object settings like Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, and Related Lookup Filters. The main area displays a table of fields, with 'Customer Details Name' being the most prominent. The table includes columns for Field Label, Field Name, Data Type, Controlling Field, and Indexed status. Buttons at the top right include Quick Find, New, Deleted Fields, Field Dependencies, and Set History Tracking.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedBy	Lookup(User)		
Customer Details 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		

- The fields of lookup, check box, date, currency, text, picklist and formula fields in service record objects also created.

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	CreatedBy	Lookup(User)		
Customer Detail	Customer_Detail__c	Lookup(Customer Detail)		
Last Modified By	LastModifiedBy	Lookup(User)		
Maintenance service	Maintenance_service__c	Checkbox		

Fields & Relationships
11 Items, Sorted by Field Label

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Last Modified By	LastModifiedBy	Lookup(User)		
Maintenance service	Maintenance_service__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)		

Service records

Fields & Relationships
8 Items, Sorted by Field Label

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

Billing details and feedback

Fields & Relationships
8 Items, Sorted by Field Label

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Billing details and feedback Name	Name	Auto Number		✓
Created By	CreatedById	Lookup(User)		
Last Modified By	LastModifiedById	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)		

- Create a validation rules is appointment object and Billing details and feedback.

The screenshot shows the Salesforce Setup interface for the Appointment object. The left sidebar lists various setup categories: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, and Related Lookup Filters. The main content area is titled "Validation Rules" and displays one item: "Vehicle". The table has columns: RULE NAME, ERROR LOCATION, ERROR MESSAGE, ACTIVE, and MODIFIED BY. The data row shows: Vehicle, Vehicle number plate, Please enter valid number, ✓, and DEVAYANI E, 8/30/2025, 3:40 AM. A "New" button is located in the top right corner of the table header.

RULE NAME	ERROR LOCATION	ERROR MESSAGE	ACTIVE	MODIFIED BY
Vehicle	Vehicle number plate	Please enter valid number	✓	DEVAYANI E, 8/30/2025, 3:40 AM

The screenshot shows the Salesforce Setup interface with the following details:

- Page Header:** Recently Viewed | Customer De, Billing details and feedback | Sales, - Student
- Search Bar:** Search Setup
- Navigation:** Setup, Home, Object Manager
- Section:** SETUP > OBJECT MANAGER
- Section Title:** Billing details and feedback
- Left Sidebar:** Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters.
- Table:** Validation Rules (1 Items, Sorted by Rule Name)

RULE NAME	ERROR LOCATION	ERROR MESSAGE	ACTIVE	MODIFIED BY
rating_should_be_less_than_5	Rating for service	rating should be from 1 to 5	✓	DEVAYANI E, 8/30/2025, 3:44 AM
- Bottom:** Standard browser controls, system status (ENG IN), and timestamp (06-09-2025 18:12).

- The customer detail object is create the matching rule and duplicate rule.

The screenshot shows the Salesforce Setup interface with the following details:

- Page Header:** Recently Viewed | Customer De, Matching Rules | Salesforce, - Student
- Search Bar:** Search Setup
- Navigation:** Setup, Home, Object Manager
- Search Bar:** Q matching
- Section:** SETUP
- Section Title:** Matching Rules
- Section:** All Matching Rules
- Text:** Didn't find what you're looking for? Try using Global Search.
- Table:** Matching Rules (View: All Matching Rules)

Action	Rule Name	Object	Status	Description	Last Modified Date	Last Modified By
Del Deactivate	Matching customer details	Customer Detail	Active		8/30/2025	E.d
Deactivate	Standard Account Matching Rule	Account	Active	Matching rule for account records. More info	8/25/2025	OEPIC
Deactivate	Standard Contact Matching Rule	Contact	Active	Matching rule for contact records. More info	8/25/2025	OEPIC
Deactivate	Standard Lead Matching Rule	Lead	Active	Matching rule for lead records. More info	8/25/2025	OEPIC
- Bottom:** Standard browser controls, system status (ENG IN), and timestamp (06-09-2025 18:20).

