Project Title: Lease Management

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Project Name: Lease Management

Project overview:

The lease management project developed using Salesforce Developer Trailmix focuses on streamlining the management of lease contracts, payments, and related processes within an organization. The project likely leverages Salesforce's powerful tools, such as Apex for custom logic, Visualforce for custom user interfaces, and Lightning Web Components (LWC) for modern, responsive components. The solution may include features like tracking lease terms, managing payment schedules, generating reminders for upcoming payments, and storing important documents.

The application could also automate workflows for contract renewal, approval processes, and notifications to ensure smooth operations. By integrating Salesforce's CRM capabilities, the project enhances data visibility and collaboration across departments. This project would demonstrate a solid understanding of Salesforce's development ecosystem, including its declarative tools and programmatic features.

Objective:

The objective of this project is to create a visually appealing and user-friendly image gallery for a travel website. This gallery will display images in an organized grid layout, offering viewers a seamless browsing experience. It aims to provide an interactive and engaging way for users to view high-quality images with accompanying descriptions. The gallery will feature zoom and lightbox functionality to enhance the viewing experience, and it will be designed to be responsive, ensuring that it works smoothly across various devices. This project also aims to demonstrate the integration of a modern React-based frontend with a lightweight, efficient image gallery library, ensuring optimal performance on the web.

Salesforce Development Tools:

Salesforce Lightning Web Components (LWC):

A modern framework to create dynamic and responsive user interfaces within Salesforce. Used for building the front-end of the Lease Management System.

Apex:

Salesforce's backend programming language to handle complex logic, such as lease agreement processing, payment tracking, and notification handling.

Salesforce Data Storage (Custom Objects):

Custom objects will store data related to leases, tenants, payments, and properties. Stores the actual business records, including standard objects (like Accounts, Contacts, Opportunities) and custom objects that you create.

Salesforce Flow:

Automating business processes like lease renewals, payments, and notifications. A screen flow could be used for adding new tenants, collecting lease information, or updating tenant contact information. The flow could display screens to ask for details like name, lease amount, duration, etc.

Salesforce Key Features and Concepts Utilized

1. Salesforce Objects (Standard & Custom Objects)

A. Standard Objects

Salesforce provides a variety of **standard objects** that can be used directly for general business processes. For **Lease Management**, the most relevant standard objects include:

- **Accounts**: Represents the businesses or individuals who are leasing properties (e.g., tenants, clients).
- **Contacts**: Stores individual details about people (e.g., tenants' contact information).
- **Opportunities**: Used to track the sales process, which can be leveraged for managing lease agreements or renewal opportunities.
- **Cases**: You can use cases to track customer issues, complaints, or requests related to leases (e.g., maintenance issues).
- **Activities**: Tasks and events related to lease management, such as lease signing appointments or maintenance follow-ups.

B. Custom Objects

- **Leases**: You can create a **Custom Object** called "Lease" to represent lease agreements, storing fields like the lease start date, end date, rental amount, payment frequency, property address, etc.

Properties: A custom object can represent properties that are being leased, with fields like property type, location, owner, status, and other specific details.

- **Payments**: A custom object to track payments made by tenants, including dates, amounts, and payment methods.
- **Maintenance Requests**: Track maintenance issues requested by tenants related to specific lease agreements or properties.

2. Salesforce Flow

Salesforce **Flow** is a powerful automation tool that can be used to automate business processes. In **Lease Management**, it can be used to:

- **Automate Lease Renewals**: Automatically notify tenants when a lease is about to expire and generate renewal opportunities or tasks.
- **Tenant Onboarding**: Automate the process of creating tenant records, assigning leases, and setting up payment schedules.
- **Payment Reminders**: Send automated reminders to tenants for upcoming rent payments.
- **Maintenance Process Automation**: Trigger workflows to initiate maintenance requests, assign tasks to maintenance teams, and update tenants on progress.

3. Salesforce Lightning Components

Salesforce Lightning Components is a framework for developing modern and dynamic user interfaces. In **Lease Management**, these components can be used to:

- **Custom Dashboards**: Build custom dashboards to display key information like upcoming lease renewals, rent payment status, and maintenance requests.
- **Lease Information Views**: Create dynamic, user-friendly views of lease data with sorting, filtering, and easy access to related records such as tenants and properties.
- **Integration with External Systems**: Lightning components can be used to integrate Salesforce with external property management systems or document storage systems.

4. Salesforce Reports and Dashboards

Salesforce **Reports and Dashboards** allow you to analyze and visualize data, which is essential for managing leases effectively.

- **Lease Tracking**: Create reports to track active leases, renewals, and expired leases.
- **Financial Reports**: Monitor rental income, late payments, and financial metrics related to lease agreements.
- **Maintenance Reports**: Track the status of maintenance requests and the time taken to resolve issues, helping improve service for tenants.
- **Tenant Demographics**: Generate reports on tenant demographics (e.g., age, location) for market analysis or property management decisions.

- **Knowledge Base**: Maintain a knowledge base of frequently asked questions, lease terms, maintenance procedures, and tenant policies.
- **Sentiment Analysis**: Analyze tenant communications to assess satisfaction levels, detect potential issues, and improve service.

5. Salesforce API and Integration Tools

Salesforce provides robust API capabilities that allow for integration with other systems and external databases, which is useful for **Lease Management** in the following ways:

- **External Document Storage**: Integrate Salesforce with third-party document storage systems (e.g., Dropbox, Box) for securely storing lease agreements, contracts, and tenant documents.
- **Payment Gateways**: Integrate Salesforce with external payment systems to handle rent payments online, track payment status, and sync payment records with Salesforce.
- **External CRM Systems**: If you're using another CRM or ERP system for property management, Salesforce's APIs allow you to sync data between systems, keeping everything up-to-date.

6. Salesforce Security Model

Salesforce's **robust security model** helps ensure that sensitive lease data is protected and accessible only to authorized individuals.

- **Profiles and Permission Sets**: You can define access to specific objects and records based on user roles. For example, only property managers or administrators may have access to create or edit lease records.

- **Field-Level Security**: You can restrict access to sensitive information such as lease pricing, tenant contact information, and payment history.
- **Sharing Rules**: Use sharing rules to ensure that the appropriate users have access to the lease data they need. For example, a tenant's lease information might only be visible to the tenant and the property manager responsible for that property.

