



ARUNAI ENGINEERING COLLEGE

(An Autonomous Institution)
Velunagar, Thiruvannamalai-606603
www.arunai.org



DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

BACHELOR OF ENGINEERING 2024 - 2025

FIFTH SEMESTER

LEASE MANAGEMENT

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Certified that this is a bonafide record of work done by

Name :

NM ID :

University Reg.No :

Semester :

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Year :

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Submitted for the _____

Practical Examination held on _____

Internal Examiner

External Examiner

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.

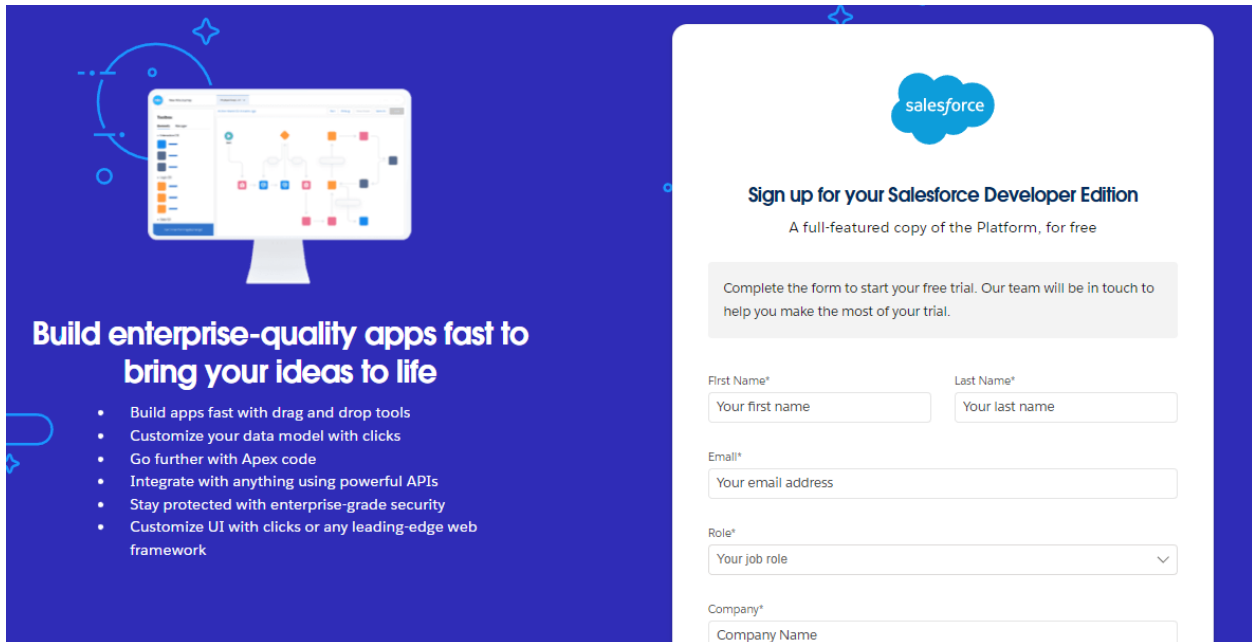
9. Schedule Class

- 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>



The image shows a promotional banner for Salesforce Developer Edition on the left and a sign-up form on the right. The banner features a blue background with a white monitor displaying a flowchart. Text on the banner reads: "Build enterprise-quality apps fast to bring your ideas to life". Below this, a list of bullet points 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". The sign-up form on the right has a white background with the Salesforce logo at the top. It says "Sign up for your Salesforce Developer Edition" and "A full-featured copy of the Platform, for free". Below this, it says "Complete the form to start your free trial. Our team will be in touch to help you make the most of your trial." The form includes fields for "First Name*", "Last Name*", "Email*", "Role*" (a dropdown menu), and "Company*" (a text field).

