

# LEASE MANAGMENT

College Name: Shri Nehru Maha Vidyalaya collage of arts and science

College Code: Bru26

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## 1.INTRODUCTION

### 1. Project Overview

The Lease Management System is a Salesforce-based application designed to streamline the processes associated with leasing real estate properties. It handles tenant management, lease

contracts, payments, and communication with automation features such as flows, approval processes, and email alerts.



## 1.2 Purpose

The main objective of the project is to enable organizations to efficiently manage properties, tenants, and lease-related activities. It reduces manual intervention, improves accuracy, and ensures better compliance and communication.

## DEVELOPMENT PHASE

### Creating Developer Account:

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



Setup > OBJECT MANAGER

### Tenant

Details

- Fields & Relationships
- Page Layouts
- Lightning Record Pages
- Buttons, Links, and Actions
- Compact Layouts
- Field Sets
- Object Links
- Record Types
- Related Lookup Filters
- Search Layouts
- List View Buttons Layout
- Restriction Rules
- Scrolling Rules

Details

Description

API Name: Tenant\_\_c

Custom: ☒

Sequencer Label: Tenant

Plural Label: Tenants

Enable Reports: ☒

Track Auditing: ☒

Track Field History: ☒

Deployment Status: Deployed

Help Settings: Standard Salesforce.com Help Window

Edit Delete

Setup > OBJECT MANAGER

### lease

Details

- Fields & Relationships
- Page Layouts
- Lightning Record Pages
- Buttons, Links, and Actions
- Compact Layouts
- Field Sets
- Object Links
- Record Types
- Related Lookup Filters
- Search Layouts
- List View Buttons Layout
- Restriction Rules

Details

Description

API Name: lease\_\_c

Custom: ☒

Sequencer Label: lease

Plural Label: leases

Enable Reports: ☒

Track Auditing: ☒

Track Field History: ☒

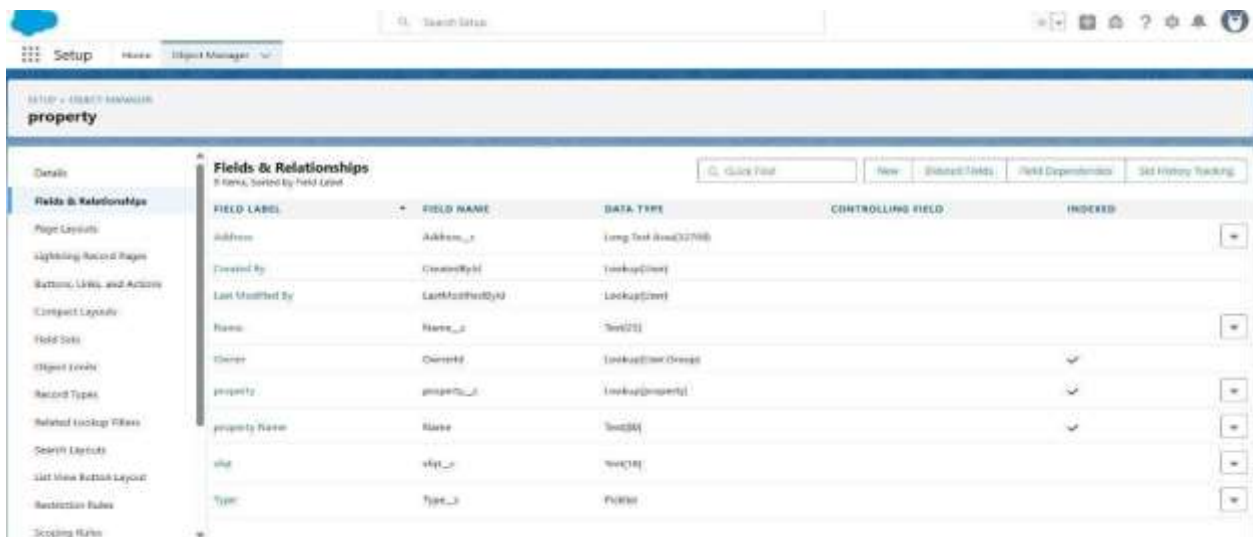
Deployment Status: Deployed


Help Settings: Standard Salesforce.com Help Window

Edit Delete



- Configured fields and relationships





Search Setup

Setup Home Object Manager

Setup > OBJECT MANAGER

Payment for tenant


Details

Fields & Relationships

7 Items, Sorted by Field Label

Quick Find New Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Amount	Amount_c	Number(16, 0)		
Check for payment	check_for_payment_c	Picklist		
Created By	CreatedBy	Lookup(User)		
Last Modified By	LastModifiedBy	Lookup(User)		
Owner	OwnerId	Lookup(User Group)		✓
Payment date	Payment_date_c	Date		
Payment Name	Name	Text(255)		✓



