

SUBSCRIPTION & BILLING MANAGEMENT – CRM PROJECT

Industry : SaaS / Subscription Billing

Project Type : Salesforce CRM solution for subscription-based companies to manage customer subscriptions, automate billing cycles, and track invoices and payments across multiple plans.

Target Users :

Sales Representatives : Need to create and track customer subscriptions, view customer billing history, and check real-time payment status.

Finance/Billing Team : Need to monitor invoices, payments and handle refunds or failed payment retries.

Customer Service Agents : Need to access a centralized view of customer accounts, subscription status, and payment histories to resolve issues quickly.

Management/Administrators : Need real-time dashboards for revenue trends, churn rate, and outstanding invoices to make data-driven decisions.

Problem Statement :

Subscription-based companies currently use manual processes or multiple disconnected systems for managing subscriptions, billing, and payments. This leads to billing errors, missed renewals, delayed revenue collection, and lack of consolidated financial data. A automated CRM is needed to streamline these operations, reduce errors, and provide actionable insights for management.

Phase 1: Problem Understanding & Industry Analysis

1. Requirement Gathering

- Talk to stakeholders (Finance team, Subscription managers, Customers, Support).
- Example requirements:
 - Manage subscriptions with start & end dates.
 - Auto-generate invoices when a subscription is created/renewed.
 - Track payments & outstanding balances.
 - Send reminders for renewals and overdue payments.

2. Stakeholder Analysis

- Admin: System setup, data management.
- Billing Manager: Approves invoices, manages disputes.
- Finance Team: Tracks revenue, reconciles payments.
- Customer Service: Handles cancellations, upgrades/downgrades.
- Customer (End User): Subscribes, views invoices, makes payments.

3. Business Process Mapping

- Flow:

Customer subscribes → Subscription record created → Invoice auto-generated → Payment captured → Renewal reminders → Reports to Finance.

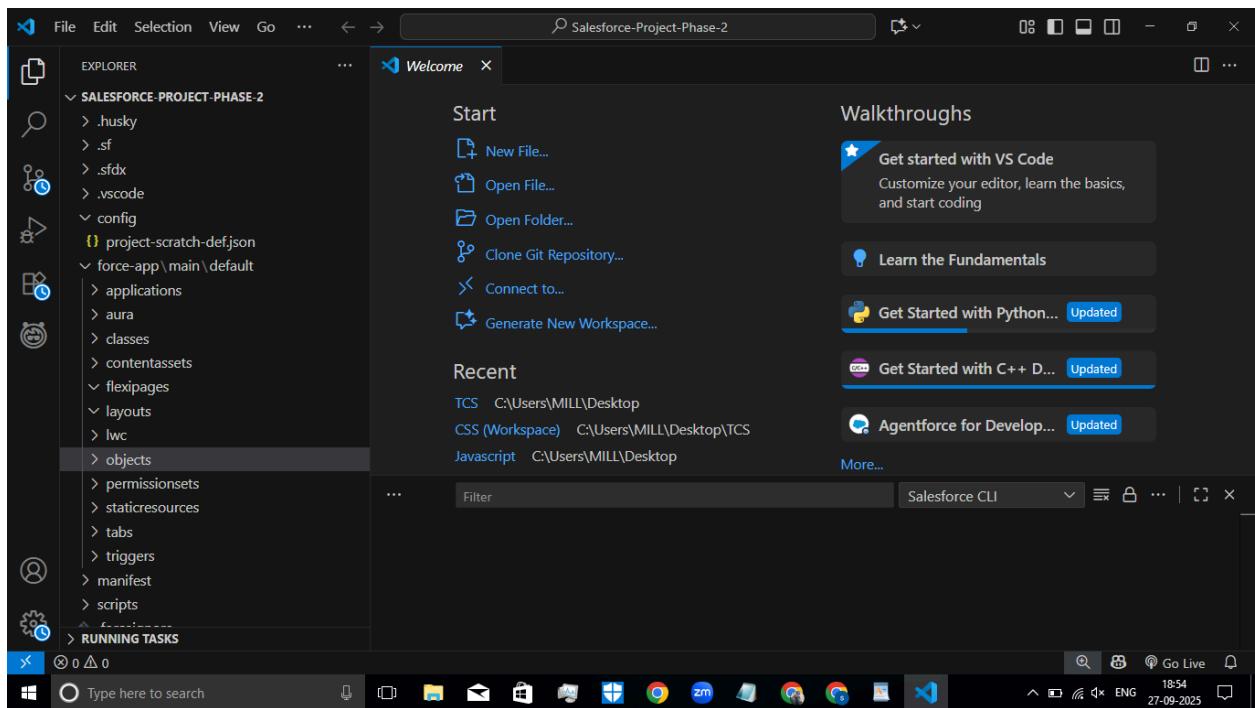
4. Industry-Specific Use Case Analysis

- Recurring billing cycles.
- Flexible subscription plans (monthly/annual).
- Payment gateway integration.

Phase 2: Org Setup & Configuration

Goal : To prepare the Salesforce environment by configuring user profiles, roles, and sharing settings to support the subscription and billing CRM solution.

1. Salesforce Edition: Developer Org (free).



2. Company Profile Setup: Add company info, time zone, currency.
3. Business Hours: Define working hours (9am–6pm) for support.
4. Fiscal Year Settings: Standard (Jan–Dec) for revenue tracking.

Screenshot of the Salesforce Setup interface showing the Company Information page under Subscription & Billing Management.

Organization Detail

Setting	Value
Organization Name	Subscription & Billing Management
Primary Contact	OrgFarm EPIC
Division	
Address	United States
Fiscal Year Starts In	January
Activate Multiple Currencies	<input type="checkbox"/>
Enable Data Translation	<input type="checkbox"/>
Newsletter	<input checked="" type="checkbox"/>
Admin Newsletter	<input checked="" type="checkbox"/>
Hide Notices About System Maintenance	<input type="checkbox"/>
Hide Notices About System Downtime	<input type="checkbox"/>
Locale Formats	ICU
Phone	
Fax	
Default Locale	English (United States)
Default Language	English
Default Time Zone	(GMT-07:00) Pacific Daylight Time (America/Los_Angeles)
Currency Locale	English (United States) - USD
Used Data Space	422 KB (0%) [View]
Used File Space	37 KB (0%) [View]
API Requests, Last 24 Hours	0 (15,000 max)
Streaming API Events, Last 24 Hours	0 (10,000 max)
Restricted Logins, Current Month	0 (0 max)
Salesforce.com Organization ID	00DqK00000BkTrt

5. User Setup: Create Billing Manager, Finance User, Sales Rep

Screenshot of the Salesforce Setup interface showing the Users page under All Users.

All Users

On this page you can create, view, and manage users.

To get more licenses, use the Your Account app. [Let's Go](#)

View: [All Users](#) | [Edit](#) | [Create New View](#)

Action	Full Name	Alias	Username	Role	Active	Profile
<input type="checkbox"/>	Edit Admin_Billing	badmi	billing.admin@project.dev	Billing Admin	<input checked="" type="checkbox"/>	System Administrator
<input type="checkbox"/>	Edit Chatter_Expert	Chatter	chatty.00dgk000000ktruaflx5bc1424an@chatter.salesforce.com		<input checked="" type="checkbox"/>	Chatter Free User
<input type="checkbox"/>	Edit EPIC_OrgFarm	QEPIIC	epic.7f99a460187e@orgfarm.salesforce.com		<input checked="" type="checkbox"/>	System Administrator
<input type="checkbox"/>	Edit Jain_Sourabh	sou	sourabhjain1071964852@agenforce.com		<input checked="" type="checkbox"/>	System Administrator
<input type="checkbox"/>	Edit Manager_Finance	fmana	finance.manager+project@gmail.com	Finance Manager	<input checked="" type="checkbox"/>	Standard Platform User
<input type="checkbox"/>	Edit Rep_Sales	srep	sales.rep+project@gmail.com	Sales Rep	<input checked="" type="checkbox"/>	Standard Platform User
<input type="checkbox"/>	Edit User_Integration	integ	integration@00dgk00000ktruafl		<input checked="" type="checkbox"/>	Analytics Cloud Integration User
<input type="checkbox"/>	Edit User_Security	sec	insightssecurity@00dgk00000ktruafl		<input checked="" type="checkbox"/>	Analytics Cloud Security User

6. Profiles:

- Finance: Access to invoices & reports.

The screenshot shows the Salesforce Setup interface under the Profiles section. The top navigation bar includes tabs for Home, Object Manager, and a search bar. The main content area displays a table titled "Profiles" with columns for Action, Profile Name, User License, and Custom. The "Custom" column contains checkboxes, many of which are checked. The table lists various profiles such as Billing Admin Profile, Chatter External User, Chatter Free User, Chatter Moderator User, Contract Manager, Cross Org Data Proxy User, Custom Marketing Profile, Custom Sales Profile, and Custom Support Profile. A pagination bar at the bottom indicates there are 46 profiles in total, with the current page being 1 of 2.

The screenshot shows the details of the "Billing Admin Profile". The top navigation bar and search bar are visible. The main content area is titled "Billing Admin Profile" and includes sections for "Profile Detail" (Name: Billing Admin Profile, User License: Salesforce, Description: null, Created By: Sourabh Jain, 9/18/2025, 9:07 PM, Modified By: Sourabh Jain, 9/18/2025, 9:32 PM) and "Page Layouts" (Standard Object Layouts: Global, Global Layout [View Assignment], Location Group Assignment, Location Group Assignment Layout [View Assignment]). A note at the top states: "Users with this profile have the permissions and page layouts listed below. Administrators can change a user's profile by editing that user's personal information. If your organization uses Record Types, use the Edit links in the Record Type Settings section below to make one or more record types available to users with this profile." A footer note at the bottom left reads: "[javasrcUp(%27%2F00egK0000059qPW%3Fsdtp%3Dp1%27)]".

7. Roles: Finance Manager → Agents below.

The screenshot shows the Salesforce Setup interface with the 'Roles' page open. The left sidebar shows navigation categories like 'Users', 'Feature Settings', 'Sales', 'Service', and 'Case Teams'. Under 'Sales', 'Contact Roles' are listed under Contracts and Opportunities. Under 'Service', 'Case Team Roles' and 'Contact Roles' are listed under Cases. A search bar at the top has 'roles' typed into it. The main content area displays a hierarchical list of roles under 'Subscription & Billing Management':

- Add Role
 - CEO
 - CFO
 - COO
 - Finance Manager
 - Billing Admin
 - Sales Manager
 - Sales Rep
 - SVP, Customer Service & Support
 - Customer Support, International

8. Permission Sets: Extra access (e.g., Reports).

The screenshot shows the Salesforce Setup interface with the 'Permission Sets' page open. The left sidebar shows navigation categories like 'Users', 'Custom Code', and 'Custom Permissions'. Under 'Custom Code', 'Custom Permissions' is selected. A search bar at the top has 'perm' typed into it. The main content area displays a 'Permission Set' section with the title 'Can Export Reports'. It includes a 'Find Settings...' search bar and a 'Permission Set Overview' link. Below this is a 'System Permissions' section with a 'System' dropdown. The 'Enabled' section shows a table with three columns: App Permissions, System Permissions, and Object Permissions. The 'System Permissions' column contains 'Export Reports' and 'Run Reports'. The 'Disabled' section shows a similar table with no items listed. A confirmation dialog box titled 'Permission Changes Confirmation' is overlaid on the page, asking if the user wants to save the changes and warning them to review their permissions. The dialog also lists 'Enabled' and 'Disabled' sections with their respective permission tables.

The screenshot shows the Salesforce Setup interface. The left sidebar is expanded, showing categories like Users, Apps, Feature Settings, and Digital Experiences. The 'Permission Sets' section is selected. The main content area displays the 'Assignment Summary' for the 'Can Export Reports' permission set. A table lists one assignment:

Full Name	User License	Expires On	Time Zone	Status
Billing Admin	Salesforce			Success

9. OWD:

- Subscription: Private.

The screenshot shows the Salesforce Setup interface. The left sidebar is expanded, showing categories like Security and Sharing Settings. The 'Sharing Settings' section is selected. The main content area displays the 'Sharing Settings' page. It includes a 'Manage sharing settings for:' dropdown set to 'Subscription' and a 'Default Sharing Settings' table:

Object	Default Internal Access	Default External Access	Grant Access Using Hierarchies
Subscription	Private	Private	<input checked="" type="checkbox"/>

- o Invoice: Private.

The screenshot shows the Salesforce Sharing Settings page for the Invoice object. The URL in the browser is <https://orgfarm-6ef0f98f3d-dev-ed.lightning.force.com/lightning/setup/SecuritySharing/page?address=%2Fp%2Fown%2FOrgSharingDetail%3Fs...>. The page title is "Sharing Settings".

The left sidebar shows a search bar for "sharing" and a "Sharing Settings" section under the "Sharing" category. A message at the bottom of the sidebar says "Didn't find what you're looking for? Try using Global Search."

The main content area displays the "Sharing Settings" for the Invoice object. It includes a "Manage sharing settings for:" dropdown set to "Invoices", a "Disable External Sharing Model" button, and a "Default Sharing Settings" table.

Organization-Wide Defaults		Organization-Wide Defaults Help (?)	
Object	Default Internal Access	Default External Access	Grant Access Using Hierarchies
Invoice	Private	Private	<input checked="" type="checkbox"/>

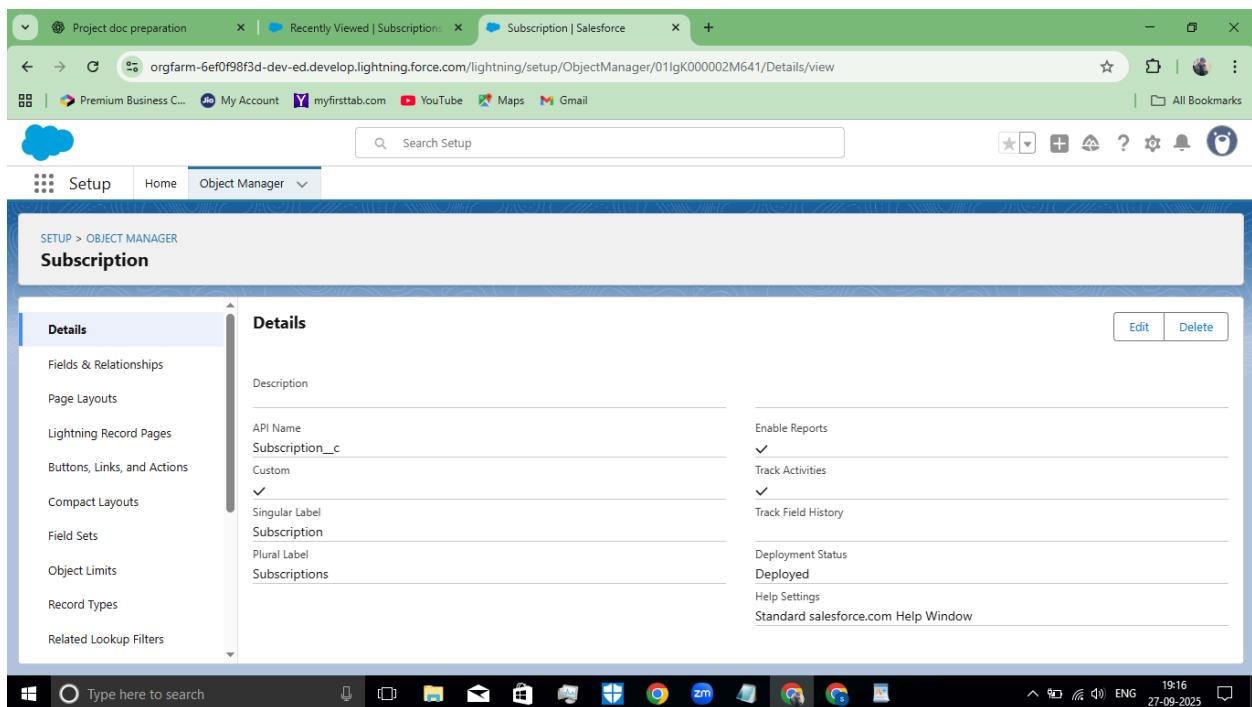
Below this is an "Other Settings" section with "Manager Groups" and "Secure guest user record access" checkboxes.

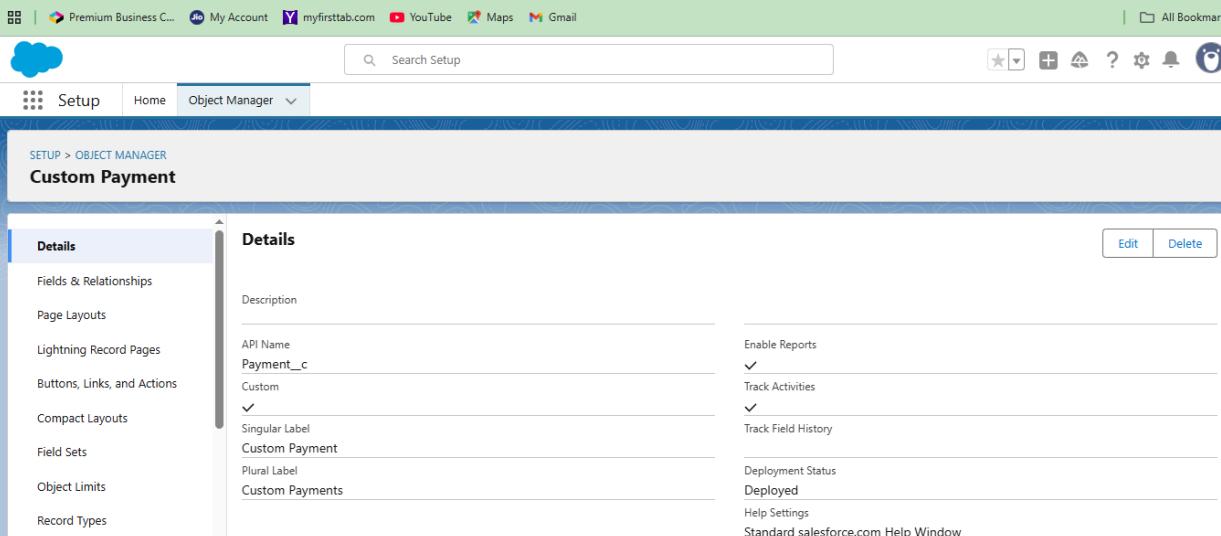
Phase 3: Data Modeling & Relationships

Goal : Design and implement a scalable data model in Salesforce to support subscription billing business processes.

1. Objects

- Standard: Account (customer), Contact (billing contact), Product.
- Custom Objects :
- Subscription__c - To store subscription details.
- Invoice__c - To store invoices linked to subscriptions.
- Payment__c - To track payments against invoices.



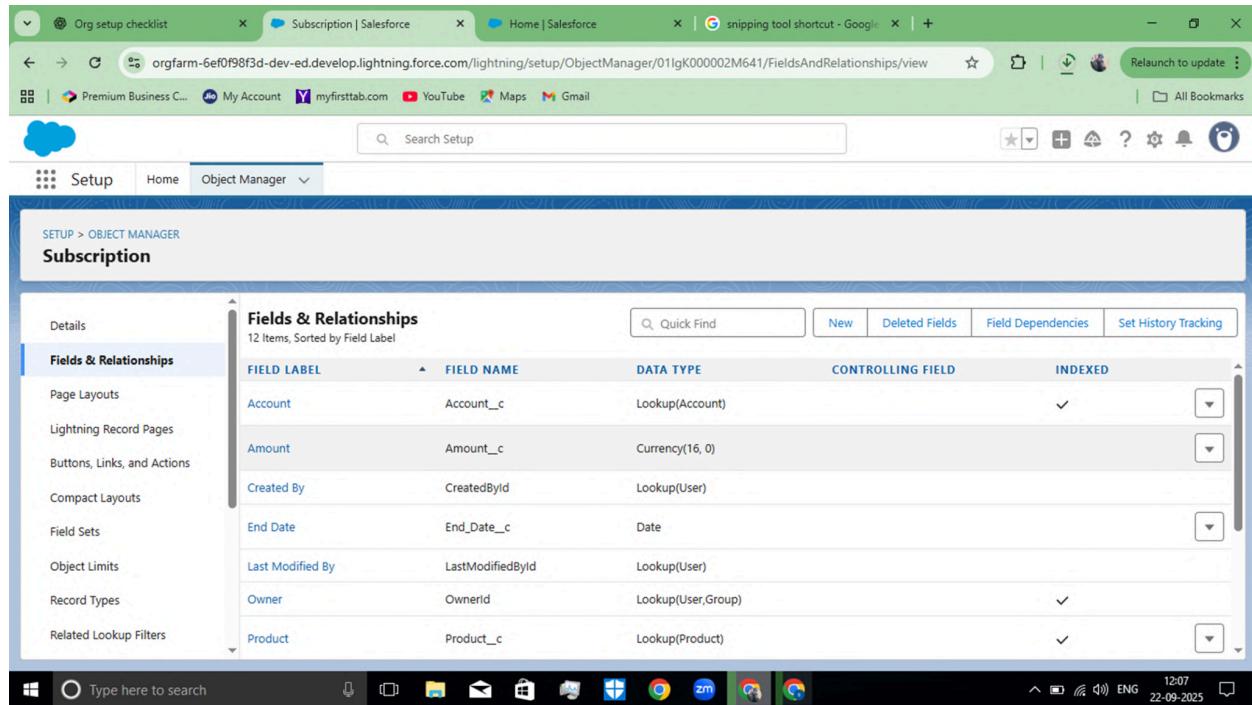


The screenshot shows the Salesforce Object Manager interface for a custom object named "Custom Payment". The left sidebar lists various setup categories like Details, Fields & Relationships, Page Layouts, etc. The main "Details" tab is selected, showing fields such as API Name (Payment__c), Singular Label (Custom Payment), and Plural Label (Custom Payments). On the right, there are sections for Reports, Activities, Field History, Deployment Status (Deployed), and Help Settings. The top navigation bar includes links for Recently Viewed, Custom Payment | Salesforce, and other tabs like Project doc preparation, Premium Business C..., My Account, myfirsttab.com, YouTube, Maps, and Gmail. The browser address bar shows the URL for the custom object's details view.

