GARAGE MANAGEMENT SYSTEM

College Name: SRI KRISHNA ADITHYA COLLEGE OF ARTS AND SCIENCE

College Code:

TEAM ID:

TEAM MEMBERS:

Team Leader Name: Prathab Adithya G B

Email: 23bsai245prathabadithyagb@skacas.ac.in

Team Member1: Shajid S

Email: 23bsai254shajids@skacas.ac.in

Team Member2: Ashiq S

Email: 23bsai211ashiqs@skacas.ac.in

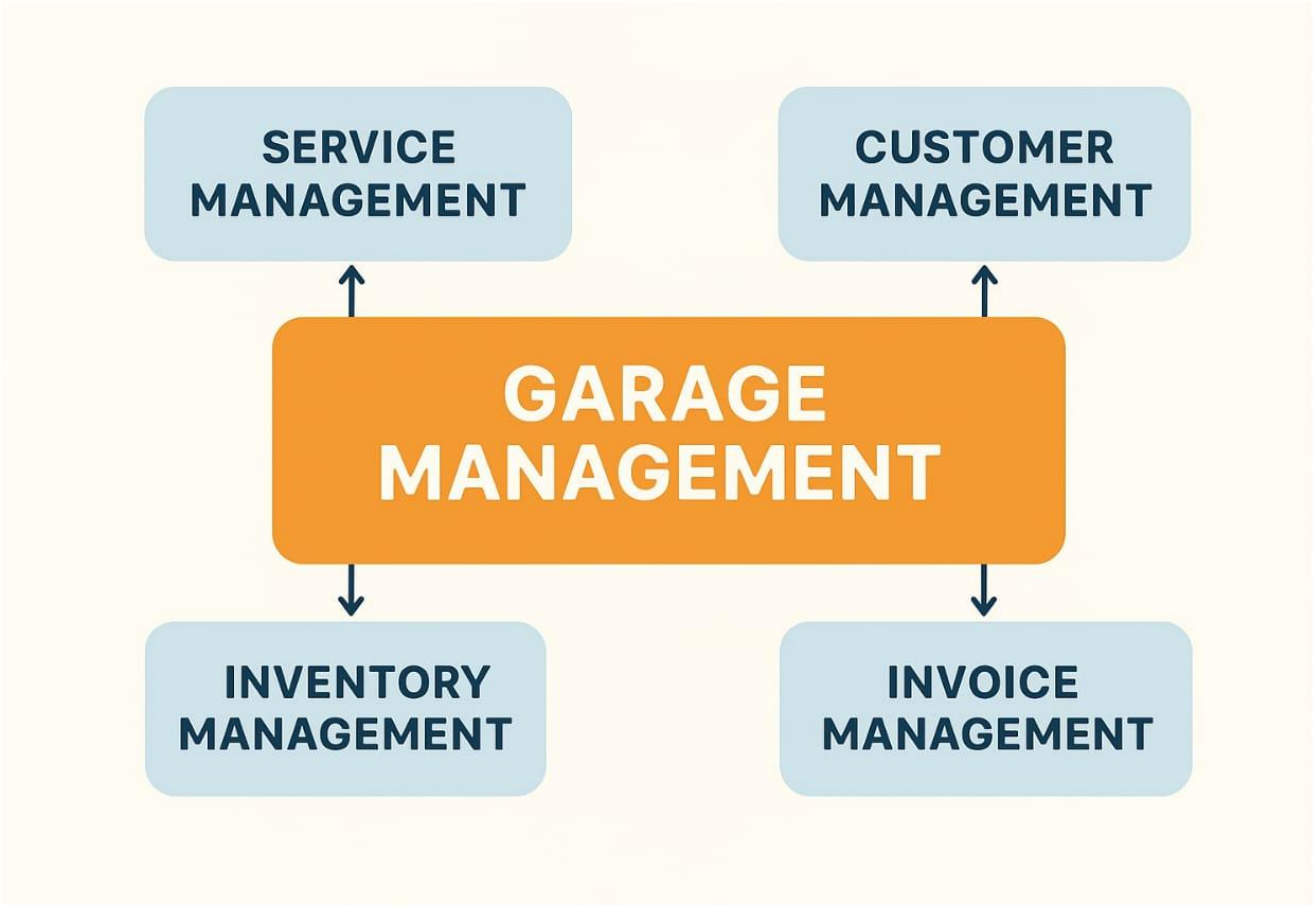
Team Member3: Hari Prasath P

Email: 23bsai217hariprasathp@skacas.ac.in

1.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.



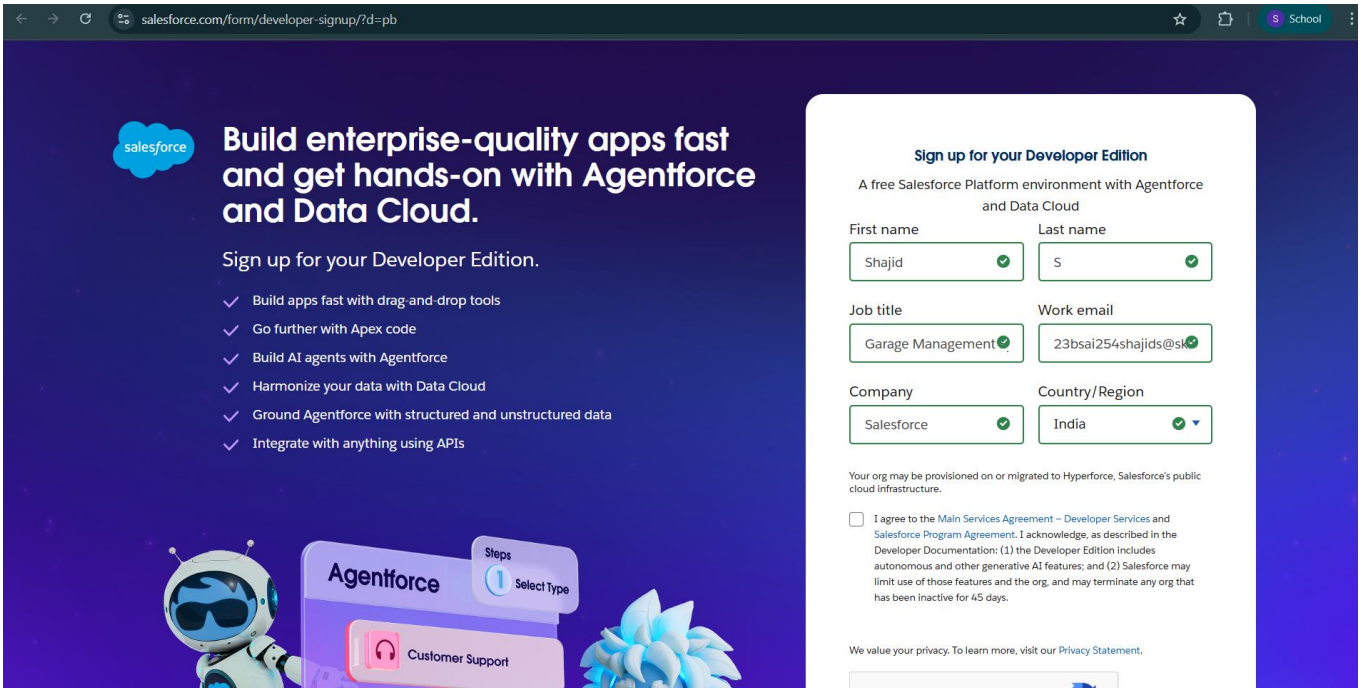
1.2 Purpose

The main objective of the project is to enable organizations to efficiently manage cars, service schedules and other activities. It reduces manual intervention, improves accuracy, and ensures better compliance and communication.

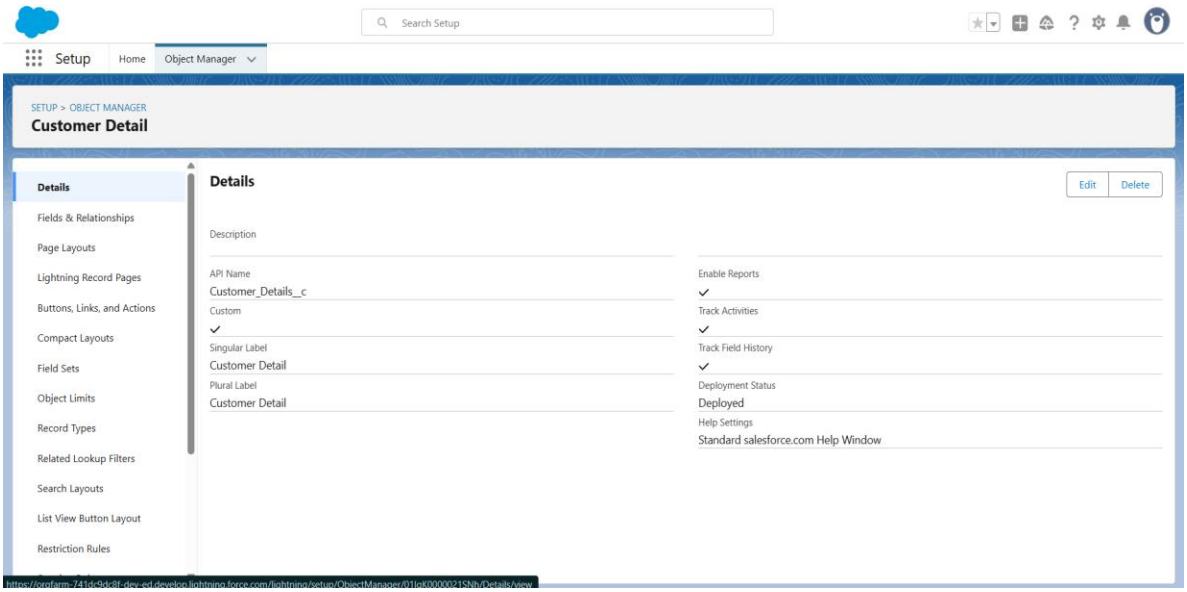
DEVELOPMENT PHASE

Creating Developer Account:

