

Project Title: A CRM Application To Manage The Mall

College Name: Government College of
Technology, Coimbatore

College Code: 7177

Department of Information Technology

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Project Overview

The Management App is a Salesforce-based CRM solution designed to modernize and streamline mall management. It addresses challenges in tenant relationships, lease tracking, customer interactions, and event planning by centralizing operations and automating processes. With a user-friendly interface and advanced analytics, the app provides actionable insights for informed decision-making, enhances tenant communication, simplifies lease management, and improves customer engagement. By leveraging Salesforce's powerful features, it boosts efficiency, optimizes revenue, and supports sustainable growth. This comprehensive solution transforms mall operations, delivering a superior experience for stakeholders while positioning malls for long-term success.

Objectives

I. Project Goals

The primary goal of the project is to leverage CRM software to manage customer data and interactions effectively, improving business relationships, retaining customers, and increasing sales. By implementing this solution, malls can streamline operations and deliver personalized experiences to tenants and customers.

- **Centralized Data**

Stores customer and tenant data in the cloud, making it accessible from anywhere. Ensures all team members have consistent, up-to-date information to enhance service delivery.

- **Comprehensive Customer Profiles**

Creates single, detailed profiles for each customer, including purchase history, order status, and service issues. Provides a better understanding of customer needs, enabling businesses to deliver tailored solutions.

- **Targeted Marketing**

Utilizes customer data, such as demographics and interests, to create and send personalized marketing campaigns. Helps increase engagement, retention, and overall sales by targeting the right audience effectively.

II. Business Goals

- **Improve Tenant and Customer Relationship Management:** Strengthen interactions through personalized communication and feedback mechanisms.
- **Increase Customer Retention and Engagement:** Foster loyalty with targeted communication and proactive service.
- **Enhance Operational Efficiency:** Streamline processes for managing events, promotions, and tenant feedback.

III. Specific Outcomes

- **Real-Time Data and Insights:** Provide actionable insights into tenant occupancy, revenue trends, and customer preferences.
- **Streamlined Communication:** Ensure effective, centralized communication with tenants and customers for better collaboration.
- **Detailed Analytics:** Deliver analytics on mall traffic patterns, event performance, and customer behavior to refine strategies.

Salesforce key features and Concepts utilized

The main functionalities and concept applied within the Salesforce project.

1. **Salesforce CRM Core Features: Accounts and Contacts:** Manage information about tenants (as Accounts) and key tenant representatives (as Contacts).
2. **Salesforce Custom Object:** Custom objects can be created to track specific lease details such as start and end dates, terms, and payment schedules.
3. **Automation Tools:** Automate processes such as sending notifications for lease expirations, scheduling maintenance tasks, or generating lease renewal reminders.
4. **Dashboards and Reports:** Generate detailed reports on tenant occupancy, lease revenue, maintenance requests, and vacancy rates.
5. **Salesforce AppExchange:** Use AppExchange solutions for additional functionalities such as payment processing, visitor management, or marketing automation.
6. **Mobile Accessibility:** Create custom mobile pages to streamline field data entry and lease inspections.

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Detailed Steps to Solution Design

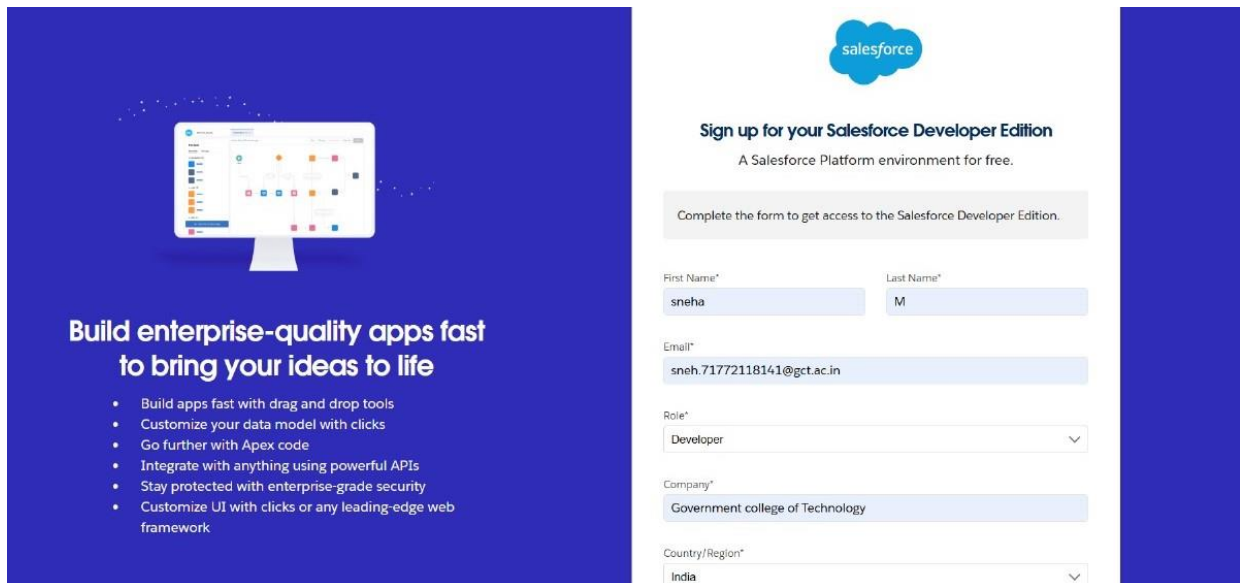
Activity 1: Creating Developer Account

1. Go to <https://developer.salesforce.com/signup>
2. On the sign-up form, enter the following details:
 - 1) First name & Last name
 - 2) Email
 - 3) Role: Developer

