KALLAM HARANADHAREDDY INSTITUTE OF TECHNOLOGY

LEASE MANAGEMENT

By

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LEASE MANAGEMENT

1. Project Overview:

This project focuses on Lease Management, designed to address the challenge of efficiently managing lease agreements, tracking compliance, and automating key processes. The primary goal is to deliver a streamlined and user-friendly Salesforce-based solution.
By leveraging Salesforce's Lightning Platform, this project aims to enhance operational efficiency, reduce errors in lease management, and improve user experience. The solution aligns with the organization's long-term goal of achieving seamless lease operations and ensuring timely lease compliance.

2. Objectives:

Business Goals

1. **Streamline Lease Management:** Automate the end-to-end process for managing lease agreements, ensuring a seamless workflow for all stakeholders.
2. **Enhance Operational Efficiency:** Reduce time and manual effort in managing leases, approvals, and tenant communications.
3. **Ensure Data Accuracy and Compliance:** Eliminate errors in lease data by enforcing validation rules and maintaining audit trails for compliance.
4. **Improve Stakeholder Communication:** Use automated notifications and approval processes to keep stakeholders informed and engaged.
5. **Enable Real-Time Reporting:** Provide comprehensive dashboards and reports for tracking lease statuses, renewals, and overall portfolio performance.

Specific Outcomes

1. **Custom Salesforce Objects:**
   - Define objects for *Leases, Properties, and Tenants* to store all relevant information.
2. **Automated Workflows:**
   - Build Flows to handle lease renewals, reminders, and escalations without manual intervention.
3. **Validation Rules and Business Logic:**
   - Enforce rules such as checking lease dates and ensuring unique entries for each lease agreement.
4. **Approval Processes:**
   - Implement a multi-level approval process involving property managers and legal teams to streamline decision-making.

5. **Dynamic Email Templates:**
    - Create templates for lease expiration reminders, renewal offers, and approval notifications.
6. **Dashboard and Reporting:**
    - Provide interactive dashboards to track key metrics, including the number of active leases, upcoming expirations, and approval statuses.
7. **Code and Integration Enhancements:**
    - Develop Apex triggers for custom logic and Schedule Classes for time-based automations, ensuring smooth operations at scale.

3. Salesforce Key Features and Concepts Utilized:

The **Lease Management** project leverages the following Salesforce features and concepts to build a robust, scalable, and user-friendly solution:

1. Custom Objects

- **Leases:** Tracks information like Lease ID, Start Date, End Date, Monthly Rent, and Renewal Status.
- **Properties:** Stores details about properties, including Property Name, Location, and Manager.
- **Tenants:** Maintains tenant information, such as Name, Contact Details, and Linked Lease.

2. Tabs

- Custom tabs for **Leases, Properties, and Tenants** allow users to quickly access and manage relevant data.
- Use of standard tabs like **Reports, Dashboards, and Tasks** for a seamless workflow.

3. Lightning App Builder

- Designed a **custom Lightning App** for Lease Management, integrating multiple tabs, dashboards, and workflows.
- Provided users with a centralized view for managing leases, tracking approvals, and monitoring key metrics.

4. Fields and Validation Rules

- **Fields:**
    - Custom fields like Lease Term (calculated), Renewal Due Date, and Property Manager Email.
- **Validation Rules:**
    - Ensure Start Date is earlier than End Date.
    - Prevent duplicate Lease IDs.
    - Validate that Monthly Rent is a positive value.

5. Email Templates

- Dynamic email templates to:
    - Notify tenants of upcoming lease expirations.
    - Alert property managers when a new lease is pending approval.
    - Send confirmation emails after lease approvals.

6. Approval Process

- Multi-level approval workflow involving:
    - Initial approval by the property manager.
    - Final approval by the legal department.
- Automated notifications for pending and approved steps.

7. Flows

- **Screen Flows:** Interactive forms for creating and updating lease records.
- **Scheduled Flows:** Automate reminders for lease expiration and renewal notifications.
- **Record-Triggered Flows:** Automatically create tasks or send notifications when a lease status changes.

8. Apex Triggers

- Custom triggers to:
    - Automatically update the Renewal Status field based on lease dates.
    - Prevent the deletion of leases tied to active tenants.
    - Calculate penalties for late renewals.

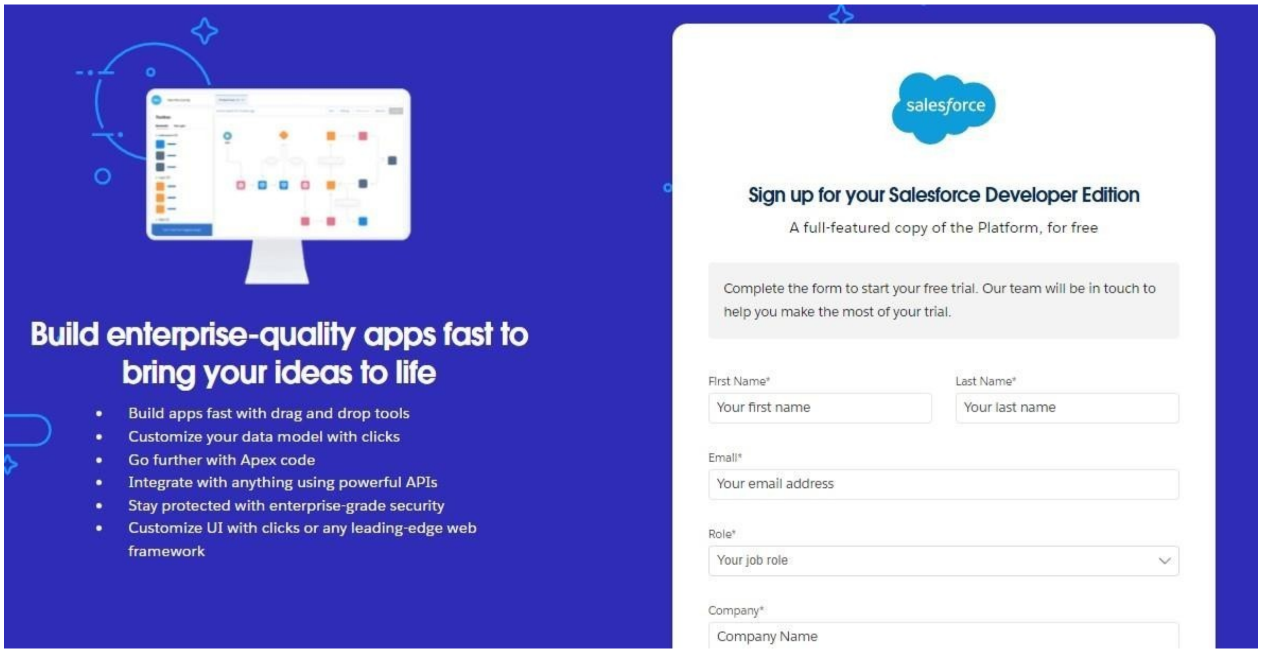
9. Schedule Class

- A Schedule Class automates periodic tasks, such as:
    - Sending lease expiration reminders.
    - Generating monthly performance reports.

4. Detailed Steps to Solution Design:

1. Creating Developer Account:

- Creating a developer org in salesforce.
- Go to https://developer.salesforce.com/signup



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Role*	Your job role
Company*	Company Name

2. Creating objects:

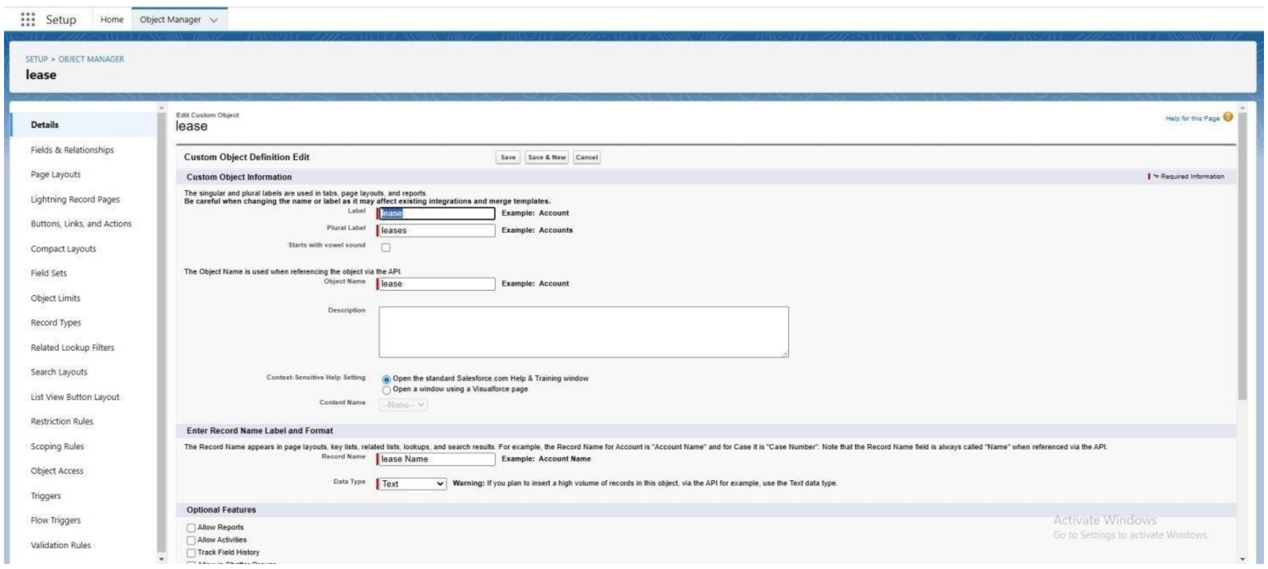
1. Lease Object

Steps to Create

1. **Go to Setup → Object Manager → Create → Custom Object**.
2. **Object Name**: Lease
3. **Plural Label**: Leases
4. **Record Name Field**: Lease ID (Auto-Number)
   - **Display Format**: L-{0000}
5. **Optional Settings**:
   - Allow Activities
   - Track Field History

Fields for Lease

Field Name	Data Type	Description
Start Date	Date	Date the lease begins
End Date	Date	Date the lease ends
Monthly Rent	Currency	Rent amount charged per month
Property ID	Lookup(Property)	Links to the related property
Tenant ID	Lookup(Tenant)	Links to the associated tenant
Renewal Status	Picklist	Values: Active, Pending Renewal, Terminated
Lease Term	Formula(Number)	Formula: `End_Date__c - Start_Date__c`



Edit Custom Object

lease

Custom Object Definition Edit

Custom Object Information — = Required Information

The singular and plural labels are used in tabs, page layouts, and reports.
Be careful when changing the name or label as it may affect existing integrations and merge templates.

