

OXFORD ENGINEERING COLLEGE

Department of B.E(Computer science and engineering)

PROJECT TITLE:

LEASE MANAGEMENT SYSTEM

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Platform: Salesforce Developer

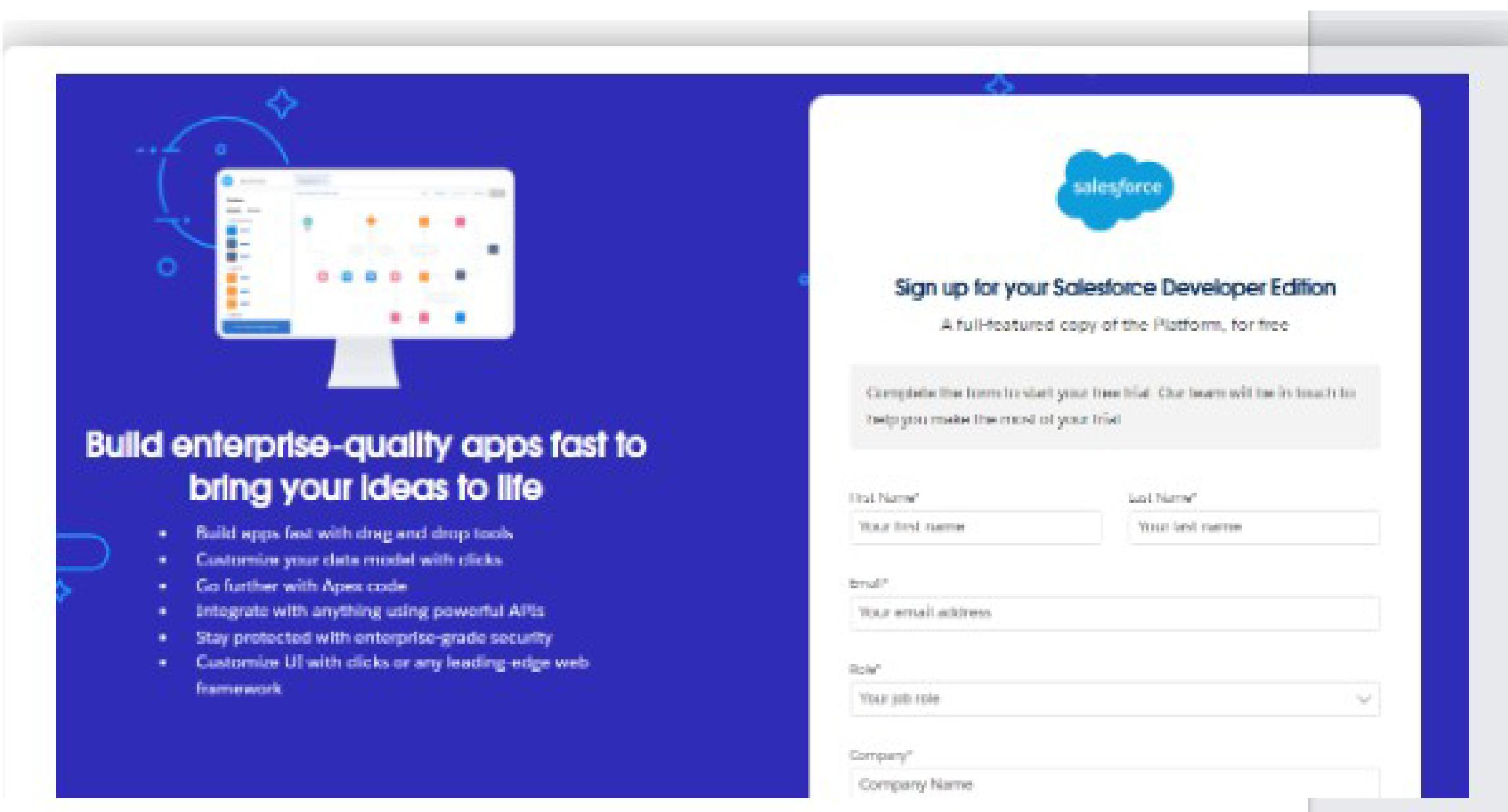
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Project Description

A lease management project involves creating a system or application to efficiently handle the processes related to leasing real estate properties, equipment, or other assets. The goal is to streamline and automate various tasks associated with lease agreements, ensuring accurate record-keeping, compliance with regulations, and effective communication between parties involved.

