Republic of the Philippines
BULACAN STATE UNIVERSITY
College of Information and Communications Technology
City of Malolos, Bulacan

HANDSMEN THREADS:

ELEVATING THE ART OF SOPHISTICATION IN MEN'S FASHION

Submitted by:

Aira Joy A. Valencia

Project Overview

HandsMen Threads, a dynamic organization in the fashion industry, has initiated a Salesforce project aimed at transforming its data management processes and enhancing customer relationship management. The project involves the creation of a comprehensive CRM system with a data model designed to store all relevant business information, ensuring a seamless flow of data across the organization. Key features of the system include automated order confirmations to improve customer communication, a dynamic loyalty program that updates customer rewards based on purchase history, proactive stock alerts to prevent inventory shortages, and scheduled bulk order updates to maintain accurate financial and inventory records. By integrating these processes, the CRM addresses critical business needs such as operational efficiency, accurate decision-making, and improved customer engagement.

Objectives

The objectives of this Salesforce CRM project are centered on improving the overall efficiency and effectiveness of HandsMen Threads' business operations. By leveraging Salesforce's robust tools and automation capabilities, the system aims to streamline workflows, enhance customer engagement, and ensure the accuracy and reliability of critical business data.

The objectives of the project are as follows:

1. Maintain accurate and consistent business data through validation rules and user interface controls.
2. Streamline operations with automated order confirmations, proactive stock alerts, and scheduled bulk order updates.

3. Implement a dynamic loyalty program that updates customer rewards based on purchase history.
4. Reduce manual tasks and ensure timely monitoring of inventory and order statuses.
5. Provide reliable and organized data to facilitate strategic business decisions.

Project Phases

Phase 1: Requirement Analysis & Planning

- **Understanding Business Requirements:** The CRM addresses manual tracking of inventory, delayed order notifications, and low customer engagement.
- **Defining Project Scope and Objectives:** The system includes custom objects for Customers, Products, Inventory, and Orders; automation for order confirmations, stock alerts, and loyalty updates.
- **Data Model Description:**

Object	**Key Fields**	**Relationships**
Handsmen Customer	Customer Name, Email, Phone, Loyalty Status, Total Purchases	Linked to Orders
Handsmen Product	Product Name, SKU, Price, Stock Quantity	Linked to Inventory and Orders
Handsmen Order	OrderNumber, Handsment Product, Handsmen Customer, Status, Quantity,	Linked to Customer, Product, and Inventory

	Total Amount, Customer Email	
Inventory	Handsmen Product, Stock Quantity, Warehouse	Linked to Product and Orders
Marketing Campaigns		

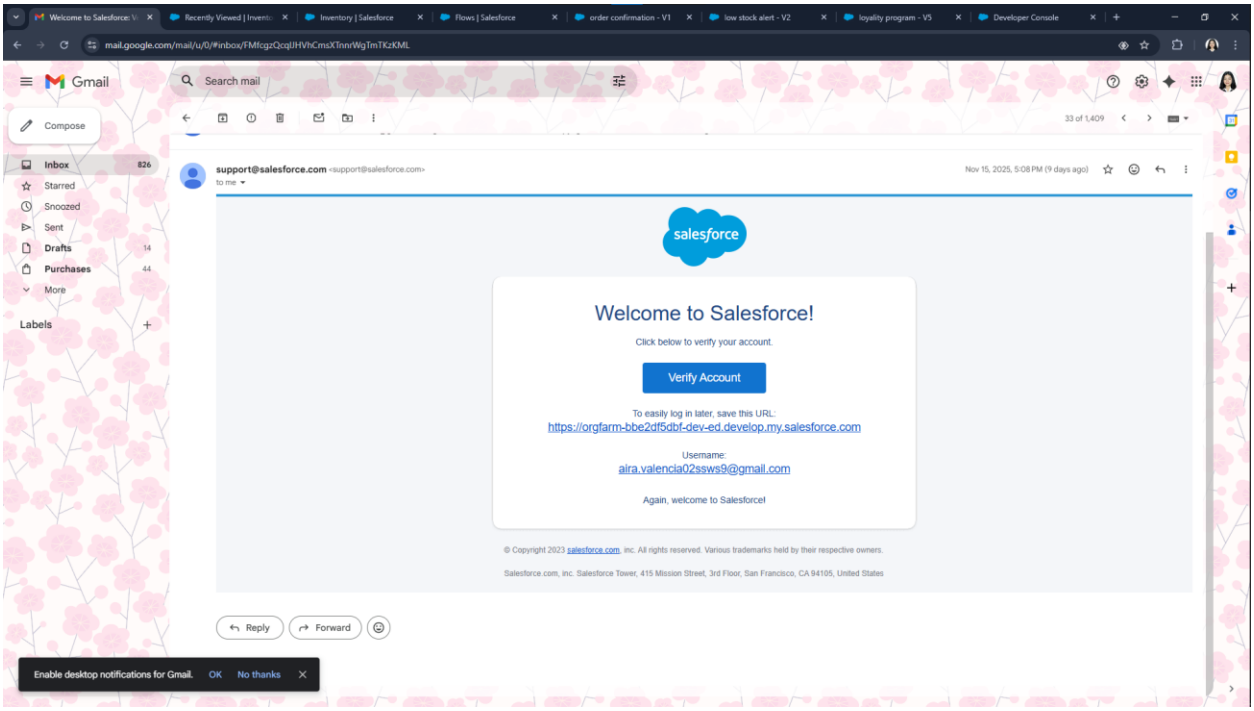
- **Stakeholders Mapping:** Inventory Manager, Sales Team, Admin, IT Support.
- **Execution Roadmap:** Timeline covering Planning → Development → Testing → Deployment.

Phase 2: Salesforce Development - Backend & Configurations

During this phase, the Salesforce CRM system was developed to meet the business requirements of HandsMen Threads. The development focused on customizing objects, fields, validation rules, automation, and backend logic to ensure smooth operations, accurate data, and improved customer engagement.

1. Environment Setup & DevOps Workflow

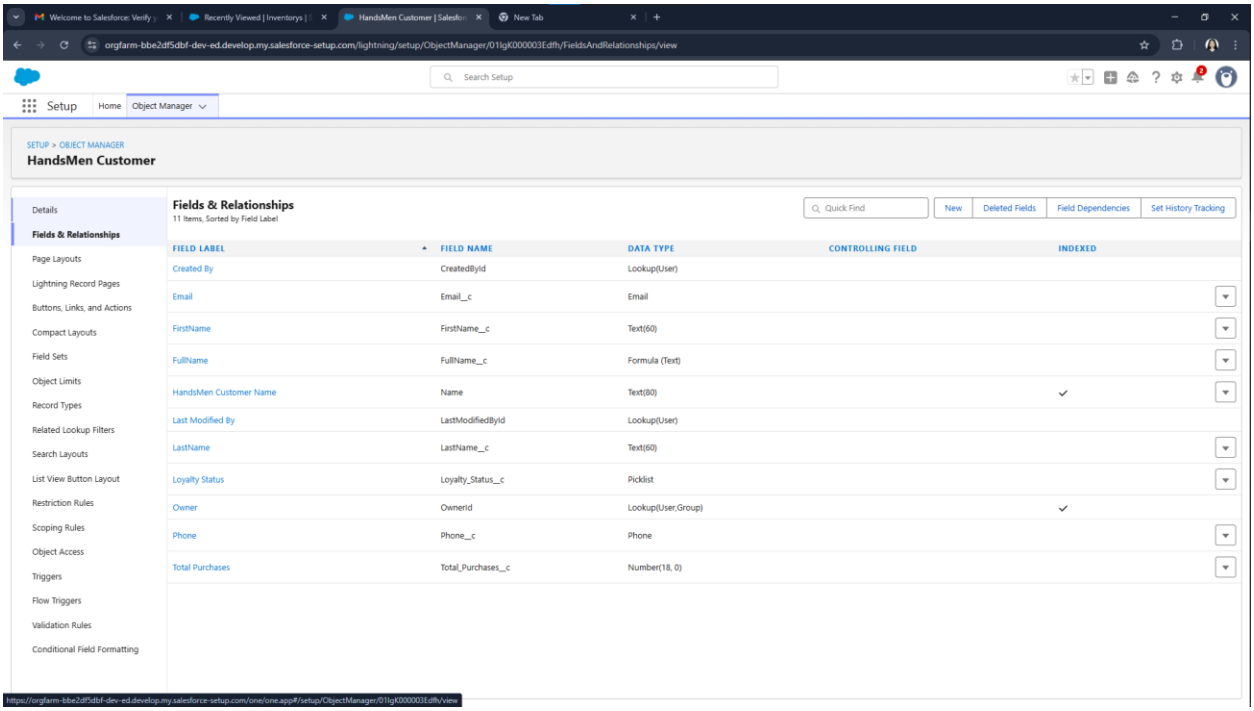
Salesforce Developer Org was used for development and testing. Sandbox environment prepared for configuration and testing before production deployment. Change sets and deployment plan established to move customizations safely to production.