The screenshot shows the Salesforce Object Manager interface for a custom object named 'Custom Invoice'. The left sidebar lists various configuration tabs: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, and Related Lookup Filters. The main 'Details' tab is selected, displaying fields like API Name (Custom_Invoice__c), Singular Label (Custom Invoice), and Plural Label (Custom Invoices). On the right, there are sections for Reports (checked), Activities (checked), Field History (checked), Deployment Status (Deployed), and Help Settings (Standard salesforce.com Help Window). Action buttons for Edit and Delete are located at the top right of the details section.

2. Fields

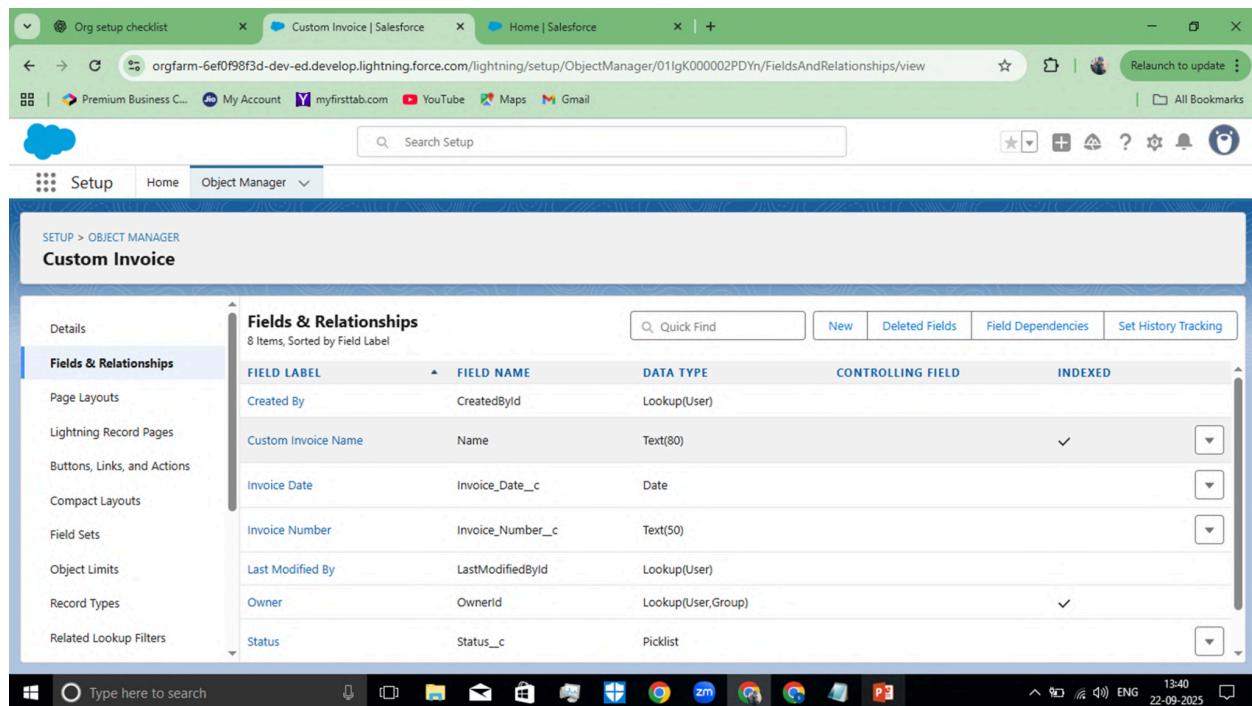
- Subscription: Start Date, End Date, Status, Plan Type.



The screenshot shows the Salesforce Object Manager interface for the 'Subscription' object. The left sidebar lists various setup options like Page Layouts, Lightning Record Pages, and Field Sets. The main area displays a table titled 'Fields & Relationships' with 12 items. The columns are FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The fields listed are:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Account	Account__c	Lookup(Account)		✓
Amount	Amount__c	Currency(16, 0)		▼
Created By	CreatedById	Lookup(User)		▼
End Date	End_Date__c	Date		▼
Last Modified By	LastModifiedById	Lookup(User)		▼
Owner	OwnerId	Lookup(User,Group)		✓
Product	Product__c	Lookup(Product)		✓

- Invoice: Invoice Date, Due Date, Total Amount, Status.



The screenshot shows the Salesforce Object Manager interface for the 'Custom Invoice' object. The left sidebar lists various setup options. The main area displays a table titled 'Fields & Relationships' with 8 items. The columns are FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The fields listed are:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		▼
Custom Invoice Name	Name	Text(80)		▼
Invoice Date	Invoice_Date__c	Date		▼
Invoice Number	Invoice_Number__c	Text(50)		▼
Last Modified By	LastModifiedById	Lookup(User)		▼
Owner	OwnerId	Lookup(User,Group)		✓
Status	Status__c	Picklist		▼

- Payment: Amount, Method, Status, Payment Date.

Fields & Relationships
41+ Items, Sorted by Field Label

Comments	Comments	Type
Created By	CreatedBy	Lookup(User)
Created Date	CreatedDate	Date/Time
Custom Invoice	Custom_Invoice__c	Lookup(Custom Invoice)
Date	Date	Date/Time
Effective Date	EffectiveDate	Date/Time
Gateway Date	GatewayDate	Date/Time
Gateway Reference Details	GatewayRefDetails	Text Area(1000)
Gateway Reference Number	GatewayRefNumber	Text(255)

3. Relationships

- Account ↔ Subscription (Lookup).

Subscription Custom Field
Account

Custom Field Definition Detail

Field Information		Object Name	Subscription
Field Label	Field Name	Data Type	Lookup
Account	Account	Object Name	Subscription
Account	Account__c	Data Type	Lookup
Description	Link every subscription to the customer (Account).		
Help Text	Link every subscription to the customer (Account).		
Data Owner			
Field Usage			
Data Sensitivity Level			
Compliance Categorization			
Created By	Sourabh Jain, 9/21/2025, 11:30 PM	Modified By	Sourabh Jain, 9/21/2025, 11:30 PM

Lookup Options

Related To	Account	Child Relationship Name	Subscription
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- Subscription ↔ Invoice (Master-Detail)

The screenshot shows the Salesforce Setup interface under the Object Manager. A custom field named 'Subscription' is being created for the 'Custom Invoice' object. The field is defined as a lookup type ('Object Name: Custom Invoice, Data Type: Lookup') for the 'Custom Invoice' object. The field has a label 'Subscription', a name 'Subscription', and an API name 'Subscription__c'. It includes fields for Description, Help Text, Data Owner, Field Usage, Data Sensitivity Level, and Compliance Categorization. The field was created by Sourabh Jain on 9/22/2025 at 11:49 PM and modified by the same user on 9/22/2025 at 11:49 PM.

- Invoice ↔ Payment (Lookup)

The screenshot shows the Salesforce Setup interface under the Object Manager. A custom field named 'Custom_Invoice' is being created for the 'Custom Payment' object. The field is defined as a lookup type ('Object Name: Custom Payment, Data Type: Lookup') for the 'Custom Payment' object. The field has a label 'Custom Invoice', a name 'Custom_Invoice', and an API name 'Custom_Invoice__c'. It includes fields for Description, Help Text, Data Owner, Field Usage, Data Sensitivity Level, and Compliance Categorization. The field was created by Sourabh Jain on 9/23/2025 at 12:10 AM and modified by the same user on 9/23/2025 at 12:10 AM.

4. Record Types

- Subscription: “Monthly Plan” vs “Annual Plan.”

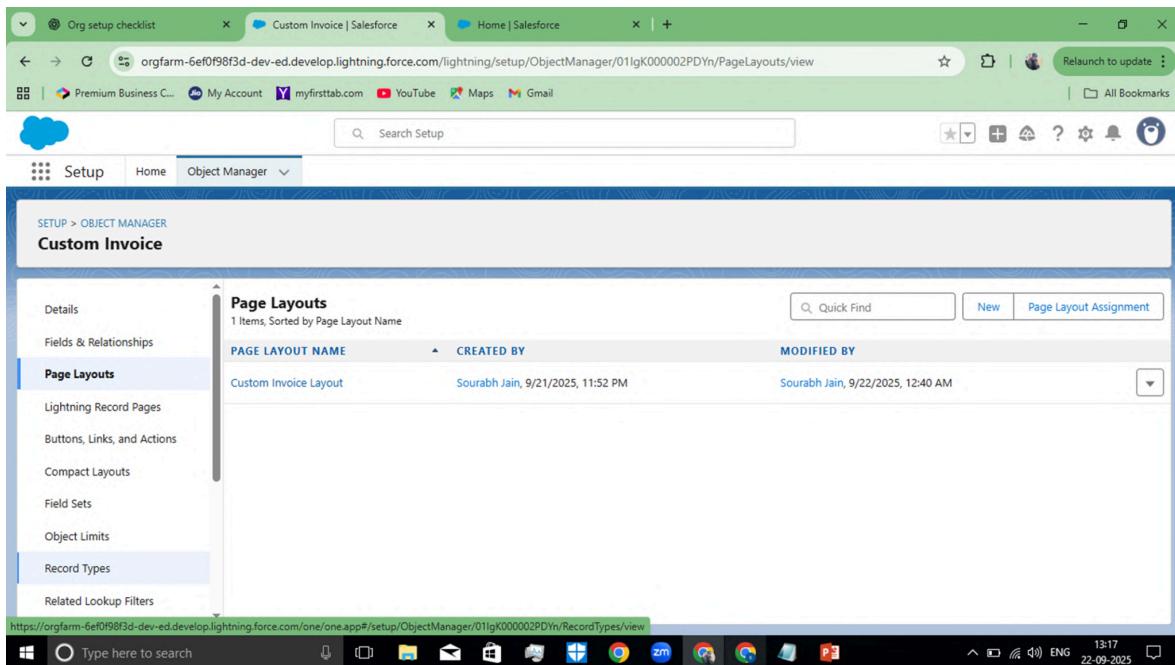
The screenshot shows the Salesforce Setup interface with the following details:

- Tab Bar:** The top bar includes tabs for "Org setup checklist", "Subscription | Salesforce", and "Home | Salesforce".
- Header:** The title is "Subscription | Salesforce" and the URL is "orgfarm-6ef0f98f3d-dev-ed.lightning.force.com/lightning/setup/ObjectManager/01lgK000002M641/RecordTypes/view".
- Search Bar:** A search bar labeled "Search Setup" is located at the top right.
- Left Sidebar:** A sidebar titled "SETUP > OBJECT MANAGER" lists various setup categories: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, and Record Types (which is selected). Other items like "Related Lookup Filters" are also listed.
- Table View:** The main area displays a table titled "Record Types" with two items:

RECORD TYPE LABEL	DESCRIPTION	ACTIVE	MODIFIED BY
New Business Subscription	▼	Sourabh Jain, 9/18/2025, 10:01 PM	(dropdown)
Renewal Subscription	▼	Sourabh Jain, 9/18/2025, 10:02 PM	(dropdown)
- Bottom Bar:** The taskbar shows the Windows Start button, a search bar, pinned icons for File Explorer, Mail, Task View, and others, and system status indicators.

5. **Page Layouts :** Custom page layouts were created for each object to organize fields and related lists. Subscription related list added to Account page layout for quick access.

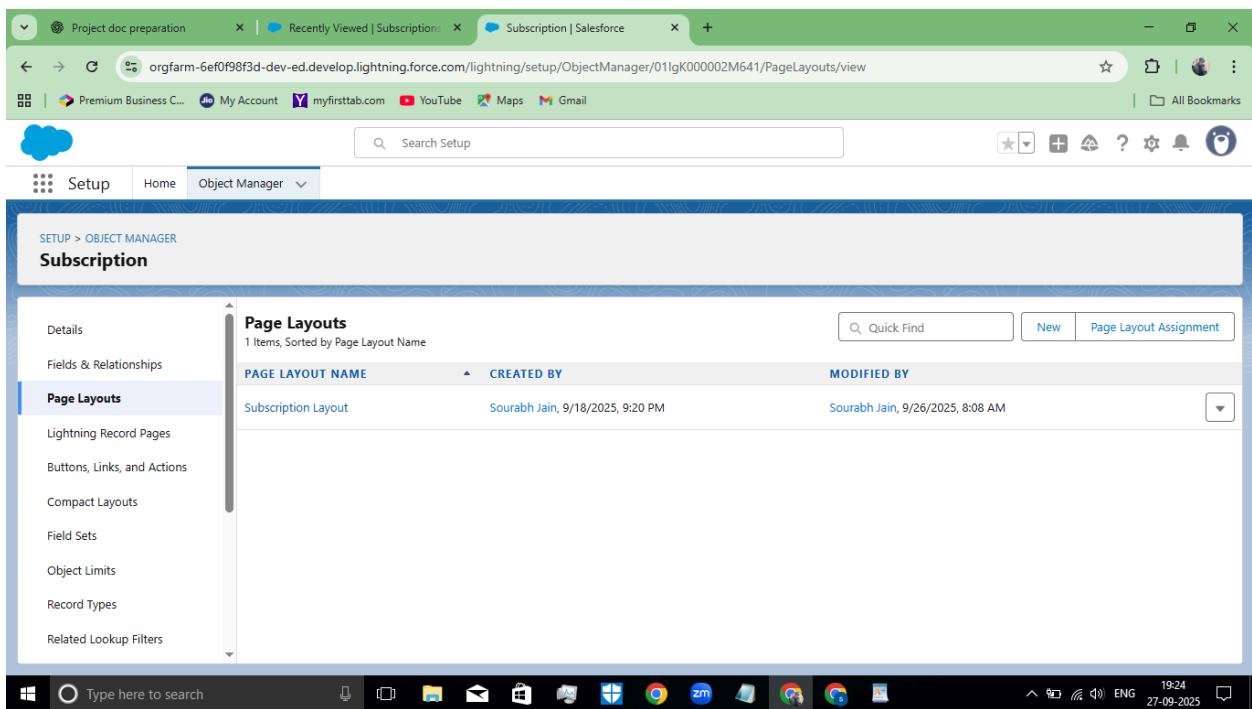
- Account page: Show related Subscriptions, Invoices



The screenshot shows the Salesforce Setup interface for the 'Custom Invoice' object. The left sidebar lists various setup categories, with 'Page Layouts' selected. The main content area displays a table titled 'Page Layouts' with one item: 'Custom Invoice Layout'. The table includes columns for 'PAGE LAYOUT NAME', 'CREATED BY', and 'MODIFIED BY'. The layout was created by Sourabh Jain on 9/21/2025 at 11:52 PM and modified on 9/22/2025 at 12:40 AM.

PAGE LAYOUT NAME	CREATED BY	MODIFIED BY
Custom Invoice Layout	Sourabh Jain, 9/21/2025, 11:52 PM	Sourabh Jain, 9/22/2025, 12:40 AM

- Subscription page: Show Invoices, Renewal Date.

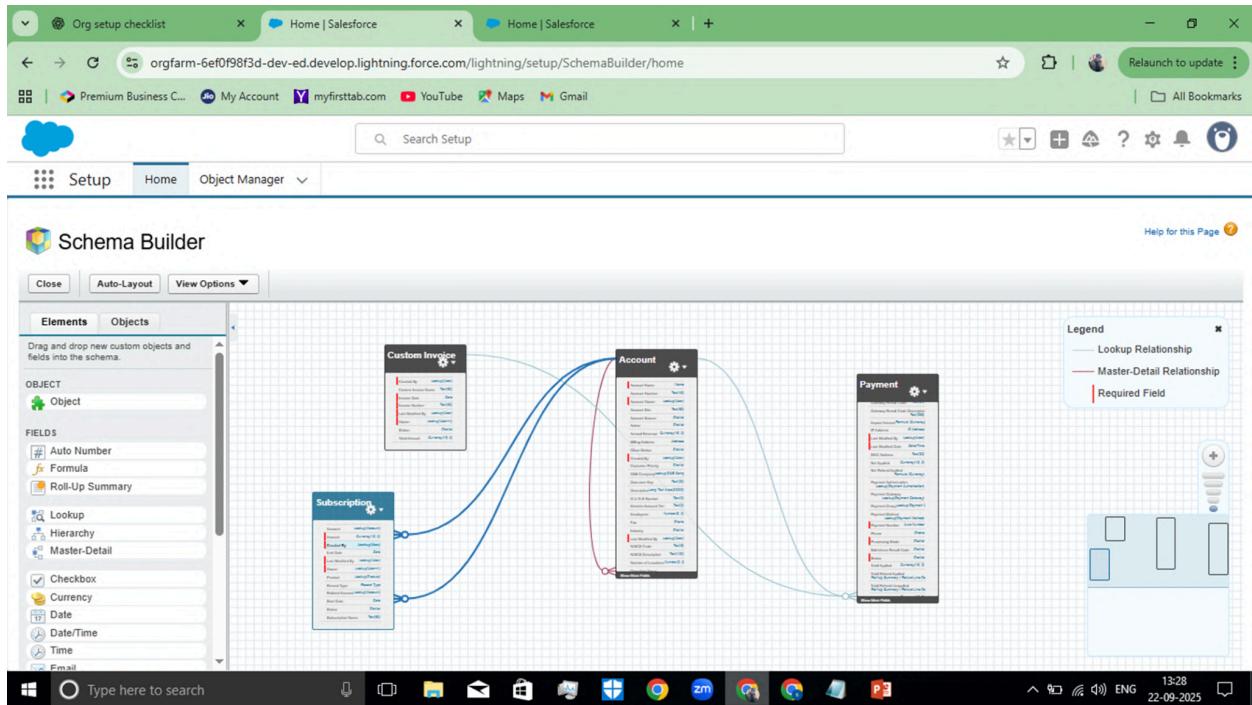


The screenshot shows the Salesforce Setup interface for the 'Subscription' object. The left sidebar lists various setup categories, with 'Page Layouts' selected. The main content area displays a table titled 'Page Layouts' with one item: 'Subscription Layout'. The table includes columns for 'PAGE LAYOUT NAME', 'CREATED BY', and 'MODIFIED BY'. The layout was created by Sourabh Jain on 9/18/2025 at 9:20 PM and modified on 9/26/2025 at 8:08 AM.

PAGE LAYOUT NAME	CREATED BY	MODIFIED BY
Subscription Layout	Sourabh Jain, 9/18/2025, 9:20 PM	Sourabh Jain, 9/26/2025, 8:08 AM

6. Schema Builder

- Visualize relationships between Subscription, Invoice, Payment.



7. Compact Layout

The screenshot shows the Salesforce Object Manager for the 'Subscription' object. The left sidebar lists various configuration options: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts (which is selected), Field Sets, Object Limits, Record Types, and Related Lookup Filters. The main content area is titled 'Subscription Compact Layout' and shows the details for the 'Subscription compact layout'. It includes fields for Label ('Subscription compact layout'), API Name ('Subscription_compact_layout'), and Included Fields ('Account', 'Product', 'Start Date', 'End Date'). It also shows the 'Created By' and 'Modified By' information, both listed as 'Sourabh Jain' on 9/22/2025, 12:54 AM. At the bottom are buttons for Edit, Clone, Delete, and Compact Layout Assignment. The bottom of the screen shows the Windows taskbar.