The screenshot shows the Salesforce Setup interface with the 'Duplicate Rules' page open. The left sidebar has 'Data' expanded, with 'Duplicate Management' selected. Under 'Duplicate Management', 'Duplicate Rules' is highlighted. The main content area is titled 'All Duplicate Rules' and contains a section 'What Are Duplicate Rules?' with a link '[Expand]'. Below this is a table listing four duplicate rules:

Rule Name	Description	Object	Matching Rule	Active	Last Modified By	Last Modified Date
Customer Detail duplicate		Customer Detail	Matching customer details	✓	e.d	8/30/2025
Standard Account Duplicate Rule	Identify accounts that duplicate other accounts.	Account	Standard Account Matching Rule	✓	QEPIC	8/25/2025
Standard Contact Duplicate Rule	Identify contacts that duplicate other contacts and leads.	Contact	Standard Lead Matching Rule Standard Contact Matching Rule	✓	QEPIC	8/25/2025
Standard Lead Duplicate Rule	Identify leads that duplicate other leads and contacts.	Lead	Standard Lead Matching Rule Standard Contact Matching	✓	QEPIC	8/25/2025

At the bottom right of the page, there are status icons for battery, signal, and time (18:22). The footer shows the date 06-09-2025.

- Create the profiles.

The screenshot shows the Salesforce Setup interface with the 'Profiles' page open. The left sidebar has 'Users' expanded, with 'Profiles' selected. The main content area is titled 'Profiles' and contains a section 'All Profiles' with links '[Edit | Delete | Create New View]'. Below this is a table listing four profiles:

Action	Profile Name	User License	Custom
<input type="checkbox"/> Edit Del [...]	Manager	Salesforce	✓
<input type="checkbox"/> Edit Clone	Marketing User	Salesforce	□
<input type="checkbox"/> Edit Clone	Minimum Access - API Only Integrations	Salesforce Integration	□
<input type="checkbox"/> Edit Clone	Minimum Access - Salesforce	Salesforce	□

At the bottom right of the page, there are status icons for battery, signal, and time (18:29). The footer shows the date 06-09-2025.

The screenshot shows the Salesforce Setup interface with the title 'Profiles'. The left sidebar shows 'Users' and 'Profiles' is selected. The main area displays a table of profiles with columns for Action, Profile Name, User License, and Status. The table includes rows for Salesperson, Salesforce API Only System Integrations, Silver Partner User, Solution Manager, Standard Platform User, Standard User, and System Administrator. A note at the bottom says ' Didn't find what you're looking for? Try using Global Search.'

Action	Profile Name	User License	Status
Edit Del ...	sales_person	Salesforce Platform	✓
Edit Del ...	Salesforce API Only System Integrations	Salesforce Integration	✓
Edit Clone	Silver Partner User	Silver Partner	□
Edit Clone	Solution Manager	Salesforce	□
Edit Clone	Standard Platform User	Salesforce Platform	□
Edit Clone	Standard User	Salesforce	□
Edit Clone	System Administrator	Salesforce	□

- Roles are created.

The screenshot shows the Salesforce Setup interface with the title 'Roles'. The left sidebar shows 'Users' and 'Roles' is selected. The main area displays a hierarchical tree of roles under 'L.R.G.Government Arts college for women'. The tree includes nodes for CEO, CFO, COO, Manager, sales_person, SVP.Customer Service & Support, Customer Support, International, and Customer Support, North America. A note at the bottom says ' Didn't find what you're looking for? Try using Global Search.'

- It is create the users.