Search Setup

Setup Home Object Manager

Setup > OBJECT MANAGER

lease

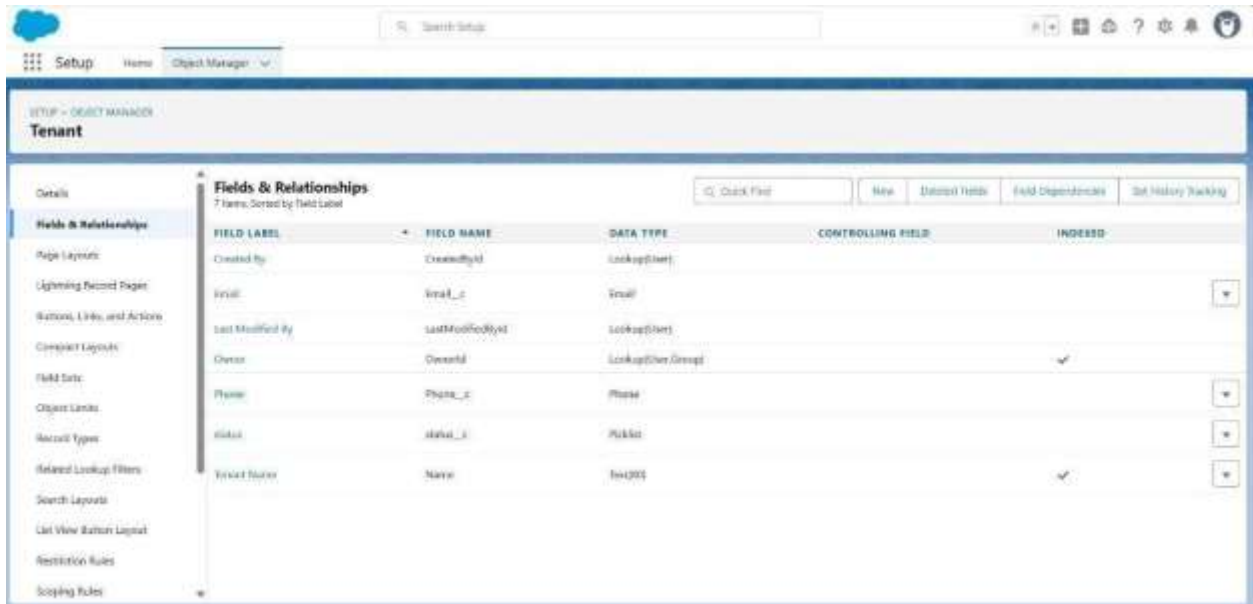
Details

Fields & Relationships

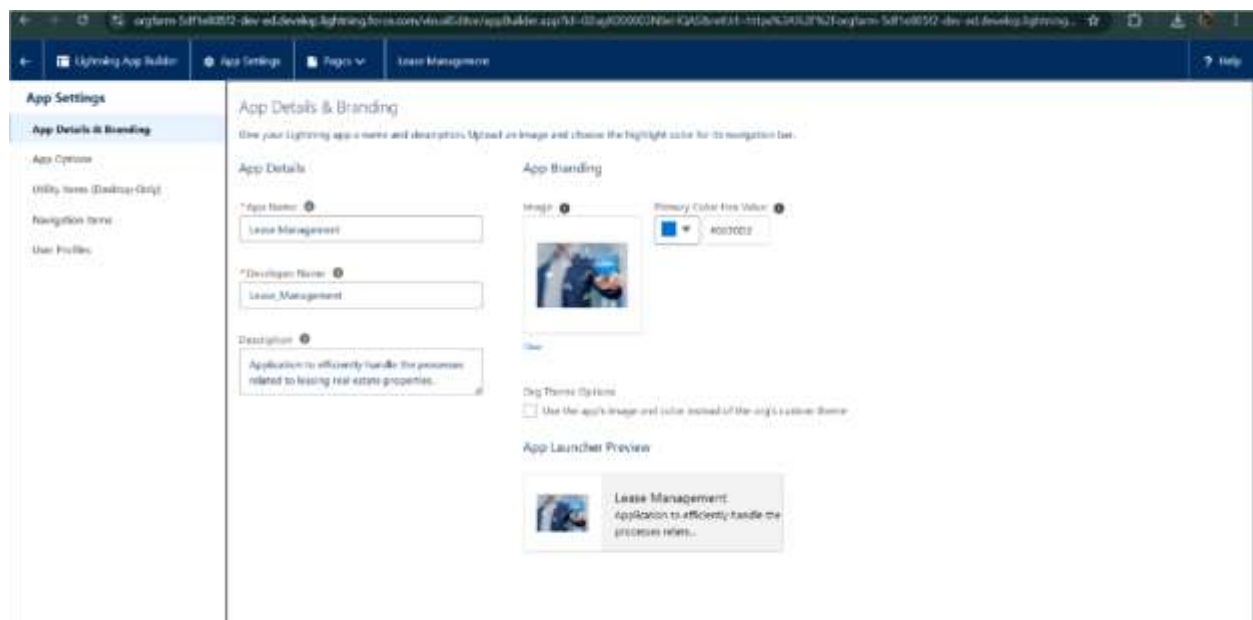
7 Items, Sorted by Field Label

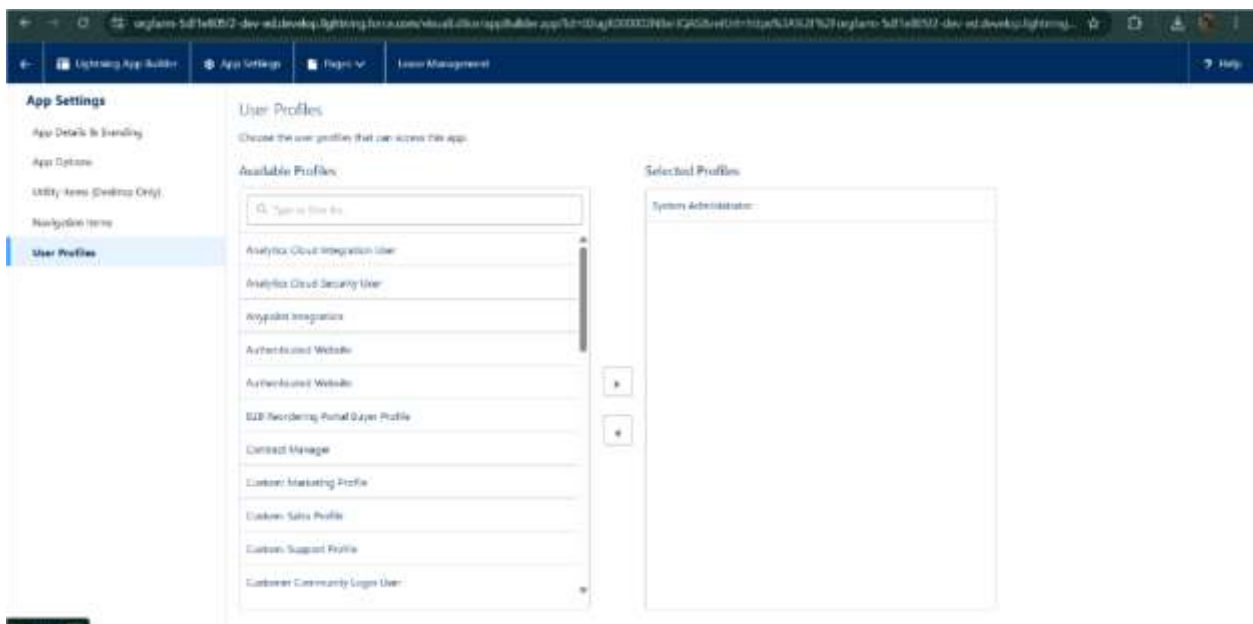
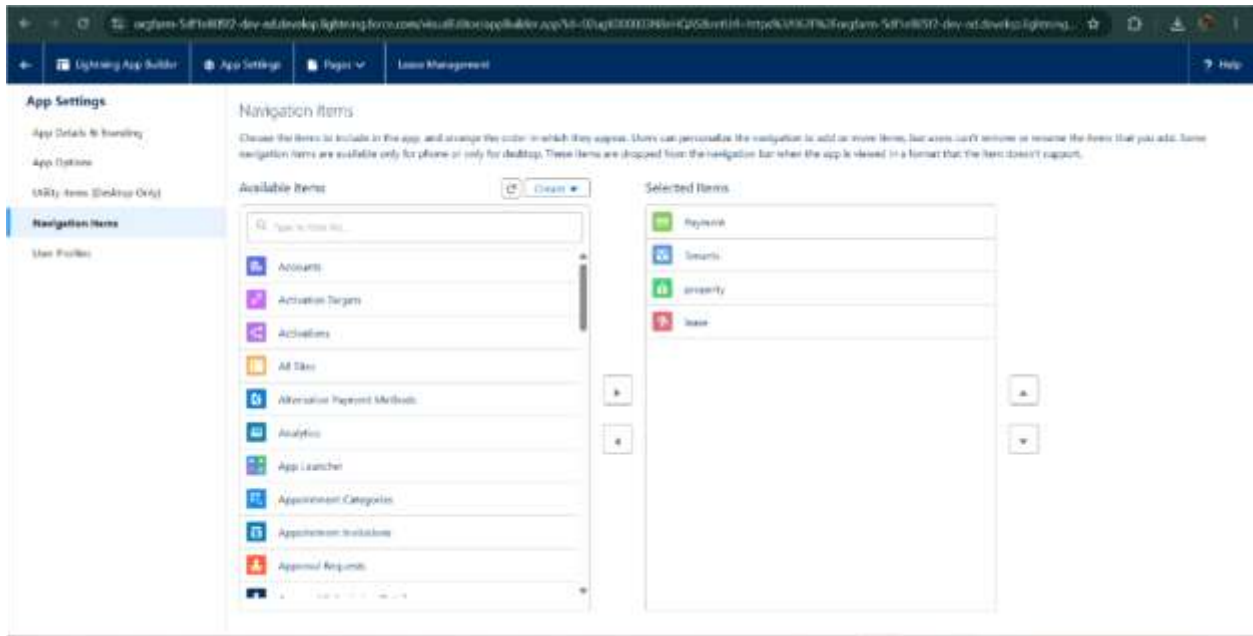
Quick Find New Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedBy	Lookup(User)		
End date	End_date_c	Date		
Last Modified By	LastModifiedBy	Lookup(User)		
Unit name	Name	Text(50)		✓
Owner	OwnerId	Lookup(User Group)		✓
Property	property__c	Lookup(Property)		✓
Start date	start_date_c	Date		