The screenshot shows the Salesforce Setup interface for the Payment object. The left sidebar lists various setup categories, with 'Compact Layouts' selected. The main content area displays the 'Payment compact layout' configuration. Key details shown include:

- Label:** Payment compact layout
- API Name:** Payment_compact_layout
- Object Name:** Payment
- Included Fields:** Amount, Payment Method, Status, Date, Custom Invoice
- Created By:** Sourabh Jain, 9/22/2025, 12:52 AM
- Modified By:** Sourabh Jain, 9/22/2025, 12:52 AM

The browser taskbar at the bottom shows the Windows taskbar with various pinned icons.

The screenshot shows the Salesforce Setup interface for the Custom Invoice object. The left sidebar lists various setup categories, with 'Compact Layouts' selected. The main content area displays the 'Invoice compact layout' configuration. Key details shown include:

- Label:** Invoice compact layout
- API Name:** Invoice_compact_layout
- Object Name:** Custom_Invoice
- Included Fields:** Custom_Invoice_Name, Invoice_Number, Invoice_Date, Status, Total_Amount
- Created By:** Sourabh Jain, 9/22/2025, 12:50 AM
- Modified By:** Sourabh Jain, 9/22/2025, 12:50 AM

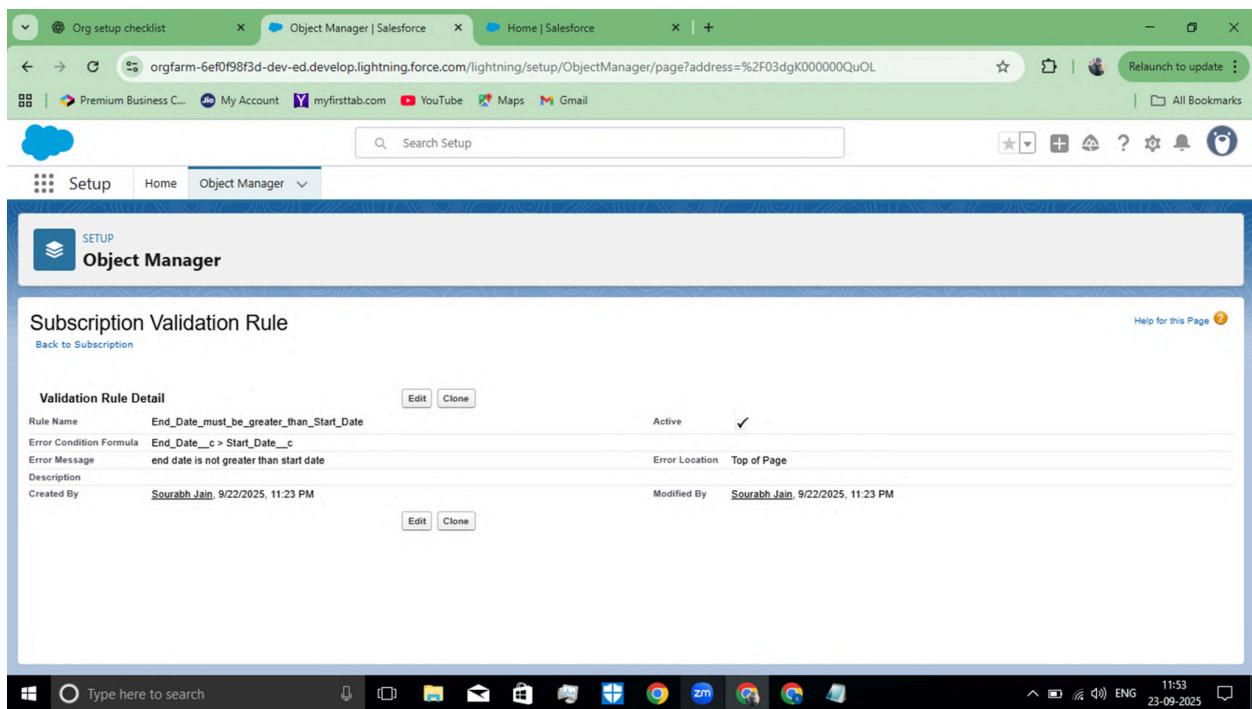
The browser taskbar at the bottom shows the Windows taskbar with various pinned icons.

Phase 4 – Process Automation (Admin)

Goal : Streamline subscription and billing operations by automating recurring billing, invoice generation, and alerts using Salesforce declarative tools.

- Validation Rules (e.g., End Date > Start Date)

Prevent_Zero_Invoice_Amount - prevents creation of invoices with zero amount.
Payment_Amount_Validation - ensures Payment Amount <= Invoice Amount.



The screenshot shows the Salesforce Object Manager interface. The top navigation bar includes tabs for 'Org setup checklist', 'Flow Builder', 'Object Manager | Salesforce', and 'Home | Salesforce'. The main content area is titled 'Custom Payment Validation Rule' under the 'Object Manager' tab. The validation rule detail is as follows:

Validation Rule Detail	
Rule Name	Payment_Amount_cannot_exceed_related_Invoice_Amount
Error Condition Formula	Amount__c <= Custom_Invoice__r.Total_Amount__c
Error Message	Payment Amount cannot exceed related Invoice Amount
Description	
Created By	Sourabh Jain 9/23/2025, 12:12 AM
Modified By	Sourabh Jain 9/23/2025, 12:12 AM

The rule is marked as 'Active' with a checkmark. The error location is set to 'Top of Page'. The bottom of the screen shows a Windows taskbar with various pinned icons.

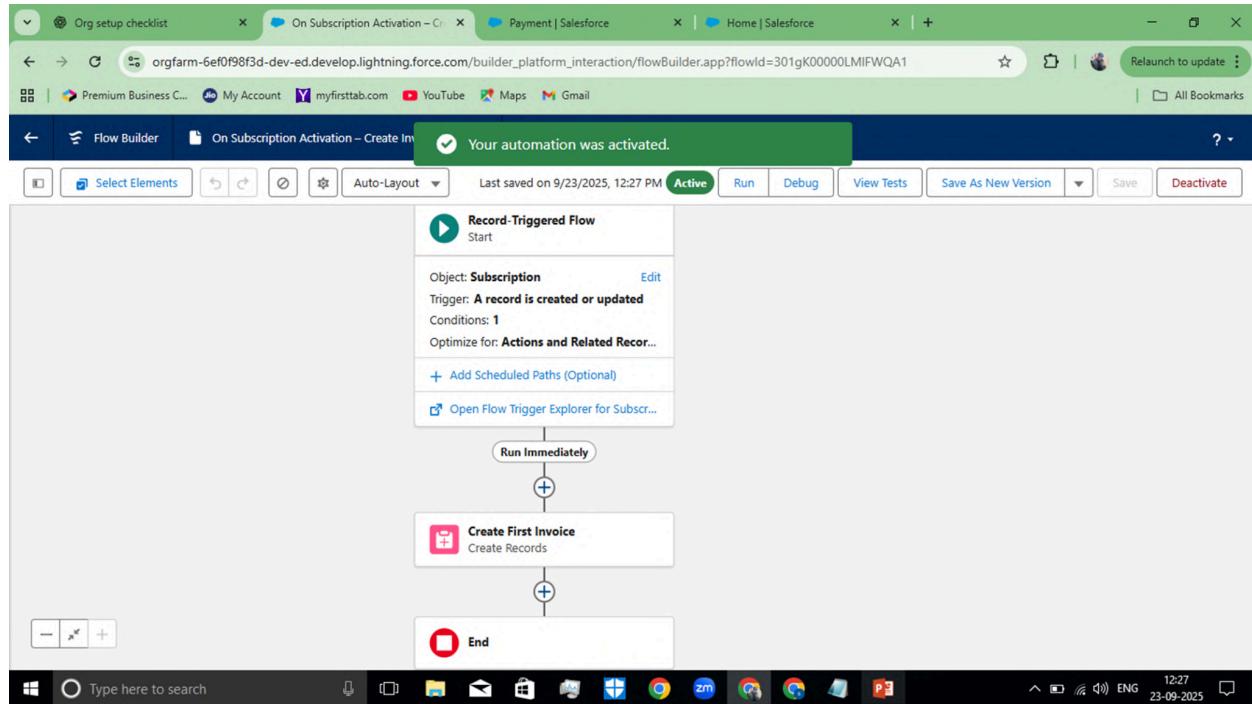
The screenshot shows the Salesforce Object Manager interface. The top navigation bar includes tabs for 'Org setup checklist', 'Flow Builder', 'Object Manager | Salesforce', and 'Home | Salesforce'. The main content area is titled 'Custom Invoice Validation Rule' under the 'Object Manager' tab. The validation rule detail is as follows:

Validation Rule Detail	
Rule Name	Due_Date_must_be_after_Invoice_Date
Error Condition Formula	Due_Date__c > Invoice_Date__c
Error Message	Due Date must be after Invoice Date
Description	
Created By	Sourabh Jain 9/22/2025, 11:32 PM
Modified By	Sourabh Jain 9/22/2025, 11:32 PM

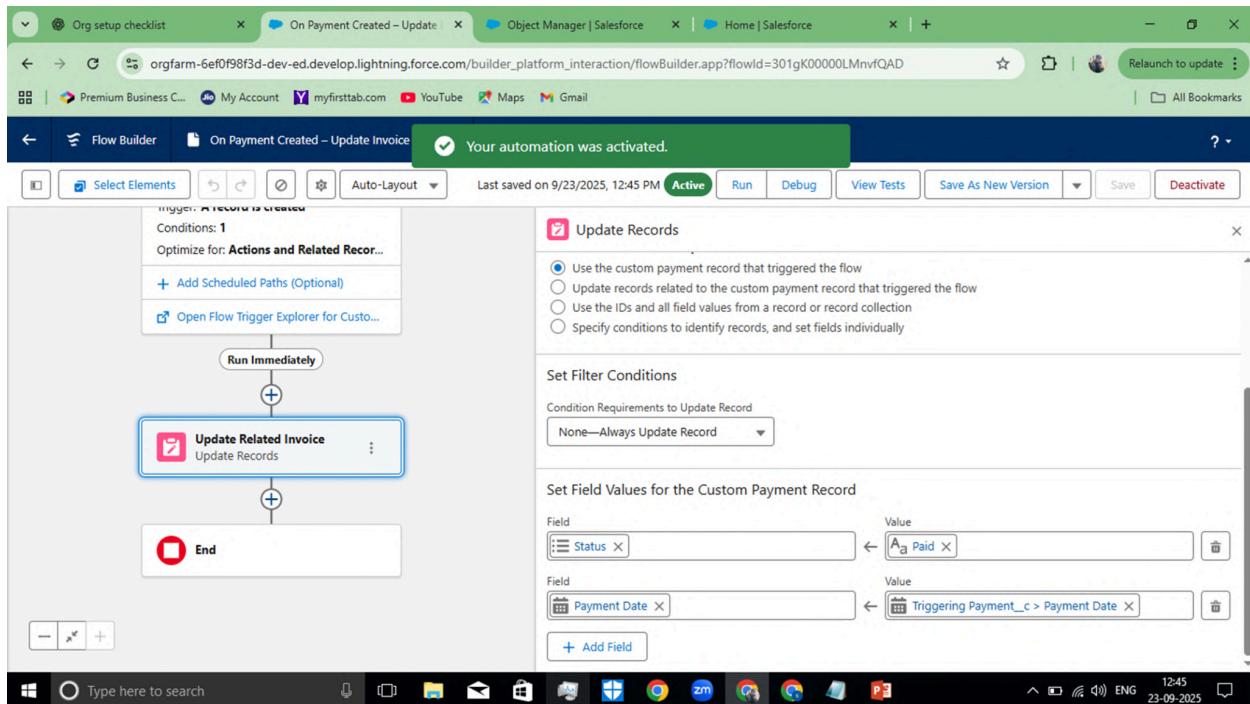
The rule is marked as 'Active' with a checkmark. The error location is set to 'Top of Page'. The bottom of the screen shows a Windows taskbar with various pinned icons.

- **Build Record-Triggered Flows** : Automatically generate Invoice records at each billing cycle when Subscription is active. Auto-update Subscription Status to Expired after End Date.

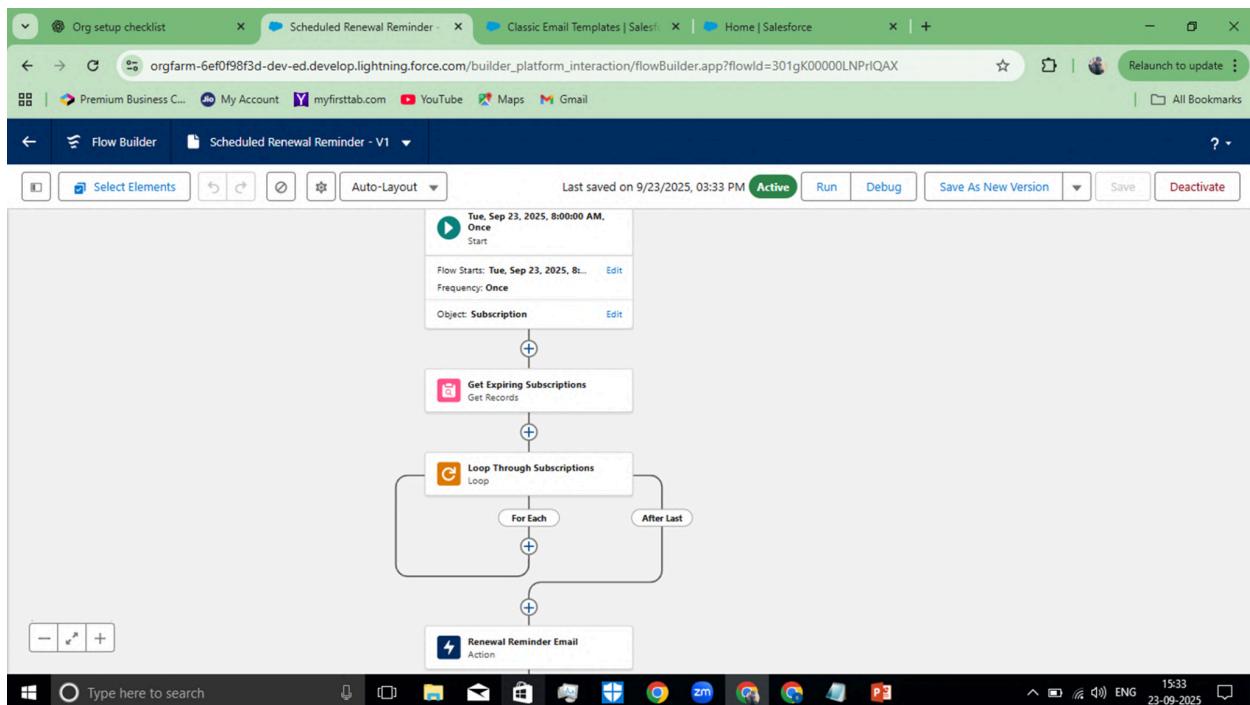
- On Subscription Activation → Create first Invoice.
- On Payment Created → Update Invoice Status = Paid.



- Add Scheduled Flow to check expiring subscriptions daily → send renewal reminders.



- Build an Approval Process for large invoices.



- Configure Email Alerts : Send renewal reminders 15 days before subscription end date and failed payment alerts immediately.

Email Template Detail

Email Template Name	Renewal Reminder	Available For Use
Template Unique Name	Renewal_Reminder	Last Used Date
Encoding	Unicode (UTF-8)	Times Used
Author	Sourabh Jain [Change]	
Description	Sourabh Jain, 9/23/2025, 12:40 AM	Modified By Sourabh Jain, 9/23/2025, 12:40 AM

Email Template

Subject: Your Subscription is Expiring Soon

HTML Preview:

Hello {!Subscription__c.Account.Name}, Your subscription {!Subscription__c.Name} is ending on {!Subscription__c.End_Date__c}. Please contact us to renew or update your subscription. Thanks,

My Personal Email Templates

Classic Email Template Availability

Action	Email Template Name	Template Type	Available For Use	Description	Author	Last Modified Date
Edit Del	Invoice Approved	Custom	✓	sou	9/23/2025	
Edit Del	Invoice Created	Text	✓	sou	9/23/2025	
Edit Del	Payment Received	Text	✓	sou	9/23/2025	
Edit Del	Renewal Reminder	Custom	✓	sou	9/23/2025	
Edit Del	Subscription Renewal Reminder	Text	✓	sou	9/23/2025	

- **Approval Process** : Automate approval for high-value refunds routed to Finance Manager

The screenshot shows the Salesforce Setup interface with the following details:

- Page Title:** Approval Processes
- Created By:** Sourabh Jain, 9/23/2025, 3:15 AM
- Modified By:** Sourabh Jain, 9/23/2025, 3:40 AM
- Initial Submission Actions:**
 - Action Type: Record Lock
 - Description: Lock the record from being edited
- Approval Steps:**

Action	Step Number	Name	Description	Criteria	Assigned Approver	Reject Behavior
Show Actions Edit	1	Large Invoice Approval			User Finance Manager	Final Rejection
- Final Approval Actions:**
 - Action: Edit
 - Type: Record Lock
 - Description: Unlock the record for editing
- Final Rejection Actions:**
 - Action: Edit | Remove
 - Type: Field Update
 - Description: Mark_Approved

Left Sidebar:

- Data
- Mass Transfer Approval Requests
- Feature Settings
 - Approval Settings
- Process Automation
- Approval Processes** (highlighted)

Bottom Bar:

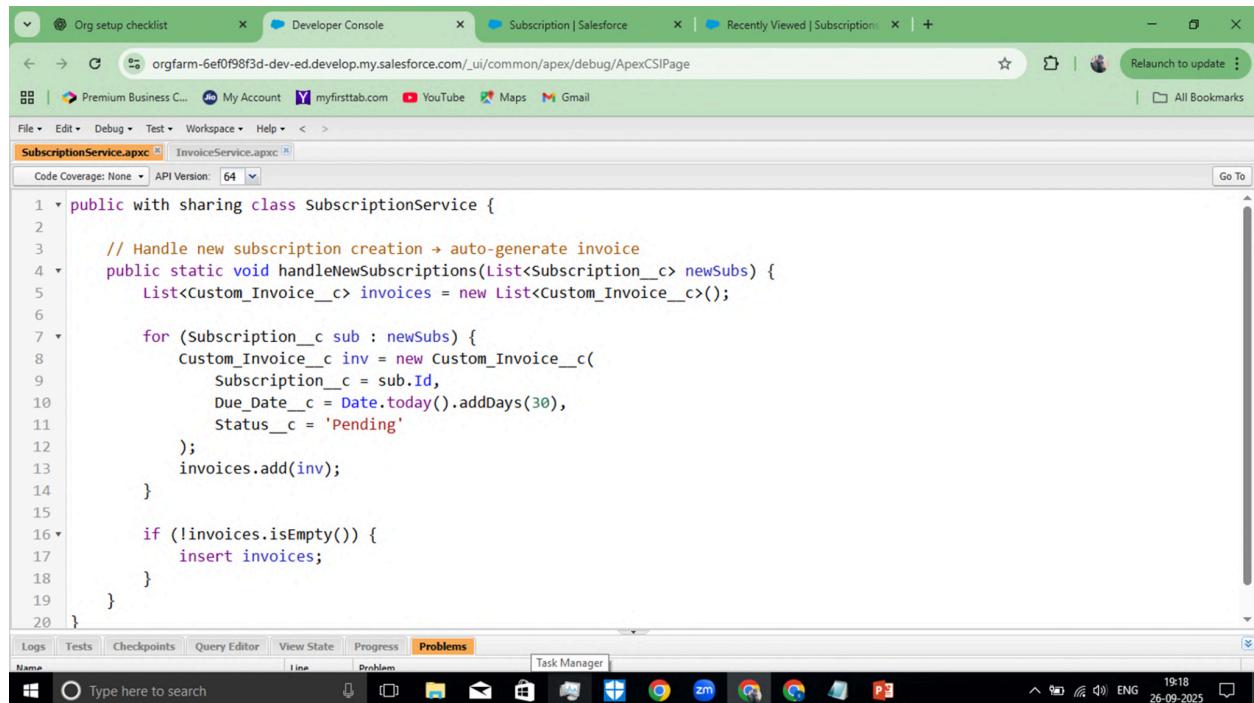
- Type here to search
- Windows Start button
- Taskbar icons: File Explorer, Mail, Task View, ZM, Google Chrome, Edge, Microsoft Word, Microsoft Excel.
- System tray: Battery, Signal, ENG, 16:10, 23-09-2025.

Phase 5 – Apex Programming (Developer)

Goal : Implement custom business logic using Apex to automate invoice status updates upon payment.