2.Creating objects:

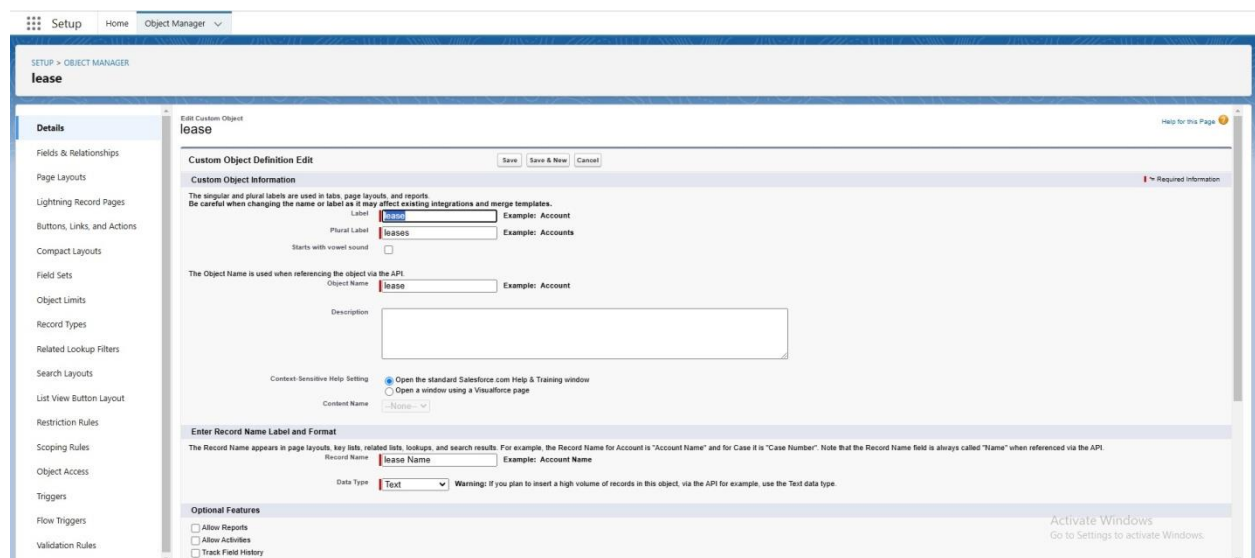
1. Lease Object

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



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
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 Delete

Description

API Name
property__c

Custom
✓

Singular Label
property

Plural Label
property

Enable Reports
✓

Track Activities
✓

Track Field History
✓

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:

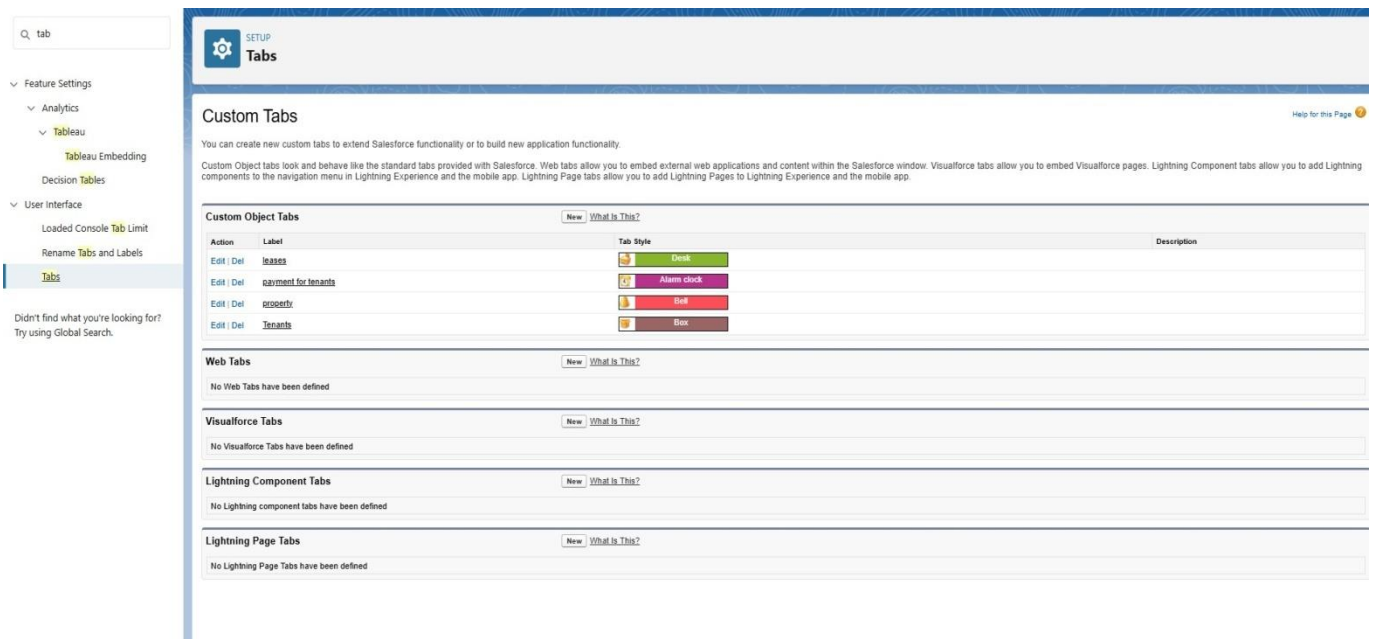
1. Lease Tab

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.



The screenshot shows the Salesforce Setup page for Custom Tabs. The left sidebar contains a search bar and a navigation menu with categories like Feature Settings, Analytics, User Interface, and a search bar. The main content area is titled 'Custom Tabs' and includes a 'Help for this Page' link. Below the title, there is a section for 'Custom Object Tabs' with a table listing tabs for 'leases', 'payment for tenants', 'property', and 'Tenants'. Each tab has a 'Tab Style' (Disk, Alarm clock, Bell, Box) and a 'Description'. Below this, there are sections for 'Web Tabs', 'Visualforce Tabs', 'Lightning Component Tabs', and 'Lightning Page Tabs', each with a 'New' button and a 'What is This?' link.

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

- 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.

Q tabs

User Interface

Rename Tabs and Labels

Tabs

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

SETUP
Tabs

Help for this Page

Edit Custom Object Tab
property


Fill in the fields below to define the custom tab.

Custom Tab Definition Edit

Custom Object Tab Information

Tab Labelproperty

Objectproperty

Tab Style Solid

(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

Save

Cancel

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

SETUP > OBJECT MANAGER				
Tenant				
Details	Fields & Relationships			
Fields & Relationships	7 Items, Sorted by Field Label			
Page Layouts	FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD INDEXED
Lightning Record Pages	Created By	CreatedById	Lookup(User)	
Buttons, Links, and Actions	Email	Email__c	Email	
Compact Layouts	Last Modified By	LastModifiedById	Lookup(User)	
Field Sets	Owner	OwnerId	Lookup(User,Group)	✓
Object Limits	Phone	Phone__c	Phone	
Record Types	status	status__c	Picklist	
Related Lookup Filters	Tenant Name	Name	Text(80)	✓
Search Layouts				
List View Button Layout				
Restriction Rules				

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.