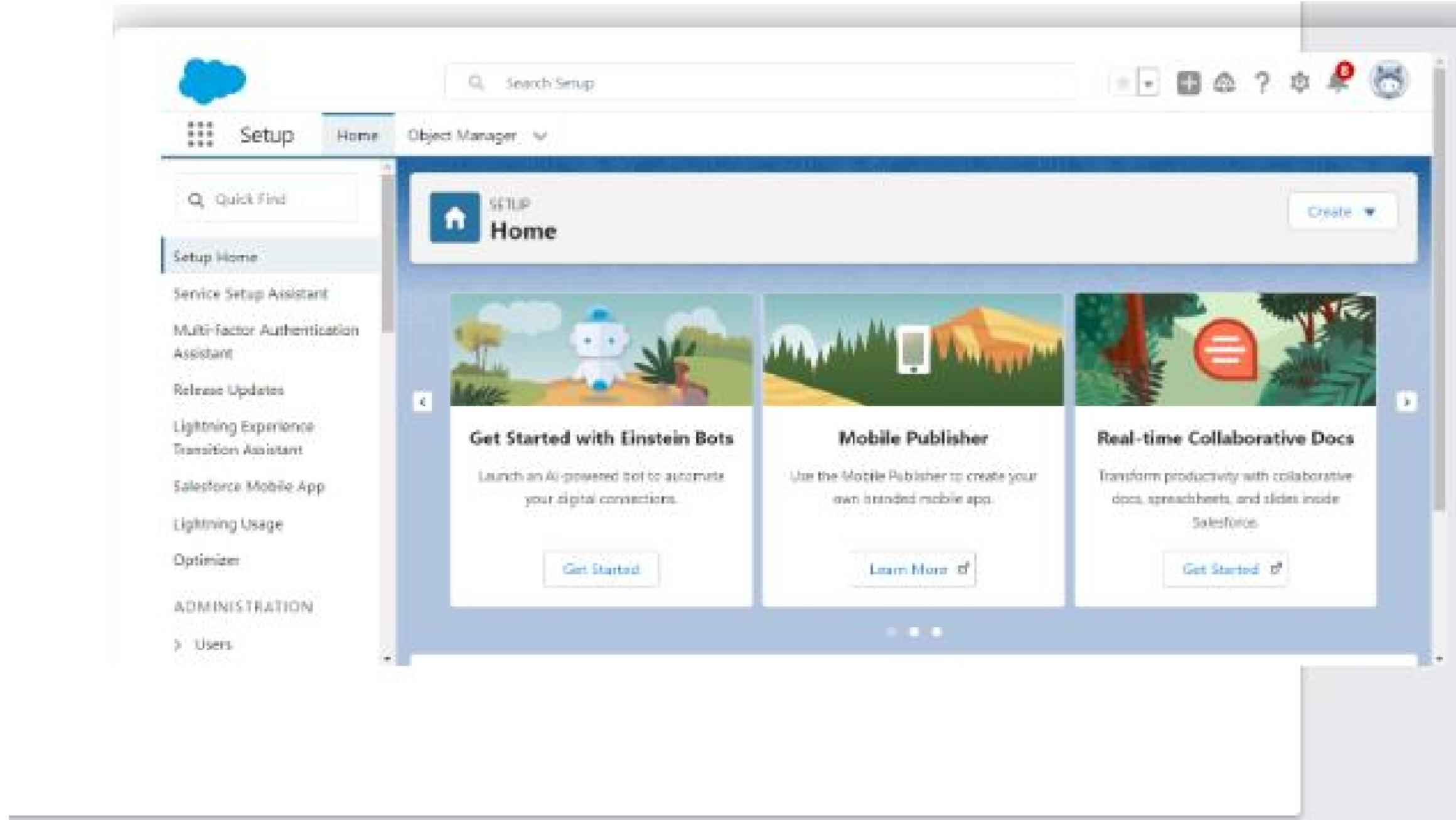
Creating Developer Account

In this step, a new Salesforce Developer Account is created using a valid email address. This account provides access to the development environment for project setup.