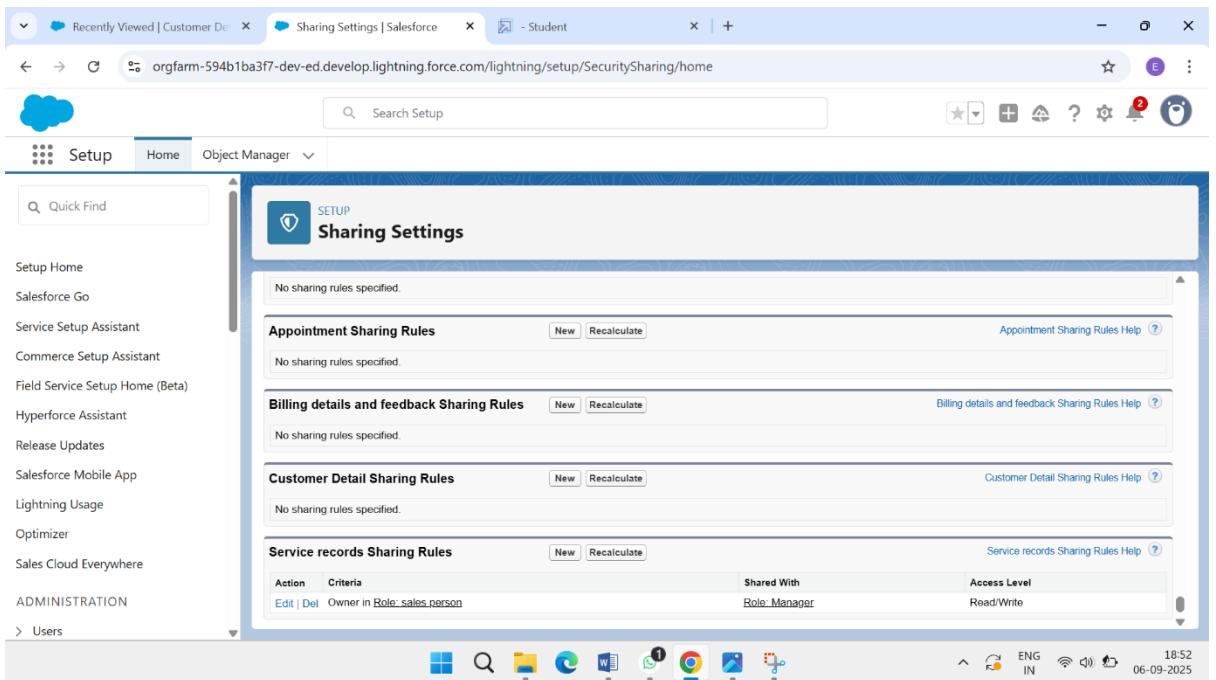
Users

Action	Full Name	Alias	Username	Role	Active	Profile
<input type="checkbox"/>	Chatter Expert	Chatter	chatty.00dg00000a00wjuab.g7de53omid5@chatter.salesforce.com		<input checked="" type="checkbox"/>	Chatter Free User
<input type="checkbox"/>	E._DEVAYANI	e.d	e.devayani0064404@agentforce.com		<input checked="" type="checkbox"/>	System Administrator
<input type="checkbox"/>	E._Devayani	de	deva@blue.txt		<input checked="" type="checkbox"/>	sales person
<input type="checkbox"/>	EPIC_OrgFarm	OEPIC	epic.a96a458be80f@orgfarm.salesforce.com		<input checked="" type="checkbox"/>	System Administrator
<input type="checkbox"/>	Mikaelson_Niklaus	rniika	niklaus@mikaelson12.com	Manager	<input checked="" type="checkbox"/>	Manager
<input type="checkbox"/>	Mikaelson_Niklaus	rniika	niklaus@mikaelson321.com		<input checked="" type="checkbox"/>	sales person
<input type="checkbox"/>	User_Integration	integ	integration@00dg00000a00wjuab.com		<input checked="" type="checkbox"/>	Analytics Cloud Integration User
<input type="checkbox"/>	User_Security	sec	insightssecurity@00dg00000a00wjuab.com		<input checked="" type="checkbox"/>	Analytics Cloud Security User

