

PROJECT REPORT

**BACHELOR OF TECHNOLOGY IN INFORMATION
TECHNOLOGY**

SEVENTH SEMESTER

**CSI COLLEGE OF ENGINEERING, KETTI
COLLEGE CODE - 7106**

**TITLE: A CRM Application to Handle the Clients and their
property Related Requirements**

SUBMITTED BY:

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1. Project Overview

This CRM Application to Handle the Clients and their property Related Requirements is integrating Salesforce to streamline client interactions and manage property-related requirements. The objective is to enhance operational efficiency, automate data handling, and improve customer experience through:

- Automated record creation upon website interactions.
- Categorization of users into *approved* and *non-approved* groups.
- Personalized property recommendations for approved users.

2. Objectives

1. **Automate Client Data Management:** Automatically generate customer records from website interactions.
2. **User Categorization:** Classify users as approved or non-approved to tailor property recommendations.
3. **Approval Workflow:** Implement an approval process for client access to specific property listings.
4. **Scalability:** Ensure the system can scale with increasing customer and data volume.

3. Project Milestones

Milestone 1: Create a Jotform and integrate it with the org to create a record of customers automatically.

- Create a form to collect customer data and link it to Salesforce.
- Automatically generate customer records.



Dreams World

Name *

First Name

Last Name

Email

example@example.com

Phone Number

Please enter a valid phone number.

Which type of Property are you looking for?

☐ RESIDENTIAL

☐ COMMERCIAL

☐ RENTAL

Budget Amount *

Address

Street Address

Street Address Line 2

City

State / Province

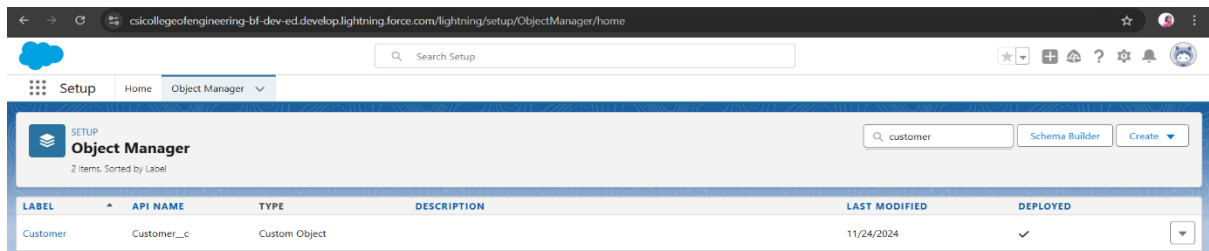
Postal / Zip Code

Submit

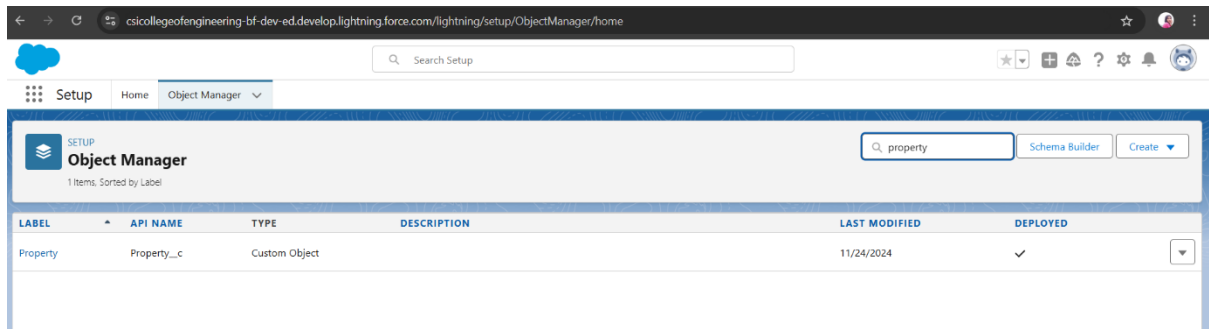
Milestone 2: Create Objects from Spreadsheet.

