Boutique App CRM

The Boutique Management App is a custom Salesforce application designed to help boutique owners seamlessly manage their customers, products, and sales in one centralized platform.

Problem Statement

Boutiques often face challenges in managing inventory, handling customer appointments, and delivering personalized experiences due to reliance on manual processes or basic systems. This leads to issues like overlapping appointments, stock mismatches, and limited visibility into sales trends. To overcome these challenges, a custom Boutique Management App is needed to centralize operations, prevent errors, streamline appointment scheduling, track products efficiently, and provide managers with insightful reports for better decision-making and improved customer satisfaction.

Phase 1: Problem Understanding & Industry Analysis

1. Requirement Gathering

Goal: Understand what each stakeholder needs from the boutique management system.

- **Customers:** Easy browsing of collections, personalized recommendations, loyalty rewards, seamless online & in-store experience.
- **Business Owners:** End-to-end visibility on sales, inventory, customer engagement, and profitability.

2. Stakeholder Analysis

Goal: Identify roles and responsibilities in the ecosystem.

- **Primary Stakeholders:**
    - **Customers →** End users, purchasing products online or in-store.
    - **Sales Staff →** Assist with transactions, update customer preferences, and upsell products.
    - **Store Manager →** Manages daily operations, inventory, and staff schedules.
- **Secondary Stakeholders:**
    - **Business Owner/Management →** Strategic decisions on sales, marketing, and expansion.
    - **IT/Salesforce Admins →** Maintain the boutique CRM & integrations.
    - **Suppliers/Vendors →** Provide stock and manage restocking cycles.

3. Business Process Mapping

Goal: Understand current challenges vs. how Salesforce can improve operations.

Current Process (Manual/Traditional):

- Customer info tracked manually in diaries/spreadsheets.
- Inventory updated at end of the day → stock mismatches.
- Customer preferences rarely tracked → missed upsell opportunities.
- Marketing mostly word-of-mouth or generic promotions.

Proposed Process (Salesforce Enabled):

- Customer interactions captured automatically (POS, website, social media).

- Real-time inventory sync with alerts for low stock.
- Automated loyalty & rewards programs.
- Personalized fashion recommendations powered by Salesforce AI.
- Targeted marketing campaigns (SMS, email, WhatsApp) from Salesforce Marketing Cloud.

4. Industry-Specific Use Case Analysis

Goal: Benchmark against best practices in Boutique/Retail.

- **Customer Retention:**
    - Many boutiques lose customers due to lack of personalized follow-up.
    - **Solution →** Salesforce CRM with customer history, birthdays, style preferences, automated reminders.
- **Inventory Management:**
    - Stockouts or overstocking are common.
    - **Solution →** Inventory dashboard with predictive restocking.

5. AppExchange Exploration

Goal: Identify existing Salesforce apps to reduce development effort.

- **Potential Apps for Boutiques:**
    - POS/Inventory Management Apps.
    - Loyalty Management Apps (customer rewards & referrals).
    - Marketing Automation Apps (SMS, WhatsApp, Email campaigns).

Phase 2: Org Setup & Configuration (Boutique App)

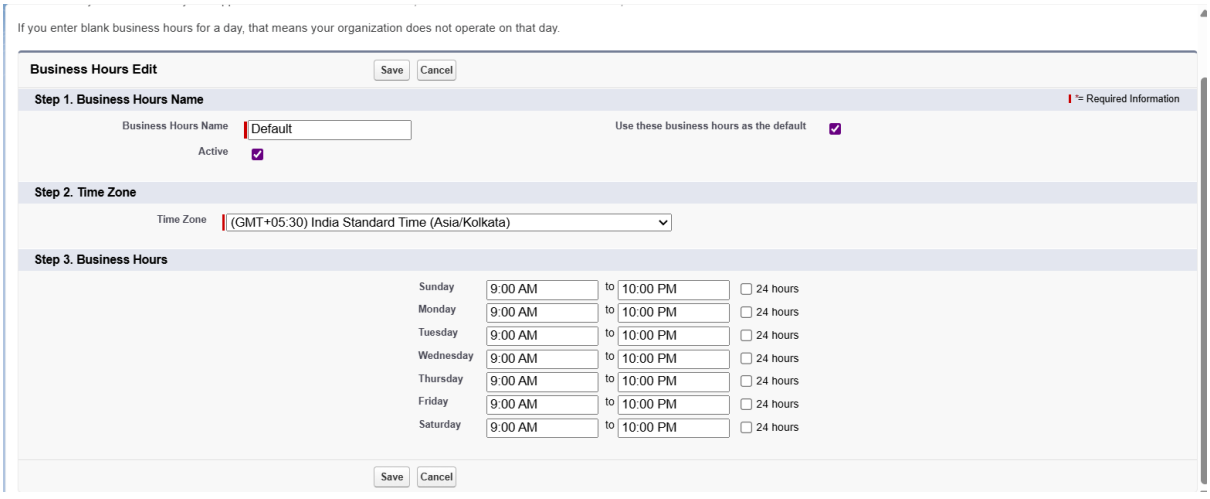
Goal: Prepare Salesforce environment for the Boutique application.

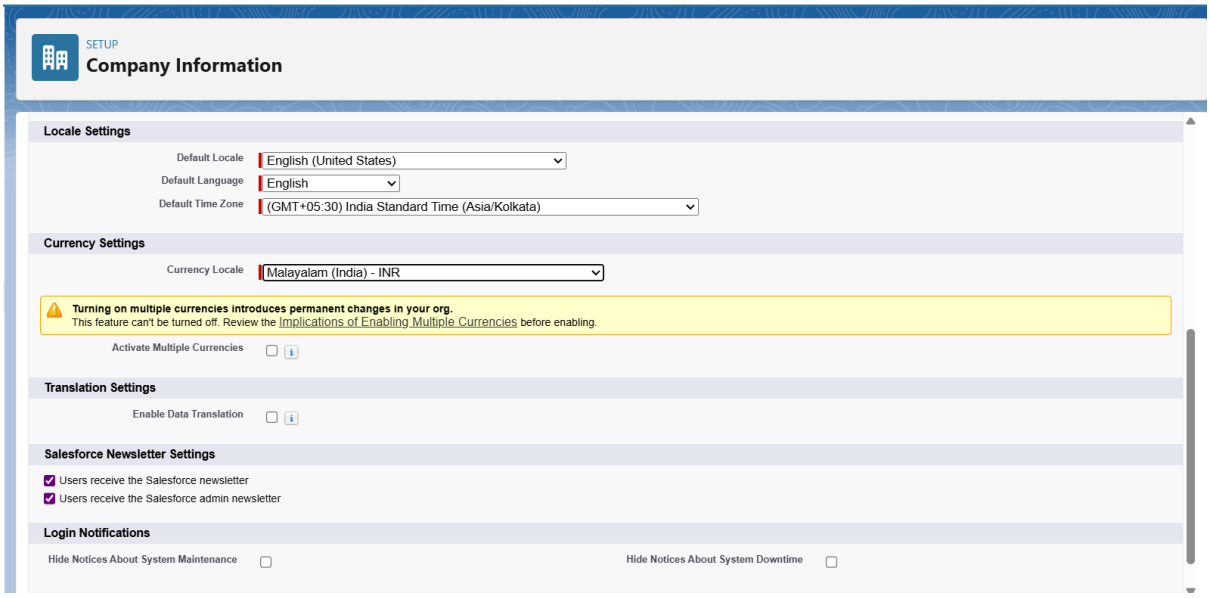
1. Salesforce Editions

For the Boutique App, we will use a Salesforce Developer Edition Org (free) to build and test all features such as appointment scheduling, customer management, and order tracking. This Developer Org acts as a safe environment where we can configure, customize, and test without affecting real data. Once everything is finalized and tested, the solution can later be moved to a Production Org, where it will be used by the boutique staff to manage real customers, appointments, and sales transactions.

2. Company Profile Setup

For the Boutique App, I set up the company details with the boutique's name, address, and contact information, configured the time zone to match the boutique's location, and set the default currency to INR (₹) or USD ($) depending on customer needs.