- Open Developer Console or VS Code.
- Apex Test Class : Ensures code coverage and correctness for trigger and helper class

Create Apex Classes: SubscriptionService.cls, InvoiceService.cls.



```
1 public with sharing class SubscriptionService {
2
3     // Handle new subscription creation + auto-generate invoice
4     public static void handleNewSubscriptions(List<Subscription__c> newSubs) {
5         List<Custom_Invoice__c> invoices = new List<Custom_Invoice__c>();
6
7         for (Subscription__c sub : newSubs) {
8             Custom_Invoice__c inv = new Custom_Invoice__c(
9                 Subscription__c = sub.Id,
10                Due_Date__c = Date.today().addDays(30),
11                Status__c = 'Pending'
12            );
13            invoices.add(inv);
14        }
15
16        if (!invoices.isEmpty()) {
17            insert invoices;
18        }
19    }
20 }
```

The screenshot shows the Salesforce Developer Console interface. The top navigation bar includes tabs for 'Org setup checklist', 'Developer Console', 'Subscription | Salesforce', and 'Recently Viewed | Subscriptions'. The main area displays the code for the `InvoiceService.apxc` class. The code implements a static void method `markInvoicesPaid` that takes a list of `Payment__c` objects. It iterates through the list, adds the `Id` of each payment to a set of invoice IDs, and then queries the database for invoices where the `Id` is in the set. For each invoice found, it updates the `Status__c` field to 'Paid'. The code uses standard Apex syntax with annotations like `public with sharing` and `SELECT ... FROM ... WHERE ...`. The bottom of the screen shows the Windows taskbar with various application icons.

```
1 public with sharing class InvoiceService {
2
3     // Mark invoice as Paid when payment is recorded
4     public static void markInvoicesPaid(List<Payment__c> payments) {
5         Set<Id> invoiceIds = new Set<Id>();
6         for (Payment__c p : payments) {
7             if (p.Custom_Invoice__c != null) {
8                 invoiceIds.add(p.Custom_Invoice__c);
9             }
10        }
11
12        if (!invoiceIds.isEmpty()) {
13            List<Custom_Invoice__c> invoices = [
14                SELECT Id, Status__c
15                FROM Custom_Invoice__c
16                WHERE Id IN :invoiceIds
17            ];
18
19            for (Custom_Invoice__c inv : invoices) {
20                inv.Status__c = 'Paid';
21            }
22            update invoices;
23        }
24    }
25}
```

- Create Trigger Handlers: one trigger per object, delegate to handler class:

The screenshot shows the Salesforce Developer Console interface. The top navigation bar includes tabs for 'Org setup checklist', 'Developer Console', 'Subscription | Salesforce', and 'Recently Viewed | Subscriptions'. The main area displays the code for the `SubscriptionTriggerHandler.apxc` class. The class contains a static void method `run` that takes a list of new subscriptions and a map of old subscriptions. It checks if the trigger is after and insert, or after and update. If it's insert, it calls `SubscriptionService.handleNewSubscriptions`. If it's update, it performs future logic such as regenerating invoices if renewal dates change. The code uses standard Apex syntax with annotations like `public with sharing` and `Map<Id, Subscription__c>`. The bottom of the screen shows the Windows taskbar with various application icons.

```
1 public with sharing class SubscriptionTriggerHandler {
2
3     public static void run(List<Subscription__c> newList, Map<Id, Subscription__c> oldMap) {
4         if (Trigger.isAfter && Trigger.isInsert) {
5             SubscriptionService.handleNewSubscriptions(newList);
6         }
7
8         if (Trigger.isAfter && Trigger.isUpdate) {
9             // Future logic: e.g., regenerate invoice if renewal date changes
10        }
11    }
12}
```

The screenshot shows the Salesforce Developer Console interface. The top navigation bar includes tabs for 'Org setup checklist', 'Developer Console', 'Subscription | Salesforce', and 'Recently Viewed | Subscriptions'. Below the navigation bar, the address bar displays the URL: orgfarm-6ef0f98f3d-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage. The main content area shows the code for the `PaymentTriggerHandler.apxc` class:

```
1 public with sharing class PaymentTriggerHandler {  
2  
3     public static void run(List<Payment__c> newList) {  
4         if (Trigger.isAfter && Trigger.isInsert) {  
5             InvoiceService.markInvoicesPaid(newList);  
6         }  
7     }  
8 }  
9
```

The code implements a trigger handler for the `Payment__c` object, specifically for insert operations. It uses the `InvoiceService` class to mark invoices as paid. The code editor interface includes tabs for other files like `SubscriptionService.apxc`, `InvoiceService.apxc`, `SubscriptionTriggerHandler.apxc`, `PaymentTriggerHandler.apxc` (which is currently selected), `SubscriptionTrigger.apxt`, and `PaymentTrigger.apxt`. The bottom navigation bar includes tabs for 'Logs', 'Tests', 'Checkpoints', 'Query Editor', 'View State', 'Progress', and 'Problems' (which is highlighted). The status bar at the bottom shows the developer's name, the date (26-09-2025), and the time (19:23).

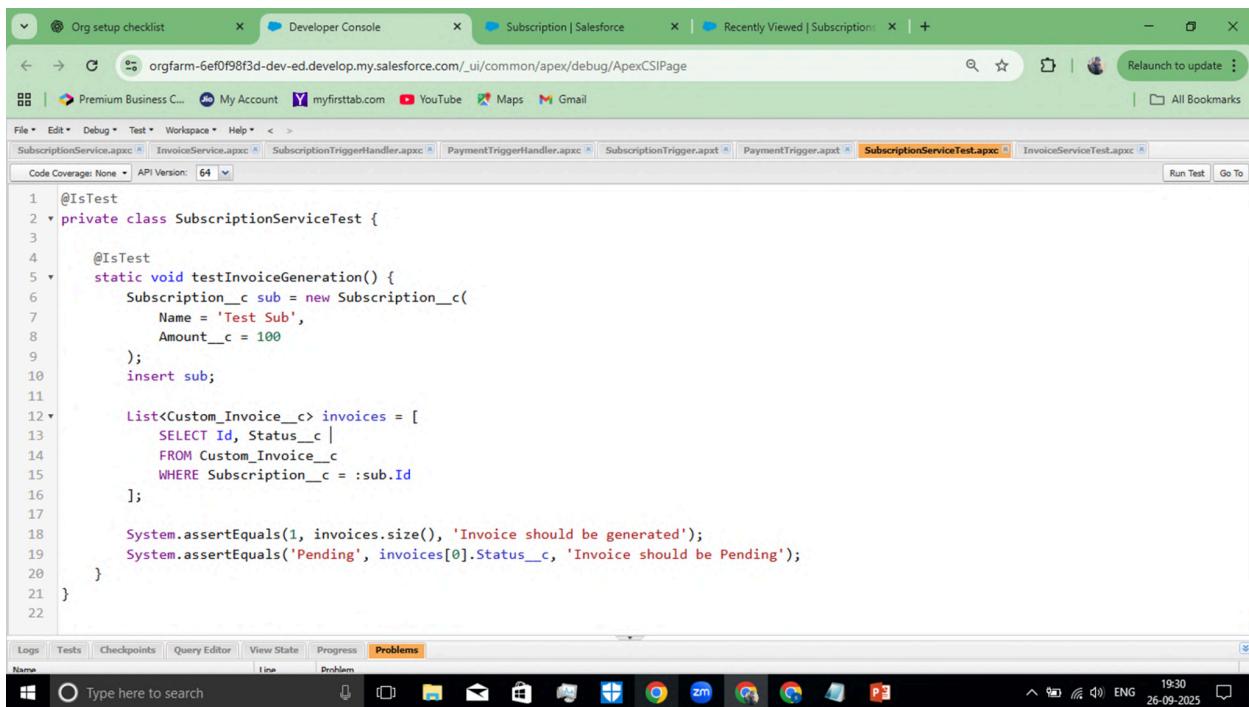
● Apex Trigger

The screenshot shows the Salesforce Developer Console interface, similar to the previous one but with a different file selected. The top navigation bar includes tabs for 'Org setup checklist', 'Developer Console', 'Subscription | Salesforce', and 'Recently Viewed | Subscriptions'. Below the navigation bar, the address bar displays the URL: orgfarm-6ef0f98f3d-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage. The main content area shows the code for the `SubscriptionTrigger.apxt` class:

```
1 trigger SubscriptionTrigger on Subscription__c (after insert, after update) {  
2     SubscriptionTriggerHandler.run(Trigger.new, Trigger.oldMap);  
3 }  
4
```

The code defines a trigger named `SubscriptionTrigger` on the `Subscription__c` object, which is triggered after insert or update operations. It calls the `run` method of the `SubscriptionTriggerHandler` class, passing the new records and the old map. The code editor interface includes tabs for other files like `SubscriptionService.apxc`, `InvoiceService.apxc`, `SubscriptionTriggerHandler.apxc`, `PaymentTriggerHandler.apxc`, `SubscriptionTrigger.apxt` (which is currently selected), and `PaymentTrigger.apxt`. The bottom navigation bar includes tabs for 'Logs', 'Tests', 'Checkpoints', 'Query Editor', 'View State', 'Progress', and 'Problems' (which is highlighted). The status bar at the bottom shows the developer's name, the date (26-09-2025), and the time (19:23).

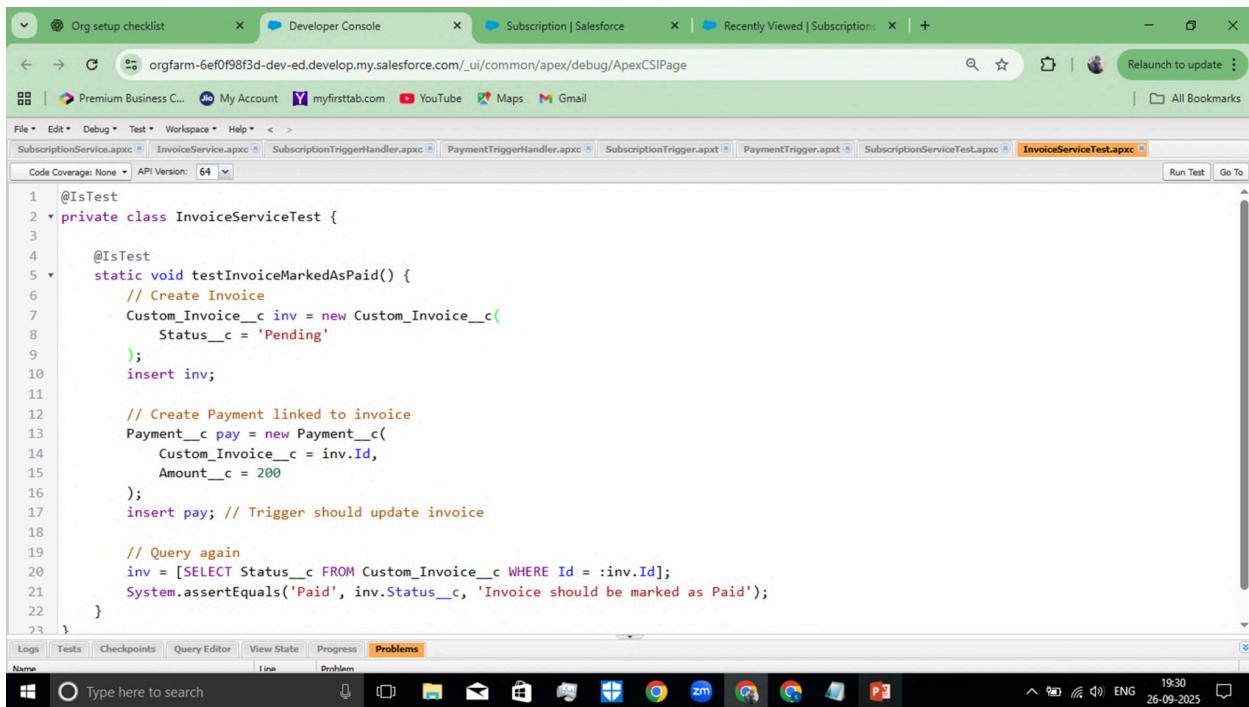
- Begin writing Unit Tests to cover your code.



```

1 @IsTest
2 private class SubscriptionServiceTest {
3
4     @IsTest
5     static void testInvoiceGeneration() {
6         Subscription__c sub = new Subscription__c(
7             Name = 'Test Sub',
8             Amount__c = 100
9         );
10        insert sub;
11
12        List<Custom_Invoice__c> invoices = [
13            SELECT Id, Status__c |
14            FROM Custom_Invoice__c
15            WHERE Subscription__c = :sub.Id
16        ];
17
18        System.assertEquals(1, invoices.size(), 'Invoice should be generated');
19        System.assertEquals('Pending', invoices[0].Status__c, 'Invoice should be Pending');
20    }
21 }

```

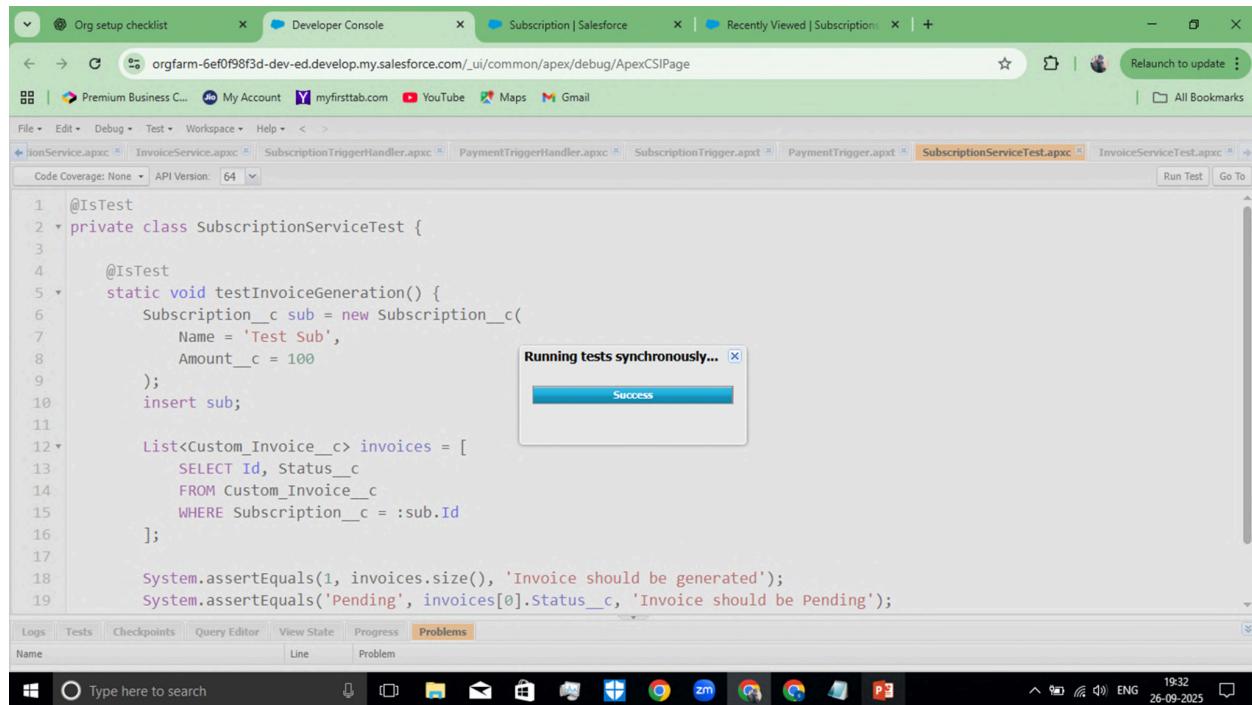


```

1 @IsTest
2 private class InvoiceServiceTest {
3
4     @IsTest
5     static void testInvoiceMarkedAsPaid() {
6         // Create Invoice
7         Custom_Invoice__c inv = new Custom_Invoice__c(
8             Status__c = 'Pending'
9         );
10        insert inv;
11
12        // Create Payment linked to invoice
13        Payment__c pay = new Payment__c(
14            Custom_Invoice__c = inv.Id,
15            Amount__c = 200
16        );
17        insert pay; // Trigger should update invoice
18
19        // Query again
20        inv = [SELECT Status__c FROM Custom_Invoice__c WHERE Id = :inv.Id];
21        System.assertEquals('Paid', inv.Status__c, 'Invoice should be marked as Paid');
22    }
23 }

```

- Test Case

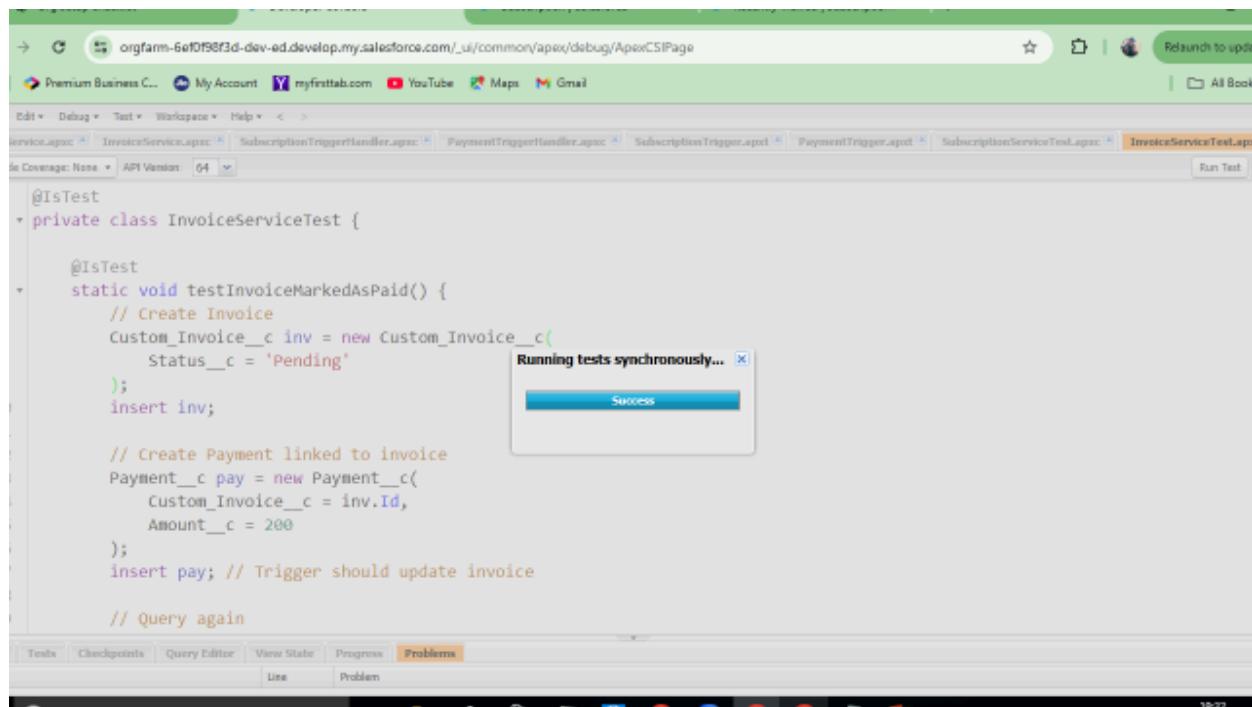


The screenshot shows the Salesforce Developer Console interface. The code being run is a test class for the SubscriptionService:

```

1 @IsTest
2 private class SubscriptionServiceTest {
3
4     @IsTest
5     static void testInvoiceGeneration() {
6         Subscription__c sub = new Subscription__c(
7             Name = 'Test Sub',
8             Amount__c = 100
9         );
10        insert sub;
11
12        List<Custom_Invoice__c> invoices = [
13            SELECT Id, Status__c
14            FROM Custom_Invoice__c
15            WHERE Subscription__c = :sub.Id
16        ];
17
18        System.assertEquals(1, invoices.size(), 'Invoice should be generated');
19        System.assertEquals('Pending', invoices[0].Status__c, 'Invoice should be Pending');
    
```

A modal window titled "Running tests synchronously..." displays the message "Success". The status bar at the bottom right shows the date and time as 26-09-2025 19:32.