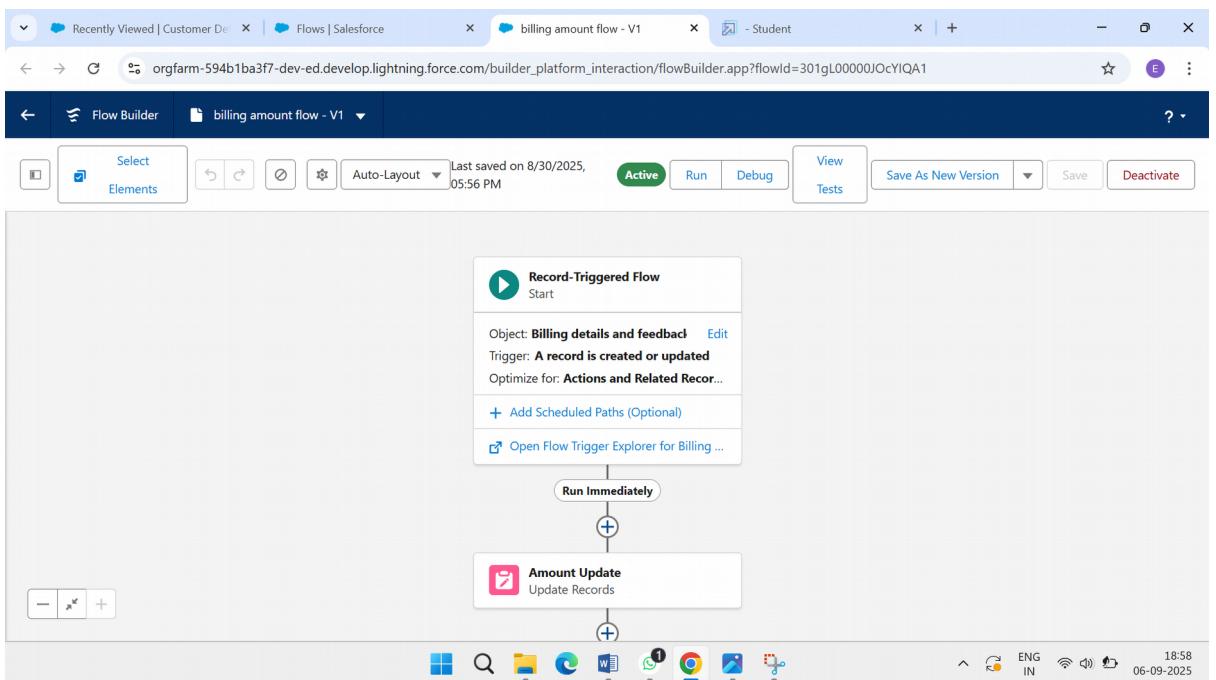
Public Groups

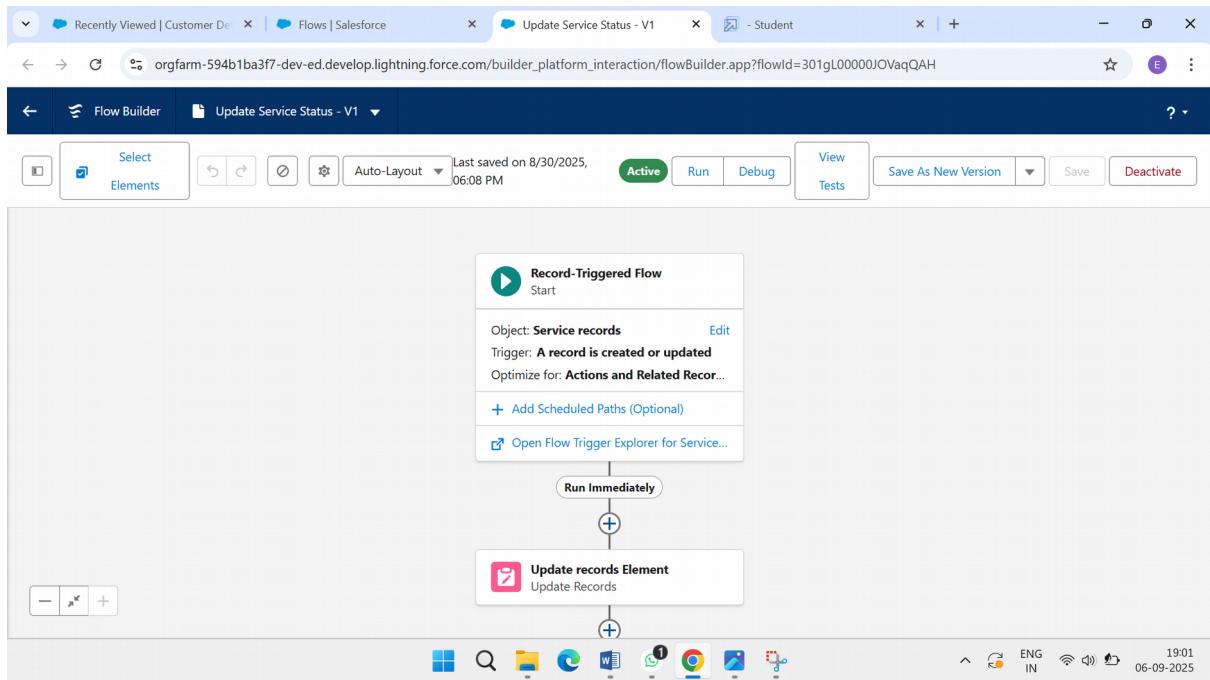
Action	Label	Group Name	Created By	Created Date
<input type="checkbox"/>	<input type="checkbox"/>	sales_team	E._DEVAYANI	8/30/2025, 4:39 AM

- To create sharing settings.



- Flows.