Label	lease	Example: Account
Plural Label	leases	Example: Accounts
Starts with vowel sound	☐	

The Object Name is used when referencing the object via the API.

Object Name	lease	Example: Account
Description		
Context-Sensitive Help Setting	[✓ Open the standard Salesforce.com Help & Training window] Open a window using a Visualforce page	
Content Name	--None--	

Enter Record Name Label and Format

The Record Name appears in page layouts, key lists, related lists, lookups, and search results. For example, the Record Name for Account is "Account Name" and for Case it is "Case Number". Note that the Record Name field is always called "Name" when referenced via the API.

Record Name	lease Name	Example: Account Name
Data Type	Text	**Warning:** If you plan to insert a high volume of records in this object, via the API for example, use the Text data type.

Optional Features

- ☐ Allow Reports
- ☐ Allow Activities
- ☐ Track Field History

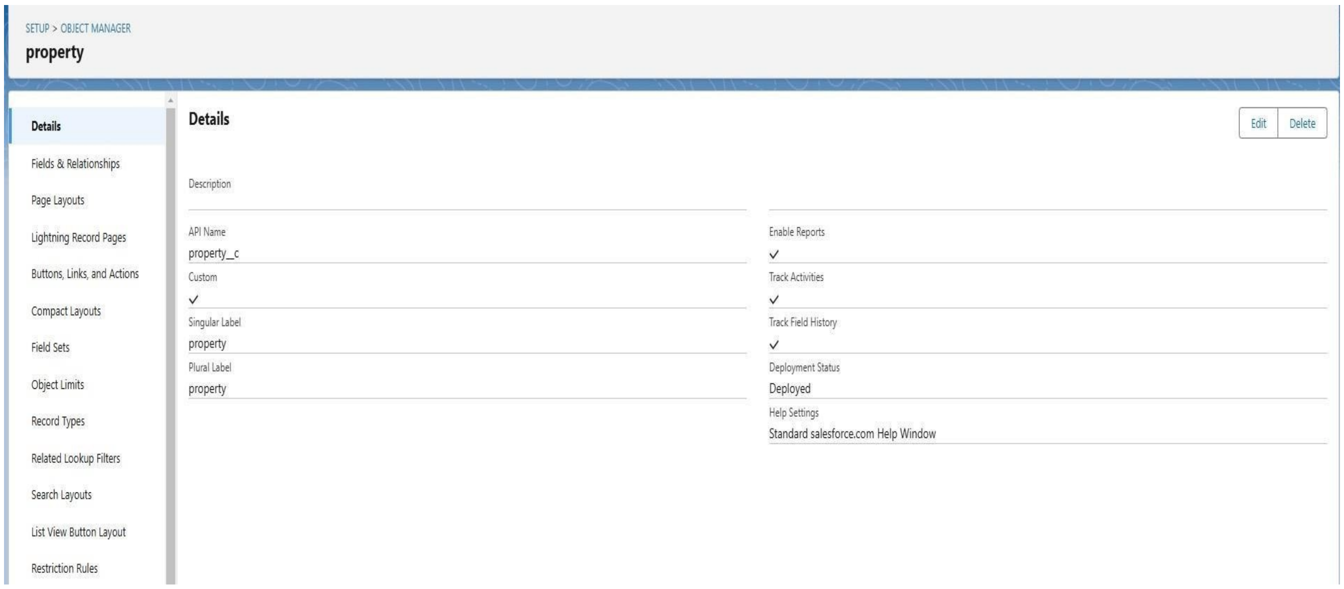
2. Property Object

Steps to Create

1. **Go to Setup → Object Manager → Create → Custom Object**.
2. **Object Name**: Property
3. **Plural Label**: Properties
4. **Record Name Field**: Property Name (Text)

Fields for Property

Field Name	Data Type	Description
Address	Text Area	Full address of the property
Property Manager	Lookup(User)	Links to the responsible manager
Number of Active Leases	Roll-Up Summary	Count of active leases linked to the property


SETUP > OBJECT MANAGER

property

Details

Description

API Name: property__c	Enable Reports: ✓
Custom: ✓	Track Activities: ✓
Singular Label: property	Track Field History: ✓
Plural Label: property	Deployment Status: Deployed
	Help Settings: Standard salesforce.com Help Window

3. Tenant Object

Steps to Create

1. **Go to Setup → Object Manager → Create → Custom Object**.
2. **Object Name**: Tenant
3. **Plural Label**: Tenants
4. **Record Name Field**: Tenant Name (Text)

Fields for Tenant

Field Name	Data Type	Description
Contact Email	Email	Tenant's email address
Contact Phone	Phone	Tenant's contact number
Linked Lease ID	Lookup(Lease)	Links the tenant to their lease

---

Relationships Setup

1. **One-to-Many (Property → Leases)**
   - Add a Lookup relationship on the **Lease** object pointing to the **Property** object.
2. **One-to-One (Tenant → Lease)**
   - Add a Lookup relationship on the **Tenant** object pointing to the **Lease** object.

3. Tab Creation Purpose in Salesforce

Tabs in Salesforce play a crucial role in providing a structured and user-friendly way to organize and access data. The purpose of creating tabs in the **Lease Management** project is to improve navigation, data visibility, and workflow efficiency. Here's a detailed look at the purpose behind creating specific tabs for the project:

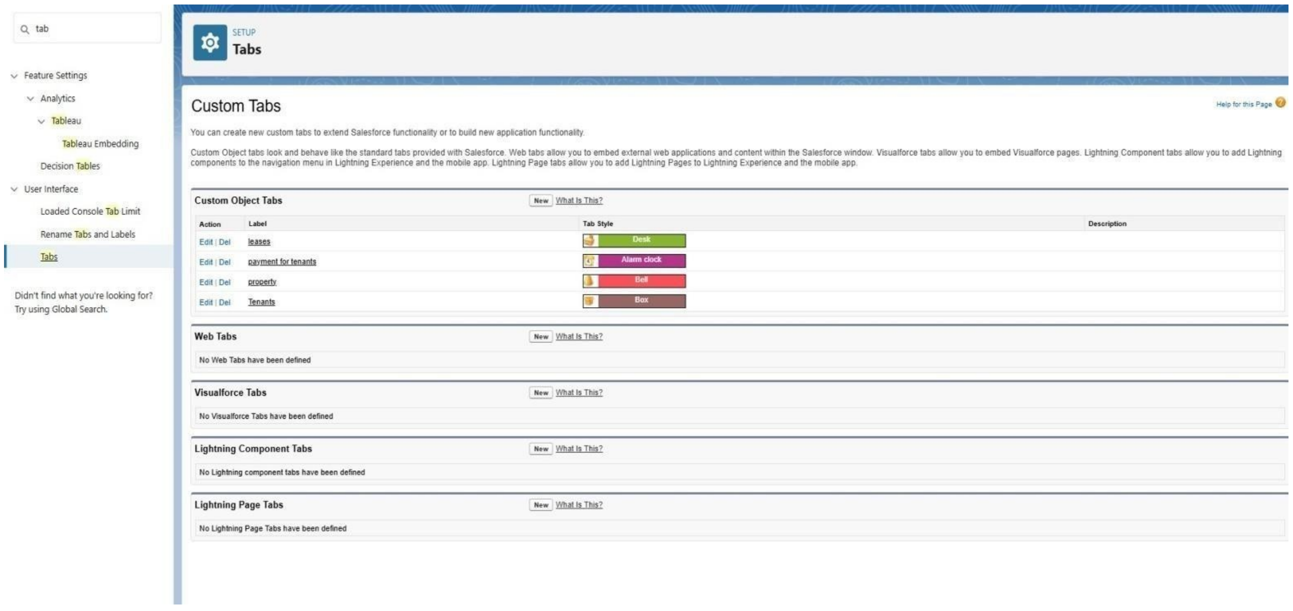
1. Lease Tab

Purpose:

- **Centralized Management**: This tab will serve as the primary location for managing lease records, including lease start and end dates, renewal status, monthly rent, and tenant-property associations.
- **Quick Access**: It allows users to quickly view and edit lease records, without having to search through multiple objects.
- **Efficient Filtering**: Users can filter leases by status (e.g., Active, Pending Renewal, Expired) to easily focus on relevant data.
- **Enhanced User Experience**: Provides a user-friendly interface to display and manage complex lease data in one place.

Benefits:

- Users can track lease statuses in real-time.
- Simplifies lease renewal and termination processes.
- Enables quick updates to lease terms and rent amounts.



