



A CRM Application to Manage the Mall

College: PPG Institute of Technology

College Code: 7125

Team : Team-14757

Team Members	NM ID
Monisha J	F352BB55A6875B8A5A64ADE7B9C9C79D
Kiruthika N	A0E80D7FDA5C921BB914963A6824976E
Selvasweety A	06706A6D48928A7A27940544B2E74D24
Sandhiya R	48928C5B030EE8C86814077BF6CDC6F4

GitHub Repo: <https://github.com/kiruthikarenuka/CRM-application-to-manage-the-mall.git>

Demo Video link: <https://youtu.be/vLXd0S5rXGg?si=ZSfjOW-LerdGZvss>

1. User Story:

The project "A CRM Application to Manage the Mall" I want to have a CRM system that allows me to manage tenant details, track customer interactions, view analytics on store performance, and send targeted communications to improve operations, **So that** I can optimize tenant relationships, provide better customer service, and increase mall revenue.

2. Project Overview :

As a Mall Manager, I want a CRM application to manage the tenants, track customer interactions, and analyze store performance to enhance mall operations and improve customer experience.

Project Flow:

Milestone 1 : Salesforce developer Account Creation

Milestone 2 : Object

Milestone 3 : Tabs

Milestone 4: Create Fields and Relationships

Milestone 5: Create the Lightning App

Milestone 6: Record Insertion

Milestone 7: Create Flows

Milestone 8: Apex Triggers

Milestone 9: Asynchronous Apex

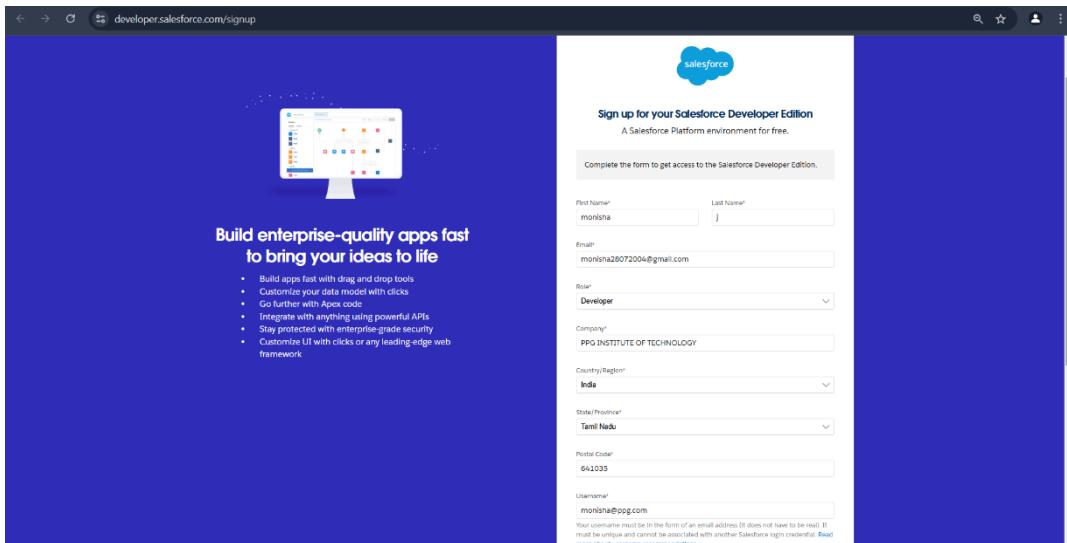
Milestone 10: Create Reports And Dashboards

Milestone 1-Salesforce developer account creation :

Activity 1:

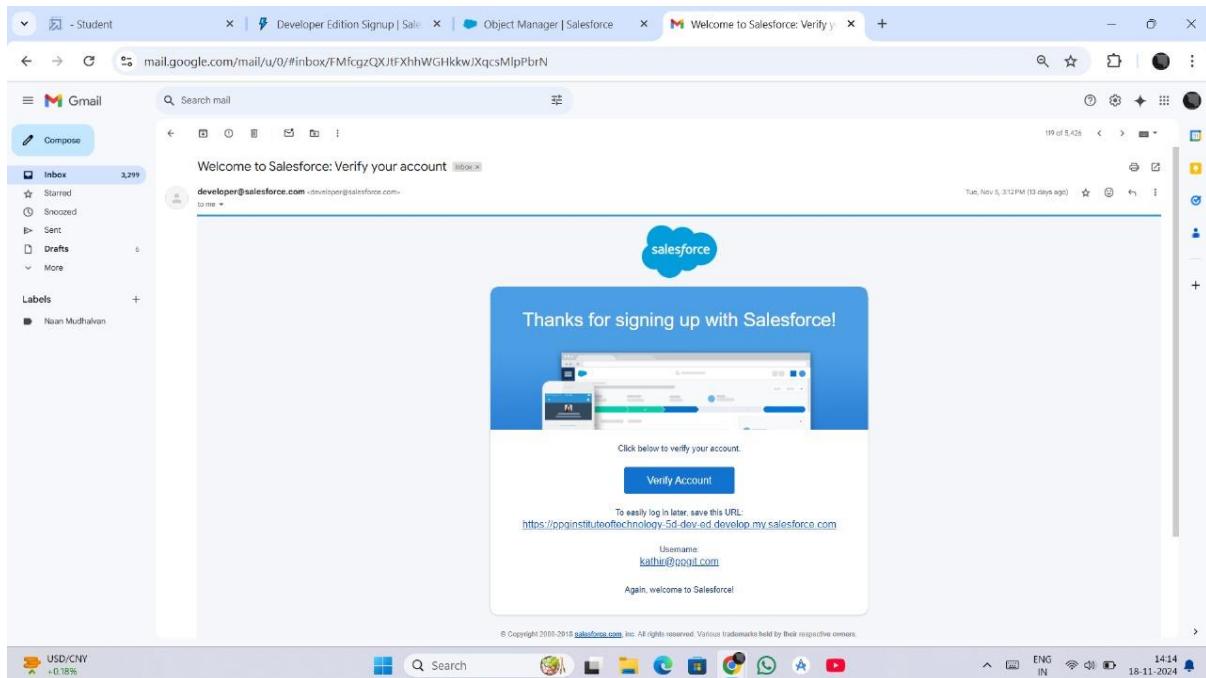
Creating Developer Account: Creating a developer org in salesforce.

1. Go to <https://developer.salesforce.com/signup>



Activity 2: Account Activation:

After signing up, I activated my Salesforce Developer Account by verifying my email. I clicked on the "Verify Account" link, set a secure password, and answered a security question. Upon completing these steps, I was redirected to the Salesforce setup page, successfully enabling access to the platform's features.