2. Custom Objects and Fields

Figure 1

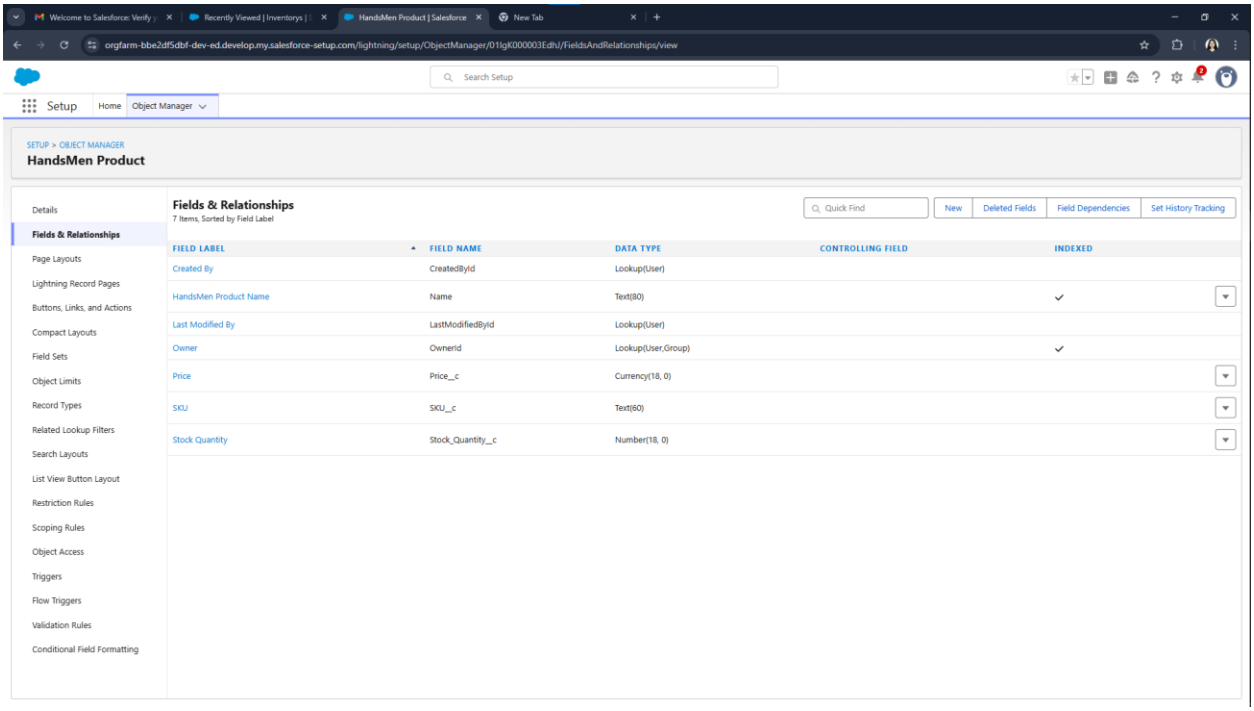
Object Manager: Handsmen Customer



The HandsMen Customer object stores all relevant customer information, including personal details, contact information, total purchase, and loyalty status. This object is linked to Orders to track transactions and supports the dynamic loyalty program by updating rewards based on total purchases. Key Fields: Name, Email, Total Purchases, Loyalty Status

Figure 2

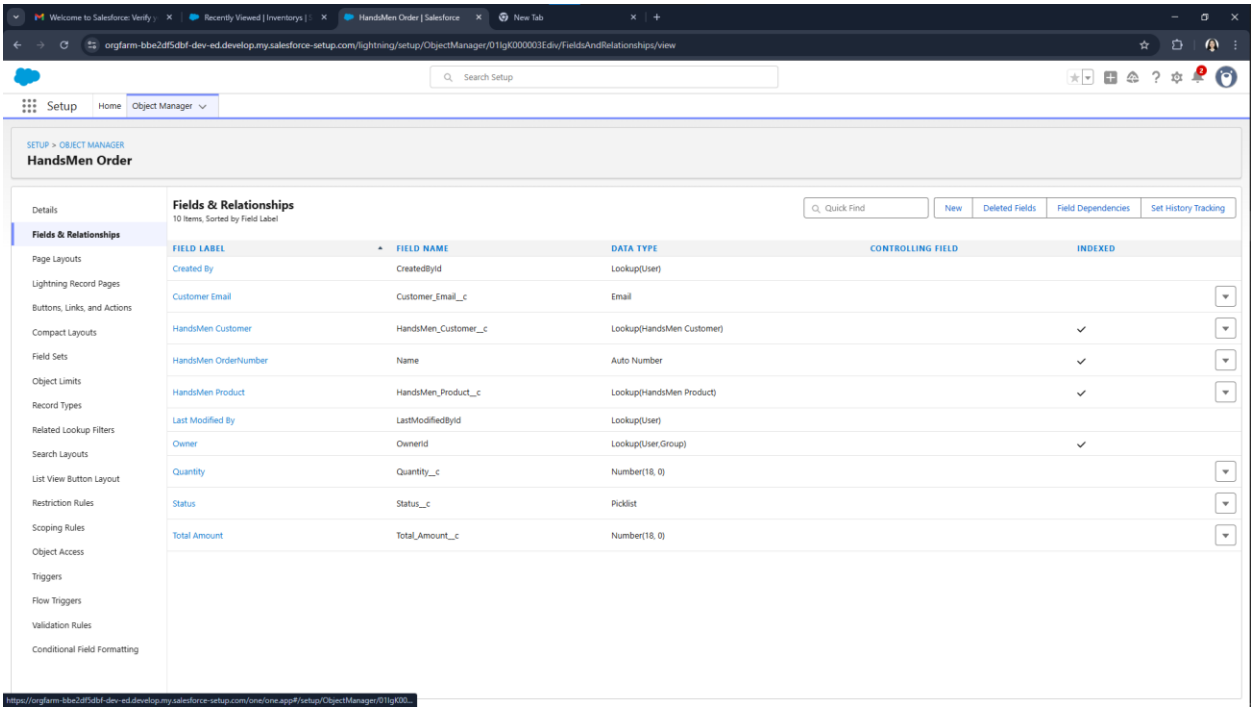
Object Manager: Handsmen Product



The HandsMen Product object contains details of all products available in the store. It tracks product names, prices, SKU, and stock quantity. Each product is linked to Inventory for stock management and Orders to monitor sales. Key Fields: Product Name, Price, SKU, Stock Quantity.