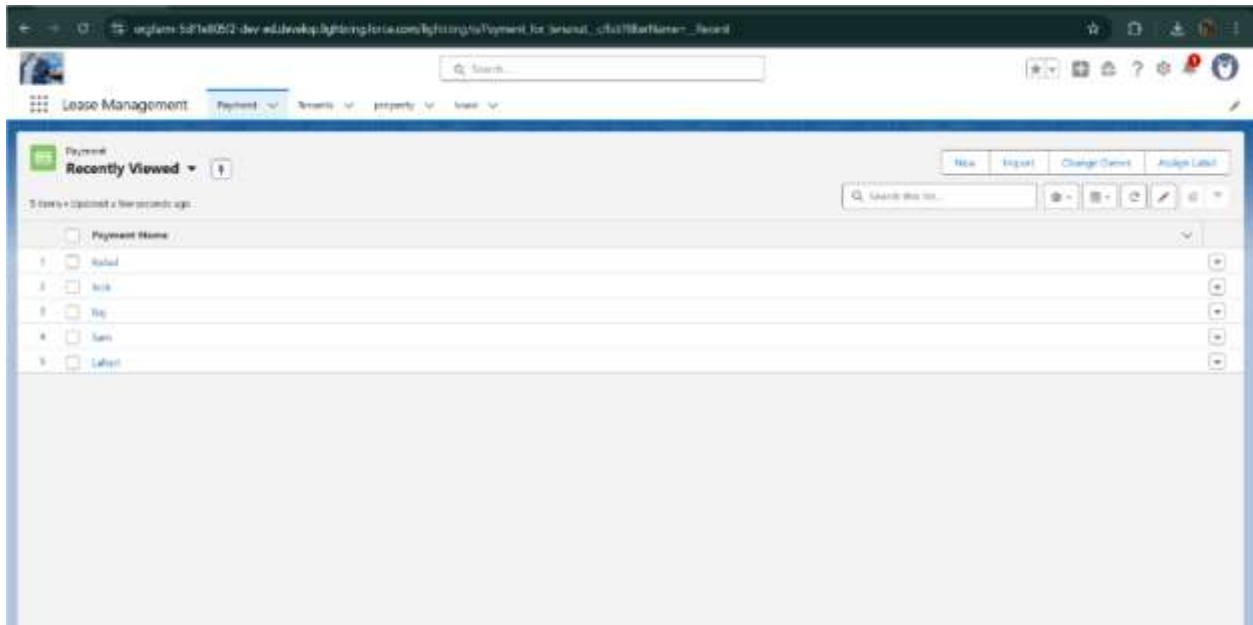


- Developed Lightning App with relevant tabs

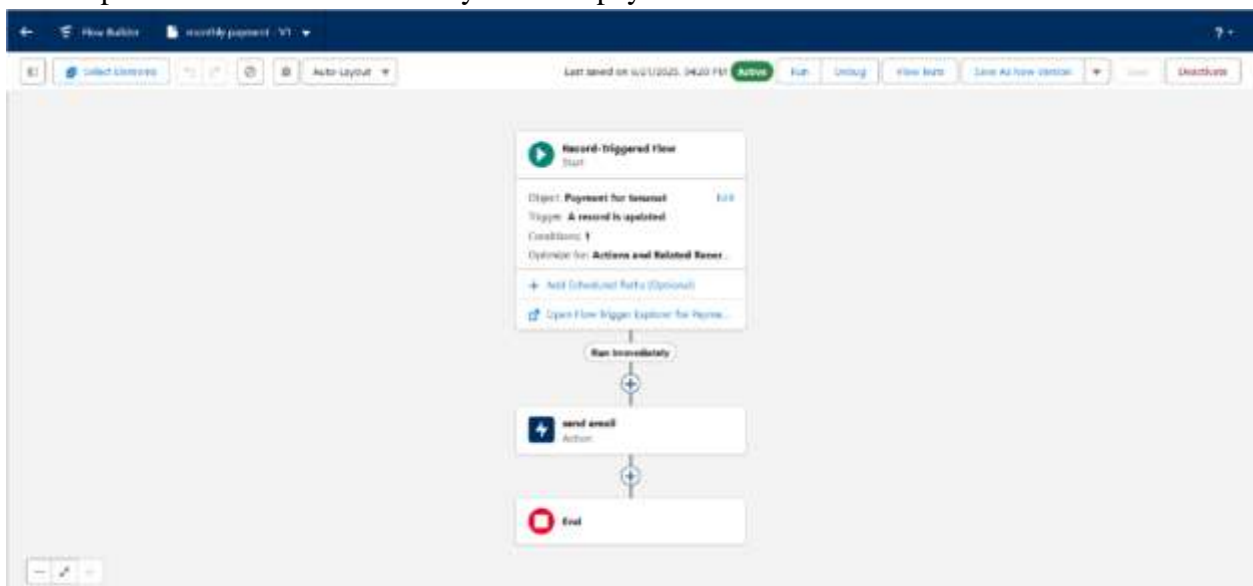








- Implemented Flows for monthly rent and payment success

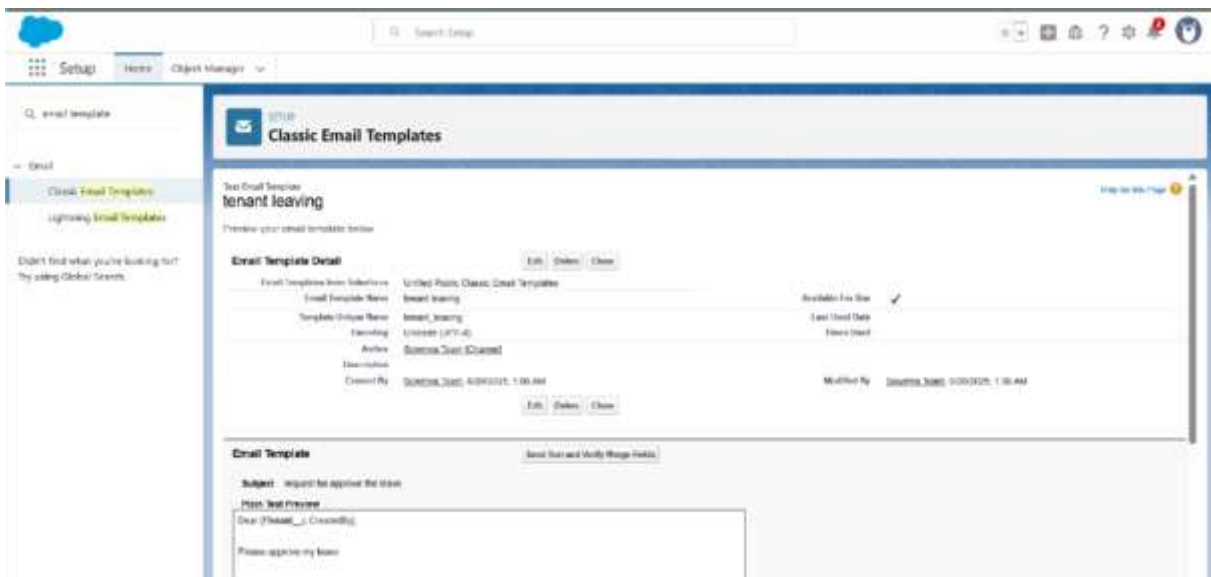
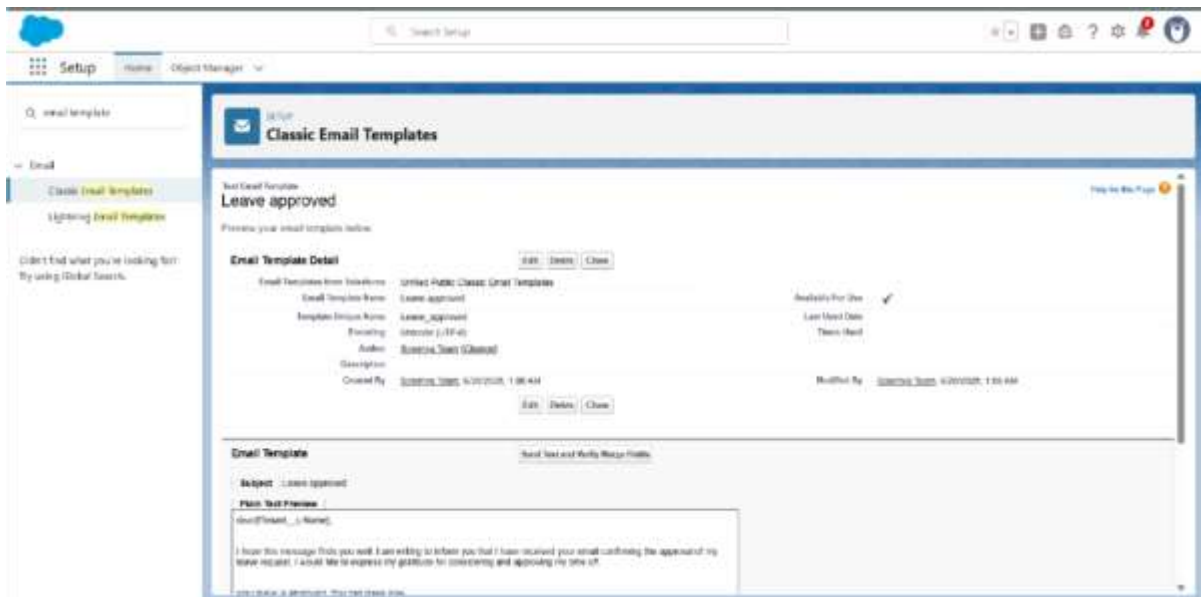


- To create a validation rule to a Lease Object





- Built and tested email templates for leave request, approval, rejection, payment, and reminders



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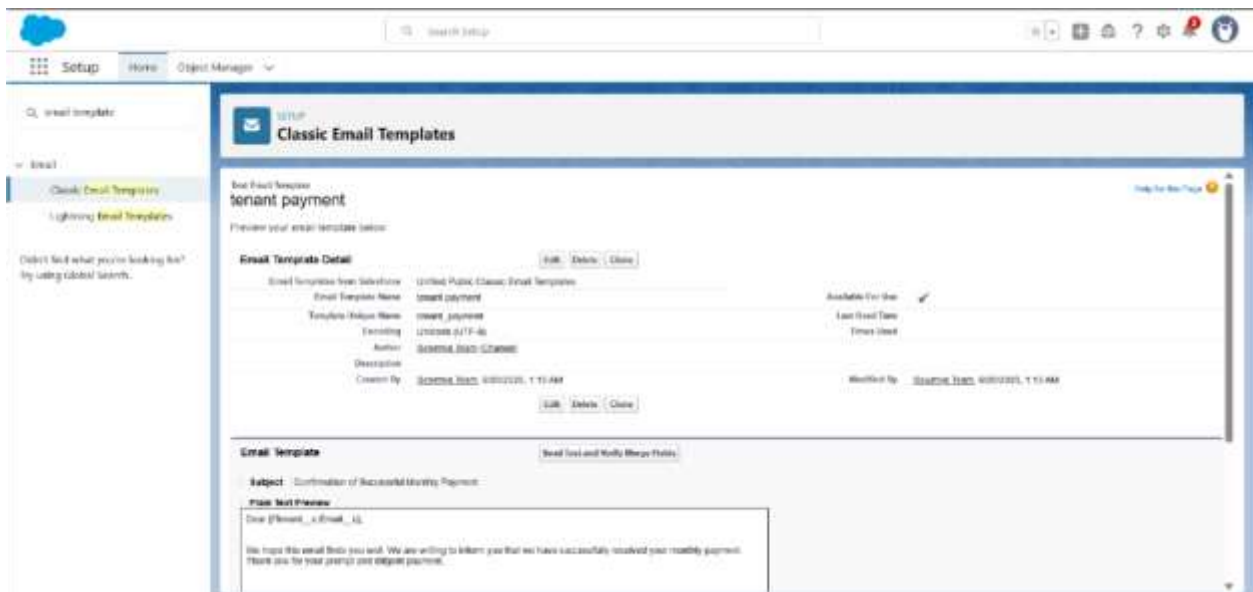
Q email template



GROUP

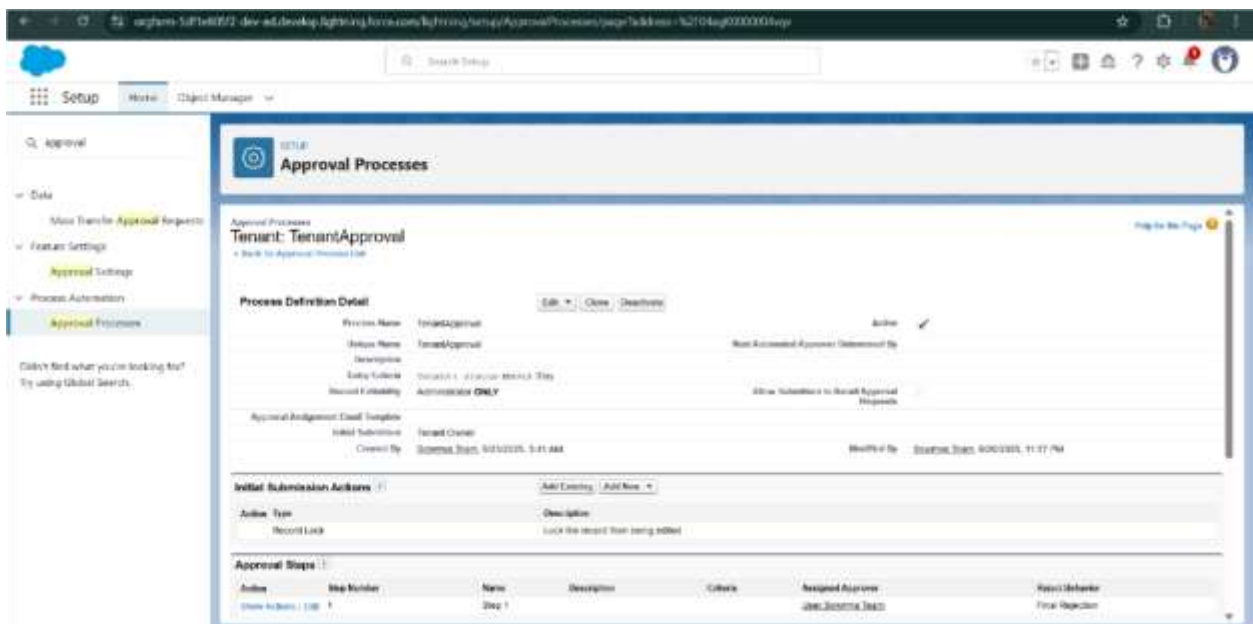
Classic Email Templates

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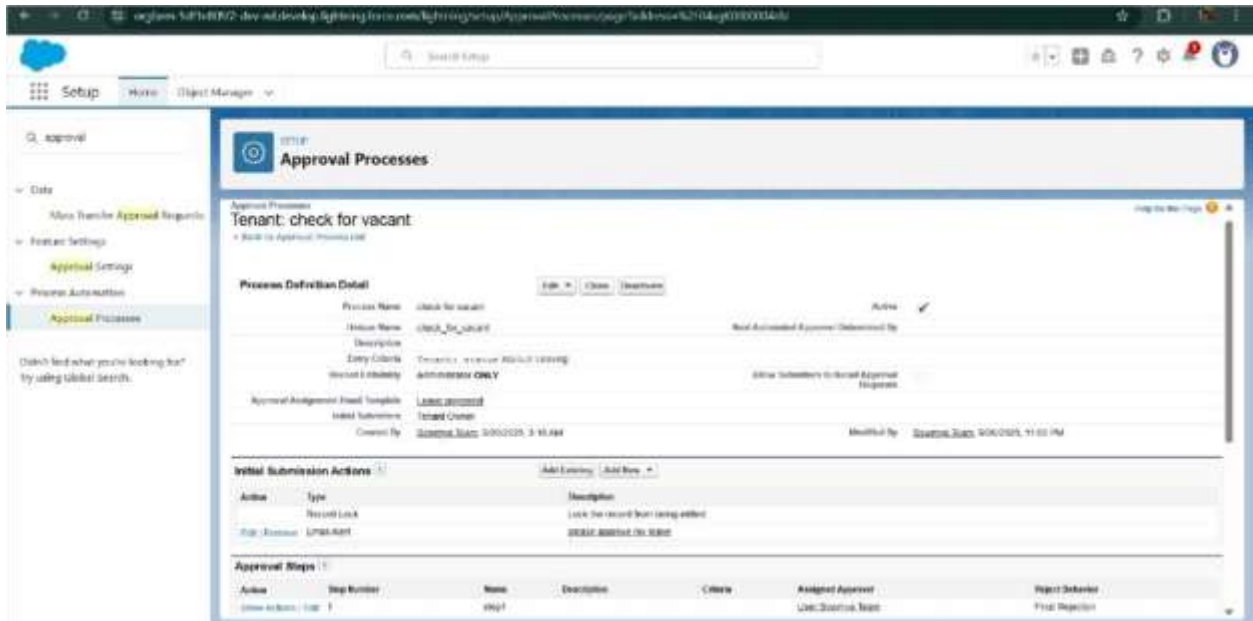