By using this URL - **https://www.salesforce.com/form/developer-signup/?d=pb**



Created objects: Customer details, Appointment, Service records, Billing details and feedback.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Setup
Home
Object Manager
SETUP > OBJECT MANAGER
Customer Detail
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
Details
Edit
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Customer_Details__c
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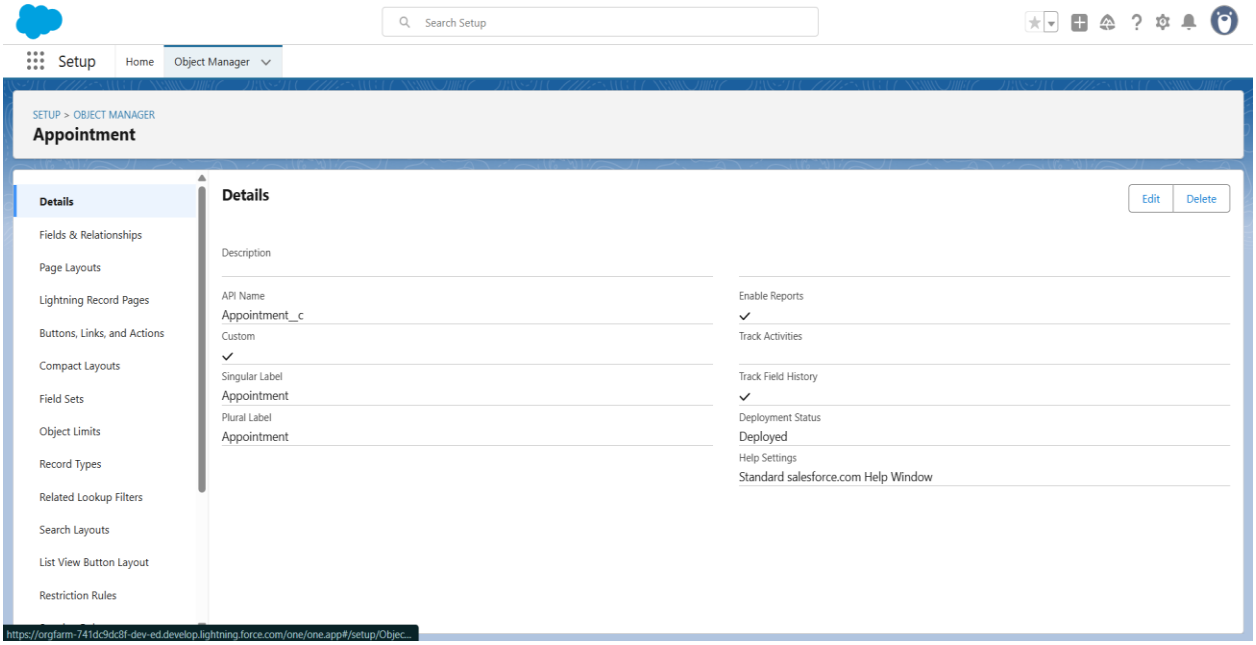
Customer Detail
Enable Reports
Track Activities
Track Field History
Deployment Status
Deployed
Help Settings
Standard salesforce.com Help Window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Page Layouts
Lightning Record Pages
Buttons, Links, and Actions
Compact Layouts
Field Sets
Object Limits
Record Types
Related Lookup Filters
Search Layouts
List View Button Layout
Restriction Rules
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Deployed
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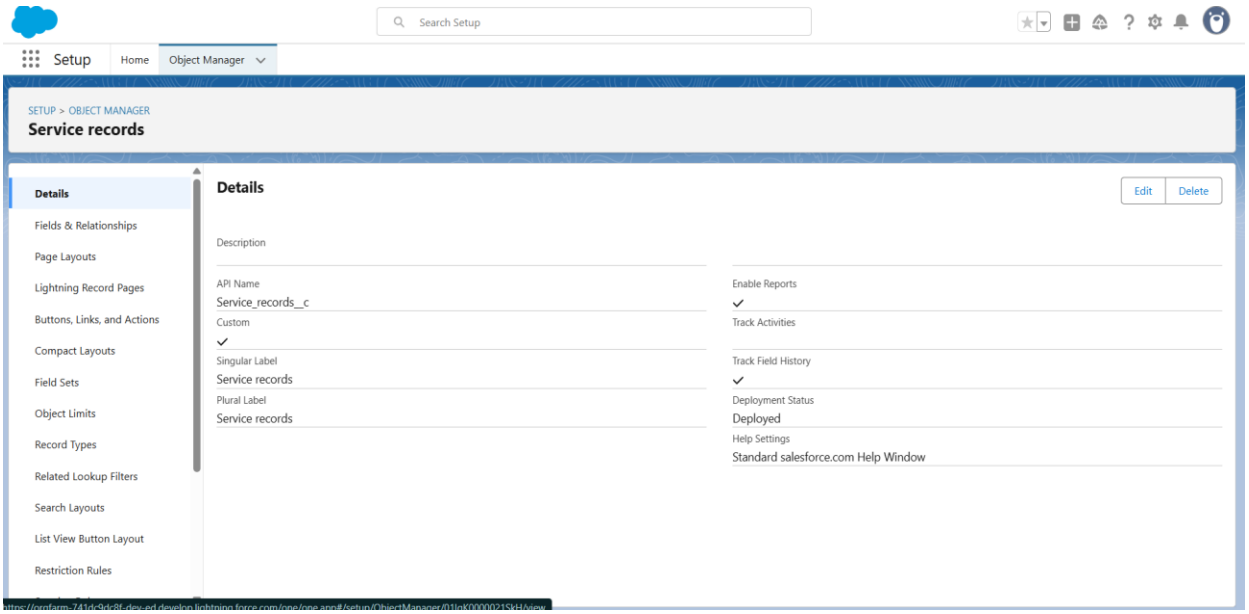
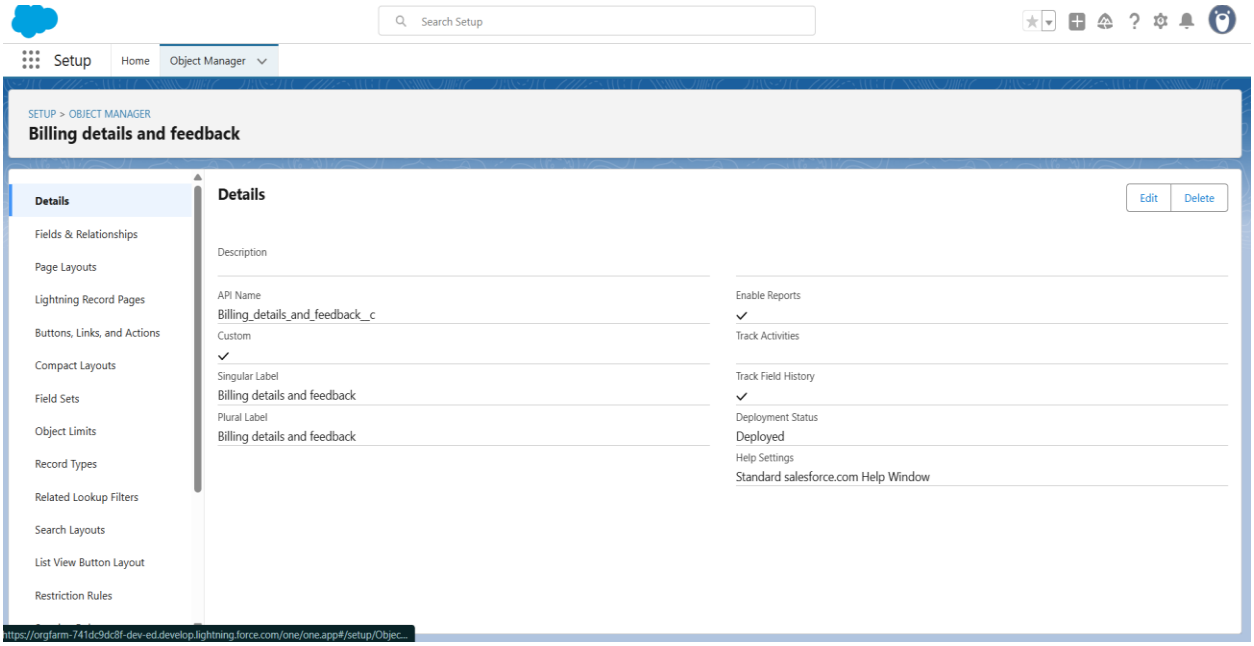
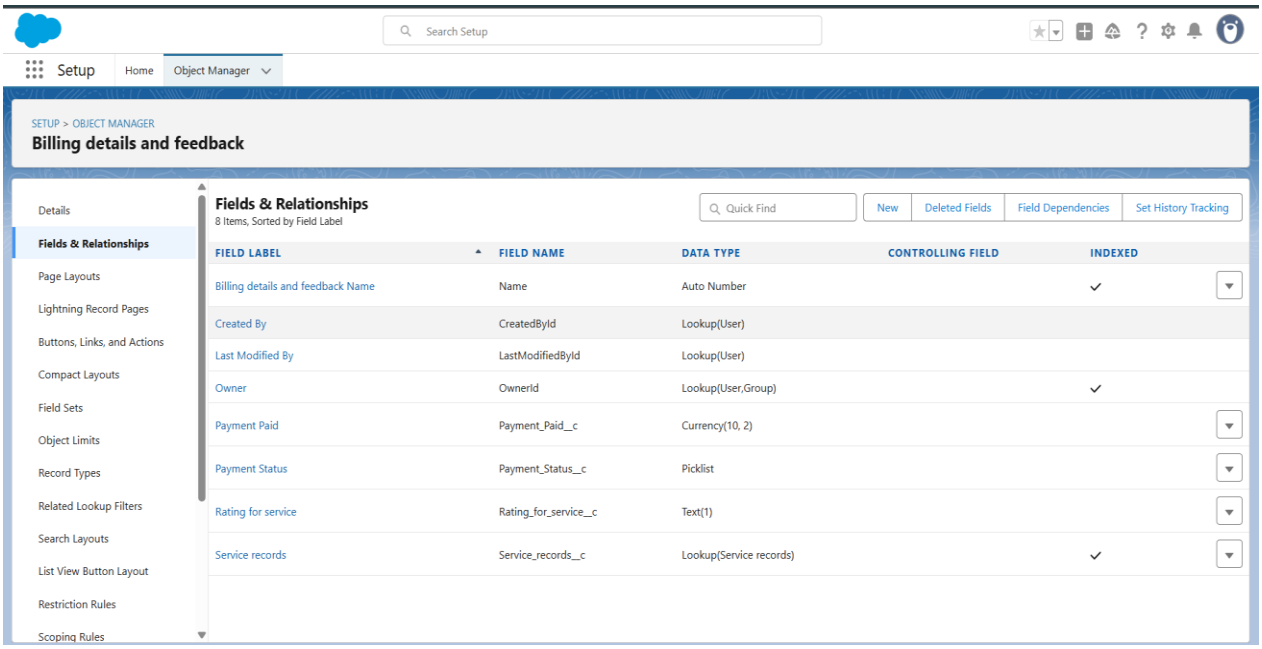
Standard salesforce.com Help Window