- Email Alert for tenant leaving

Email Alert

Tenant leaving

Rules Using This Email Alert

Approval Processes Using This Email Alert

Entitlement Processes Using This Email Alert

Help for this Page

Email Alert Detail

Description

Unique Name

From Email Address

Recipients

Additional Emails

Tenant leaving

Tenant_leaving

Current User's email address

Email Field: Email

Email Template

Object

Leave_abc@vsg

Tenant

Created By

Modified By

SRINIVASAN B

SRINIVASAN B

11/11/2024, 8:34 pm

11/11/2024, 8:34 pm

Edit

Delete

Clone

Rules Using This Email Alert

This alert is currently not used by any rules

Rules Using This Email Alert Help

Approval Processes Using This Email Alert

Action

Approval Process Name

Description

Type

State

Edit | Del

check for vacant

Tenant

Active

Approval Processes Using This Email Alert Help

Entitlement Processes Using This Email Alert

This alert is currently not used by any entitlement processes

Flows Using This Email Alert

Flow Name

Version

Description

Object

Active

Back To Top

Always show me more records per related list

6.Flows

1. Scheduled Flows

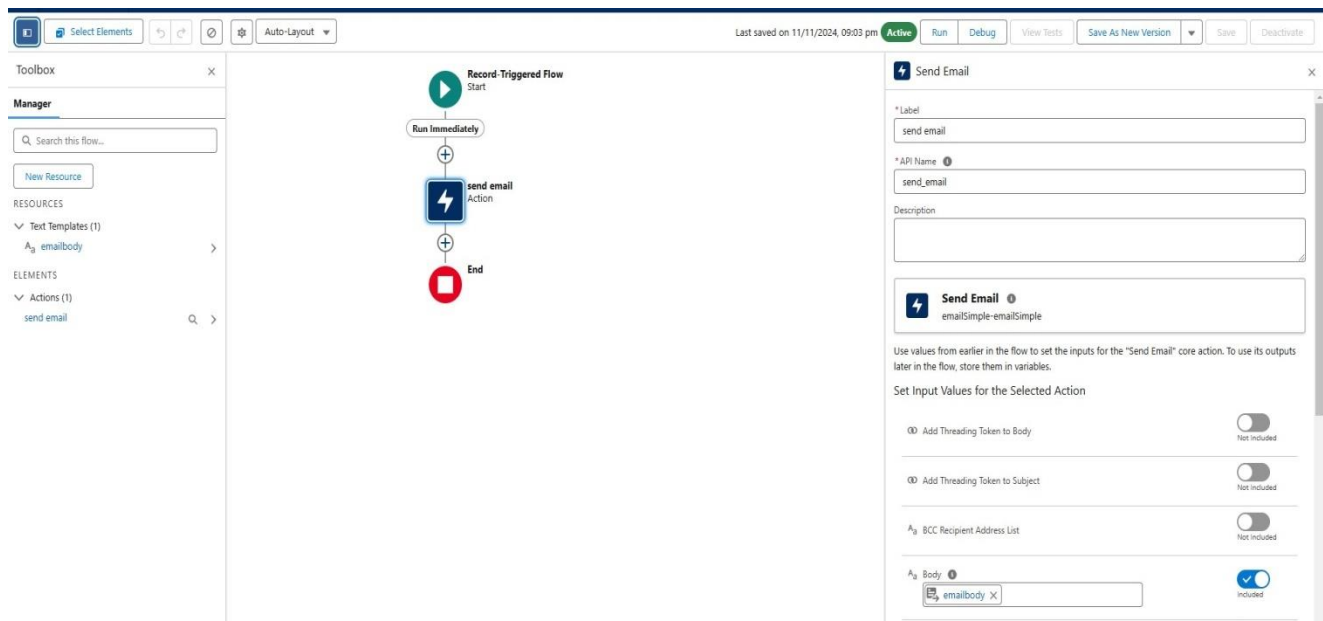
- **Purpose:** Notify tenants about lease expiration and automate renewal reminders.
- **Steps:**
 - Create a Flow with the trigger set to run daily.
 - Query leases expiring in the next 30 days.
 - Send an email notification using dynamic templates.

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."



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;

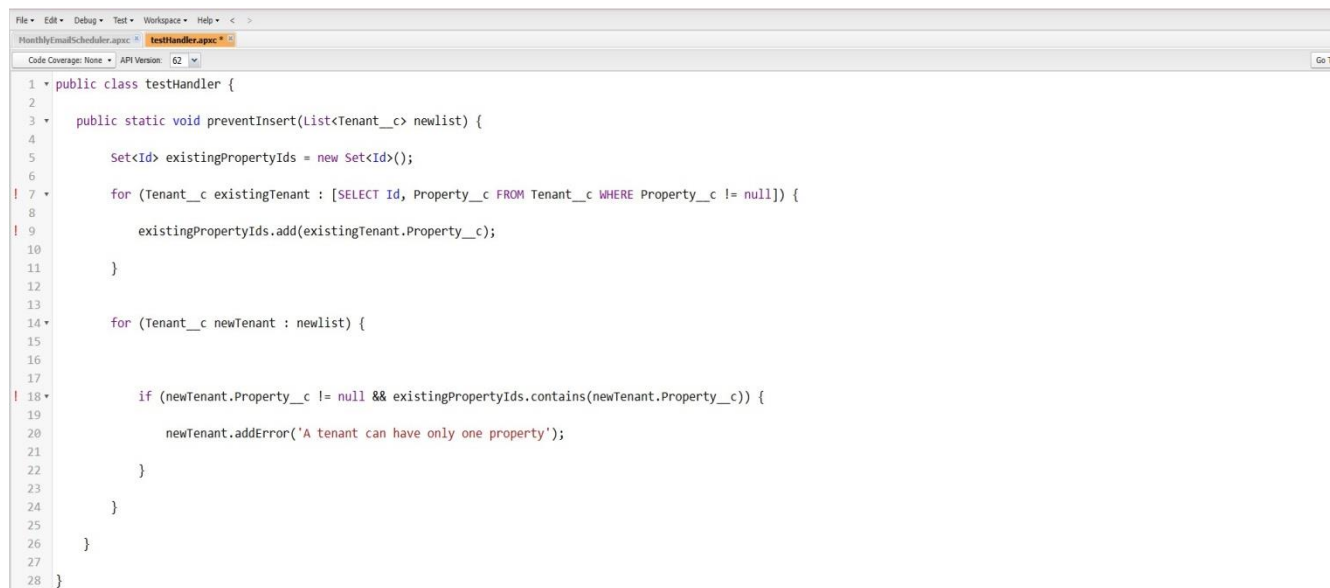
// Try inserting a duplicate Lease record
Lease__c lease2 = new Lease__c(Tenant_ID__c = tenant.Id, Property_ID__c = property.Id,
Start_Date__c = Date.today(), End_Date__c = Date.today().addMonths(12), Monthly_Rent__c =
1200);