- Approval Process creation

For Tenant Leaving:

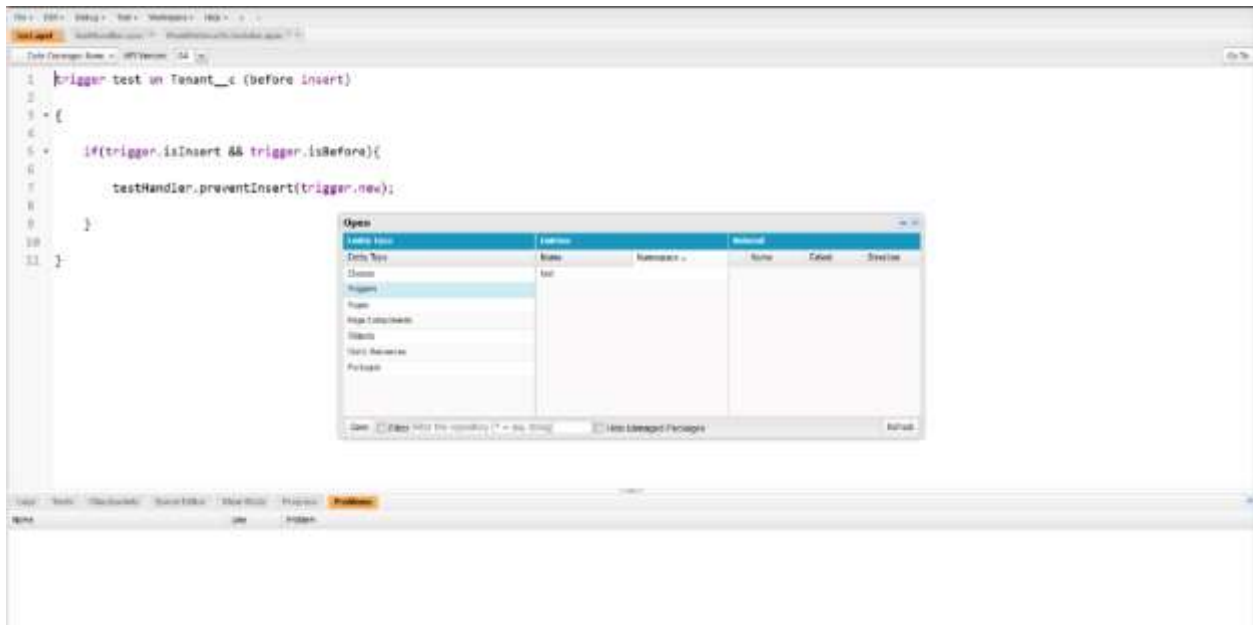


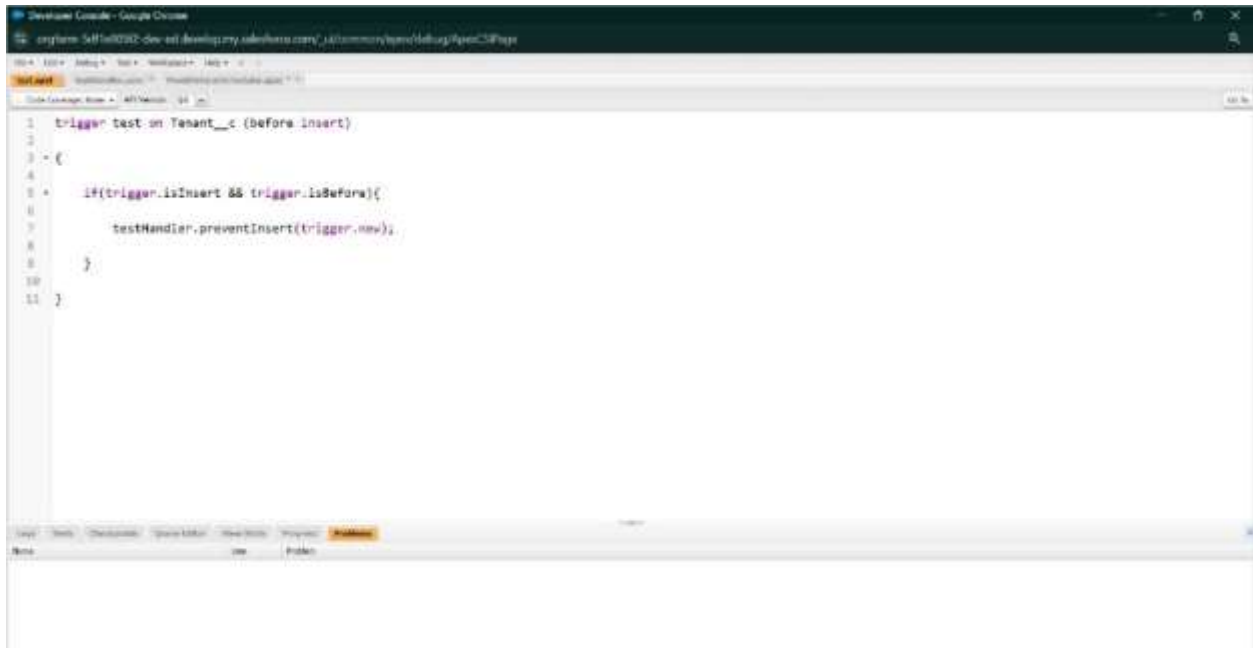
For Check for Vacant:



- Apex Trigger

Create an Apex Trigger

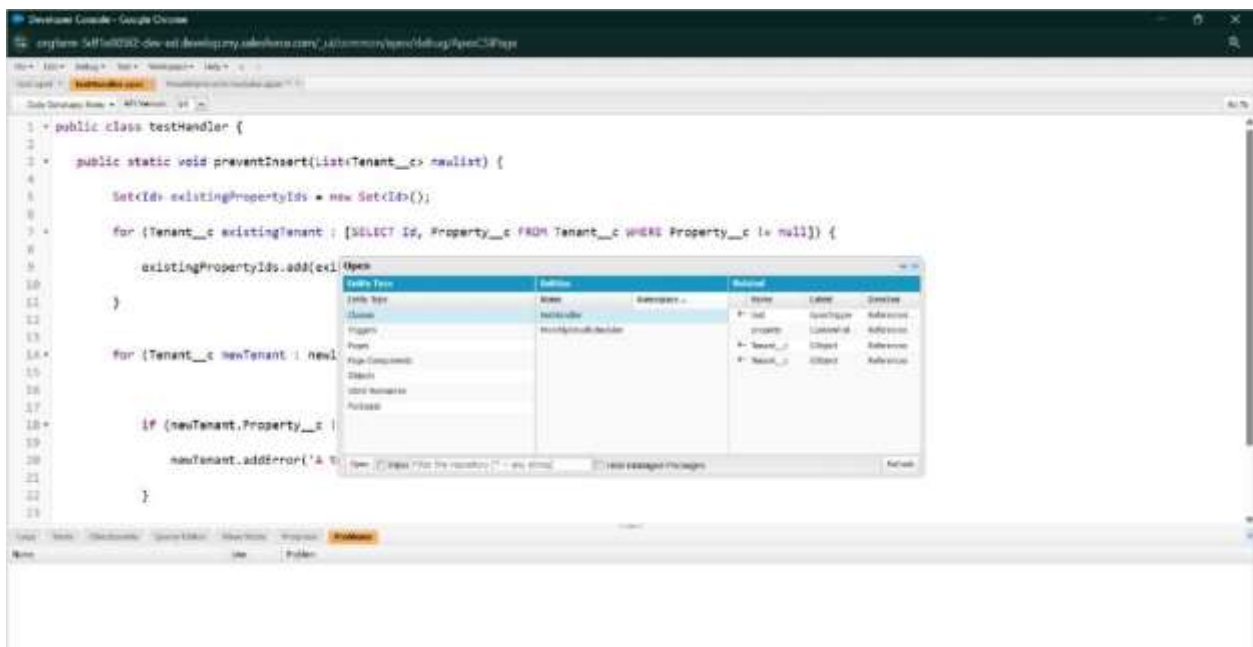




The screenshot shows a code editor with a trigger for the `Tenant__c` object, triggered before insert. The trigger calls a handler class `testHandler` to prevent insert if a property already exists.

```
1 trigger test on Tenant__c (before insert)
2
3 {
4
5     if(trigger.isInsert && trigger.isBefore){
6         testHandler.preventInsert(trigger.new);
7     }
8 }
9
10
11 }
```

Create an Apex Handler class



The screenshot shows an Apex handler class `testHandler` with a `preventInsert` method. A modal window is open over the code, displaying a table with columns: Table Type, Name, Description, Role, Label, and Direction.

```
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         for (Tenant__c newTenant : newList) {
13
14             if (newTenant.Property__c != null && existingPropertyIds.contains(newTenant.Property__c)) {
15                 newTenant.addError('A property with this name already exists');
16             }
17         }
18     }
19 }
20
21
22 }
```

Table Type	Name	Description	Role	Label	Direction
Class	testHandler		*	test	ApexTrigger
Property	Property__c		*	Property__c	LookupId
Property	Property__c		*	Tenant__c	LookupId
Property	Property__c		*	Tenant__c	LookupId



```
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             existingPropertyIds.add(existingTenant.Property__c);
9         }
10
11         for (Tenant__c newTenant : newList) {
12
13             if (newTenant.Property__c != null && existingPropertyIds.contains(newTenant.Property__c)) {
14                 newTenant.addError('A tenant can have only one property');
15             }
16         }
17     }
18 }
```

- FLOWS

The screenshot displays the Salesforce Flow Builder interface for a "Record-Triggered Flow". The flow is triggered by a record update and includes a "Send Email" action and a "Test" button. The right-hand panel shows the "Configure Start" settings, including a condition for "check for payment" and options for when to run the flow. Below this, the "Optimize Flow" section provides guidance on field updates and asynchronous paths.