Figure 3

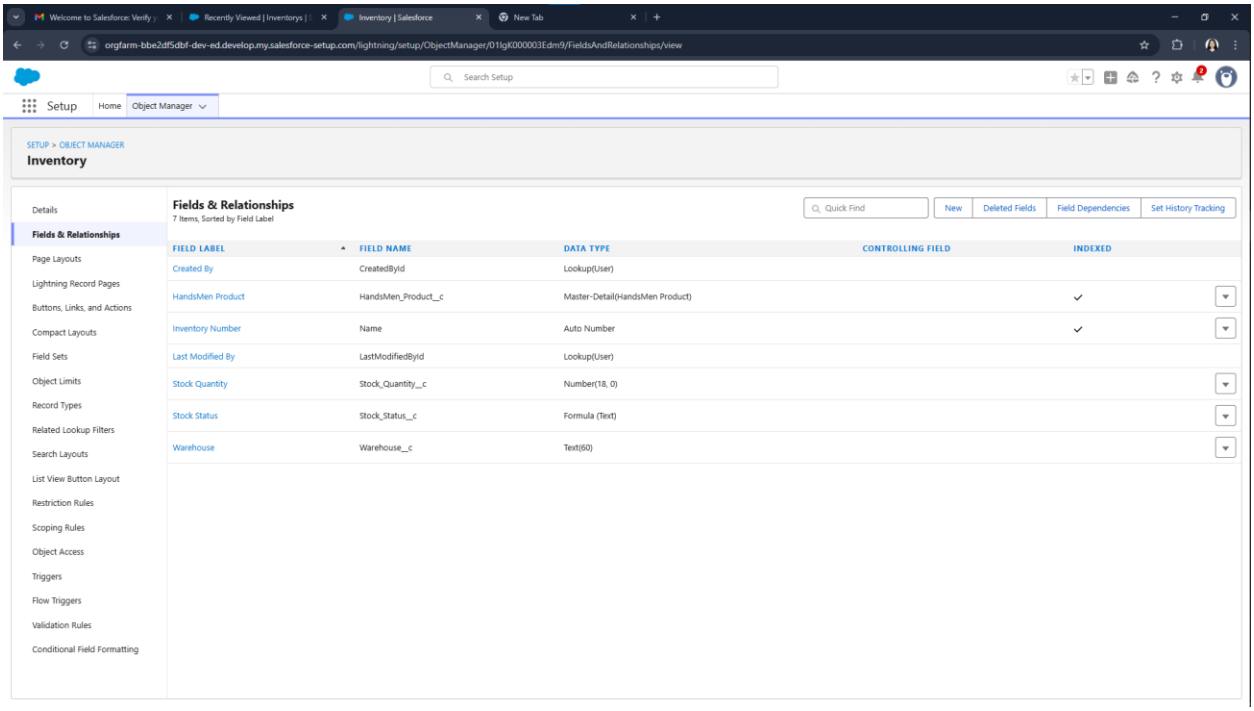
Object Manager: Handsmen Order



The HandsMen Order object records all customer orders, including order number, customer name, ordered products, quantity, total amount, and order status. This object integrates with Flows and Apex triggers to automatically calculate total amounts and trigger order confirmation emails. Key Fields: Order Number, Customer, Product, Quantity, Total Amount, Status.

Figure 4

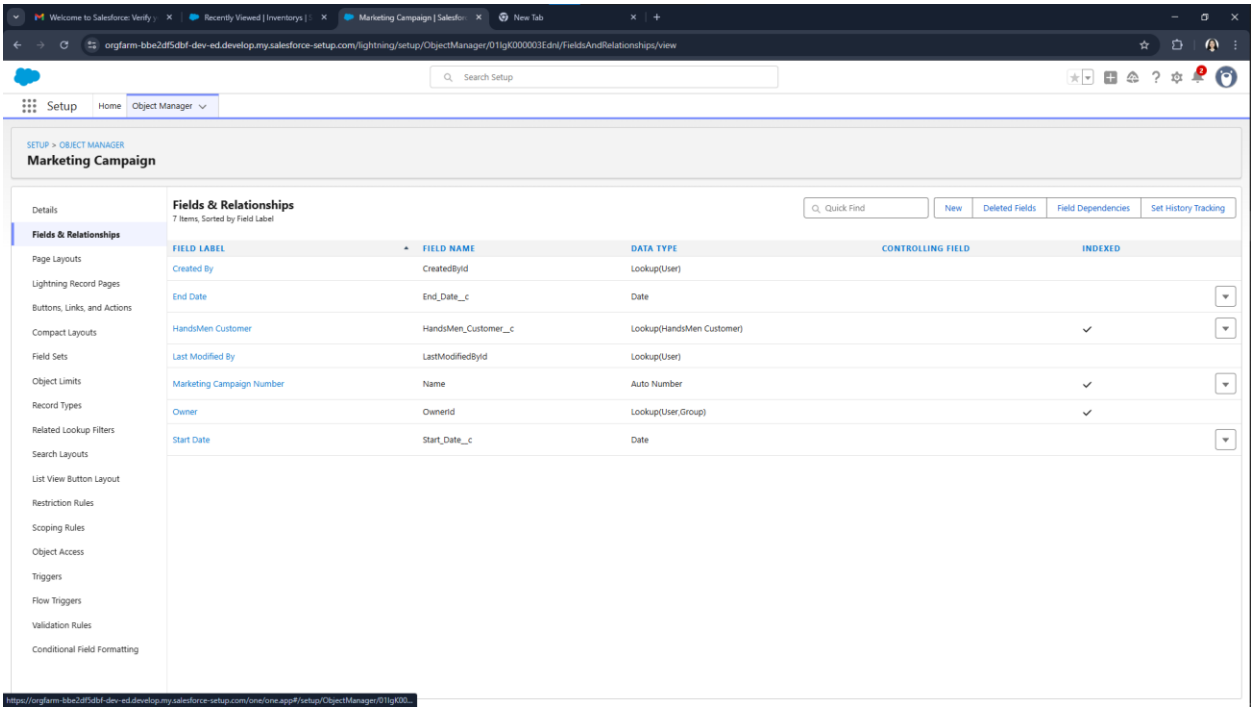
Object Manager: Inventory



The Inventory object manages the stock levels of all products. It monitors stock quantities, generates low-stock alerts via automation, and ensures the availability of products for fulfilling orders. Each inventory record is linked to a HandsMen Product. Key Fields: Inventory number, Product, Stock Quantity, Stock Status.

Figure 5

Object Manager: Marketing Campaigns



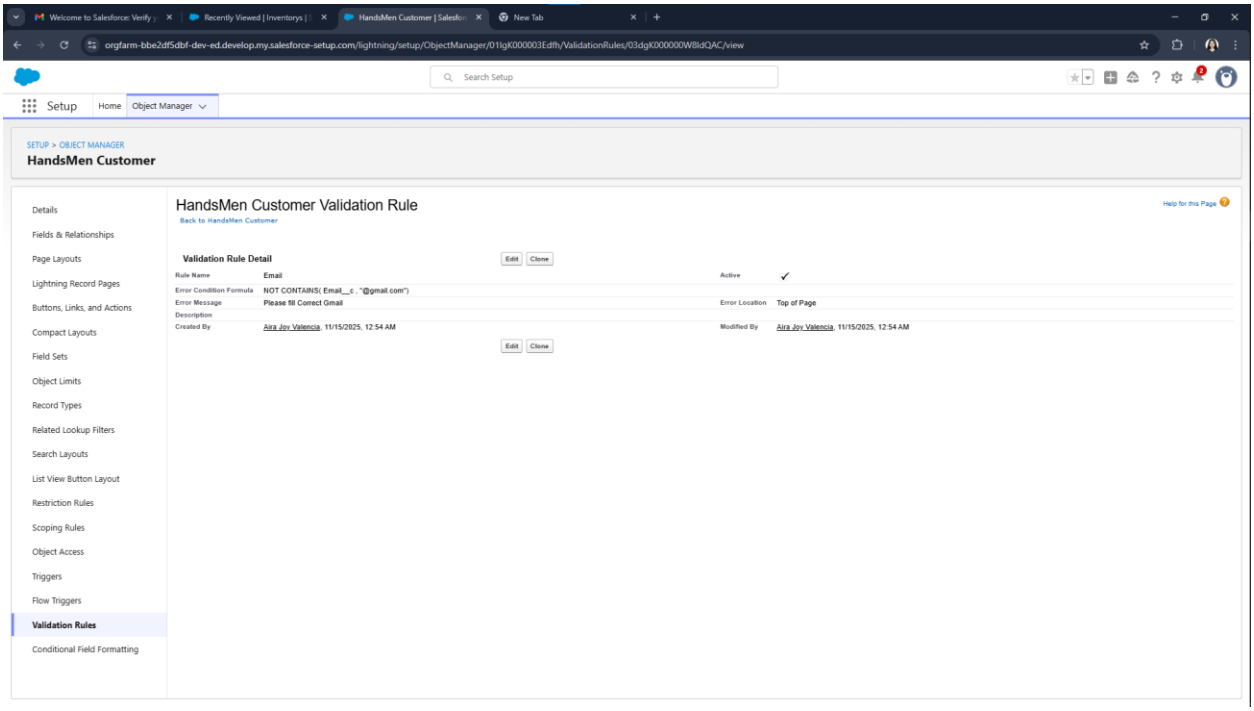
The Marketing Campaigns object tracks promotional activities and campaigns targeted at customers. It stores customer name, marketing campaign number, and start date.