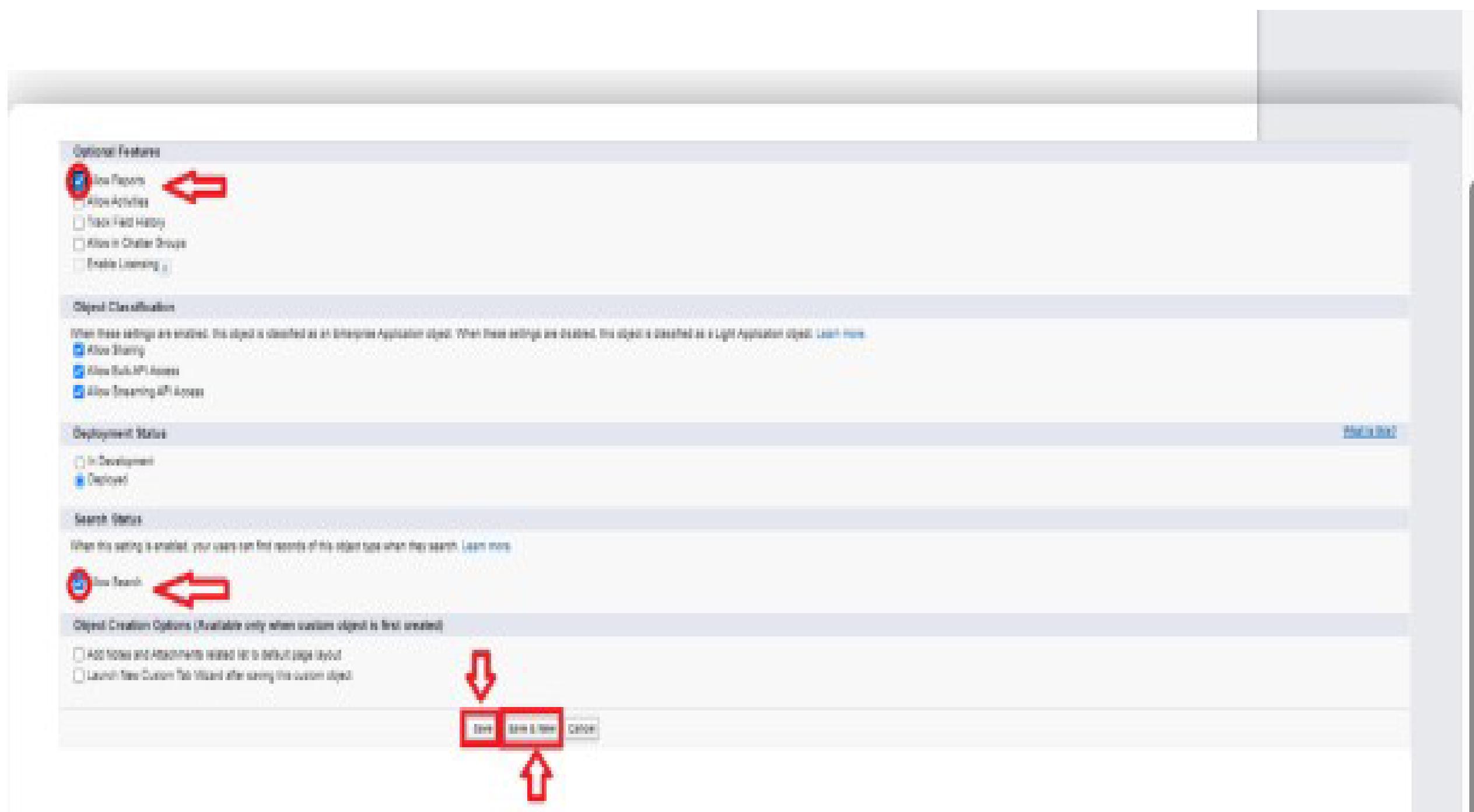
Account Activation

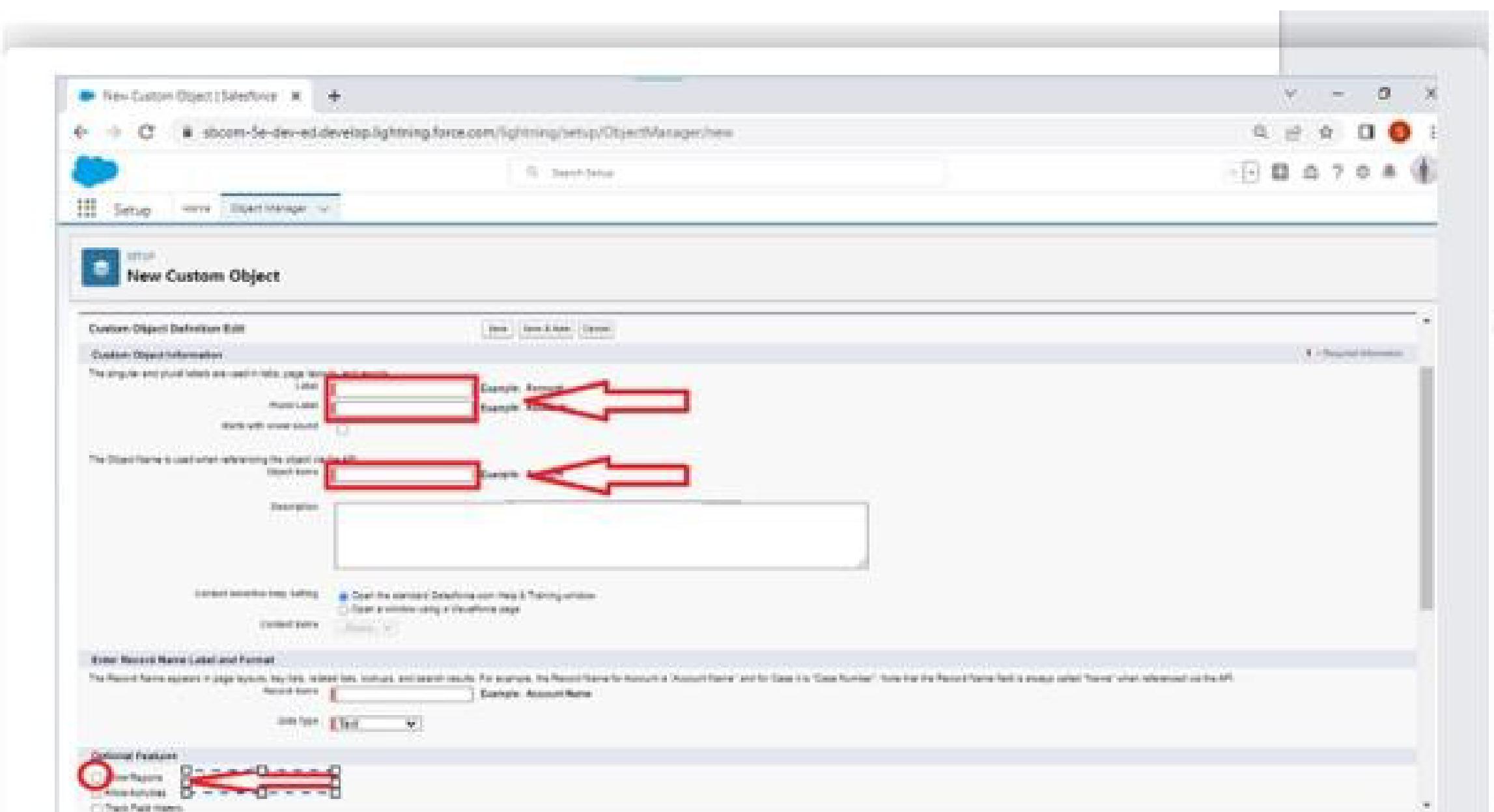
Activate the Salesforce Developer Account by verifying the registered email and completing the activation process.