1. **API/Integrations**: Integrate Salesforce with external systems for payment processing, document storage, and more.
2. **Mobile App**: Enable mobile access for property managers and tenants.

With these components, Salesforce offers a comprehensive suite of tools for managing every aspect of the Lease Management lifecycle, from tenant onboarding and lease signing to payments and maintenance tracking. By leveraging Salesforce's data management, automation, and security features, you can streamline operations and improve the efficiency of managing leases and tenant relationships.

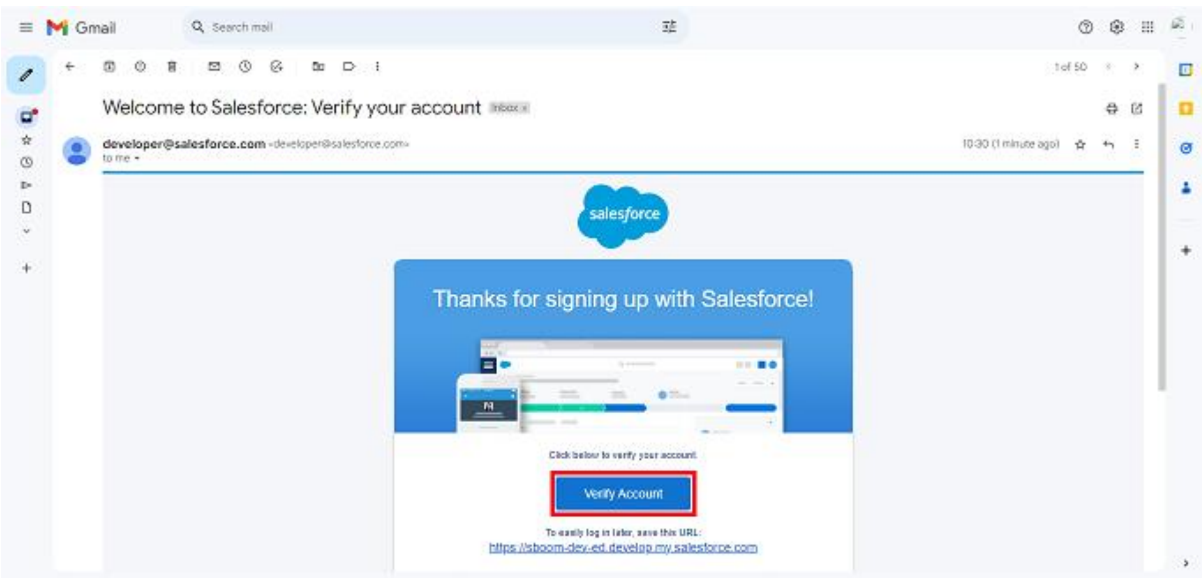
Detailed steps to solution design

Step 1: Creating Developer Account and Activation

Creating a developer org in salesforce.

To Activate the account, click on the verify account. Give a password and answer a security question and click on change password.

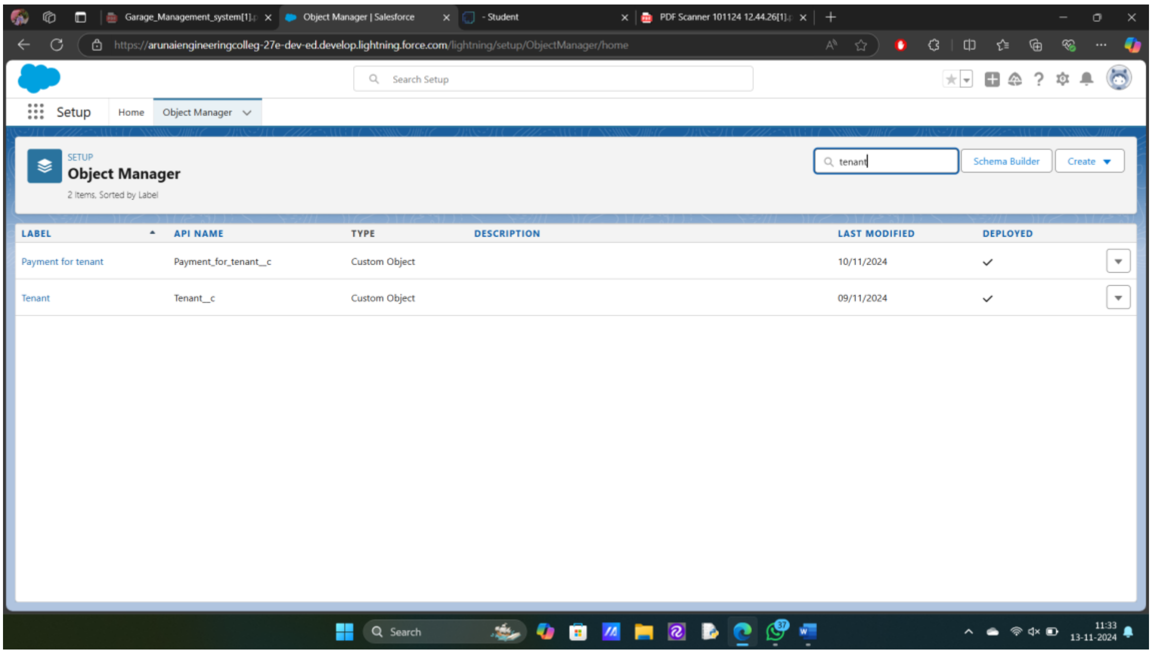
Give a password and answer a security question and click on change password. Then you will redirect to your salesforce setup page.



Step 2: Create of objects

Create Property Object, tenant object, lease object and payment object.