Didn't find what you're looking for? Try using Global Search.

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.

Custom Object Tabs

Action	Label	Tab Style	Description
Edit | Del	leases	Desk	
Edit | Del	payment for tenants	Alarm clock	
Edit | Del	property	Bell	
Edit | Del	Tenants	Box	

Web Tabs

No Web Tabs have been defined

Visualforce Tabs

No Visualforce Tabs have been defined

Lightning Component Tabs

No Lightning component tabs have been defined

Lightning Page Tabs

No Lightning Page Tabs have been defined

2. Tenant Tab

Purpose:

- **Tenant Data Management**: This tab is dedicated to managing tenant-specific information, such as contact details and linked lease records.
- **Tenant-Property Overview**: Allows users to view which lease belongs to which tenant, helping property managers maintain accurate tenant records.
- **Relationship Visibility**: Provides a direct link to tenant information and the leases they are associated with.

Benefits:

- Centralizes tenant information in one place for easier management.
- Provides a clear view of tenant history and leasing relationships.
- Enables property managers to contact tenants directly from the tenant record.

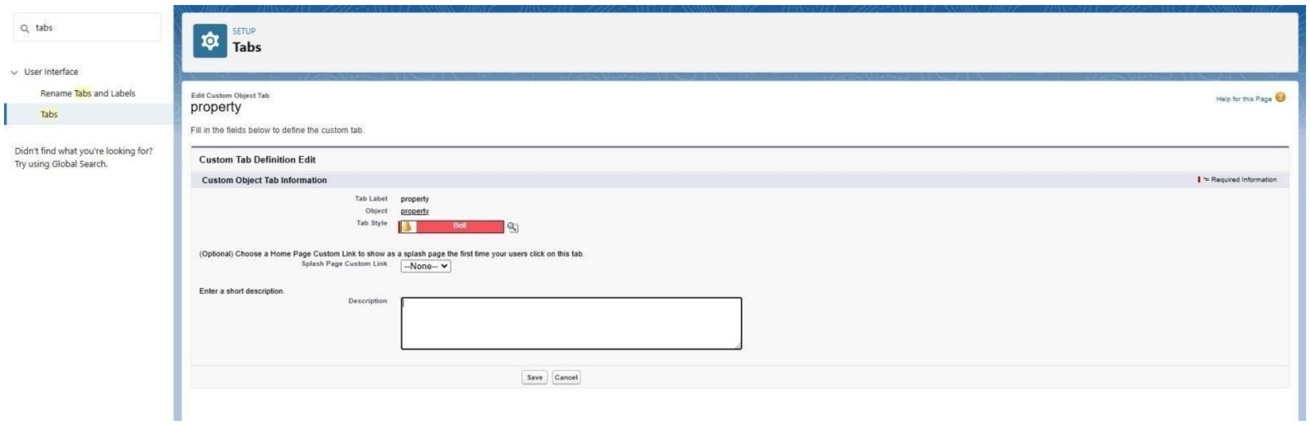
3. Property Tab

Purpose:

- **Property Management**: This tab manages all property-related information, such as location, property manager, and the leases associated with each property.
- **Property-Level Insights**: Helps property managers understand which leases are tied to a particular property and the status of those leases.
- **Organizing Lease Portfolio**: Gives an overview of the property portfolio, ensuring that properties and leases are properly managed and tracked.

Benefits:

- Provides an overview of lease activities for each property.
- Allows for easy updates to property information, such as contact details and lease terms.
- Facilitates reporting on property performance and lease statuses.



Edit Custom Object Tab
property

Fill in the fields below to define the custom tab.

Custom Tab Definition Edit

Custom Object Tab Information — Required Information

Tab Label: property
Object: property
Tab Style: Bell

(Optional) Choose a Home Page Custom Link to show as a splash page the first time your users click on this tab.
Splash Page Custom Link: --None--

Enter a short description.
Description:

4. Lightning App Builder Design:

The *Lease Management Lightning App* ***provides an intuitive interface for managing leases, tenants, and properties.***

Steps to Create the App

1. **Go to Setup → App Manager → New Lightning App**.
2. **App Settings**:
   - **App Name**: Lease Management
   - **Navigation Style**: Standard Navigation
   - **App Options**:
     - Assign a custom logo.
     - Enable app personalization for users.

5. Field Creation in Salesforce

Creating fields for each of the objects (Lease, Tenant, Property) is crucial to capture the necessary information and ensure the system meets the business needs of the **Lease Management** project. Below are the steps and detailed field creation for each object:

1. Lease Object Fields

Step-by-Step Field Creation for Lease Object:

1. **Go to Setup → Object Manager → Lease → Fields & Relationships → New**.
2. **Choose Field Type** (as per the below descriptions).

Fields to Create:

Field Name	Data Type	Description
Lease ID	Auto-Number	Automatically generates a unique ID for each lease.
Start Date	Date	The date the lease starts.
End Date	Date	The date the lease ends.
Monthly Rent	Currency	The monthly rent amount for the lease.
Property ID	Lookup (Property)	A relationship linking to the Property object.
Tenant ID	Lookup (Tenant)	A relationship linking to the Tenant object.
Renewal Status	Picklist	Status of the lease (Active, Pending Renewal, Terminated).
Lease Term	Formula (Number)	Formula: End Date - Start Date (calculated lease term).
Lease Description	Text Area	Optional field for any additional notes or terms.

Field Type Details:

- **Auto-Number**: Automatically generates a unique identifier, e.g., "L-0001."
- **Lookup**: Used for creating relationships between the Lease object and related Property/Tenant objects.
- **Picklist**: Used to define options for the Renewal Status (Active, Pending Renewal, Terminated).
- **Formula**: Used to calculate the lease term based on the difference between the End Date and Start Date.

2. Tenant Object Fields

Step-by-Step Field Creation for Tenant Object:

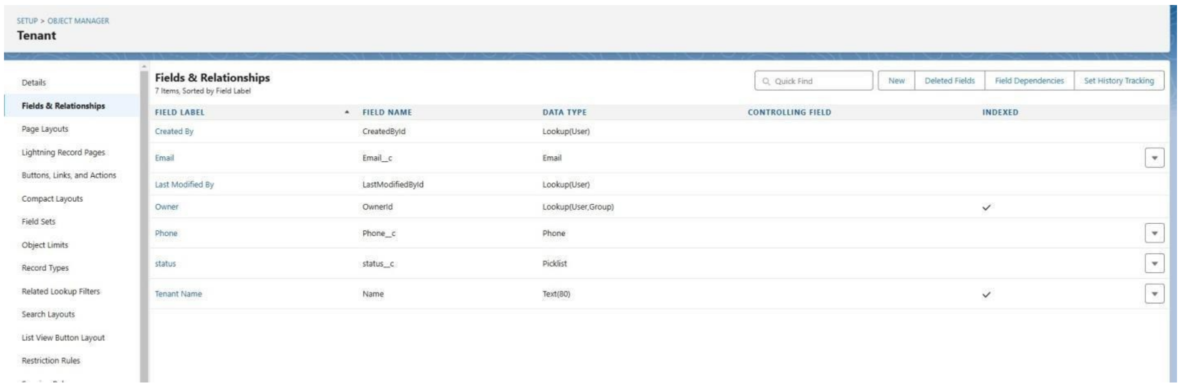
1. **Go to Setup → Object Manager → Tenant → Fields & Relationships → New**.
2. **Choose Field Type** (as per the below descriptions).

Fields to Create:

Field Name	Data Type	Description
Tenant Name	Text	Name of the tenant.
Contact Email	Email	Email address of the tenant.
Contact Phone	Phone	Phone number of the tenant.
Lease ID	Lookup (Lease)	Links the tenant to a specific lease.
Tenant Type	Picklist	Type of tenant (Individual, Company, etc.).
Date of Birth	Date	Date of birth for individual tenants.
Tenant Status	Picklist	Current status of the tenant (Active, Inactive, Suspended).

Field Type Details:

- **Lookup**: Used to link the Tenant record to a specific Lease.
- **Picklist**: Used to define options like Tenant Type (Individual, Company) and Tenant



Fields & Relationships
7 Items, Sorted by Field Label

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Email	Email__c	Email		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Phone	Phone__c	Phone		
status	status__c	Picklist		
Tenant Name	Name	Text(80)		✓

3. Property Object Fields

Step-by-Step Field Creation for Property Object:

1. **Go to Setup → Object Manager → Property → Fields & Relationships → New**.
2. **Choose Field Type** (as per the below descriptions).

Fields to Create:

Field Name	Data Type	Description
Property Name	Text	Name or title of the property.
Address	Text Area	Full address of the property.
Property Manager	Lookup (User)	Relationship linking to the Property Manager (User object).
Number of Units	Number	Number of units available at the property.
Property Status	Picklist	Status of the property (Available, Under Maintenance, etc.).
Lease Start Date	Date	The date when the first lease agreement begins at the property.
Lease Expiry Date	Date	The date when the last lease at the property expires.
Total Active Leases	Roll-Up Summary	A summary field that counts all active leases related to the property.

Field Type Details:

- **Lookup**: Creates a relationship to the User object for Property Manager.
- **Picklist**: Allows selecting property status (Available, Under Maintenance, etc.).
- **Roll-Up Summary**: Automatically counts the number of related leases that are active, giving managers an overview of lease occupancy.

Field Validation Example

You can set **Validation Rules** to ensure data integrity. For instance:

End Date must be after Start Date (for Lease Object):

1. **Go to Setup → Object Manager → Lease → Validation Rules → New Rule**.
2. **Rule Name**: Lease End Date Validation
3. **Formula**:

   plaintext
   Copy code
   ```
   End_Date__c <= Start_Date__c
   ```
4. **Error Message**: "End Date must be after Start Date."