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();
}
}

```



```

1 public class testHandler {
2
3     public static void preventInsert(List<Tenant__c> newlist) {
4
5         Set<Id> existingPropertyIds = new Set<Id>();
6
7         for (Tenant__c existingTenant : [SELECT Id, Property__c FROM Tenant__c WHERE Property__c != null]) {
8
9             existingPropertyIds.add(existingTenant.Property__c);
10
11         }
12
13         for (Tenant__c newTenant : newlist) {
14
15             if (newTenant.Property__c != null && existingPropertyIds.contains(newTenant.Property__c)) {
16
17                 newTenant.addError('A tenant can have only one property');
18
19             }
20
21         }
22
23     }
24
25 }
26
27
28 }

```

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
Namespace Prefix:
Created By: SRINIVASAN.B., 11/11/2024, 9:03 pm
Status: Active
Code Coverage: 0% (0/15)
Last Modified By: SRINIVASAN.B., 11/11/2024, 9:30 pm

Class Body

```

1 global class MonthlyEmailScheduler implements Schedulable {
2     global void execute(SchedulableContext sc) {
3         Integer currentDay = Date.today().day();
4         if (currentDay == 1) {
5             sendMonthlyEmails();
6         }
7     }
8 }
9
10 public static void sendMonthlyEmails() {
11     List<Tenant__c> tenants = [SELECT Id, Email__c FROM Tenant__c];
12
13     for (Tenant__c tenant : tenants) {
14         String recipientEmail = tenant.Email__c;
15         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.';
16         String emailSubject = 'Reminder: Monthly Rent Payment Due';
17
18         Messaging.SingleEmailMessage email = new Messaging.SingleEmailMessage();
19         email.setToAddresses(new String[]{recipientEmail});
20         email.setSubject(emailSubject);
21         email.setPlainTextBody(emailContent);
22
23         Messaging.sendEmail(new Messaging.SingleEmailMessage[]{email});
24     }
25 }
26
27 }

```

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.

MonthlyEmailScheduler.apex