4) Company: College Name

5) County: India

6) Postal Code: pin code



The image shows a promotional banner for Salesforce Developer Edition. On the left, a blue background features a white monitor displaying a Salesforce interface. Text on the banner reads: "Build enterprise-quality apps fast to bring your ideas to life". Below this, a bulleted list highlights features: "Build apps fast with drag and drop tools", "Customize your data model with clicks", "Go further with Apex code", "Integrate with anything using powerful APIs", "Stay protected with enterprise-grade security", and "Customize UI with clicks or any leading-edge web framework". On the right, a white sign-up form is displayed against a blue background. The form title is "Sign up for your Salesforce Developer Edition" with the subtitle "A Salesforce Platform environment for free." Below the title, it says "Complete the form to get access to the Salesforce Developer Edition." The form fields include: "First Name*" (sneha), "Last Name*" (M), "Email*" (sneh.71772118141@gct.ac.in), "Role*" (Developer), "Company*" (Government college of Technology), and "Country/Region*" (India).

Activity 2: Account Activation

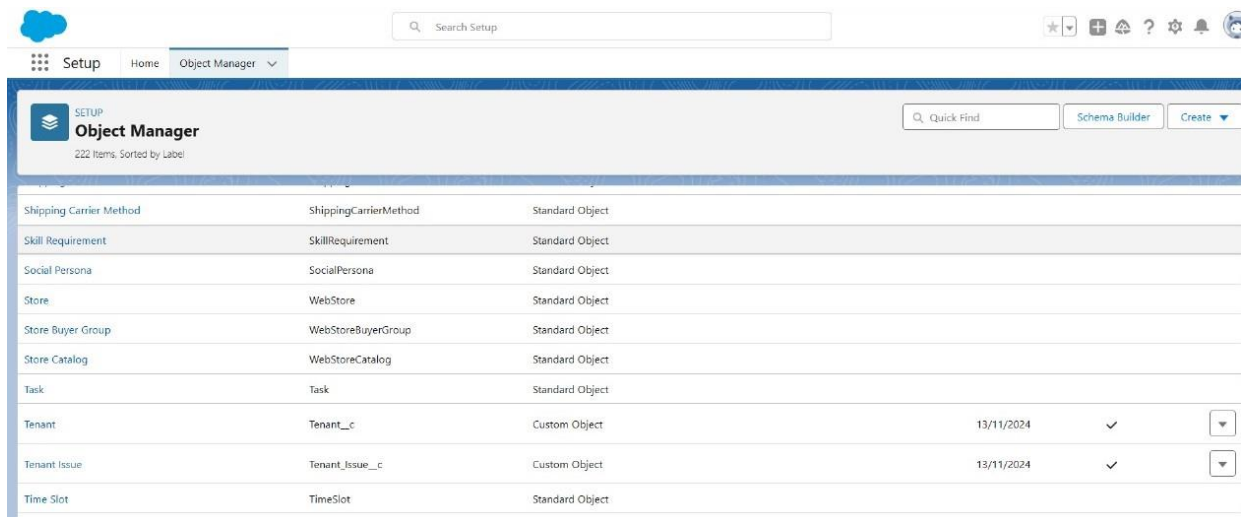
1. Go to the inbox of the email that you used while signing up. Click on the verify account to activate your account. The email may take 5 10mins.
2. Click on Verify Account.
3. Give a password and answer a security question and click on change password.
4. Then you will redirect to your salesforce setup page.

Create Custom Objects

To store the data as per business requirement.

Activity: Create Tenant Object

1. From the setup page ==> Click on Object Manager ==> Click on Create ==> Click on Custom Object.
 1. Enter the label name: Tenant
 2. Plural label name: Tenants
 3. Enter Record Name Label and Format
 - Record Name: Tenant Name
 - Data Type: Text
 4. Click on Allow reports
 5. Allow search and Save



