

Garage Management System

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College Code : bru3j

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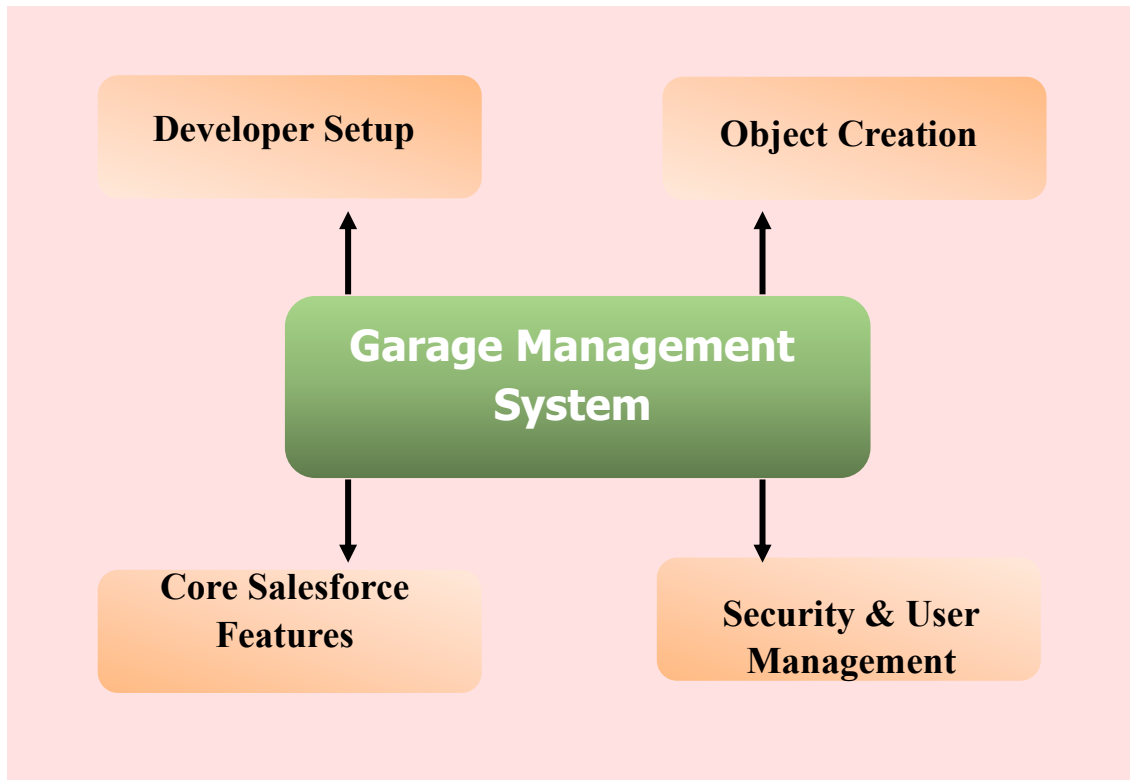
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INTRODUCTION

Project Overview :

The Garage Management System (GMS) is a Salesforce-based solution that streamlines garage operations by managing customers, vehicles, services, and billing in one platform. It improves efficiency, reduces manual errors, and enhances the overall service experience.




Purpose :

The purpose of the project is to enhance the efficiency of automotive repair facilities by automating key operations, improving service quality, and simplifying customer interactions. It aims to provide a seamless platform that supports staff productivity, ensures accurate service tracking, and fosters long-term customer satisfaction and loyalty.

DEVELOPMENT PHASE

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First name Last name

Subitsh A

Job title Work email

Developer subitsha1803@gmail

Company Country/Region

Tiruppur Kumaran Co India


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- Created objects : Customer Details, Appointment, Service records, Billing details and feedback