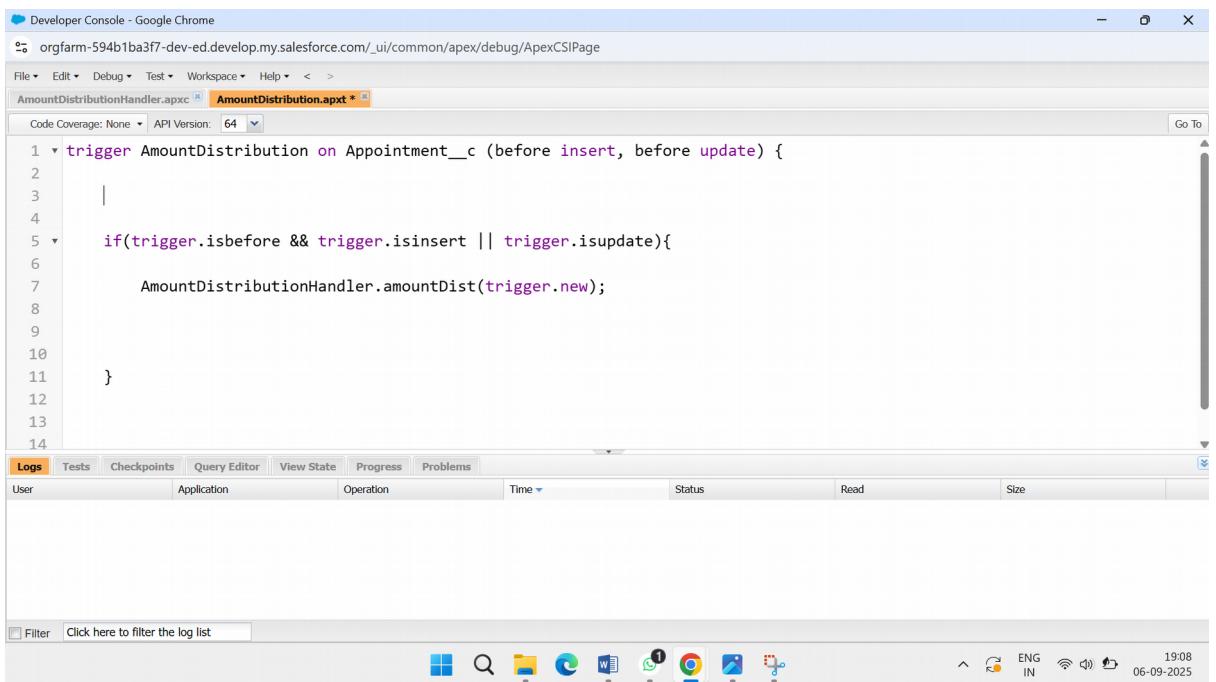
- Schedule class:
Create an Apex Class.

The screenshot shows the Salesforce Developer Console interface. The title bar reads "Developer Console - Google Chrome". The URL is "orgfarm-594b1ba3f7-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage". The menu bar includes File, Edit, Debug, Test, Workspace, Help, and a back/forward button. Below the menu is a tab bar with "AmountDistributionHandler.apxc" (highlighted in orange) and "AmountDistribution.apxt". A dropdown for "Code Coverage" is set to "None", and the "API Version" is set to "64". On the right, there's a "Go To" search field and a vertical scrollbar. The main area displays the Apex code for "AmountDistributionHandler":

```
1 public class AmountDistributionHandler {  
2  
3  
4  
5     public static void amountDist(list<Appointment__c> listApp){  
6  
7         list<Service_records__c> serList = new list <Service_records__c>();  
8  
9  
10        for(Appointment__c app : listApp){  
11            if(app.Maintenance_service__c == true && app.Repairs__c == true && app.Replacement_Parts__c == true){  
12                serList.add(new Service_records__c());  
13            }  
14        }  
15        insert serList;  
16    }  
17}
```

Below the code editor is a navigation bar with tabs: Logs (highlighted in orange), Tests, Checkpoints, Query Editor, View State, Progress, and Problems. The logs table has columns: User, Application, Operation, Time (dropdown), Status, Read, and Size. The status column shows "Success" for all rows. At the bottom, there's a "Filter" input and a "Click here to filter the log list" link. The system tray at the bottom right shows network connectivity, battery level, and the date "06-09-2025".

Schedule Apex Trigger.