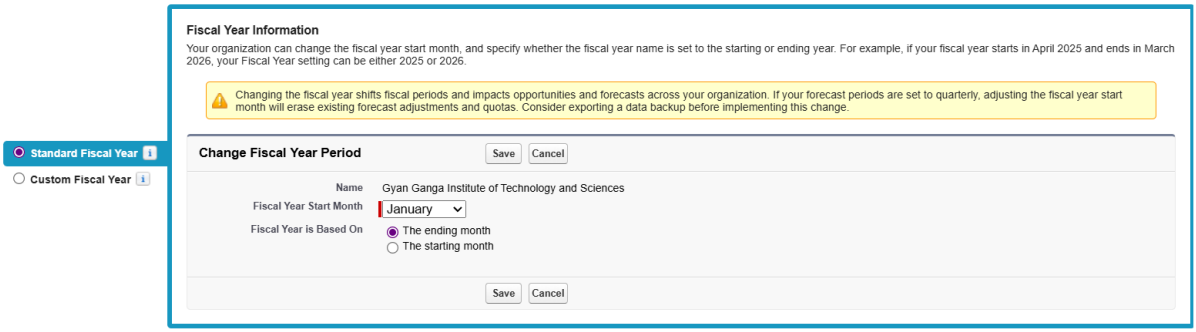


3. Business Hours & Holidays

For the Boutique App, the business hours are set from 9:00 AM to 10:00 PM, aligning with typical boutique operating times. In addition, public holidays such as Diwali, Christmas, and other major festive days are marked as non-working days to ensure that customers cannot schedule appointments on those dates.

4. Fiscal Year Settings

The Standard Fiscal Year (Jan–Dec) is used for the revenue & sales reporting.



5. User Setup & Licenses

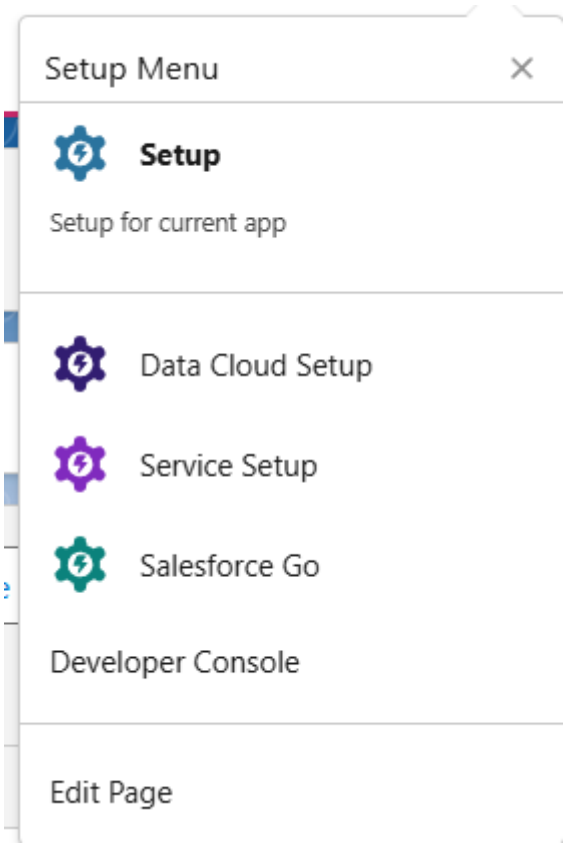
Since it is an application to manage a small-scale business so not much profile setup and licences is need.

6. Login Access Policies

For the Boutique App, staff login access is restricted to 10:00 AM – 8:00 PM, ensuring that employees can only log in during active working

7. Dev Org Setup

For the Boutique App, the Developer Org serves as a sandbox environment where all configurations, automation, Lightning components, and Apex development can be safely built and tested without affecting real customer data.



8. Deployment Basics

For the Boutique App, deployment involves moving all configurations and code—including custom objects, flows, Apex classes, and Lightning Web Components—from the sandbox environment to the production org. This can be done using tools such as Change Sets, VS Code with Salesforce CLI, or DevOps Center to ensure a smooth and controlled transition to the live environment.

Phase 3: Data Modelling & Relationships

Goal: Build data structure.

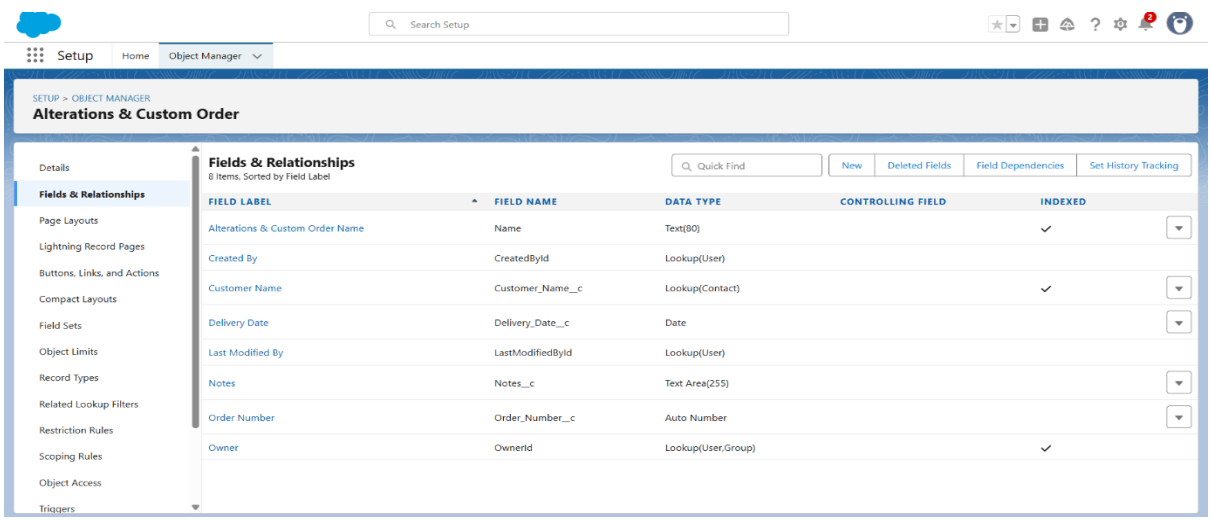
1. Standard & Custom Objects

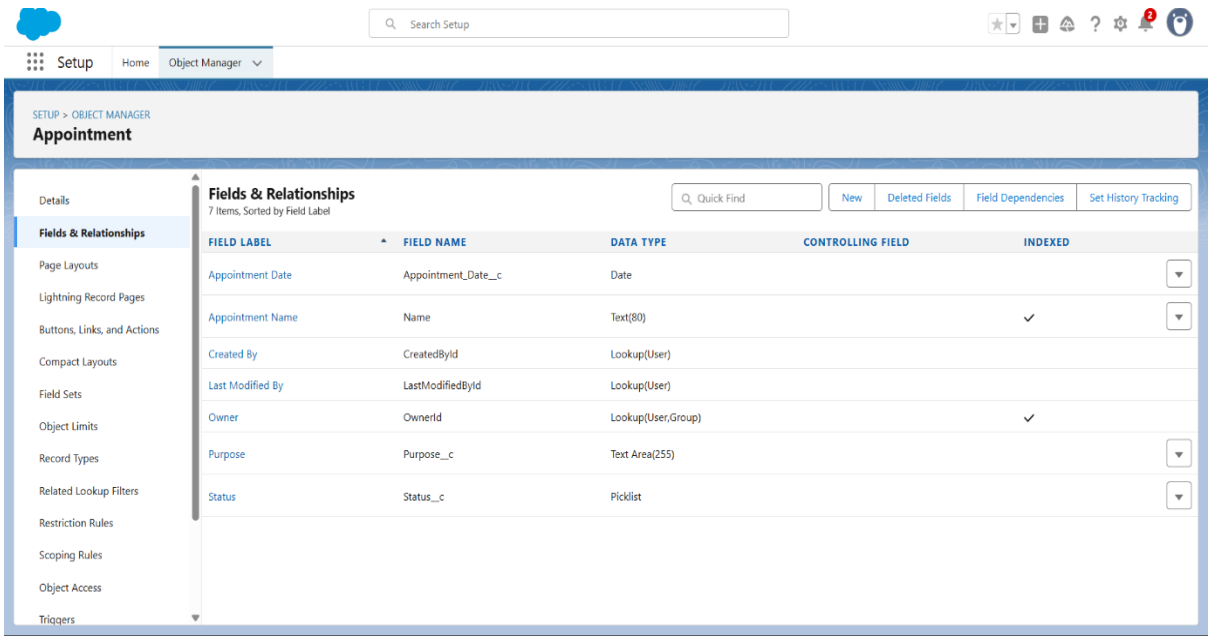
- Standard: Contact (customers), Products, Orders.
- Custom: Alterations & Custom Orders, Appointments, Style Preferences, Supplier.