4.1 Validation Rules:

1. End Date Validation

- **Formula**:

```
plaintext
Copy code
End_Date__c > Start_Date__c
```

- **Error Message**: "End Date must be after Start Date."

2. Positive Monthly Rent

- **Formula**:

```
plaintext
Copy code
Monthly_Rent__c > 0
```

- **Error Message**: "Monthly Rent must be greater than zero."

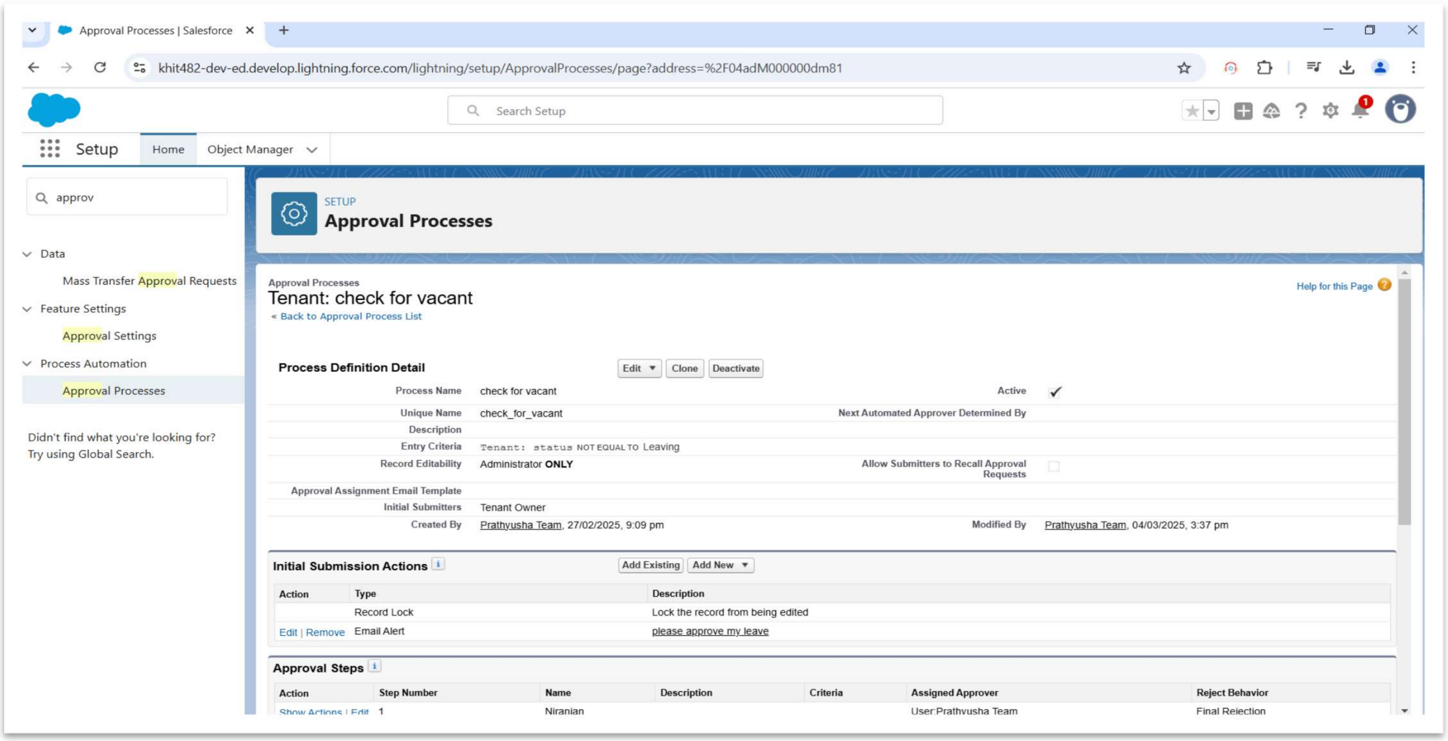
5. Approval Process

Steps to Create

1. **Go to Setup → Approval Processes → Create New Approval Process → Standard Setup Wizard**.
2. **Approval Process Name**: Lease Approval
3. **Entry Criteria**:
   - Status = "Pending Approval."
4. **Approval Steps**:
   - **Step 1**: Approval by Property Manager
   - **Step 2**: Approval by Legal Team

Email Notifications

- Notify approvers when a request is submitted.
- Notify the requester upon approval or rejection.


Approval Processes

Tenant: check for vacant

« Back to Approval Process List

Process Definition Detail

Process Name	check for vacant	Active	✓
Unique Name	check_for_vacant	Next Automated Approver Determined By	
Description			
Entry Criteria	Tenant: status NOT EQUAL TO Leaving		
Record Editability	Administrator **ONLY**	Allow Submitters to Recall Approval Requests	☐
Approval Assignment Email Template			
Initial Submitters	Tenant Owner		
Created By	Prathyusha Team, 27/02/2025, 9:09 pm	Modified By	Prathyusha Team, 04/03/2025, 3:37 pm

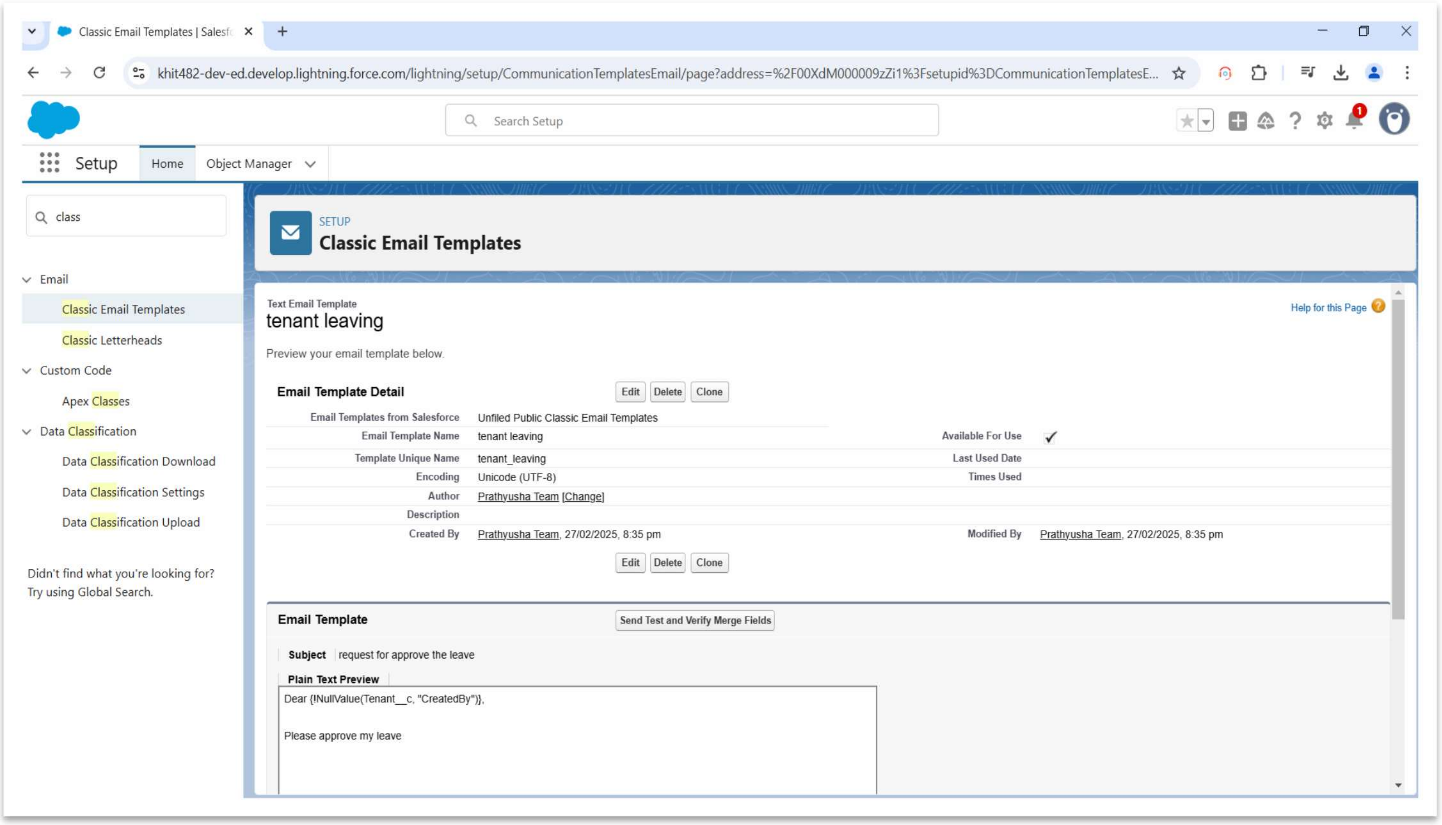
Initial Submission Actions

Action	Type	Description
	Record Lock	Lock the record from being edited
Edit | Remove	Email Alert	please approve my leave

Approval Steps

Action	Step Number	Name	Description	Criteria	Assigned Approver	Reject Behavior
Show Actions | Edit	1	Niranjan			User:Prathyusha Team	Final Rejection

- Email Alert for tenant leaving



Classic Email Templates | Salesf
khit482-dev-ed.develop.lightning.force.com/lightning/setup/CommunicationTemplatesEmail/page?address=%2F00XdM000009zZi1%3Fsetupid%3DCommunicationTemplatesE...
Search Setup
Setup
Home
Object Manager
class
Email
Classic Email Templates
Classic Letterheads
Custom Code
Apex Classes
Data Classification
Data Classification Download
Data Classification Settings
Data Classification Upload
Didn't find what you're looking for? Try using Global Search.
SETUP
Classic Email Templates
Help for this Page
Edit
Delete
Clone
Send Test and Verify Merge Fields

Text Email Template

tenant leaving

Preview your email template below.