Directly Creating Objects from Spreadsheet in Salesforce

- Create Customer Object

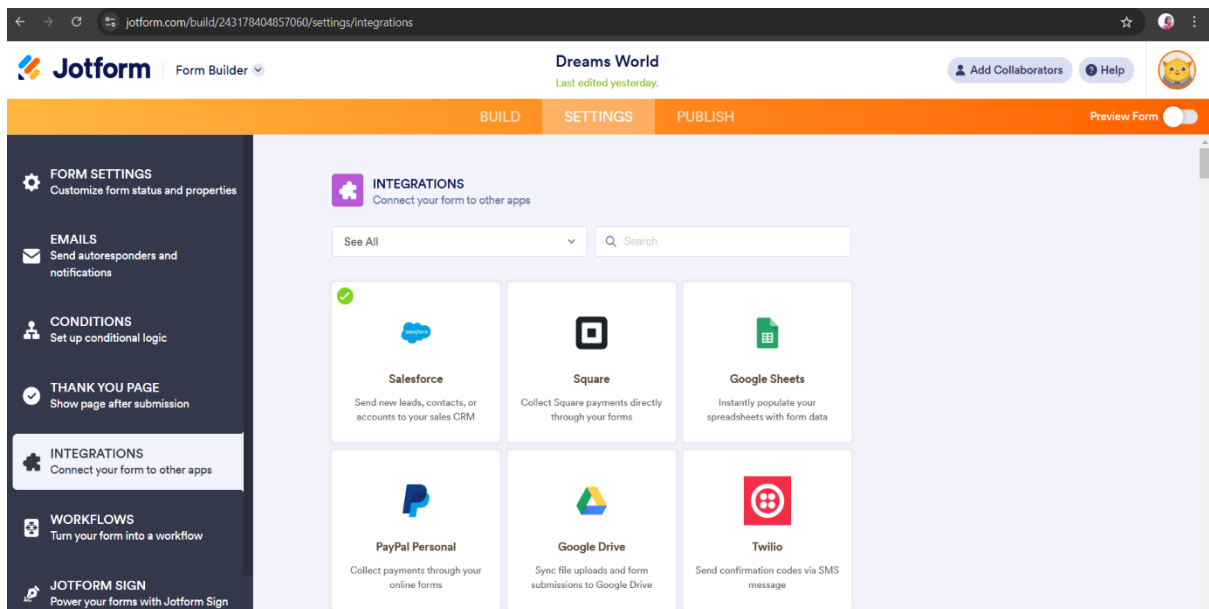


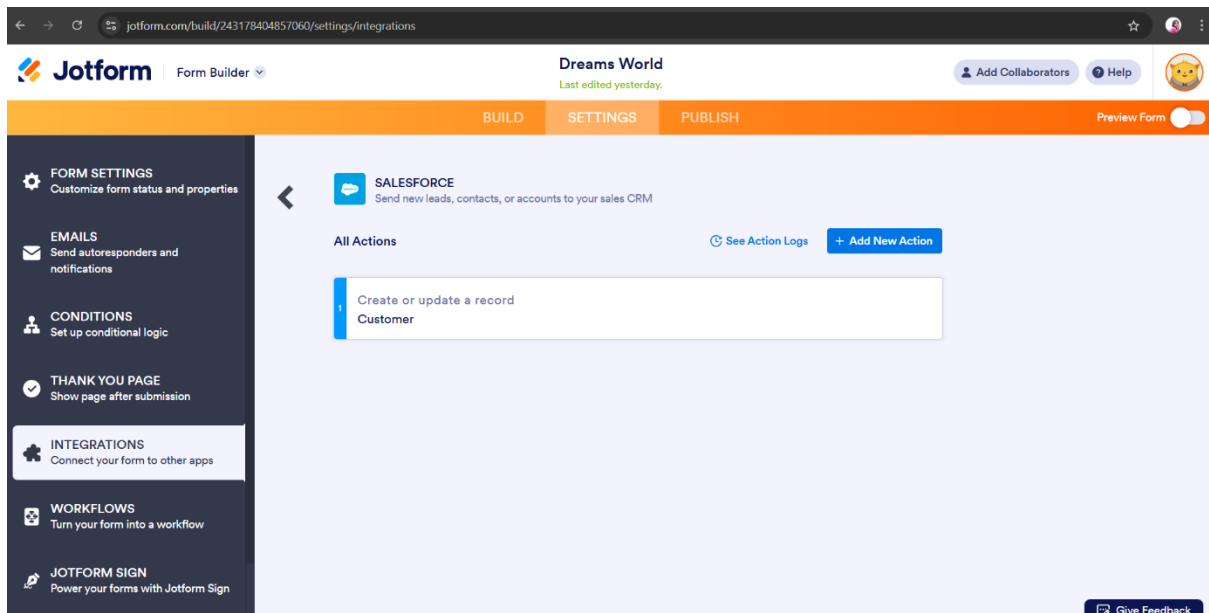
- Create Property object



Milestone 3: Integrate Jotform with Salesforce Platform

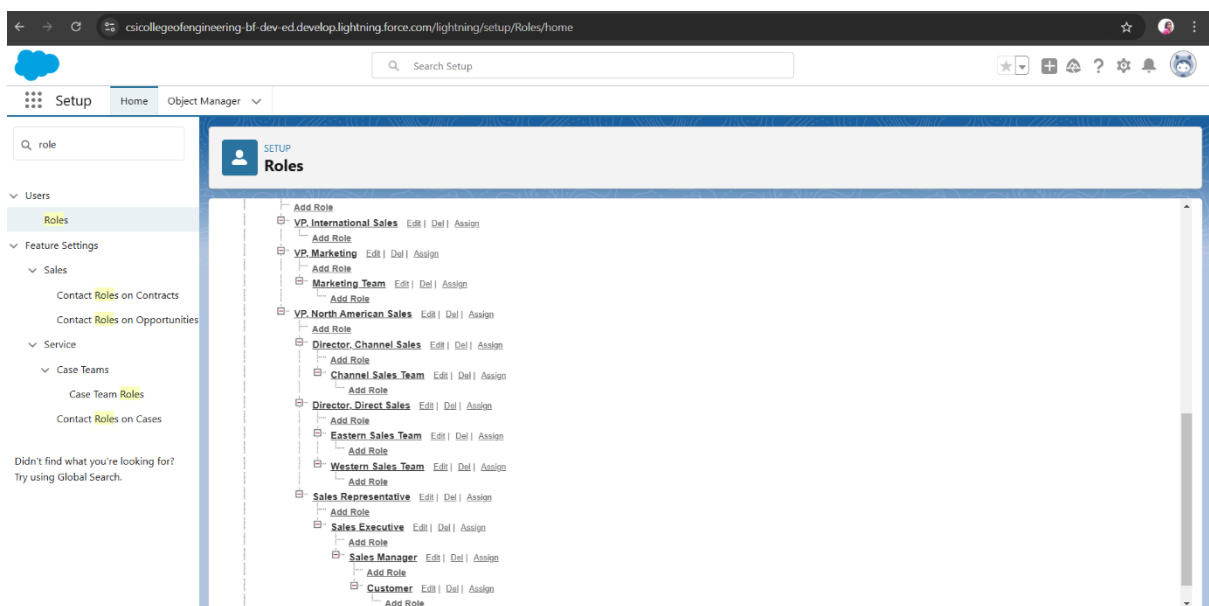
Integrate jotform with salesforce to create customer records





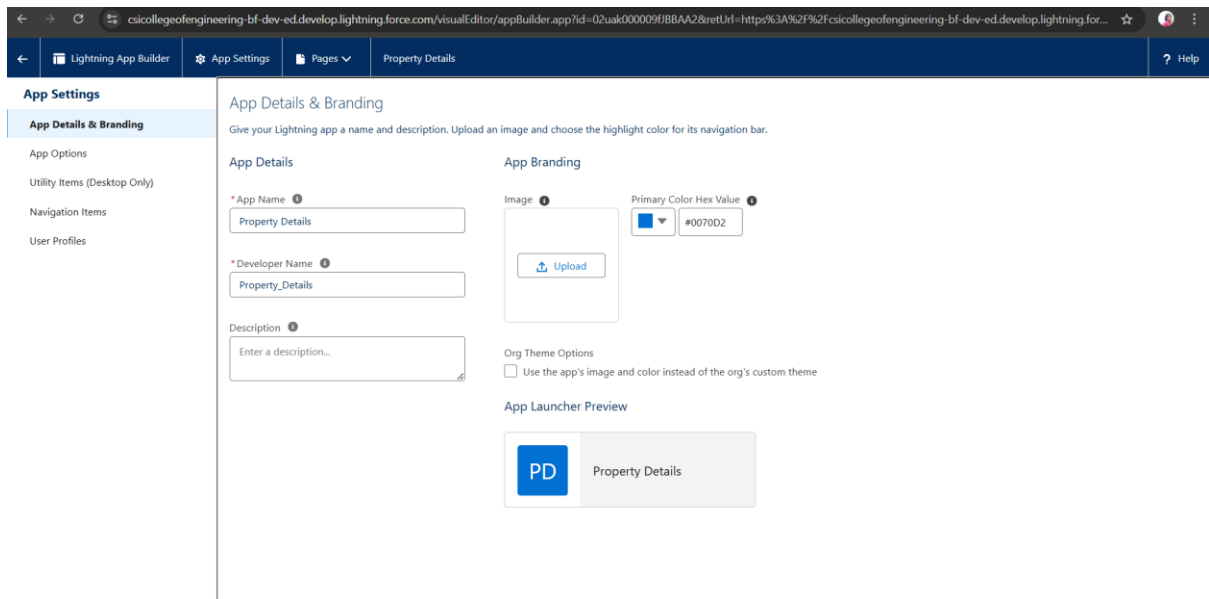
Milestone 4: Create Roles

Create and assign roles for different user levels Sales Executive, Manager, Customer