2. Fields

- Alteration & Custom Orders: Alterations & Custom Order Name, Delivery Date, Notes, Customer Name, Order Number
- Appointments: Appointment Name, Appointment Date, Purpose, Status
- Style Preferences: Style Preferences Name, Category, Colour, Size, Style Notes
- Supplier: Supplier Name, Contact Number, Product

Screenshots

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Page Layouts
Lightning Record Pages
Buttons, Links, and Actions
Compact Layouts
Field Sets
Object Limits
Record Types
Related Lookup Filters
Restriction Rules
Scoping Rules
Object Access
Triggers
Fields & Relationships
7 Items, Sorted by Field Label
Quick Find
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Set History Tracking
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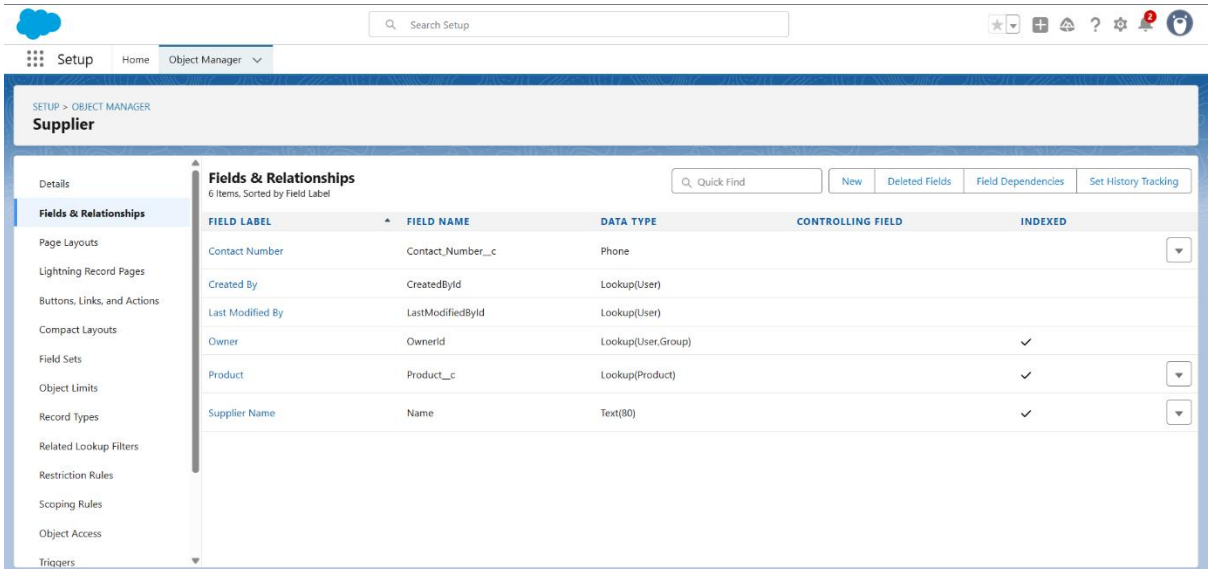
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Supplier Name
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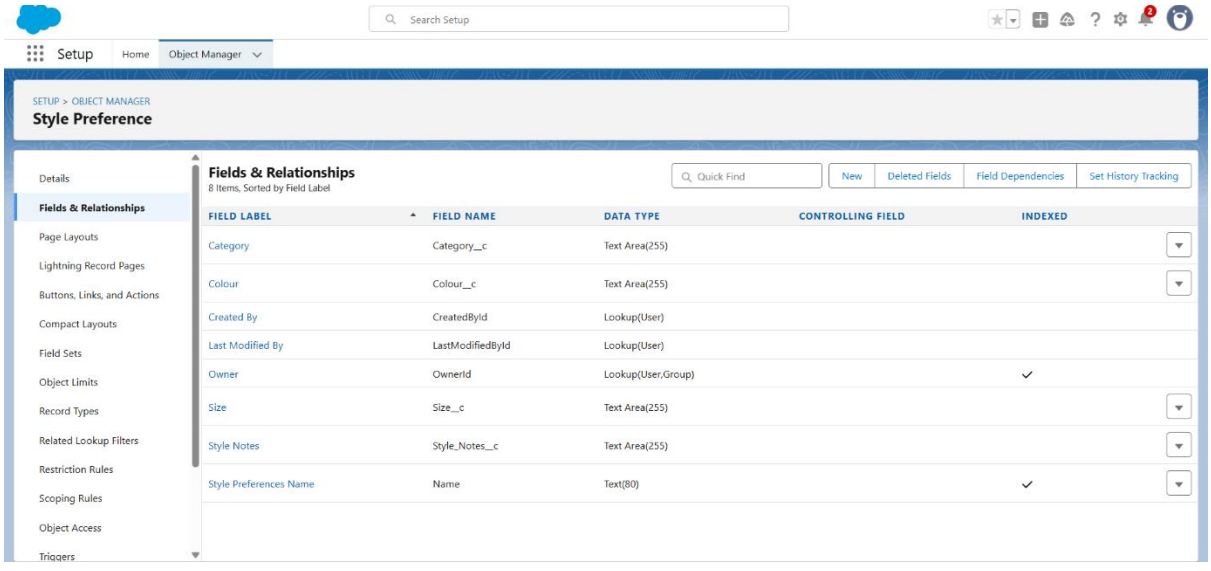
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Lookup(User)
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LastModifiedById
Lookup(User)
Owner
OwnerId
Lookup(User,Group)
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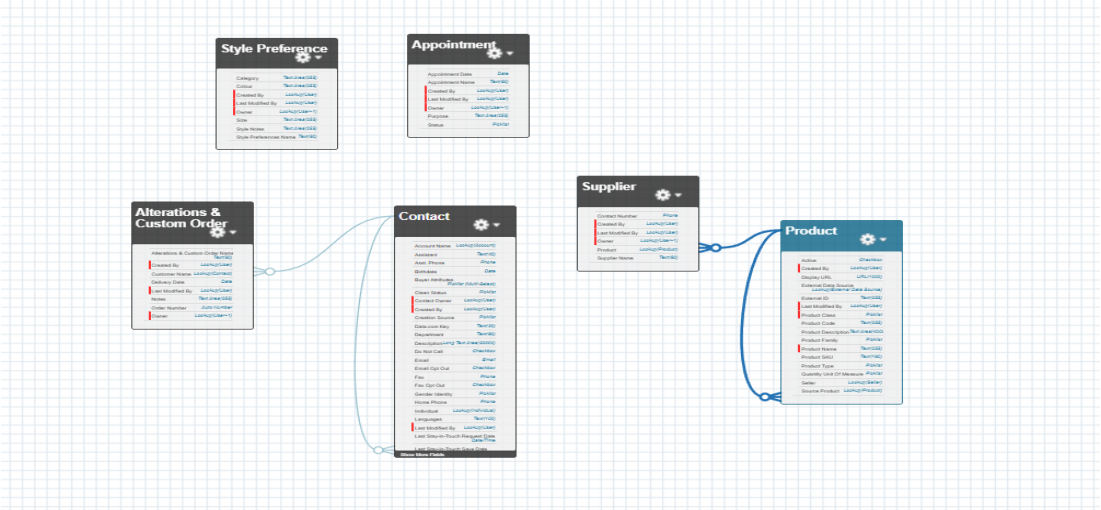
Style Notes
Style_Notes__c
Text Area(255)
Style Preferences Name
Name
Text(80)