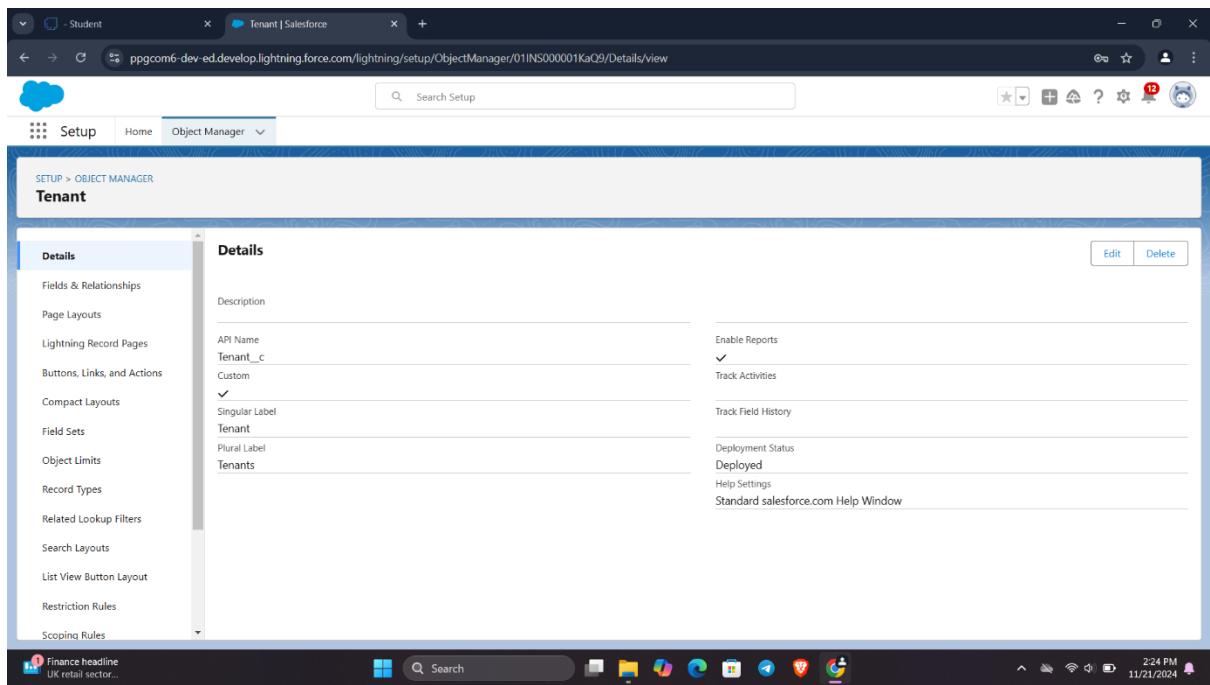
Home Page:

The screenshot shows the Salesforce Home page in the Setup interface. The left sidebar includes links for Setup Home, Service Setup Assistant, Multi-Factor Authentication Assistant, Release Updates, Lightning Experience Transition Assistant, Salesforce Mobile App, Lightning Usage, Optimizer, Administration, and Users. The main content area features three cards: "Get Started with Einstein Bots", "Mobile Publisher", and "Real-time Collaborative Docs".

Milestone 2-Object:

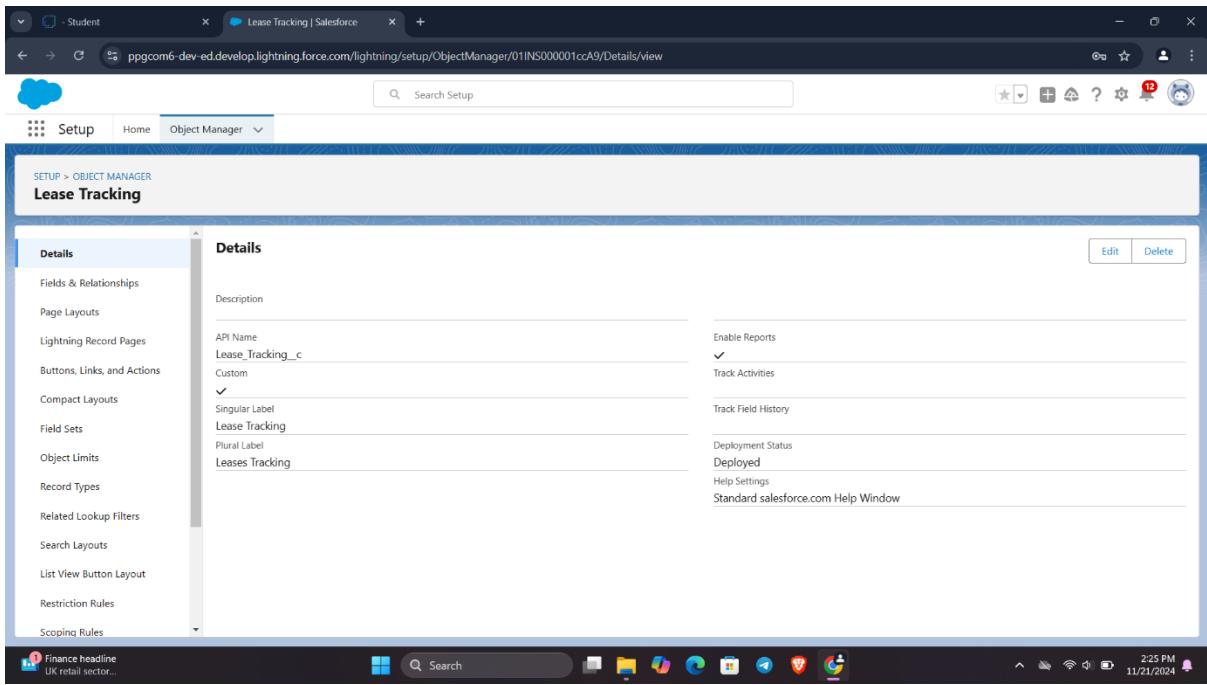
For the " A CRM Application to Manage the Mall " project, we use custom objects in Salesforce to manage the data effectively. Below are the steps to create and configure the required objects for the project.

1. Tenant Object:



The **Tenant** object can serve a key role in helping to manage the various businesses or retail establishments that are housed within the mall. The purpose of the **Tenant** object would be to track and manage detailed information about the individual stores, brands, or service providers operating within the mall.

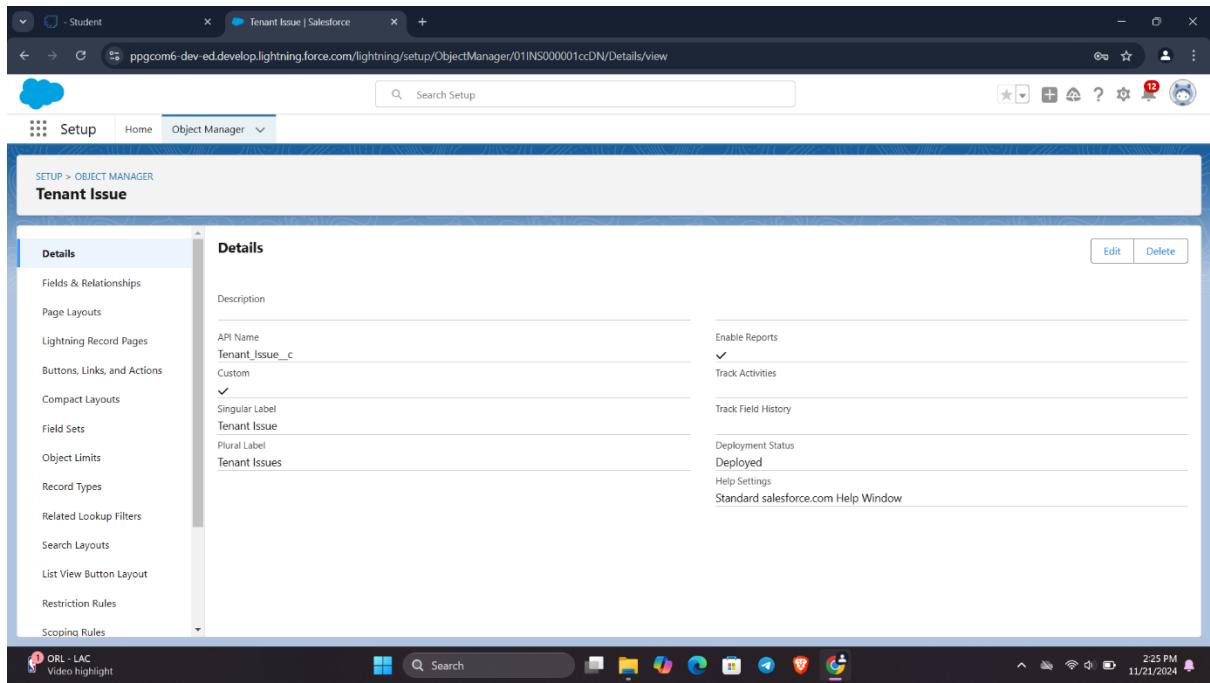
2. Lease tracking Object:



The **Lease Tracking** object plays a crucial role in managing the contractual agreements between the mall management and its tenants. The **Lease Tracking** object helps ensure that all lease-related details are properly recorded, monitored, and managed, providing visibility into each tenant's lease terms, payments, and compliance.