- Configured fields and relationships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Billing details and feedback
Details
Fields & Relationships
Page Layouts
Lightning Record Pages
Buttons, Links, and Actions
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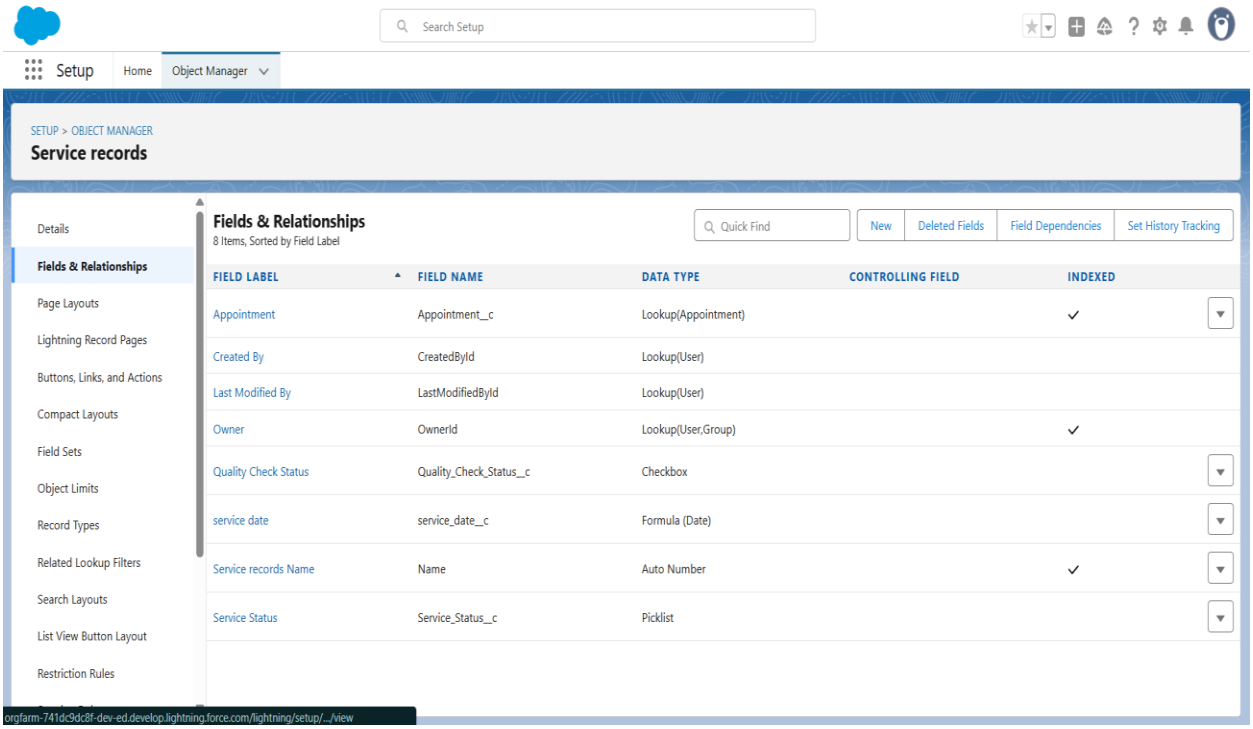
Field Sets
Object Limits
Record Types
Related Lookup Filters
Search Layouts
List View Button Layout
Restriction Rules
Scoping Rules
Fields & Relationships
8 Items, Sorted by Field Label
Quick Find
New
Deleted Fields
Field Dependencies
Set History Tracking
FIELD LABEL
FIELD NAME
DATA TYPE
CONTROLLING FIELD
INDEXED
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(10, 2)
Payment Status
Payment_Status__c
Picklist
Rating for service
Rating_for_service__c
Text(1)
Service records
Service_records__c
Lookup(Service records)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Service records
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Fields & Relationships
Page Layouts
Lightning Record Pages
Buttons, Links, and Actions
Compact Layouts
Field Sets
Object Limits
Record Types
Related Lookup Filters
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List View Button Layout
Restriction Rules
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
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Picklist
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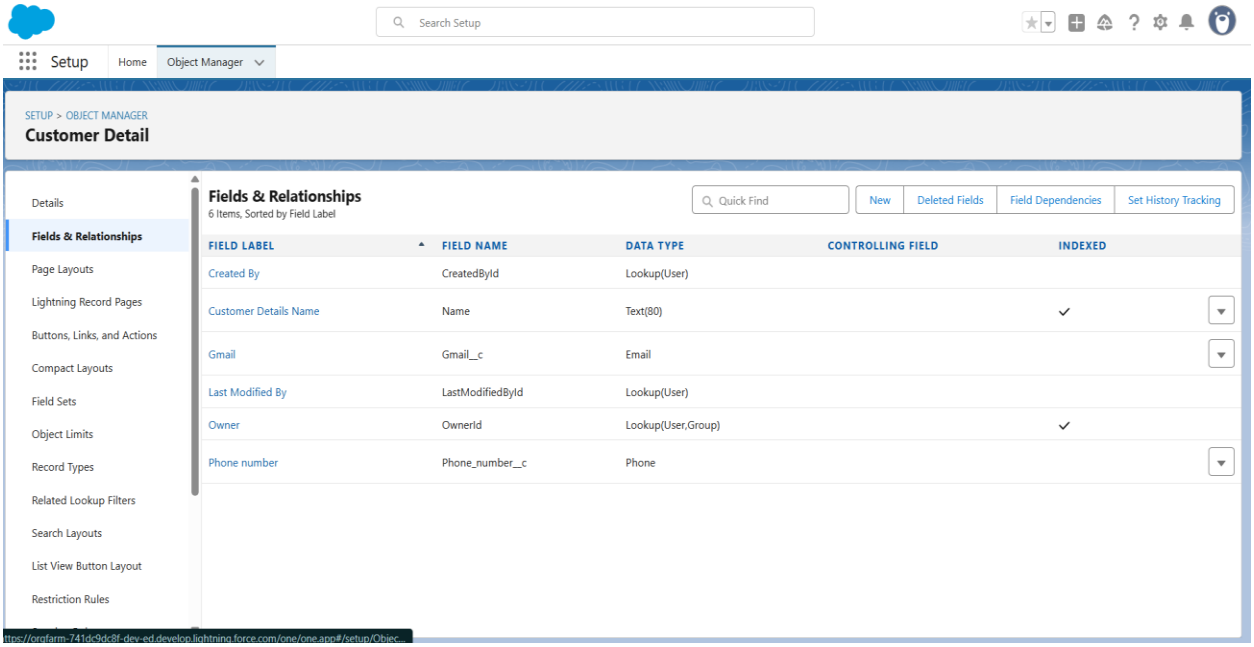
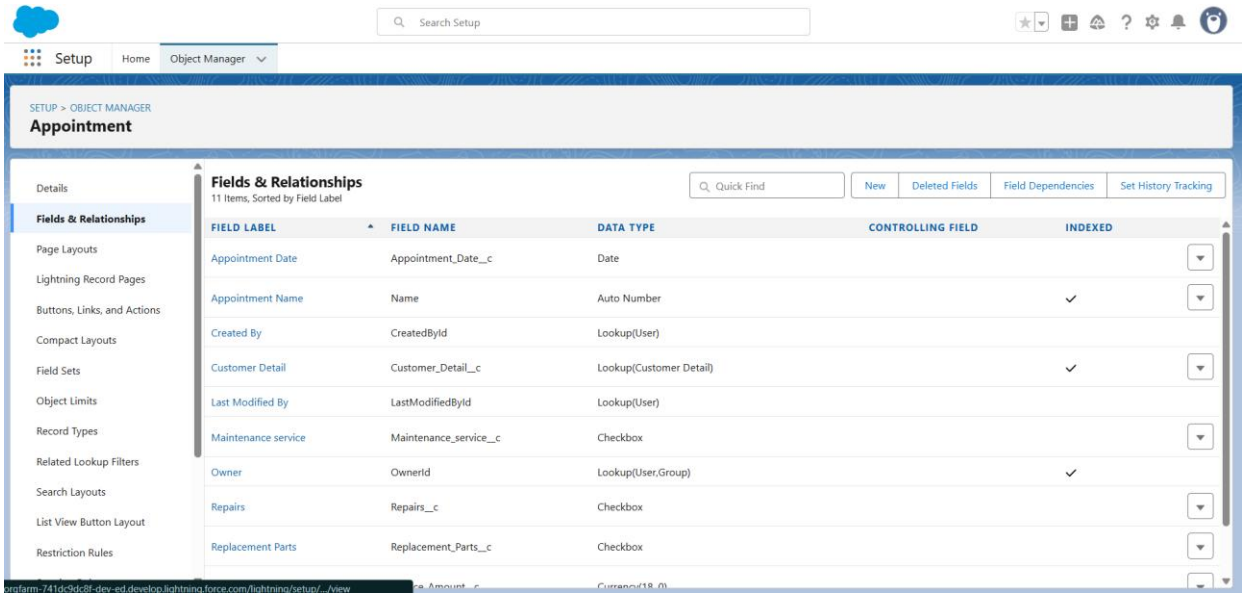
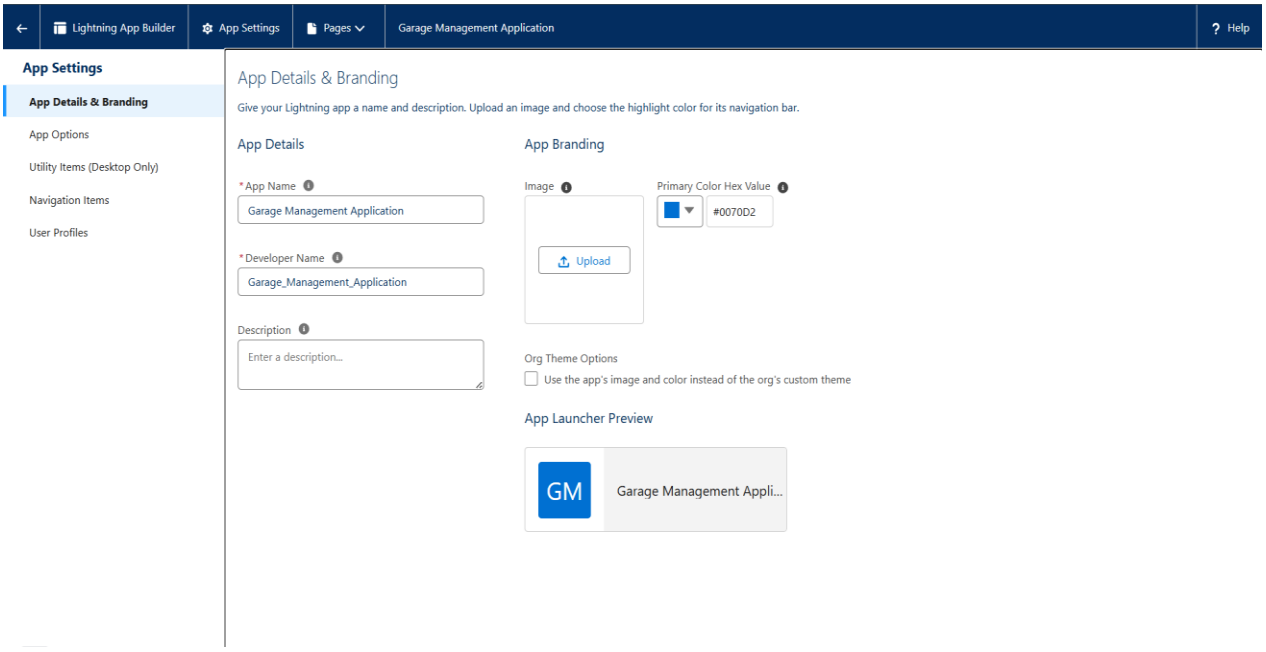