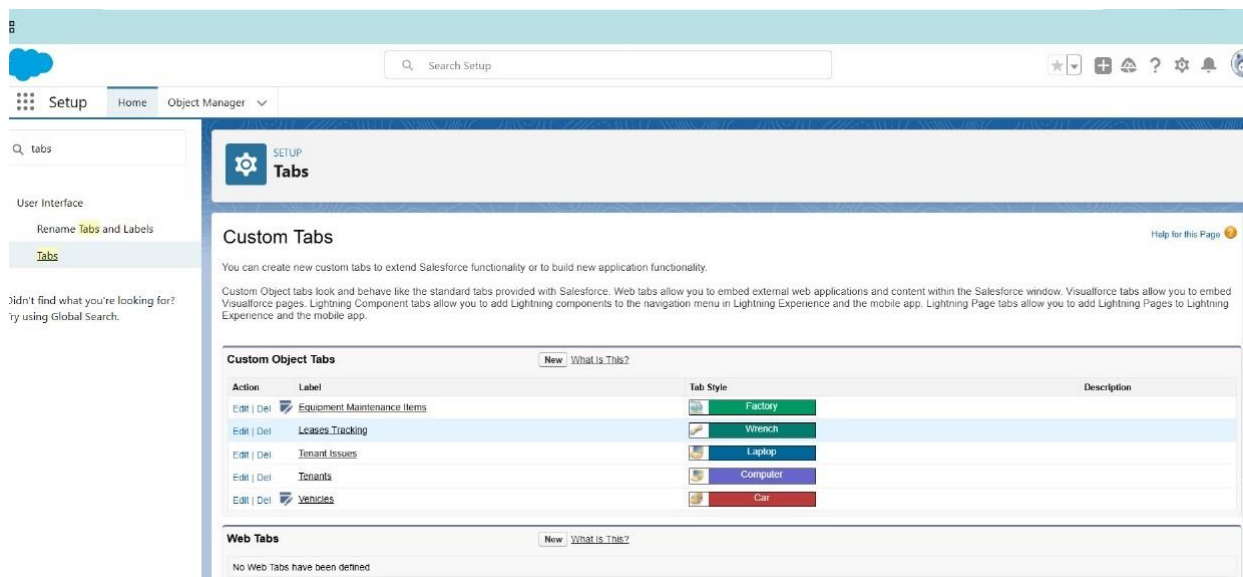
Note: Similarly, create objects for Lease Tracking and Tenant issues.

Tabs

A tab is like a user interface that is used to build records for objects and to view the records in the objects.

Activity: Create a custom tab for tenant object

1. Go to setup page ==> type Tabs in Quick Find bar ==> click on tabs ==> New (under custom object tab)
 1. Select Object (Tenant) ==> Select the tab style ==> Next (Add to profiles page) keep it as default ==> Next (Add to Custom App) uncheck the include tab ==> Save.
 2. Make sure to append tab to users' existing personal customizations is checked.



Custom Tabs

You can create new custom tabs to extend Salesforce functionality or to build new application functionality.

Custom Object tabs look and behave like the standard tabs provided with Salesforce. Web tabs allow you to embed external web applications and content within the Salesforce window. Visualforce tabs allow you to embed Visualforce pages. Lightning Component tabs allow you to add Lightning components to the navigation menu in Lightning Experience and the mobile app. Lightning Page tabs allow you to add Lightning Pages to Lightning Experience and the mobile app.

Action	Label	Tab Style	Description
Edit Del	Equipment Maintenance Items	Factory	
Edit Del	Leases Tracking	Wrench	
Edit Del	Tenant Issues	Laptop	
Edit Del	Tenants	Computer	
Edit Del	Vehicles	Car	

Web Tabs

No Web Tabs have been defined

Note: Similarly, create tabs for Lease Tracking and Tenant issues.

Create Fields and Relationships

To sort of information the objects store which we have created.

Activity: Create Fields on Tenant object

1. While still on your salesforce account, navigate to the gear icon present in the top right corner. You will notice Setup and click on setup.
2. You will now be navigated to the setup page, and click on object manager and search for object "Tenant".
3. Click on "Fields & Relationships" in the left panel.
4. Click on New and choose the data type Phone and first name: Phone Number. Click next and fill the following details in the mentioned.
5. Click Next, Next and click on "Save and New".

S No	Field Label	Data Type
1	Address	Text Area (255)
2	PAN Card	Text
3	Date of Reg	Date
4	Email	Email
5	GST No	Text