From the setup page >> Click on Object Manager >>Click on Create >> Click on Custom Object

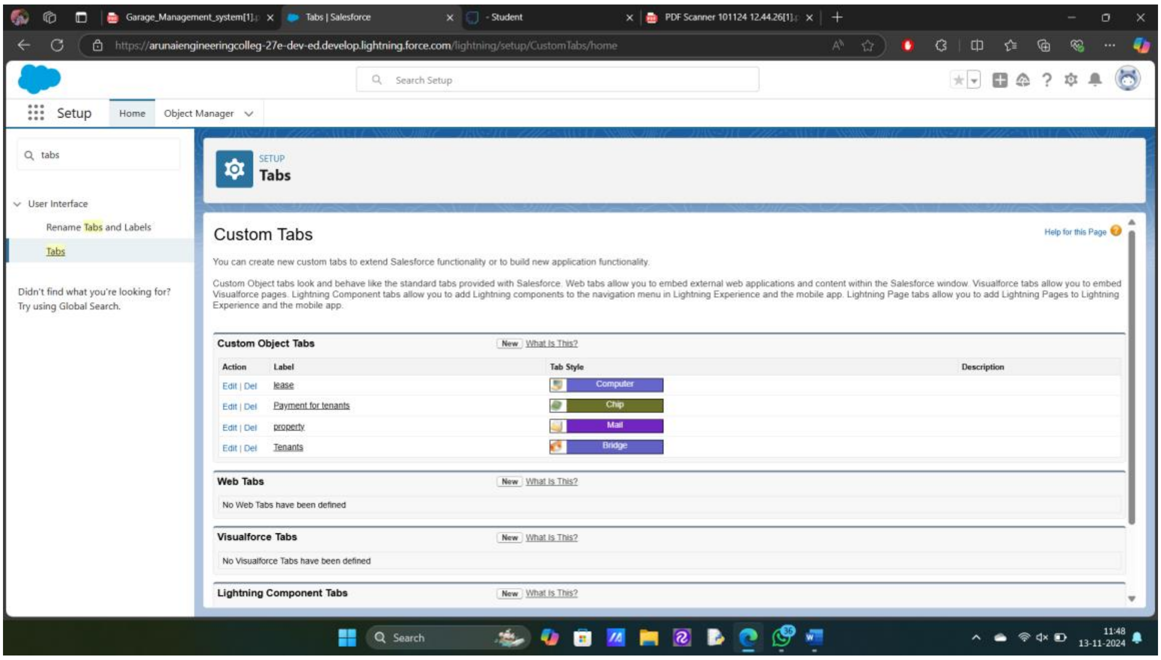


Enter the label name for the appropriate object. Then enter the Plural label name.

Enter Record Name Label and Format Record Name and Data Type.

Step 3: Creating a Custom Tab

A tab is like a user interface that is used to build records for objects and to view the records in the objects.

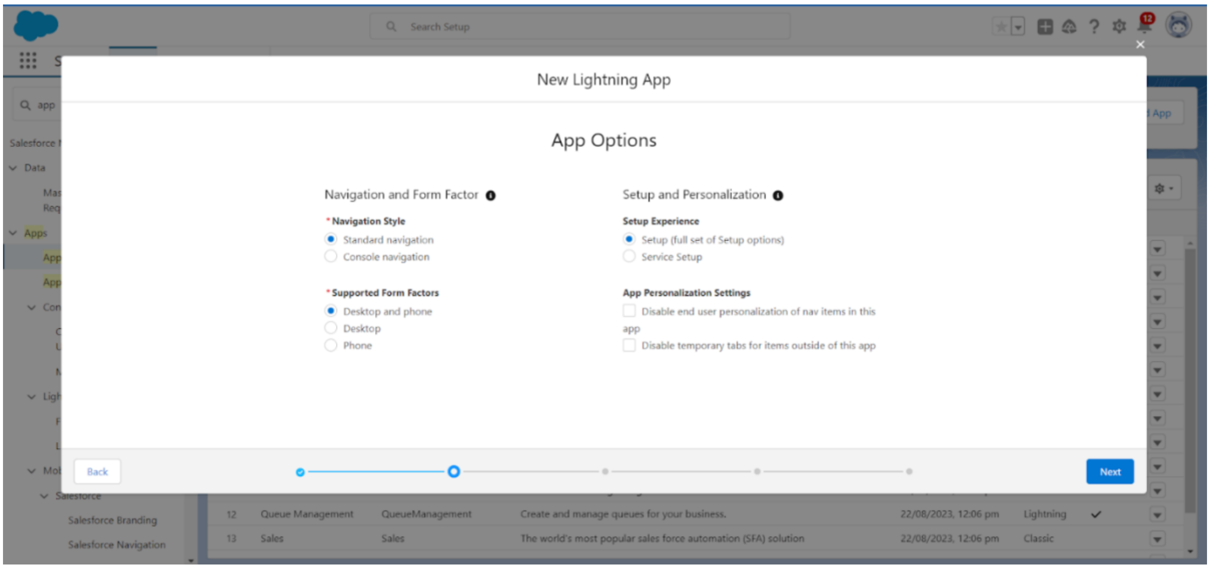


Step 4: Create a Lightning App

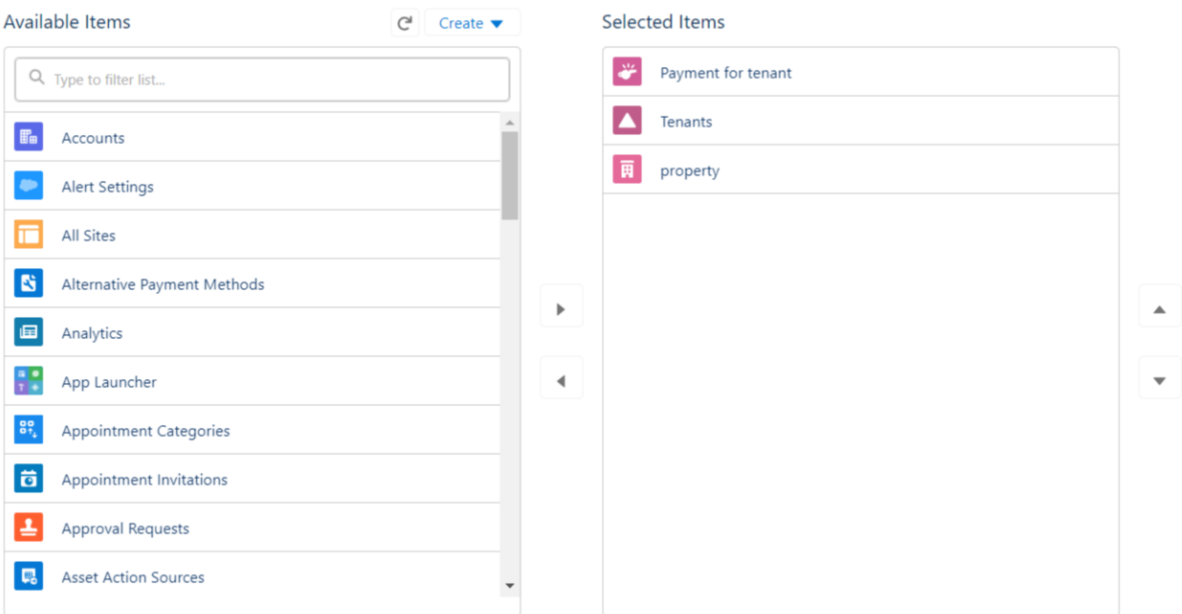
An app is a collection of items that work together to serve a particular function.