- Developed Lightning App with relevant tabs


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
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
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Primary Color Hex Value
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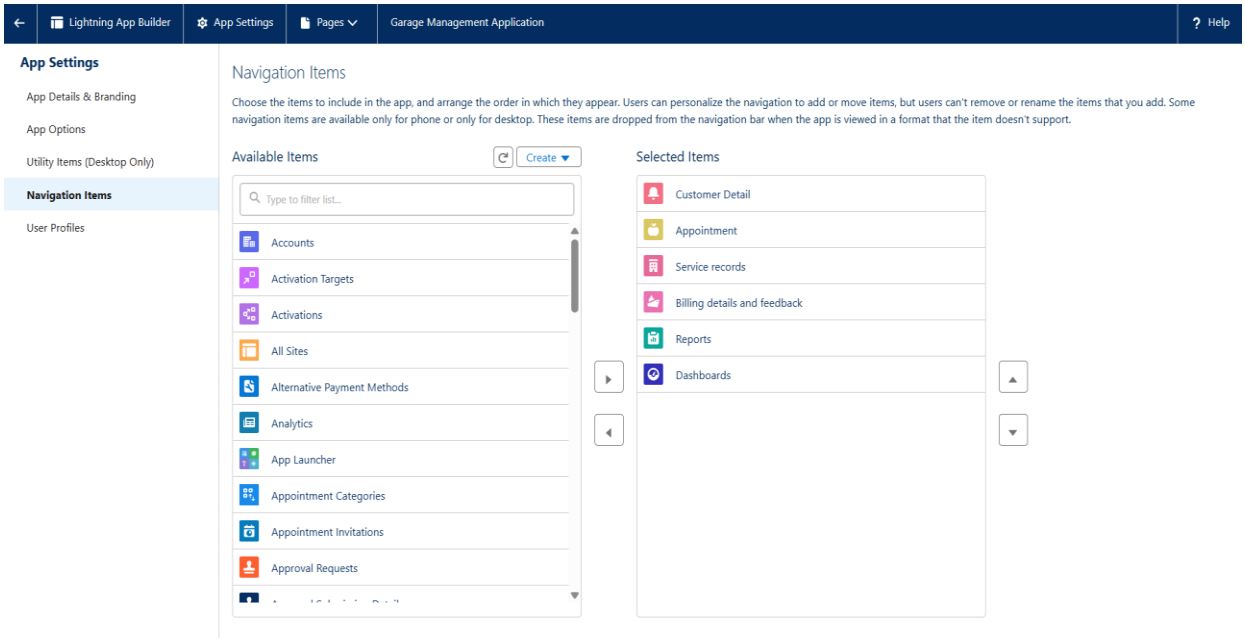
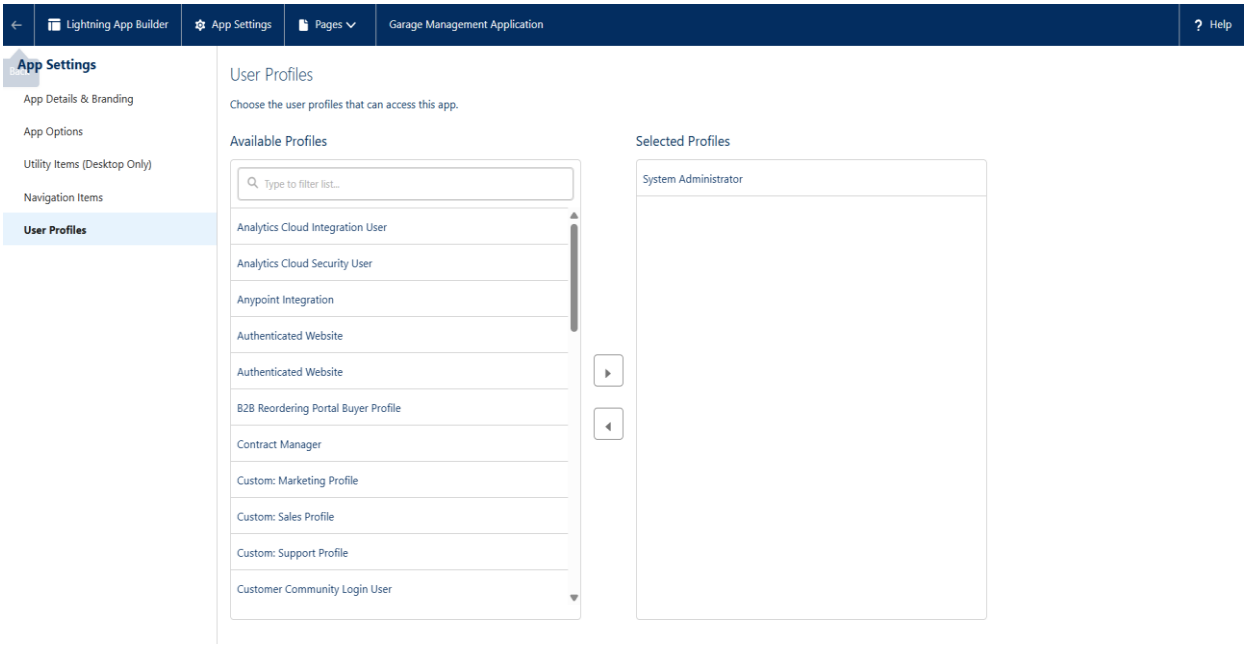
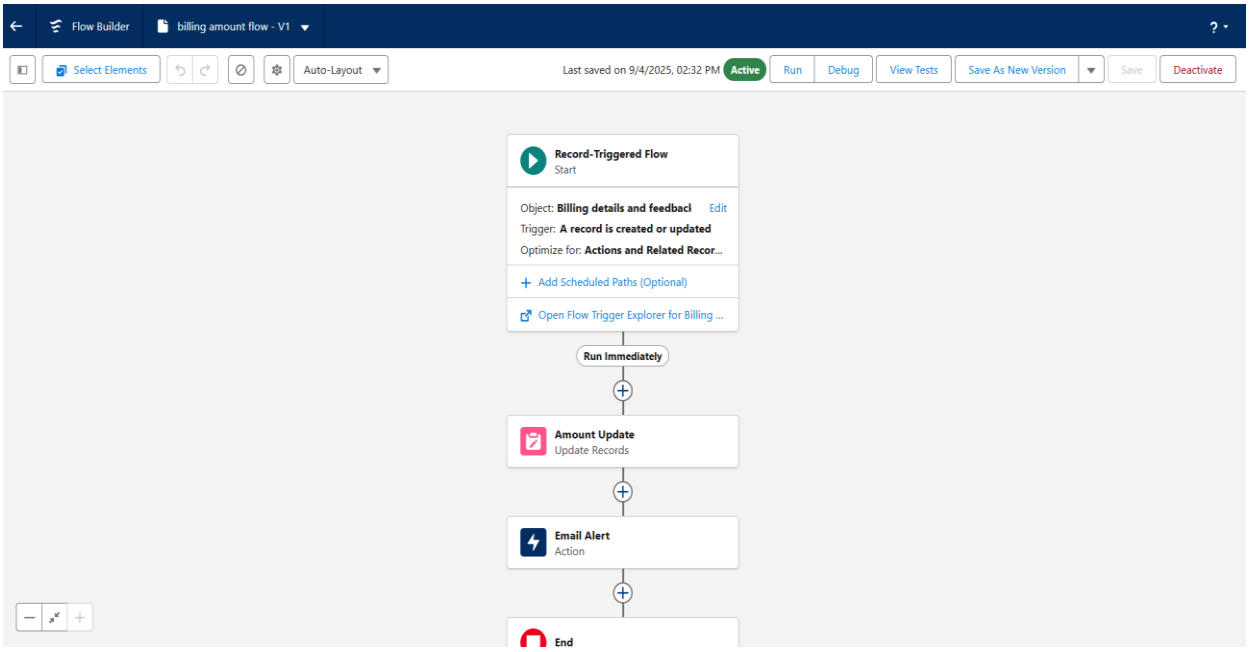
Org Theme Options
Use the app's image and color instead of the org's custom theme
App Launcher Preview
GM
Garage Management Appli...

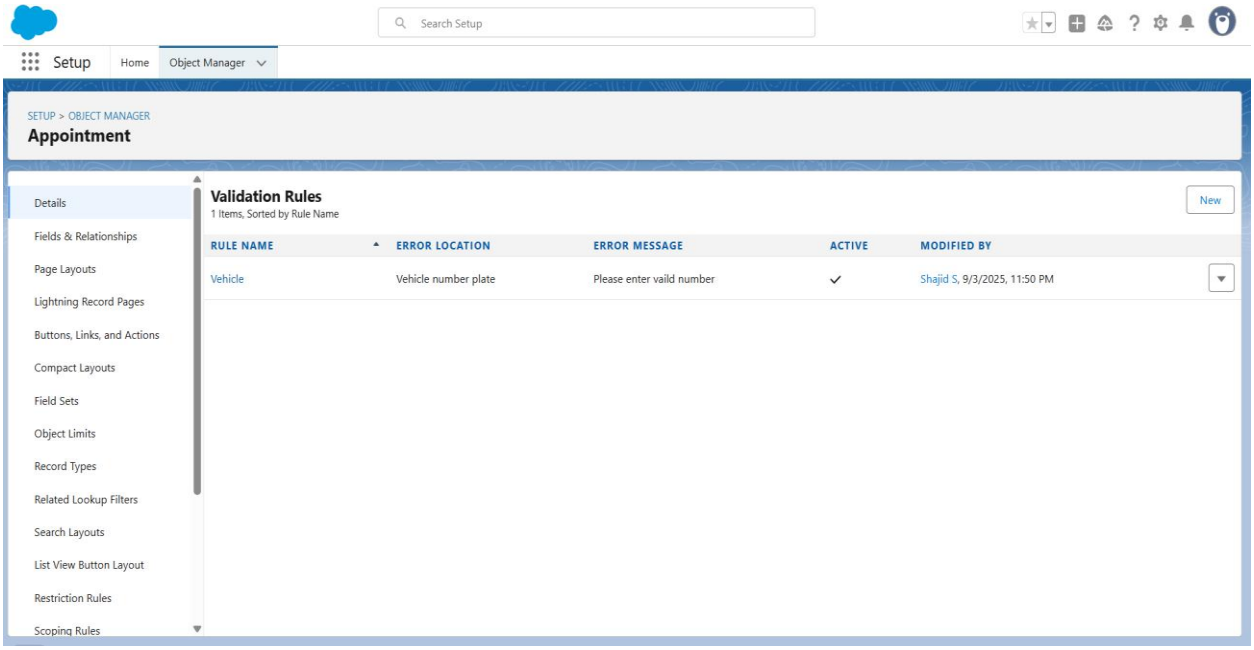

Lightning App Builder
App Settings
Pages
Garage Management Application
Help
App Settings
App Details & Branding
App Options
Utility Items (Desktop Only)
Navigation Items
User Profiles
Navigation Items
Choose the items to include in the app, and arrange the order in which they appear. Users can personalize 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 Detail
Appointment
Service records
Billing details and feedback
Reports
Dashboards