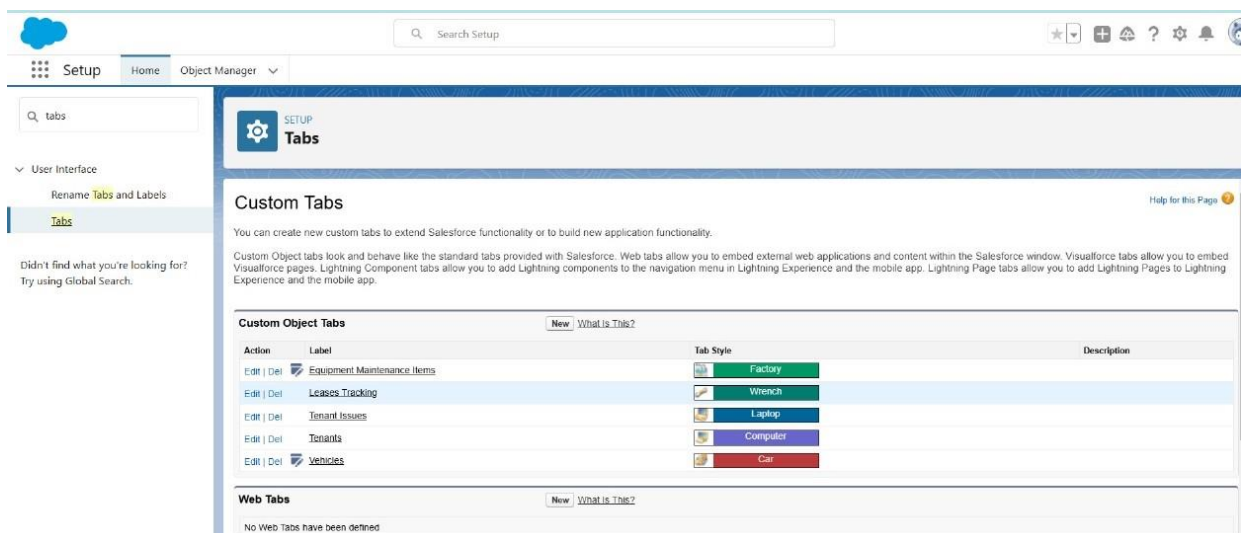
Note: Similarly, Create Fields tabs for Lease Tracking and Tenant issues.

Create the Lightning App

In Lightning Experience, Lightning apps gives users access to sets of objects, tabs, and other items all in one convenient bundle in the navigation bar. Lightning apps let you brand your apps with a custom colour and logo.

Activity: Steps to Create Custom App in Salesforce

1. Go to setup, by clicking the gear icon present in the top right corner.
2. Navigate to the Home bar and in the quick find box, search for App.
3. Click on APP MANAGER.
4. Enter the App name as 'Smart Mall'.



The screenshot shows the Salesforce Setup interface. The left sidebar has a search bar with 'tabs' entered. The main content area is titled 'Custom Tabs' and includes a 'New' button. Below the title, there is a table of Custom Object Tabs and a section for Web Tabs.

Action	Label	Tab Style	Description
Edit Del	Equipment Maintenance Items	Factory	
Edit Del	Leases Tracking	Wrench	
Edit Del	Tenant Issues	Laptop	
Edit Del	Tenants	Computer	
Edit Del	Vehicles	Car	

Web Tabs

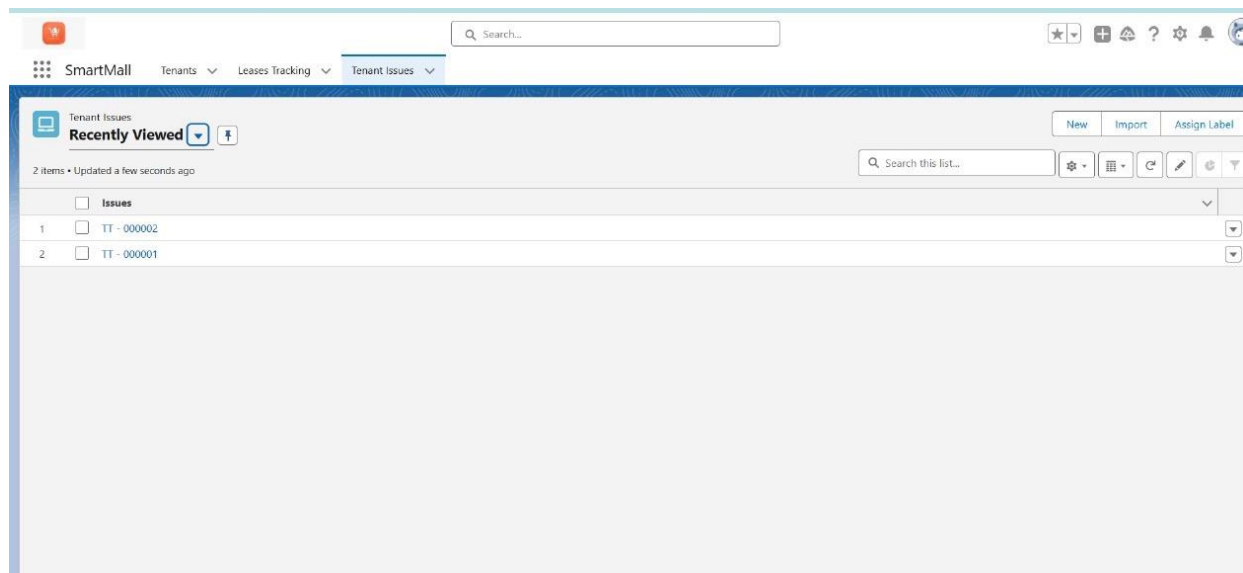
No Web Tabs have been defined.

Record Insertion

Creating records in Salesforce is a fundamental and essential activity that serves multiple purposes, contributing to the effective management of data, streamlined processes, and overall success of an organization.

Activity: Inserting Records in Tenant Object

1. Click on the App Launcher and search Tenant Object then click New in the right corner to create a record.
2. Fill every field with valid data, especially the fields on which you have created a validation rule.
3. If you Enter Phone Number more or less than 10 digits it will show an error.
4. Similarly, if you enter DateofReg a Past date it will show an error.