3. Schema Builder

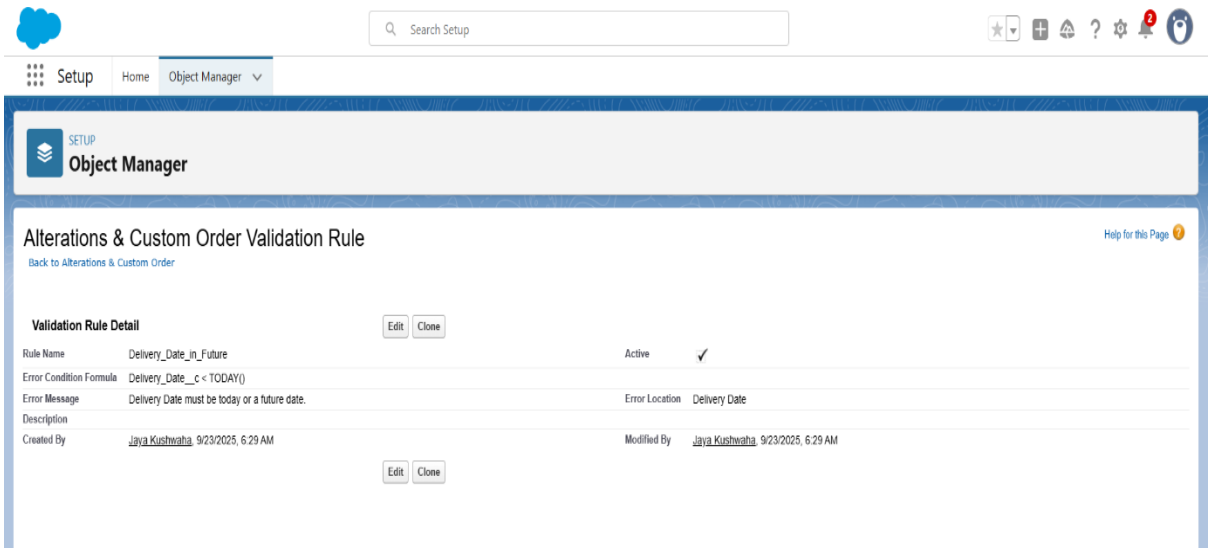
Schema Builder serves as a visual blueprint of how the boutique's data is structured and connected. It allows you to easily create and manage custom objects like Customers, Appointments, and Products, while also defining the relationships between them, such as linking customers to their appointments or associating products with those appointments. Instead of just looking at lists of fields, Schema Builder presents everything in a clear diagram, making it easier to understand how data flows across the system. For the boutique, this means being able to track how customers schedule appointments, what services or products are included, and how these records interact, ensuring smooth operations and avoiding gaps or duplication in the system.

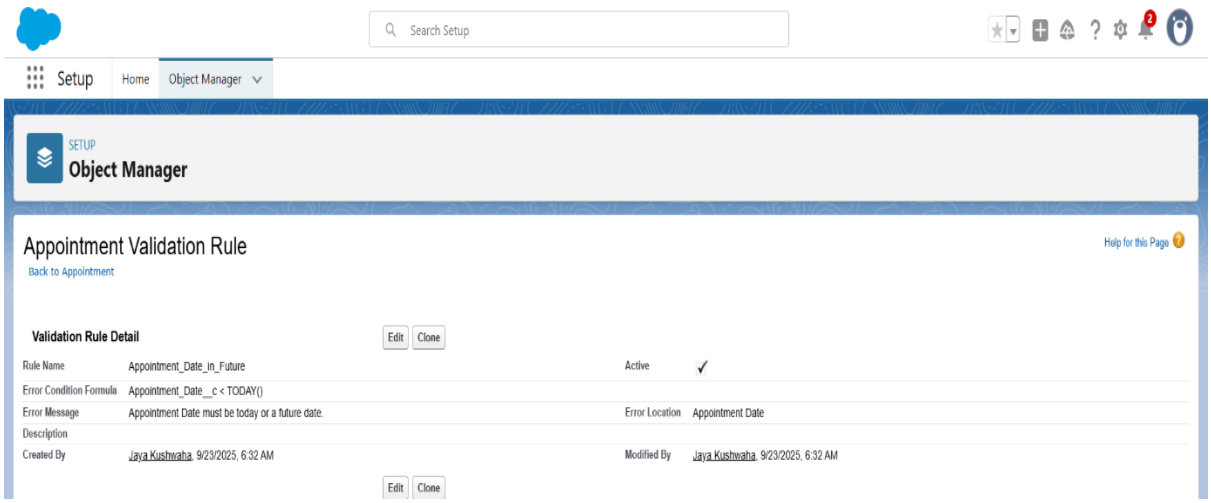


Phase 4: Process Automation (Admin)

Goal: Automate tasks.

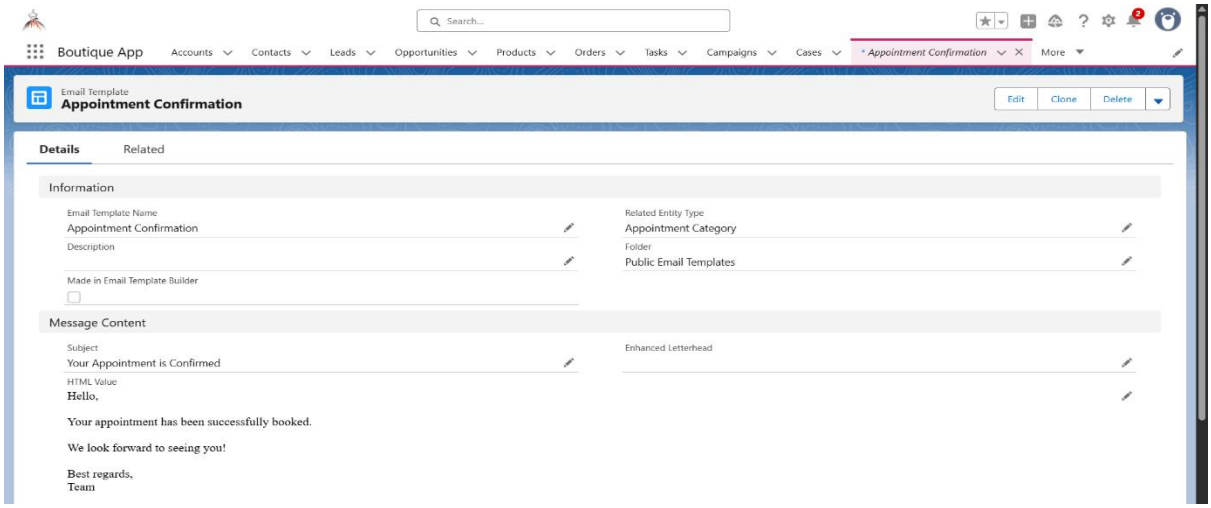
1. **Validation Rules**
    - Appointment Date must be not from past.
    - Delivery Date must be not from past.





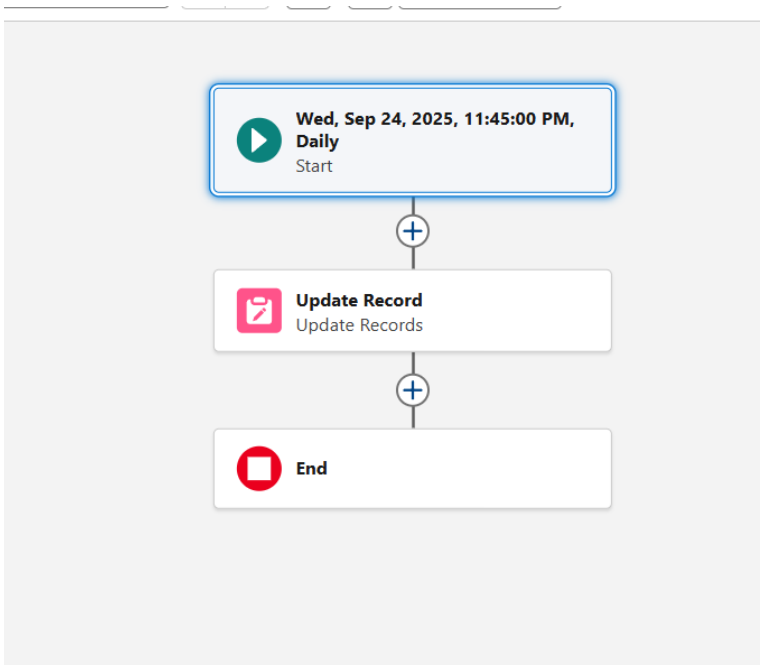
2. **Email Alerts**

- Customer gets email after approval.



3. **Field Updates**

- After the Appointment is completed the Status is updated to “Completed”.



Phase 5: Apex Programming (Developer)

Goal: Add advanced logic.