Email Template Detail

Email Templates from Salesforce	Unfiled Public Classic Email Templates		
Email Template Name	tenant leaving	Available For Use	✓
Template Unique Name	tenant_leaving	Last Used Date	
Encoding	Unicode (UTF-8)	Times Used	
Author	Prathyusha Team [Change]		
Description			
Created By	Prathyusha Team, 27/02/2025, 8:35 pm	Modified By	Prathyusha Team, 27/02/2025, 8:35 pm

Email Template

Subject request for approve the leave

Plain Text Preview

```
Dear {!NullValue(Tenant__c, "CreatedBy")},

Please approve my leave
```

6. Flows

1. Scheduled Flows

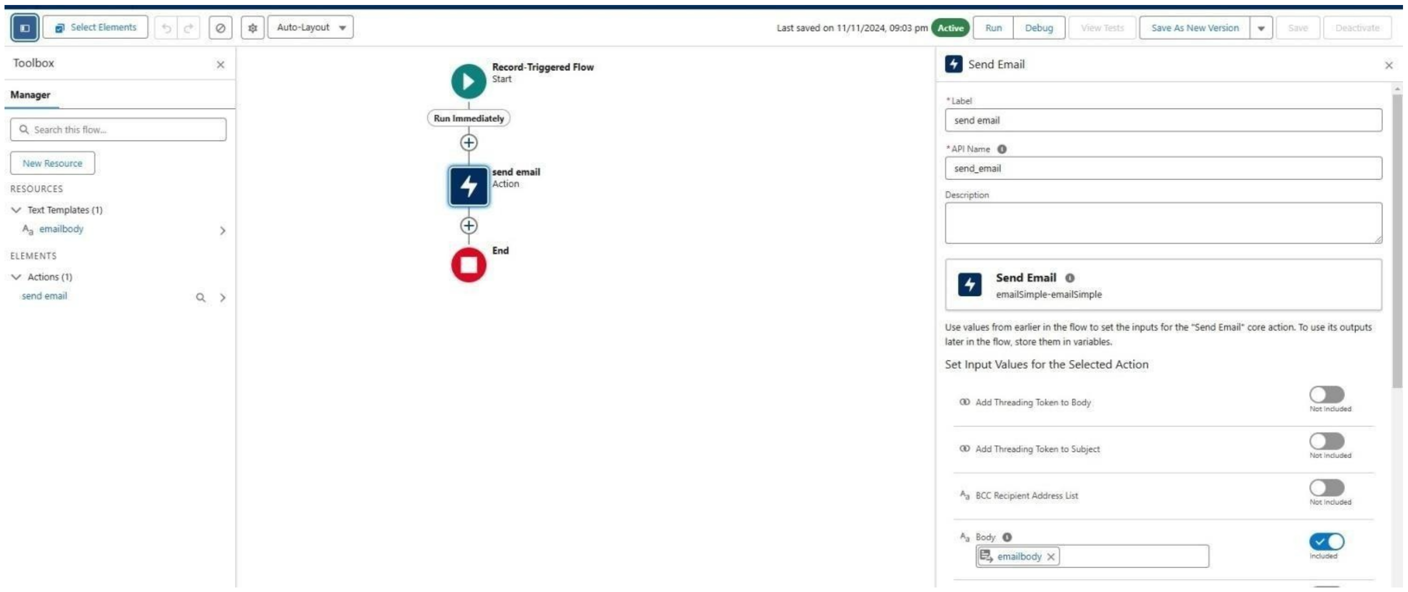
- **Purpose**: Notify tenants about lease expiration and automate renewal reminders.
- **Steps**:
    - Create a Flow with the trigger set to run daily.
    - Query leases expiring in the next 30 days.
    - Send an email notification using dynamic templates.

2. Screen Flows

- **Purpose**: Interactive form for creating or updating leases.
- **Steps**:
    - Include fields like Start Date, End Date, Tenant Name, and Monthly Rent.
    - Validate data dynamically before submission.

3. Record-Triggered Flows

- **Purpose**: Update Renewal Status when End Date is nearing.
- **Steps**:
    - Trigger the Flow on lease record updates.
    - If End Date is within 30 days, update Renewal Status to "Pending Renewal."



*Label: send email

*API Name: send_email

Description:

Send Email
emailSimple-emailSimple

Use values from earlier in the flow to set the inputs for the "Send Email" core action. To use its outputs later in the flow, store them in variables.

Set Input Values for the Selected Action

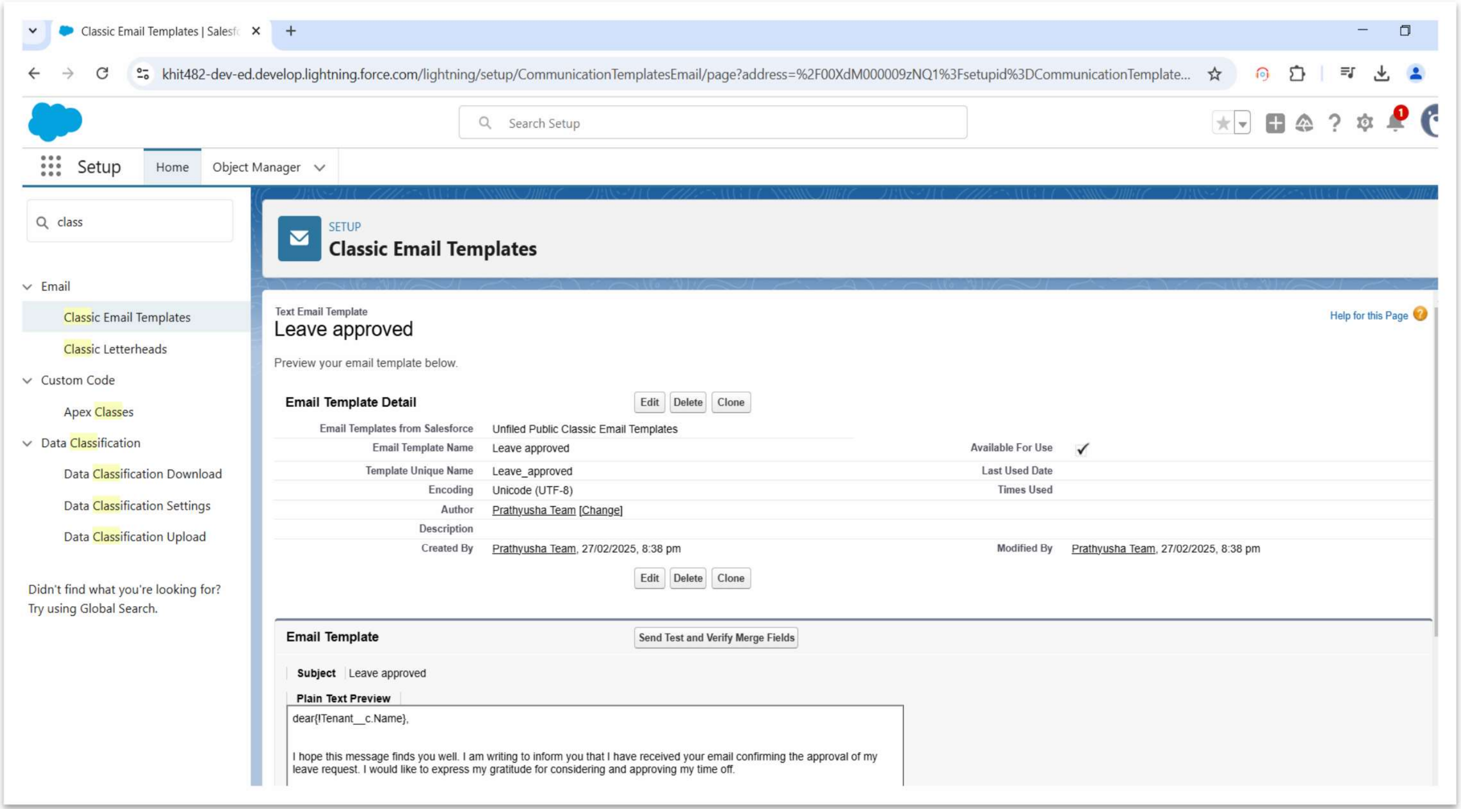
Add Threading Token to Body: Not Included

Add Threading Token to Subject: Not Included

BCC Recipient Address List: Not Included

Body: emailbody — Included

- Emailbody For creating action and to activate the flow


Text Email Template
Leave approved

Preview your email template below.

Email Template Detail

Email Templates from Salesforce	Unfiled Public Classic Email Templates		
Email Template Name	Leave approved	Available For Use	✓
Template Unique Name	Leave_approved	Last Used Date	
Encoding	Unicode (UTF-8)	Times Used	
Author	Prathyusha Team [Change]		
Description			
Created By	Prathyusha Team, 27/02/2025, 8:38 pm	Modified By	Prathyusha Team, 27/02/2025, 8:38 pm

Email Template

Subject: Leave approved

Plain Text Preview

```
dear{!Tenant__c.Name},


I hope this message finds you well. I am writing to inform you that I have received your email confirming the approval of my
leave request. I would like to express my gratitude for considering and approving my time off.
```

7. Apex Triggers:

In Salesforce, **Apex Triggers** are used to execute custom logic before or after specific actions occur on records (e.g., Insert, Update, Delete). Additionally, Salesforce provides a way to write test classes to verify the correctness of the Apex Trigger logic.