Note: Similarly, Inserting Records for Lease Tracking and Tenant issues.

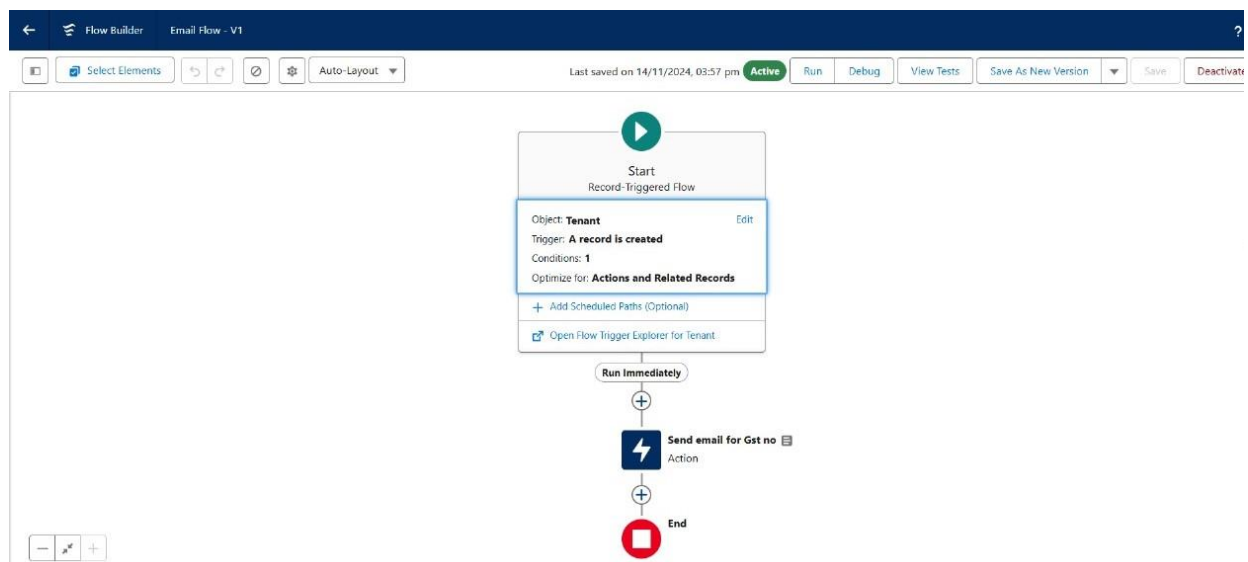
Create Flows

To automate complex business processes by orchestrating and automating sequences of tasks, data manipulations, and user interactions.

Activity: Create a Record Triggered flow on tenant Object

Whenever tenant record is created and the GST No field in tenant Object is empty a mail should be sent to the tenant requesting the GST No.

- 1) To create a flow, click on setup==> Flows ==> Click on New Flow==>Select Record Triggered Flow
- 2) In Trigger the flow when Select A record is created
- 3) Select Condition required All Conditions are met (AND)
- 4) Select Field - GST_No__c, Operator - Is Null, Value - True.
- 5) Optimize the Flow for: Actions and Related Records.



Note: Similarly, Creating flow for schedule flow on lease tracking.

Apex Triggers

A trigger is a set of Apex code that runs before or after DML(Data Manipulation Language) events.

Activity: Apex Trigger to send an email if the tenant has not paid 50 Percent of Total Rent

- 1) Click on the gear icon and click on the developer console.
- 2) Click on file select New Apex Trigger
- 3) Name- leasetrackingtrigger, Object —> Lease_Tracking__c
- 4) Use Event - After insert and After Update and Use Trigger Context Variables as IsAfter and IsUpdate.

CODE SNIPPET:

```
trigger leasetrackingtrigger on Lease_Tracking__c (After insert,After update) {  
    if(trigger.isAfter && Trigger.IsUpdate)  
    {  
        LeaseTrackingTriggerHandler.method1(trigger.old);  
    }  
}
```