Create Property Object

Create a new custom object named “Property” to store details related to lease properties such as property name, type, and location.





Create Tenant Object

Create a “ Tenant” custom object to manage tenant information including name, contact, and lease duration.

Create Payment Object

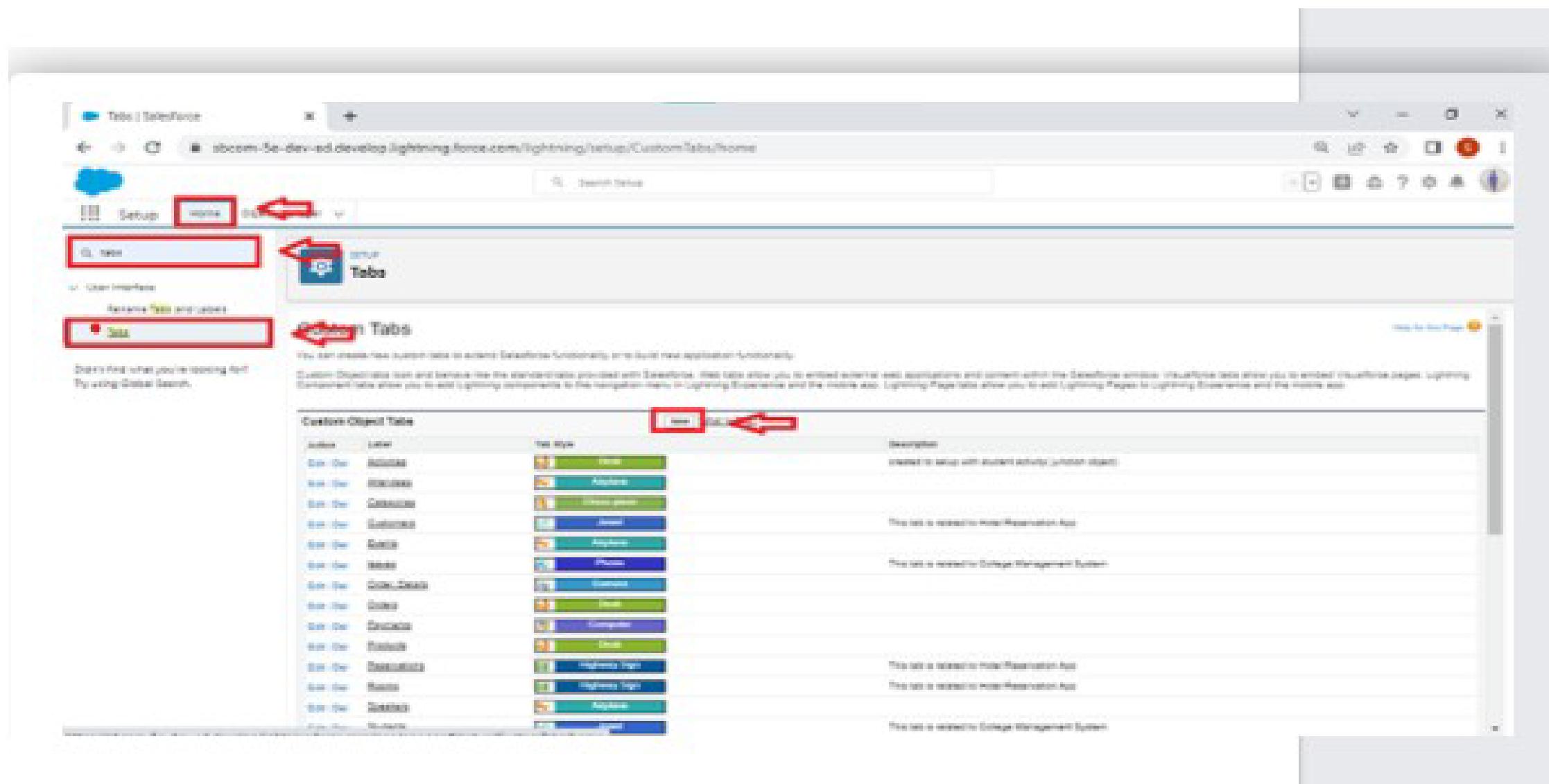
Design a “ Payment” object to handle rent payments, due dates, and payment status tracking.