Key Fields: Customer Name, Start Date, End Date.

3. Validation Rules

Figure 6

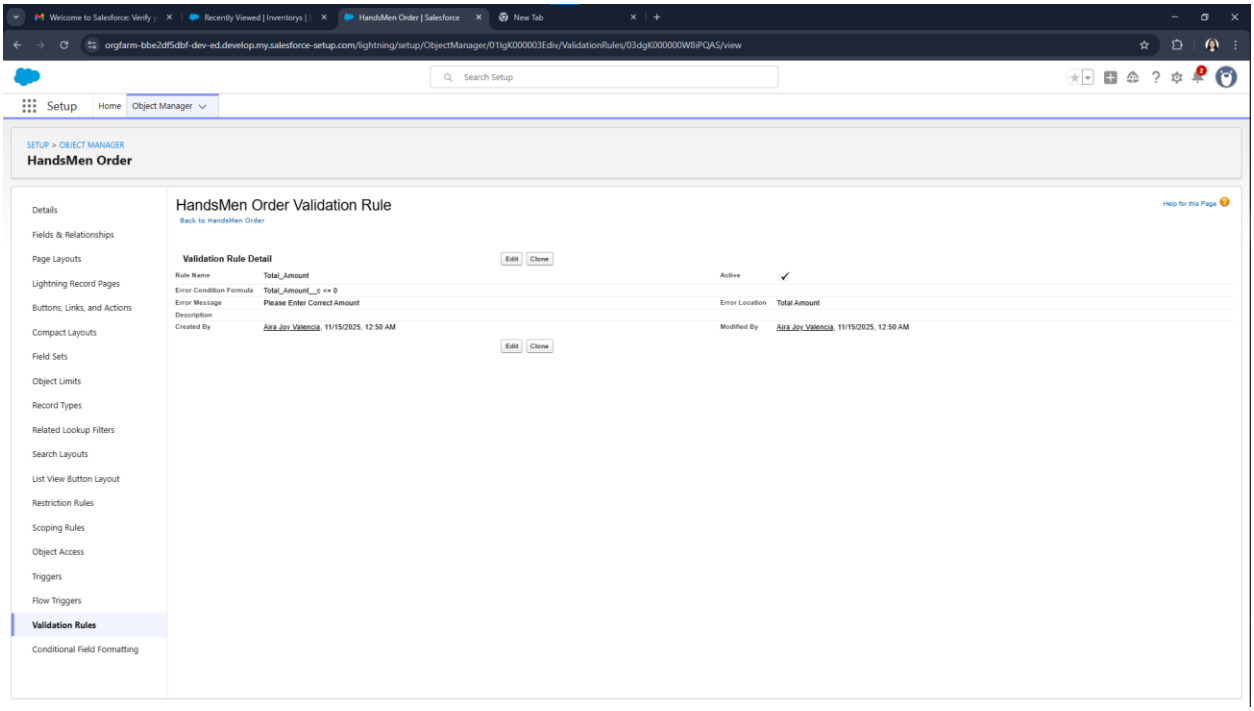
Customer Email Validation Rule



Ensures that the email address entered for a customer follows a valid email format. This prevents incorrect or incomplete email entries, enabling reliable communication with customers.

Figure 7

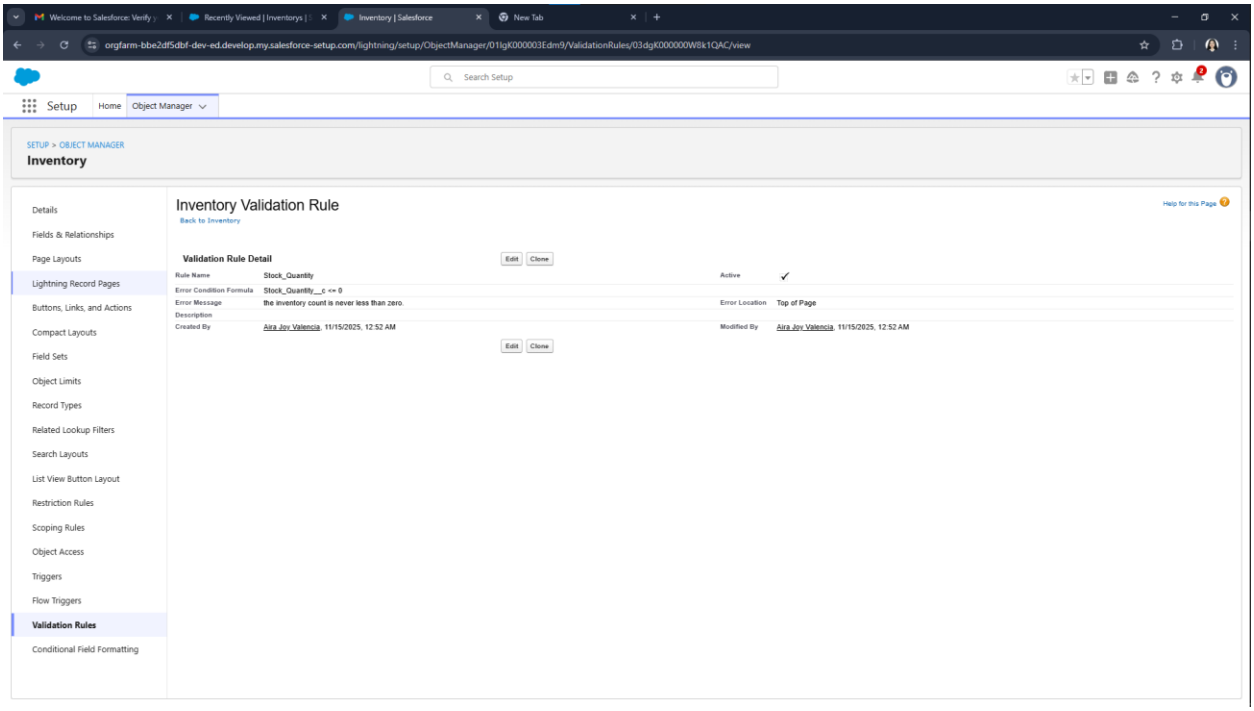
Handsmen Order Validation Rule



Ensures that the Total Amount field in an order is correctly calculated and not left blank. This guarantees accurate financial data for orders and prevents manual entry errors.

Figure 8

Inventory Validation Rule

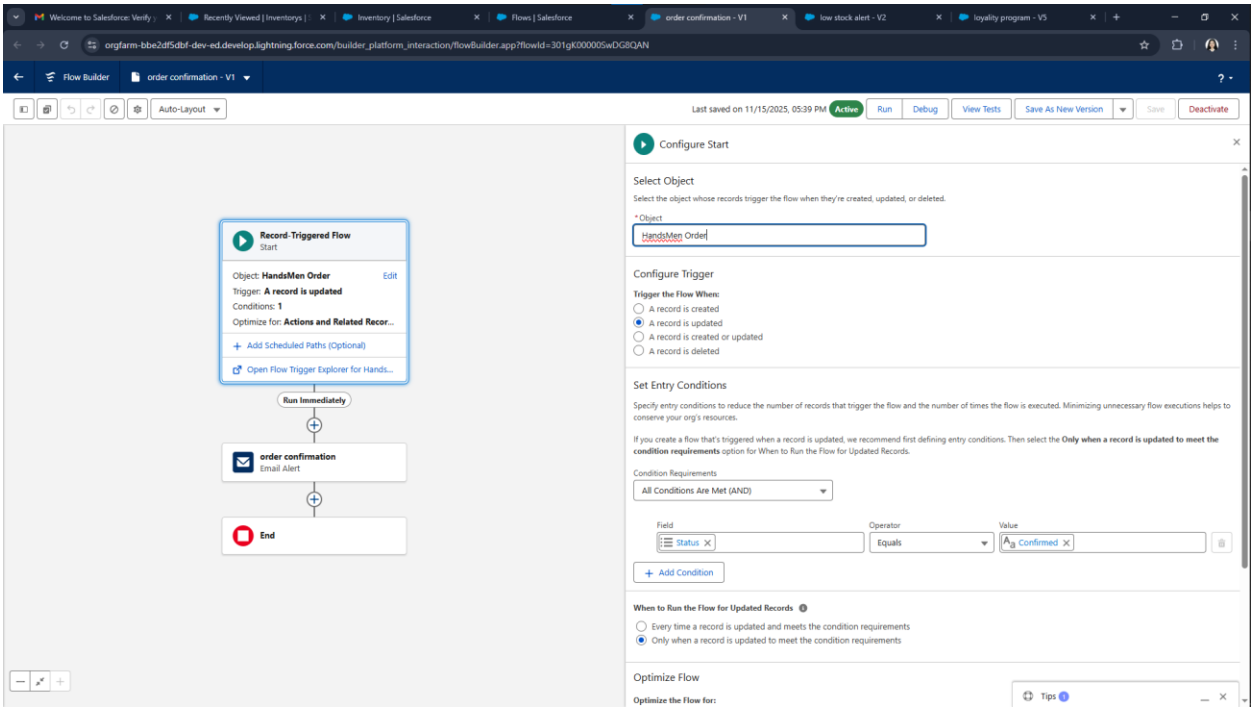


Prevents the Stock Quantity from being set to a negative value. This ensures accurate inventory tracking and avoids discrepancies in stock management.