Search Setup

Setup

Home

Object Manager

SETUP > OBJECT MANAGER

Customer Details

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Restriction Rules

Scoping Rules

Object Access

Trainers

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

Help Settings

Standard salesforce.com Help Window

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Details

Description

API Name

Appointment_c

Custom

✓

Singular Label

Appointment

Plural Label

Appointments

Enable Reports

✓

Track Activities

Track Field History

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Description

API Name

Service_records_c

Custom

✓

Singular Label

Service records

Plural Label

Service records

Enable Reports

✓

Track Activities

Track Field History

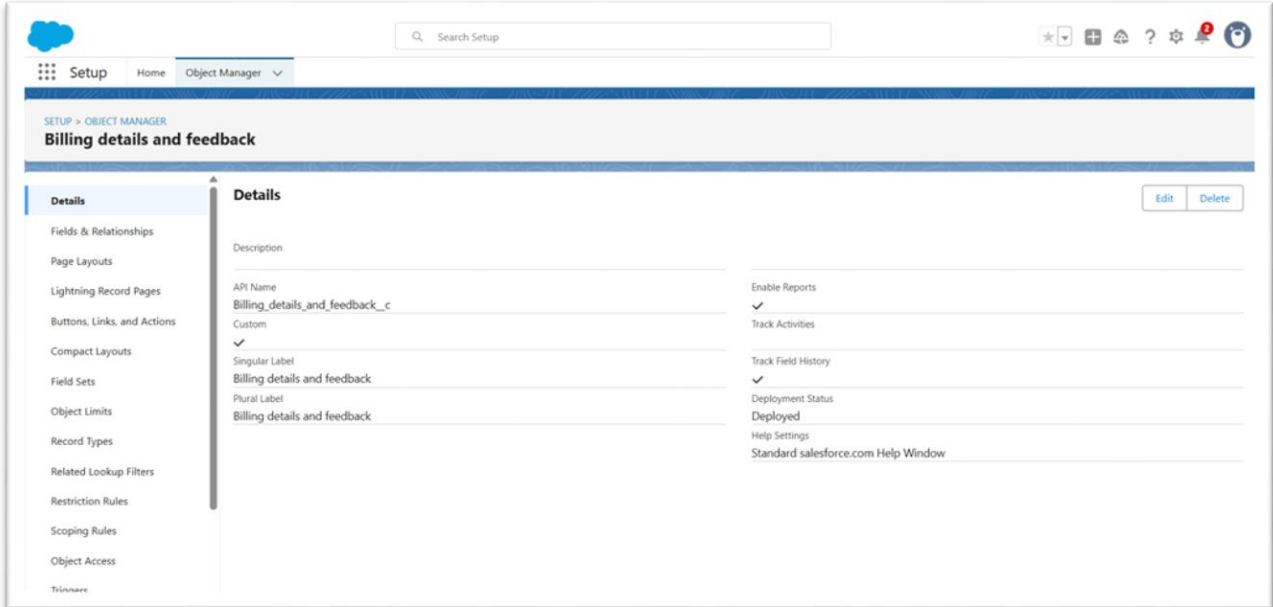
✓

Deployment Status

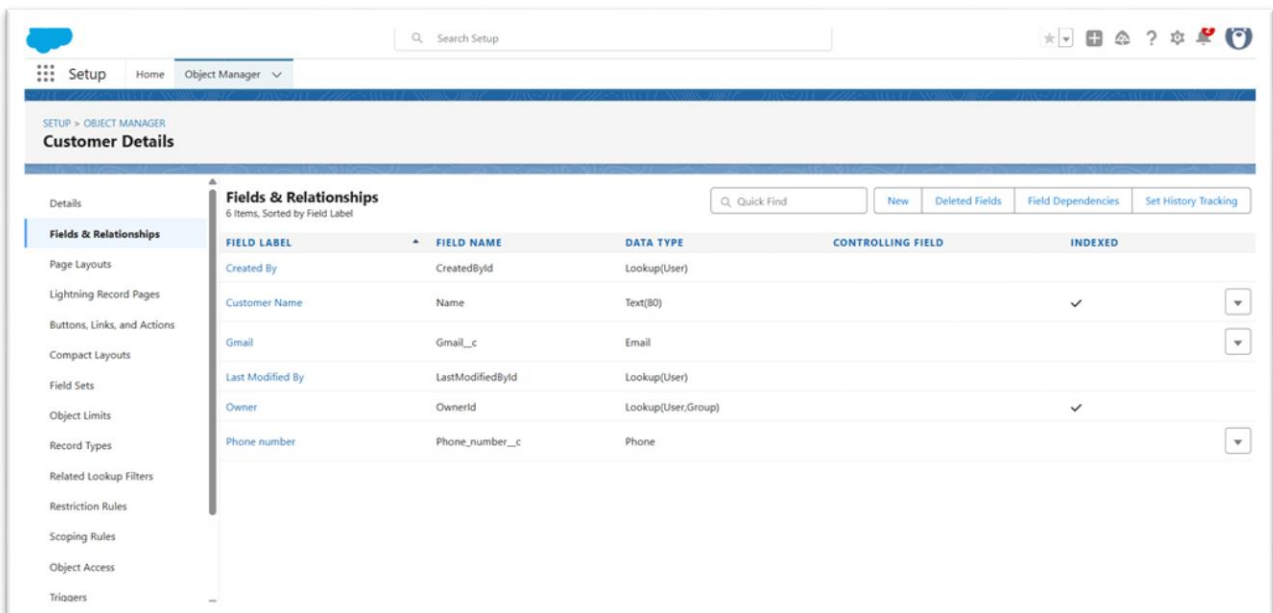
Deployed

Help Settings

Standard salesforce.com Help Window



- Configured fields and relationships



Setup

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Triggers

Fields & Relationships

11 Items, Sorted by Field Label

Quick Find

New

Deleted Fields

Field Dependencies

Set History Tracking

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	Checkbox		
Owner	OwnerId	Lookup(User,Group)		✓
Repairs	Repairs__c	Checkbox		
Replacement Parts	Replacement_Parts__c	Checkbox		