1. Classes & Objects

Service Class: AppointmentService.cls

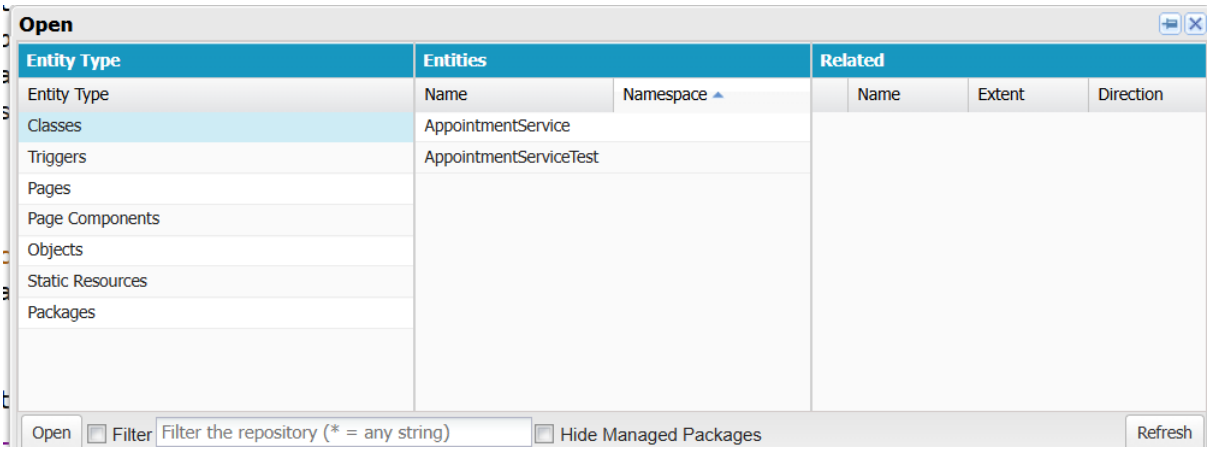
- This is a **helper class** that holds all the business logic for appointments.
  It makes your code **reusable** and keeps your trigger clean.

- **What it does:**
  1. **scheduleAppointment()** → Sets the status to "Scheduled" (if date is today or future).
  2. **completeAppointment()** → Marks an appointment "Completed" only if the date is today or past.
  3. **cancelAppointment()** → Marks an appointment "Cancelled".

Test Class: AppointmentServiceTest.cls

- This is used to **prove that your code works** and to get Salesforce's required **75%+ coverage**.
- **What it does:**
  1. **Creates test Contacts (customers)** → since Appointment__c links to Customer__c.
  2. **Creates test Appointments** → scheduled for today or future.

3. Tests:
    - Scheduling an appointment (should be "Scheduled").
    - Completing an appointment (status changes to "Completed").
    - Cancelling an appointment (status changes to "Cancelled").

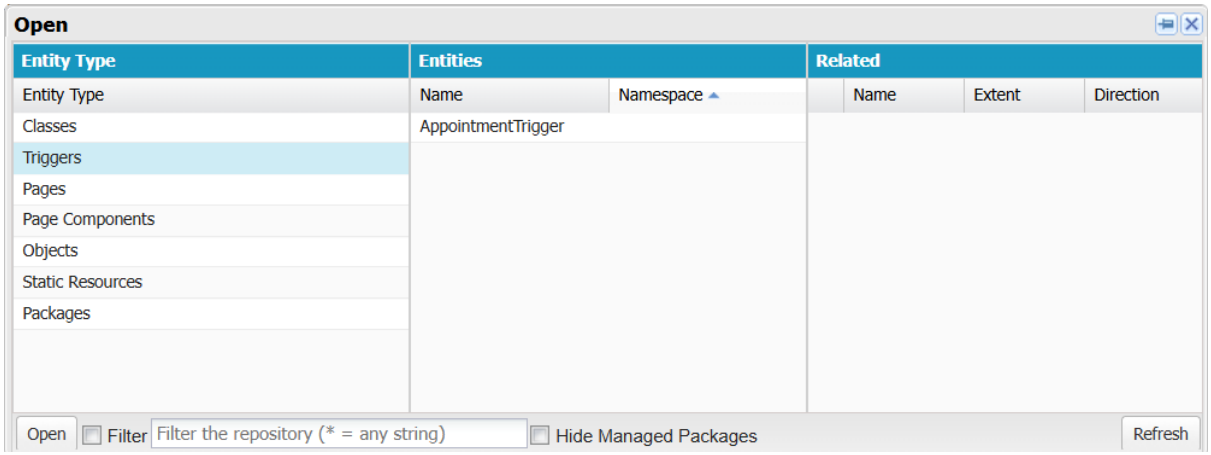


2. Apex Triggers

Trigger: AppointmentTrigger

- This runs automatically when **Appointment__c** records are inserted or updated.
- **What it does:**
    1. **On Insert (new appointment):**
       Calls scheduleAppointment() → ensures new appointments always start with correct status.
    2. **On Update:**
        - If status changed to "Completed" → calls completeAppointment().

- If status changed to "Cancelled" → calls cancelAppointment().

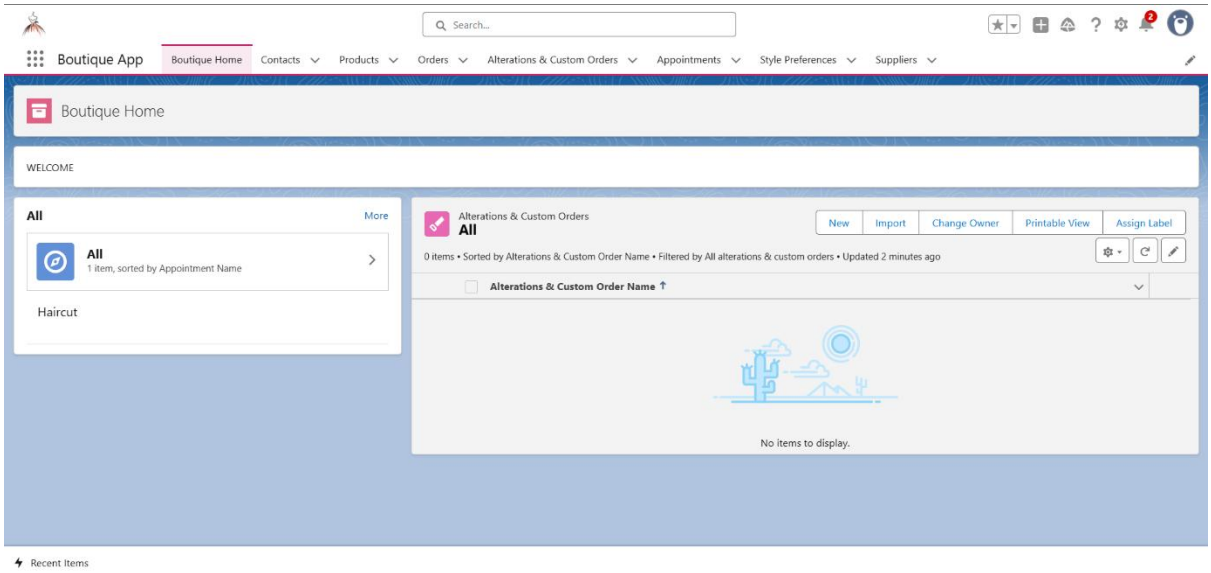


Phase 6: User Interface Development

Goal: Make it user-friendly.

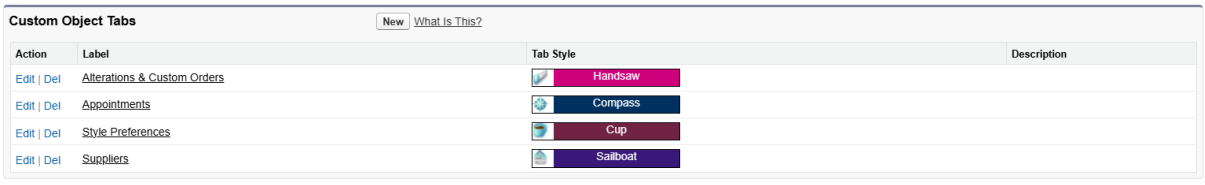
1. **Lightning App Builder**

   - A boutique App is created with the Lightning Web Component for the handling of various tasks and customers in a small business.