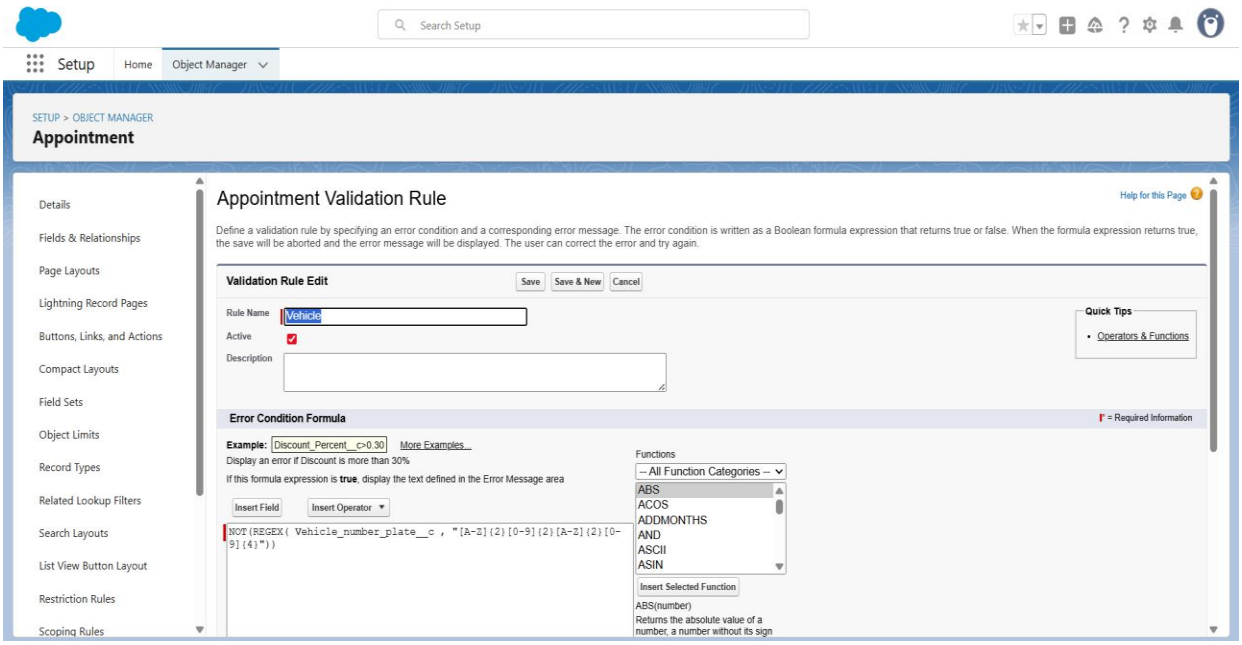


- Implemented Flows for billing details and feedback, Service records.

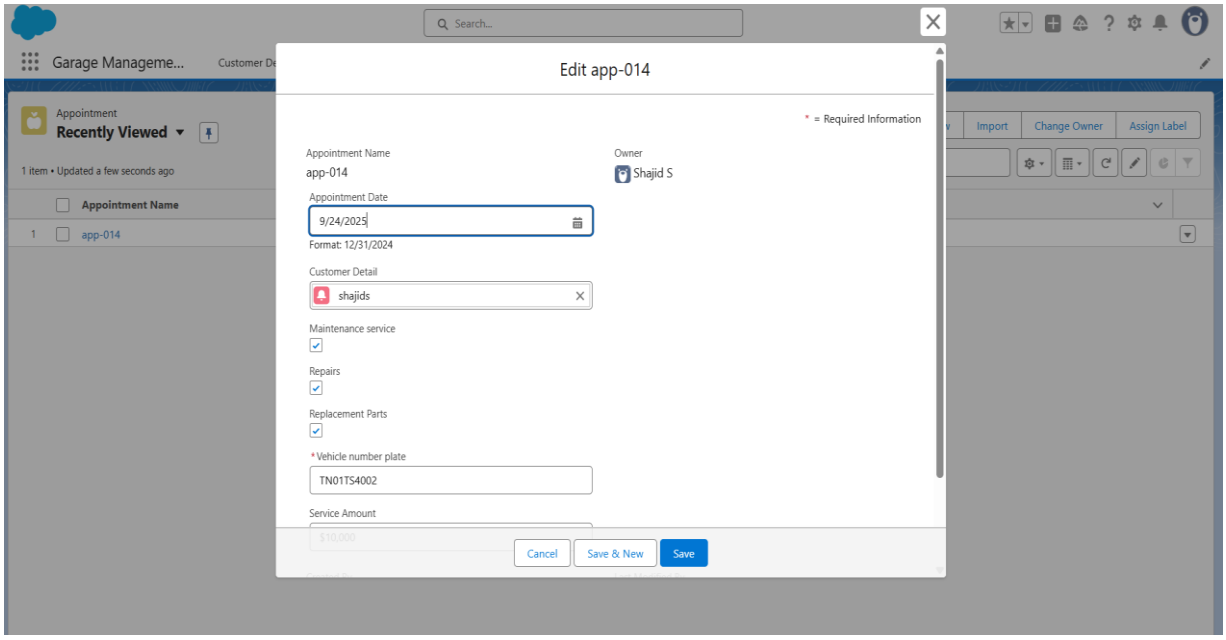


- To create a validation rule for billing and feedback, appointment objects.

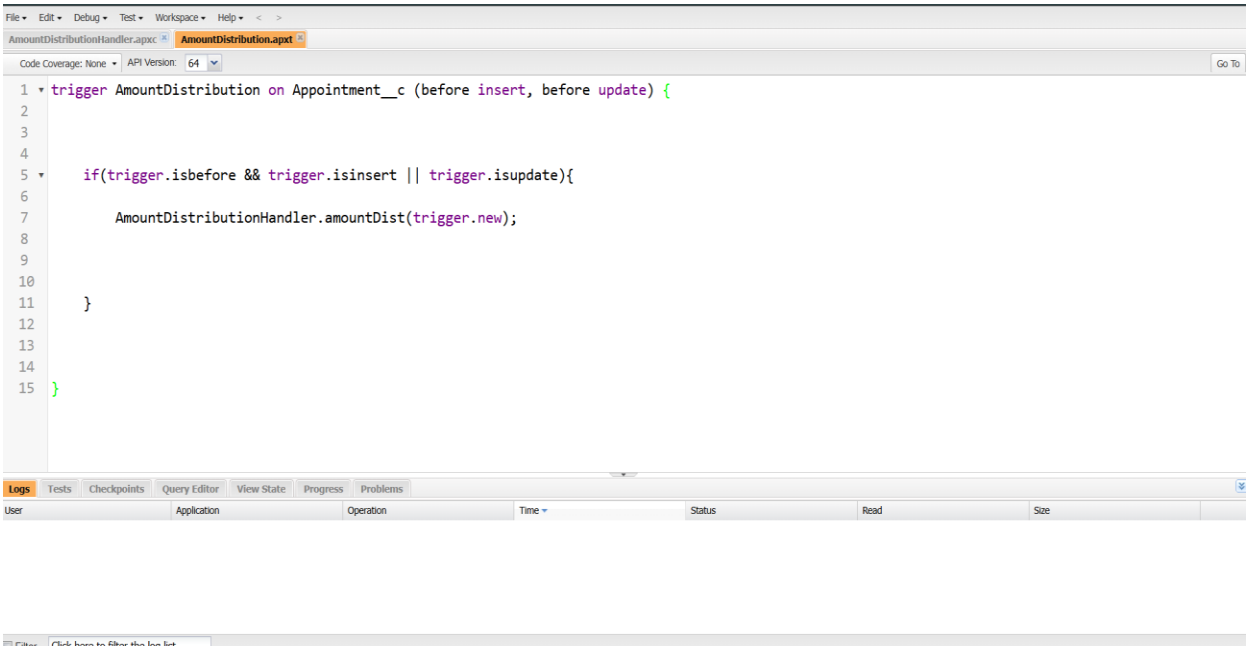




- Added Apex trigger Amount Distribution Handler.