Milestone 5: Create a Property Details App

Create a Lightning App named *Property Details* in Salesforce, integrating the *Customer* and *Property* objects. Assign the System Administrator profile for app access and management.

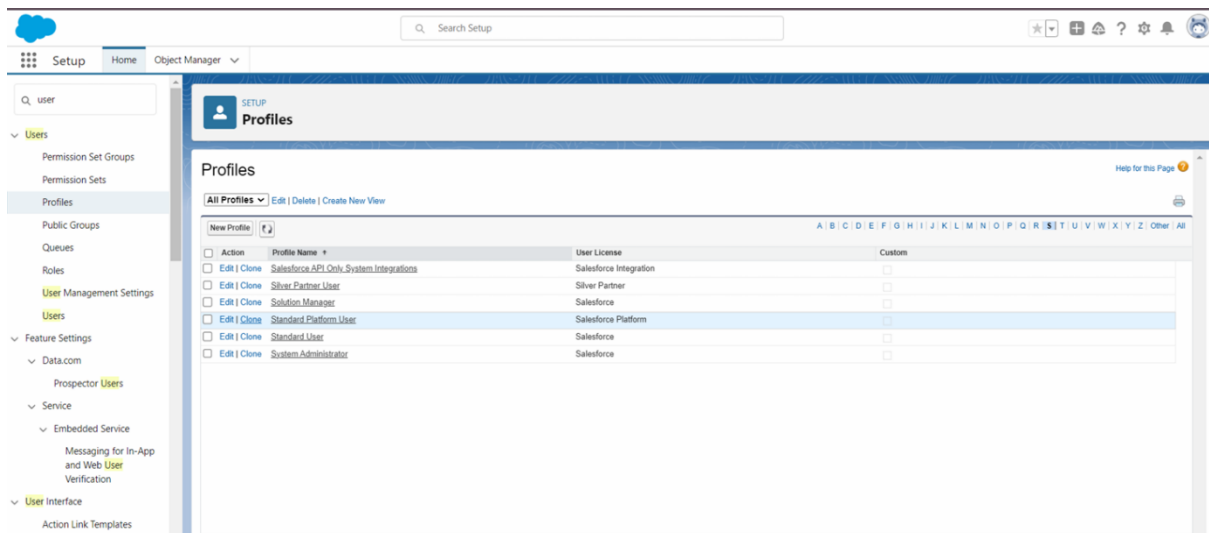


Milestone 6: Create Profiles

Clone the Salesforce Platform User profile to create Customer and Manager profiles.

Customer:

For Customer, restricted access to only the *Property Details* app, removed standard object permissions, and allowed read-only access to the *Property* object.



SETUP
Profiles

Name
User License Salesforce Platform
Description
Custom Profile ☒

Custom App Settings ! = Required Information

	Visible	Default		Visible	Default
Analytics Studio (standard__Insights)	<input type="checkbox"/>	<input type="radio"/>	LWC Component (LWC_Component)	<input type="checkbox"/>	<input type="radio"/>
App Launcher (standard__AppLauncher)	<input type="checkbox"/>	<input type="radio"/>	Platform (standard__Platform)	<input checked="" type="checkbox"/>	<input checked="" type="radio"/>
Dreams Houses (Dreams_Houses)	<input type="checkbox"/>	<input type="radio"/>	Property Details (Property_Details)	<input checked="" type="checkbox"/>	<input type="radio"/>
How We Roll Maintenance (How_We_Roll_Maintenance)	<input type="checkbox"/>	<input type="radio"/>	WDC (standard__Work)	<input type="checkbox"/>	<input type="radio"/>

SETUP
Profiles

Standard Object Permissions

The permissions defined here control access at the object level. Access to individual records within that object type is controlled by the sharing model. Set access levels based on the functional requirements for the profile. For example, create different groups of permissions for individual contributors, managers, and administrators. [How do I choose?](#)

	Basic Access				Data Administration	
	Read	Create	Edit	Delete	View All	Modify All
Accounts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Addresses	<input type="checkbox"/>				<input type="checkbox"/>	
Assets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Authorization Forms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Authorization Form Consents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Authorization Form Data Uses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Authorization Form Texts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Background Operations	<input type="checkbox"/>					
Business Brands	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communication Subscriptions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communication Subscription Channel Types	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communication Subscription Consents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communication Subscription Timings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contacts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contact Point Phones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contact Point Type Consents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D&B Companies	<input type="checkbox"/>					
Data Use Legal Bases	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Data Use Purposes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Documents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engagement Channel Types	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ideas	<input type="checkbox"/>	<input type="checkbox"/>				
Individuals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Locations	<input type="checkbox"/>				<input type="checkbox"/>	
Party Consents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Push Topics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Sellers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communication Subscriptions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communication Subscription Channel Types	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communication Subscription Consents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communication Subscription Timings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contacts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contact Point Addresses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contact Point Consents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contact Point Emails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Individuals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Locations	<input type="checkbox"/>				<input type="checkbox"/>	
Party Consents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Push Topics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Sellers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Streaming Channels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
User External Credentials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Custom Object Permissions

	Basic Access				Data Administration	
	Read	Create	Edit	Delete	View All	Modify All
Customer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Customer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
error logs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Property	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Property	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sales orders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vehicles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Manager:

For Manager, restricted access to the *Property Details* app, removed standard object permissions, and granted full access (modify all) to both *Property* and *Customer* objects.

SETUP Profiles

Set the permissions and page layouts for this profile.