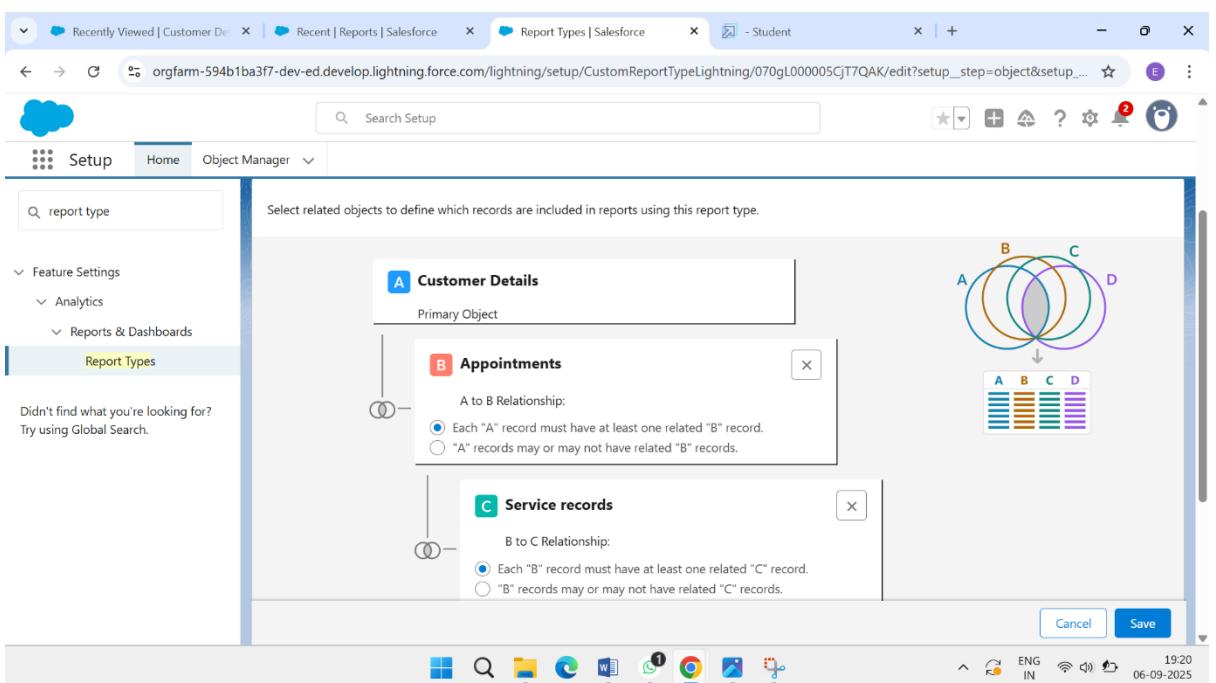


The screenshot shows the Salesforce Developer Console in Google Chrome. The URL is orgfarm-594b1ba3f7-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage. The tab is AmountDistribution.apxt. The code editor contains the following Apex trigger:

```
trigger AmountDistribution on Appointment__c (before insert, before update) {
    if(trigger.isbefore && trigger.isinsert || trigger.isupdate){
        AmountDistributionHandler.amountDist(trigger.new);
    }
}
```

The code coverage is Non- and the API Version is 64. Below the code editor is a log viewer with tabs for Logs, Tests, Checkpoints, Query Editor, View State, Progress, and Problems. The Logs tab is selected, showing no entries. The status bar at the bottom right shows ENG IN and the date 06-09-2025.

- To create the report folders.



The screenshot shows the Salesforce Setup interface in a web browser. The URL is orgfarm-594b1ba3f7-dev-ed.develop.lightning.force.com/lightning/setup/CustomReportTypeLightning/070gL000005CjT7QAK/edit?setup_step=object&setup_id=00U000000000000000. The page is titled "Report Types".

The left sidebar shows "Feature Settings" expanded, with "Analytics" and "Reports & Dashboards" collapsed. "Report Types" is selected. A search bar at the top has "report type" typed into it.

The main area displays the "Customer Details" report type configuration. It includes sections for "Appointments" and "Service records".

Relationship settings for "Appointments" are shown:

- A to B Relationship:
 - Each "A" record must have at least one related "B" record.
 - "A" records may or may not have related "B" records.

Relationship settings for "Service records" are shown:

- B to C Relationship:
 - Each "B" record must have at least one related "C" record.
 - "B" records may or may not have related "C" records.

On the right side, there is a diagram illustrating relationships between objects A, B, C, and D using overlapping circles and a grid. The "Save" button is visible at the bottom right of the configuration pane.

The screenshot shows a Microsoft Dynamics 365 Business Central interface. At the top, there's a navigation bar with icons for Home, Search, and various system functions. Below the navigation bar, the title "Garage Management..." is visible, followed by dropdown menus for Customer Details, Appointments, Service records, Reports, and More.

The main content area is titled "Report: Service information" and "New Service information Report". It displays a summary table with two rows:

Total Records	Total Payment paid
1	0

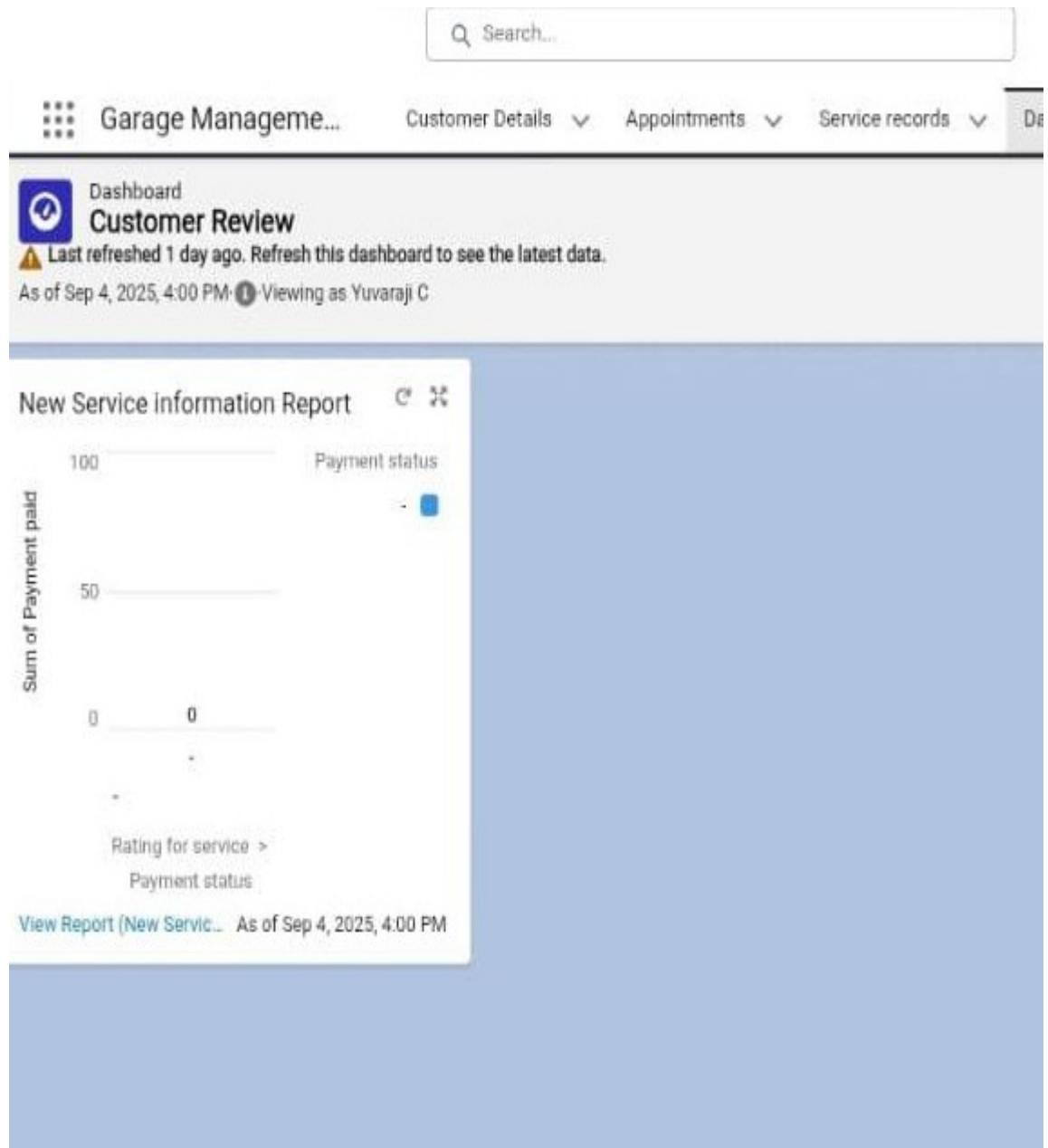
Below this summary is a chart titled "Sum of Payment paid" with a scale from 0 to 90. A single data point is plotted at 0.

On the left side of the chart, there's a vertical filter bar labeled "Rating for service" with a dropdown arrow.