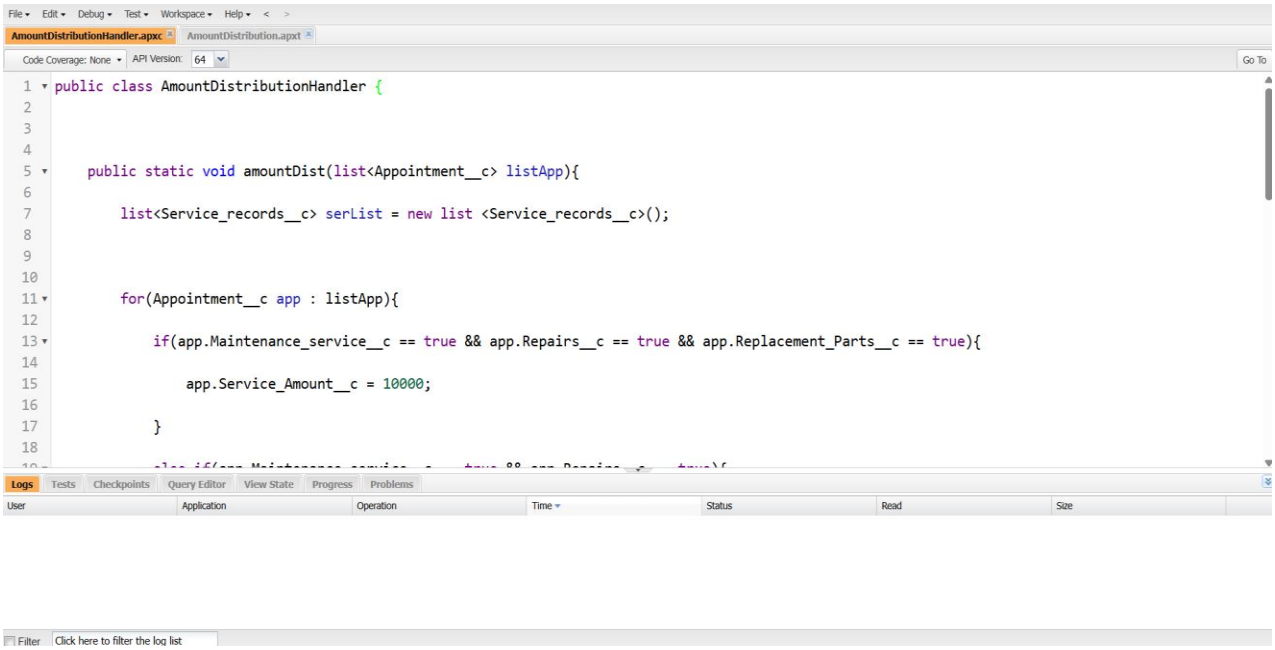


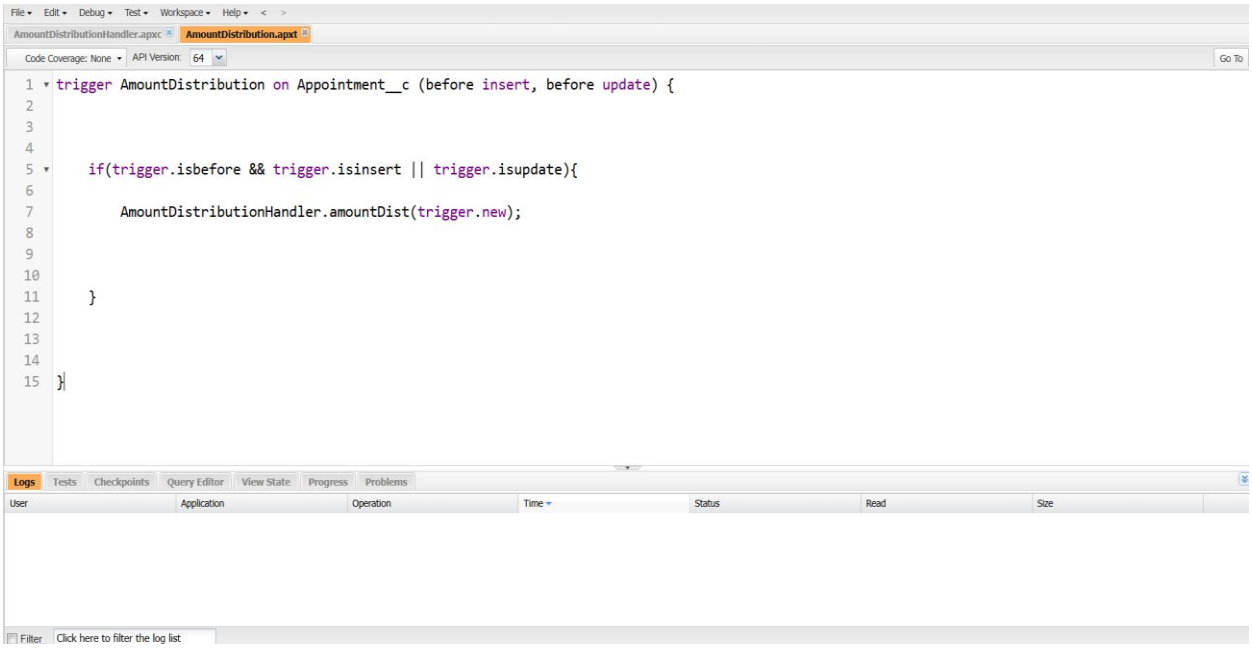
- Scheduled notification reminder emails using Apex class.