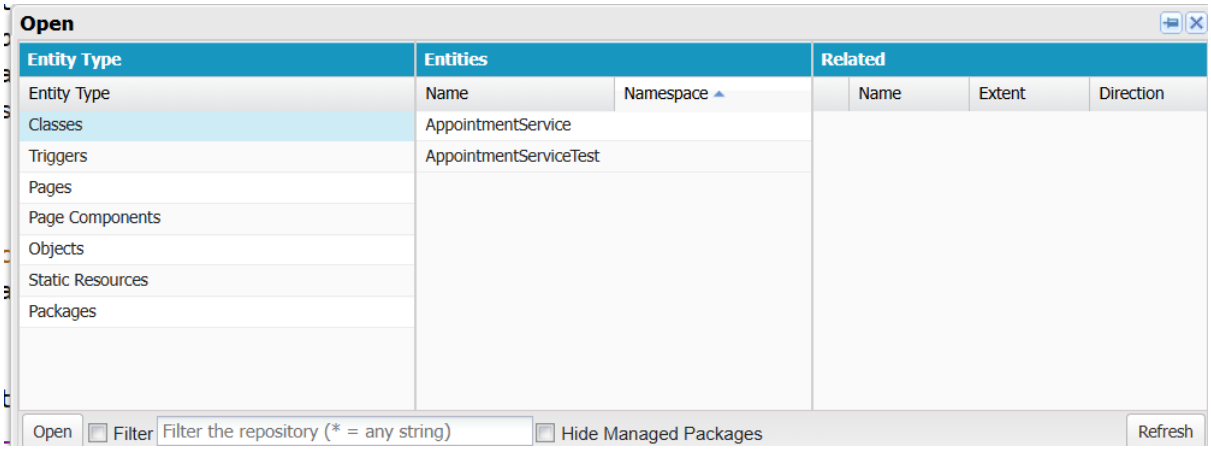
2. **Tabs**

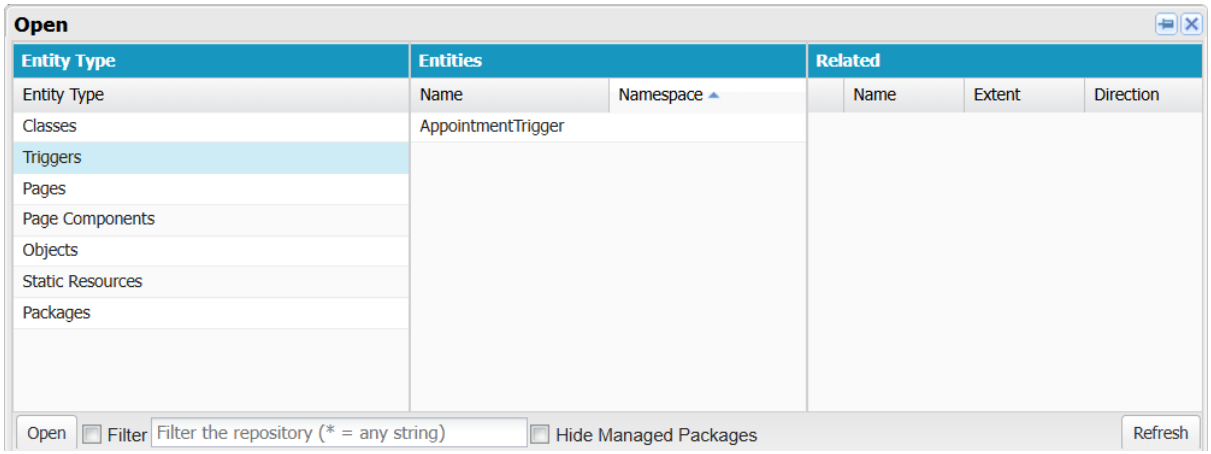
   - Various tabs for the custom objects are added in the app for seamless use by the owner.



3. **Apex with LWC**

   - Apex is used with lightning web component in integration with vs code for the better use of the application.





force-app > main > default > lwc > upcomingAppointments > JS upcomingAppointments.js > ...

```
1  import { LightningElement, wire } from 'lwc';
2  import getTodayAppointments from '@salesforce/apex/AppointmentController.getTodayAppointments';
3
4  export default class UpcomingAppointments extends LightningElement {
5      @wire(getTodayAppointments) appointments;
6  }
7
```

force-app > main > default > lwc > upcomingAppointments > upcomingAppointments.js-meta.xml > ...

```
2   <LightningComponentBundle xmlns="http://soap.sforce.com/2006/04/metadata">
5       <targets>
6           <target>lightning__AppPage</target>
7           <target>lightning__HomePage</target>
8           <target>lightning__RecordPage</target>
9       </targets>
10  </LightningComponentBundle>
11
```

force-app > main > default > lwc > upcomingAppointments > upcomingAppointments.html > ...

```html
<template>
    <lightning-card title="Today's Appointments" icon-name="standard:contact">
        <template if:true={appointments.data}>
            <template for:each={appointments.data} for:item="app">
                <div key={app.Id} class="slds-box slds-m-bottom_small slds-theme_default">
                    <p><strong>Customer:</strong> {app.Customer__r.Name}</p>
                    <p><strong>Date:</strong> {app.Appointment_Date__c}</p>
                    <p><strong>Status:</strong> {app.Status__c}</p>
                    <p><strong>Purpose:</strong> {app.Purpose__c}</p>
                </div>
            </template>
        </template>
        <template if:true={appointments.error}>
            <p class="slds-text-color_error">Error loading appointments.</p>
        </template>
        <template if:false={appointments.data}>
            <p>No appointments for today.</p>
        </template>
    </lightning-card>
</template>
```

force-app > main > default > classes > AppointmentService.cls > AppointmentService > scheduleAppointment(Appointment__c) : void

```apex
public with sharing class AppointmentService {

    // Schedule a new appointment (before insert)
    public static void scheduleAppointment(Appointment__c app) {
        if (app.Appointment_Date__c == null) {
            throw new AuraHandledException('Appointment Date is required.');
        }
        if (app.Appointment_Date__c < Date.today()) {
            throw new AuraHandledException('Appointment Date must be today or in the future.');
        }
        app.Status__c = 'Scheduled';
    }

    // Mark as completed (before update when status changes)
    public static void completeAppointment(Appointment__c app) {
        if (app.Appointment_Date__c == null) {
            throw new AuraHandledException('Appointment Date is required to complete an appointment.');
        }
        if (app.Appointment_Date__c <= Date.today()) {
            app.Status__c = 'Completed';
        } else {
            throw new AuraHandledException('Appointment cannot be completed before the scheduled date.');
        }
    }

    // Cancel an appointment
    public static void cancelAppointment(Appointment__c app) {
        app.Status__c = 'Cancelled';
    }
}
```

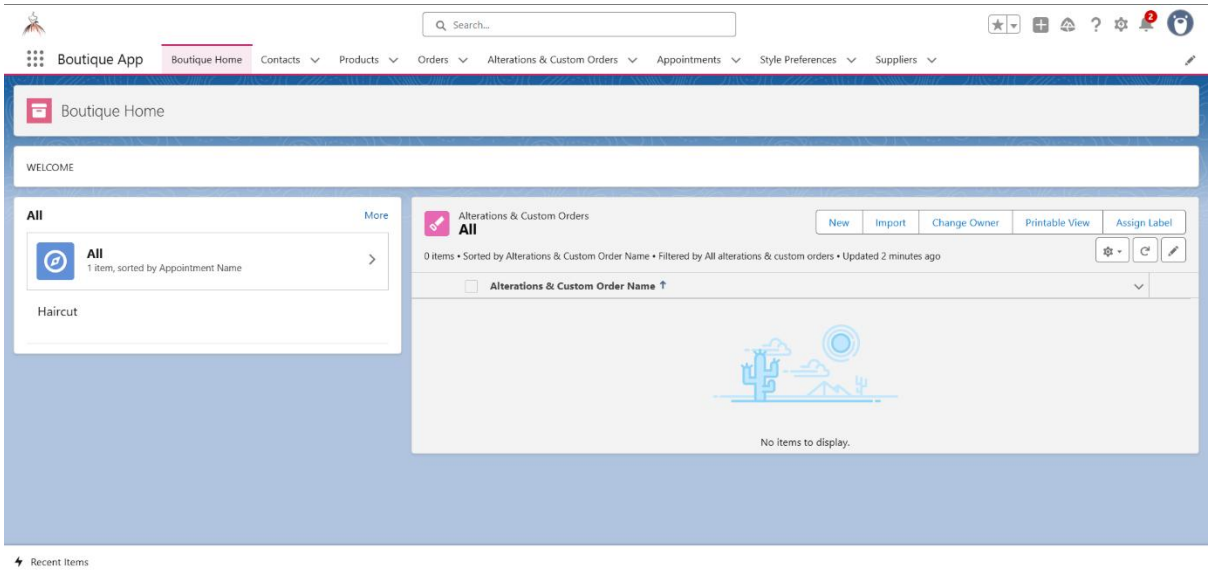
AppointmentService.cls | AppointmentTrigger.trigger | upcomingAppointments.js | upcomingAppointments.js-meta.xml

force-app > main > default > triggers > AppointmentTrigger.trigger > AppointmentTrigger

```
trigger AppointmentTrigger on Appointment__c (before insert, before update) {

    if (Trigger.isBefore) {
        if (Trigger.isInsert) {
            for (Appointment__c app : Trigger.new) {
                AppointmentService.scheduleAppointment(app);
            }
        }

        if (Trigger.isUpdate) {
            for (Appointment__c app : Trigger.new) {
                Appointment__c oldApp = Trigger.oldMap.get(app.Id);

                if (app.Status__c == 'Completed' && oldApp.Status__c != 'Completed') {
                    AppointmentService.completeAppointment(app);
                }

                if (app.Status__c == 'Cancelled' && oldApp.Status__c != 'Cancelled') {
                    AppointmentService.cancelAppointment(app);
                }
            }
        }
    }
}
```