Setup

Home

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Service records

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Fields & Relationships

8 Items, Sorted by Field Label

Quick Find

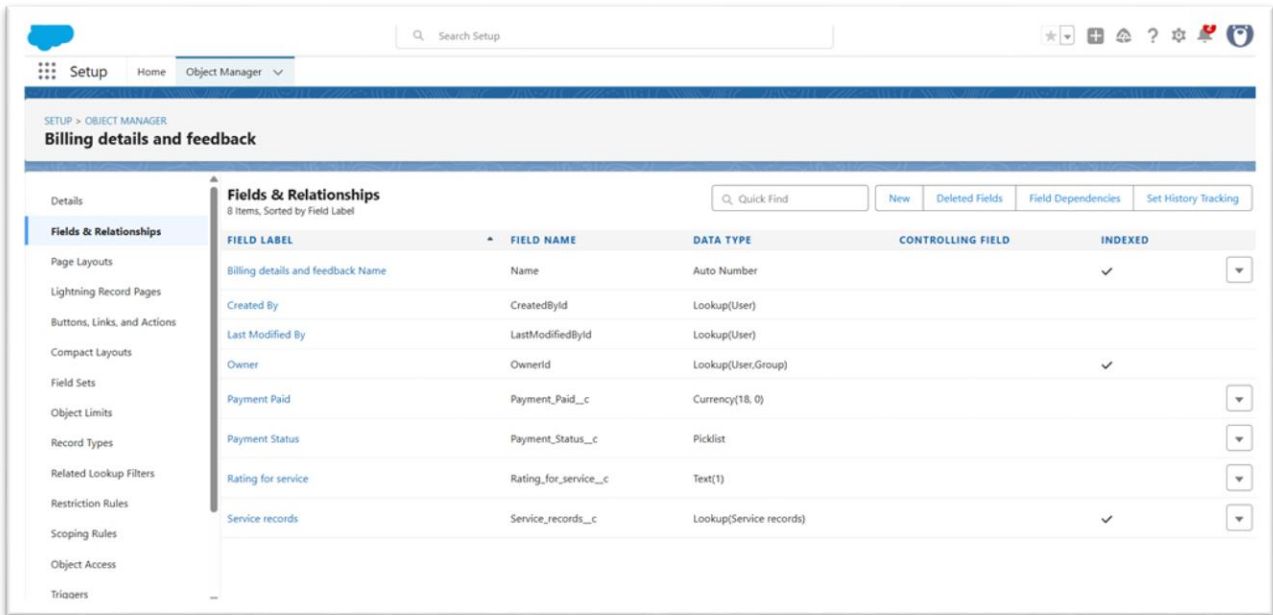
New

Deleted Fields

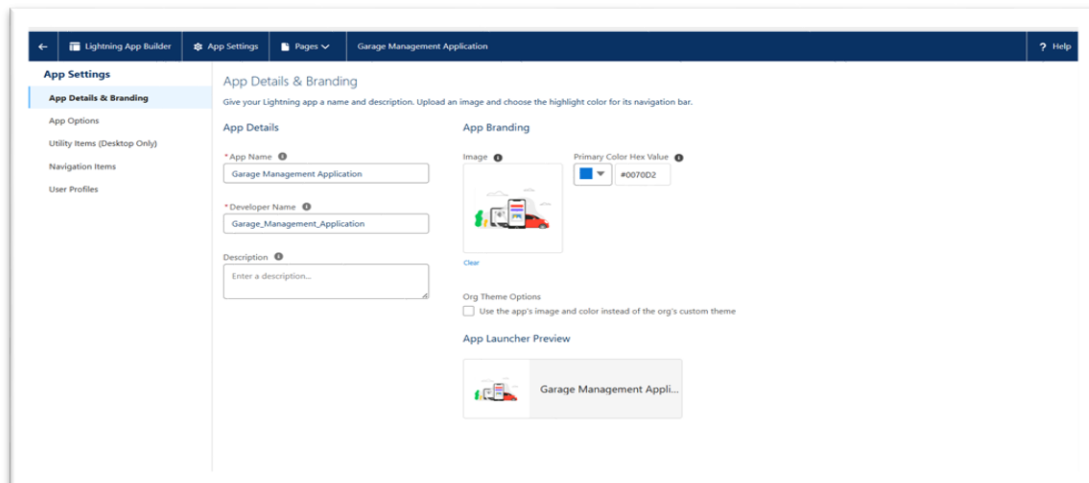
Field Dependencies

Set History Tracking

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		



- Developed Lightning App with relevant tabs



← Lightning App Builder

⚙ App Settings

📄 Pages ▾

Garage Management Application

ⓘ Help

App Settings

App Details & Branding

App Options

Utility Items (Desktop Only)

Navigation Items

User Profiles

Navigation Items

Choose the items to include in the app, and arrange the order in which they appear. Users can personalize the navigation to add or move items, but users can't remove or rename the items that you add. Some navigation items are available only for phone or only for desktop. These items are dropped from the navigation bar when the app is viewed in a format that the item doesn't support.

Available Items

☐ Create ▾

Type to filter list...