The screenshot shows the Salesforce Developer Console interface. The code being run is a test class for the InvoiceService:

```

@IsTest
private class InvoiceServiceTest {

    @IsTest
    static void testInvoiceMarkedAsPaid() {
        // Create Invoice
        Custom_Invoice__c inv = new Custom_Invoice__c(
            Status__c = 'Pending'
        );
        insert inv;

        // Create Payment linked to invoice
        Payment__c pay = new Payment__c(
            Custom_Invoice__c = inv.Id,
            Amount__c = 200
        );
        insert pay; // Trigger should update invoice

        // Query again
    }
}

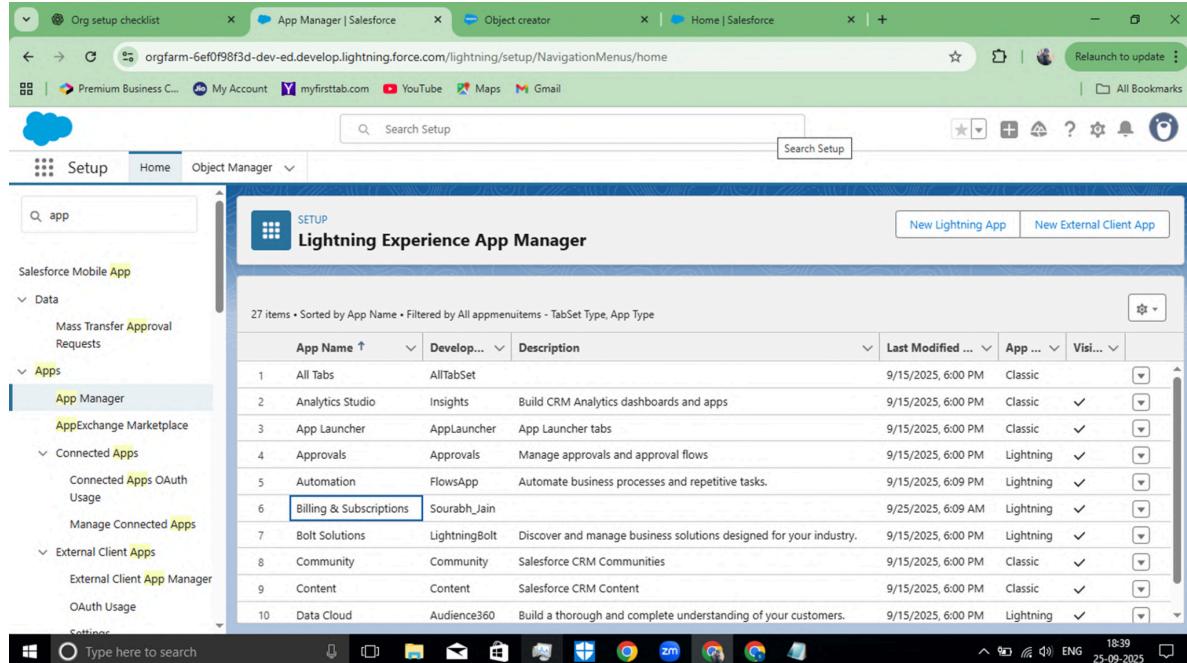
```

A modal window titled "Running tests synchronously..." displays the message "Success". The status bar at the bottom right shows the date and time as 26-09-2025 19:32.

Phase 6 – User Interface Development

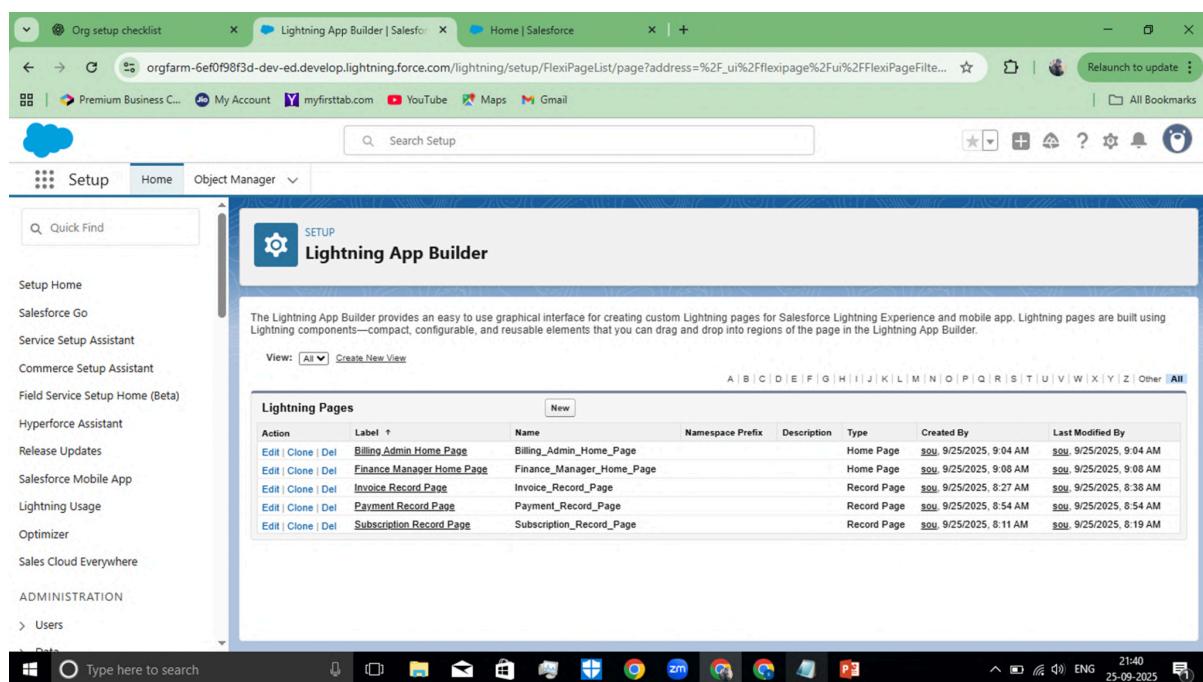
Goal : Develop Lightning Web Components to improve visibility and streamline subscription and billing management.

App Manager → New Lightning App (“Billing & Subscriptions”).



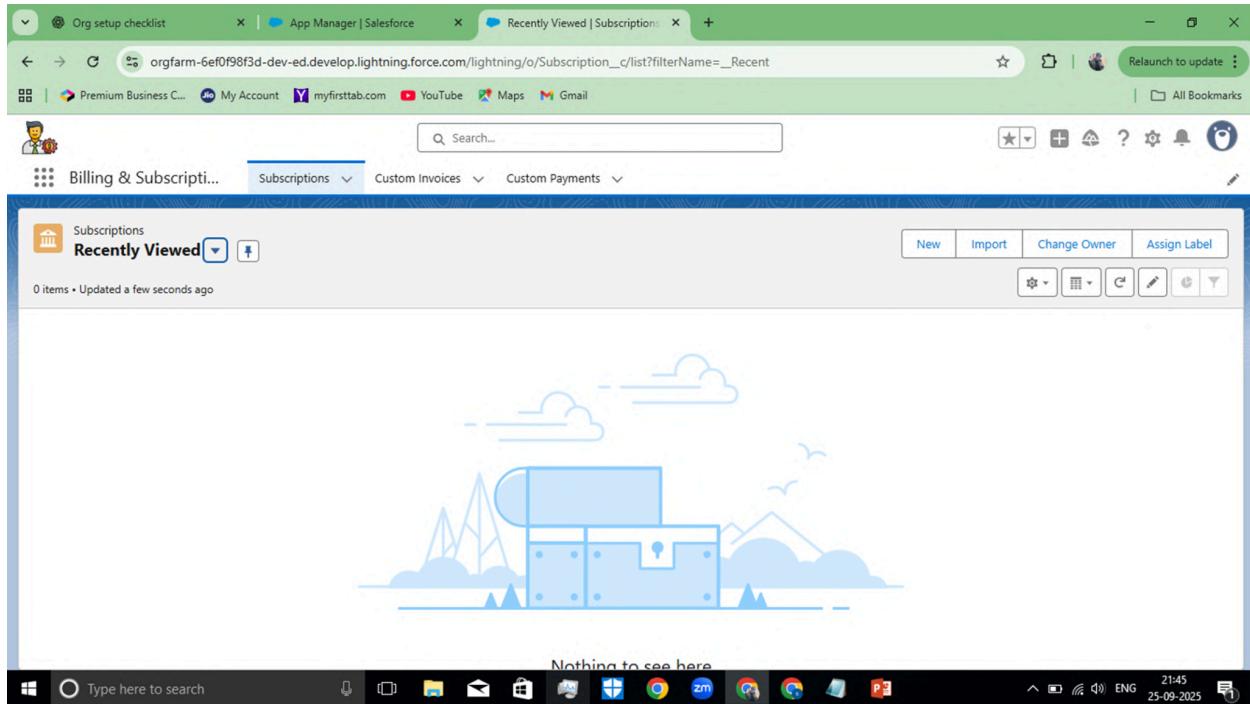
The screenshot shows the Salesforce App Manager interface. The left sidebar is collapsed, and the main area displays a list of installed apps. The 'Billing & Subscriptions' app, created by Sourabh_Jain, is highlighted in blue. The list includes various standard and custom apps like All Tabs, Analytics Studio, App Launcher, Approvals, Automation, Bolt Solutions, Community, Content, and Data Cloud.

App Name	Developer	Description	Last Modified	Type	Visibilities
All Tabs	AllTabSet		9/15/2025, 6:00 PM	Classic	
Analytics Studio	Insights	Build CRM Analytics dashboards and apps	9/15/2025, 6:00 PM	Classic	
App Launcher	AppLauncher	App Launcher tabs	9/15/2025, 6:00 PM	Classic	
Approvals	Approvals	Manage approvals and approval flows	9/15/2025, 6:00 PM	Lightning	
Automation	FlowsApp	Automate business processes and repetitive tasks.	9/15/2025, 6:09 PM	Lightning	
Billing & Subscriptions	Sourabh_Jain		9/25/2025, 6:09 AM	Lightning	
Bolt Solutions	LightningBolt	Discover and manage business solutions designed for your industry.	9/15/2025, 6:00 PM	Lightning	
Community	Community	Salesforce CRM Communities	9/15/2025, 6:00 PM	Classic	
Content	Content	Salesforce CRM Content	9/15/2025, 6:00 PM	Classic	
Data Cloud	Audience360	Build a thorough and complete understanding of your customers.	9/15/2025, 6:00 PM	Lightning	

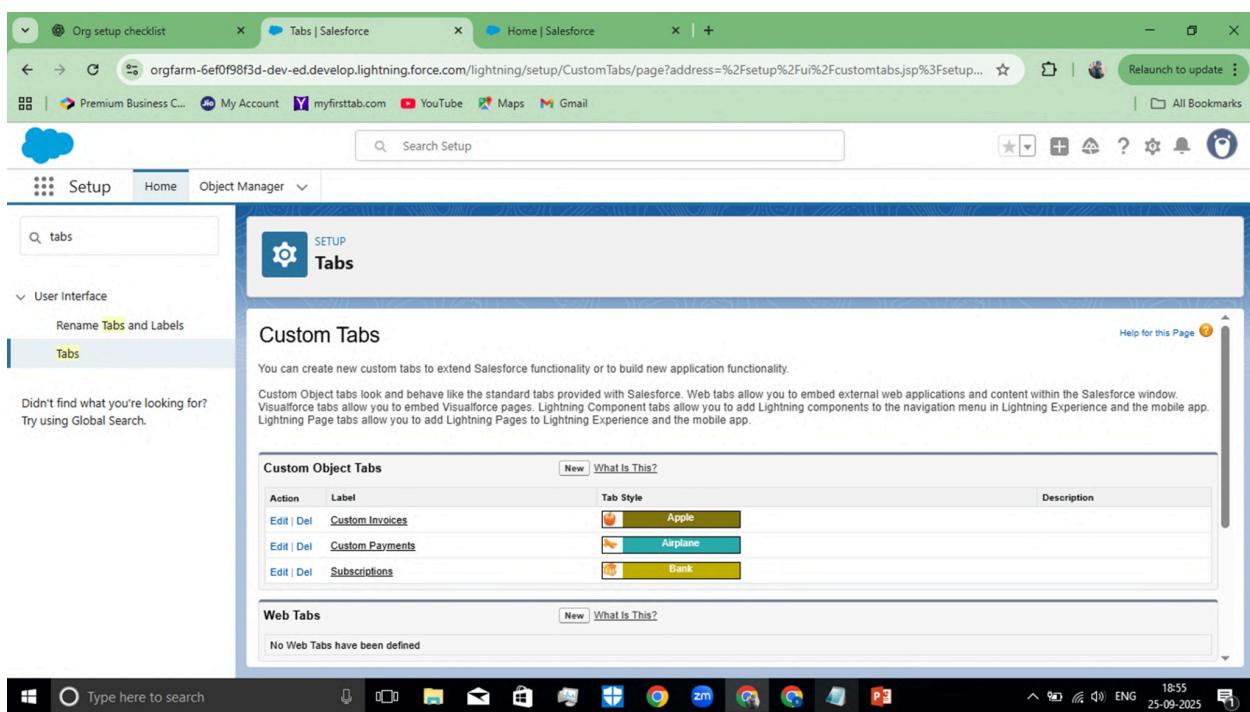


The screenshot shows the Lightning App Builder interface. The left sidebar lists various setup options. The main area displays a table of Lightning Pages. The 'Billing Admin Home Page' is the most recent addition, created by sou on 9/25/2025 at 9:04 AM.

Action	Label	Name	Namespace Prefix	Description	Type	Created By	Last Modified By
Edit Clone Del	Billing Admin Home Page	Billing_Admin_Home_Page			Home Page	sou	9/25/2025, 9:04 AM
Edit Clone Del	Finance Manager Home Page	Finance_Manager_Home_Page			Home Page	sou	9/25/2025, 9:08 AM
Edit Clone Del	Invoice Record Page	Invoice_Record_Page			Record Page	sou	9/25/2025, 8:27 AM
Edit Clone Del	Payment Record Page	Payment_Record_Page			Record Page	sou	9/25/2025, 8:54 AM
Edit Clone Del	Subscription Record Page	Subscription_Record_Page			Record Page	sou	9/25/2025, 8:11 AM



- Add your Custom Tabs (Subscription, Invoice, Payment, Plan) to the app navigation.



- Build Lightning Record Pages for each custom object in Lightning App Builder.

The screenshot shows the Salesforce Setup interface with the following details:

- Page Header:** Org setup checklist, Subscription | Salesforce, Home | Salesforce, Relaunch to update.
- Search Bar:** Search Setup.
- Navigation:** Setup, Home, Object Manager.
- Section:** SETUP > OBJECT MANAGER.
- Object:** Subscription.
- Section:** Lightning Record Pages (selected).
- Page Layout:** Subscription_Record_Page.
- Information:**
 - Name: Subscription_Record_Page
 - Description: (empty)
 - Label: Subscription Record Page
- Assignments By App:**

App	Form Factor
Billing & Subscriptions	Desktop and phone
- Assignments By App, Record Type, and Profile:**

App	Record Type	Profile	Form Factor
Billing & Subscriptions	Master	Billing Admin Profile	Desktop and phone
Billing & Subscriptions	Master	Finance Manager Profile	Desktop and phone

The screenshot shows the Salesforce Setup interface with the following details:

- Page Header:** Org setup checklist, Custom Invoice | Salesforce, Home | Salesforce, Relaunch to update.
- Search Bar:** Search Setup.
- Navigation:** Setup, Home, Object Manager.
- Section:** SETUP > OBJECT MANAGER.
- Object:** Custom Invoice.
- Section:** Lightning Record Pages (selected).
- Page Layout:** Invoice_Record_Page.
- Information:**
 - Name: Invoice_Record_Page
 - Description: (empty)
 - Label: Invoice Record Page
- Assignments By App:**

App	Form Factor
Billing & Subscriptions	Desktop and phone
- Assignments By App, Record Type, and Profile:**

App	Record Type	Profile	Form Factor
Billing & Subscriptions	Master	Billing Admin Profile	Desktop and phone
Billing & Subscriptions	Master	Finance Manager Profile	Desktop and phone

The screenshot shows the Salesforce Setup interface with the following details:

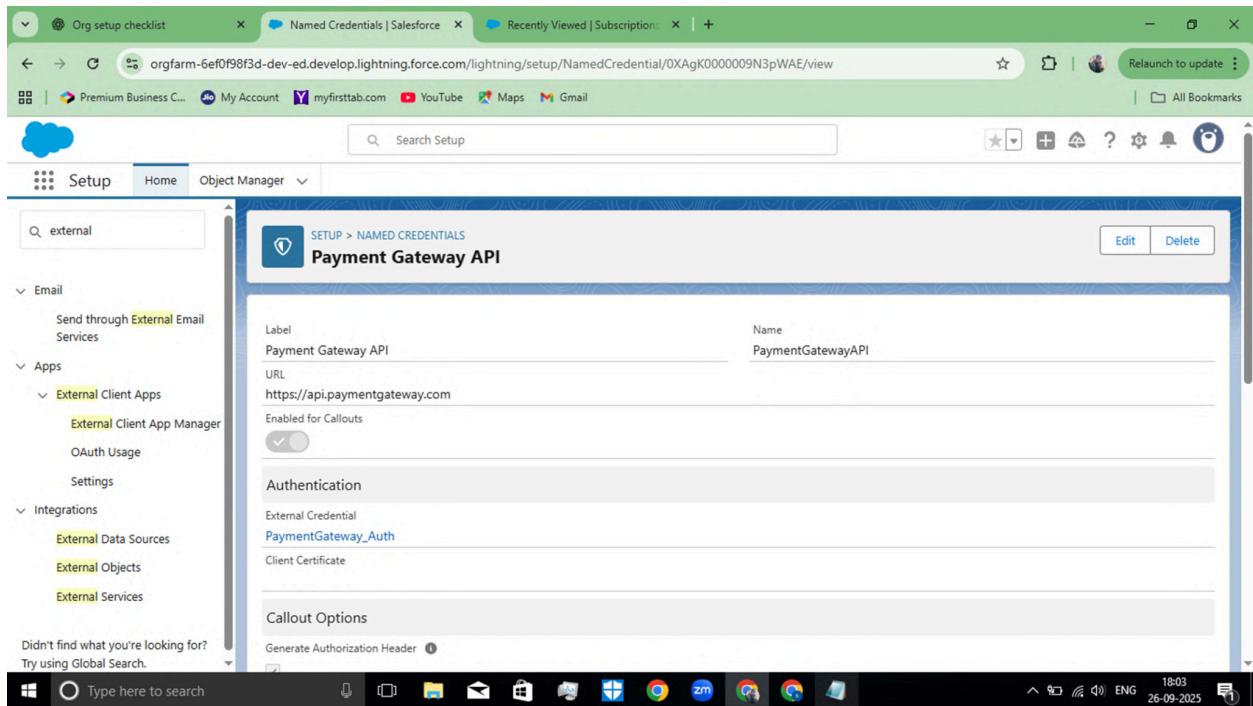
- Tab Bar:** Org setup checklist, Custom Payment | Salesforce, Home | Salesforce.
- Header:** Search bar (Search Setup), Relaunch to update, All Bookmarks.
- Left Sidebar:** Navigation menu under SETUP > OBJECT MANAGER, with the following items:
 - Details
 - Fields & Relationships
 - Page Layouts
 - Lightning Record Pages** (selected)
 - Buttons, Links, and Actions
 - Compact Layouts
 - Field Sets
 - Object Limits
 - Record Types
 - Related Lookup Filters
- Central Content:** Lightning Page **Payment_Record_Page**.
 - Lightning Page Detail:** Name: Payment_Record_Page, Label: Payment Record Page. Buttons: Edit, Clone, Delete.
 - Information:** Description. Buttons: Edit, Clone, Delete.
 - Assignments By App:** Shows assignments for the Billing & Subscriptions app. Form Factor: Desktop and phone.
 - Assignments By App, Record Type, and Profile:** A table showing assignments across different record types and profiles.

App	Record Type	Profile	Form Factor
Billing & Subscriptions	Master	Billing Admin Profile	Desktop and phone
Billing & Subscriptions	Master	Finance Manager Profile	Desktop and phone
- Bottom:** Taskbar with search bar (Type here to search), system icons, and system status (21:25, ENG, 25-09-2025).

Phase 7 – Integration & External Access

Goal : Establish secure, scalable integration with external payment gateways and accounting systems.