**Record-Triggered Flow**  
Start  
Object: Payment for tenant  
Trigger: A record is updated  
Conditions: 1  
Optimize for: Actions and Related Records  
+ Add Scheduled Paths (Optional)  
Open Flow Trigger Explorer for Payment

Run Immediately

Send Email  
Action

Test

**Configure Start**

Field	Operator	Value
check for payment	Equal	1

+ Add Condition

**When to Run the Flow for Updated Records**

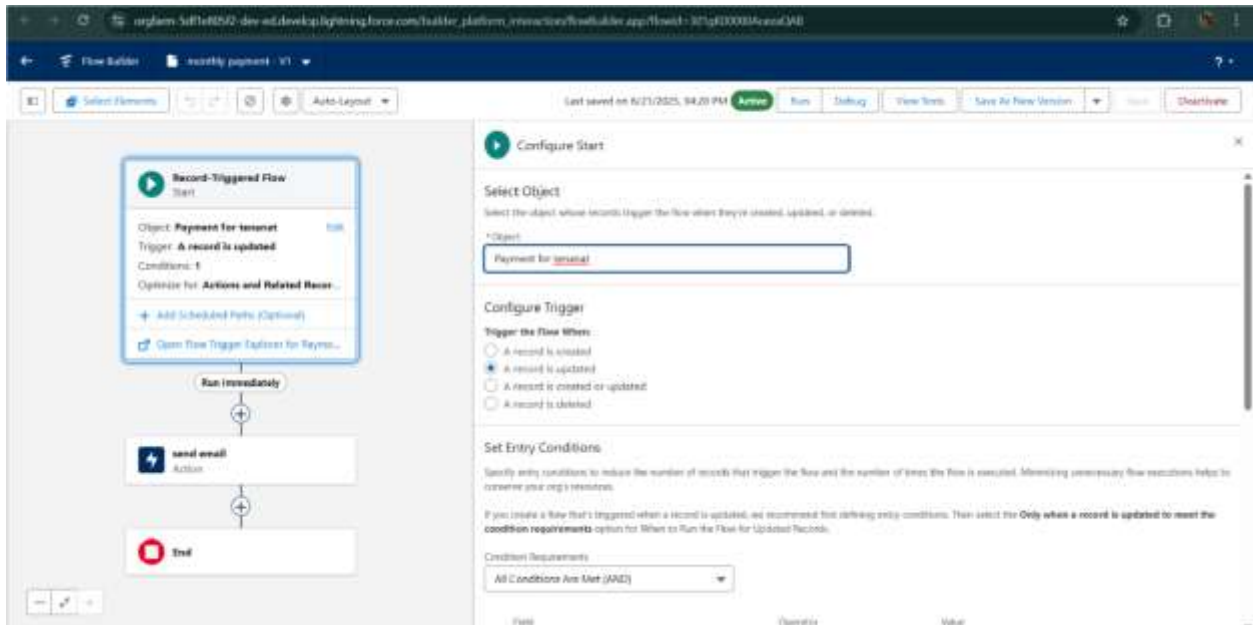
- ☒ Every time a record is updated and meets the condition requirements
- ☐ Only when a record is updated to meet the condition requirements

**Optimize Flow**  
Optimize the Flow for:

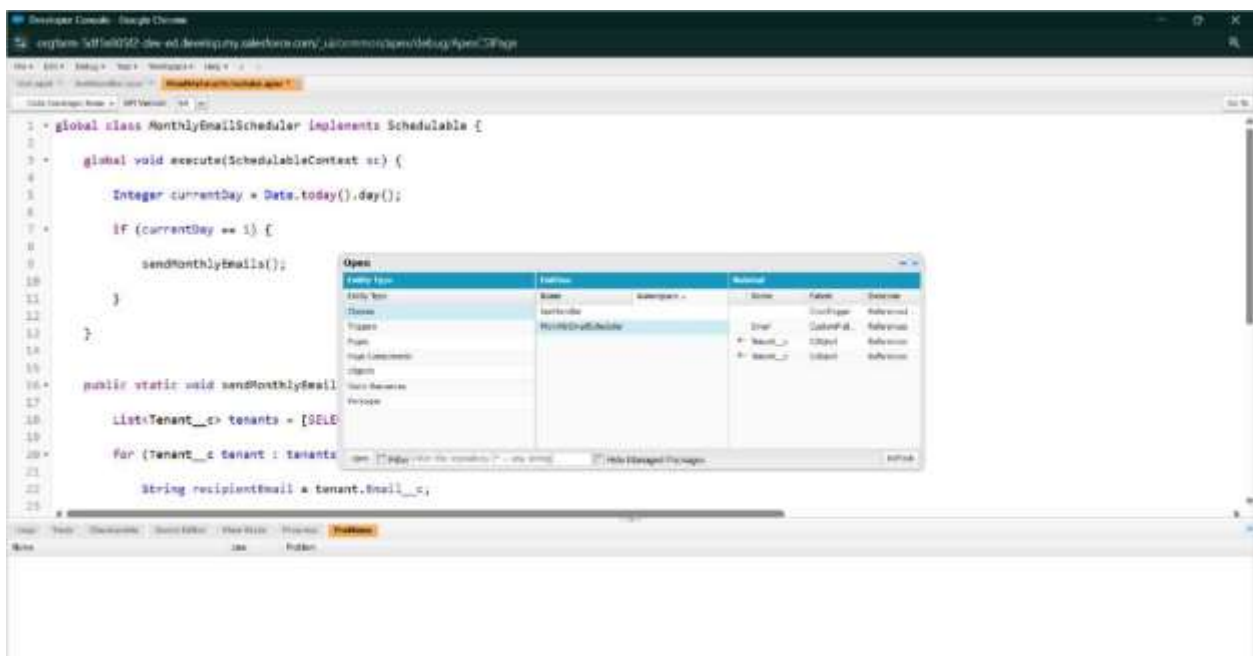
**Fast Field Updates**  
Update fields on the record that triggers the flow to run. This high-performance flow runs **before** the record is saved to the database.

**Actions and Related Records**  
Update any record and perform actions, like send an email. This more flexible flow runs **after** the record is saved to the database.

Is this flow making an external callout or connecting to an external system?  
An asynchronous path is required for flows that involve external systems.  
Add Asynchronous Path ☐



- Schedule class:  
Create an Apex Class



The screenshot shows the Salesforce Developer Console interface. On the left, the navigation pane is open, showing the 'Apex' section with sub-items like 'Apex Exception Email', 'Custom Code', 'Apex Classes', 'Apex Settings', 'Apex Test Execution', 'Apex Test History', 'Apex Triggers', 'Environments', and 'Tools'. The 'Apex Classes' item is selected. The main content area displays the 'MonthlyEmailScheduler' class. The 'Apex Class Detail' section shows the class name, namespace, and creation information. The 'Class Body' tab is active, showing the Apex code for the class.

**Apex Class Detail**

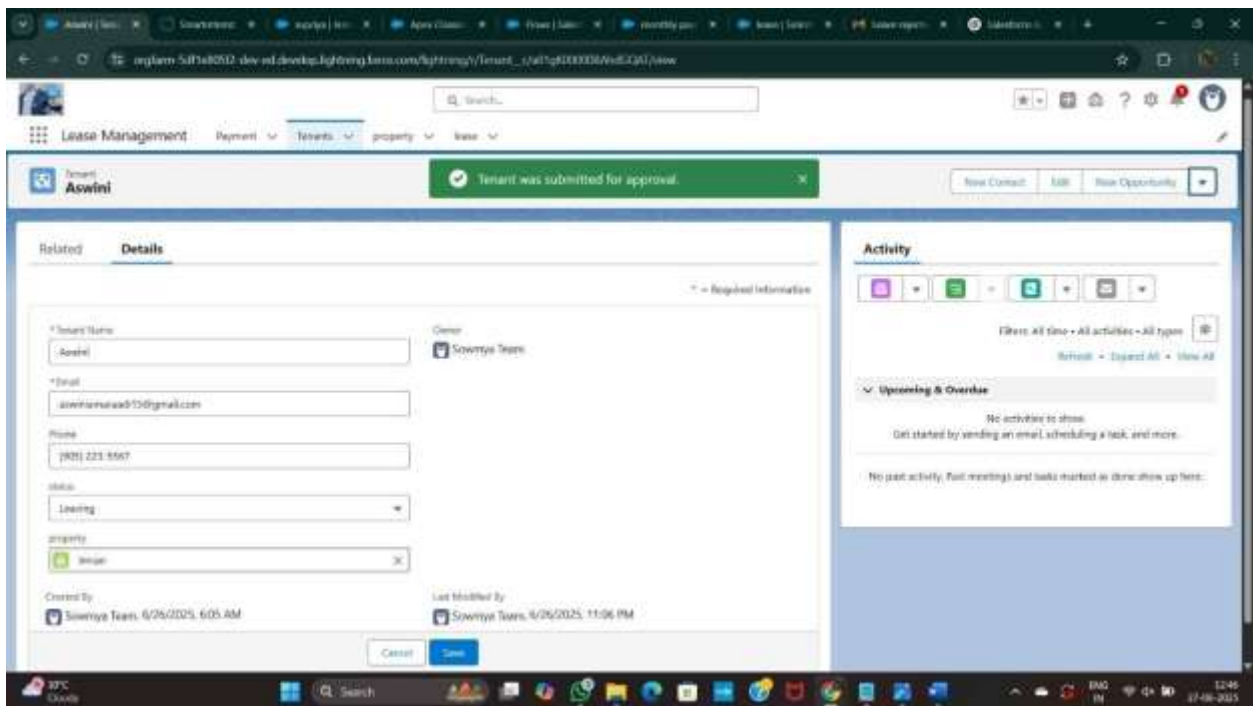
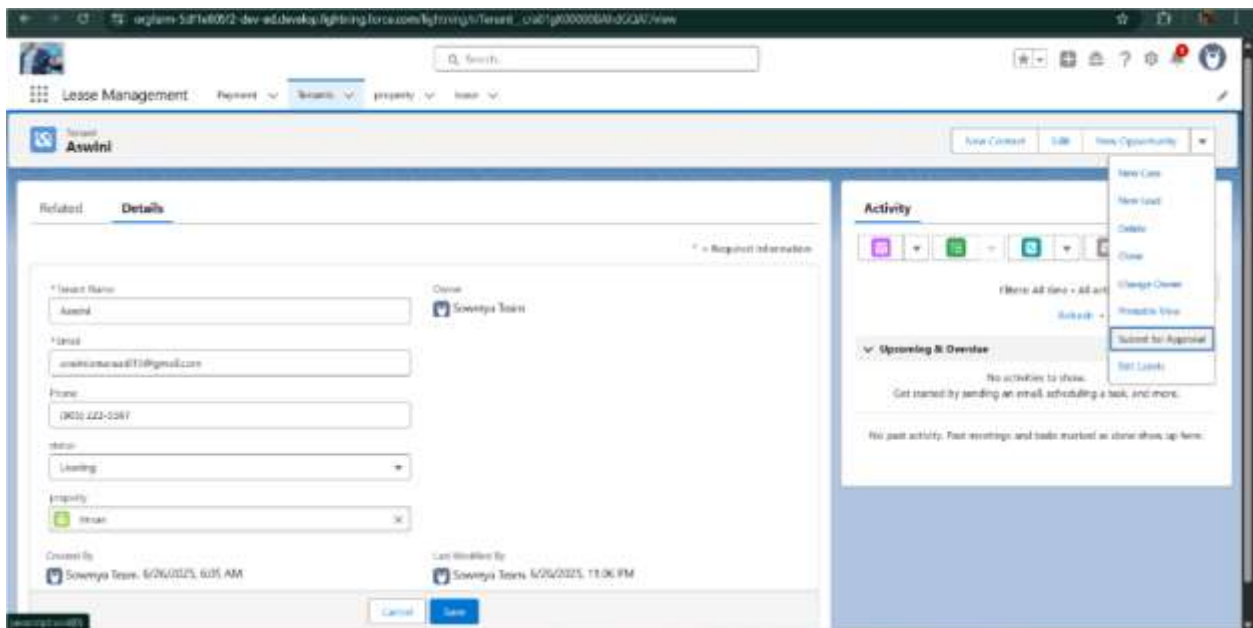
Name	Namespace	Status	Active
MonthlyEmailScheduler		Code Coverage	0% (0/0)
Created by	System Team	Last Modified by	System Team
Created	4/23/2018 2:46 AM	Last Modified	4/23/2018 2:47 AM