3. Tenant issue Object:

The **Tenant Issue** object is designed to manage and track all reported issues or concerns raised by tenants within the mall. This object provides a centralized system for mall management to log, categorize, prioritize, and resolve tenant issues efficiently. The goal is to streamline the issue resolution process, improve tenant satisfaction, and maintain operational efficiency within the mall.



Milestone 3-Tabs:

1. Custom Tab for the Tenant Object:

The custom tab for the **Tenant Object** will be integrated into the Salesforce Lightning interface, improving user experience and providing quick access to tenant details such as tenant name, lease details, contact information, and store location.

The screenshot shows the Salesforce Setup interface with the 'Custom Tabs' page open. The left sidebar has 'User Interface' expanded, with 'Tabs' selected. The main content area is titled 'Custom Tabs' and contains sections for 'Custom Object Tabs', 'Web Tabs', 'Visualforce Tabs', and 'Lightning Component Tabs'. Under 'Custom Object Tabs', there is a table with three rows:

Action	Label	Tab Style	Description
Edit Del	Leases Tracking	Car	
Edit Del	Tenant Issues	Guitar	
Edit Del	Tenants	Bell	

Below each section is a note: 'Custom Object tabs look and behave like the standard tabs provided with Salesforce.', 'No Web Tabs have been defined.', 'No Visualforce Tabs have been defined.', and 'No Lightning Component Tabs have been defined.' The top right corner has a 'Help for this Page' link.

The screenshot shows the Salesforce Setup interface with the 'Tenants' custom tab details page open. The left sidebar has 'User Interface' expanded, with 'Tabs' selected. The main content area is titled 'Custom Object Tab Tenants' and contains a 'Custom Tab Definition Detail' table:

Tab Label	Tenants	Edit	Delete
Object	Tenant		
Description		Splash Page	Custom Link
Created By	monisha J, 19/11/2024, 12:26 pm	Modified By	monisha J, 19/11/2024, 12:26 pm

At the bottom of the page, there is a JavaScript code snippet: 'javascript:srcUp(%27%2F01rNS00000CZpl%3fsetupid%3DCustomTabs%26udtp%3Dp1%27);'. The top right corner has a 'Help for this Page' link.

As part of our Salesforce-based CRM application for mall management, two critical components are **Lease Tracking** and **Tenant Issues**. These modules will allow mall managers and staff to track lease agreements and manage tenant-related issues effectively.

The screenshot shows the Salesforce Setup interface with the 'Tabs' page selected. A custom object tab named 'Tenant Issues' has been created. The tab's definition detail shows it is based on the 'Tenant Issue' object, labeled 'Tenant Issues', and is styled as a 'Guitar' tab.

Custom Tab Definition Detail
Tab Label: Tenant Issues
Object: Tenant Issue
Description:
Created By: monisha.j, 19/11/2024, 12:27 pm
Modified By: monisha.j, 19/11/2024, 12:27 pm

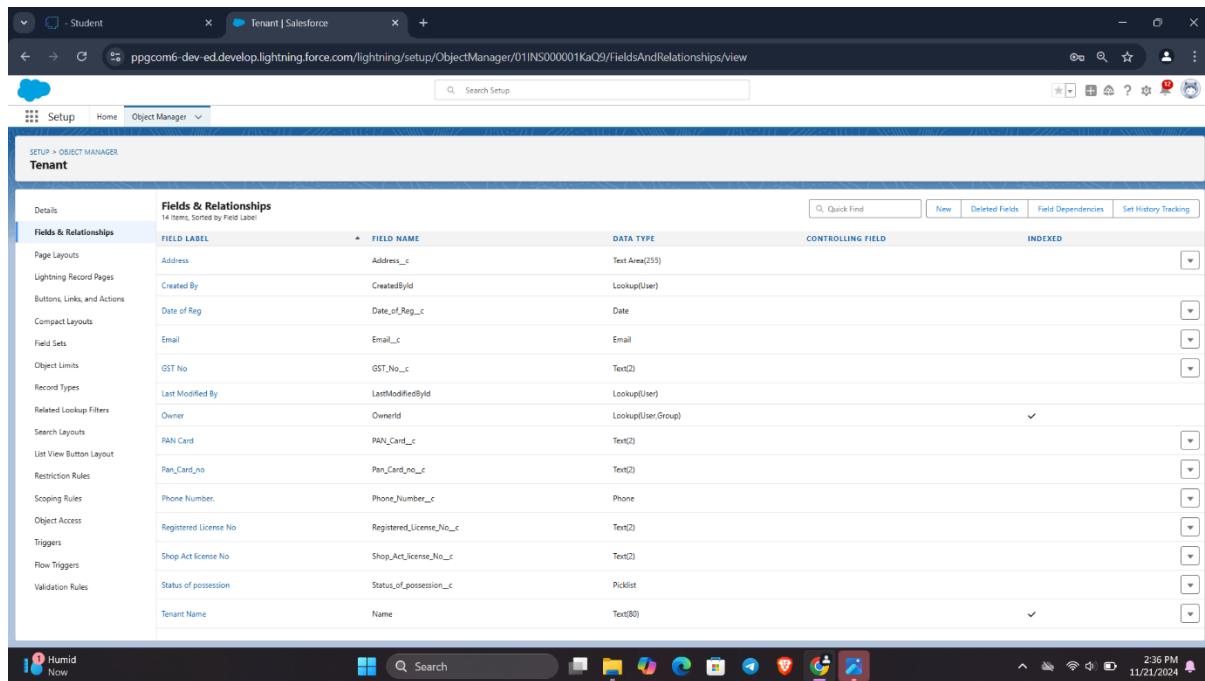
The screenshot shows the Salesforce Setup interface with the 'Tabs' page selected. A custom object tab named 'Leases Tracking' has been created. The tab's definition detail shows it is based on the 'Lease Tracking' object, labeled 'Leases Tracking', and is styled as a 'Car' tab.

Custom Tab Definition Detail
Tab Label: Leases Tracking
Object: Lease Tracking
Description:
Created By: monisha.j, 19/11/2024, 12:26 pm
Modified By: monisha.j, 19/11/2024, 12:26 pm

This document outlines the steps to create custom tabs for **Lease Tracking** and **Tenant Issues**, enhancing the usability of the CRM system.

Milestone 4- Create Fields and Relationships:

In our Salesforce-based CRM application designed for mall management, it's essential to customize the system with specific fields and relationships that allow us to effectively manage key data. This includes tenant information, lease agreements, maintenance requests, and other entities relevant to mall operations. By creating the right fields and relationships, we can ensure the system captures and organizes all necessary data for efficient mall management.



The screenshot shows the Salesforce Object Manager interface for the 'Tenant' object. On the left, a sidebar lists various setup options like Details, Fields & Relationships, Page Layouts, Lightning Record Pages, etc. The main area is titled 'Fields & Relationships' and displays a table of 14 items, sorted by Field Label. The table columns include FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The fields listed are:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Address	Address_c	Text Area(255)		
Created By	CreatedById	Lookup(User)		
Date of Reg	Date_of_Reg_c	Date		
Email	Email_c	Email		
GST No	GST_No_c	Text(2)		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User/Group)		✓
PAN Card	PAN_Card_c	Text(2)		
Pan_Card_no	Pan_Card_no_c	Text(2)		
Phone Number	Phone_Number_c	Phone		
Registered License No	Registered_License_No_c	Text(2)		
Shop Act license No	Shop_Act_license_No_c	Text(2)		
Status of possession	Status_of_possession_c	Picklist		
Tenant Name	Name	Text(80)		✓

The **Tenant** object represents businesses that lease space in the mall. Custom fields for this object can include tenant details like name, lease information, and contact details.