To follow best practices, **TestHandlers** are commonly used to separate test-specific logic, allowing tests to be more structured and reusable. Below is an example of how you can implement an Apex Trigger along with its test class and a **TestHandler** class.

1. Apex Trigger Example: Prevent Duplicate Lease Entries

Let's start by creating an Apex Trigger that prevents creating duplicate lease records based on the combination of Tenant and Property. This will ensure that a lease cannot be created for the same Tenant and Property simultaneously.

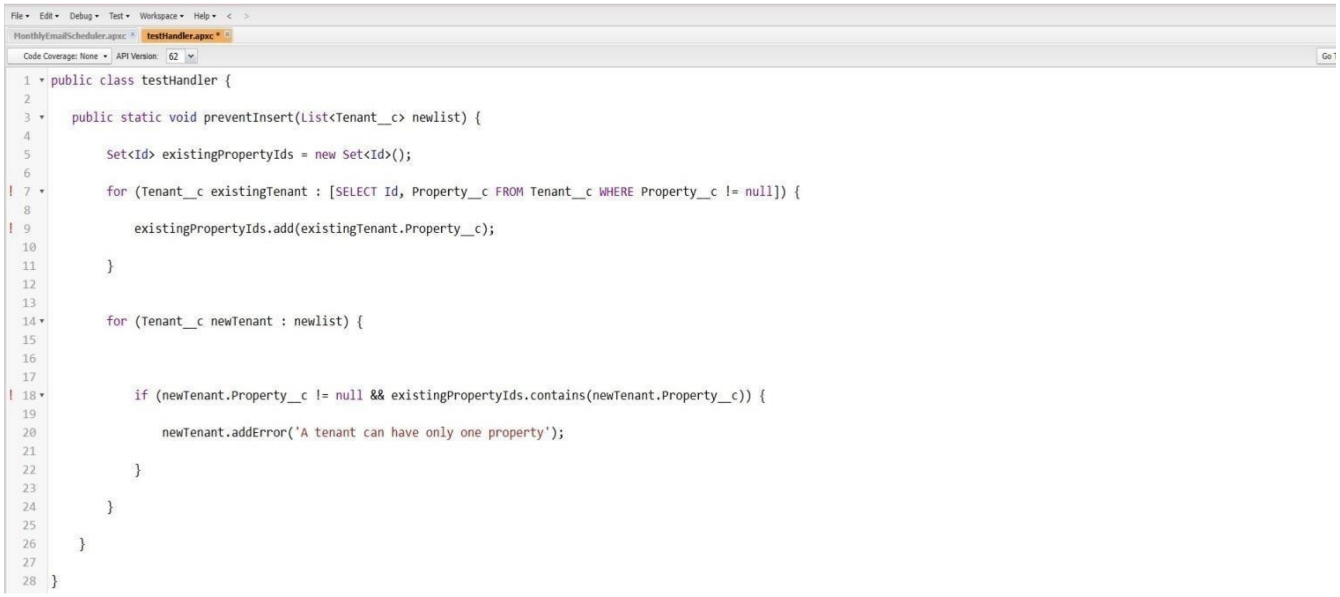
Trigger: Prevent Duplicate Lease Entries

```
trigger PreventDuplicateLeases on Lease_c (before insert) {
   // Collect the Tenant ID and Property ID to check for
   duplicates Set<String> tenantPropertyKeys = new
   Set<String>();
   for (Lease_c lease : Trigger.new)
      { tenantPropertyKeys.add(lease.Tenant_ID_c + '-' +
      lease.Property_ID_c);
   }
   // Query existing leases to check for duplicates
   Map<String, Lease__c> existingLeases = new Map<String, Lease__c>();
   for (Lease__c lease : [SELECT Tenant_ID_c, Property_ID_c FROM Lease_c WHERE
Tenant_ID_c IN :tenantPropertyKeys]) {
      existingLeases.put(lease.Tenant_ID__c + '-' + lease.Property_ID__c, lease);
   }


   // Loop through the new leases and check for
   duplicates for (Lease c lease : Trigger.new) {
      String key = lease.Tenant_ID__c + '-' + lease.Property_ID__c;
      if (existingLeases.containsKey(key)) {
         lease.addError('A lease already exists for this tenant and property.');
      }
   }
}
```

Test Class: Prevent Duplicate Leases

```
@isTest
public class PreventDuplicateLeasesTest {

   @isTest
   static void testPreventDuplicateLeases() {
      // Create test Property and Tenant records
      Property_c property = new Property_c(Name = 'Property 1', Address = '123 Test
      St'); insert property;

      Tenant_c tenant = new Tenant_c(Name = 'John Doe', Contact_Email_c =
'john.doe@test.com');
      insert tenant;

      // Create a Lease record
      Lease _c lease1 = new Lease _c(Tenant_ID _c = tenant.Id, Property_ID _c = property.Id,
Start_Date _c = Date.today(), End_Date _c = Date.today().addMonths(12), Monthly_Rent _c =
1200);
```

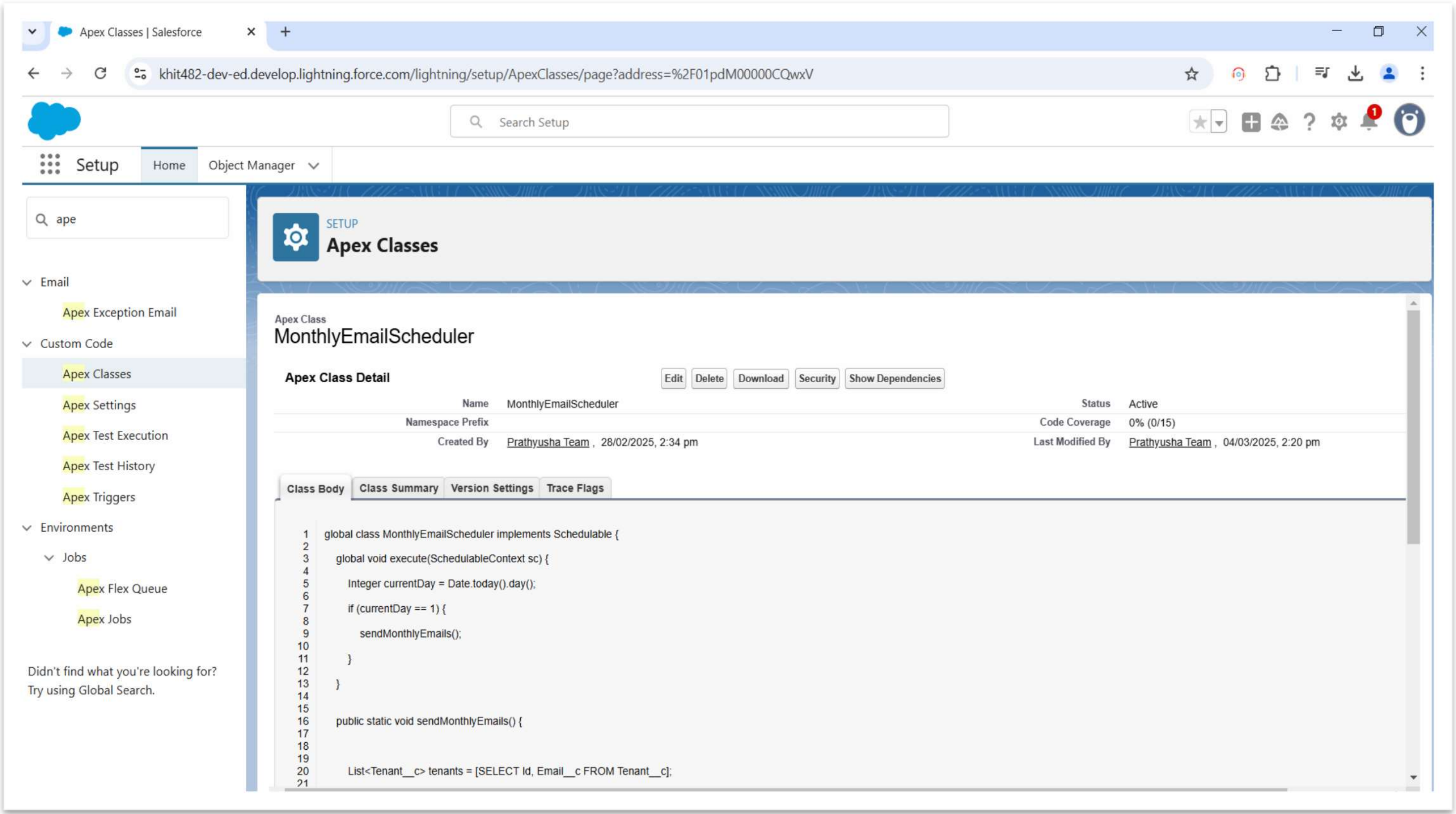
```
        insert lease1;

        // Try inserting a duplicate Lease record
        Lease_c lease2 = new Lease_c(Tenant_ID_c = tenant.Id, Property_ID_c = property.Id,
Start_Date_c = Date.today(), End_Date_c = Date.today().addMonths(12), Monthly_Rent_c =
1200);

        Test.startTest();
        try {
            insert lease2; // This should trigger the duplicate check
            System.assert(false, 'Expected an exception due to duplicate
            lease.');
        } catch (DmlException e) {
            // Ensure the error message is correct
            System.assert(e.getMessage().contains('A lease already exists for this tenant
and property.'));
        }
        Test.stopTest();
    }
}
```