4. **Utility Bar**

- Quick ‘Recent Items’ action for easy access by the owner.

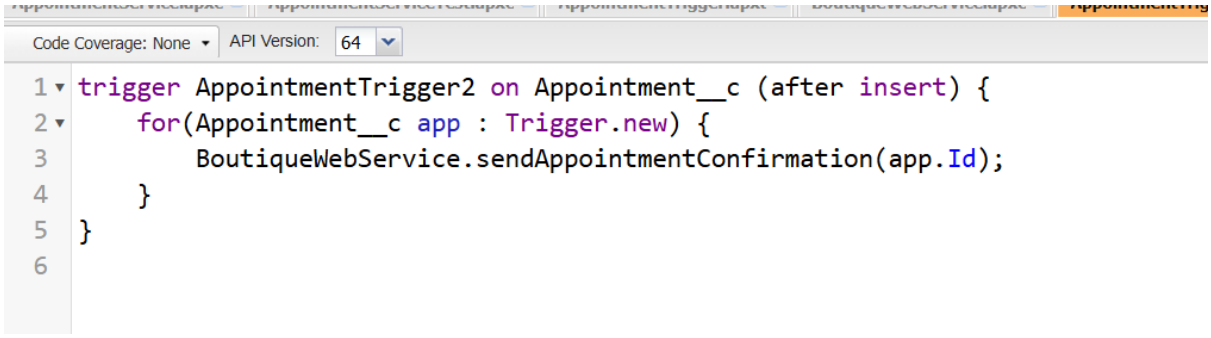


Phase 7: Integration & External Access

Goal: Connect with outside systems.

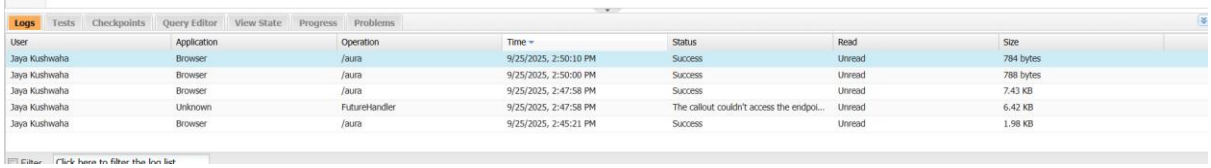
1. **Named Credentials**
    - Store insurance API credentials securely.

2. **External Services**
    - Connect Salesforce to external systems like **email services** using **API**. Also lets us use feature like email when an appointment is created. In this, I've use REST API to notify the customer whenever the appointment is created.



```
Code Coverage: None  API Version: 64

1  trigger AppointmentTrigger2 on Appointment__c (after insert) {
2      for(Appointment__c app : Trigger.new) {
3          BoutiqueWebService.sendAppointmentConfirmation(app.Id);
4      }
5  }
6
```

```
AppointmentService.apxc | AppointmentServiceTest.apxc | AppointmentTrigger.apxt | BoutiqueWebService.apxc | AppointmentTrigger2.apxt
Code Coverage: None  API Version: 64

1  public with sharing class BoutiqueWebService {
2      @future(callout=true)
3      public static void sendAppointmentConfirmation(Id appointmentId) {
4          Appointment__c app = [SELECT Id, Customer__r.Email, Appointment_Date__c FROM Appointment__c WHERE Id = :appointmentId];
5
6          HttpRequest req = new HttpRequest();
7          req.setEndpoint('callout:Boutique_Email_API/send'); // Named Credential
8          req.setMethod('POST');
9          req.setHeader('Content-Type', 'application/json');
10         req.setBody(JSON.serialize(
11             new Map<String, Object>{
12                 'email' => app.Customer__r.Email,
13                 'date' => app.Appointment_Date__c,
14                 'message' => 'Your appointment is confirmed!'
15             }
16         ));
17
18         Http http = new Http();
19         HttpResponse res = http.send(req);
20     }
21 }
22
```



Logs | Tests | Checkpoints | Query Editor | View State | Progress | Problems

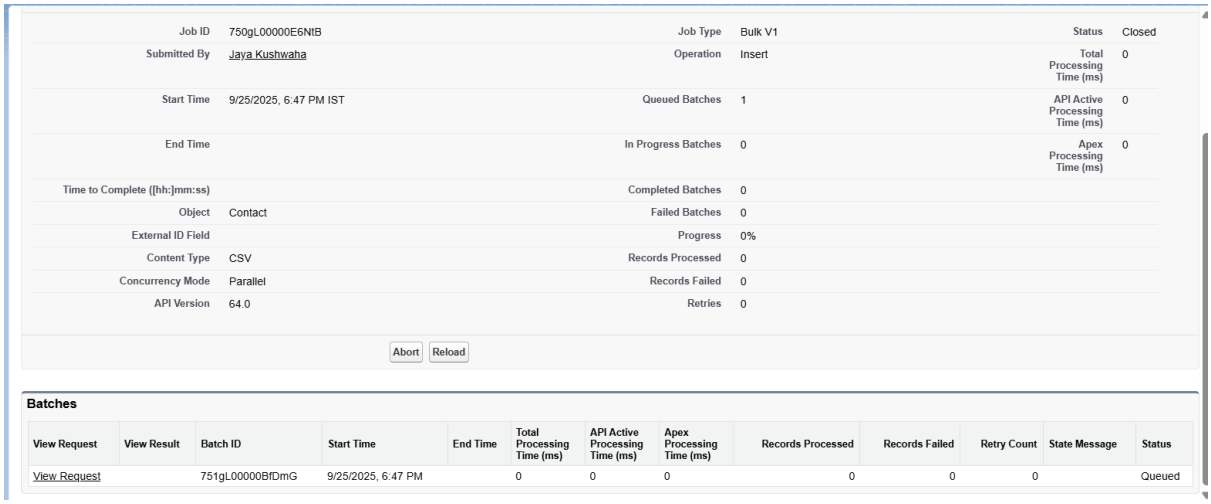
User	Application	Operation	Time	Status	Read	Size
Jaya Kushwaha	Browser	/aura	9/25/2025, 2:50:10 PM	Success	Unread	784 bytes
Jaya Kushwaha	Browser	/aura	9/25/2025, 2:50:00 PM	Success	Unread	788 bytes
Jaya Kushwaha	Browser	/aura	9/25/2025, 2:47:58 PM	Success	Unread	7.43 KB
Jaya Kushwaha	Unknown	FutureHandler	9/25/2025, 2:47:58 PM	The callout couldn't access the endpoi...	Unread	6.42 KB
Jaya Kushwaha	Browser	/aura	9/25/2025, 2:45:21 PM	Success	Unread	1.98 KB

Phase 8: Data Management & Deployment

Goal: Manage data and move changes.

1. **Data Import Wizard**

   - Import 50 demo Customer records from the Data Import Wizard.