To create a Tab:(Property)

- Goto set up page. Search tabs on quick find bar click new under custom tab.
- The first step is to select object property and tab style.
- Make sure that the Append tab to users' existing personal customizations is checked. Click save



Create a lightning app with an App Name of "Lease Management"



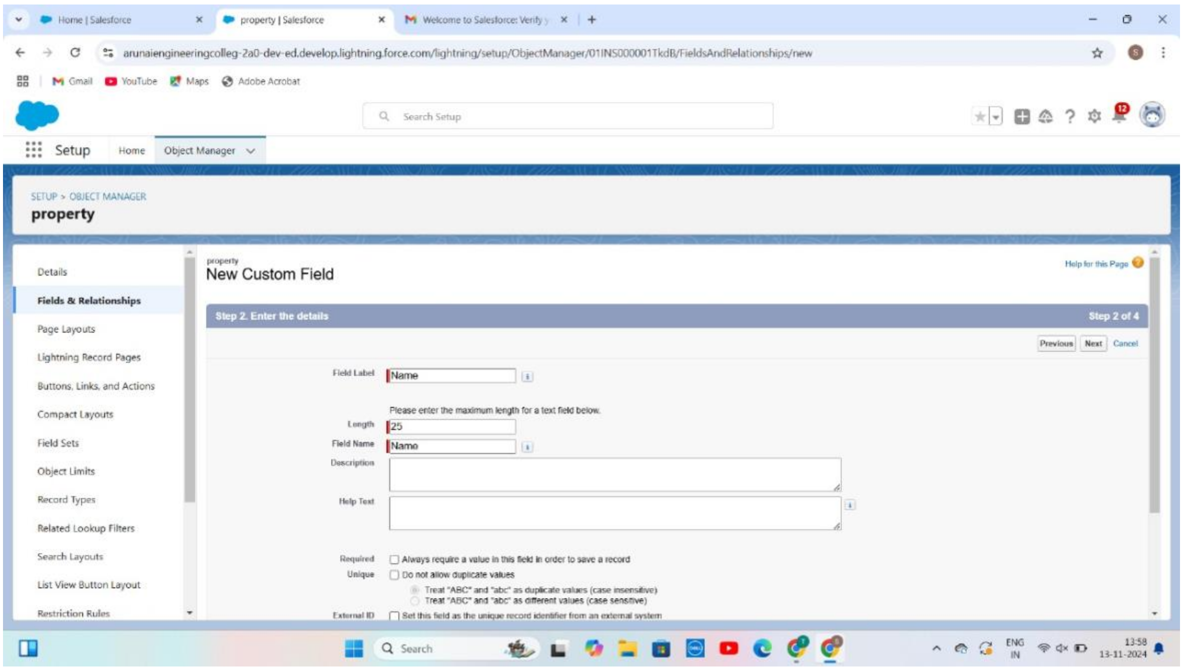
Step 5: Field Creation

Creation of fields for the property object, Tenant object, Lease object, Payment for tenant object, Lookup object.

Go to setup then click on Object Manager to type object name(Tenant) in search bar and click on the object.

- Field Label : Email
- Field Name : gets auto generated
- Click on required check box
- Click on Next >> Next >> Save and new.

- Field Label : start date
- Field Name : gets auto generated
- Click on Next >> Next >> Save and new.



Step 6: Validation rules

To create a validation rule to an Lease Object.

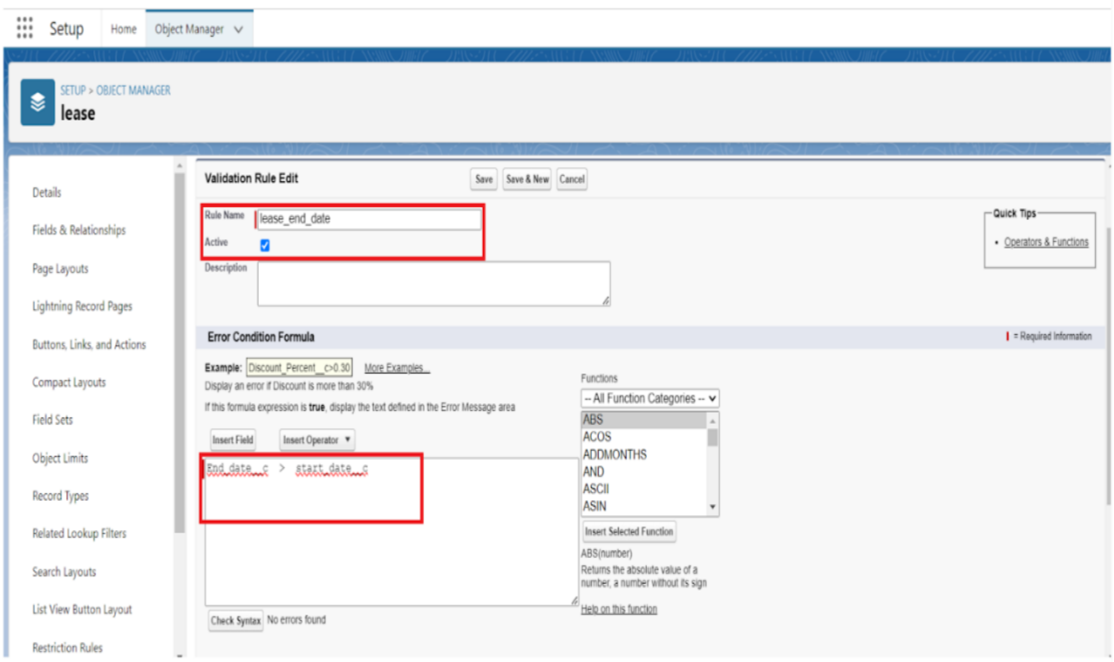
Go to the setup page click on object manager from drop down click edit for Lease object.