4. Automation - Flows and Process Builder

Figure 9

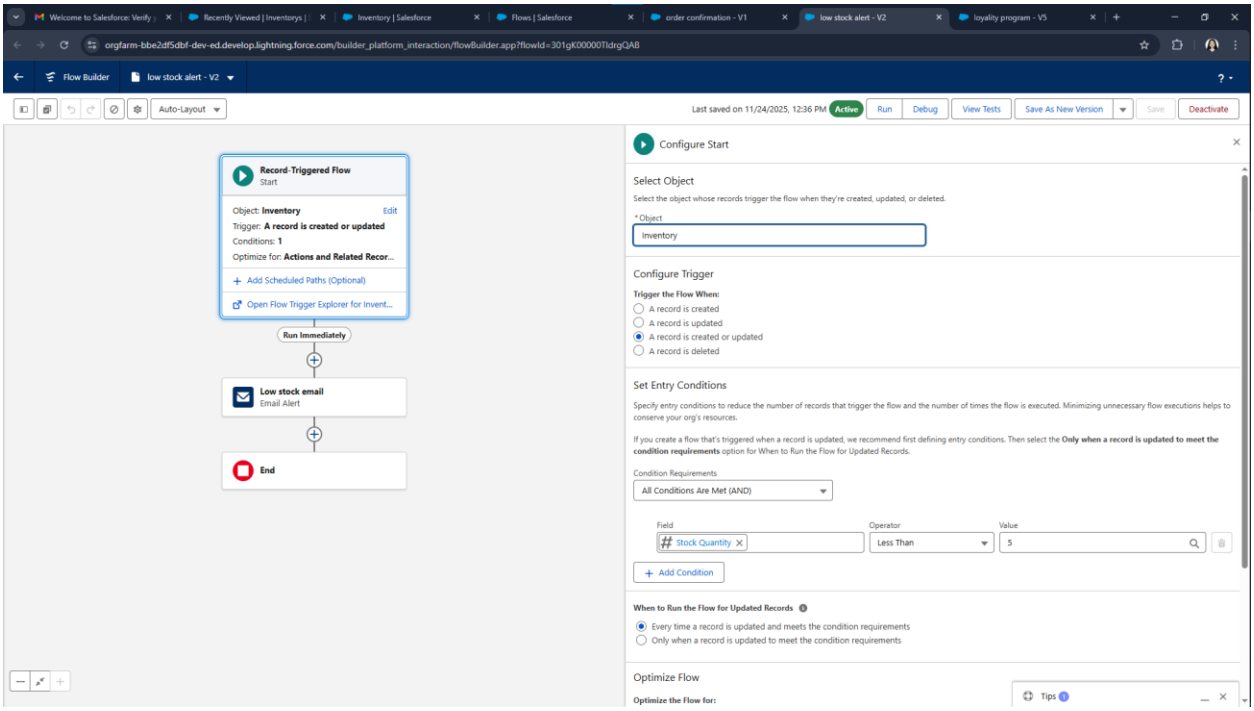
Order Confirmation Email Flow



Automatically sends an email to the customer once a HandsMen Order is confirmed. This flow improves customer engagement by keeping them informed about their purchase status.

Figure 10

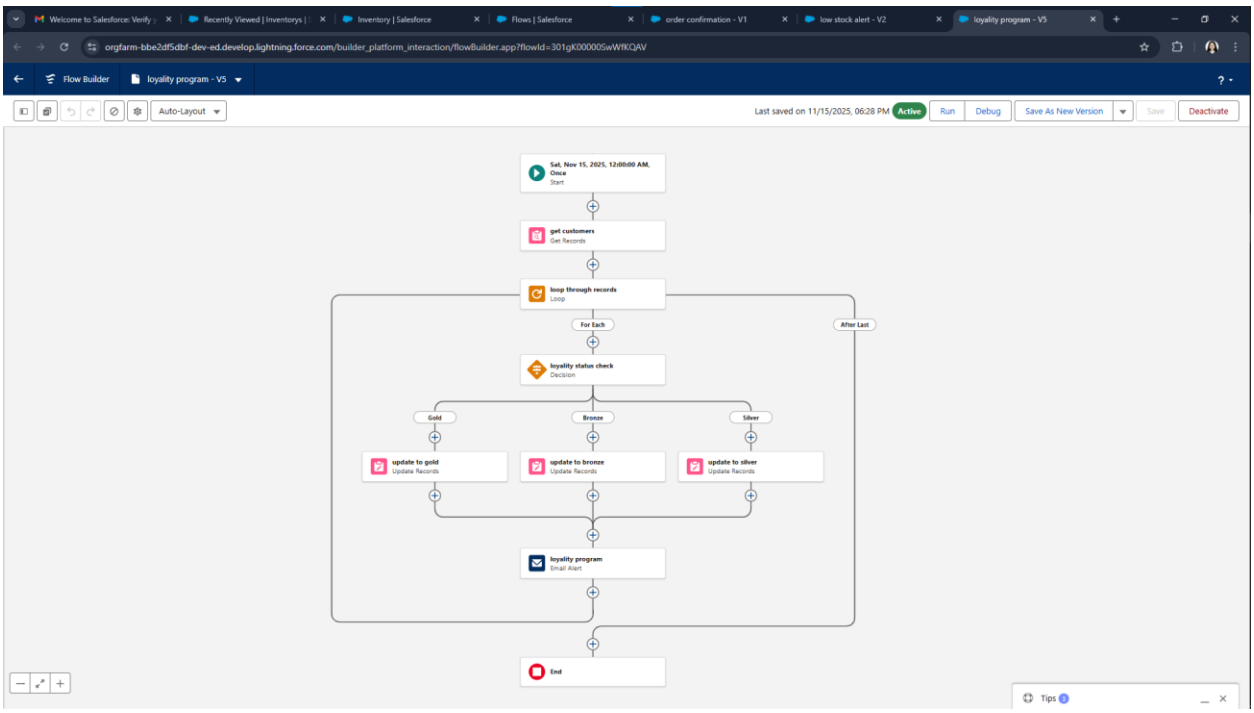
Low Stock Alert Email – Record Triggered Flow



Triggers an email notification to the inventory team when the stock quantity of a product falls below a set threshold (e.g., 5 units). This ensures timely restocking and prevents stockouts.