Create Lease Object

Establish a “ Lease” object to connect Property and Tenant objects and manage lease terms, start and end dates.

Creating a Custom Tab

Add custom tabs for each created object to make them accessible in the Salesforce app navigation bar.



Lightning App Creation

Create a custom Lightning App that includes all the custom objects and tabs for better project navigation. **Fields Creation**

The screenshot shows the Salesforce Object Manager interface. On the left, the 'Available Items' pane lists various objects such as Accounts, Alert Settings, All Sites, Alternative Payment Methods, Analytics, App Launcher, Appointment Categories, Appointment Invitations, Approval Requests, and Asset Action Sources. On the right, the 'Selected Items' pane contains three objects: 'Payment for tenant', 'Tenants', and 'property'. A central toolbar at the top includes a 'Create' button and other navigation options.

Fields Creation

In Salesforce, **Fields** are used to store different types of data inside each **Object**. Each object in the **Lease Management System** has specific fields that help to manage properties, tenants, leases, and payments efficiently.

The screenshot shows the 'Step 2: Enter the details' page for creating a new field. The 'Field Label' is set to 'Name', 'Length' is 25, and 'Field Name' is 'Name'. The 'Required' checkbox is checked. The 'Usage' section includes options for 'Email' and 'Text' types, with 'Text' selected. The 'General' section includes checkboxes for 'Add this field to the unique record identifier from all external sources' and 'Add this field to existing custom report types that contain this criteria'. A red arrow points to the 'Next Step' button in the top right corner.

Email Template

An **Email Template** in Salesforce is a pre-designed message format that allows users to send standardized emails automatically or manually. It saves time, ensures consistency, and helps communicate important information like **lease confirmation**, **payment receipts**, and **reminders** to tenants.

1. Tenant Leaving Notification

Sends an alert to the admin when a tenant requests to vacate the property.

2. Lease Approved

Notifies the tenant that their lease request has been approved successfully.

3. Lease Rejection Email

Informs the tenant that their lease application has been rejected due to missing details or eligibility.

4 . Monthly Payment Reminder

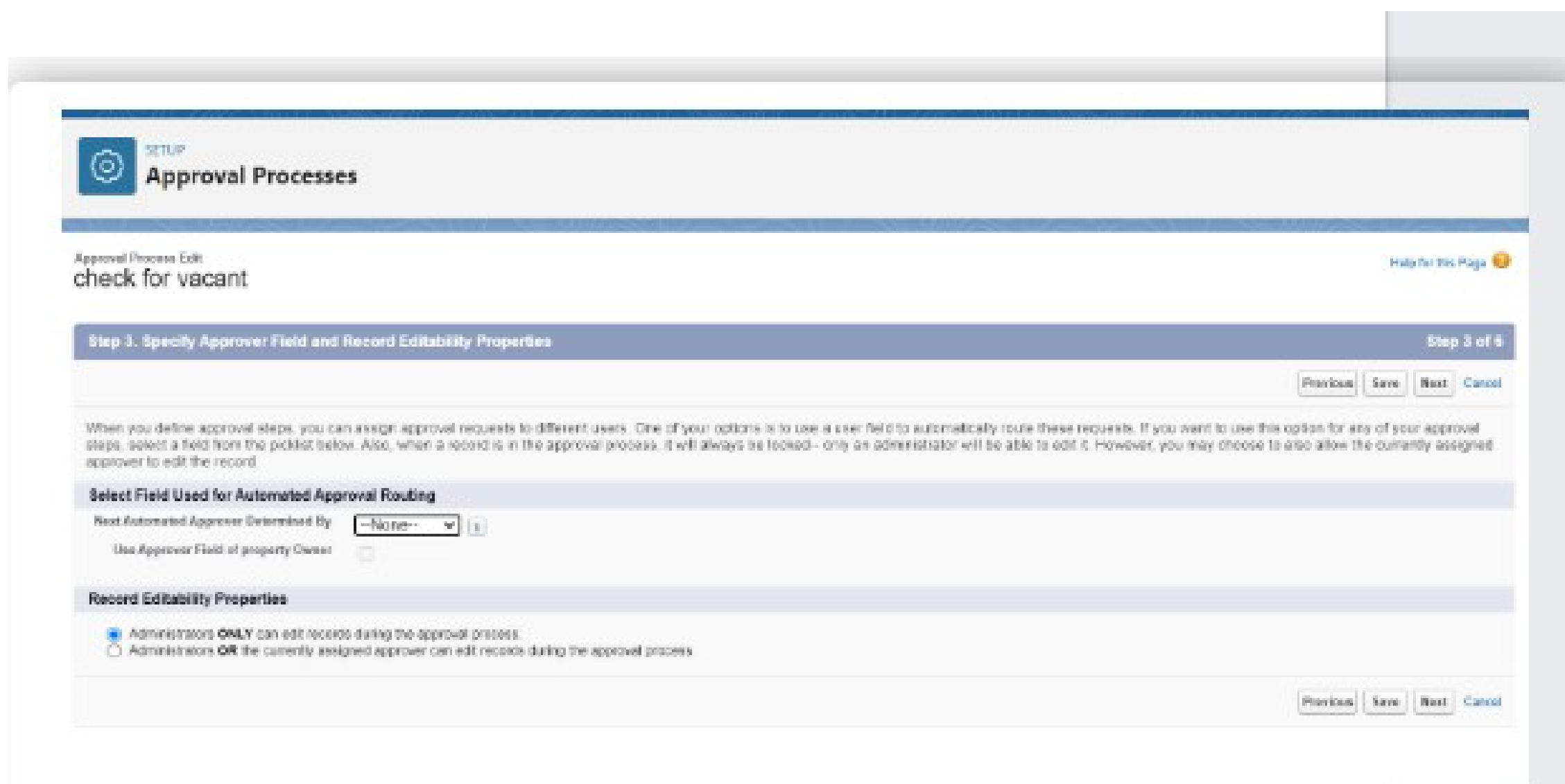
Automatically reminds the tenant each month about the upcoming rent payment due date.