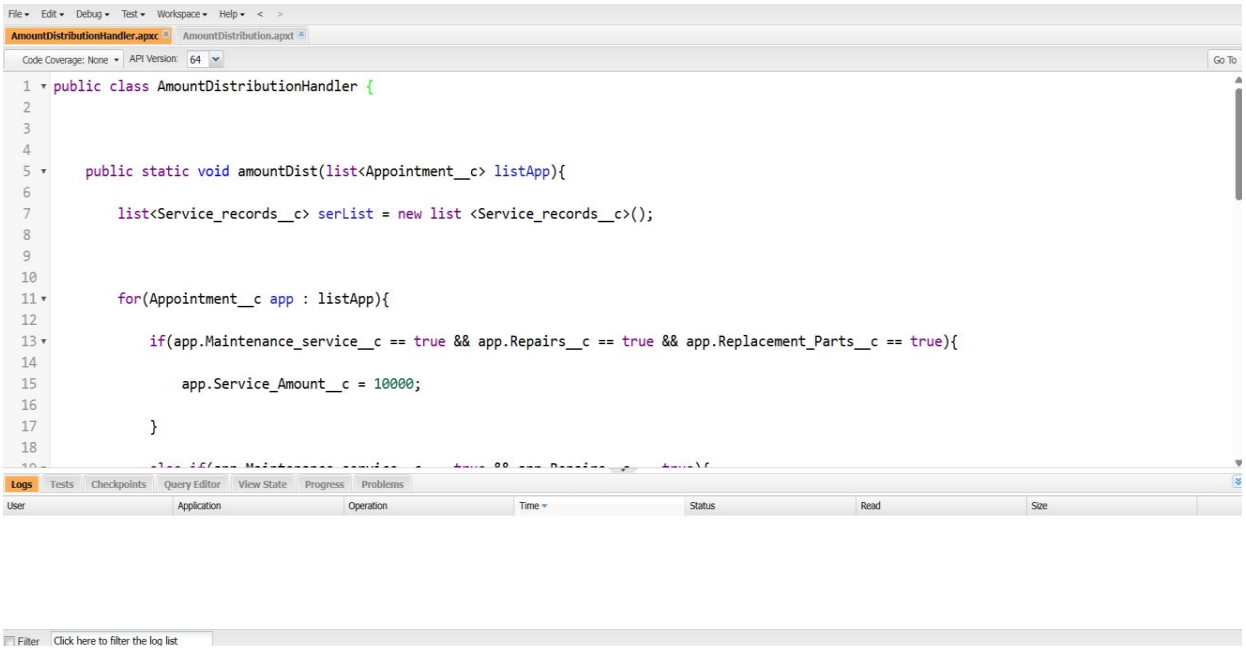
- Apex Trigger

  Create an Apex Trigger

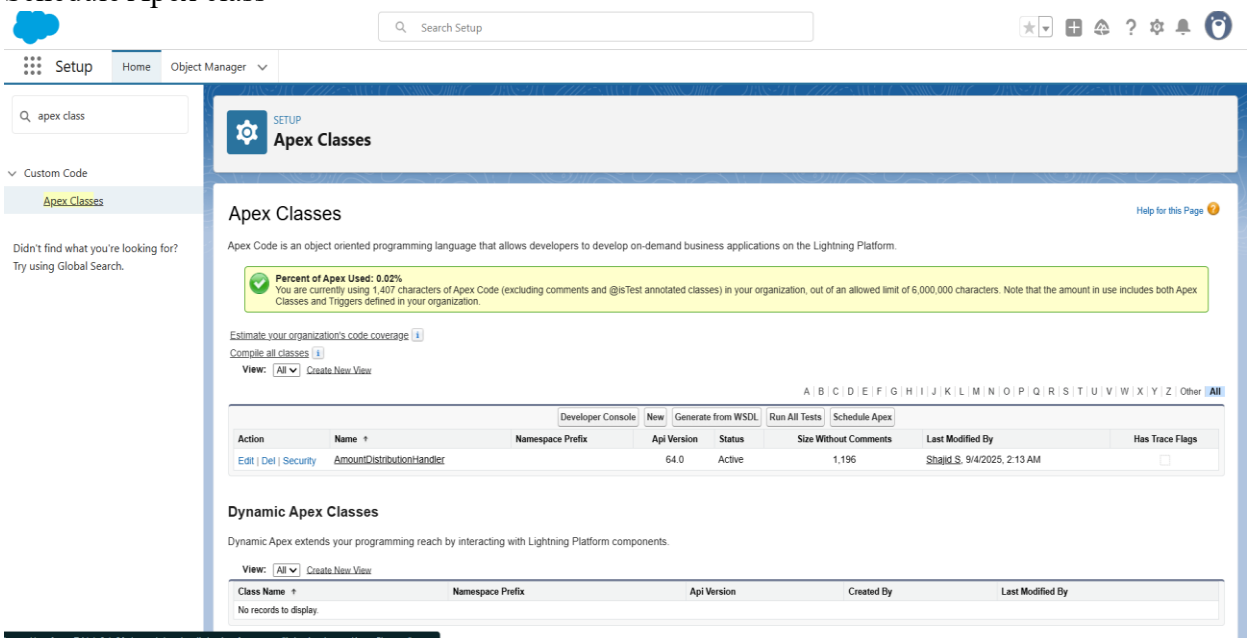


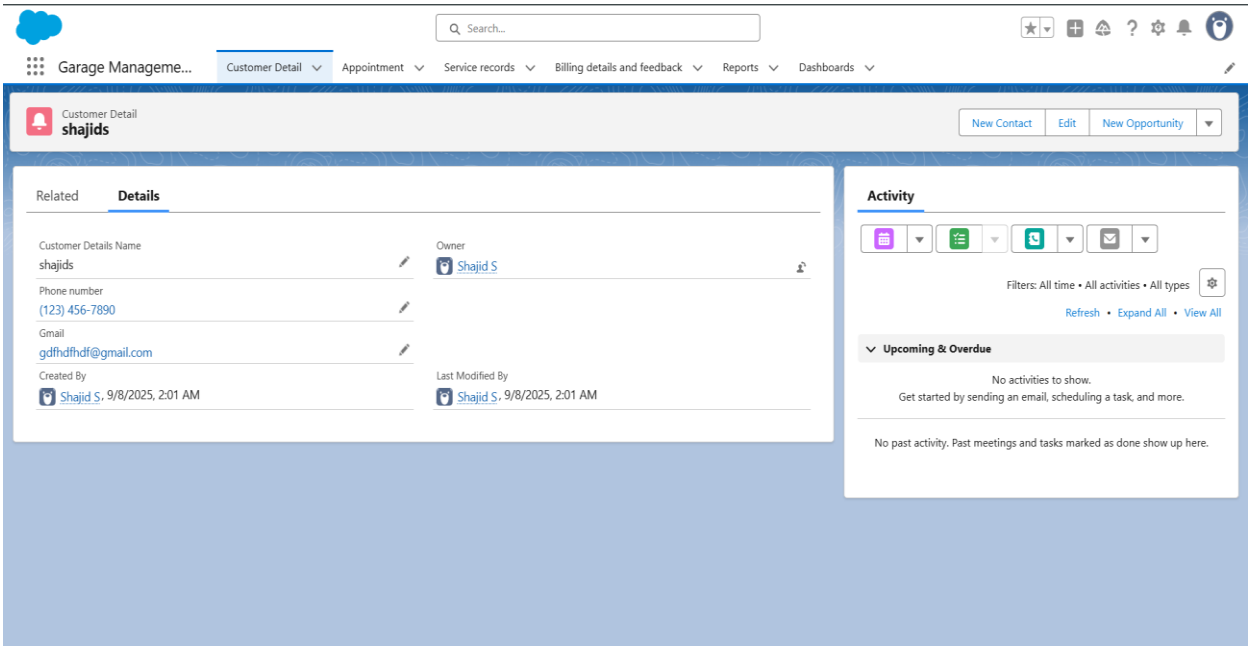


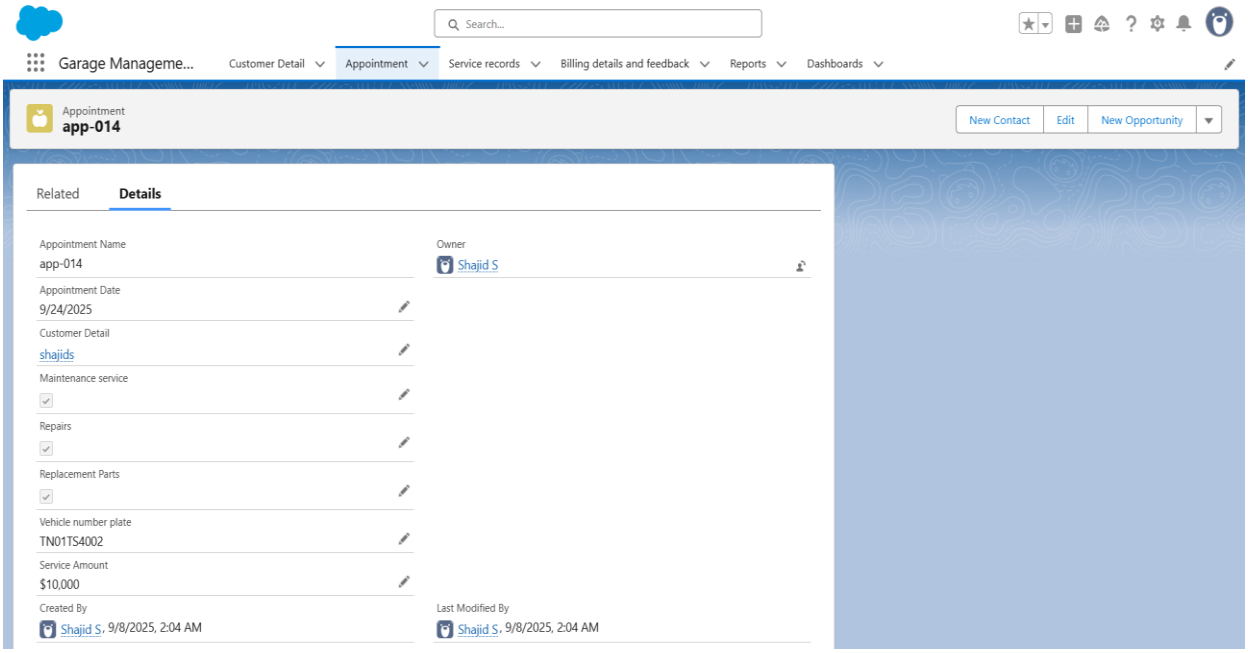
Create an Apex Handler class



Schedule Apex class






Search...
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Customer Detail
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Related
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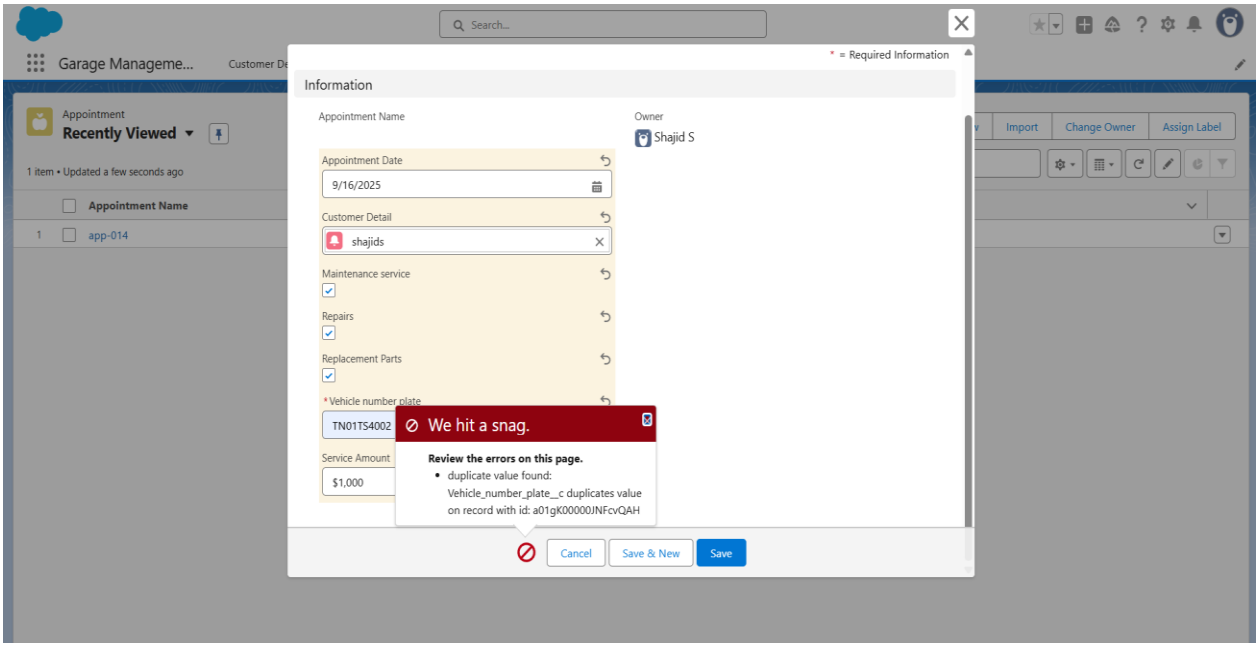
app-014
Owner
Shajid S
Appointment Date
9/24/2025
Customer Detail
shajids
Maintenance service
Repairs
Replacement Parts
Vehicle number plate
TN01TS4002
Service Amount
$10,000
Created By
Shajid S, 9/8/2025, 2:04 AM
Last Modified By
Shajid S, 9/8/2025, 2:04 AM