- Create Named Credentials for any external API (e.g., payment gateway)



The screenshot shows the Salesforce Setup interface with the following details:

- Page Header:** Org setup checklist, Named Credentials | Salesforce, Recently Viewed | Subscriptions.
- Search Bar:** Search Setup.
- Left Sidebar:** Security, Named Credentials (selected).
- Central Content:**
 - Section:** SETUP > NAMED CREDENTIALS
 - Name:** PaymentGateway_Auth
 - Label:** PaymentGateway_Auth
 - Authentication Protocol:** Basic Authentication
 - Managed Package Access:** Created By Namespace
- Related Named Credentials:** A table showing one entry:

Label	Name	URL
Payment Gateway API	PaymentGatewayAPI	https://api.paymentgateway.com

- Configure Platform Events (e.g., InvoicePaid__e) to publish events externally

The screenshot shows the Salesforce Setup interface with the following details:

- Page Header:** Org setup checklist, Platform Events | Salesforce, Recently Viewed | Subscriptions.
- Search Bar:** Search Setup.
- Left Sidebar:** MuleSoft, Einstein, Custom Code, Integrations, Security (Platform Encryption selected).
- Central Content:**
 - Section:** SETUP > PLATFORM EVENTS
 - Platform Event:** InvoicePaid
 - Platform Event Definition Detail:**

Singular Label	InvoicePaid	Description	
Plural Label	InvoicePays	Deployment Status	
Object Name	InvoicePaid_e	Deployed	
API Name	InvoicePaid_e_e		
Event Type	High Volume		
Publish Behavior	Publish Immediately		
Created By	Sourabh Jain, 9/26/2025, 6:15 AM	Modified By	Sourabh Jain, 9/26/2025, 6:15 AM
 - Standard Fields:** A table showing standard fields for the InvoicePaid event.

Action	Field Label	Field Name	Data Type	Controlling Field	Indexed
Created By	CreatedBy	Lookup(User)			
Created Date	CreatedDate	Date/Time			
Event UUID	EventUuid	Text(36)			

The screenshot shows the Salesforce Setup interface. On the left, the navigation sidebar is open, showing categories like Sales, Data, Apps, and External Client Apps. Under External Client Apps, 'External Client App Manager' is selected. The main content area displays the 'Manage External Client Apps' page for 'Invoices API Access'. The 'Settings' tab is active. Key details shown include:

- Contact Email: sourabhjain1071964@gmail.com
- App Authorization: All users can self-authorize
- Type: Local
- App Status: Enabled

Below the settings, there are tabs for Policies and Package Defaults. A note says 'Configure basic settings for the external client app and plugins.' An 'Edit' button is available. The bottom of the screen shows the Windows taskbar with various pinned icons.

- Enable Change Data Capture for Subscription/Invoice if you want real-time streaming

The screenshot shows the Salesforce Setup interface. The navigation sidebar is open, showing categories like Environments, Jobs, Integrations, Company Settings, Data Classification, and Data Mask. Under Data Classification, 'Data Classification Download' is selected. The main content area displays the 'Change Data Capture' configuration page. The 'Selected Entities' section lists entities that generate change event notifications:

- Custom Payment (Payment__c)
- Custom Invoice (Custom_Invoice__c)
- Subscription (Subscription__c)

The bottom of the screen shows the Windows taskbar with various pinned icons.

- Set up Salesforce Connect if you want to show external ERP data without storing it

The screenshot shows the Salesforce Setup interface with the following details:

- Page Header:** Org setup checklist, External Data Sources | Salesforce, Recently Viewed | Subscriptions.
- Search Bar:** Search Setup.
- Left Navigation:** Email, Apps (External Client Apps, OAuth Usage, Settings), Integrations (External Data Sources, External Objects, External Services). The "External Data Sources" link is highlighted.
- Current View:** SETUP - External Data Sources. The title is "External Data Source: ERP_Orders".
- Form Fields:**
 - External Data Source: ERP_Orders
 - Name: ERP_Orders
 - Type: Salesforce Connect: OData 2.0
 - Parameters:
 - URL: https://erp.example.com/odata/
 - Connection Timeout (Seconds): 120
 - Writable External Objects:
 - High Data Volume:
- Buttons:** Edit, Validate and Sync, Delete.
- Help:** Help for this Page.
- Bottom:** Windows taskbar showing various application icons and system status.

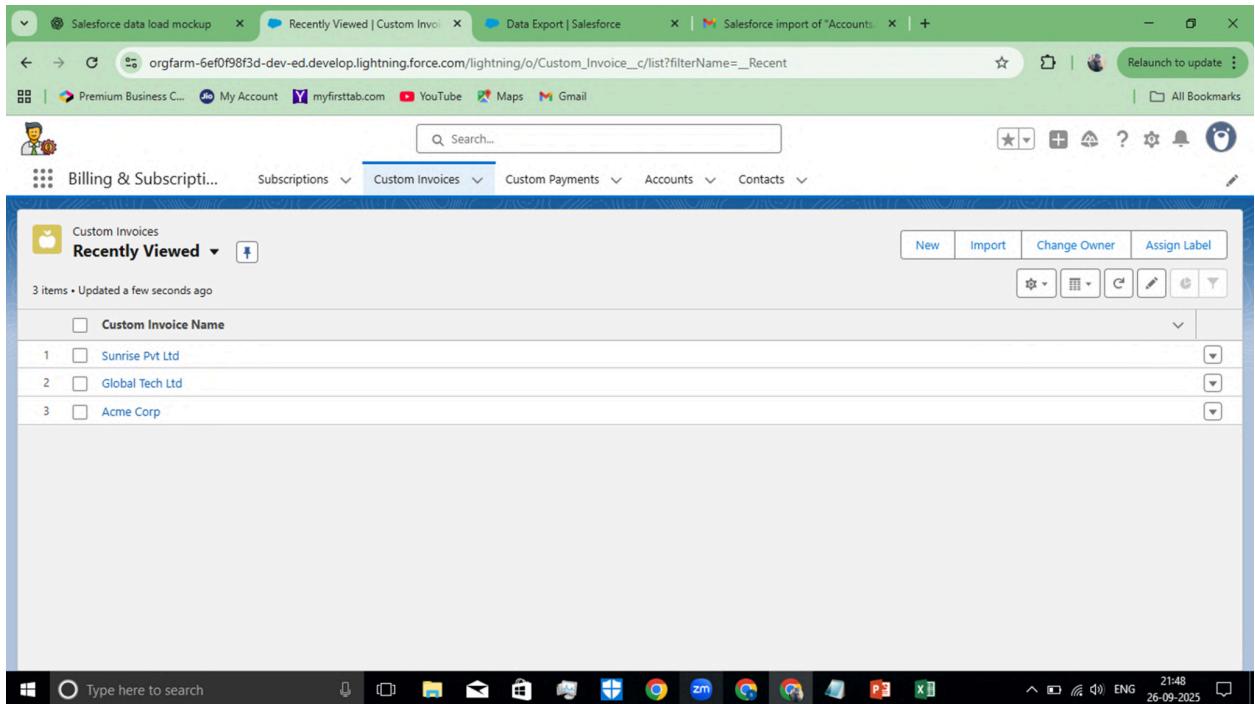
The screenshot shows the Salesforce Setup interface with the following details:

- Page Header:** Org setup checklist, External Data Sources | Salesforce, Recently Viewed | Subscriptions.
- Search Bar:** Search Setup.
- Left Navigation:** Email, Apps (External Client Apps, OAuth Usage, Settings), Integrations (External Data Sources, External Objects, External Services). The "External Data Sources" link is highlighted.
- Current View:** SETUP - External Data Sources. The title is "Validate External Data Source: ERP_Orders".
- Form Fields:**
 - Name: ERP_Orders
 - External Data Source: ERP_Orders
 - Status: Server URL: https://erp.example.com/odata/\$metadata
- Bottom:** Windows taskbar showing various application icons and system status.

Phase 8 – Data Management & Deployment

Goal : Establish procedures for migrating data, managing duplicates, and deploying code.

- Use Data Import Wizard for small loads (Accounts, Subscriptions).



Salesforce data load mockup | Recently Viewed | Custom Payn | Data Export | Salesforce | Salesforce import of "Accounts" | Relaunch to update

orgfarm-6ef0f98f3d-dev-ed.develop.lightning.force.com/lightning/o/Payment__c/list?filterName=_Recent

Premium Business C... My Account myfirsttab.com YouTube Maps Gmail All Bookmarks

Billing & Subscripti... Subscriptions Custom Invoices Custom Payments Accounts Contacts

Custom Payments Recently Viewed

3 items • Updated a few seconds ago

	Payment Name
1	PAY-0003
2	PAY-0002
3	PAY-0001

New Import Change Owner Assign Label

Type here to search 21:50 ENG 26-09-2025

Salesforce data load mockup | Lightning Experience | Salesforce | Data Export | Salesforce | Salesforce import of "Accounts" | Relaunch to update

orgfarm-6ef0f98f3d-dev-ed.develop.lightning.force.com/lightning/o/Account/list?filterName=_Recent

Premium Business C... My Account myfirsttab.com YouTube Maps Gmail All Bookmarks

Billing & Subscripti... Subscriptions Custom Invoices Custom Payments Accounts Contacts

Accounts Recently Viewed

3 items • Updated a few seconds ago

	Account Name	Account Site	Phone	Account Owner Alias
1	Sunrise Pvt Ltd		(998) 877-6655	sou
2	Global Tech Ltd		(912) 345-6780	sou
3	Acme Corp		(987) 654-3210	sou

New Import Assign Label

Type here to search 21:50 ENG 26-09-2025

- Use Data Loader for bulk loads (Invoices, Payments).

The screenshot shows the Salesforce Setup interface with the following details:

- Job ID:** 750gK00000Dswlv
- Submitted By:** Sourabh Jain
- Job Type:** Bulk V1
- Status:** Closed
- Total Processing Time (ms):** 276
- Start Time:** 9/26/2025, 7:48 AM PST
- Queued Batches:** 0
- API Active Processing Time (ms):** 141
- End Time:** 9/26/2025, 7:48 AM PST
- In Progress Batches:** 0
- Apex Processing Time (ms):** 75
- Time to Complete (hh:mm:ss):** 00:01
- Completed Batches:** 1
- Object:** Contact
- Failed Batches:** 0
- Progress:** 100%
- External ID Field:**
- Content Type:** CSV
- Concurrency Mode:** Parallel
- Records Processed:** 3
- Records Failed:** 0
- API Version:** 64.0
- Retries:** 0

The screenshot shows the Data Loader interface with the following details:

- Insert**
- Search:** Search
- Data Loader**
- Home**
- Object Manager**

The results table shows the following data:

	Scucess	Created	Errors	Total
Success	3	3	0	3
Total	3	3	0	3

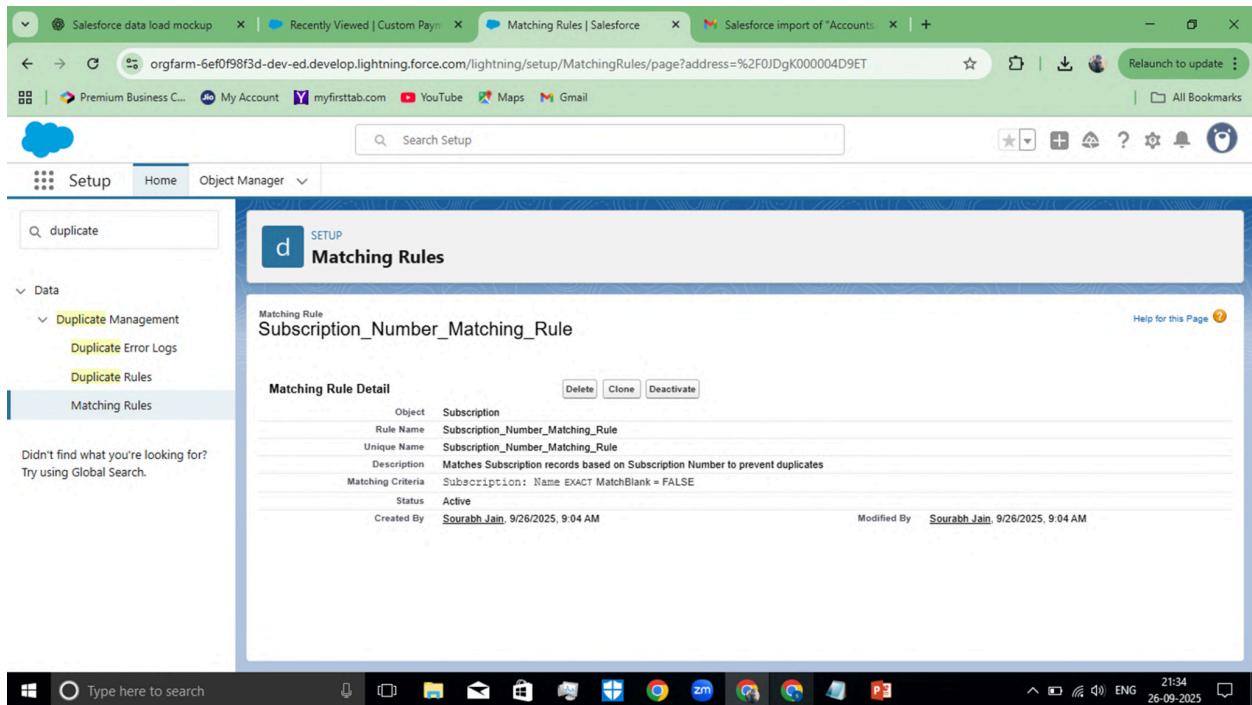
Insert

The insert was successful.

	Scucess	Created	Errors	Total
Success	3	3	0	3
Total	3	3	0	3

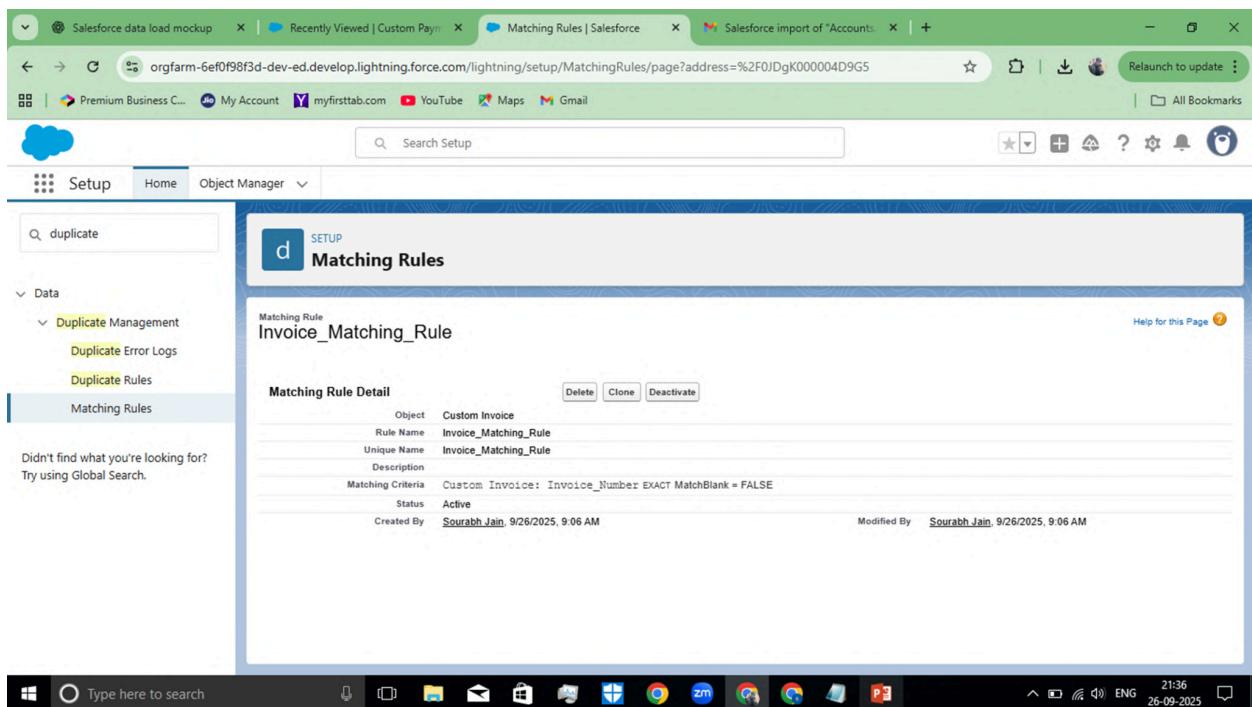
Finish

● Configure Matching Rules



The screenshot shows the Salesforce Setup interface with the Matching Rules page open. A matching rule named "Subscription_Number_Matching_Rule" is displayed. The rule details are as follows:

Object	Subscription
Rule Name	Subscription_Number_Matching_Rule
Unique Name	Subscription_Number_Matching_Rule
Description	Matches Subscription records based on Subscription Number to prevent duplicates
Matching Criteria	Subscription: Name EXACT MatchBlank = FALSE
Status	Active
Created By	Sourabh Jain 9/26/2025, 9:04 AM
Modified By	Sourabh Jain 9/26/2025, 9:04 AM



The screenshot shows the Salesforce Setup interface with the Matching Rules page open. A matching rule named "Invoice_Matching_Rule" is displayed. The rule details are as follows:

Object	Custom Invoice
Rule Name	Invoice_Matching_Rule
Unique Name	Invoice_Matching_Rule
Description	
Matching Criteria	Custom Invoice: Invoice_Number EXACT MatchBlank = FALSE
Status	Active
Created By	Sourabh Jain 9/26/2025, 9:06 AM
Modified By	Sourabh Jain 9/26/2025, 9:06 AM

The screenshot shows the Salesforce Setup interface. The left sidebar is titled "Data" and includes sections for "Duplicate Management", "Duplicate Error Logs", "Duplicate Rules", and "Matching Rules". The "Matching Rules" section is currently selected. The main content area displays a "Matching Rule Detail" for "Payment_Matching_Rule". The rule details are as follows:

Object	Custom Payment
Rule Name	Payment_Matching_Rule
Unique Name	Payment_Matching_Rule
Description	Custom Payment: Status EXACT MatchBlank = FALSE
Matching Criteria	Inactive
Status	Inactive
Created By	Sourabh Jain, 9/26/2025, 9:07 AM
Modified By	Sourabh Jain, 9/26/2025, 9:07 AM

The status bar at the bottom indicates it's 21:37 on 26-09-2025.

- Duplicate Rules to avoid duplicates.

The screenshot shows the Salesforce Setup interface. The left sidebar is titled "Data" and includes sections for "Duplicate Management", "Duplicate Error Logs", "Duplicate Rules", and "Matching Rules". The "Duplicate Rules" section is currently selected. The main content area displays a "Duplicate Rule Detail" for "Subscription_Number_Duplicate_Rule". The rule details are as follows:

Rule Name	Subscription_Number_Duplicate_Rule
Description	Prevents creation of duplicate Subscription records based on Subscription Number
Object	Subscription
Record-Level Security	Enforce sharing rules
Action On Create	Block
Action On Edit	Allow
Alert Text	A subscription with this Subscription Number already exists.
Active	<input type="checkbox"/>
Matching Rule	<input checked="" type="checkbox"/> Subscription_Number_Matching_Rule <input checked="" type="checkbox"/> Mapped
Conditions	
Created By	Sourabh Jain, 9/26/2025, 9:10 AM
Modified By	Sourabh Jain, 9/26/2025, 9:10 AM

The status bar at the bottom indicates it's 21:40 on 26-09-2025.

The screenshot shows the Salesforce Duplicate Rules setup page for a 'Custom Invoice Duplicate Rule'. The rule is named 'Custom_Invoice_Number_Duplicate_Rule'. It prevents creation of duplicate Custom Invoice records based on Invoice Number. The rule is set to 'Block' on creation and 'Allow' on edit. An alert message is triggered if a Custom Invoice with the same Invoice Number already exists. The matching criteria is 'Custom_Invoice: Invoice_Number EXACT MatchBlank = FALSE'. The rule was created by Sourabh Jain on 9/26/2025 at 9:12 AM and modified by the same user on 9/26/2025 at 9:12 AM.

Salesforce data load mockup | Recently Viewed | Custom Pay... | Duplicate Rules | Salesforce | Salesforce import of "Accounts" | Relaunch to update

Setup Home Object Manager

Q duplicate

d SETUP Duplicate Rules

Custom Invoice Duplicate Rule
Custom_Invoice_Number_Duplicate_Rule

Duplicate Rule Detail

	Rule Name	Description	Object	Record-Level Security	Action On Create	Action On Edit	Operations On Create	Operations On Edit	Matching Criteria
Rule Name	Custom_Invoice_Number_Duplicate_Rule	Prevents creation of duplicate Custom Invoice records based on Invoice Number	Custom Invoice	Enforce sharing rules	Block	Allow	<input type="checkbox"/> Alert	<input type="checkbox"/> Report	Custom_Invoice: Invoice_Number EXACT MatchBlank = FALSE
Description							<input checked="" type="checkbox"/> Alert	<input type="checkbox"/> Report	
Object									
Record-Level Security									
Action On Create									
Action On Edit									
Alert Text		A Custom Invoice with this Invoice Number already exists.							
Active		<input type="checkbox"/>							
Matching Rule		<input checked="" type="checkbox"/> Invoice_Matching_Rule <input checked="" type="checkbox"/> Mapped							
Conditions									
Created By	Sourabh Jain	9/26/2025, 9:12 AM							
Modified By	Sourabh Jain	9/26/2025, 9:12 AM							

Help for this Page

Windows Defender User Interface

Type here to search

21:42 26-09-2025

The screenshot shows the Salesforce Duplicate Rules setup page for a 'Custom Payment Duplicate Rule'. The rule is named 'Custom_Payment_Duplicate_Rule'. It prevents creation of duplicate Custom Payment records based on Status or other key fields. The rule is set to 'Block' on creation and 'Allow' on edit. An alert message is triggered if a payment with the same status already exists. The matching criteria is 'Custom_Payment: Status EXACT MatchBlank = FALSE'. The rule was created by Sourabh Jain on 9/26/2025 at 9:13 AM and modified by the same user on 9/26/2025 at 9:13 AM.