- 1) Create an apex class and Name it LeaseTrackingTriggerHandler

CODE SNIPPET:

```
public class LeaseTrackingTriggerHandler {  
    public static void method1(List<Lease_Tracking__c> lt1)  
    {  
        for(Lease_Tracking__c lt2: lt1 )
```

```

{
    if(lt2.Amount_to_be_paid__c > (lt2.Total_rent_Yearly__c)/2)
    {
        Messaging.SingleEmailMessage M = New
Messaging.SingleEmailMessage();

        List<String> ToADD = New List<String>{lt2.Email_id__c};

        M.setToAddresses(ToADD);

        M.setSubject('Regarding the Pending Rent');

        M.setPlainTextBody('Hello, This is an Reminder for you to
complete your due rent by the end this month, your due rent thatneeds
to be paid is' +lt2.Amount_to_be_paid__c;

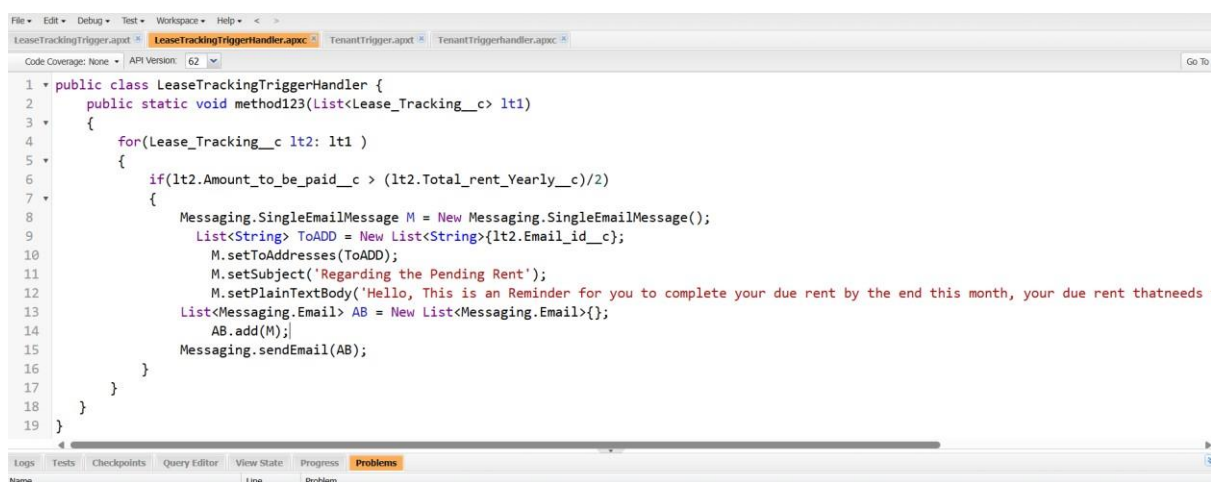
        List<Messaging.Email> AB = New List<Messaging.Email>{};

        AB.add(M);

        Messaging.sendEmail(AB);

    }
}
}
}

```



```

1 public class LeaseTrackingTriggerHandler {
2     public static void method123(List<Lease_Tracking__c> lt1)
3     {
4         for(Lease_Tracking__c lt2: lt1 )
5         {
6             if(lt2.Amount_to_be_paid__c > (lt2.Total_rent_Yearly__c)/2)
7             {
8                 Messaging.SingleEmailMessage M = New Messaging.SingleEmailMessage();
9                 List<String> ToADD = New List<String>{lt2.Email_id__c};
10                M.setToAddresses(ToADD);
11                M.setSubject('Regarding the Pending Rent');
12                M.setPlainTextBody('Hello, This is an Reminder for you to complete your due rent by the end this month, your due rent thatneeds
13                List<Messaging.Email> AB = New List<Messaging.Email>{};
14                AB.add(M);
15                Messaging.sendEmail(AB);
16            }
17        }
18    }
19 }

```

Asynchronous Apex

This approach is designed to handle long-running processes, heavy computations, or tasks that should not block user interactions.

Activity: Schedule Apex

Delete the Tenant Records Monthly whose Status Of Possession is closed.

- 1) Create a class with name tenantschedulable
- 2) Give extension Schedulable to the class.
- 3) Open the Anonymous Window.
- 4) Schedule the class

```
tenantschedulable a = new tenantschedulable();  
string cron = '0 0 0 1 * ? *';  
system.schedule('Delete the records monthly', cron, a);
```

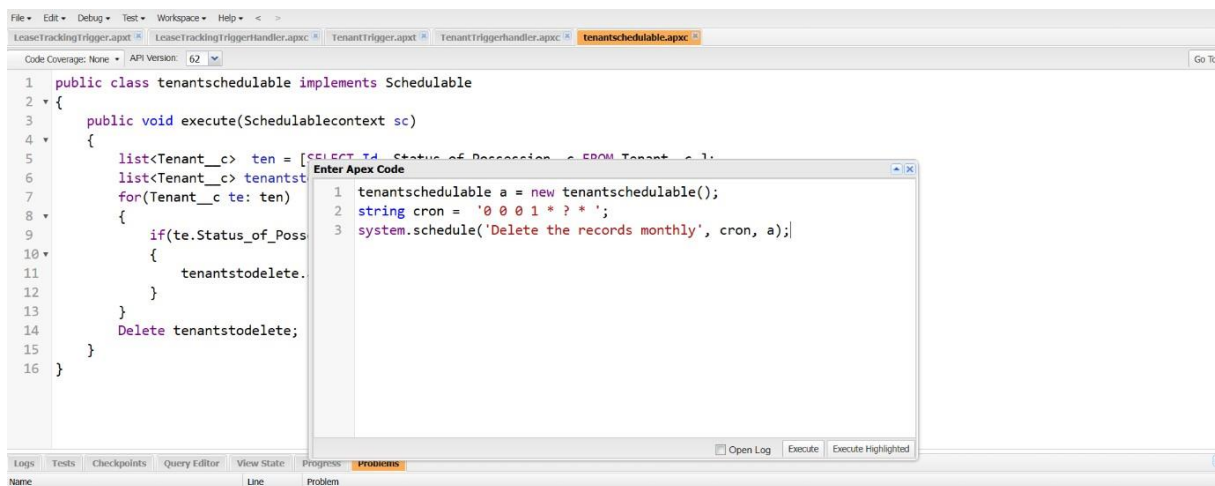
CODE SNIPPET

```
public class tenantschedulable implements Schedulable  
{  
    public void execute(Schedulablecontext sc)  
    {  
        list<Tenant__c> ten = [SELECT Id, Status_of_Possession__c  
FROM Tenant__c];  
        list<Tenant__c> tenantstodelete = New List<Tenant__c>()  
        for(Tenant__c te: ten)  
        {  
            if(te.Status_of_Possession__c == 'Closed'){
```

```

        tenantstodelete.add(te);
    }
}
Delete tenantstodelete;
}
}