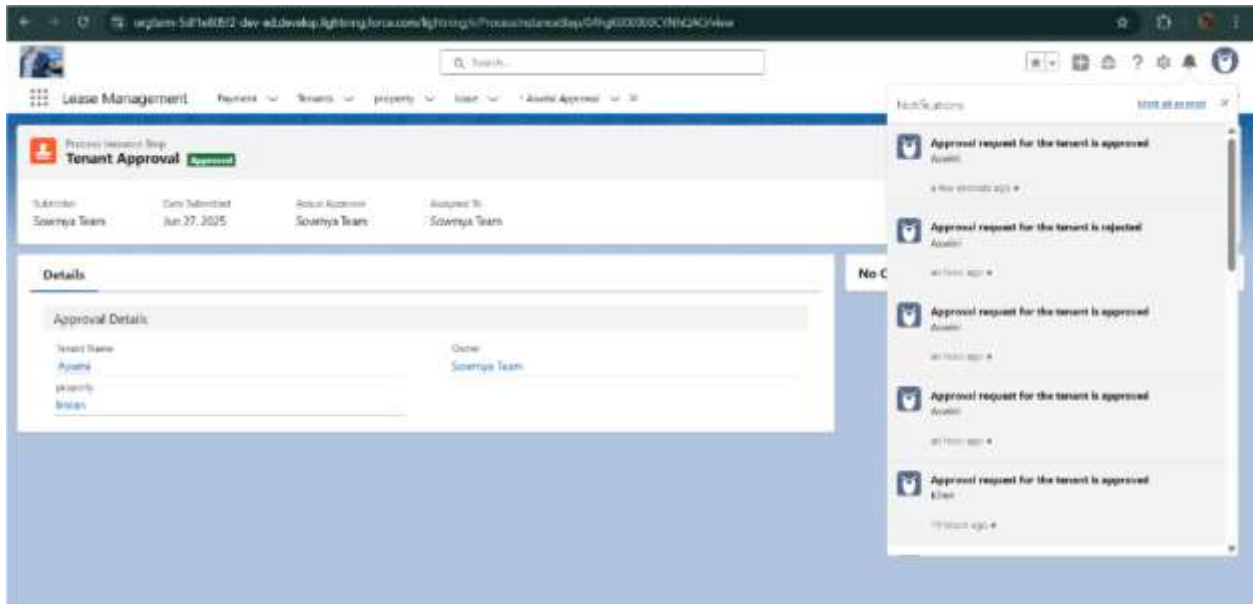
**Class Body** | **Class Summary** | **Version Settings** | **Trace Flags**

```

1  global class MonthlyEmailScheduler implements Schedulable {
2
3      global void executeDateBasedContext() {
4
5          Integer currentDay = Date.today().day();
6
7          if (currentDay == 1) {
8              sendMonthlyEmail();
9          }
10     }
11
12 }
13
14
15
16 public static void sendMonthlyEmail() {
17
18     List<Tenant__c> tenants = [SELECT id, Email__c FROM Tenant__c];
19
20     for (Tenant__c tenant : tenants) {