Salesforce data load mockup | Recently Viewed | Custom Pay... | Duplicate Rules | Salesforce | Salesforce import of "Accounts" | Relaunch to update

Setup Home Object Manager

Q duplicate

d SETUP Duplicate Rules

Custom Payment Duplicate Rule
Custom_Payment_Duplicate_Rule

Duplicate Rule Detail

	Rule Name	Description	Object	Record-Level Security	Action On Create	Action On Edit	Operations On Create	Operations On Edit	Matching Criteria
Rule Name	Custom_Payment_Duplicate_Rule	Prevents creation of duplicate Custom Payment records based on Status or other key fields	Custom Payment	Enforce sharing rules	Block	Allow	<input type="checkbox"/> Alert	<input type="checkbox"/> Report	Custom_Payment: Status EXACT MatchBlank = FALSE
Description							<input checked="" type="checkbox"/> Alert	<input type="checkbox"/> Report	
Object									
Record-Level Security									
Action On Create									
Action On Edit									
Alert Text		A payment with this status already exists.							
Active		<input type="checkbox"/>							
Matching Rule		<input checked="" type="checkbox"/> Payment_Matching_Rule <input checked="" type="checkbox"/> Mapped							
Conditions									
Created By	Sourabh Jain	9/26/2025, 9:13 AM							
Modified By	Sourabh Jain	9/26/2025, 9:13 AM							

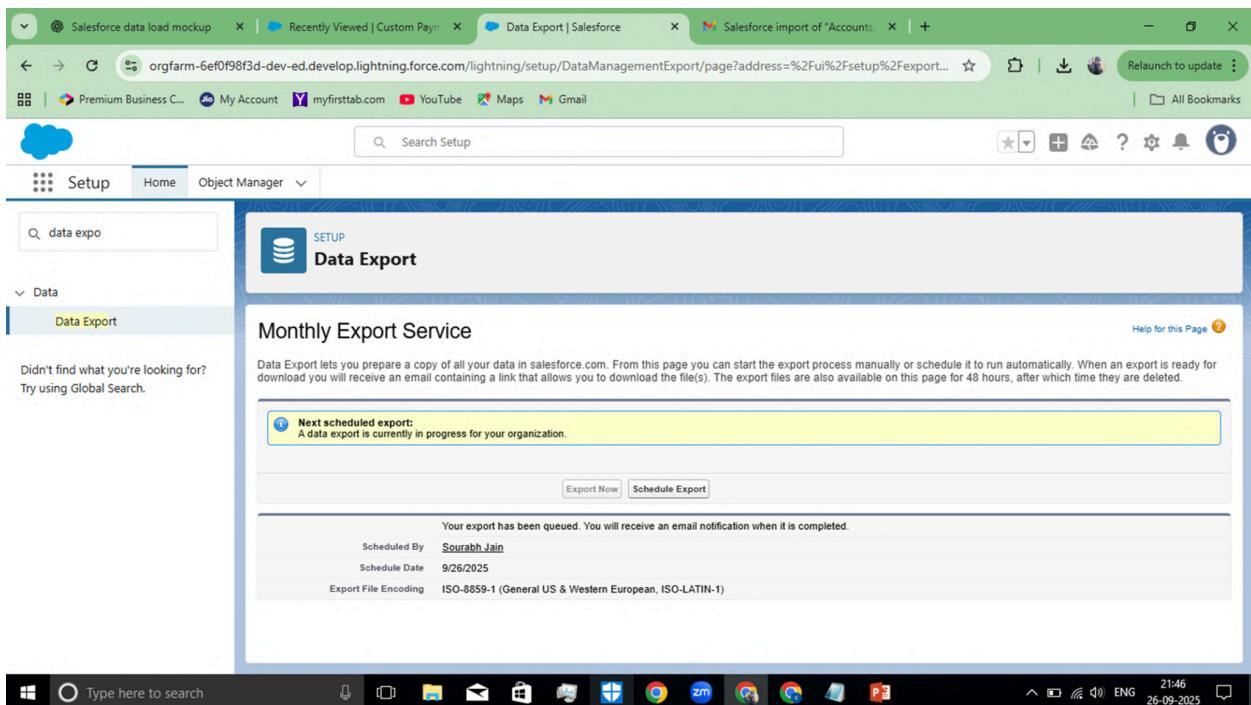
Help for this Page

Windows Defender User Interface

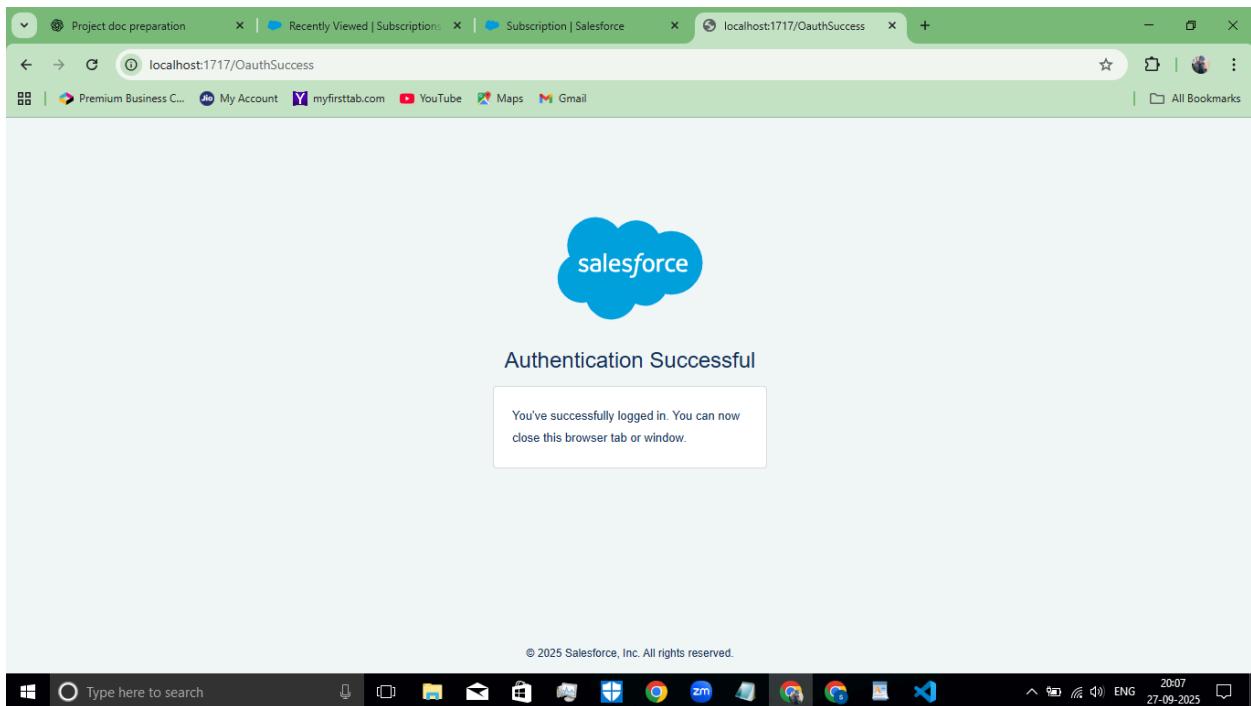
Type here to search

21:44 26-09-2025

- Export data for backup using Data Export



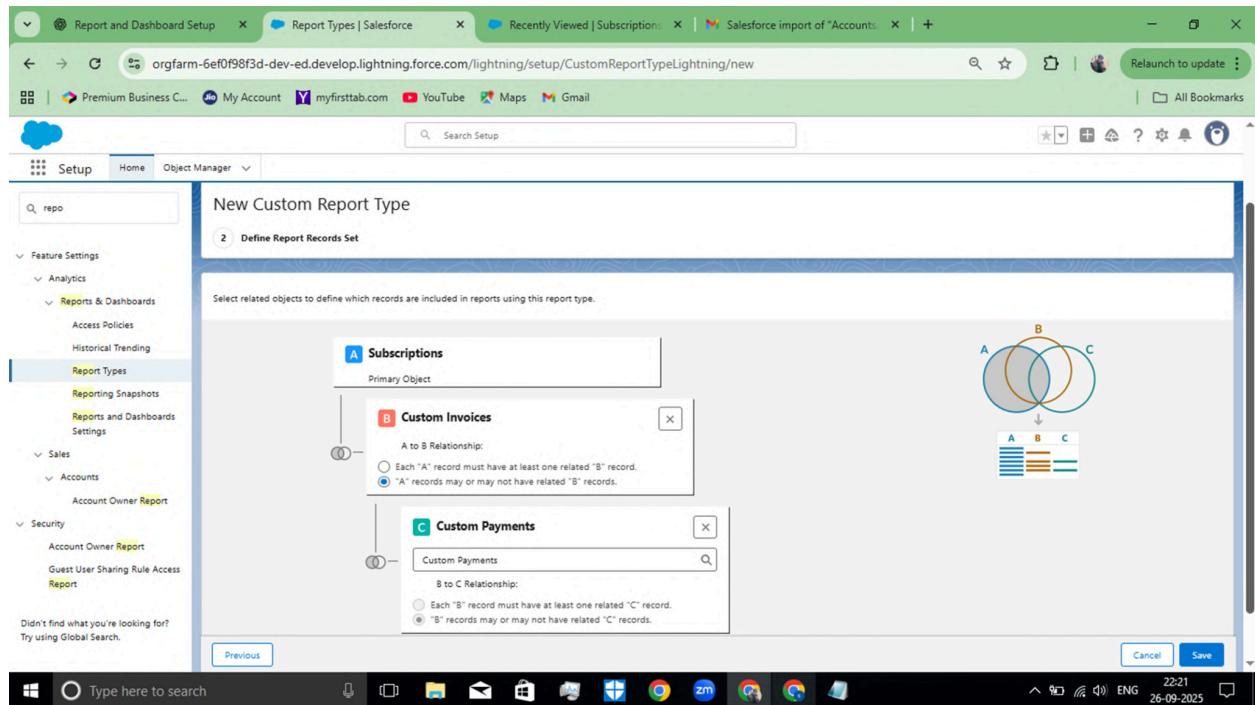
- Project Deployment : Created unmanaged package with Apex classes, flows, and LWCs. Deployed using SFDX: Deploy Source to Org command.



Phase 9 – Reporting, Dashboards & Security Review

Goal : Create meaningful reports and dashboards to provide business insights and conduct a security review.

- Create **Custom Report Types** for Subscription + Invoice + Payment.



Report and Dashboard Setup | Report Types | Salesforce | Recently Viewed | Subscriptions | Salesforce import of "Accounts"

orgfarm-6ef0f98f3d-dev-ed.lightning.force.com/lightning/setup/CustomReportTypeLightning/070gK0000065dJp/view

Premium Business C... My Account myfirsttab.com YouTube Maps Gmail All Bookmarks Relaunch to update

Setup Home Object Manager

repo

Feature Settings

- Analytics
- Reports & Dashboards
 - Access Policies
 - Historical Trending
 - Report Types
 - Reporting Snapshots
 - Reports and Dashboards
 - Settings
- Sales
- Accounts
 - Account Owner Report
- Security
 - Account Owner Report

Details

Display La... Subscription Report
API Name Subscription_Report
Description Test Report
Created By Sourabh Jain, 9/26/25, 10:21 PM
Store in C... accounts
Deployme... Deployed
Modified By Sourabh Jain, 9/26/25, 10:21 PM

Object Relationships

Subscriptions (A)

with or without related records from Custom Invoices (E)

with or without related records from Custom Payn

Fields

Source Object	Included Fields
Subscriptions	17
Custom Invoices	13
Custom Payments	11

Type here to search 22:21 ENG 26-09-2025

Report and Dashboard Setup | Report Builder | Salesforce | Report Types | Salesforce | Recently Viewed | Subscriptions | Salesforce import of "Accounts"

orgfarm-6ef0f98f3d-dev-ed.lightning.force.com/lightning/setup/CustomReportTypeLightning/070gK0000065dZxQAl/view

Premium Business C... My Account myfirsttab.com YouTube Maps Gmail All Bookmarks Relaunch to update

Setup Home Object Manager

repo

Feature Settings

- Analytics
- Reports & Dashboards
 - Access Policies
 - Historical Trending
 - Report Types
 - Reporting Snapshots
 - Reports and Dashboards
 - Settings
- Sales
- Accounts
 - Account Owner Report
- Security
 - Account Owner Report

Details

Display La... Invoice Report
API Name Invoice_Report
Description Invoice Test Report
Created By Sourabh Jain, 9/26/25, 10:30 PM
Store in C... accounts
Deployme... Deployed
Modified By Sourabh Jain, 9/26/25, 10:30 PM

Object Relationships

Custom Invoices (A)

Fields

Source Object	Included Fields
Custom Invoices	14

Type here to search 22:37 ENG 26-09-2025

The screenshot shows the Salesforce Report Types page. On the left, a sidebar menu is open under 'Analytics' > 'Reports & Dashboards' > 'Report Types'. The main area displays the details of a report named 'Payment Report'.

Details

- Display Label: Payment Report
- API Name: Payment_Report
- Description: Payment Test Report
- Created By: Sourabh Jain, 9/26/25, 10:36 PM
- Store in C...: accounts
- Deployme...: Deployed
- Modified By: Sourabh Jain, 9/26/25, 10:36 PM

Object Relationships

Custom Payments (A)

```

graph TD
    A((A)) --> B[A]
    
```

Fields

Source Object	Included Fields
Custom Payments	12

● Build Reports:

- Subscriptions by Status (Summary)
- Invoices by Due Date (Tabular)
- Revenue by Plan (Matrix)
- Payments vs Invoices (Joined)

The screenshot shows the Salesforce Report Builder interface. The report title is 'Invoices by Due Date'.

REPORT

Invoice Report

Fields

- Groups: GROUP ROWS, Add group...
- Columns: Custom Invoice Name, # Total Amount, Status

Filters

Due Date: 8/31/2025 (1), 8/1/2025 (2), Total (3)

Preview

Previewing a limited number of records. Run the report to see everything.

Due Date	Custom Invoice Name	Total Amount	Status	Custom Invoice ID
8/31/2025 (1)	Global Tech Ltd	\$85,000	Overdue	a01gK00000LoC57
		\$85,000		
8/1/2025 (2)	Acme Corp	\$50,000	Sent	a01gK00000Ln4Q
	Sunrise Pvt Ltd	\$9,000	Sent	a01gK00000Lnxm5
		\$59,000		
Total (3)		\$144,000		

Buttons

- Update Preview Automatically: Off
- Add Chart, Save & Run, Save, Close, Run

Report and Dashboard Setup | Report Builder | Salesforce | Recently Viewed | Subscript... | Report Types | Salesforce | Salesforce import of "Accou... | Relaunch to update

orgfarm-6ef0f98f3d-dev-ed.develop.lightning.force.com/lightning/r/Report/00OgK000005NHUAW/edit

Premium Business C... My Account myfirsttab.com YouTube Maps Gmail All Bookmarks

Billing & Subscripti... Subscriptions Custom Invoices Custom Payments Accounts Contacts

REPORT Revenue by Plan Payment Report

Fields > Outline Filters 2

Groups GROUP ROWS Add group... Payment Name

Payment Date Status

Columns Add column... Custom Payment ID

Status → Pending Paid Failed Total

Payment Name	Payment Date	9/1/2025	Subtotal	9/6/2025	Subtotal	9/28/2025	Subtotal	Total
PAY-0001	Record Count	1	1	0	0	0	0	1
PAY-0002	Record Count	0	0	0	0	1	1	1
PAY-0003	Record Count	0	0	1	1	0	0	1
Total	Record Count	1	1	1	1	1	1	3

Details (3 Rows) Click an intersection in the table above to filter details.

Custom Payment ID
a02gK000005rx5V
a02gK000005rx8j
a02gK000005rxn3
4

Row Counts Detail Rows Subtotals Grand Total Stacked Summaries Conditional Formatting

22:45 26-09-2025

Report and Dashboard Setup | Report Builder | Salesforce | Recently Viewed | Subscript... | Report Types | Salesforce | Salesforce import of "Accou... | Relaunch to update

orgfarm-6ef0f98f3d-dev-ed.develop.lightning.force.com/lightning/r/Report/00OgK000005NI1NUAW/edit

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Billing & Subscripti... Subscriptions Custom Invoices Custom Payments Accounts Contacts

JOINED REPORT Payments vs Invoices

Add Block

Fields > Outline Filters

Group Across Blocks Add group...

Columns < Invoice Report block 1 Add column... Custom Invoice Name Due Date Status # Total Amount < Payment Report block 2

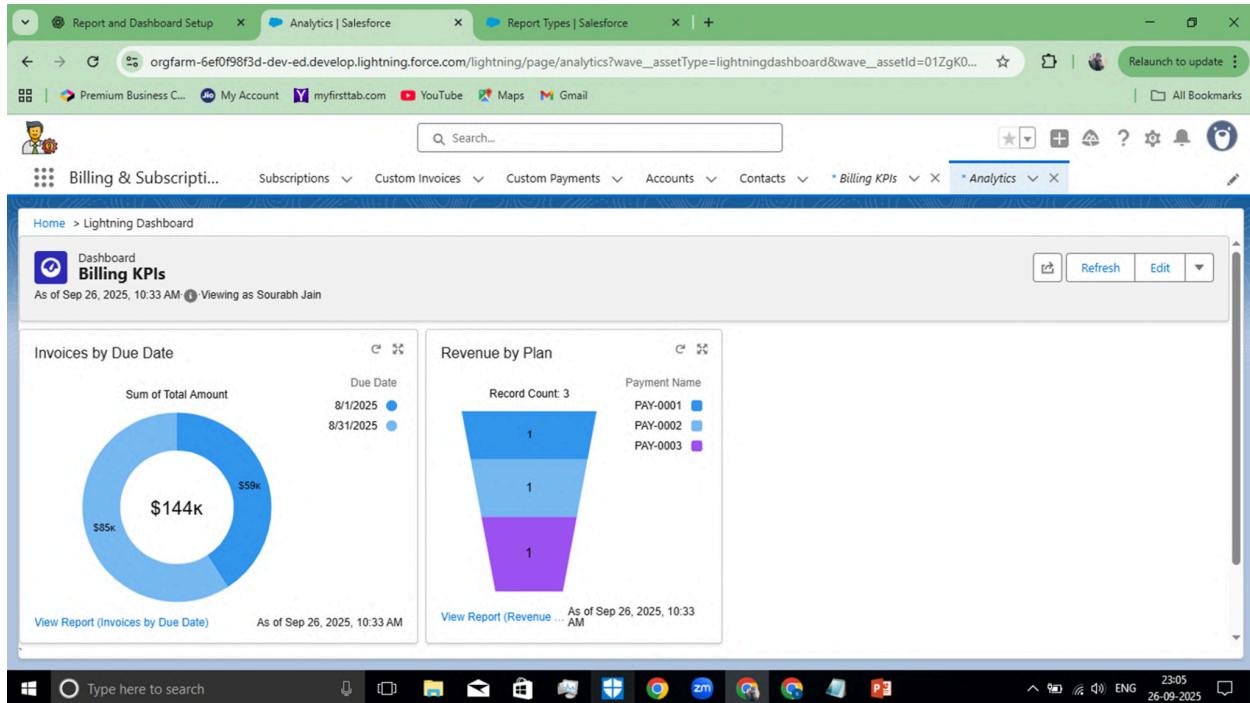
Invoice Report
Invoice Report block 1
Payment Report block 2

Custom Invoice Name	Due Date	Status	Total Amount	Created Date	Invoice Number
1 Acme Corp	8/1/2025	Sent	\$50,000	9/26/2025	INV01
2 Sunrise Pvt Ltd	8/1/2025	Sent	\$9,000	9/26/2025	INV03
3 Global Tech Ltd	8/31/2025	Overdue	\$85,000	9/26/2025	INV02
4 Count: 3			\$144,000	Count: 3	

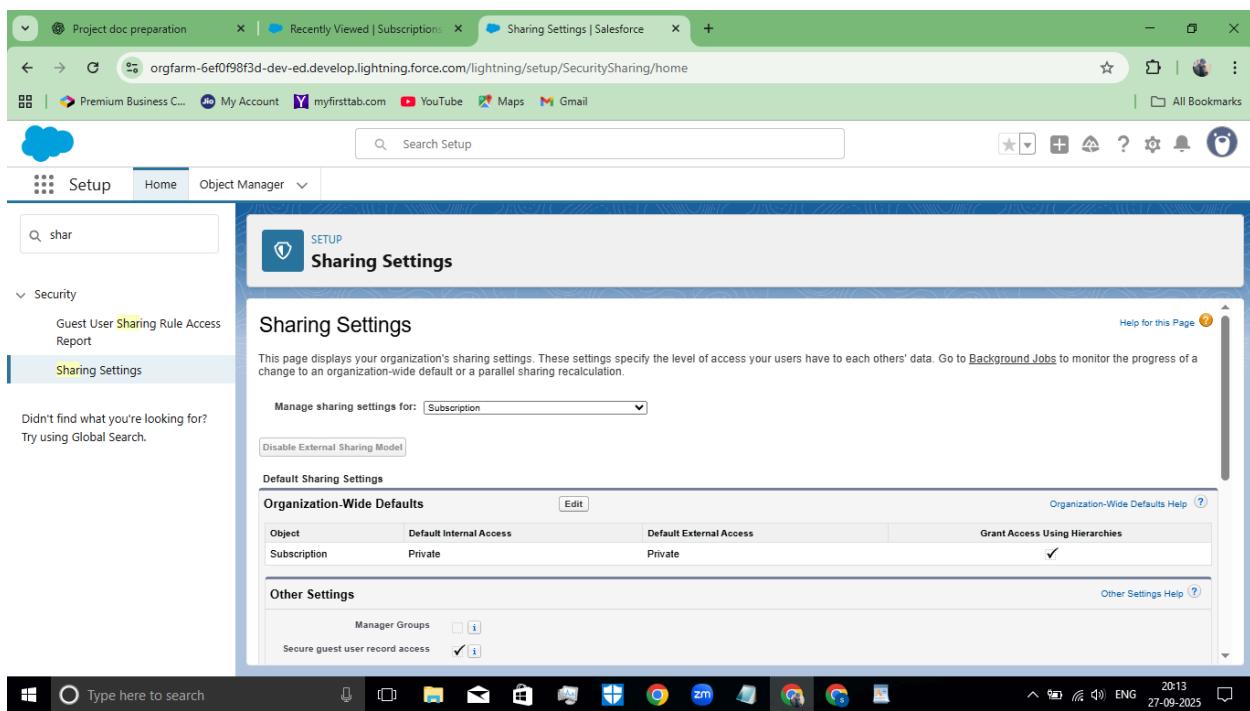
Update Preview Automatically

22:54 26-09-2025

- Bundle into **Dashboards** (“Billing KPIs”). Use **Dynamic Dashboard** option.