The screenshot shows the Salesforce Object Manager interface for the 'Tenant Issue' object. The left sidebar lists various setup categories like Details, Fields & Relationships, Page Layouts, etc. The main content area displays the 'Fields & Relationships' section with 12 items. The table columns include FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. Key fields shown include Created By (CreatedBy), Date (Date__c), Email id (Email_id__c), Issue Related to (Issue_Related_to__c), Issues (Name), Last Modified By (LastModifiedBy), Origin (Origin__c), Phone Number (Phone_Number__c), Priority (Priority__c), Related tenant (Related_tenant__c), Status (Status__c), and Subject (Subject__c). The 'INDEXED' column indicates which fields are indexed for search.

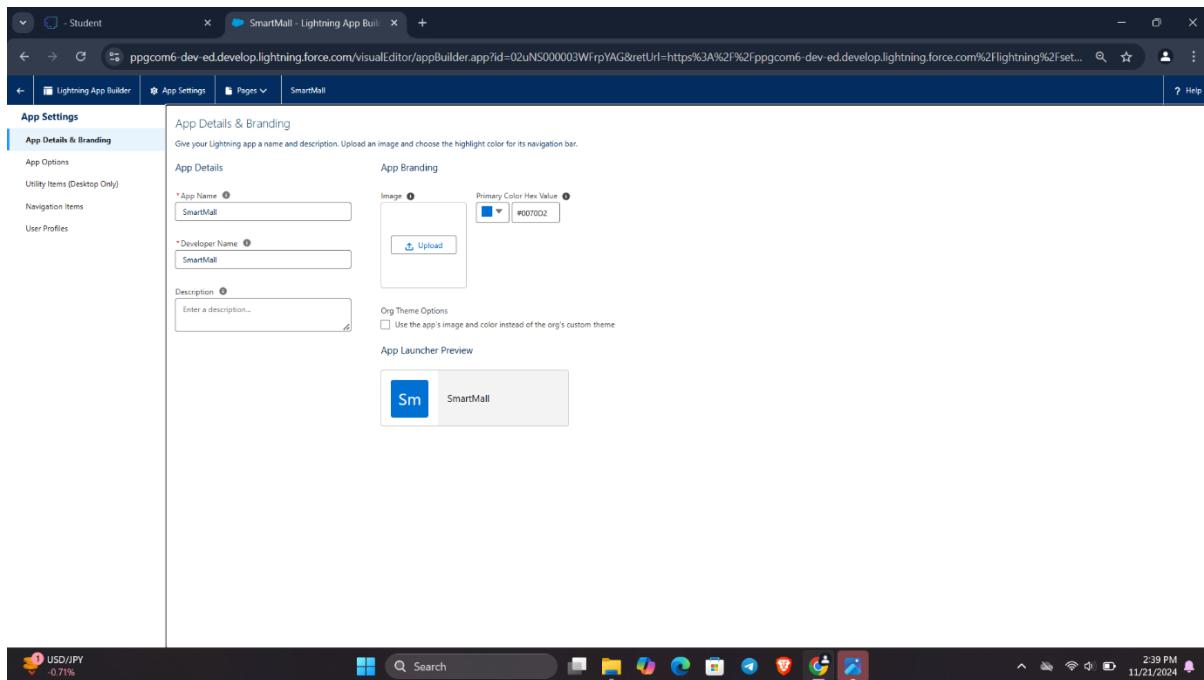
The screenshot shows the Salesforce Object Manager interface for the 'Lease Tracking' object. The left sidebar lists various setup categories. The main content area displays the 'Fields & Relationships' section with 11 items. The table columns include FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. Key fields shown include Amount Paid (Amount_Paid__c), Amount to be paid (Amount_to_be_paid__c), Created By (CreatedBy), Date of Possession (Date_of_Possession__c), Email id (Email_id1__c), End Date of Possession (End_Date_of_Possession__c), Last Modified By (LastModifiedBy), Lease Tracking No (Name), Related Tenant (Related_Tenant__c), Total rent(Yearly) (Total_rent_Yearly__c), and Total Year of Contract (Total_Year_of_Contract__c). The 'INDEXED' column indicates which fields are indexed for search.

The **Lease Agreement** object tracks the details of each individual lease agreement between the mall and the tenant. It links the **Tenant** object and contains specific lease terms.

Milestone 5- Create the Lightning App:

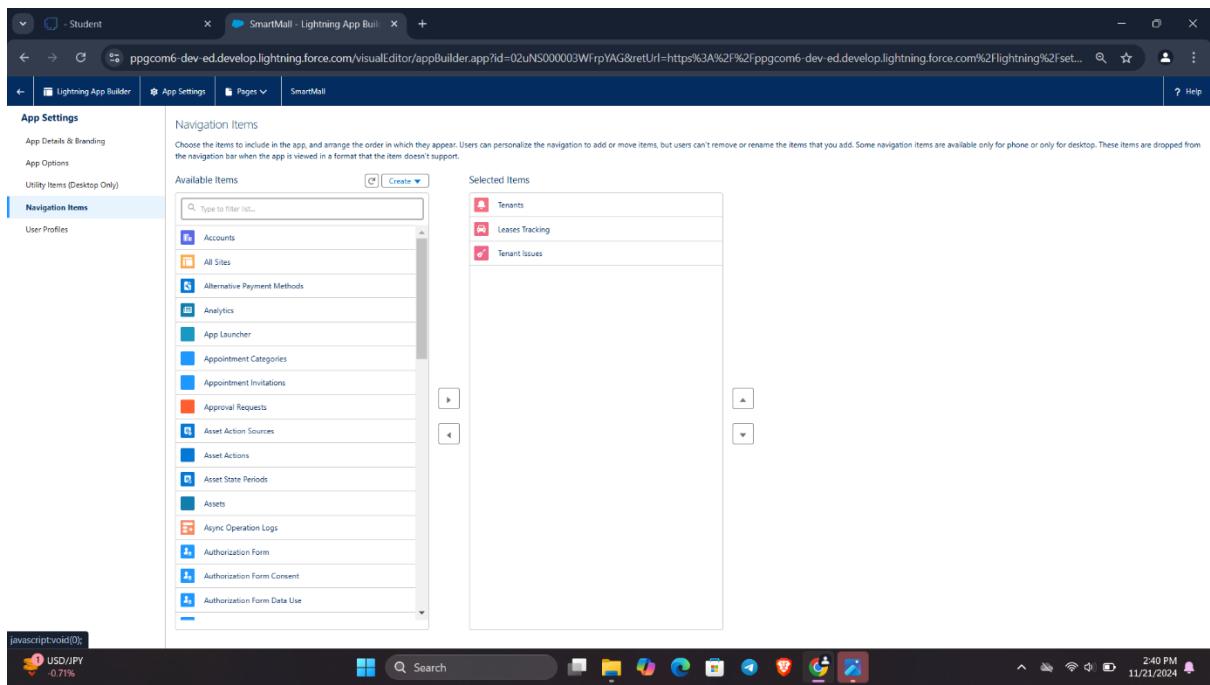
1.App details & branding:

In Salesforce allows you to build a custom application tailored to the specific needs of your CRM project for managing the mall. This includes configuring the app's details, branding, and layout to ensure it meets the requirements of users, such as property managers, finance teams, and mall administrators.