Job ID	750gL00000E6NtB	Job Type	Bulk V1	Status	Closed
Submitted By	Jaya Kushwaha	Operation	Insert	Total Processing Time (ms)	0
Start Time	9/25/2025, 6:47 PM IST	Queued Batches	1	API Active Processing Time (ms)	0
End Time		In Progress Batches	0	Apex Processing Time (ms)	0
Time to Complete ([hh:]mm:ss)		Completed Batches	0		
Object	Contact	Failed Batches	0		
External ID Field		Progress	0%		
Content Type	CSV	Records Processed	0		
Concurrency Mode	Parallel	Records Failed	0		
API Version	64.0	Retries	0		

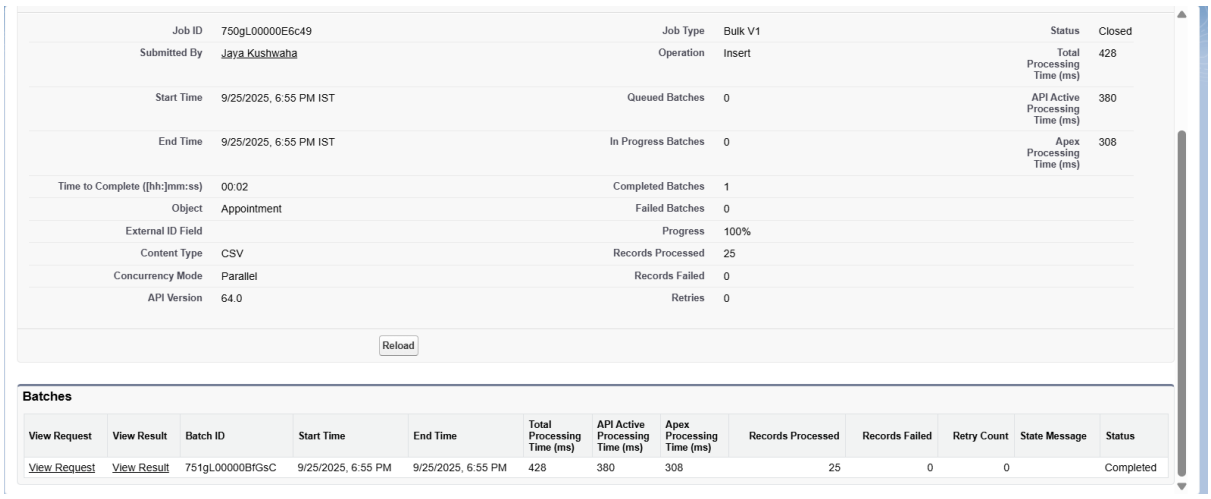
Abort Reload

Batches

View Request	View Result	Batch ID	Start Time	End Time	Total Processing Time (ms)	API Active Processing Time (ms)	Apex Processing Time (ms)	Records Processed	Records Failed	Retry Count	State Message	Status
View Request		751gL00000BfDmG	9/25/2025, 6:47 PM		0	0	0	0	0	0		Queued

2. **Data Loader**

   - Import bulk Appointments from the Data Import Wizard.



Job ID	750gL00000E6c49	Job Type	Bulk V1	Status	Closed
Submitted By	Jaya Kushwaha	Operation	Insert	Total Processing Time (ms)	428
Start Time	9/25/2025, 6:55 PM IST	Queued Batches	0	API Active Processing Time (ms)	380
End Time	9/25/2025, 6:55 PM IST	In Progress Batches	0	Apex Processing Time (ms)	308
Time to Complete ([hh:]mm:ss)	00:02	Completed Batches	1		
Object	Appointment	Failed Batches	0		
External ID Field		Progress	100%		
Content Type	CSV	Records Processed	25		
Concurrency Mode	Parallel	Records Failed	0		
API Version	64.0	Retries	0		

Reload

Batches

View Request	View Result	Batch ID	Start Time	End Time	Total Processing Time (ms)	API Active Processing Time (ms)	Apex Processing Time (ms)	Records Processed	Records Failed	Retry Count	State Message	Status
View Request	View Result	751gL00000BfGsC	9/25/2025, 6:55 PM	9/25/2025, 6:55 PM	428	380	308	25	0	0		Completed

3. **VS Code & SFDX**

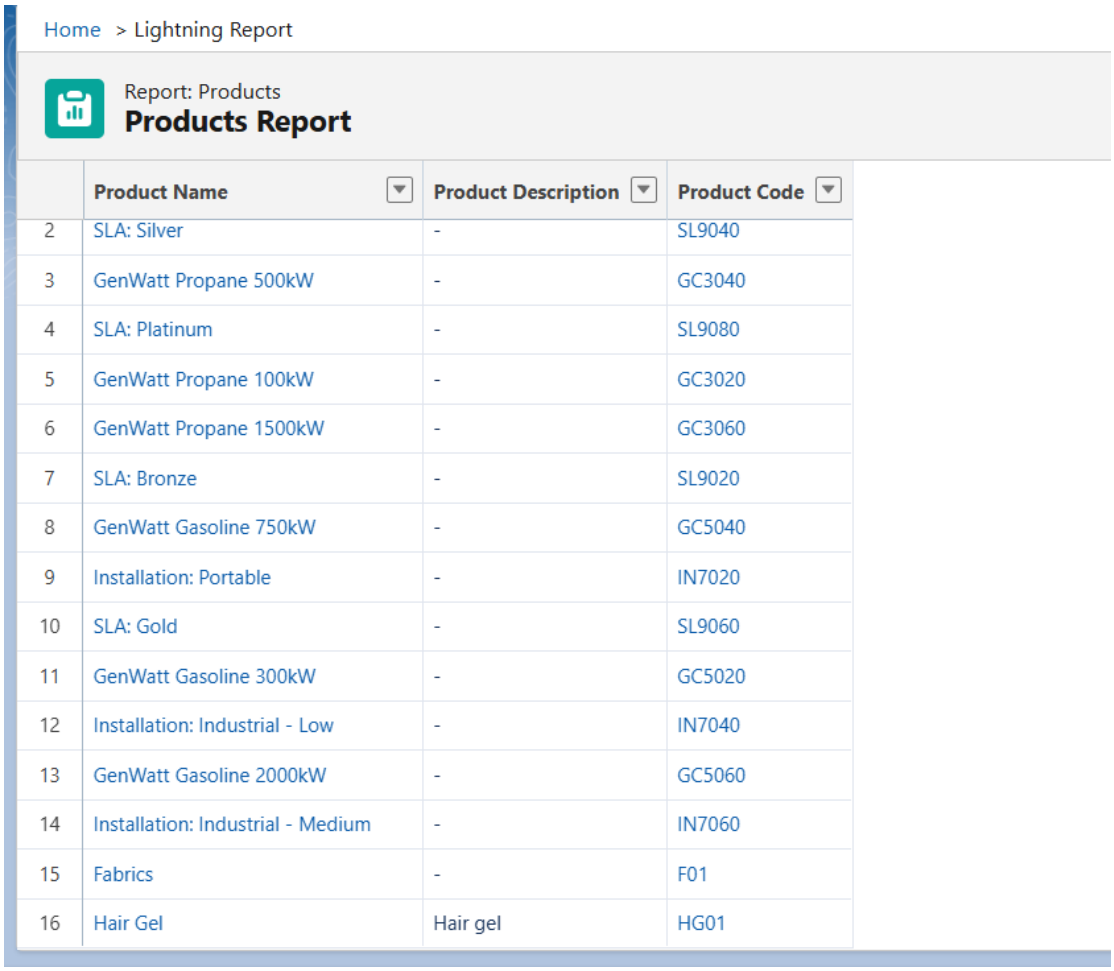
Dev-friendly deployments and user-friendly platforms such as VS code is used to integrate the apex programming and other work into the application so that it is seamless.

Phase 9: Reporting, Dashboards & Security Review

Goal: Monitor business & secure data.

1. **Reports**

   Given is a report that shows the products in stock.



	Product Name	Product Description	Product Code
2	SLA: Silver	-	SL9040
3	GenWatt Propane 500kW	-	GC3040
4	SLA: Platinum	-	SL9080
5	GenWatt Propane 100kW	-	GC3020
6	GenWatt Propane 1500kW	-	GC3060
7	SLA: Bronze	-	SL9020
8	GenWatt Gasoline 750kW	-	GC5040
9	Installation: Portable	-	IN7020
10	SLA: Gold	-	SL9060
11	GenWatt Gasoline 300kW	-	GC5020
12	Installation: Industrial - Low	-	IN7040
13	GenWatt Gasoline 2000kW	-	GC5060
14	Installation: Industrial - Medium	-	IN7060
15	Fabrics	-	F01
16	Hair Gel	Hair gel	HG01

2. **Dashboards**

Dashboard for product availability is created for easy access of the details provided in the report.