Figure 11

Loyalty Program Email Flow

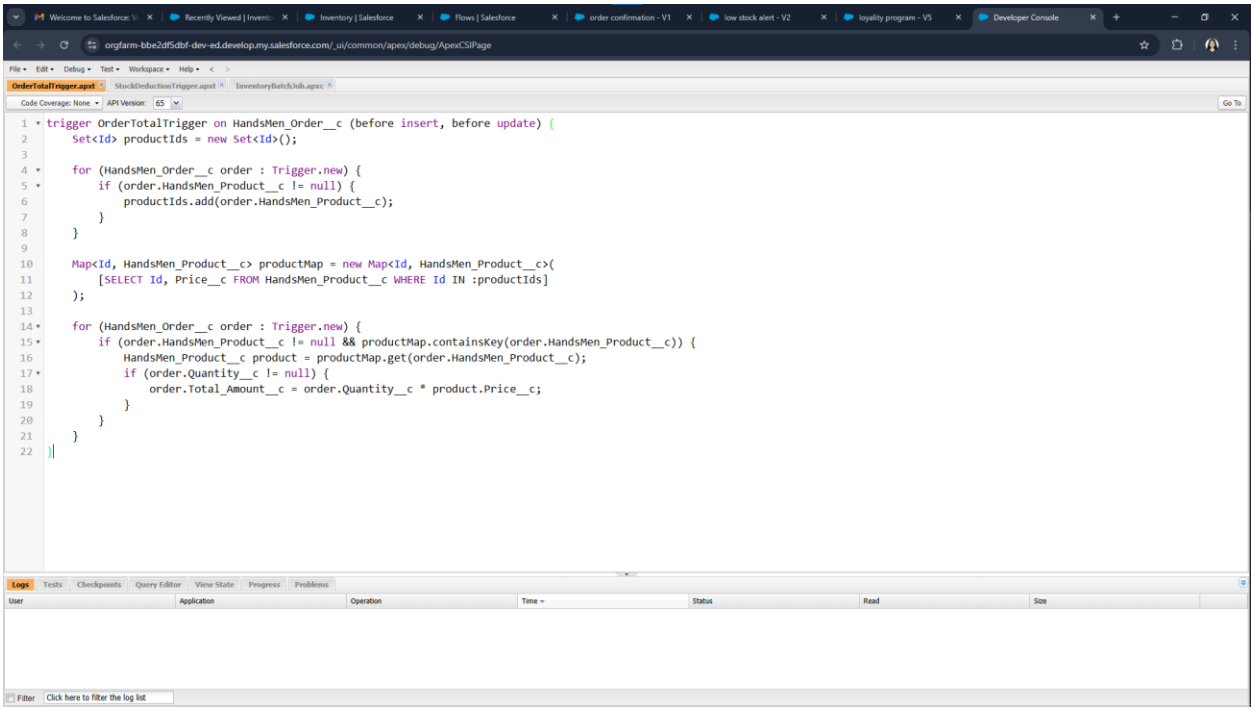


Automatically sends a notification to the customer when their loyalty status changes based on accumulated purchases. This flow promotes repeat business and rewards loyal customers.

5. Apex Classes and Triggers

Figure 12

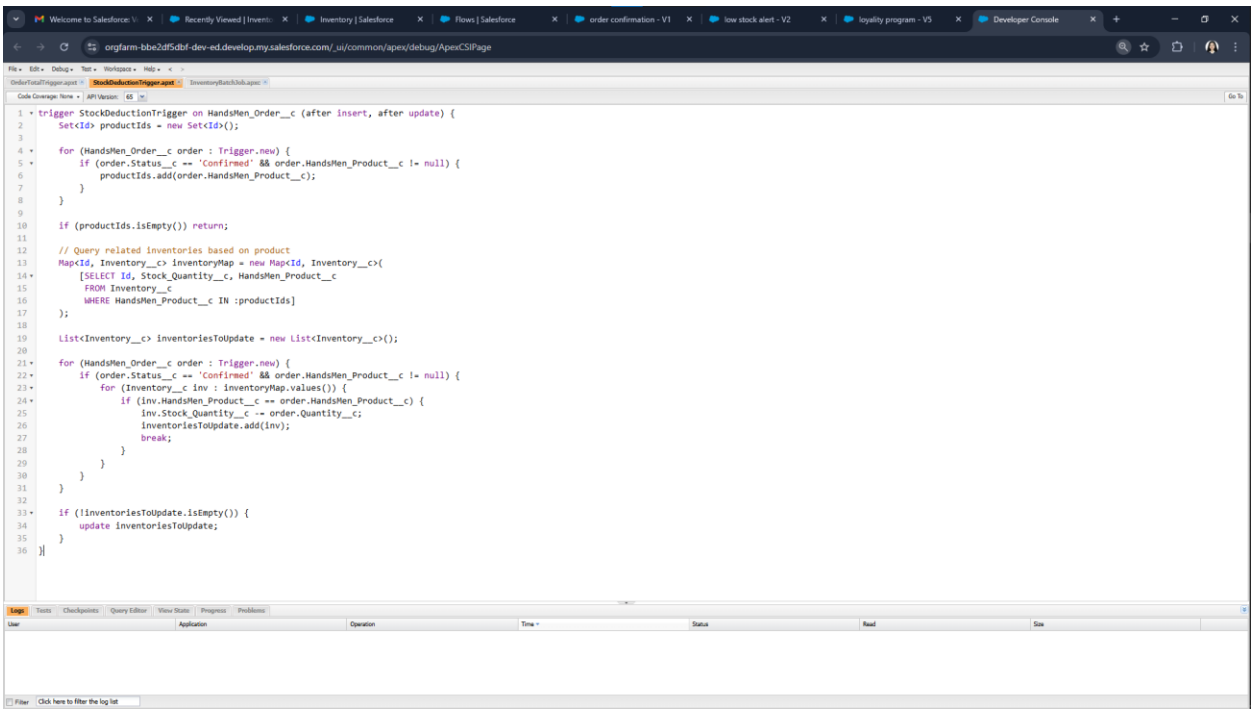
Order Total Trigger



This trigger calculates the Total Amount of a HandsMen Order automatically whenever a new order is created or an existing order is updated. It multiplies the quantity of the ordered product by its price, ensuring accurate financial data without manual calculation.

Figure 13

Stock Deduction Trigger



```
trigger StockDeductionTrigger on HandsMen_Order__c (after insert, after update) {
    Set<Id> productIds = new Set<Id>();

    for (HandsMen_Order__c order : Trigger.new) {
        if (order.Status__c == 'Confirmed' && order.HandsMen_Product__c != null) {
            productIds.add(order.HandsMen_Product__c);
        }
    }

    if (productIds.isEmpty()) return;

    // Query related inventories based on product
    Map<Id, Inventory__c> inventoryMap = new Map<Id, Inventory__c>(
        [SELECT Id, Stock_Quantity__c, HandsMen_Product__c
         FROM Inventory__c
         WHERE HandsMen_Product__c IN :productIds]
    );

    List<Inventory__c> inventoriesToUpdate = new List<Inventory__c>();

    for (HandsMen_Order__c order : Trigger.new) {
        if (order.Status__c == 'Confirmed' && order.HandsMen_Product__c != null) {
            for (Inventory__c inv : inventoryMap.values()) {
                if (inv.HandsMen_Product__c == order.HandsMen_Product__c) {
                    inv.Stock_Quantity__c -= order.Quantity__c;
                    inventoriesToUpdate.add(inv);
                    break;
                }
            }
        }
    }

    if (!inventoriesToUpdate.isEmpty()) {
        update inventoriesToUpdate;
    }
}
```

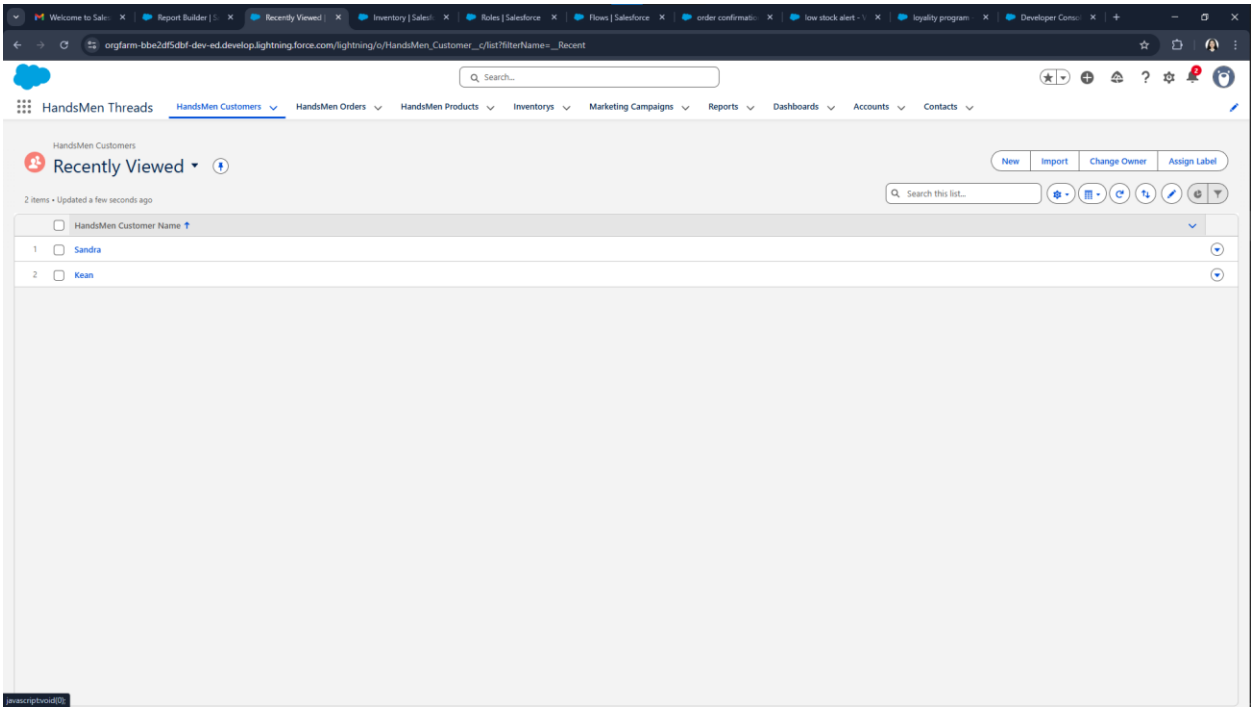
This trigger automatically deducts the quantity of products from the Inventory whenever an order is confirmed. It updates the related inventory records in real-time to reflect the current stock, preventing overselling and supporting accurate stock management.