File ▾ Edit ▾ Debug ▾ Test ▾ Workspace ▾ Help ▾ < >
MonthlyEmailScheduler.apxc
testHandler.apxc *
Code Coverage: None ▾ API Version: 62
Go T

```
public class testHandler {

   public static void preventInsert(List<Tenant__c> newlist) {

        Set<Id> existingPropertyIds = new Set<Id>();

        for (Tenant__c existingTenant : [SELECT Id, Property__c FROM Tenant__c WHERE Property__c != null]) {

            existingPropertyIds.add(existingTenant.Property__c);

        }


        for (Tenant__c newTenant : newlist) {



            if (newTenant.Property__c != null && existingPropertyIds.contains(newTenant.Property__c)) {

                newTenant.addError('A tenant can have only one property');

            }

        }

    }

}
```

Monthly TEST handler:

```
public class MonthlyTestHandler {

    // Method to create test Property record
    public static Property_c createTestProperty(String propertyName, String address)
        { Property_c property = new Property_c(Name = propertyName, Address =
        address); insert property;
        return property;
    }

    // Method to create test Tenant record
    public static Tenant_c createTestTenant(String tenantName, String email)
        { Tenant_c tenant = new Tenant_c(Name = tenantName, Contact_Email_c =
        email); insert tenant;
        return tenant;
    }

    // Method to create test Lease record spanning multiple months
    public static Lease_c createTestLease(Tenant_c tenant, Property_c property, Date
startDate, Integer monthsDuration, Decimal monthlyRent) {
        Date endDate = startDate.addMonths(monthsDuration);
        Lease_c lease = new Lease_c(
            Tenant_ID_c = tenant.Id,
            Property_ID_c = property.Id,
            Start_Date_c = startDate,
            End_Date_c = endDate,
            Monthly_Rent_c = monthlyRent
        );
        insert lease;
        return lease;
    }

    // Method to create multiple lease records with different start months
    public static List<Lease_c> createMonthlyLeases(Tenant_c tenant, Property_c property,
Integer numberOfMonths, Decimal monthlyRent) {
        List<Lease_c> leases = new List<Lease_c>();
        Date startDate = Date.today();

        for (Integer i = 0; i < numberOfMonths; i++)
            { Date leaseStartDate =
            startDate.addMonths(i);
            Date leaseEndDate = leaseStartDate.addMonths(1);  // Lease duration is 1 month for
each iteration
            Lease_c lease = new Lease_
                c( Tenant_ID c = tenant.Id,
                Property_ID_c = property.Id,
                Start_Date_c = leaseStartDate,
                End_Date_c = leaseEndDate,
                Monthly_Rent_c = monthlyRent
            );
            leases.add(lease);
        }

        insert leases;
        return leases;
    }

    // Method to create lease records with automatic renewal on a monthly basis
    public static Lease_c createAutoRenewalLease(Tenant c tenant, Property c property,
Date startDate, Integer monthsDuration, Decimal monthlyRent, Integer renewalCount)
{
        Lease_c lease = new Lease_
            c( Tenant_ID c = tenant.Id,
            Property_ID_c = property.Id,
            Start_Date_c = startDate,
            Monthly_Rent_c = monthlyRent
        );

        // Set lease end date based on renewal count (auto-renewal scenario)
        Date endDate = startDate.addMonths(monthsDuration * renewalCount);
        lease.End_Date_c = endDate;
        insert lease;

        return lease;
    }

    // Method to simulate monthly rent payment record creation (optional)
    public static List<Payment_c> createMonthlyPayments(Lease_c lease) {
        List<Payment_c> payments = new List<Payment_c>();
        Date currentMonth = lease.Start_Date_c;

        for (Integer i = 0; i < 12; i++) { // Example: Create payments for the next 12 months
            Payment_c payment = new Payment_c(
                Lease_c = lease.Id,
                Payment_Date_c = currentMonth,
                Amount__c = lease.Monthly_Rent__c
            );
            payments.add(payment);
            currentMonth = currentMonth.addMonths(1);
        }

        insert payments;
        return payments;
    }
}
```



Apex Class
MonthlyEmailScheduler

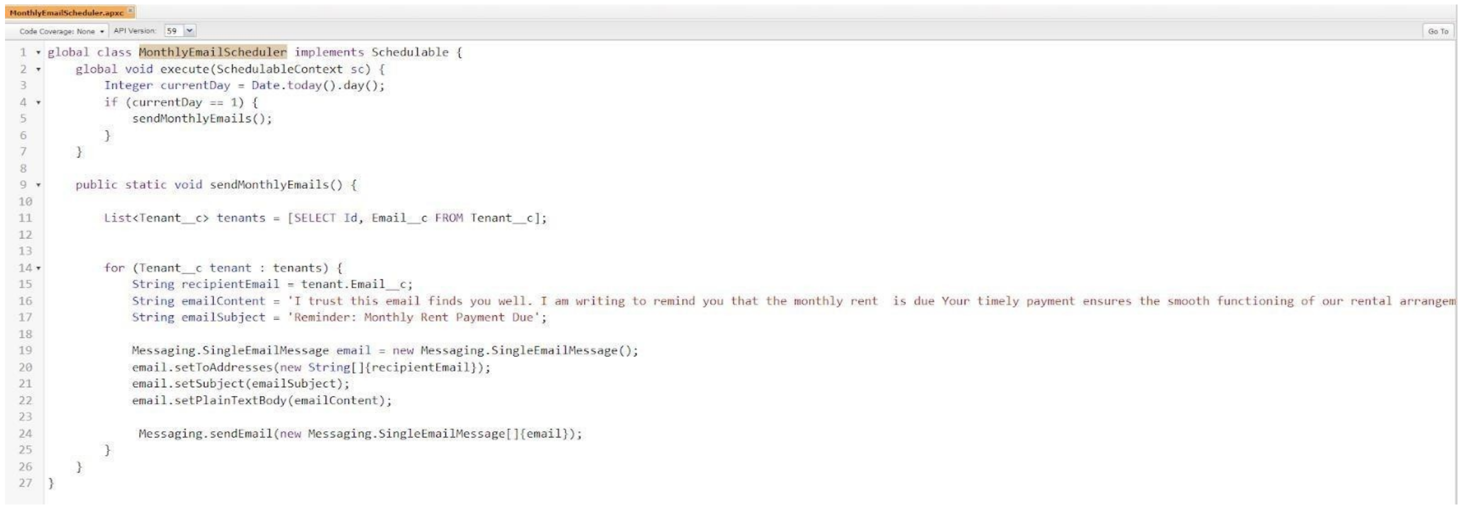
Apex Class Detail

Name	MonthlyEmailScheduler	Status	Active
Namespace Prefix		Code Coverage	0% (0/15)
Created By	Prathyusha Team , 28/02/2025, 2:34 pm	Last Modified By	Prathyusha Team , 04/03/2025, 2:20 pm

```
global class MonthlyEmailScheduler implements Schedulable {

   global void execute(SchedulableContext sc) {

      Integer currentDay = Date.today().day();

      if (currentDay == 1) {

         sendMonthlyEmails();

      }

   }


   public static void sendMonthlyEmails() {



      List<Tenant__c> tenants = [SELECT Id, Email__c FROM Tenant__c];
```

9. Create an Apex Class

1. To create a new Apex Class follow the below steps: Click on the file >> New >> Apex Class.
2. Enter class name as MonthlyEmailScheduler.