5. Successful Payment Confirmation

Sends a thank-you message and confirmation once the tenant's rent payment is received successfully.

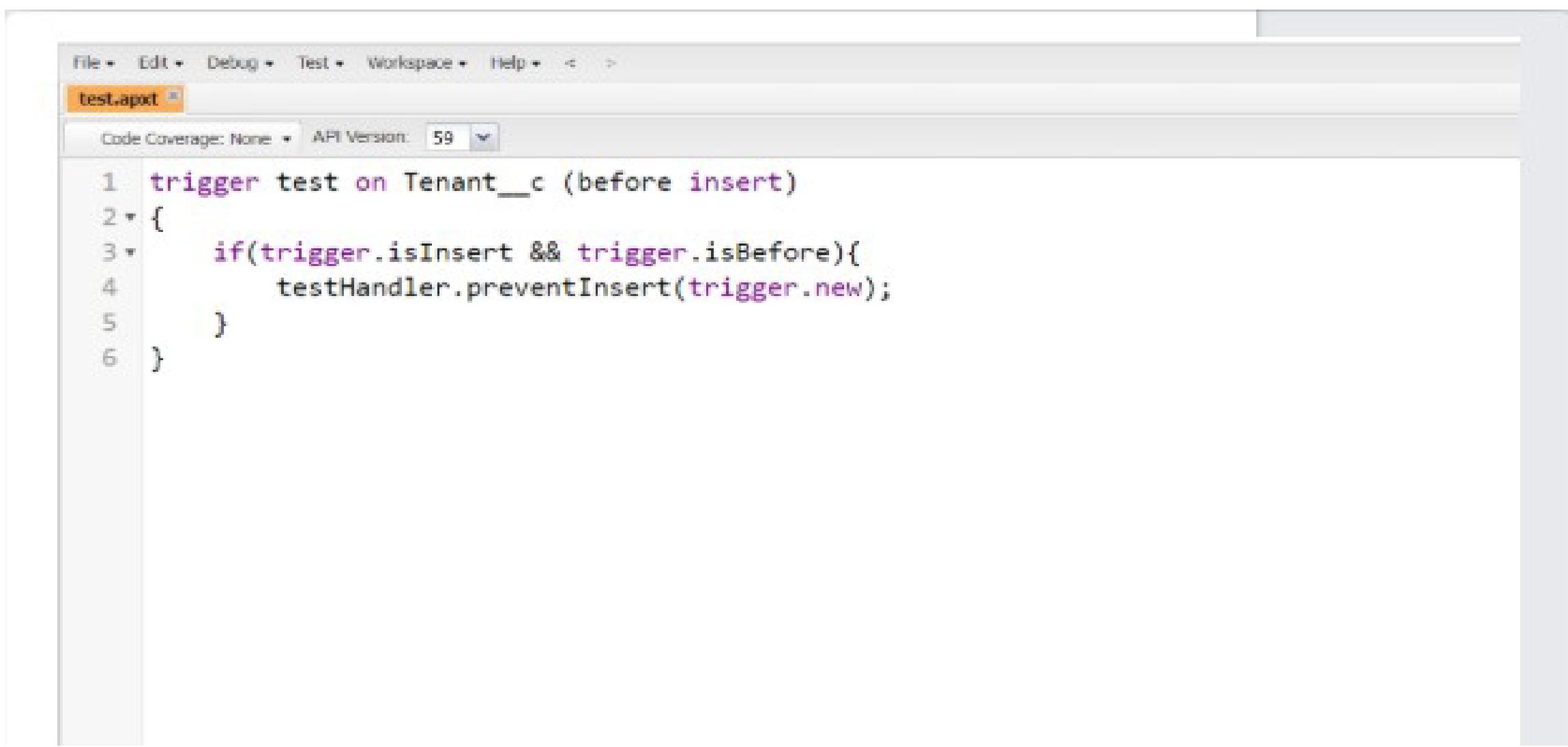
Approval Process

An **Approval Process** automates how records are approved in Salesforce. In this project, an approval process is created for the **Lease or Payment** object to ensure that certain records (for example, rent amount > ₹ 50,000) need admin or manager approval before final confirmation.