Accounts

Activation Targets

Activations

All Sites

Alternative Payment Methods

Analytics

App Launcher

Appointment Categories

Appointment Invitations

Approval Requests

...

Selected Items

Customer Details

Appointments

Service records

Billing details and feedback

Reports

Dashboards

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Garage Management Application

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Navigation Items

User Profiles

User Profiles

Choose the user profiles that can access this app.

Available Profiles

Type to filter list...

Analytics Cloud Integration User

Analytics Cloud Security User

Anypoint Integration

Authenticated Website

Authenticated Website

B2B Reordering Portal Buyer Profile

Contract Manager

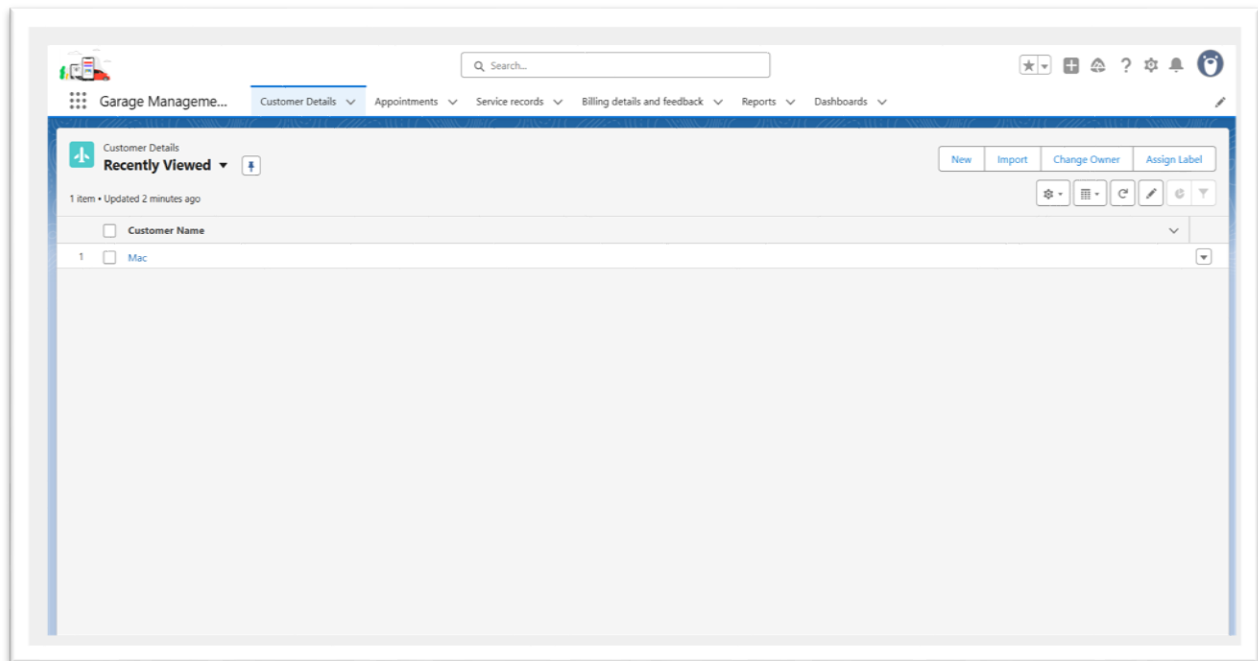
Custom: Marketing Profile

Custom: Sales Profile

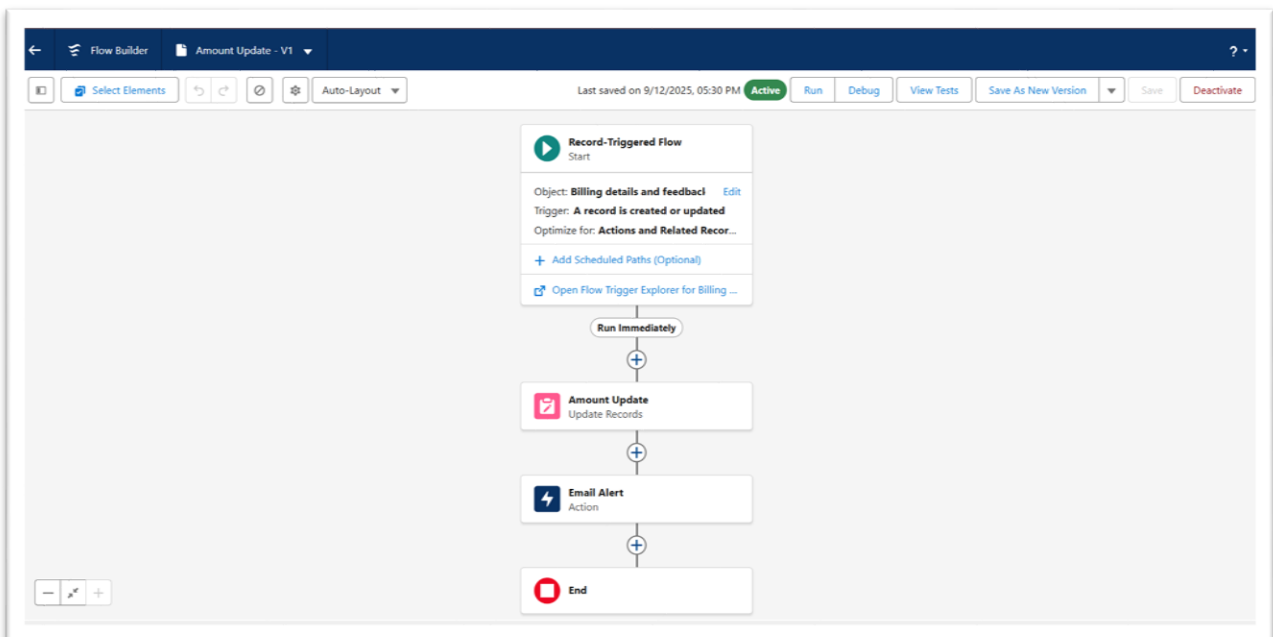
...