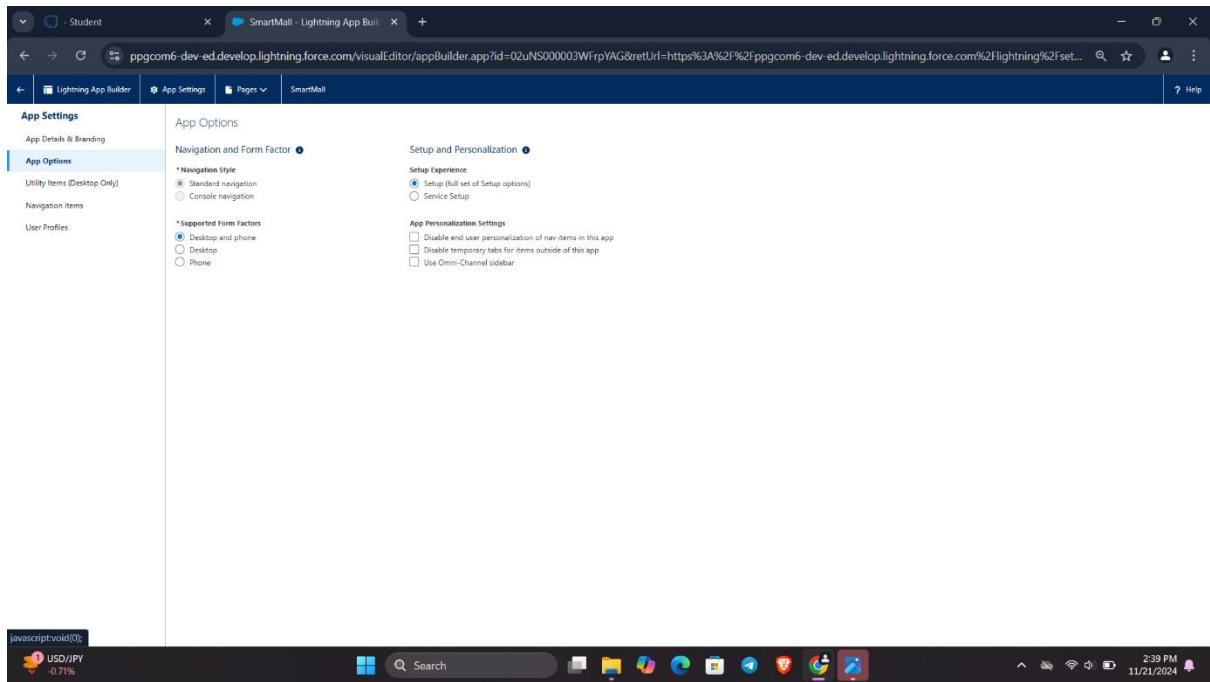
2.Navigation items:

Crucial to the app's usability, as they define how users will access different sections and features within the app. For your **Mall CRM** app, you'll want to configure the navigation so that it aligns with the specific tasks and processes that users will be performing, such as managing tenants, leases, payments, and mall performance.



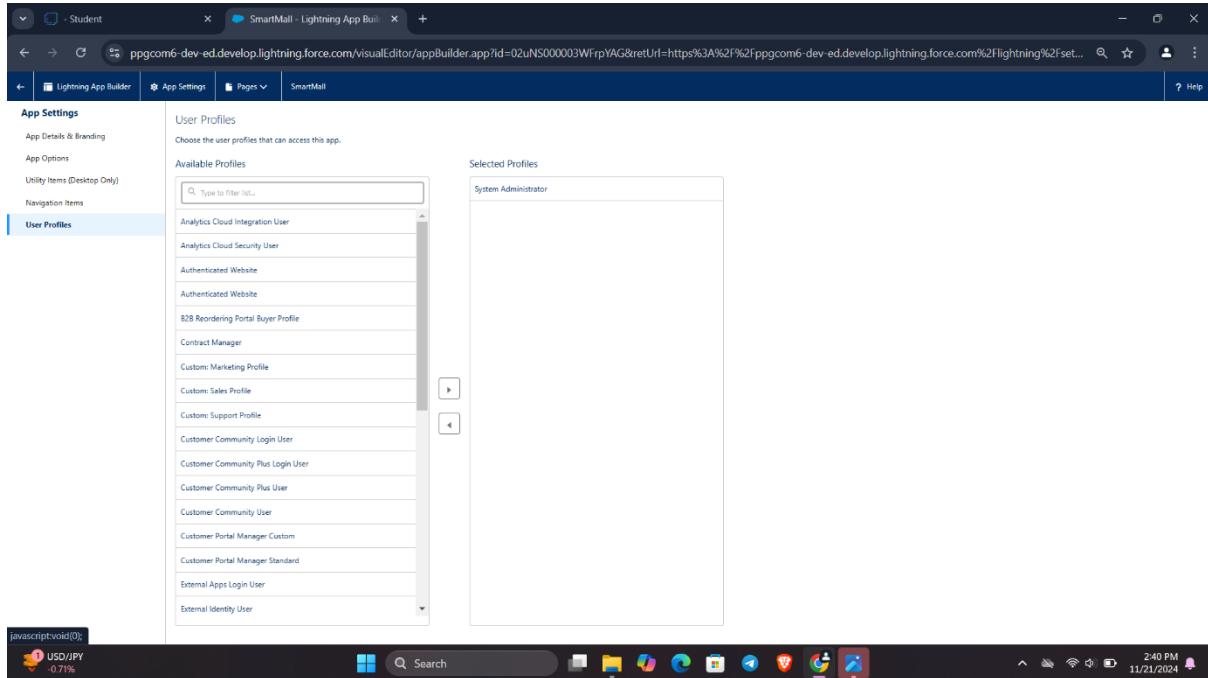
3.App option:

App options are settings and configurations that control how your Lightning app behaves and appears to users. These options allow you to fine-tune the user experience, defining app features such as app visibility, user access, default landing pages, branding, and more.



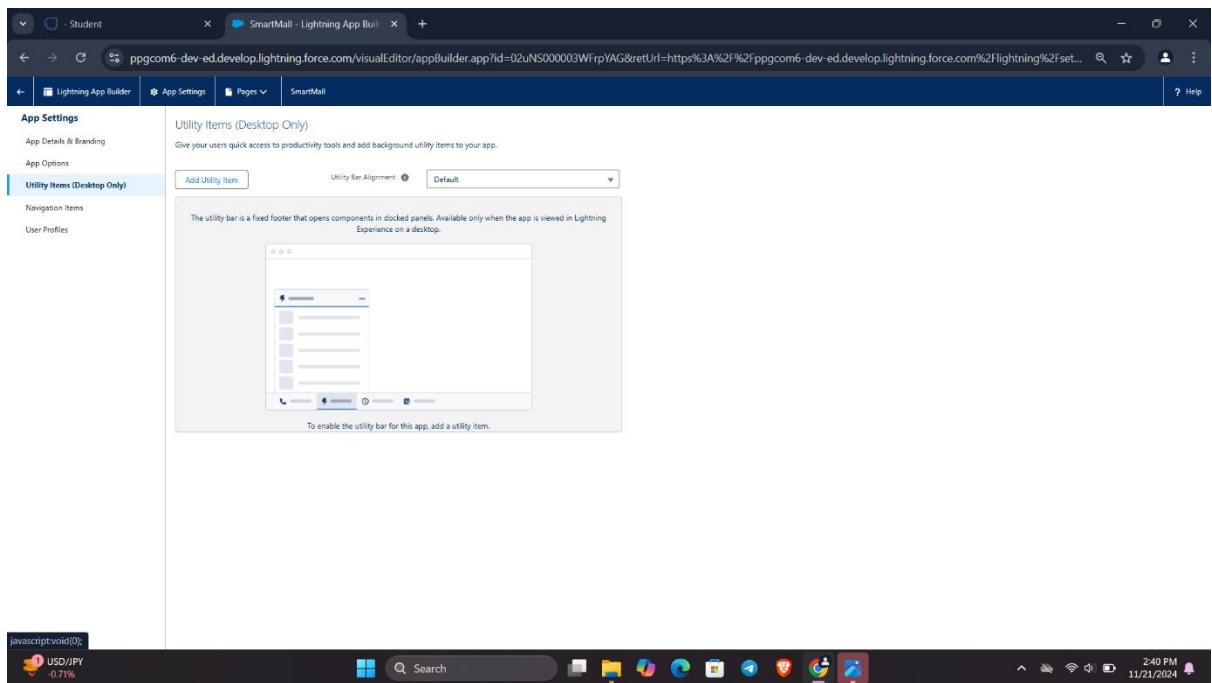
4.User profiles:

It control the permissions and access rights of users within an app. Profiles define what a user can see and do in the app, based on their role. For your Mall CRM app , you will need to create and configure profiles that ensure the right people have the appropriate access to the app's features, records, and data.