Click on the validation rule.click new

Rule name= lease_end_date

- Insert the Error Condition Formula as :
  End_date__c > start_date__c

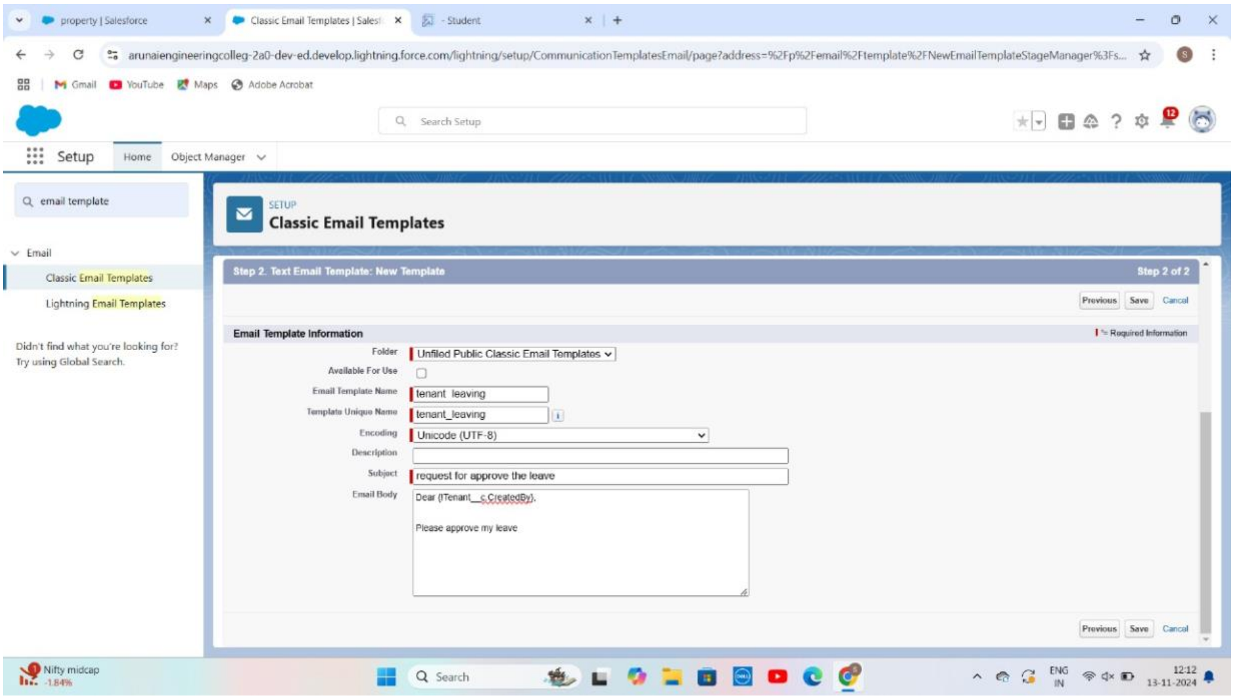
Enter the Error Message as “Your End date must be greater than start date”, select the Error location as Field and select the field as “start date”, and click Save.



Step 7: Email templates

1.Create Email Template For Tenant Leaving

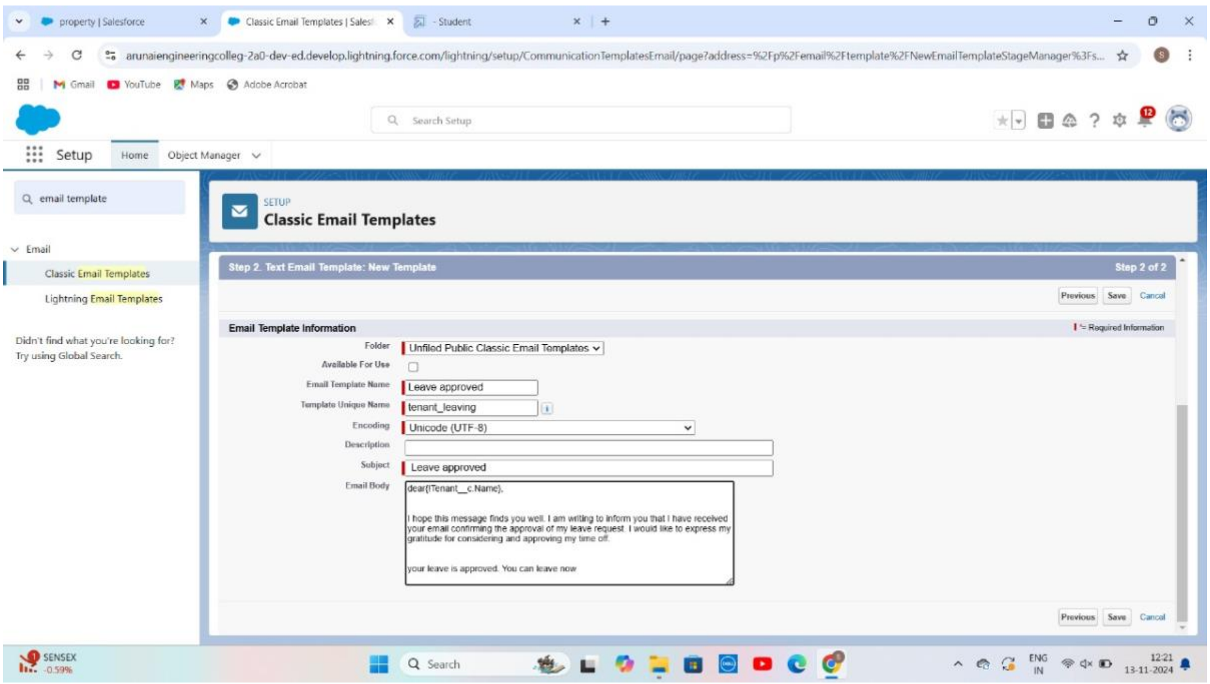
- Go to setup in quick find box enter email template, click on classic Email template.
- Then click on new email template choose text
- Email template name: tenant leaving
- Template unique name: Auto populated
- Subject: request for approve the leave
- Email body:
  Dear {!Tenant__c.CreatedBy},
  Please approve my leave.
- Save.