Profile Edit Save Save & New Cancel

Name:

User License: Salesforce Platform

Description:

Custom Profile: ☒

Custom App Settings ! = Required Information

	Visible	Default		Visible	Default
Analytics Studio (standard__Insights)	<input type="checkbox"/>	<input type="radio"/>	LWC Component (LWC_Component)	<input type="checkbox"/>	<input type="radio"/>
App Launcher (standard__AppLauncher)	<input type="checkbox"/>	<input type="radio"/>	Platform (standard__Platform)	<input checked="" type="checkbox"/>	<input checked="" type="radio"/>
Dreams Houses (Dreams_Houses)	<input type="checkbox"/>	<input type="radio"/>	Property Details (Property_Details)	<input checked="" type="checkbox"/>	<input type="radio"/>
How We Roll Maintenance (How_We_Roll_Maintenance)	<input type="checkbox"/>	<input type="radio"/>	WDC (standard__Work)	<input type="checkbox"/>	<input type="radio"/>

SETUP Profiles

Custom Object Permissions

	Basic Access				Data Administration			Basic Access				Data Administration	
	Read	Create	Edit	Delete	View All	Modify All		Read	Create	Edit	Delete	View All	Modify All
Customer	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
error logs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Property	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Session Settings

Session Times Out After:

Session Security Level Required at Login:

Password Policies

User passwords expire in:

Enforce password history:

Minimum password length:

Password complexity requirement:

Password question requirement:

Maximum invalid login attempts:

Lockout effective period:

Obscure secret answer for password resets: ☐

Require a minimum 1 day password lifetime: ☐

Milestone 7: Create a CheckBox field on user

Create a new custom field "Verified" in the User object under Fields and Relationships with the data type set to Checkbox.

SETUP > OBJECT MANAGER User

Fields & Relationships 1 Items, Sorted by Field Label Search New Deleted Fields Field Dependencies

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Verified	Verified__c	Checkbox		<input type="checkbox"/>

Details

- Fields & Relationships
- User Page Layouts
- User Profile Page Layouts
- Lightning Record Pages
- Buttons and Links
- Compact Layouts
- Field Sets
- Object Limits
- Related Lookup Filters
- Search Layouts
- List View Button Layout
- Triggers
- Flow Triggers

The screenshot shows the Salesforce Setup interface for configuring a custom field named 'Verified' on the 'User' object. The left sidebar lists navigation options like 'Details', 'Fields & Relationships', 'User Page Layouts', etc. The main content area is titled 'User Custom Field Verified' and includes tabs for 'Field Information', 'Set Field-Level Security', 'View Field Accessibility', and 'Where is this used?'. The 'Field Information' tab is active, displaying details such as Field Label (Verified), Field Name (Verified__c), API Name (Verified__c), Description, Help Text, Data Owner, Field Usage, Data Sensitivity Level, Compliance Categorization, Created By (Sangeetha K), and Modified By (Sangeetha K). Below this is the 'General Options' section with a 'Default Value' of 'Unchecked'. At the bottom, the 'Validation Rules' section shows 'No validation rules defined'.

Milestone 8: Create Users

Create four users with different roles and profiles in Salesforce:

1. User 1 (Executive): Assigned Sales Executive role, System Administrator profile, and Salesforce license.
2. User 2 (Manager): Assigned Sales Manager role, Manager profile, and Salesforce Platform license.
3. User 3 (Customer): Assigned Customer role, Customer profile, and Salesforce Platform license, with the Verified checkbox unchecked.
4. User 4 (Customer2): Assigned Customer role, Customer profile, and Salesforce Platform license, with the Verified checkbox checked.

The screenshot shows the 'All Users' page in Salesforce Setup. It includes a search bar, a left sidebar with navigation options like 'Users', 'Permission Set Groups', 'Profiles', etc., and a main table listing users. The table has columns for Action, Full Name, Alias, Username, Role, Active, and Profile. Below the table are buttons for 'New User', 'Reset Password(s)', and 'Add Multiple Users'.

Action	Full Name	Alias	Username	Role	Active	Profile
<input type="checkbox"/> Edit	Chatter Expert	Chatter	chatty_00ak00000hmfteap.syl0qgzz3@chatter.salesforce.com		✓	Chatter Free User
<input type="checkbox"/> Edit	Customer	cust	cust20@gmail.com	Customer	✓	Customer
<input type="checkbox"/> Edit	Customer2	cust	cust21@gmail.com	Customer	✓	Customer
<input type="checkbox"/> Edit	Executive	exec	exec16@gmail.com	Sales Executive	✓	System Administrator
<input type="checkbox"/> Edit	Girev-Jane	jgrex	jane_grav.hgnimmoaim.oivh8mbaol@gmail.com		✓	Customer Community User
<input type="checkbox"/> Edit	K. Sangeetha	sk	sangeethascreentflow@gmail.com	SF Admin	✓	System Administrator
<input type="checkbox"/> Edit	Manager	mana	manag20@gmail.com	Sales Manager	✓	Manager
<input type="checkbox"/> Edit	User Integration	integ	integration@00ak00000hmfteap.com		✓	Analytics Cloud Integration User
<input type="checkbox"/> Edit	User Security	sec	insightssecurity@00ak00000hmfteap.com		✓	Analytics Cloud Security User

Milestone 9: Create an Approval Process for Property Object

An Approval Process named *Property Approval* was created for the *Property* object in Salesforce. The process was configured with two key criteria: Location is not blank and Verified is false. The Sales Manager was designated as the automated approver, with permission for Administrators or the approver to edit records during the process. The approval page layout was customized to display essential fields like Property, Owner, Location, and Type. Sales Manager was set as the initial submitter, and Sales Executive as the final approver. Field updates were added to mark properties as Verified (True) or Unverified (False), and the approval process was activated for use.

The screenshot shows the Salesforce Setup interface for the 'Approval Processes' section. The left sidebar contains navigation links for 'Data', 'Mass Transfer Approval Requests', 'Process Automation', and 'Approval Processes'. The main content area displays the 'Property: Property Approval' process details.

Process Definition Detail

Field	Value
Process Name	Property Approval
Unique Name	Property_Approval
Description	
Entry Criteria	(Property: Location NOT EQUAL TO null) AND (Property: Verified EQUALS False)
Record Editability	Administrator OR Current Approver
Approval Assignment Email Template	
Initial Submitters	Property Owner, Role: Sales Manager
Created By	Sangeetha K. 11/24/2024, 5:10 AM
Modified By	Sangeetha K. 11/24/2024, 5:28 AM

Initial Submission Actions

Action	Type	Description
	Record Lock	Lock the record from being edited

Approval Steps

Action	Step Number	Name	Description	Criteria	Assigned Approver	Reject Behavior
Show Actions Edit	1	Executive Approval			Manager	Final Rejection

This screenshot provides a more detailed view of the 'Approval Processes' setup, specifically focusing on the 'Approval Steps' and associated actions.