Selected Profiles

System Administrator



- Implemented Flows



- To create a validation rule to an Appointment Object

The screenshot shows the Salesforce Setup interface. The left sidebar contains a navigation menu with options like Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Restriction Rules, Scoping Rules, Object Access, and Triggers. The main content area is titled "Appointment Validation Rule" and includes a description: "Define a validation rule by specifying an error condition and a corresponding error message. The error condition is written as a Boolean formula expression that returns true or false. When the formula expression returns true, the save will be aborted and the error message will be displayed. The user can correct the error and try again."

The "Validation Rule Edit" section contains the following fields:

- Rule Name:** Vehicle
- Active:** ☒
- Description:** (empty text box)

The "Error Condition Formula" section includes an example: "Example: `Discount_Percent__c > 30`". Below this, it states: "Display an error if Discount is more than 30%. If this formula expression is true, display the text defined in the Error Message area."

The formula editor shows the formula: `NOT (REGEX(Vehicle_number_plate__c , "[A-Z]{2}[0-9]{2}[A-Z]{2}[0-9]{4}"))`. A "Functions" dropdown menu is open, showing categories like ABS, ACOS, ADDMONTHS, AND, ASCII, and ASIN. The "Insert Selected Function" button is visible.

On the right side, there is a "Quick Tips" section with a link to "Operators & Functions".

The screenshot shows the Salesforce Setup interface for the "Appointment Validation Rule". The left sidebar is the same as in the previous screenshot. The main content area is titled "Appointment Validation Rule" and includes a "Back to Appointment" link.

The "Validation Rule Detail" section contains the following information:

- Rule Name:** Vehicle
- Active:** ☒
- Error Condition Formula:** `NOT(REGEX(Vehicle_number_plate__c , "[A-Z]{2}[0-9]{2}[A-Z]{2}[0-9]{4}"))`
- Error Message:** Please enter valid number
- Error Location:** Vehicle number plate
- Description:** (empty text box)
- Created By:** Subitha A. 8/29/2025, 9:46 AM
- Modified By:** Subitha A. 8/29/2025, 9:46 AM

Buttons for "Edit" and "Clone" are available for the Rule Name, Error Condition Formula, Error Message, and Created By fields.

- To create a validation rule to a Billing details and Feedback Object

Setup Home Object Manager

Search Setup

SETUP > OBJECT MANAGER

Billing details and feedback

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

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Object Access

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Billing details and feedback Validation Rule

Define a validation rule by specifying an error condition and a corresponding error message. The error condition is written as a Boolean formula expression that returns true or false. When the formula expression returns true, the save will be aborted and the error message will be displayed. The user can correct the error and try again.

Validation Rule Edit Save Save & New Cancel

Rule Name

Active ☒

Description

Error Condition Formula [More Examples...](#)

Example: `Discount_Percent_c > 0.30`
 Display an error if Discount is more than 30%
 If this formula expression is **true**, display the text defined in the Error Message area

`NOT(REGEX(Rating_for_service__c , "[1-5]{1}"))`

Functions
 -- All Function Categories --
 ABS
 ACOS
 ADDMONTHS
 AND
 ASCII
 ASIN

 ABS(number)
 Returns the absolute value of a number, a number without its sign

Quick Tips
 • Operators & Functions

[Help for this Page](#)

Setup Home Object Manager

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SETUP > OBJECT MANAGER

Billing details and feedback

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Billing details and feedback Validation Rule