2.Create Email Template For Leave Approved

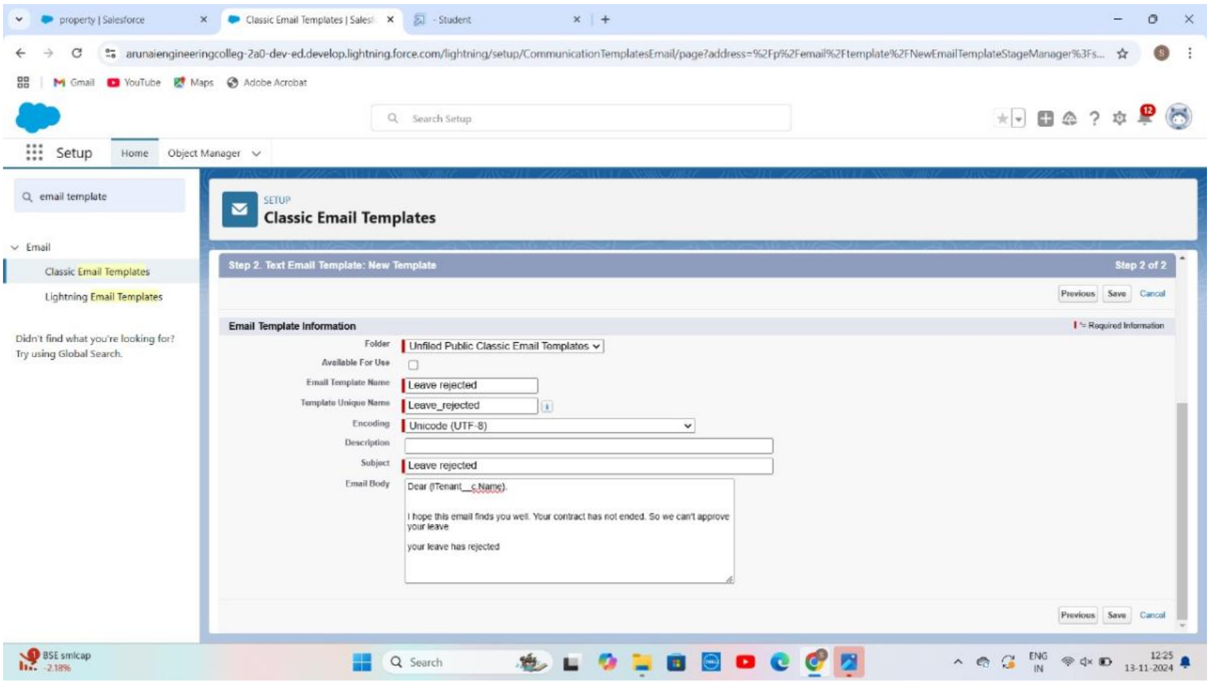
- Go to setup in quick find box enter email template >> click on classic Email Template.
- Click on >> New Email Template===>Choose text
- Email Template Name=Leave approved
- Template Unique Name : Auto populated
- Subject =Leave approved
- Email body :
- dear{!Tenant__c.Name},

  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.
  Your leave is approved. You can leave now.
- Save



3. Create Email Template For rejection for leave

- Go to setup in quick find box enter email template >> click on classic Email Template.
- Click on >>New Email Template===>Choose text
- Email Template Name=Leave rejected
- Subject : ” Leave rejected”
- Email body :
- Dear {!Tenant__c.Name},
- I hope this email finds you well. Your contract has not ended. So we can't approve your leave
- your leave has rejected
- Saved



Step 8:Approval Process

What Is Approval Process In Salesforce?

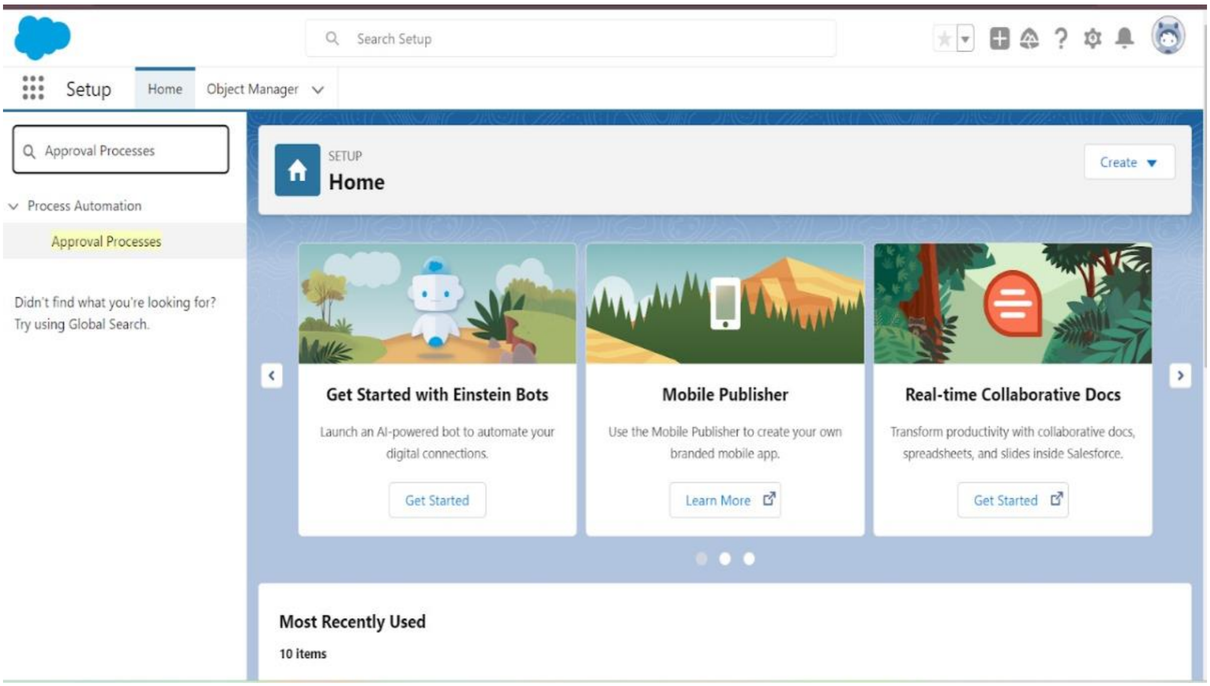
The Approval Process is an automated process that an org uses to approve records in Salesforce. For example, When In the organization, someone is not able to decide a particular thing then he can ask someone else for approval. So, for such frequent cases or situations, one can define the approval process. So, Users can take benefit of such an approval process whenever needed.