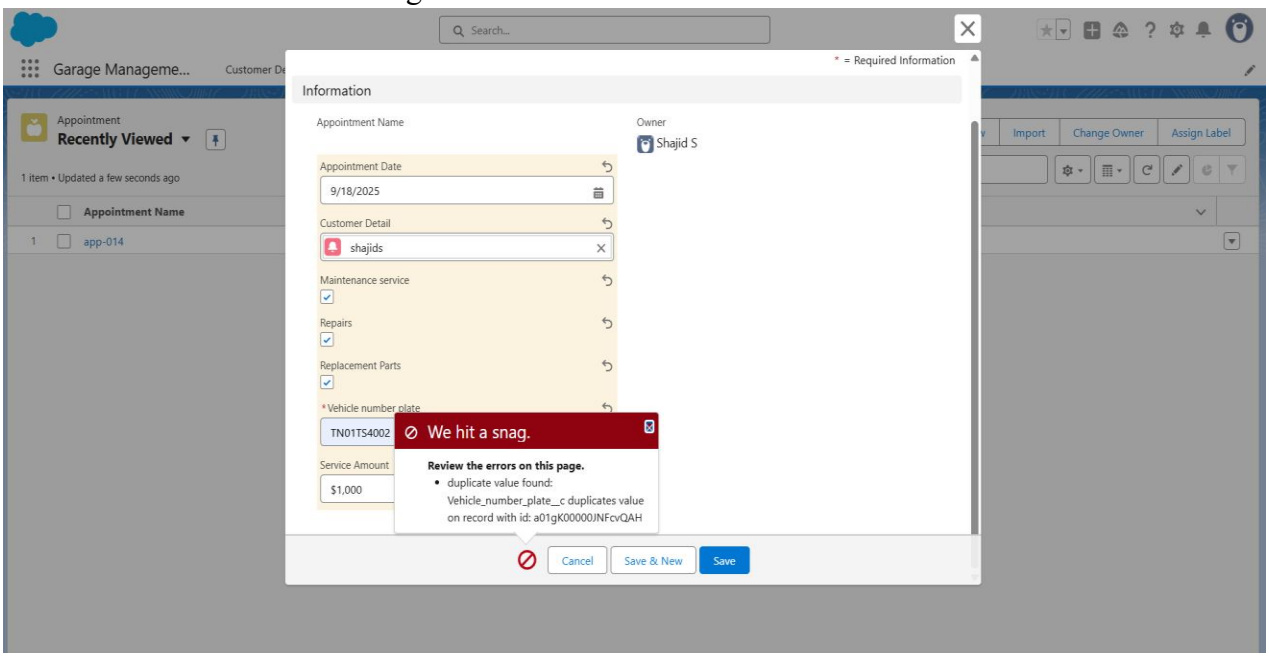
FUNCTIONAL AND PERFORMANCE TESTING

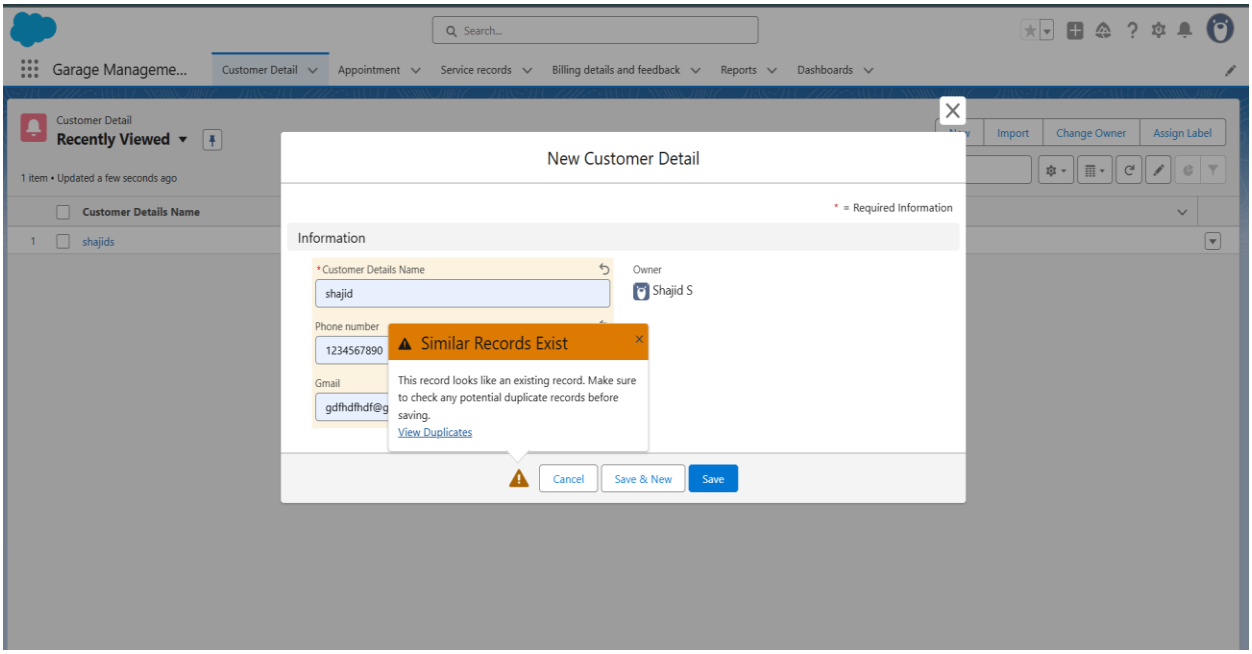
Performance Testing

- Trigger validation by entering duplicate vehicle number-property records

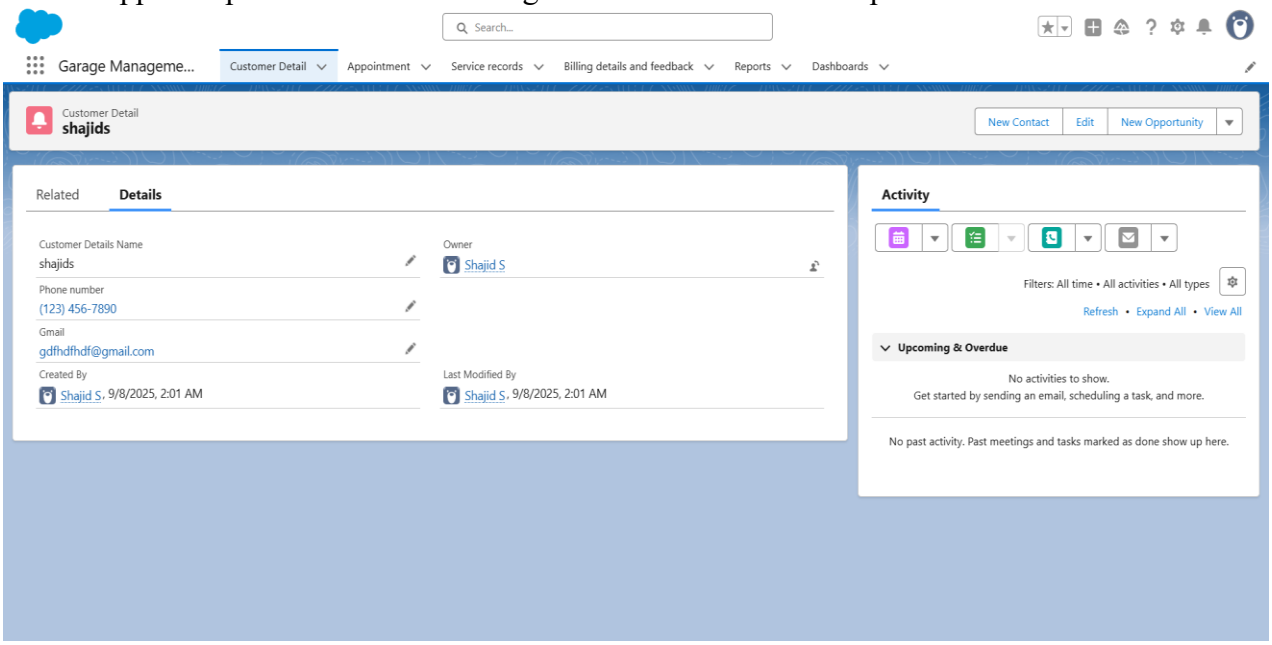


- Validation Rule checking





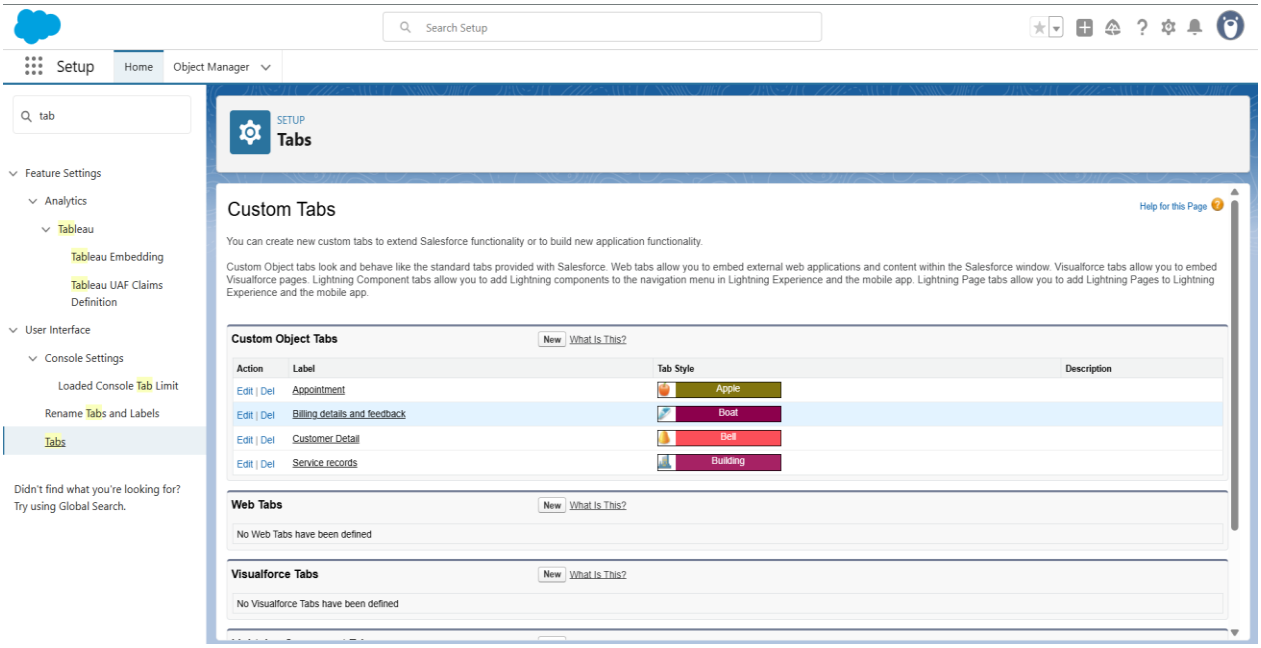
- Approval process validated through email alerts and status updates



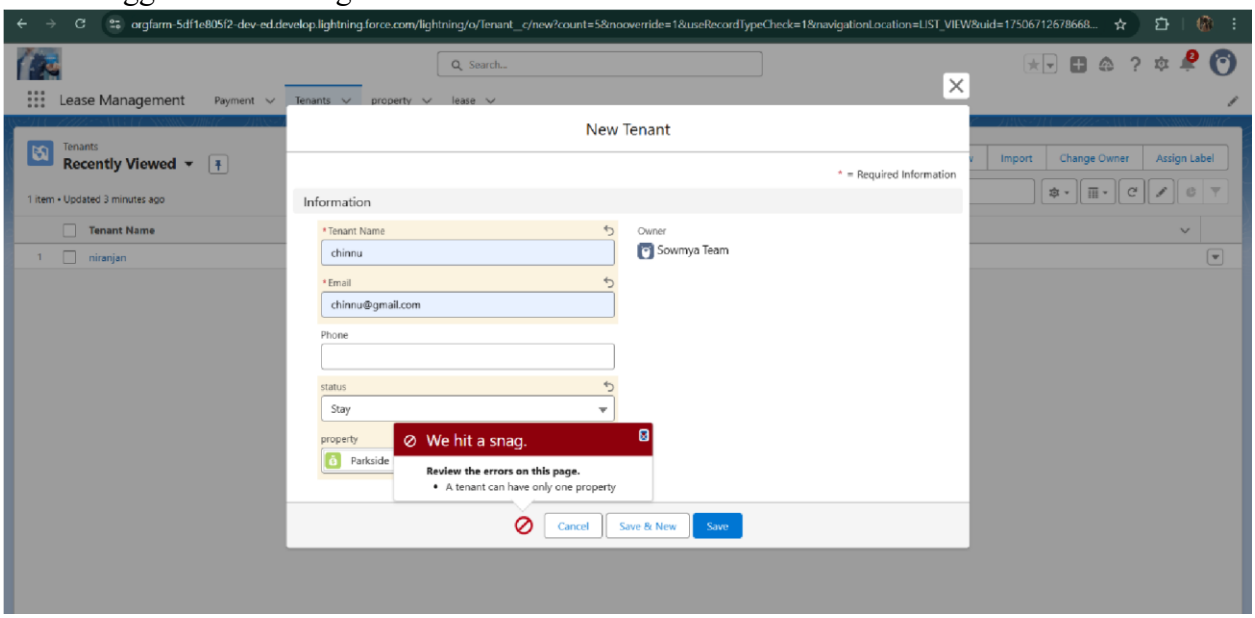
RESULTS

Output Screenshots

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



- Trigger error messages



ADVANTAGES & DISADVANTAGES

Advantages

- Centralized data storage for customer, vehicle, and service details.
- Better customer service with service reminders and history tracking.
- Automation of job cards, invoices, and service records.
- Integration with Salesforce CRM for a 360° customer view.
- Effective spare parts and inventory management.
- Detailed reports and analytics for business decisions.
- Scalable and customizable for any size of garage.

Disadvantages

- Complex setup and requires proper Salesforce configuration.
- High cost of Salesforce licensing and maintenance.
- Needs stable internet connection for smooth operation.
- Learning curve for staff with limited technical knowledge.
- Customization effort required to fit unique workflows.
- Data security and privacy concerns in cloud storage.

CONCLUSION

The Garage Management System successfully streamlines the operations of leasing through a structured, automated Salesforce application. It improves efficiency, communication, and data accuracy for both admins and customers.

APPENDIX

- **Source Code:**

```
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;
         }

   }
   }
}
```

The syntax for creating trigger is :

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

```
    if(trigger.isbefore && trigger.isinsert || trigger.isupdate){
        AmountDistributionHandler.amountDist(trigger.new);

    }

}
```