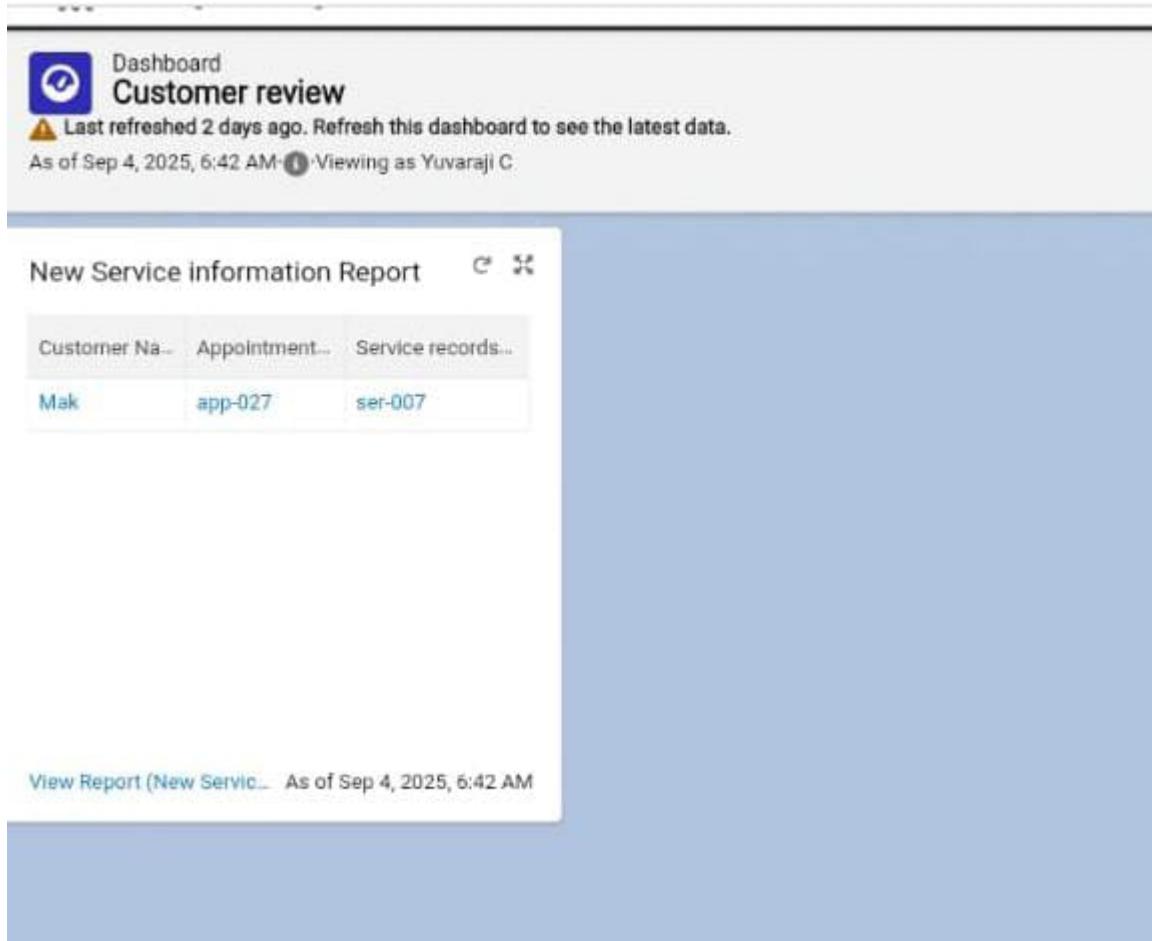
At the bottom, there's a detailed table view with columns: Rating for service, Payment status, Customer Name, Appointment Date, Service Status, and Payment paid. The table shows one record for "Mak" with an appointment date of "8/31/2025" and a completed status. The payment amount is listed as "0".

Rating for service	Payment status	Customer Name	Appointment Date	Service Status	Payment paid
- (1)	- (1)	Mak	8/31/2025	Completed	0
		Subtotal			0
		Subtotal			0
		Total (1)			0

- The Dashboards is created.



- The Garage Management System is used the user adoption.
- Create a Customer detail, Appointment, Service record and Billing details and feedback.



3. ADVANTAGES AND DISADVANTAGES:-

ADVANTAGES:-

- ✓ Stores customer details, vehicle and service record in one place without errors.
- ✓ Provides service history, billing, and updates quickly to customers.
- ✓ Time saving.

- ✓ Efficiency improvement.
- ✓ Ensures safe storage of records compared to traditional registers.
- ✓ Helps management make better decisions using service and revenue reports.
- ✓ Inventory are controls.

DISADVANTAGES:-

- ✓ Garage operations may slow down if there are technical issues or downtime.
- ✓ If not properly secured, customer and vehicle data could be exposed.
- ✓ Initial cost.
- ✓ Technical knowledge required.
- ✓ Maintenance.
- ✓ Customer satisfaction.
- ✓ Regular software updates.
- ✓ Technical support are required.

4. FUNCTIONAL AND PERFORMANCE TESTING:-

- ❖ Functional testing makes sure the system features work correctly.
- ❖ Performance testing makes sure the system works efficiently under real-world usage and load.

CONCLUSION:-

The Garage Management System provides an efficient way to manage day-to-day garage operations by automating tasks such as Customer details, Appointment, Service record and Billing details and feedback. The system ensures that garage operations are faster, more reliable and customer-friendly, though it requires proper setup, training and maintenance.

APPENDIX:-

```
public class AmountDistributionHandler {  
  
    public static void amountDist(list<Appointment__c> listApp){  
        list<Service_records__c> serList = new list <Service_records__c>();  
  
        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;  
            }  
        }  
    }  
}
```

```
trigger AmountDistribution on Appointment__c (before insert, before update) {  
  
    if(trigger.isbefore && trigger.isinsert || trigger.isupdate){  
        AmountDistributionHandler.amountDist(trigger.new);  
    }  
}
```