```



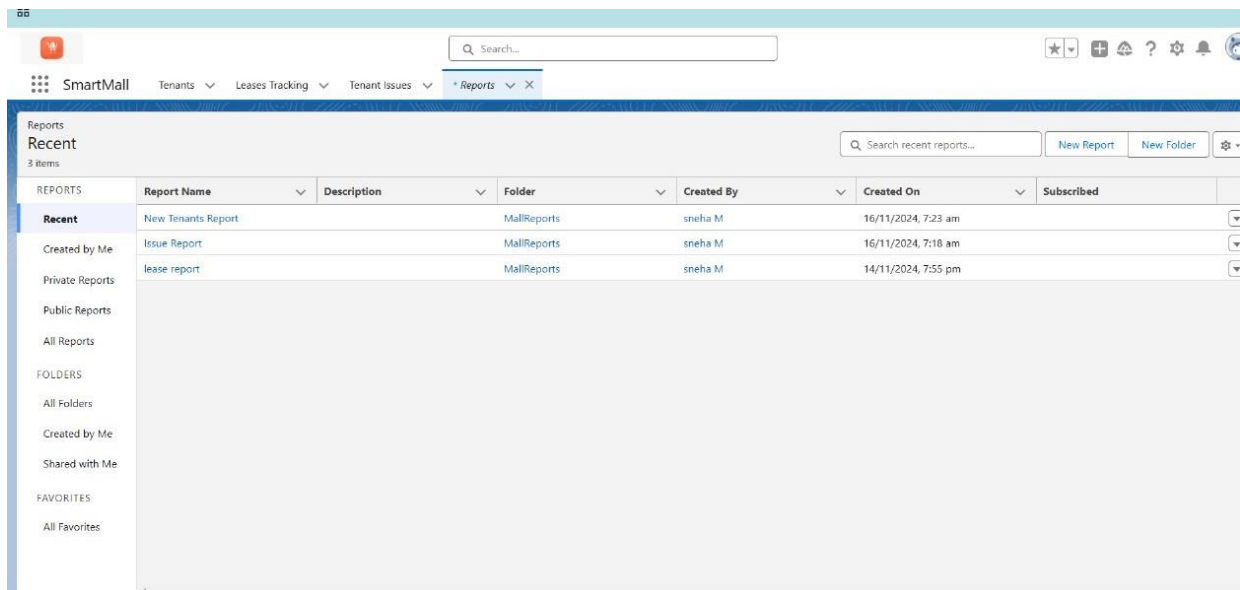
Create Reports and Dashboards

Salesforce Reports and Dashboards are powerful tools that empower users to visualize and analyze data within the Salesforce platform. They play a crucial role in providing insights, monitoring performance, and making informed business decisions.

Activity: Create a Report of lease Management Records

The Manager needs a report which shows the tenant and their joining date and their Remaining payment details and also group this by date of Registration, and make a bucket list of remaining amount as greater than 1000000 as red, less than 1000 and greater than 500000 as blue and less than equal to 500000 as yellow.

- 1) Create a new Folder and name it as MallReports
- 2) Click On new report ==> Select object Activities with LeaseTracking ==> Click on start report.
- 3) Click on the Amount to be paid column and click on bucket this list and name it as Remaining amount.
- 4) Save the report named as lease report and Save it in MallReports.



The screenshot shows the 'Reports' section of the SmartMall application. It displays a table of recent reports with the following columns: Report Name, Description, Folder, Created By, Created On, and Subscribed. The table lists three reports: 'New Tenants Report', 'Issue Report', and 'lease report', all created by 'sneha M' and saved in the 'MallReports' folder.