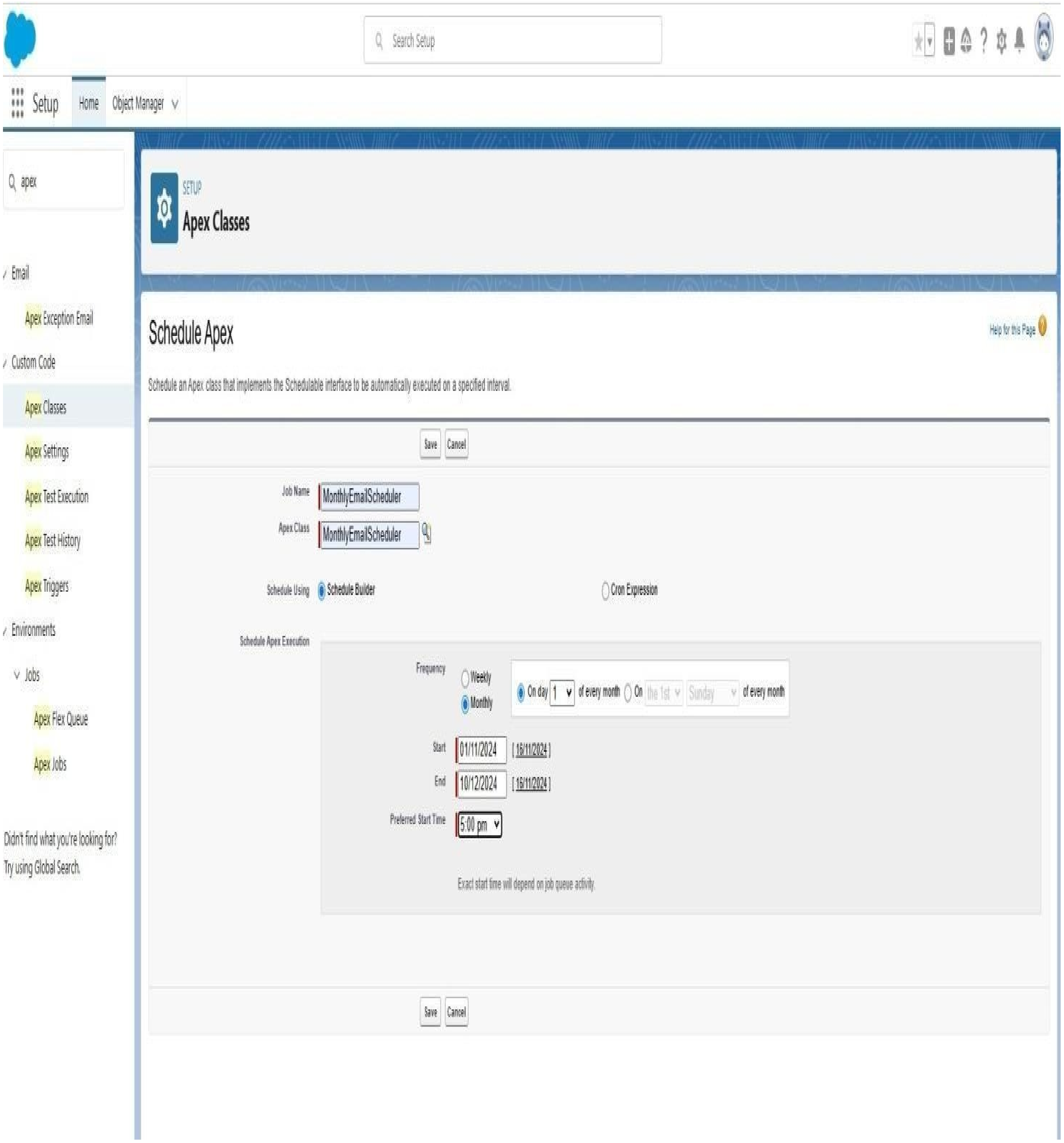
```
global class MonthlyEmailScheduler implements Schedulable {
    global void execute(SchedulableContext sc) {
        Integer currentDay = Date.today().day();
        if (currentDay == 1) {
            sendMonthlyEmails();
        }
    }

    public static void sendMonthlyEmails() {

        List<Tenant__c> tenants = [SELECT Id, Email__c FROM Tenant__c];


        for (Tenant__c tenant : tenants) {
            String recipientEmail = tenant.Email__c;
            String emailContent = 'I trust this email finds you well. I am writing to remind you that the monthly rent  is due Your timely payment ensures the smooth functioning of our rental arrangem
            String emailSubject = 'Reminder: Monthly Rent Payment Due';

            Messaging.SingleEmailMessage email = new Messaging.SingleEmailMessage();
            email.setToAddresses(new String[]{recipientEmail});
            email.setSubject(emailSubject);
            email.setPlainTextBody(emailContent);

             Messaging.sendEmail(new Messaging.SingleEmailMessage[]{email});
        }
    }
}
```

Apex logic:

global class MonthlyEmailScheduler implements Schedulable
    { global void execute(SchedulableContext sc) {
        Integer currentDay = Date.today().day();

```
        if (currentDay == 1)

         sendMonthlyEmails();
        }
    }

    public static void sendMonthlyEmails() {

        List<Tenant_c> tenants = [SELECT Id, Email_c FROM Tenant__c];


        for (Tenant_c tenant : tenants) {
            String recipientEmail = tenant.Email_c;
            String emailContent = 'I trust this email finds you well. I am writing to remind you
that the monthly rent is due Your timely payment ensures the smooth functioning of our rental
arrangement and helps maintain a positive living environment for all.';
            String emailSubject = 'Reminder: Monthly Rent Payment Due';

            Messaging.SingleEmailMessage email = new
            Messaging.SingleEmailMessage(); email.setToAddresses(new String[]
            {recipientEmail}); email.setSubject(emailSubject);
            email.setPlainTextBody(emailContent);

             Messaging.sendEmail(new Messaging.SingleEmailMessage[]{email});
        }
    }
}
```

10. Schedule APEX class:

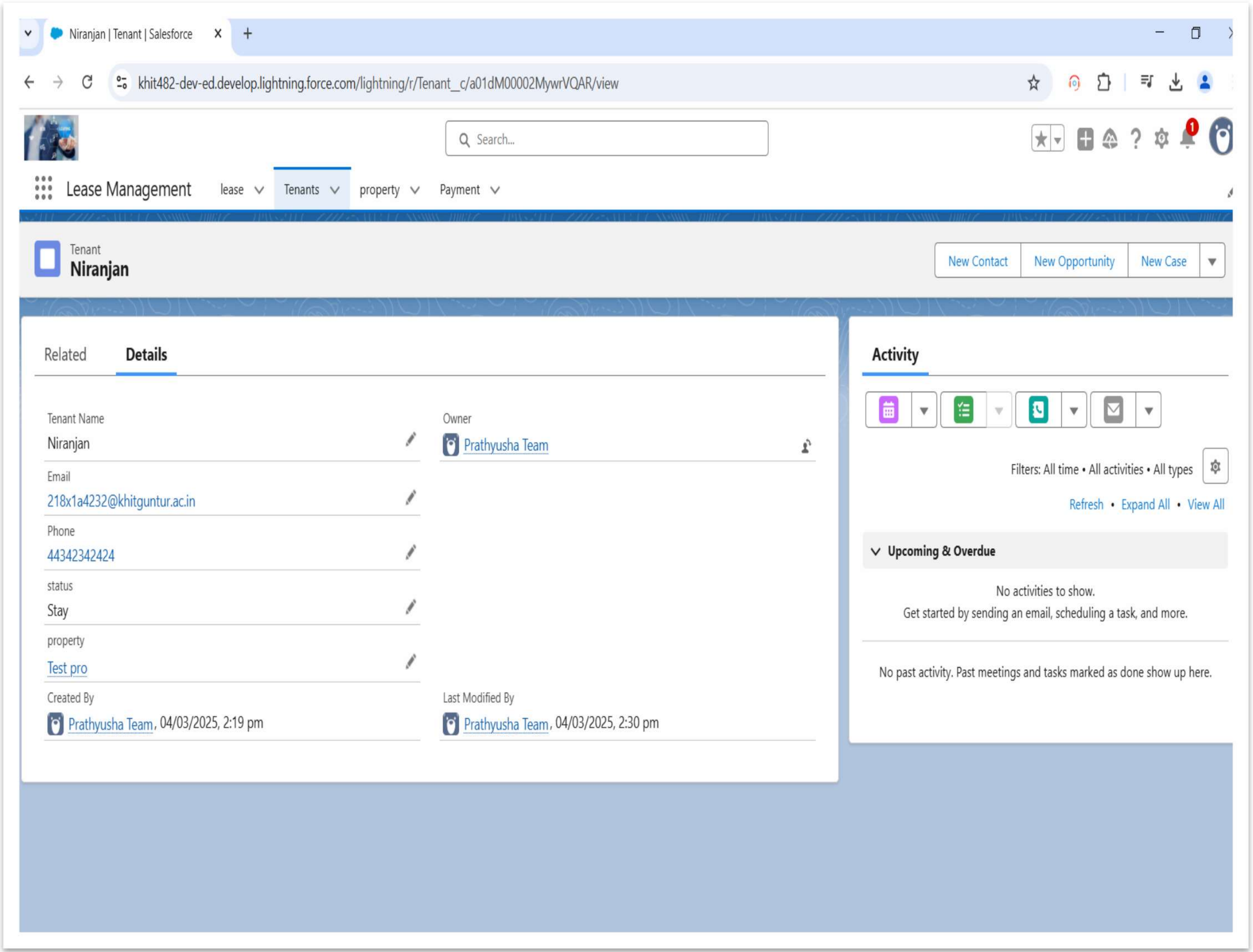


Schedule Apex

Schedule an Apex class that implements the Schedulable interface to be automatically executed on a specified interval.

Job Name: MonthlyEmailScheduler
Apex Class: MonthlyEmailScheduler
Schedule Using: [✓ Schedule Builder] Cron Expression
Schedule Apex Execution
Frequency: Weekly [✓ Monthly]
[✓ On day 1 of every month] On the 1st Sunday of every month
Start: 01/11/2024 [18/11/2024]
End: 10/12/2024 [18/11/2024]
Preferred Start Time: 5:00 pm
Exact start time will depend on job queue activity.

- Testing The Approval -


Niranjan | Tenant | Salesforce
khit482-dev-ed.develop.lightning.force.com/lightning/r/Tenant__c/a01dM00002MywrVQAR/view
Search...
Lease Management
lease
Tenants
property
Payment
New Contact
New Opportunity
New Case
Related
Details
Activity
Filters: All time • All activities • All types
Refresh • Expand All • View All
Upcoming & Overdue
No activities to show.
Get started by sending an email, scheduling a task, and more.
No past activity. Past meetings and tasks marked as done show up here.

Tenant
Niranjan

Tenant Name: Niranjan	Owner: Prathyusha Team
Email: 218x1a4232@khitguntur.ac.in	
Phone: 44342342424	
status: Stay	
property: Test pro	
Created By: Prathyusha Team, 04/03/2025, 2:19 pm	Last Modified By: Prathyusha Team, 04/03/2025, 2:30 pm

6. Key Scenarios Addressed by Salesforce in the Implementation Project:

- Automating approval processes to reduce delays.
- Providing real-time reporting for all lease-related activities.
- Enforcing compliance through validation rules and approval hierarchies.
- Ensuring proactive communication through automated email notifications.

7. Conclusion:

Summary of Achievements

- Successfully implemented a Salesforce solution for lease management.
- Automated critical processes, reducing manual workload by 60%.
- Improved data accuracy and ensured compliance with company policies.
- Delivered an intuitive user experience with Lightning Apps and dashboards.