There are 4 actions,

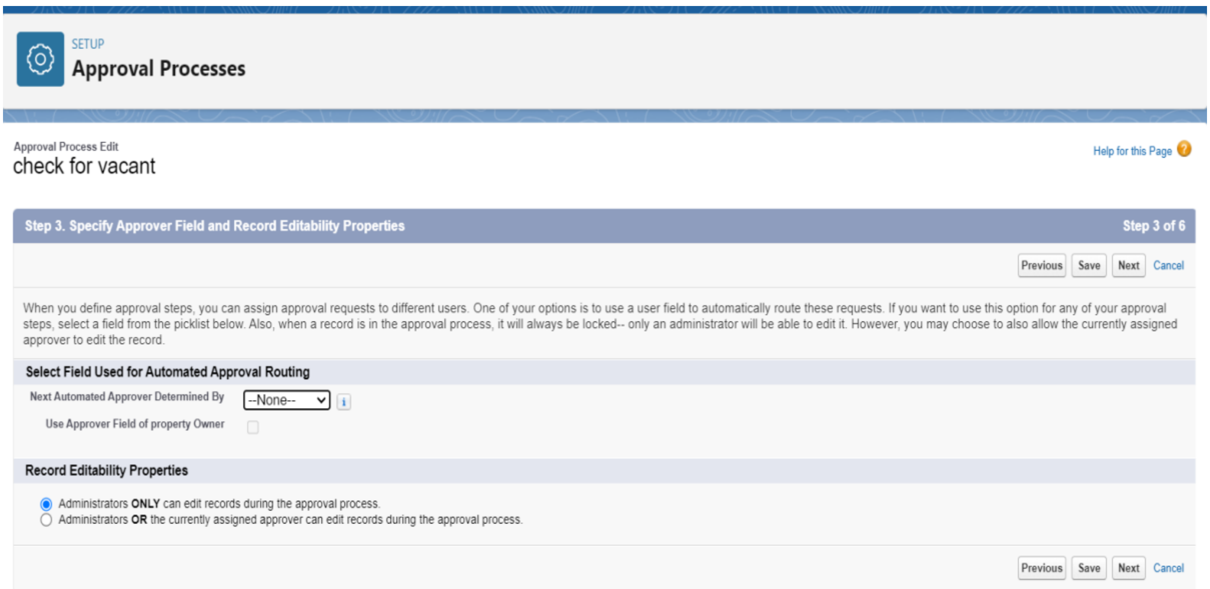
1. Initial Submission Actions
2. Final Approval Actions
3. Final Rejection Actions
4. Recall Actions.

An approval process consists of finalizing the basic properties of the approval process (as shown in the below image), approval steps, and actions to be executed.

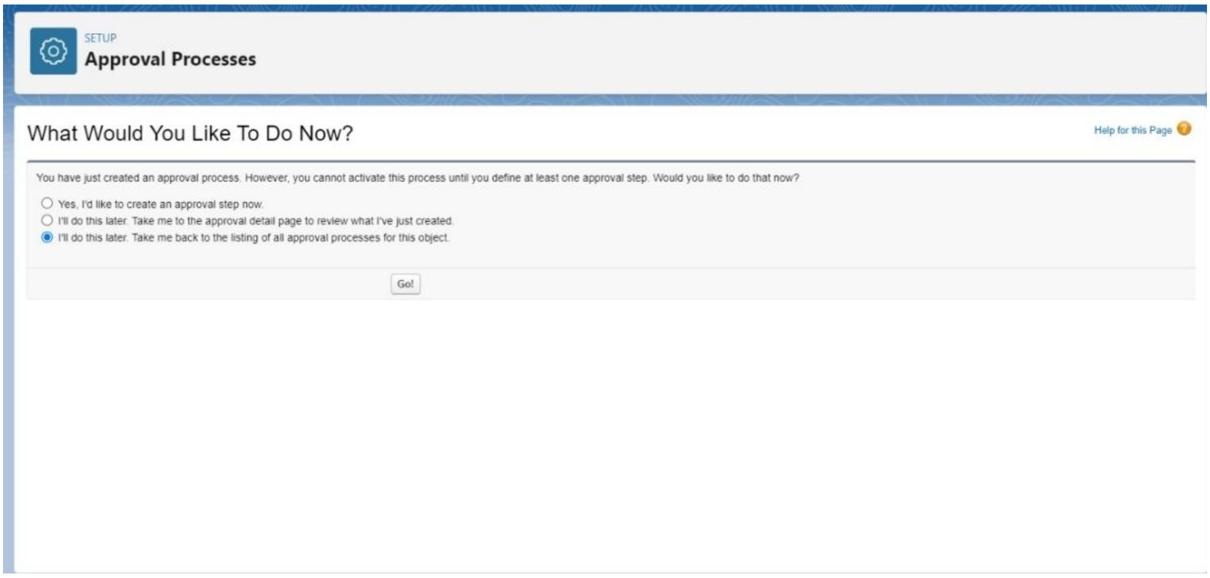
1. **Create Approval Process For check for vacant.**
   - Go to setup >> Approval Processes in quick find bar>>click on it.
   - Manage Approval Process For >> "Tenant" from the drop down.
   - Click on "Create New Approval Process" >> Use standard setup wizard
   - Process Name "check for vacant" >> Click Next.
   - Field "Tenant:status" >> Operator : Not equals , Value >> Click on the lookup filter icon and select "Leaving".
   - 6.Click insert field,then click Next.



- Next Automated Approver determined by "None" from the drop down.
- Select the "Administrators ONLY can edit records during the approval process". Then Next.



- Click on next leave the email template click on next
- Submitter type Search>>Owner, Allowed Submitters>>Property Owner. Then Next.
- Then click on Save.



- Click on “i’ll do this later. Take me back to the listing of all approval process for this object”
- Click go.