REPORTS	Report Name	Description	Folder	Created By	Created On	Subscribed
Recent	New Tenants Report		MallReports	sneha M	16/11/2024, 7:23 am	
Created by Me	Issue Report		MallReports	sneha M	16/11/2024, 7:18 am	
Private Reports	lease report		MallReports	sneha M	14/11/2024, 7:55 pm	

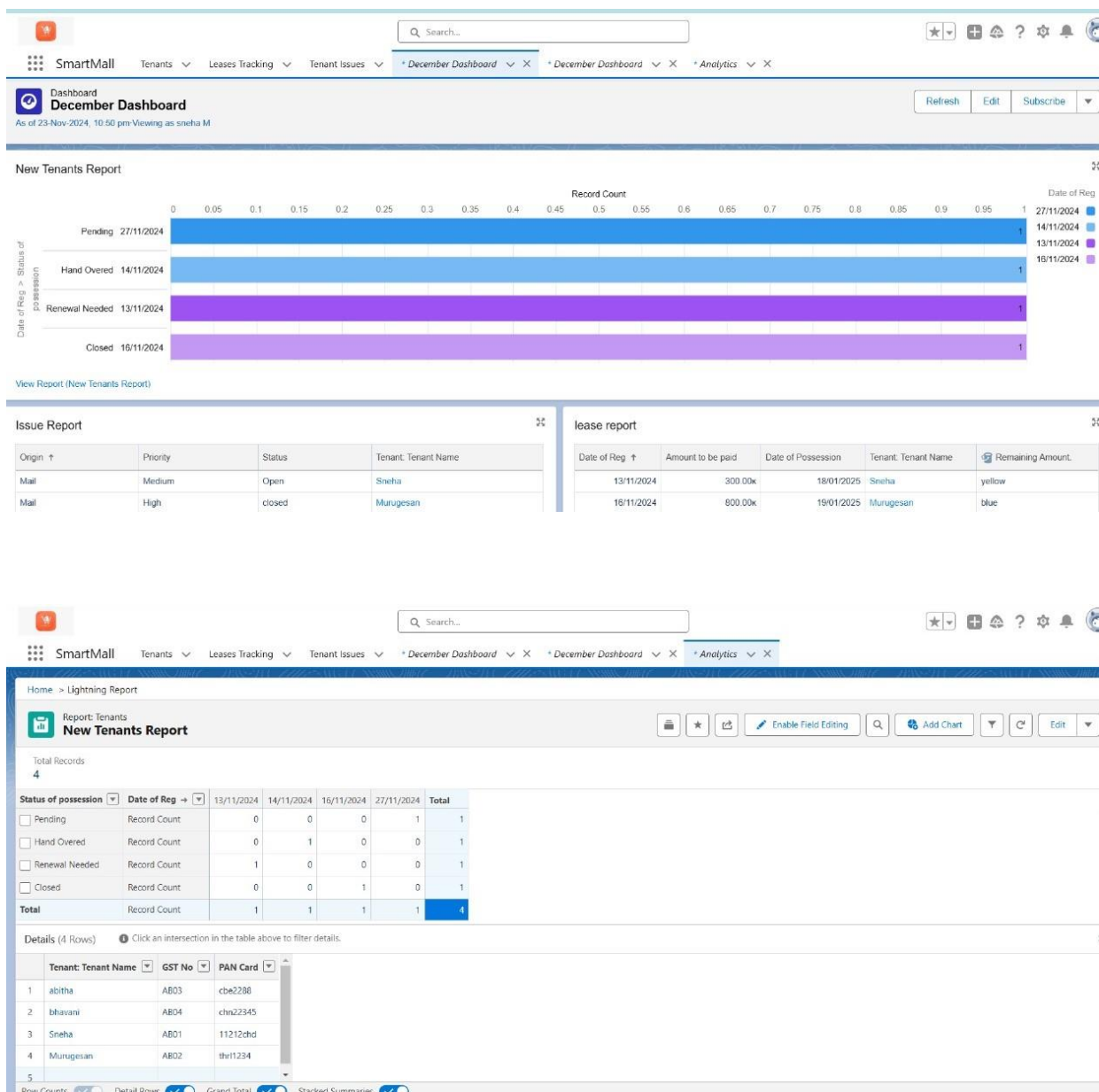
Note: Similarly, Create a Report on Issue Record and Tenant Records

Create a Dashboard

Create a Dashboard and follow the instruction below

- 1) To Create a Dashboard first create a folder to store the dashboard and save it as Mall Dashboard
- 2) Now click on New Dashboard
- 3) Enter Name - December Dashboard, select the Mall Dashboard folder and click on create.

- 4) Click on + Component and Select Tenant Details, Display as Horizontal Bar Chart, Dimensions - Height * width = 10*12.
- 5) Click on + Component and Select Issue Report, Display as Lightning Table, Dimensions - Height * width = 8*6.
- 6) Click on + Component and Select lease report, Display as Lightning Table, Dimensions - Height * width = 8*6
- 7) Click on save and Done.



Conclusion:

This CRM application for mall management has showcased the importance of a centralized system in improving operational efficiency and customer relationship management. By integrating tenant management, customer analytics, event scheduling, and promotional tools, it streamlines processes to deliver personalized shopper experiences and efficient tenant support. The system enhances communication, provides actionable insights, and drives customer satisfaction while optimizing engagement and supporting mall growth. With potential for AI-driven insights and automation, it sets the foundation for scalable CRM solutions to meet evolving retail industry demands.

Thank You..!!