Phase 3: UI/UX Development & Customization

This phase focused on creating a user-friendly interface for HandsMen Threads' Salesforce CRM, ensuring that users can efficiently interact with records, access key information, and perform daily operations smoothly. The customization included Lightning App setup, page layouts, dynamic forms, reports, dashboards, and user management.

1. Lightning App Setup

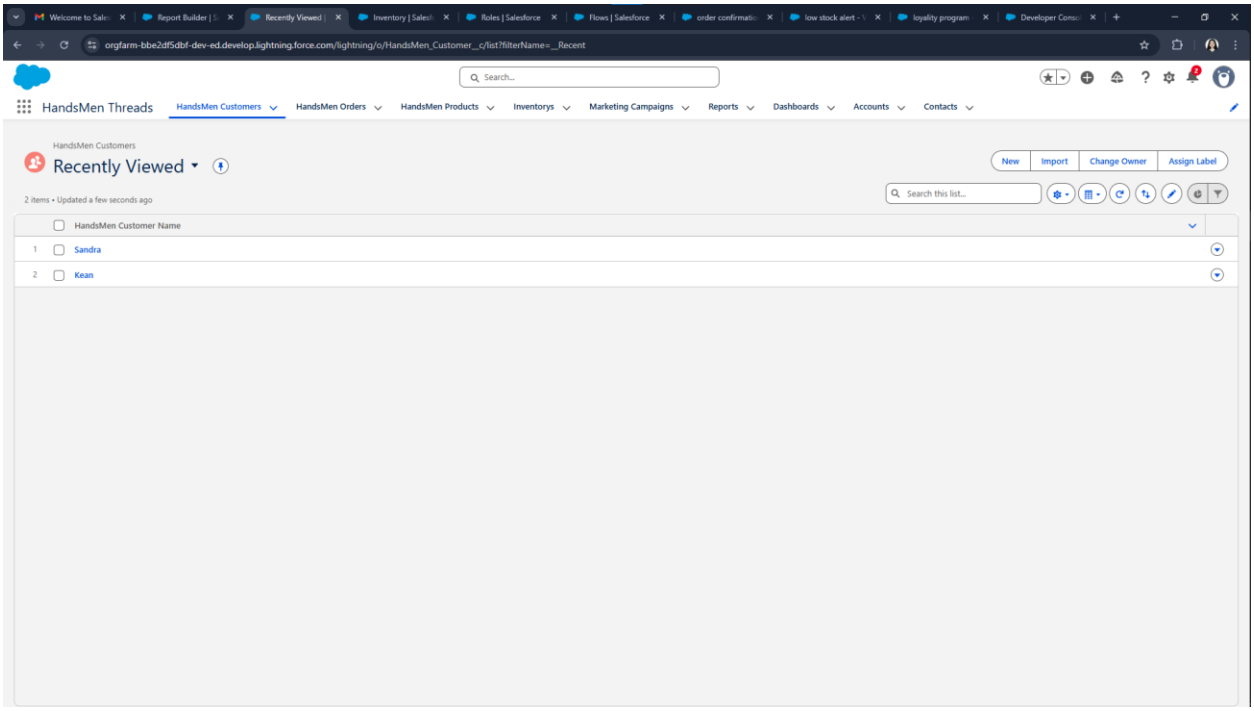
A custom HandsMen Threads App was created in Salesforce App Manager to centralize all objects, automation, and dashboards. The app provides quick access to Customers, Products, Orders, Inventory, and Marketing Campaigns in a single interface.



2. Page Layouts & Dynamic Forms

Figure 14

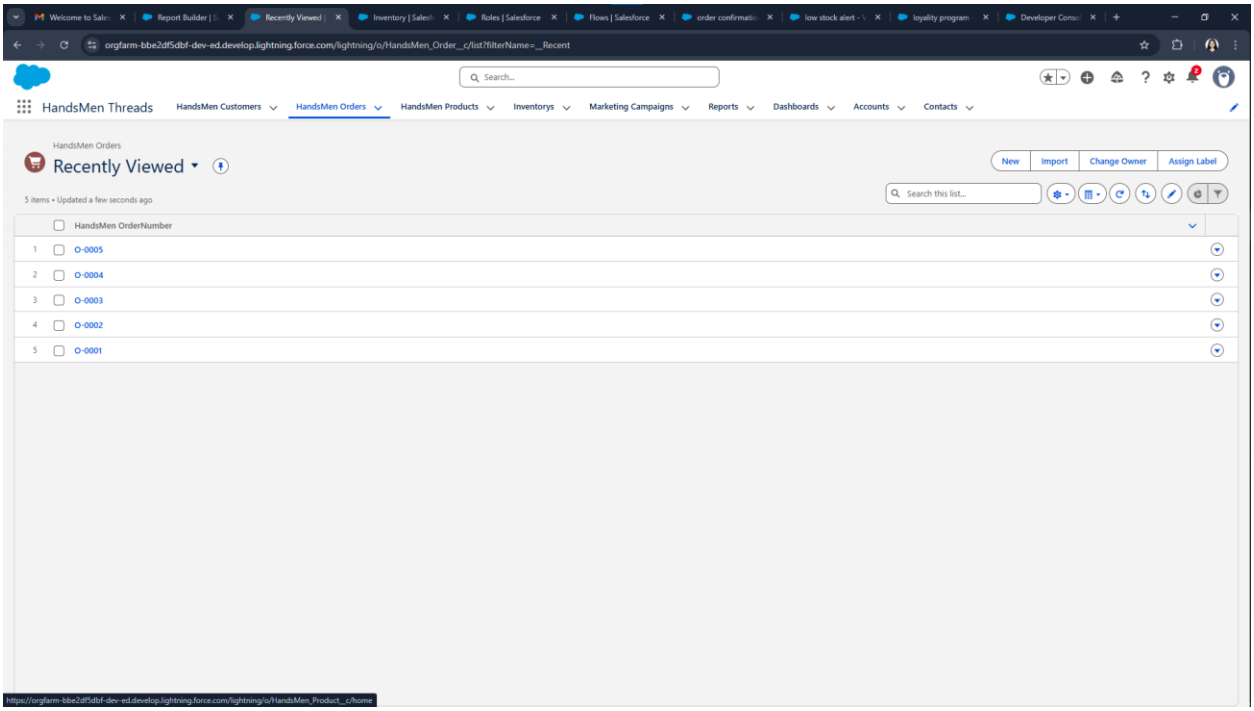
Handsmen Customer Page



Includes all relevant customer information, including contact details, total purchases, and loyalty status. The page layout is designed to provide quick access to customer records and related orders, supporting personalized engagement and loyalty program management.