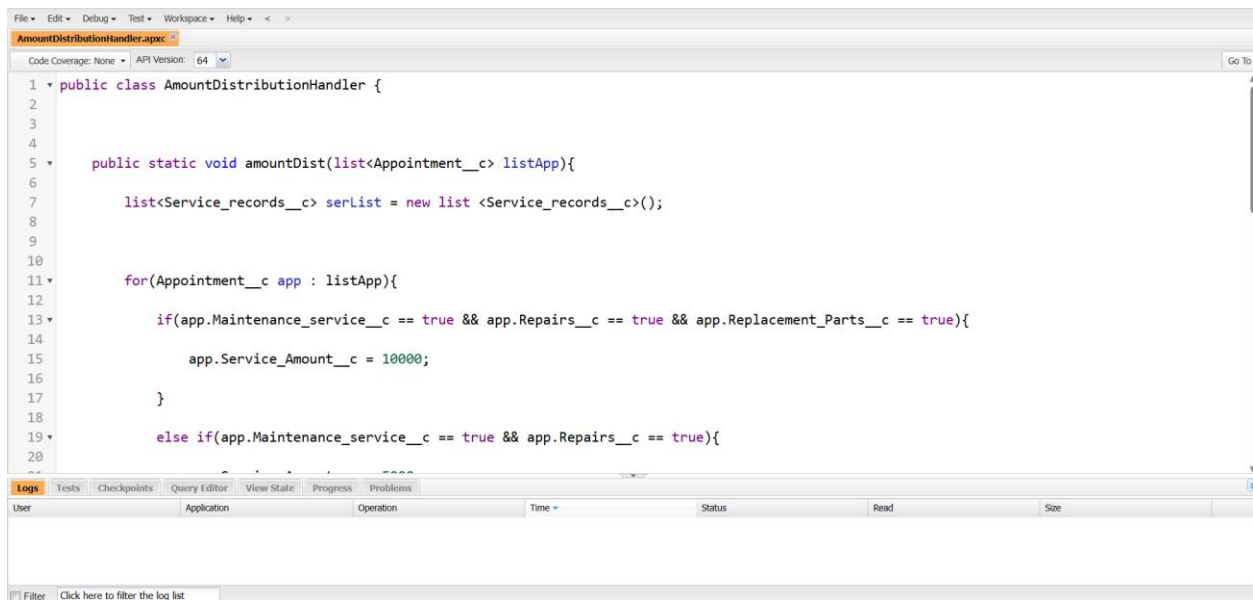
[Back to Billing details and feedback](#)

Validation Rule Detail Edit Clone

Rule Name	rating_should_be_less_than_5	Active	<input checked="" type="checkbox"/>
Error Condition Formula	NOT(REGEX(Rating_for_service__c , "[1-5]{1}"))		
Error Message	rating should be from 1 to 5	Error Location	Rating for service
Description			
Created By	Subisha A. 8/29/2025, 9:49 AM	Modified By	Subisha A. 8/29/2025, 9:49 AM

Edit Clone

- Created an Apex Handler class



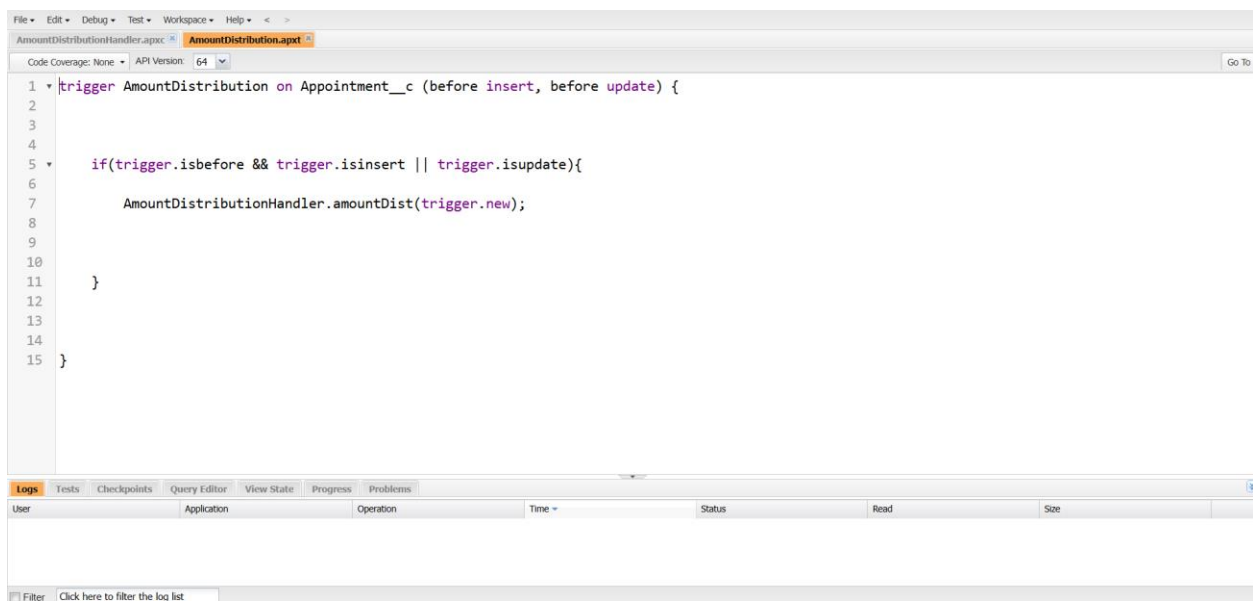
```
1 public class AmountDistributionHandler {
2
3
4
5 public static void amountDist(list<Appointment__c> listApp){
6
7     list<Service_records__c> serList = new list <Service_records__c>();
8
9
10
11     for(Appointment__c app : listApp){
12
13         if(app.Maintenance_service__c == true && app.Repairs__c == true && app.Replacement_Parts__c == true){
14
15             app.Service_Amount__c = 10000;
16
17         }
18
19         else if(app.Maintenance_service__c == true && app.Repairs__c == true){
20
21             app.Service_Amount__c = 5000;
22
23         }
24     }
25 }
```