Approval Steps

Action	Step Number	Name	Description	Criteria	Assigned Approver	Reject Behavior
Hide Actions Edit	1	Executive Approval			Manager	Final Rejection

Approval Actions

Action	Type	Description
Edit Remove	Field Update	Verified Property

Rejection Actions

Action	Type	Description
Edit Remove	Field Update	Unverified Property

Final Approval Actions

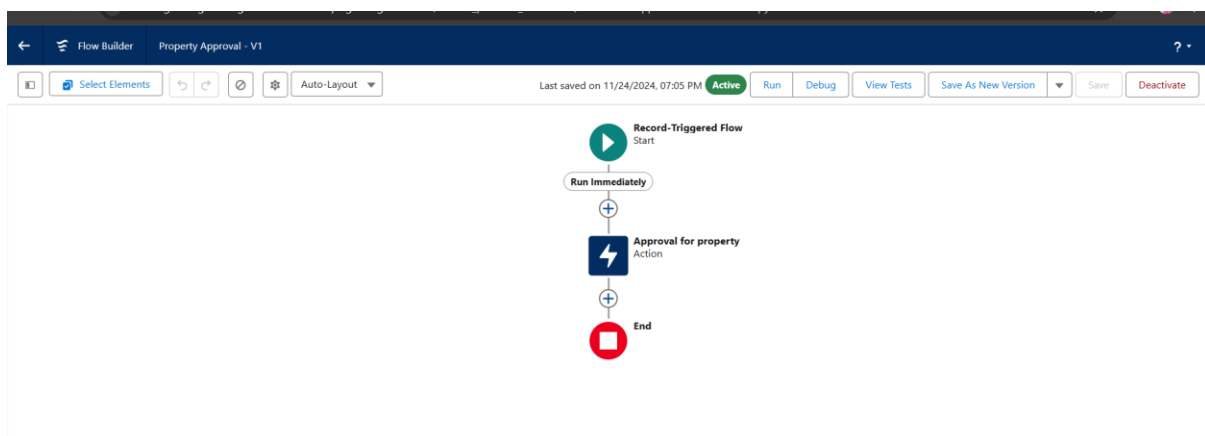
Action	Type	Description
Edit	Record Lock	Lock the record from being edited

Final Rejection Actions

Action	Type	Description
Edit	Record Lock	Unlock the record for editing

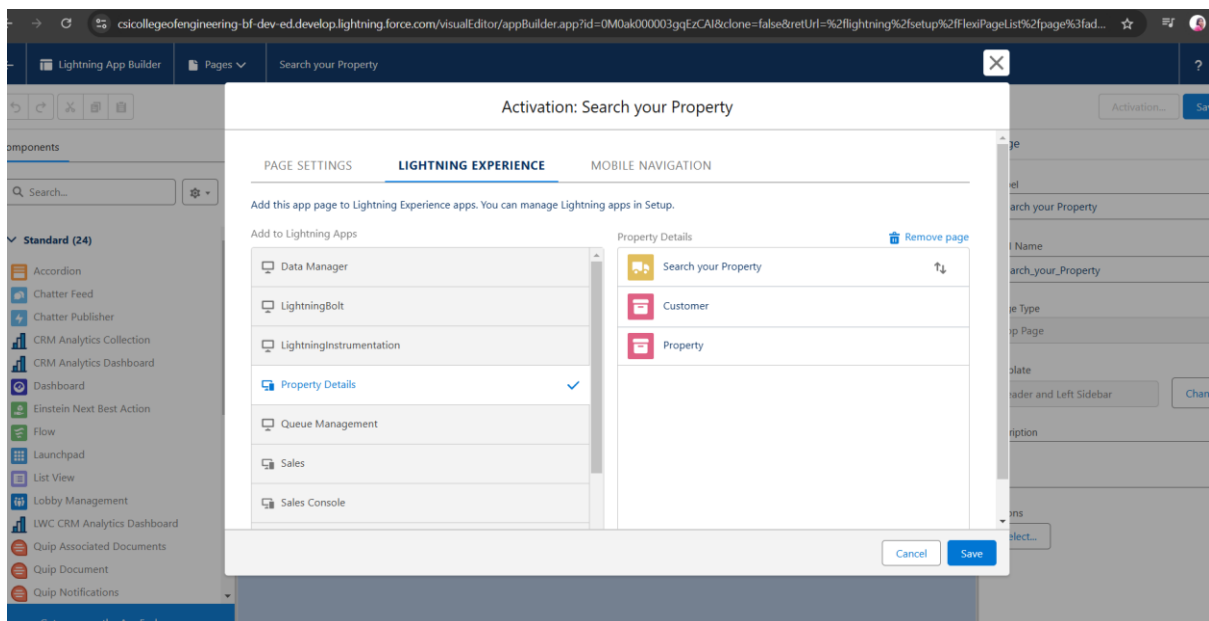
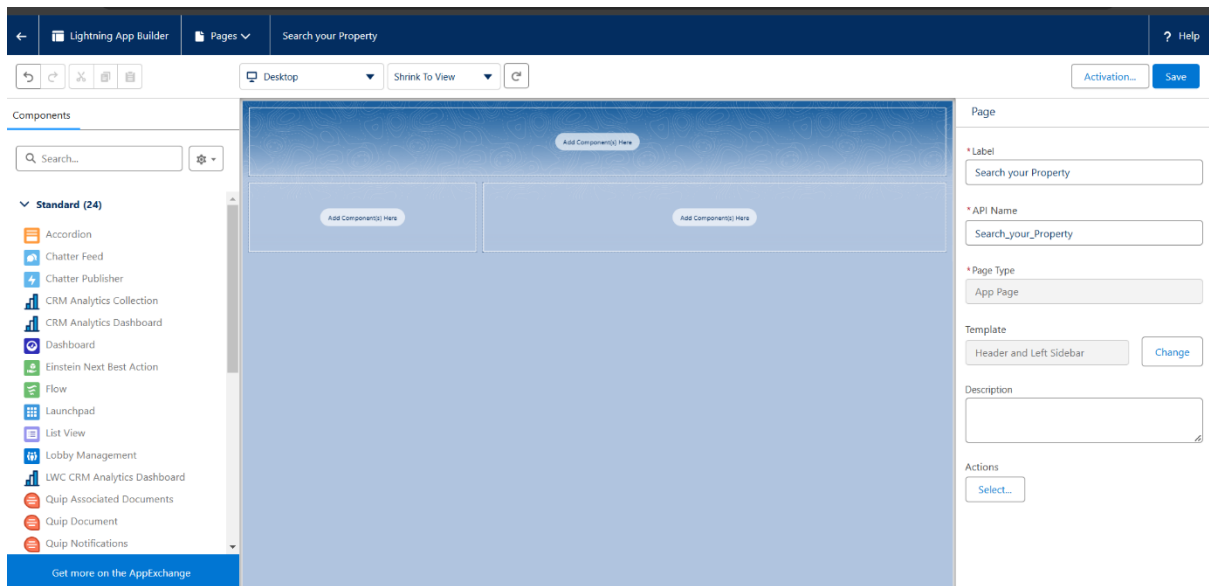
Milestone 10: Create a Record trigger flow to submit the Approval Process Automatically