Apex Trigger

An **Apex Trigger** is used to perform automatic actions when a record is created or updated. In this project, a trigger is written on the **Payment** object to automatically update the **Lease Status** once the payment is completed.

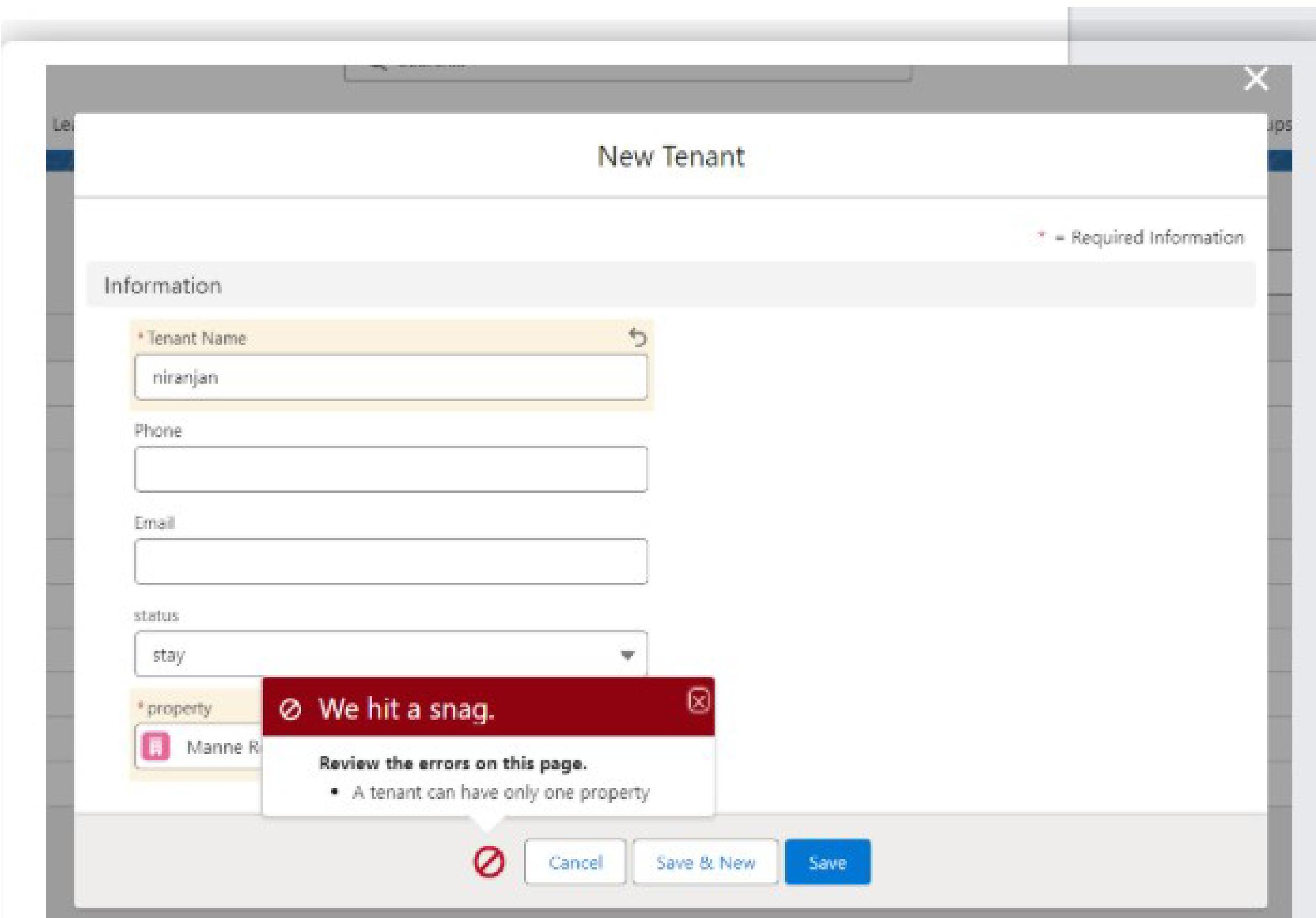


```
trigger test on Tenant__c (before insert)
{
    if(trigger.isInsert && trigger.isBefore){
        testHandler.preventInsert(trigger.new);
    }
}
```

Apex logic:

```
:  
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)) {  
                newTenantaddError('A tenant can have only one property');  
            }  
        }  
    }  
}
```

Testing the Trigger:



Flow Creation

A **Flow** is created to automate record updates or send email alerts without coding.

In this project, a **Record-Triggered Flow** is designed on the **Tenant** or **Payment** object to send an automatic email when a new payment is recorded.