Logs Tests Checkpoints Query Editor View State Progress Problems

User	Application	Operation	Time	Status	Read	Size
------	-------------	-----------	------	--------	------	------

Filter Click here to filter the log list

- Added Apex trigger



```
1 trigger AmountDistribution on Appointment__c (before insert, before update) {
2
3
4
5     if(trigger.isbefore && trigger.isinsert || trigger.isupdate){
6
7         AmountDistributionHandler.amountDist(trigger.new);
8
9
10
11     }
12
13
14
15 }
```

Logs Tests Checkpoints Query Editor View State Progress Problems

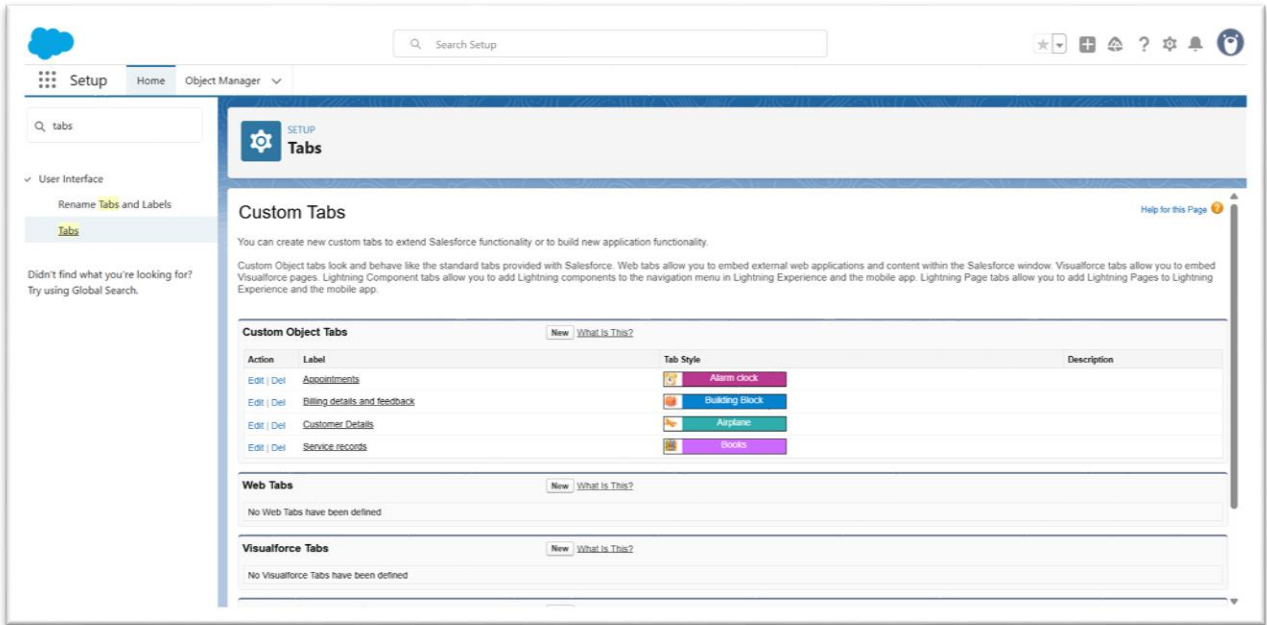
User	Application	Operation	Time	Status	Read	Size
------	-------------	-----------	------	--------	------	------