Created a Record Trigger Flow for the *Property* object in Salesforce to automate the submission of properties for approval. The flow was triggered when a record is created, with no entry conditions specified. The action added was "Submit for Approval", with the label "Approval for Property" and the Record ID set to `{!$Record.Id}`. After configuring the flow, it was saved with the label "Property Approval" and activated for use. This automation ensures properties are automatically submitted for approval when they are created.



Milestone 11: Create an App Page

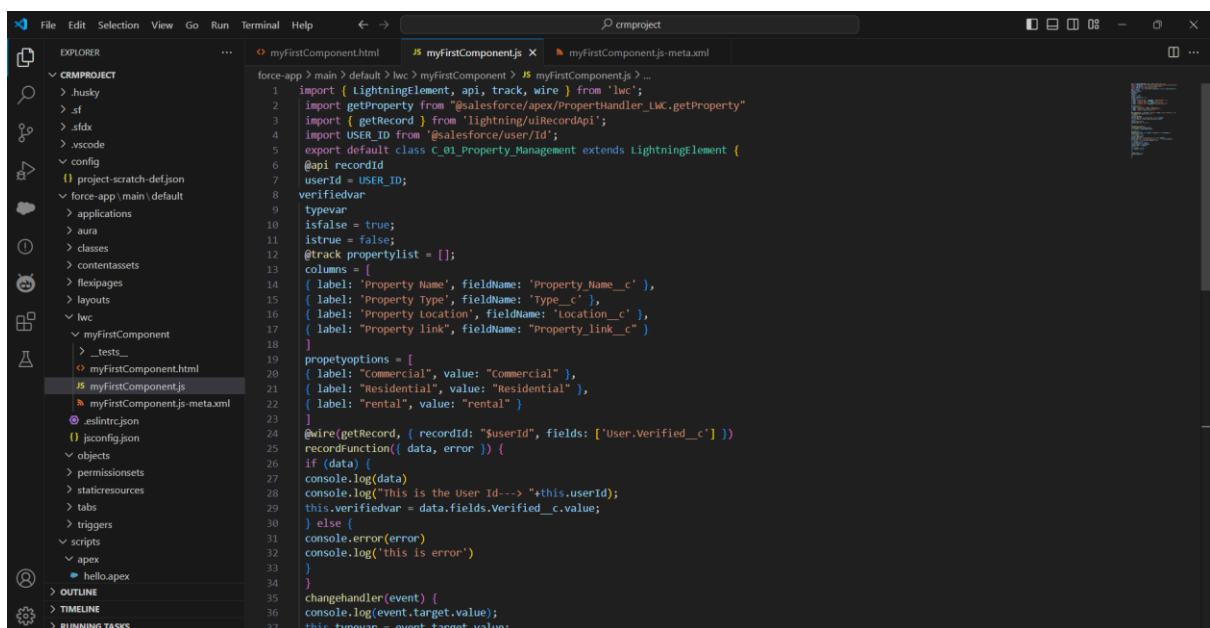
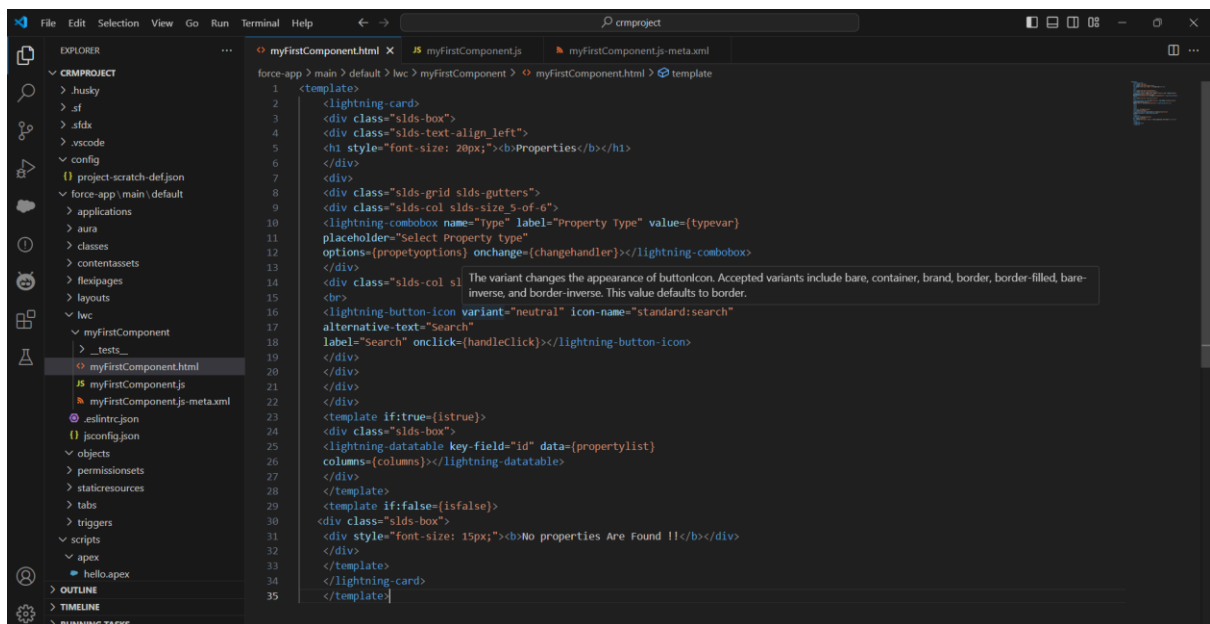
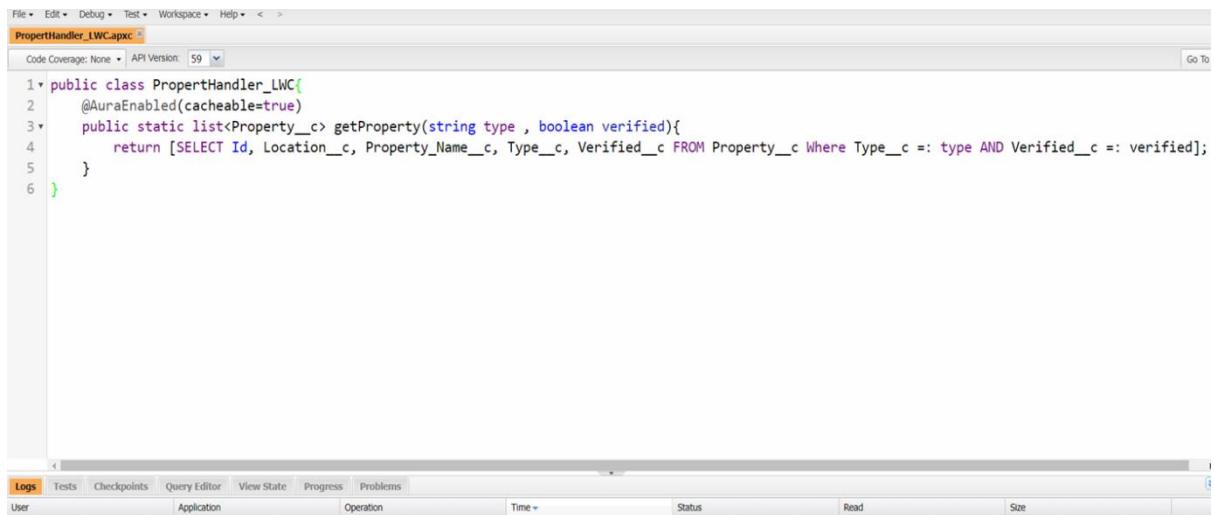
Created an App Page for the *Property Details* object, titled "Search Your Property", using Lightning App Builder. The page was configured with the Header and Left Sidebar components. After saving, it was activated and set to be available for all users. The page was added to the Property Details app in Lightning Experience. The page setup allows users to search properties directly within the app. All configurations were saved and the app was made accessible to users, streamlining property searches. This integration enhances user navigation and property management.