5.Utility items:

It special components that can be added to the Lightning App to enhance functionality and improve user experience. These utility items provide quick access to frequently used tools or features within your app, allowing users to perform actions efficiently without navigating away from their current page.



Milestone 6- Record Insertion:

In the Salesforce CRM application for mall management, record insertion refers to adding new records to objects such as Tenant, Lease Agreement, Maintenance Request, Parking Spot, and other key components of the system. Efficient record insertion ensures that all relevant information about tenants, leases, and issues is captured correctly, making it easier to manage mall operations.

The screenshot shows the Salesforce Object Manager interface. The top navigation bar includes tabs for 'Setup', 'Home', and 'Object Manager'. The main title is 'SETUP > OBJECT MANAGER' followed by 'Tenant'. On the left, a sidebar lists various object configuration options like 'Fields & Relationships', 'Page Layouts', and 'Record Types'. The central 'Details' section displays the following fields:

Field	Value
Description	
API Name	Tenant__c
Custom	✓
Singular Label	Tenant
Plural Label	Tenants
Enable Reports	✓
Track Activities	
Track Field History	
Deployment Status	Deployed
Help Settings	Standard salesforce.com Help Window

At the bottom right of the details section are 'Edit' and 'Delete' buttons. The status bar at the bottom of the browser window shows '2:24 PM 11/21/2024'.

This document outlines various methods for record insertion within Salesforce, including manual entry via the UI, bulk data upload using tools like Data Loader, and programmatic insertion using Apex code. This flexibility enables efficient data entry, whether for a single record or in bulk.

The screenshot shows the Salesforce Object Manager interface. The top navigation bar includes tabs for 'Setup', 'Home', and 'Object Manager'. The main title is 'SETUP > OBJECT MANAGER' followed by 'Lease Tracking'. On the left, a sidebar lists various object configuration options like 'Fields & Relationships', 'Page Layouts', and 'Record Types'. The central 'Details' section displays the following fields:

Field	Value
Description	
API Name	Lease_Tracking__c
Custom	✓
Singular Label	Lease Tracking
Plural Label	Leases Tracking
Enable Reports	✓
Track Activities	
Track Field History	
Deployment Status	Deployed
Help Settings	Standard salesforce.com Help Window

At the bottom right of the details section are 'Edit' and 'Delete' buttons. The status bar at the bottom of the browser window shows '2:25 PM 11/21/2024'.

The screenshot shows the Salesforce Object Manager interface for the 'Lease Tracking' object. The left sidebar lists various configuration options: 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, and Scoping Rules. The main 'Details' tab is selected, showing the following configuration details:

- Description: [empty]
- API Name: Lease_Tracking_c
- Custom: ✓
- Singular Label: Lease Tracking
- Plural Label: Leases Tracking
- Enable Reports: ✓
- Track Activities: ✓
- Track Field History: [empty]
- Deployment Status: Deployed
- Help Settings: Standard salesforce.com Help Window

The status bar at the bottom indicates 'Finance headline UK retail sector...' and the system is connected to 'ppgcom6 - Student'. The date and time shown are 11/21/2024 2:25 PM.

The screenshot shows the Salesforce Object Manager interface for the 'Tenant Issue' object. The left sidebar lists the same configuration options as the previous screenshot. The main 'Details' tab is selected, showing the following configuration details:

- Description: [empty]
- API Name: Tenant_Issue_c
- Custom: ✓
- Singular Label: Tenant Issue
- Plural Label: Tenant Issues
- Enable Reports: ✓
- Track Activities: [empty]
- Track Field History: [empty]
- Deployment Status: Deployed
- Help Settings: Standard salesforce.com Help Window

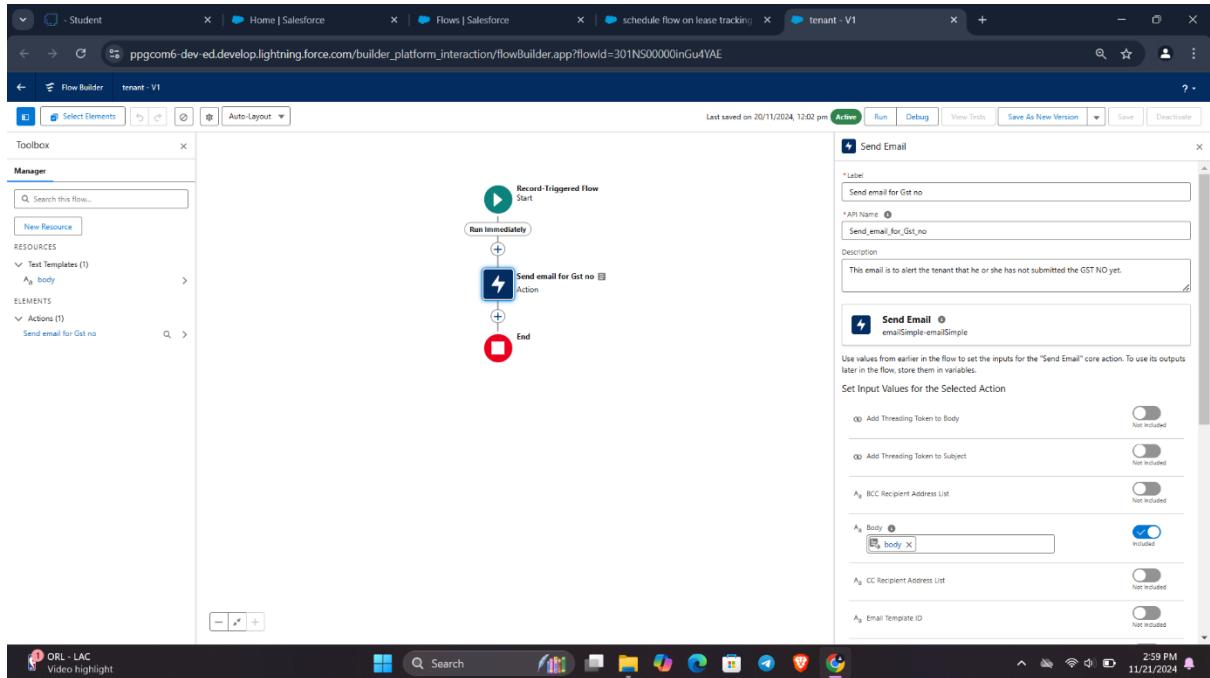
The status bar at the bottom indicates 'ORL - LAC Video highlight' and the system is connected to 'ppgcom6 - Student'. The date and time shown are 11/21/2024 2:25 PM.