```

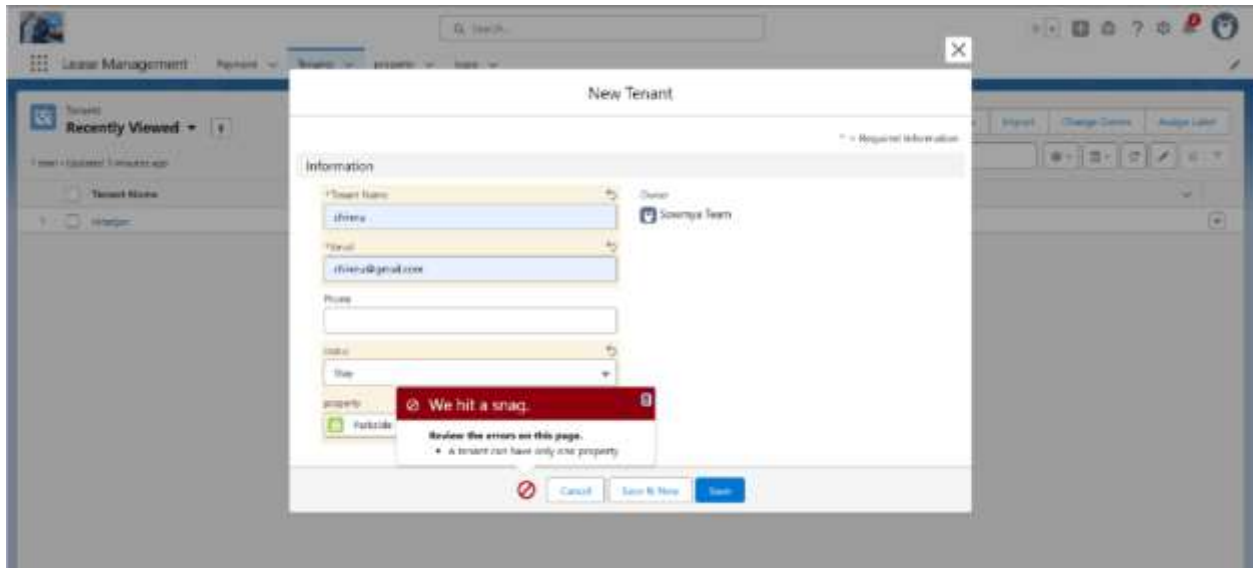




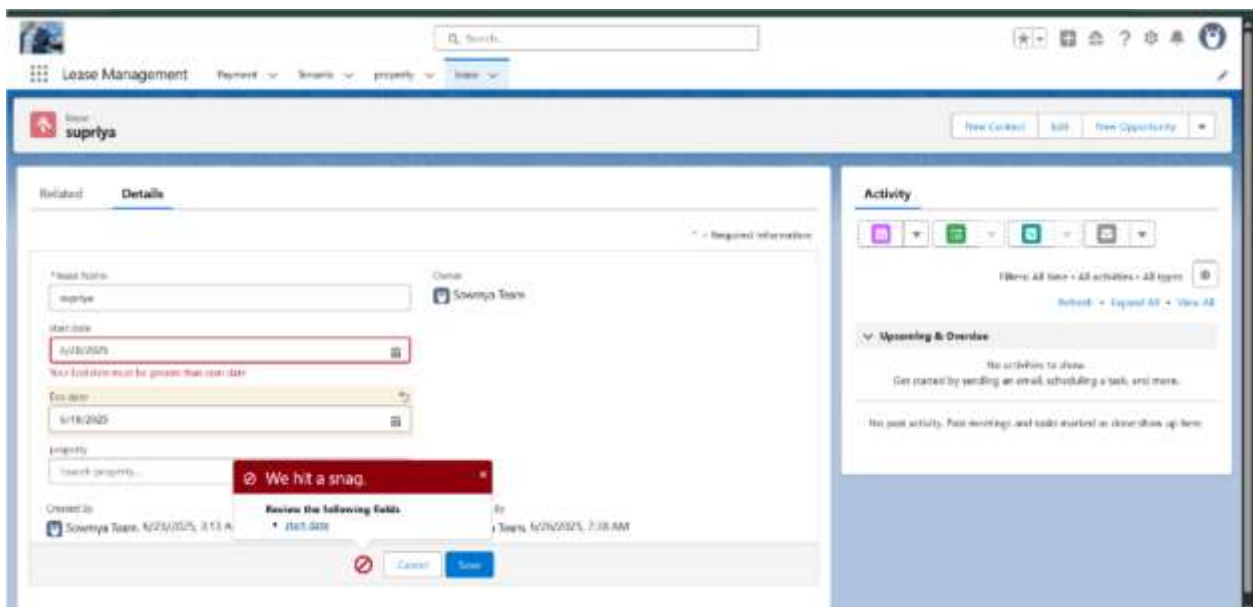
# FUNCTIONAL AND PERFORMANCE TESTING

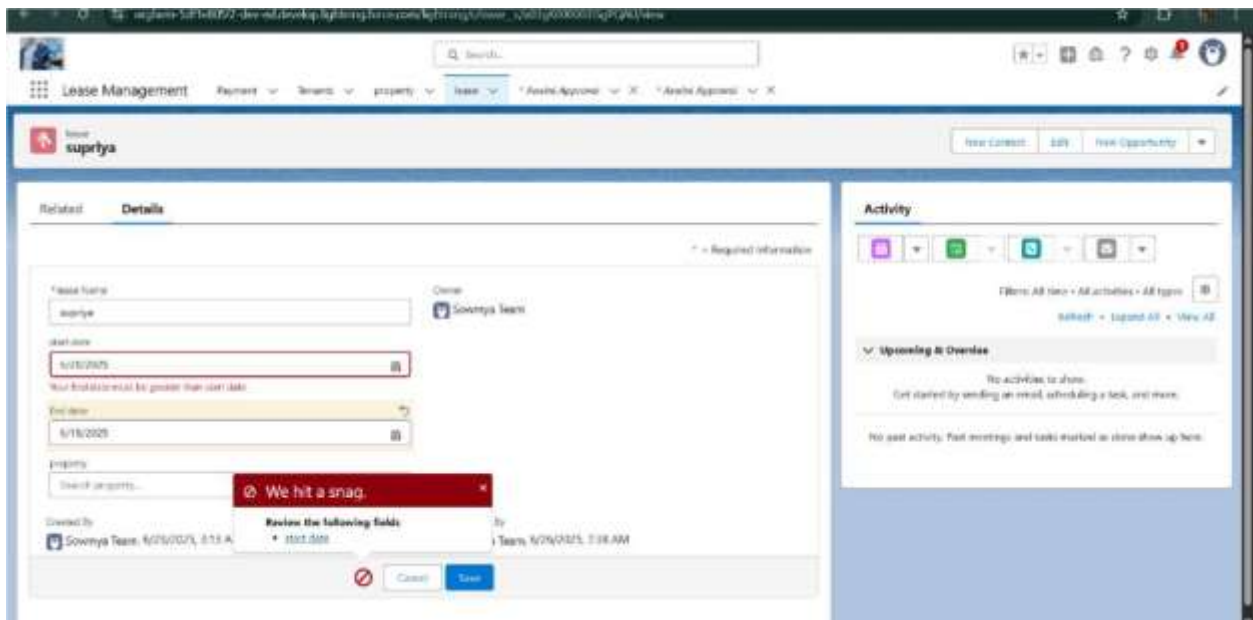
## Performance Testing

- Trigger validation by entering duplicate tenant-property records

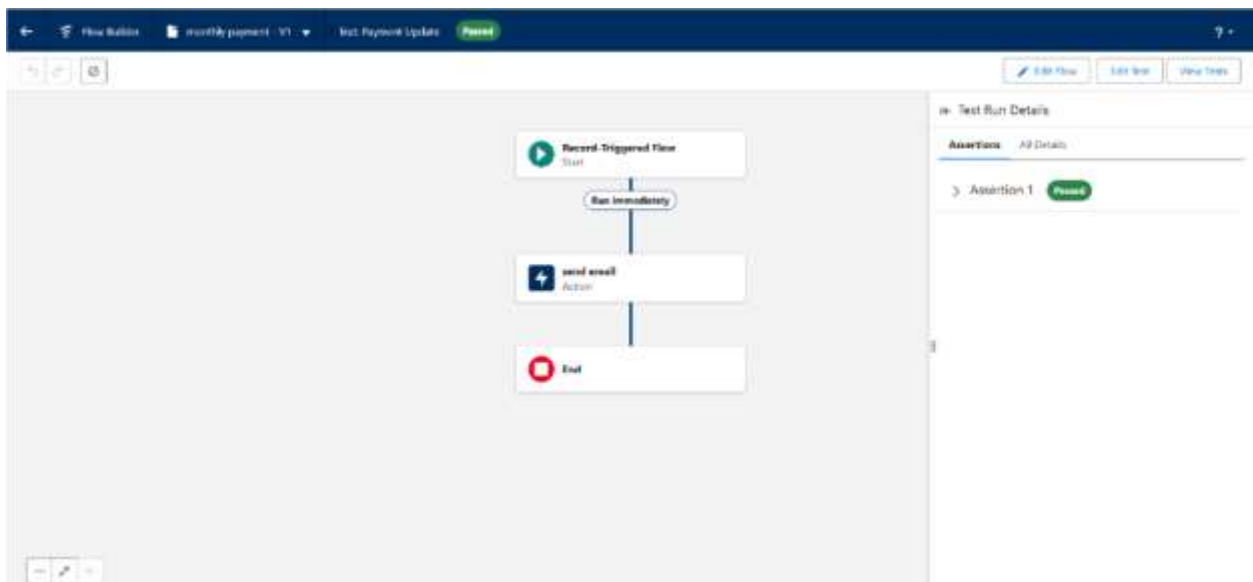


- Validation Rule checking





- Test flows on payment update



- Approval process validated through email alerts and status updates

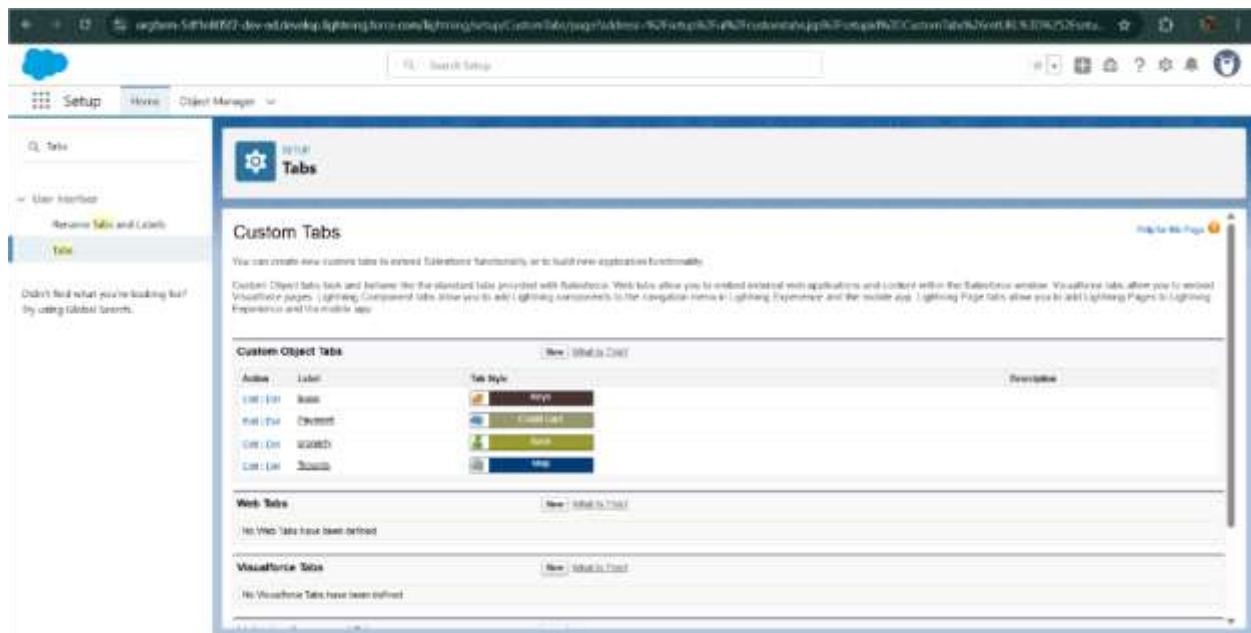




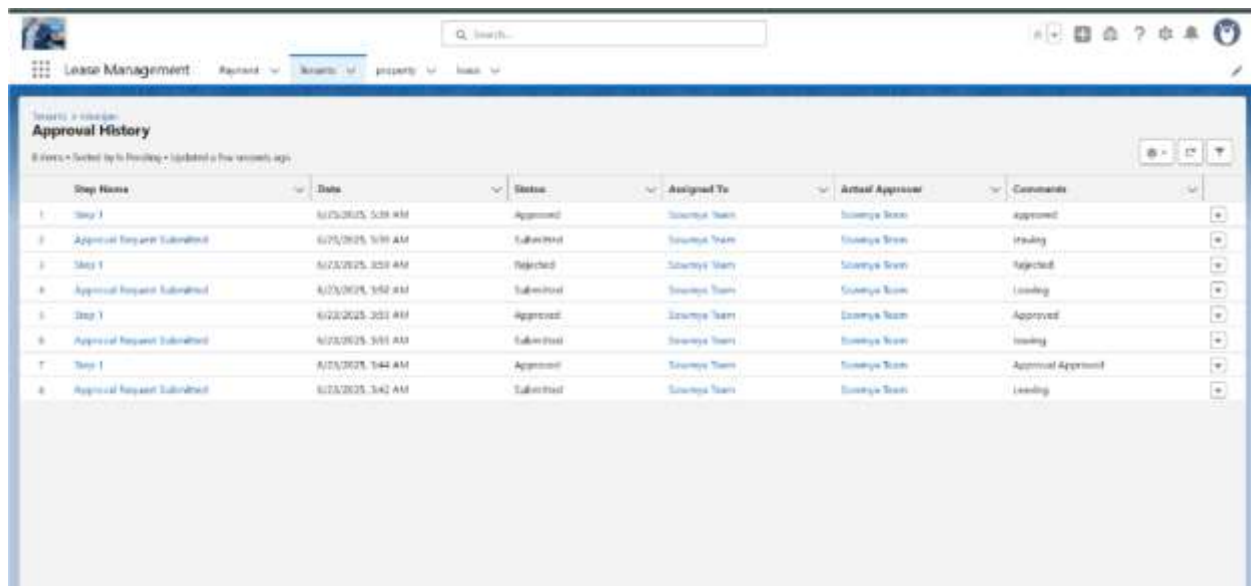
# RESULTS

## Output Screenshots

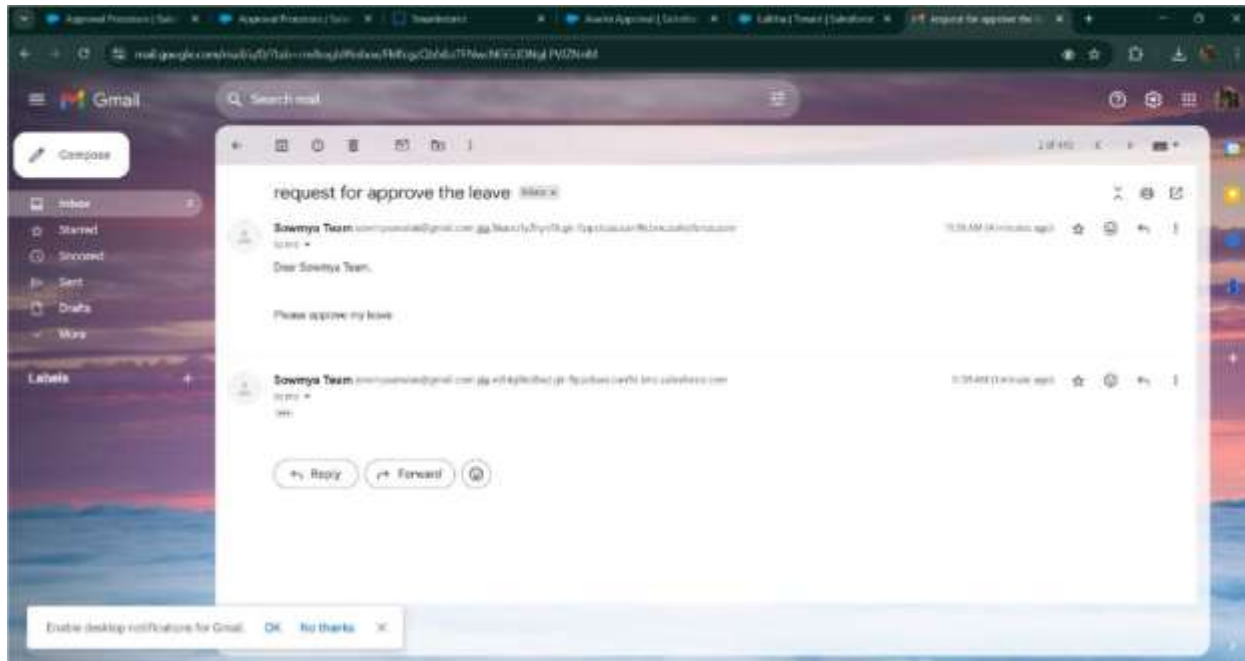
- Tabs for Property, Tenant, Lease, Payment