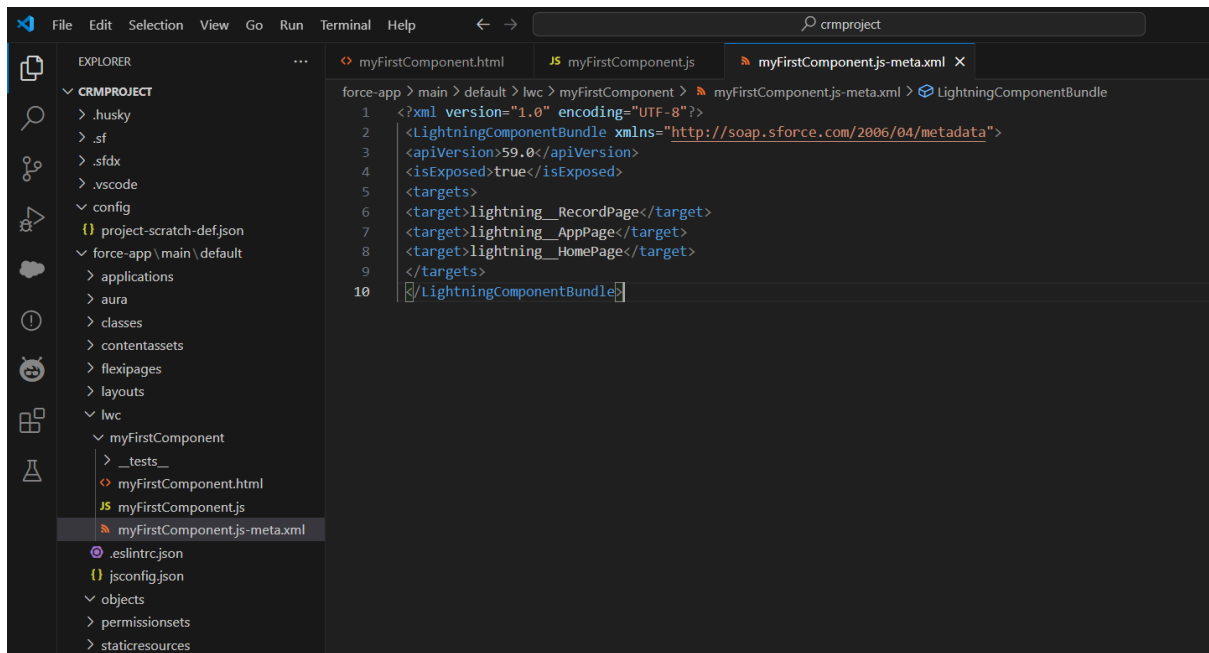


Milestone 12: Create a LWC Component

Create an Lwc Component for the customers so that only verified customers can access the verified properties and non Verified customers can access non verified properties, and deploy it on "Search your Property Page"

1. Create an Apex Class and make it aura enabled and name it "PropertHandler_LWC" and make it aura enabled, then in VSCode, authorize your org, create a Lightning Web Component and write the provided code.