Filter Click here to filter the log list

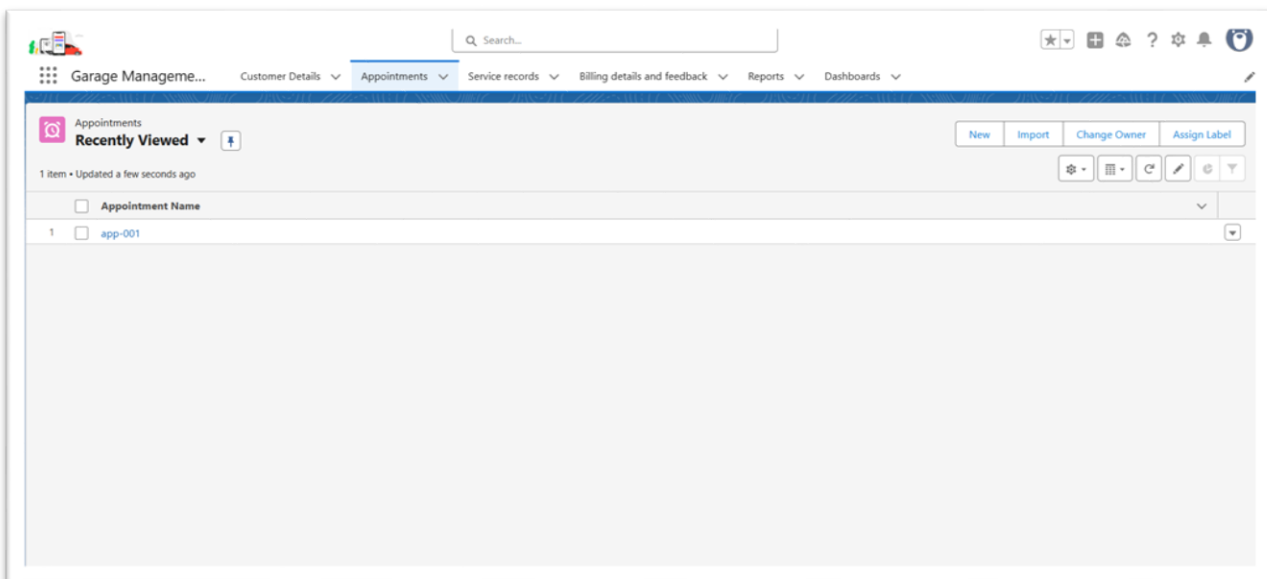
RESULTS

Output Screenshots

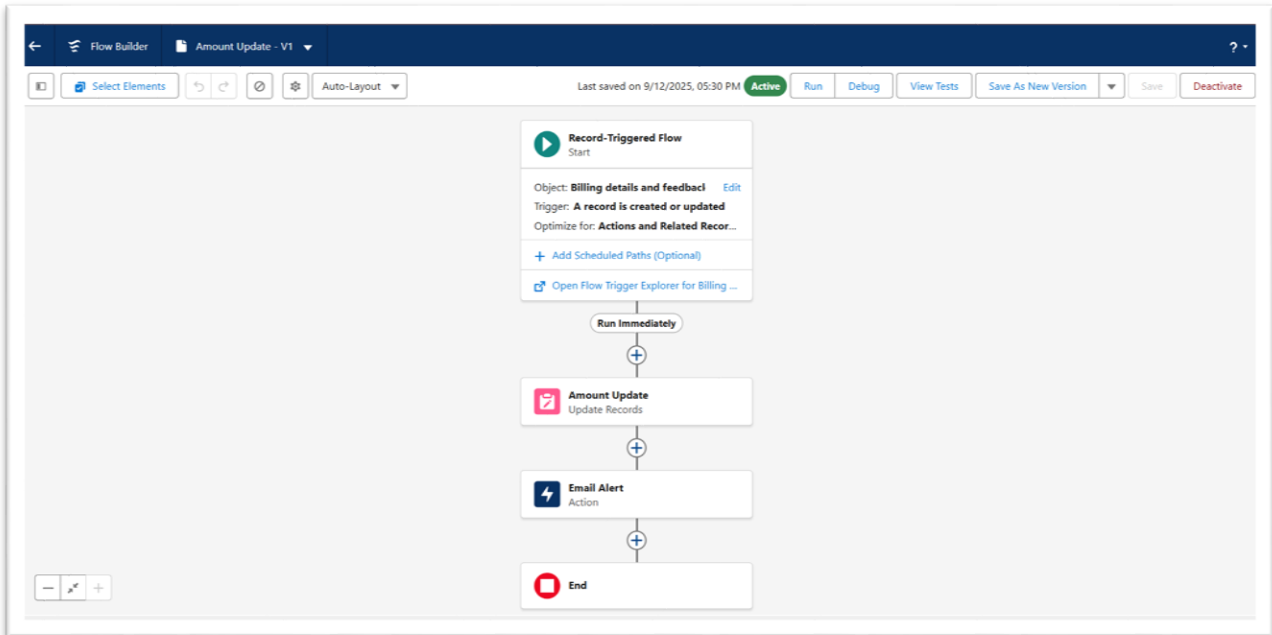
- Tabs for Customer Details, Appointment, Service records, Billing details and feedback



- Email alerts



- Flow runs



CONCLUSION

The Garage Management System streamlines garage operations by automating services, billing, and customer management. It improves efficiency, reduces errors, and enhances customer satisfaction, making it a reliable solution for long-term growth.

APPENDIX

- **Source Code: Provided in Apex Classes and Triggers**

AmountDistributionHandler.apxc :

```
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;  
    }  
  
    }  
    }  
}
```

AmountDistribution.apxt :

```
trigger AmountDistribution on Appointment__c (before insert, before update) {
```

```
    if(trigger.isbefore && trigger.isinsert || trigger.isupdate){
```

```
        AmountDistributionHandler.amountDist(trigger.new);
```

```
    }
```

```
}
```