Set Entry Conditions

Specify entry conditions to reduce the number of records that trigger the flow and the number of times the flow is executed. Minimizing unnecessary flow executions helps to conserve your org's resources.

If you create a flow that's triggered when a record is updated, we recommend first defining entry conditions. Then select the **Only when a record is updated to meet the condition requirements** option for When to Run the Flow for Updated Records.

Condition Requirements

All Conditions Are Met (AND)

Field	Operator	Value
check_for_payment_c	Equals	paid

+ 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

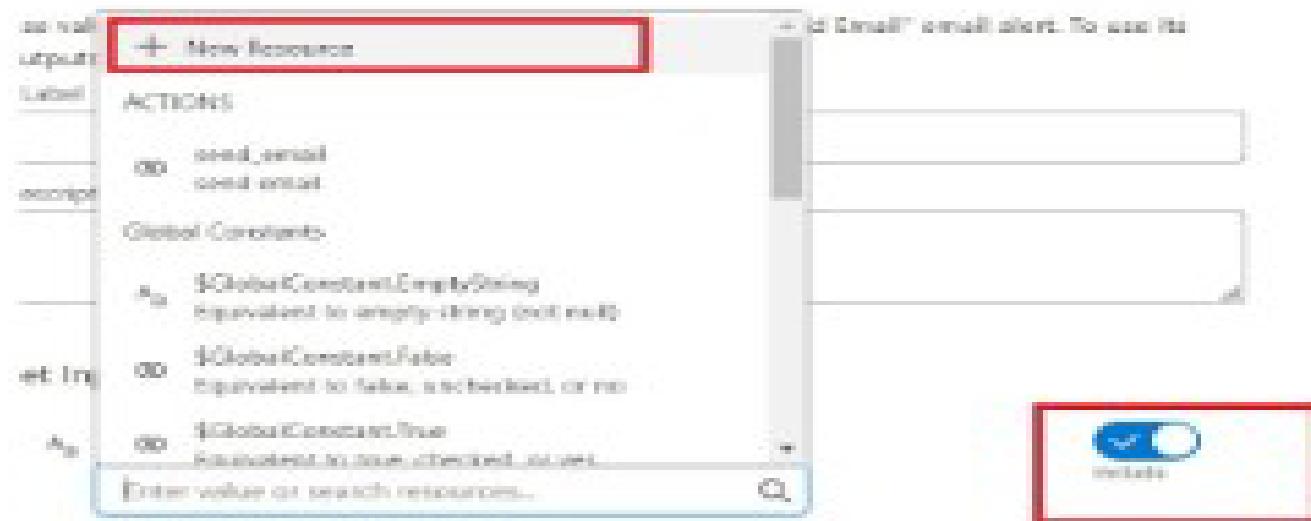
*** Optimize the Flow for:**

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.



Schedule Apex Class

A **Scheduled Apex Class** is used to run Apex code automatically at a specific time (daily, weekly, monthly). For example – sending payment reminders, lease expiry alerts, or autoupdating records every morning.

Schedule Apex

Schedule an Apex class that implements the 'Schedulable' interface to be automatically executed on a weekly or monthly interval.

		Save	Cancel
Job Name:	<input type="text" value="MonthlyEmailScheduler"/>		
Apex Class:	<input type="text" value="MonthlyEmailScheduler"/> Edit		
Schedule Apex Execution:	Frequency: <input type="radio"/> Weekly <input checked="" type="radio"/> Monthly <input checked="" type="radio"/> On day: 1 <input type="radio"/> of every month <input type="checkbox"/> On: <input type="text" value="1st"/> Start: <input type="text" value="04/12/2023"/> Edit End: <input type="text" value="04/01/2024"/> Edit Preferred Start Time: <input type="text" value="9:00 am"/>		
<small>Crash test time will depend on job queue activity.</small>			
Save Cancel			

Apex Classes

Apex Class is an object-oriented programming language that allows developers to create reusable components in the Lightning Platform.

[View All Pages](#)

[Create New](#)

Apex Classes

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Actions	Name	Managed By	Last Modified Date	Last Modified By	Has Test Class
Edit	Lease Inquiry	Lease Inquiry	2023-04-12	John Doe	<input checked="" type="checkbox"/>
Edit	Lease Inquiry	Lease Inquiry	2023-04-12	John Doe	<input checked="" type="checkbox"/>
Edit	Lease Inquiry	Lease Inquiry	2023-04-12	John Doe	<input checked="" type="checkbox"/>
Edit	Lease Inquiry	Lease Inquiry	2023-04-12	John Doe	<input checked="" type="checkbox"/>

Conclusion

The *Lease Management System* project was successfully created using Salesforce. This project demonstrates how different Salesforce features such as **Objects, Tabs, Validation Rules, Email Templates, Approval Process, Flows, and Apex Triggers** can be used to automate and simplify lease management tasks. The system ensures efficient handling of tenant records, payments, and lease approvals with minimal manual work. Overall, this project improves productivity,

reduces human error, and provides a digital solution for real-time property management.