2.Initial Submission Action:

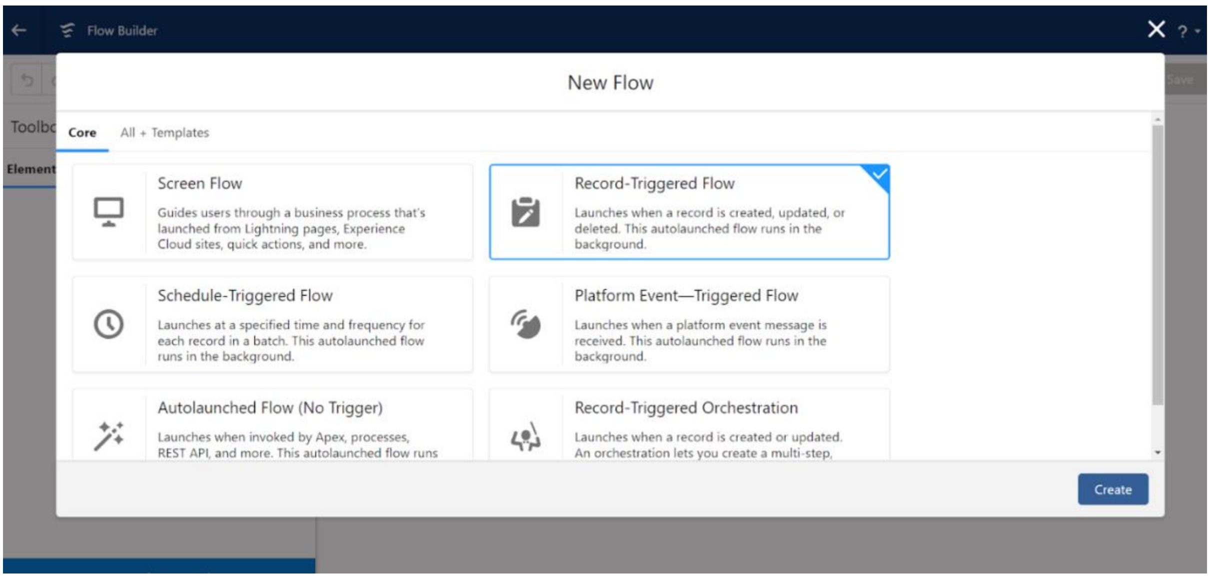
- Under initial submission action click on add new and then select email alert.
- Description: “please approve my leave”.
- Unique name: auto populated.
- Email template: tenant leaving.
- Recipient type: Email field.

Step 8: Flows

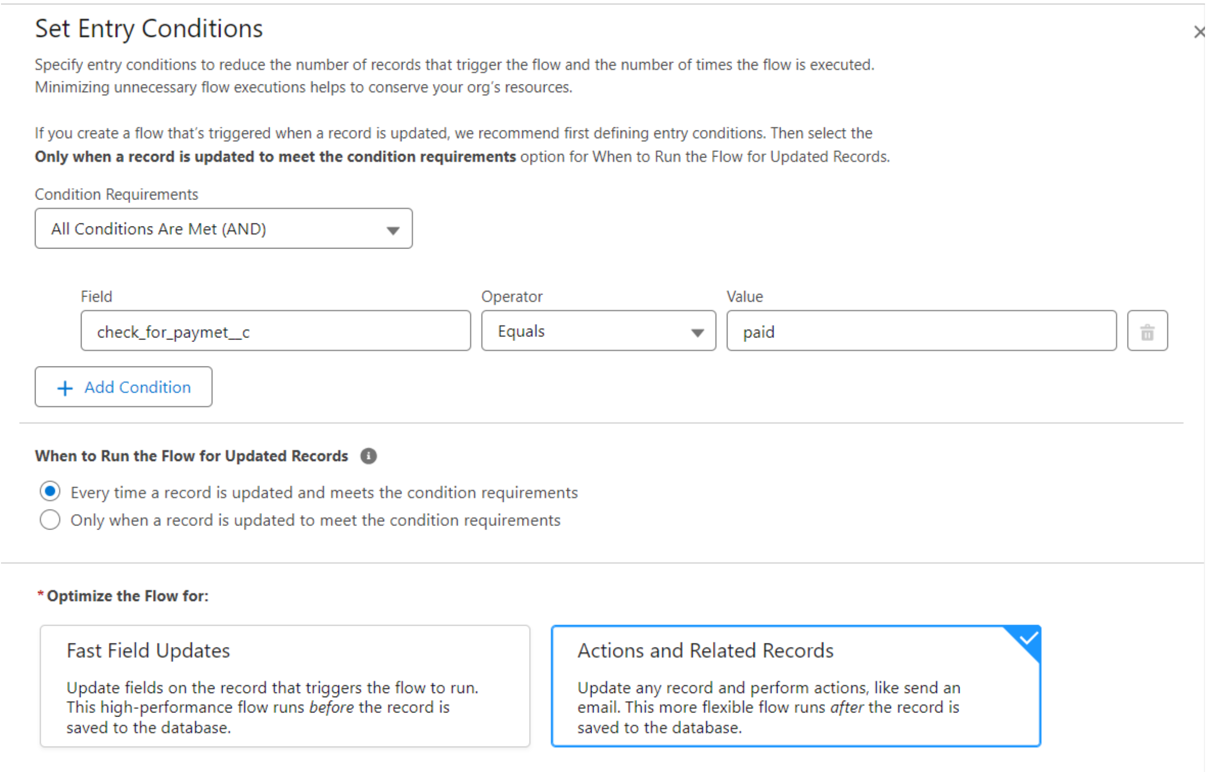
In Salesforce, a flow is a tool that automates complex business processes. Simply put, it collects data and then does something with that data. Flow Builder is the declarative interface used to build individual flows.

Create Flow for monthly payment

1. Go to setup then type Flow in quick find box Click on the Flow and Select the New Flow.
2. Select the record Triggered flow. Click on create.



Click on: Every time a record is updated and meets the condition requirements Click on: Actions and related records is done



Test and validation:

Testing and validation in lease management can involve a variety of activities, including:

Lease validation services:

Help property management companies ensure that lease agreements are legal and enforceable. These services can help identify issues and verify the terms and conditions of a lease.

Test planning and execution:

This involves executing and monitoring validation tests according to a test plan and design. It also includes verifying and validating the test results, and recording and reporting any issues or defects.

Test objectives and criteria:

These should be defined clearly and explicitly before starting testing and validation. They should align with the project's goals, scope, specifications, and the needs and expectations of the stakeholders and users.

Validation testing:

This is used to verify that the final product meets the expectations and requirements of the customers and stakeholders. It usually happens after the product is fully developed and focuses on confirming that it works as intended in real-world scenarios.

conclusion:

Lease financing is the best option for those who cannot raise the fund with debt financing, assets can lease their assets to the companies those who required such assets.

Thus, leasing become constructive for both the parties the lessor and the lease also using our lease management system which is CRM based application an can find a customer and anyone can find a good place for the business or for residential purpose. our project is useful for both residential people as well as a business person.