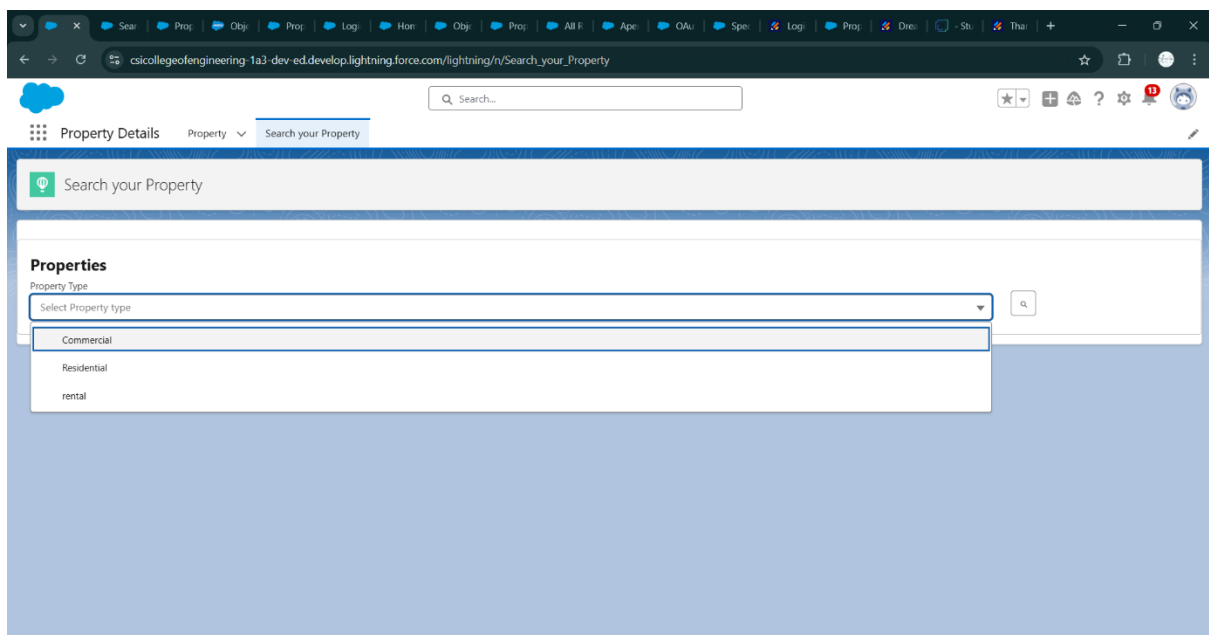


Milestone 13: Drag this Component to your App Page

Navigate to App Launcher in Salesforce and searched for Property Details.

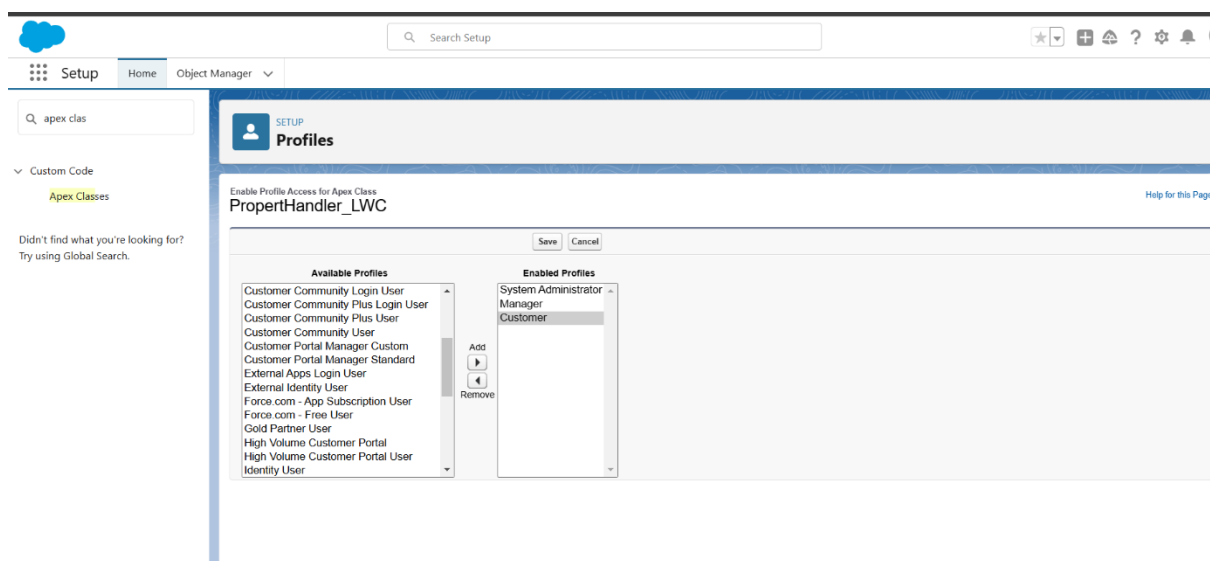
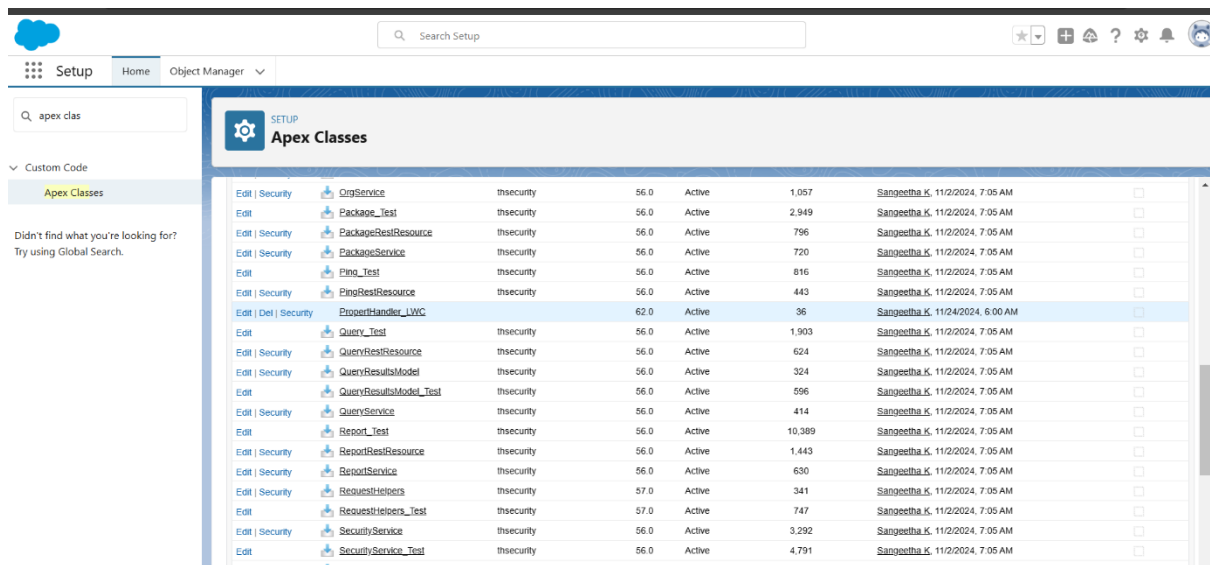
Click the gear icon and selected Edit Page.

Drag the Lightning Web Component to the app page and save the changes.



Milestone 14: Give Access of Apex Classes to Profile

Navigate to Setup Apex Classes and click on "Security" next to PropertyHandler__LWC. In the Profiles section, added Manager and Customer profiles for access. Save the changes to grant the necessary profiles access to the PropertyHandler__LWC Apex class.



Conclusion

The CRM application to Handle the Clients and their property Related Requirements aims to streamline customer interactions, enhance user experience, and optimize property management operations through Salesforce integration. With scalable architecture and automated workflows, the platform will support future growth and improve customer satisfaction.