Milestone 7- Create Flows:

1. Email for tenant:

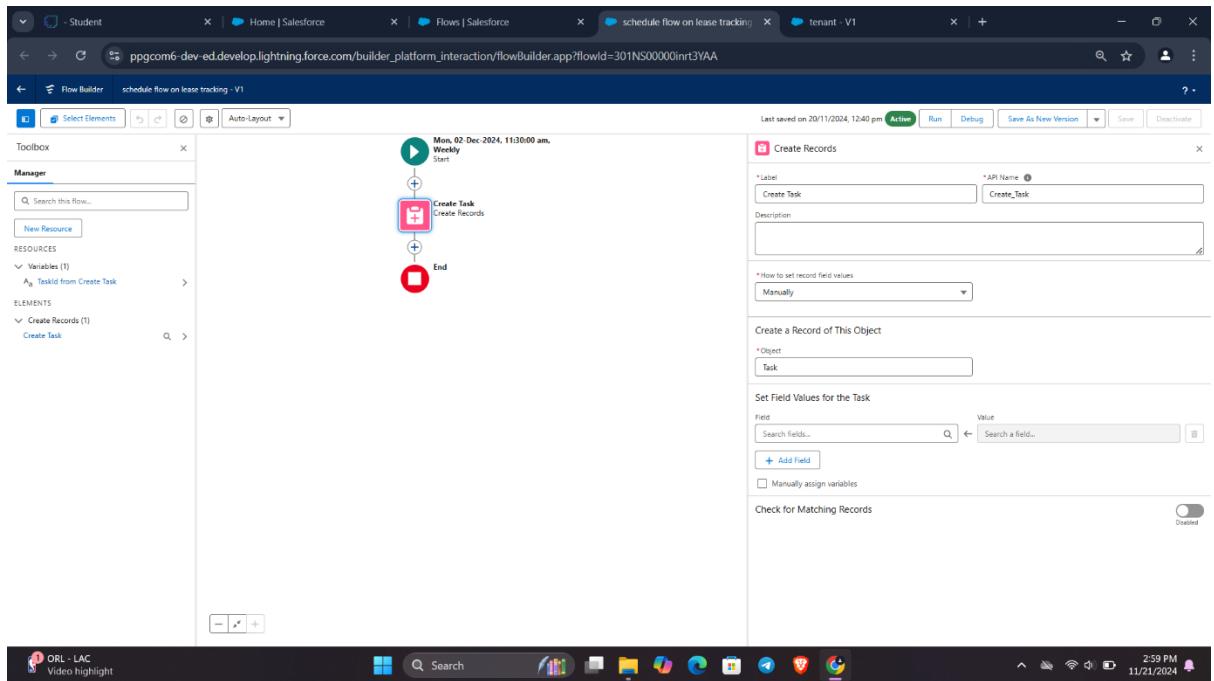
This document outlines various methods for record insertion within Salesforce, including manual entry via the UI, bulk data upload using tools

like **Data Loader**, and programmatic insertion using **Apex** code. This flexibility enables efficient data entry, whether for a single record or in bulk.



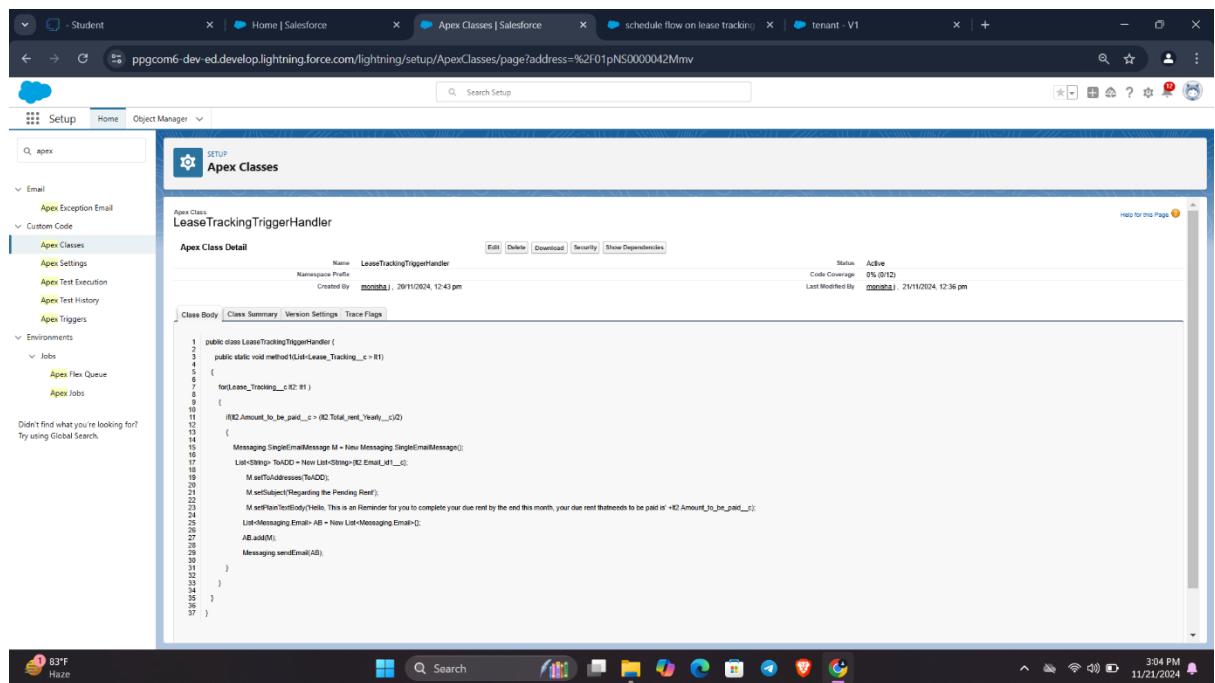
2. Schedule flow on lease tracking:

In the CRM application for mall management, it's essential to keep tenants informed about key events such as lease renewal reminders, maintenance schedules, or special announcements. Salesforce **Flows** can be used to automate the process of sending emails to tenants, ensuring timely and efficient communication.



Milestone 8-Apex Triggers:

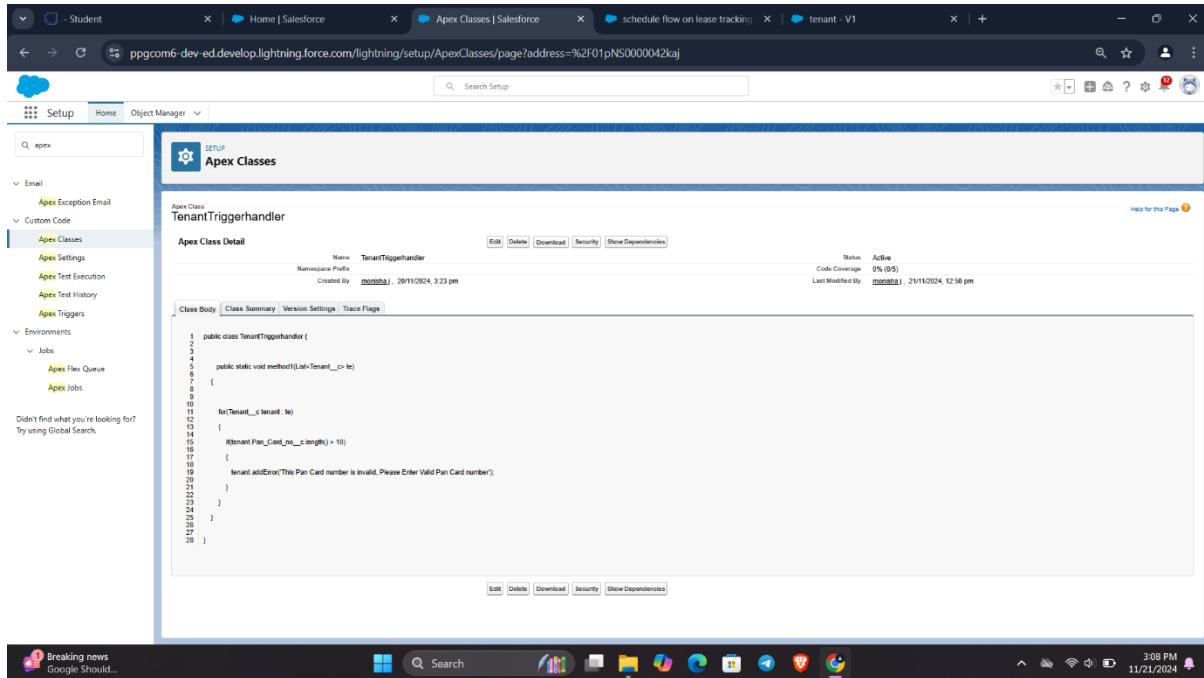
1. LeaseTrackingTriggerHandler:



This handler is responsible for managing operations related to lease records, such as creating, updating, or deleting leases.