- Re-check **Sharing Settings** and **Field Level Security** for sensitive fields.



- Tighten Session Settings and configure Login IP Ranges for profiles as needed.

The screenshot shows the 'Session Settings' page in the Salesforce Setup. The 'Session Timeout' section has a dropdown set to '1 hour' and two checked checkboxes: 'Disable session timeout warning popup' and 'Force logout on session timeout'. The 'Session Settings' section contains several checkboxes, with 'Lock sessions to the domain in which they were first used' and 'Force logout after Login-As-User' being checked. The left sidebar shows sections like Einstein Assessors, Security, and Session Management, with 'Session Settings' selected.

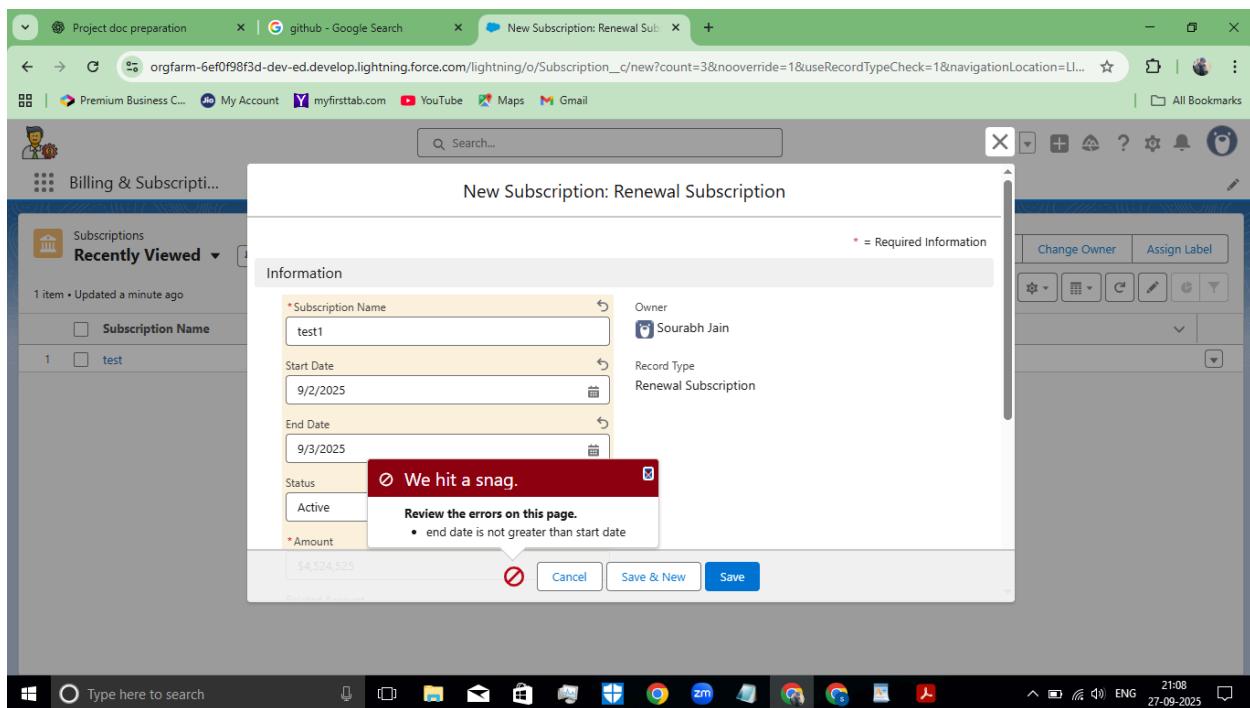
The screenshot shows the 'Profiles' page in the Salesforce Setup. It displays 'Login Hours' (No login hours specified), 'Login IP Ranges' (IP Start Address: 152.56.251.39, IP End Address: 152.56.251.39), and sections for 'Enabled Apex Class Access', 'Enabled Visualforce Page Access', and 'Enabled External Data Source Access'. The left sidebar shows sections like Hyperforce Assistant, Users, Data, Feature Settings, Data.com, Marketing, and Lead Processes, with 'Profiles' selected.

Phase 10: Quality Assurance Testing

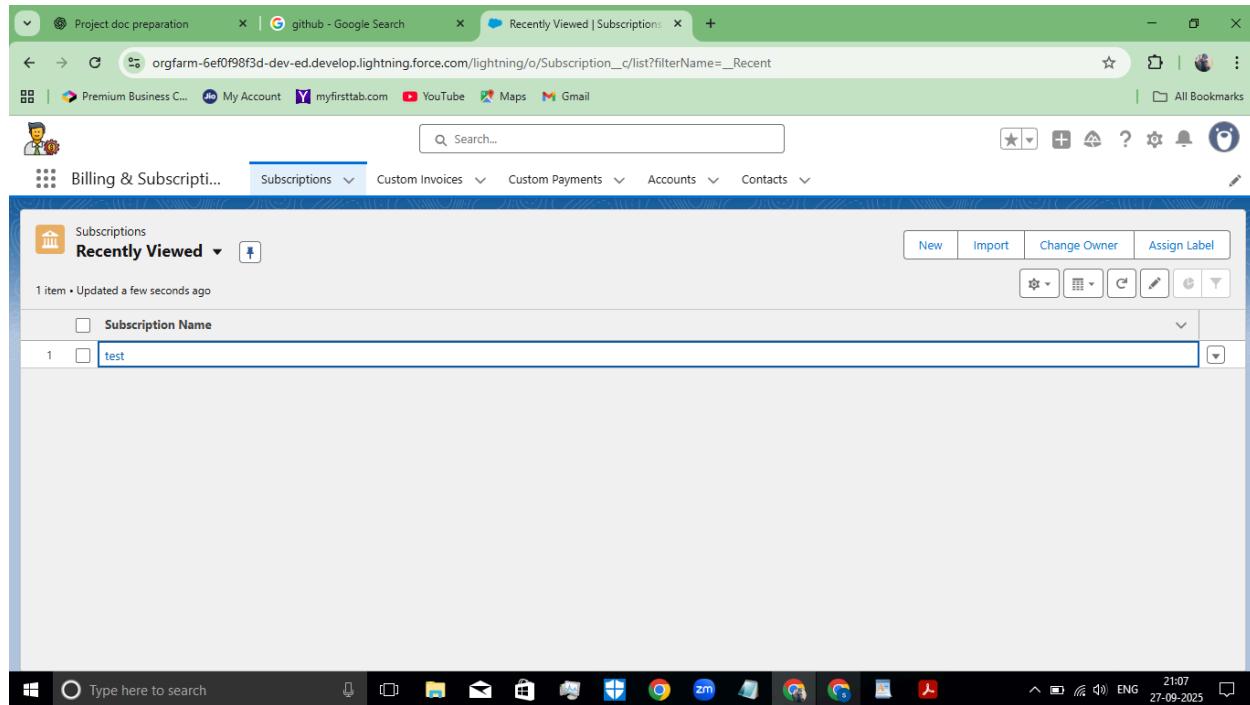
Goal :

To verify that each Salesforce feature (custom objects, flows, triggers, validation rules, approval processes, LWCs) functions correctly, meets business requirements, and handles both valid and invalid inputs gracefully.

1. As you can see we cannot create the subscription because the end_date is not greater than the start_date.

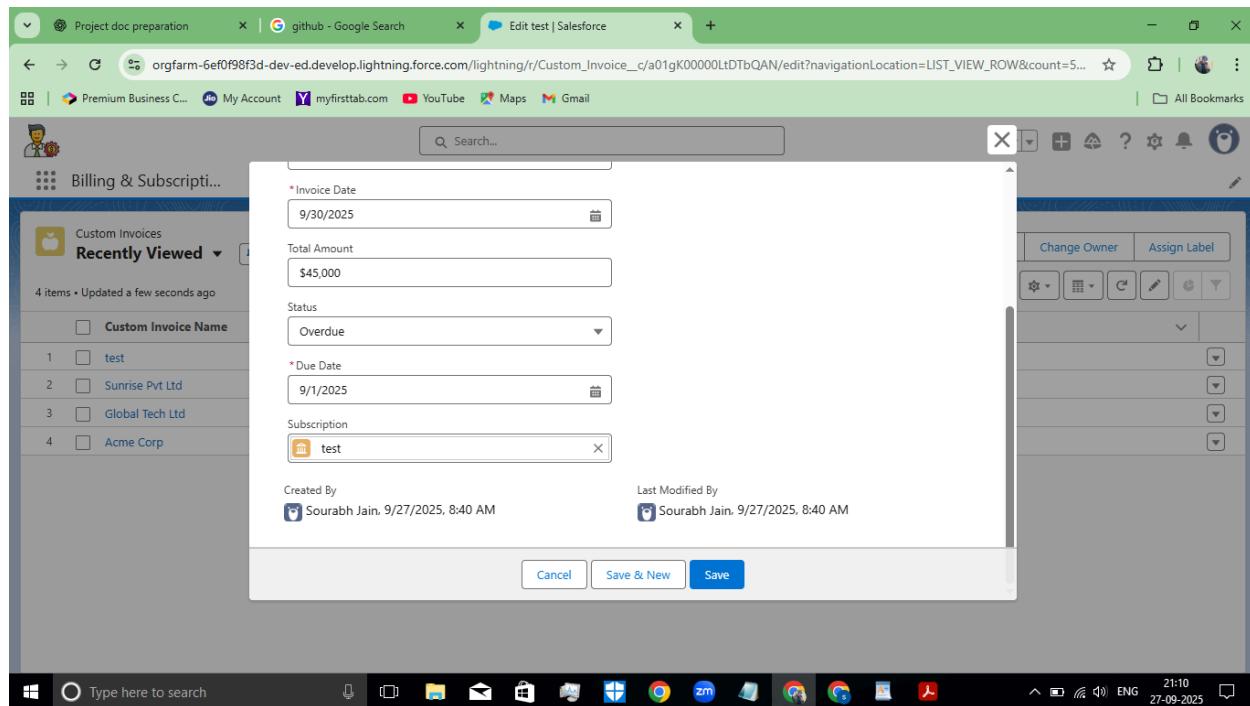


Now when the end date is updated the subscription record is saved successfully.



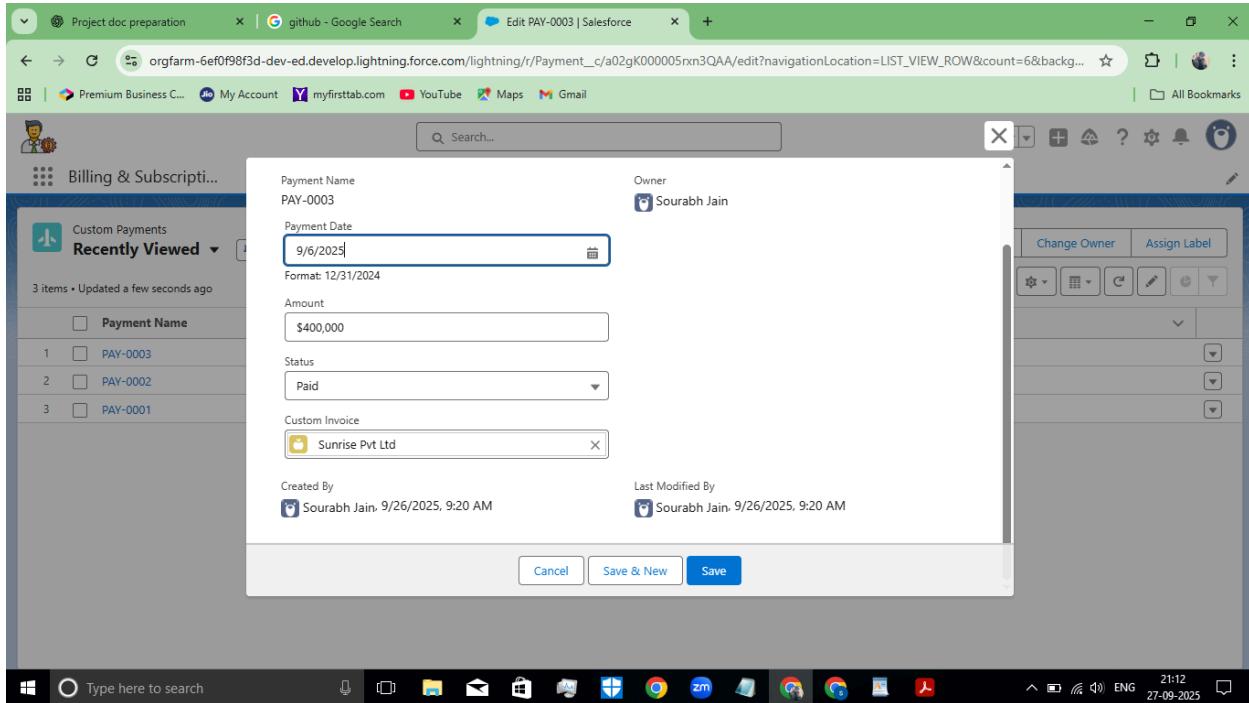
The screenshot shows the Salesforce Lightning interface. The top navigation bar has tabs for 'Project doc preparation', 'github - Google Search', and 'Recently Viewed | Subscriptions'. Below the navigation is a header with a user icon, a search bar, and various tool icons. The main content area is titled 'Subscriptions' and shows a list titled 'Recently Viewed'. One item, 'test', is listed with a checkbox next to it. At the top right of the list are buttons for 'New', 'Import', 'Change Owner', and 'Assign Label'. Below the list are standard Salesforce edit and delete icons. The bottom of the screen shows the Windows taskbar with various pinned apps like File Explorer, Edge, and Gmail.

Now the custom invoice created show a lookup field related to the subscription record.



The screenshot shows the Salesforce Lightning interface. The top navigation bar has tabs for 'Project doc preparation', 'github - Google Search', and 'Edit test | Salesforce'. Below the navigation is a header with a user icon, a search bar, and various tool icons. The main content area is titled 'Custom invoices' and shows a list titled 'Recently Viewed'. Four items are listed, with the first one, 'test', selected. The right side of the screen shows the 'Edit test' form for a 'Custom_Invoice__c' record. The form fields include 'Invoice Date' (9/30/2025), 'Total Amount' (\$45,000), 'Status' (Overdue), 'Due Date' (9/1/2025), and a 'Subscription' field which is a lookup to the 'test' subscription record. At the bottom of the form are 'Cancel', 'Save & New', and 'Save' buttons. The bottom of the screen shows the Windows taskbar with various pinned apps like File Explorer, Edge, and Gmail.

Now we can see the custom payment field include a lookup field related to the custom invoice.



Key Attachments :

1. Project Documentation

- Detailed project doc (phases, requirements, design).
- User Guide (for Sales/Finance teams).
- Technical Guide (objects, flows, Apex, security).

2. QA & Testing Evidence

- Test case tables for each feature.

- Input & Output screenshots (record creation, validation errors, trigger results).
- Summary of total test cases vs. passed/failed.

3. Configuration Snapshots

- Org setup screenshots (profiles, roles, OWD).
- Sharing settings and field-level security screens.

4. Automation & Code

- Apex triggers, classes, and test classes.
- Flow diagrams and screenshots.
- LWC component code and preview screenshots.

5. Reports & Dashboards

- Screenshots of MRR, churn, outstanding invoices dashboards.
- Example summary report outputs.

6. Integration Evidence

- Connected App settings screenshots.
- Named Credential and Remote Site Setting configs.

7. Deployment Artifacts

- Unmanaged package details.
- SFDX deployment logs/screenshots.

- **Future Plans :**

- 1. Enhanced Analytics & Predictive Insights**

Build AI-powered dashboards to forecast churn, predict revenue, and highlight at-risk customers.

Use Salesforce Einstein or Tableau CRM to give managers predictive metrics like expected renewals or failed payment probability.

- 2. Self-Service Customer Portal**

Deploy an Experience Cloud (Community) portal where customers can:

- View subscriptions, invoices, and payment history.
- Download invoices or update payment methods securely.
- Request upgrades or downgrades without agent involvement.

- 3. Multi-Currency & Multi-Region Support**

Extend the data model and automations to handle different currencies, tax rates (GST/VAT), and compliance requirements across regions.

Integrate with local payment gateways for better conversion.

- 4. Advanced Payment Handling**

Add automated retry logic for failed payments.

Integrate with multiple gateways (Stripe, PayPal, Razorpay, etc.) for redundancy.

Support partial payments and credits/refunds directly from Salesforce.

5. Automate Renewal & Upsell Campaigns

Combine Marketing Cloud or Pardot with your subscription data to automatically send upgrade offers or renewal campaigns to customers nearing expiration.

6. Enhanced Compliance & Security

Implement PCI DSS guidelines for storing/handling card info (via tokenization).

Add advanced audit logging and two-factor authentication for finance roles.

7. Mobile Access & Field Rep App

Build a lightweight mobile app or Salesforce mobile configuration so field reps can manage subscriptions and payments on the go.

8. Deeper Integrations

Connect with accounting/ERP software (QuickBooks, NetSuite, SAP) for seamless reconciliation.

Expose APIs for partner systems to create subscriptions and fetch invoices in real time.

9. Automated Testing Framework

Create reusable automated test scripts for each feature (Flows, Triggers, Validation Rules) to reduce manual QA effort in future releases.

10. Continuous Deployment Pipeline

Implement a DevOps pipeline (GitHub + Salesforce DX + CI/CD) for automated deployments and version control.

Conclusion: Successfully presented the "**SUBSCRIPTION & BILLING MANAGEMENT – CRM PROJECT**" & Demonstrate the complete subscription-to-payment process to stakeholders, show dashboards, collect feedback, and deliver user/technical documentation for smooth adoption.