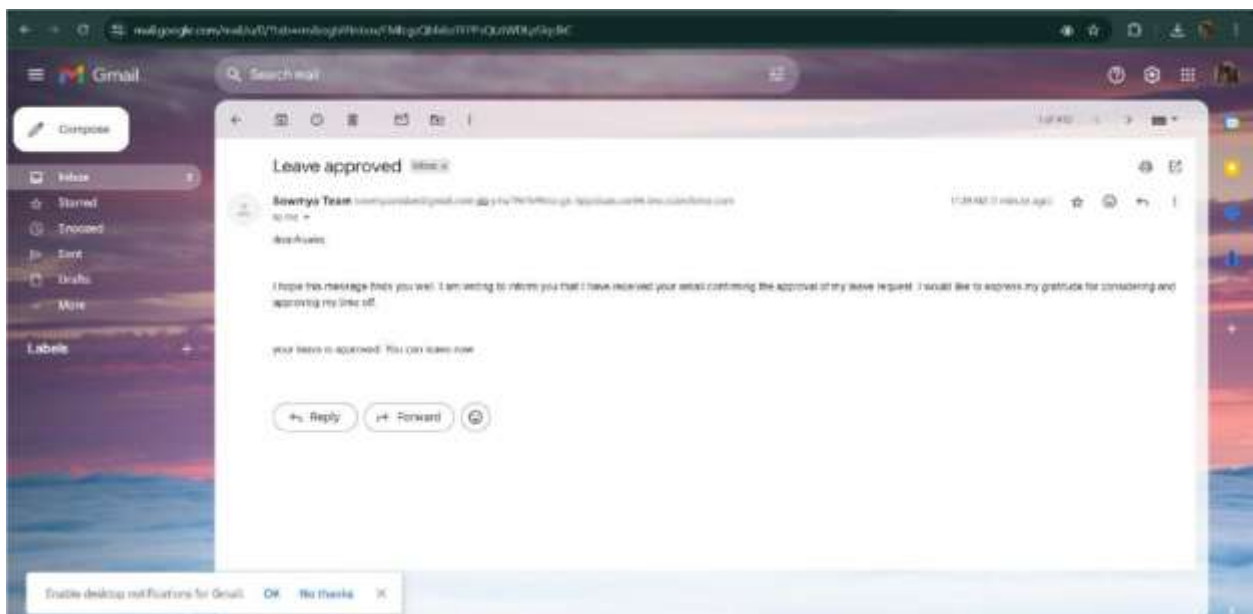
- Email alerts



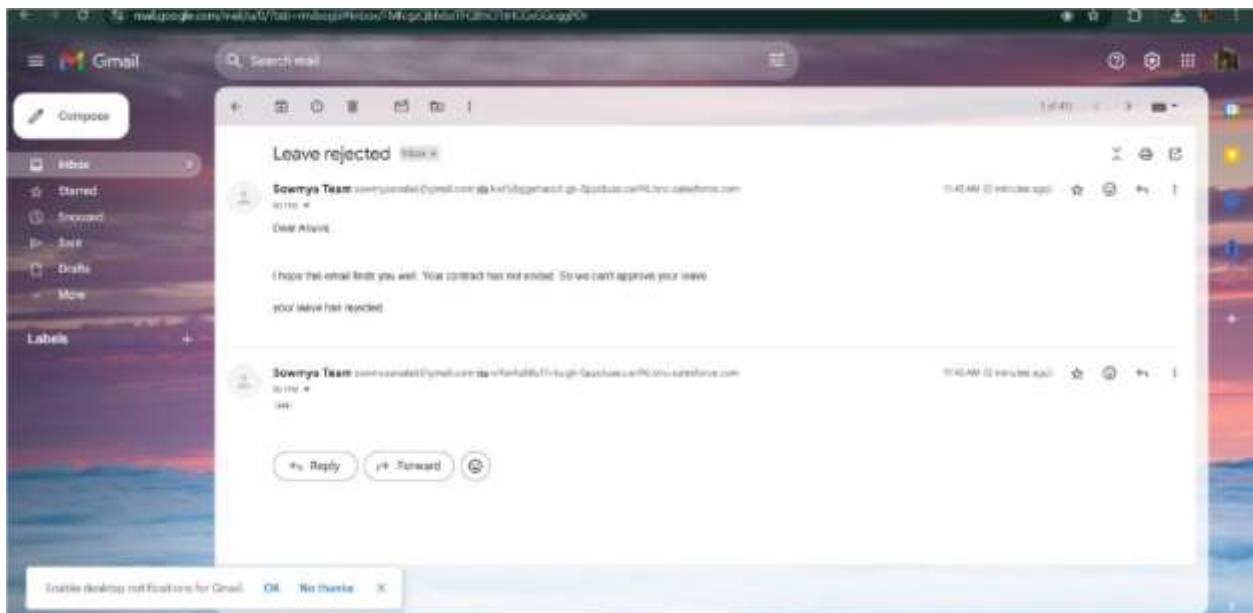
- Request for approve the leave



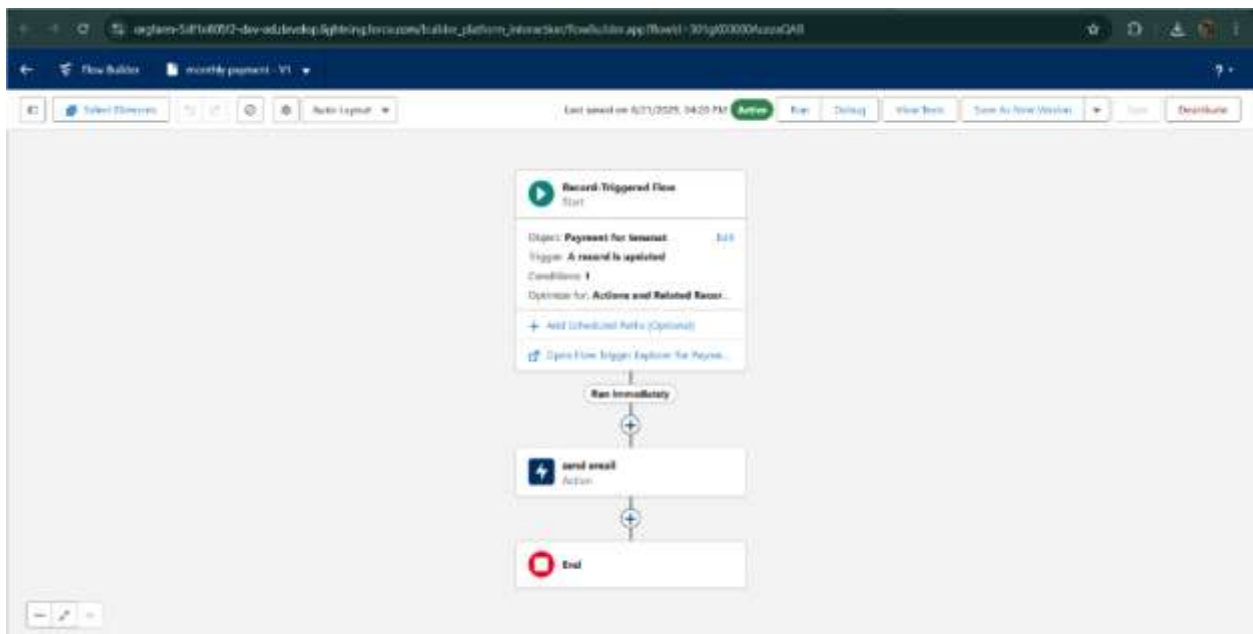
- Leave approved



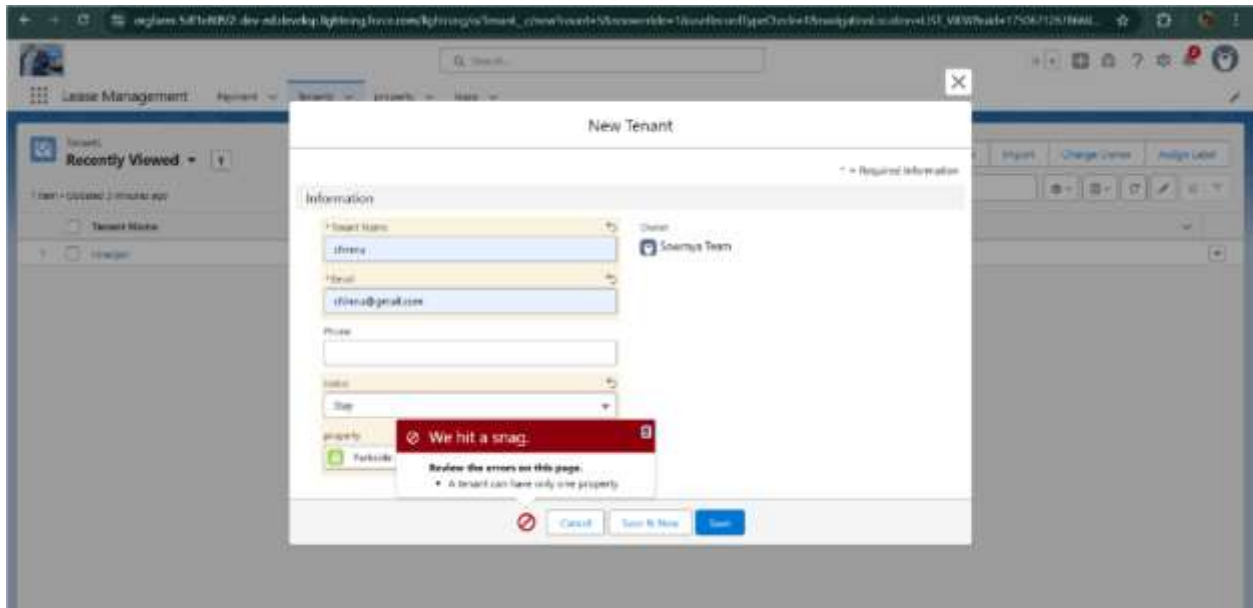
- Leave rejected



- Flow runs



- Trigger error messages



- Approval process notifications



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## ADVANTAGES & DISADVANTAGES

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# CONCLUSION

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

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## APPENDIX

- **Source Code:** Provided in Apex Classes and Triggers

### Test.apxt:

```
trigger test on Tenant__c (before insert) { if
(trigger.isInsert && trigger.isBefore){
testHandler.preventInsert(trigger.new);

} }
```

### testHandler.apxc:

```
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');

        }

    }

}

```

### **MonthlyEmailScheduler.apxc:**

```

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});  
  
}  
  
}  
  
}
```