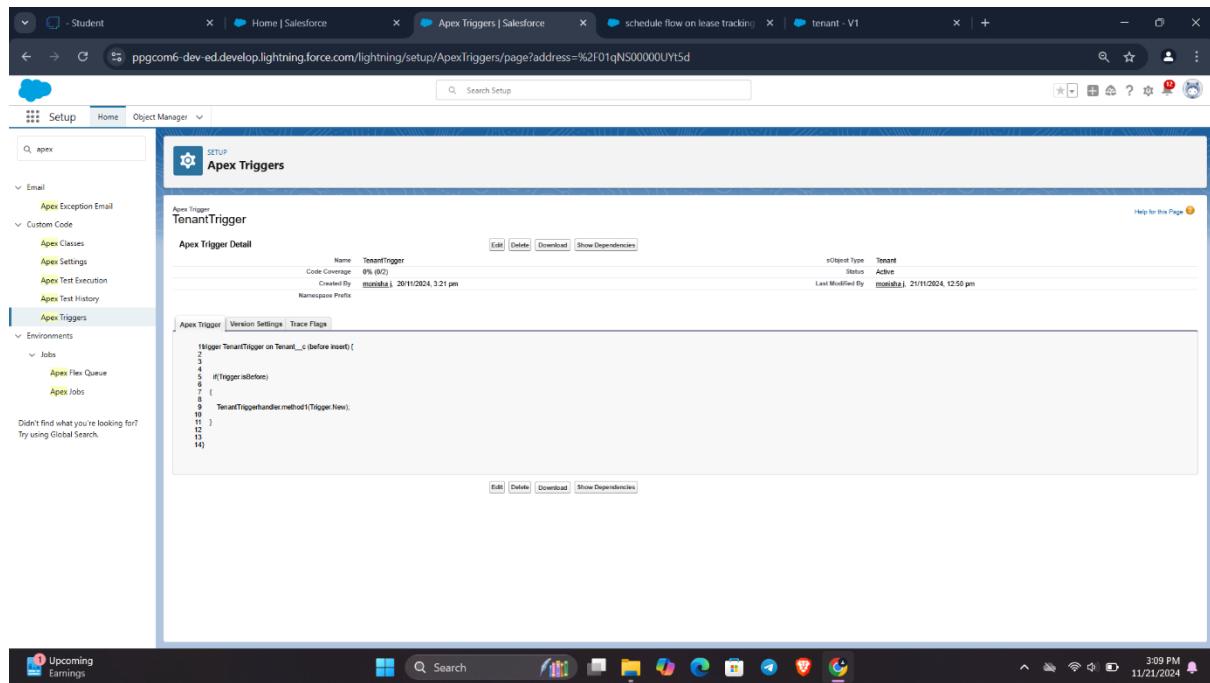
2. TenantTriggerHandler:

This handler class processes all the operations triggered by the `TenantTrigger`. It will have methods to handle the insert, update, and delete of Tenant records.



3. TenantTrigger:

This is the main trigger that will invoke the **TenantTriggerHandler**. It will execute upon changes to Tenant records, such as inserts, updates, or deletions.



Milestone 9 - Asynchronous Apex:

Asynchronous Apex can help to manage long-running or time-sensitive processes efficiently. This is especially useful for handling scheduled tasks, batch processing, and future methods that should not block the main user process.

1.Tenantschedulable:

Tenantschedulable could be used to schedule and manage tasks like sending reminder notifications to tenants, updating lease statuses, generating reports, or even synchronizing external systems.

The screenshot shows the Salesforce Setup interface under the Apex Classes section. The page title is "Apex Classes" and the specific class is "tenantschedulable". The code editor contains the following Apex code:

```

1 public class tenantschedulable implements Schedulable
2 {
3     public void execute(SchedulableContext sc)
4     {
5         List<Tenant__c> lsn = [SELECT M.Status_of_Possession__c FROM Tenant__c];
6         Iterator<Tenant__c> iter = lsn.iterator();
7         while(iter.hasNext())
8         {
9             Tenant__c item = iter.next();
10            if(item.Status_of_Possession__c == 'Closed')
11            {
12                iter.remove();
13            }
14        }
15        for(Tenant__c ls : lsn)
16        {
17            if(ls.Status_of_Possession__c == 'Closed')
18            {
19                tenantToDelete.add(ls);
20            }
21        }
22        tenantToDelete.delete();
23    }
24 }
25 Delete tenantToDelete;
26
27
28
29
30
31
32
33

```

Milestone 10- Create Reports And Dashboards:

The screenshot shows the Salesforce Reports page titled "Report: Tenants with Tenant Issues". The report displays a table with 10 total records, listing Tenant Names and their corresponding Tenant Issue IDs. The table has two columns: "Tenant: Tenant Name" and "Tenant Issue: Issues".

Tenant: Tenant Name	Tenant Issue: Issues
1 sudharsan	TT - 000000
2 nithish	TT - 000001
3 sivahari	TT - 000002
4 dhana	TT - 000003
5 usha	TT - 000004
6 sri	TT - 000005
7 sweetly	TT - 000006
8 sandhiya	TT - 000007
9 kiruthi	TT - 000008
10 moni	TT - 000009

It critical component for providing insights and helping stakeholders make data-driven decisions.

Report. Tenants
Tenant Details

Total Records 10

	Tenant: Tenant Name
1	kiruthi
2	sweety
3	dhana
4	sandhya
5	sudharsan
6	moni
7	sri
8	usha
9	sivahari
10	nithish

In the context of your CRM for managing a Mall project, reports and dashboards will enable you to visualize key metrics like tenant activity, lease expiration dates, payment statuses, and overall performance of the mall.

Report. Tenants with Leases Tracking
lease report

Total Records 10 Total Amount to be paid 20,00,000.00

	Tenant: Tenant Name	Lease Tracking: Lease Tracking No	Amount to be paid	Date of Possession	Date of Reg
1	sudharsan	TT - 000001	2,00,000.00	31/07/2025	20/11/2024
2	dhana	TT - 000004	1,00,000.00	11/08/2025	20/11/2024
3	sivahari	TT - 000003	4,00,000.00	29/06/2025	20/11/2024
4	nithish	TT - 000002	1,00,000.00	30/07/2025	20/11/2024
5	sandhya	TT - 000000	2,00,000.00	30/07/2025	20/11/2024
6	moni	TT - 000007	2,00,000.00	01/09/2025	20/11/2024
7	usha	TT - 000005	1,00,000.00	01/12/2025	20/11/2024
8	sweety	TT - 000006	2,00,000.00	30/11/2025	20/11/2024
9	sri	TT - 000009	3,00,000.00	02/12/2025	20/11/2024
10	kiruthi	TT - 000008	2,00,000.00	01/12/2025	20/11/2024
11			20,00,000.00		

SmartMall

Recent

REPORTS

Recent

Created by Me

Private Reports

Public Reports

All Reports

FOLDERS

All Folders

Created by Me

Shared with Me

FAVORITES

All Favorites

Search...

Search recent reports... New Report New Folder

Report Name	Description	Folder	Created By	Created On	Subscribed
Issue Report		MailReports	monisha.j	21/11/2024, 1:10 pm	
Tenant Details		MailReports	monisha.j	21/11/2024, 1:12 pm	
lease report		MailReports	monisha.j	21/11/2024, 1:09 pm	

https://ppgcom6-dev-ed.lightning.force.com/lightning/o/Report/home?queryScope=mru

80°F Haze

Search

10:40 AM 11/23/2024

Final steps is what are the reports we are created will show in report content.