```

1 global class MonthlyEmailScheduler implements Schedulable {
2     global void execute(SchedulableContext sc) {
3         Integer currentDay = Date.today().day();
4         if (currentDay == 1) {
5             sendMonthlyEmails();
6         }
7     }
8 }
9
10 public static void sendMonthlyEmails() {
11     List<Tenant__c> tenants = [SELECT Id, Email__c FROM Tenant__c];
12
13     for (Tenant__c tenant : tenants) {
14         String recipientEmail = tenant.Email__c;
15         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.';
16         String emailSubject = 'Reminder: Monthly Rent Payment Due';
17
18         Messaging.SingleEmailMessage email = new Messaging.SingleEmailMessage();
19         email.setToAddresses(new String[]{recipientEmail});
20         email.setSubject(emailSubject);
21         email.setPlainTextBody(emailContent);
22
23         Messaging.sendEmail(new Messaging.SingleEmailMessage[]{email});
24     }
25 }
26
27 }

```

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];

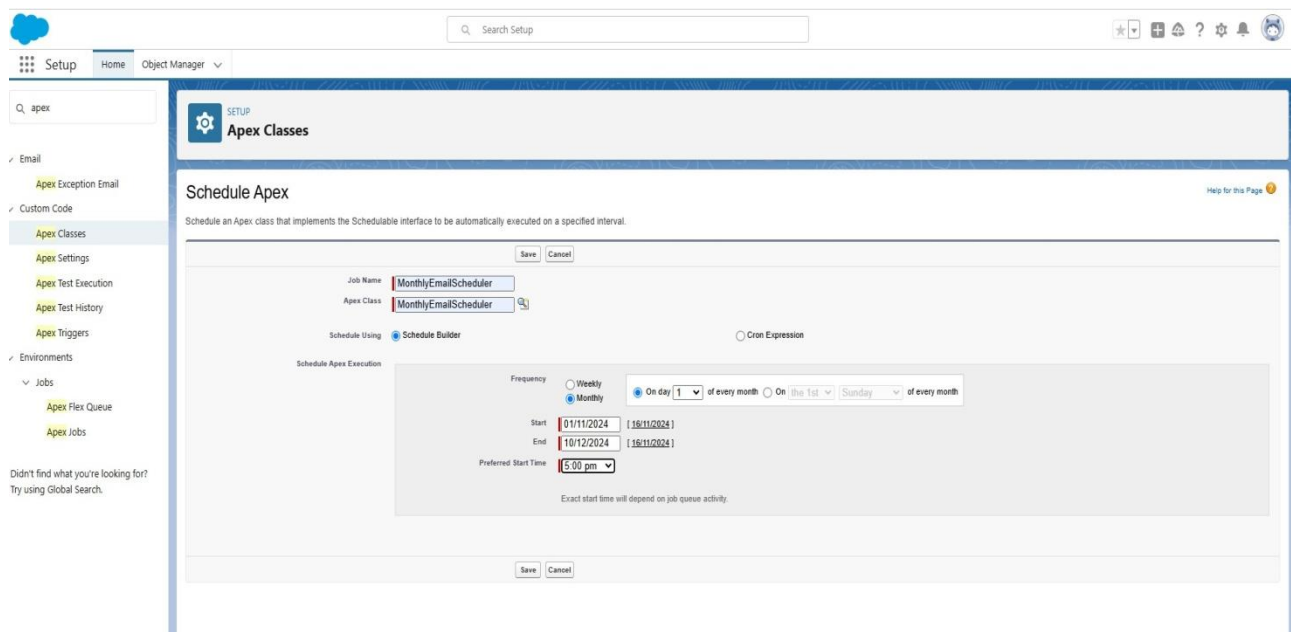
    for (Tenant__c tenant : tenants) {
        String recipientEmail = tenant.Email__c;
        String emailContent = 'I trust this email finds you well. I am writing to remind you that
the monthly rent is due Your timely payment ensures the smooth functioning of our rental
arrangement and helps maintain 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:



The screenshot shows the Salesforce Setup interface for configuring an Apex class schedule. The left sidebar contains navigation links for Setup, Home, Object Manager, and a search bar. The main content area is titled 'Apex Classes' and 'Schedule Apex'. It includes a 'Job Name' field set to 'MonthlyEmailScheduler' and an 'Apex Class' dropdown also set to 'MonthlyEmailScheduler'. The 'Schedule Using' section has 'Schedule Builder' selected. The 'Frequency' is set to 'Monthly', with a configuration of 'On day 1 of every month'. The 'Start' date is '01/11/2024' and the 'End' date is '10/12/2024'. The 'Preferred Start Time' is '5:00 pm'. There are 'Save' and 'Cancel' buttons at the top and bottom of the configuration area.

- Testing the approval


Tenant
srinivasan

[New Contact](#)
[Edit](#)
[New Opportunity](#)

[Related](#)
[Details](#)

Tenant Name

srinivasan

Email

wishvishal38@gmail.com

Phone

9043219212

status

Stay

Created By

SRINIVASAN R, 11/11/2024, 8:45 pm

Owner

SRINIVASAN R

Last Modified By

SRINIVASAN R, 11/11/2024, 10:49 pm

Activity

Calendar

Tasks

Chats

Mail

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.

- Make an approval


Tenant Approval
Approved

Submitter

SRINIVASAN R

Date Submitted

11-Nov-2024

Actual Approver

SRINIVASAN R

Assigned To

SRINIVASAN R

Details

Approval Details

Tenant Name

srinivasan

Owner

SRINIVASAN R

Approver Comments

SRINIVASAN R

END

11-Nov-2024, 10:57:11 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.