Figure 15

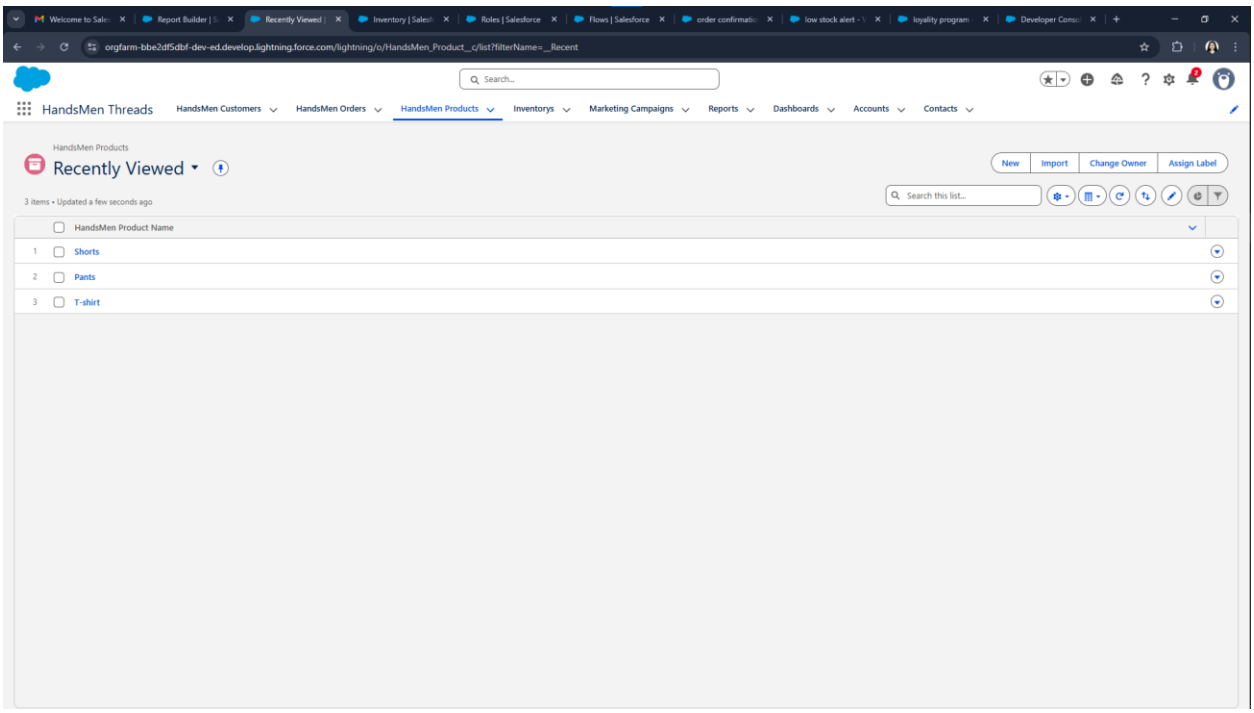
Handsmen Orders Page



Shows all order records with key fields such as order number, customer, product, quantity, total amount, and status. The layout list unique keys of all the orders of customers.

Figure 16

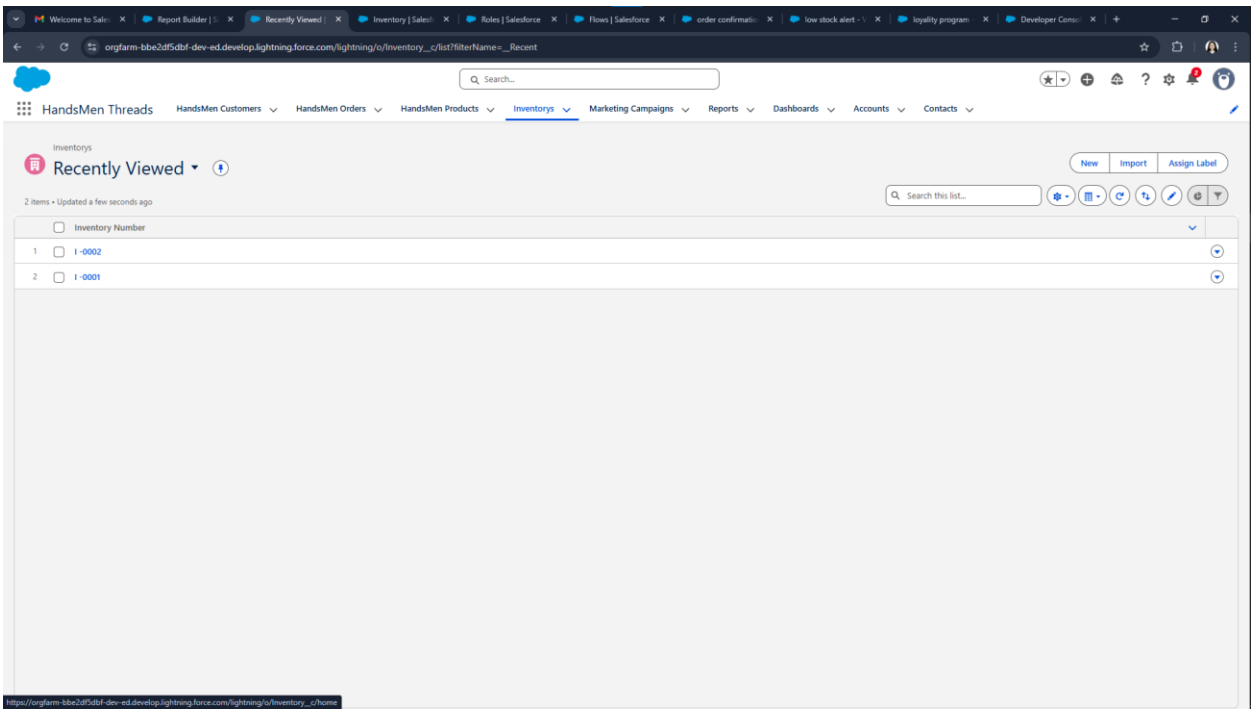
Handsmen Products Page



Displays product name including price and others. The page links to inventory records and orders, enabling quick updates to product details and supporting accurate stock management.

Figure 17

Inventory Page



Shows the stock levels of all products along with last updated information. This page is integrated with low-stock alerts and supports timely restocking to ensure product availability for orders.

Phase 4: Data Migrating Testing and Security

Unit Testing: The functionality of Apex classes and triggers was verified.

For example: Order Total Trigger: Automatically calculates the total amount when creating or updating orders.

Stock Deduction Trigger: Automatically reduces inventory when an order is confirmed.

Flow Testing: All automated flows - Order Confirmation Email, Low-Stock Alert, and Loyalty Program Email - were tested through the system by creating sample records, as demonstrated in the video.

Record Validation: Validation rules for Customer Email, Inventory Stock, and Order Total were checked in real-time during the demo, showing that invalid entries are blocked.

> *Note: Testing results are visible in the project demo video, which validates the c orrectness of triggers, flows, and validation rules.*

Phase 5: Deployment, Documentation & Maintenance

The final phase of the HandsMen Threads Salesforce CRM project focused on deploying the system, ensuring proper documentation, and establishing strategies for ongoing maintenance. The CRM was developed and tested in a Salesforce Developer Org, with deployment to production planned via Change Sets or other Salesforce deployment tools to ensure a smooth transition without disrupting business operations. All custom objects, fields, validation rules, automation flows, and Apex triggers have been documented, with accompanying screenshots to guide future administrators. Testing of flows, triggers, and validation rules is referenced in the project demo

video, providing visual proof of correct functionality. For system maintenance, administrators can monitor key processes such as orders, inventory levels, and loyalty program updates, review logs, and validate automation. The CRM is designed to be scalable, with potential future enhancements including the creation of reports and dashboards for analytics, integration of Lightning Web Components for interactive interfaces, automated data import scripts, and advanced security auditing. Overall, this phase ensures the CRM is ready for live operations, maintains data integrity, and supports improved customer engagement and operational efficiency.

Conclusion

The HandsMen Threads Salesforce CRM project successfully delivers a customized and scalable solution designed to enhance the company's operational efficiency and customer engagement. Through the development of an automated business processes, and secure user management, the system now supports accurate order processing, real-time inventory updates, loyalty program automation, and improved communication through email notifications. The implementation of validation rules, Apex triggers, and record-triggered flows ensures data integrity at every stage of the workflow.

This CRM provides significant business value by streamlining key processes—such as order confirmation, stock monitoring, and customer tracking—reducing manual work and minimizing the possibility of errors. The platform is built with flexibility in mind, enabling administrators to maintain and expand the system as business requirements evolve. With a documented architecture, clear process flows, and comprehensive testing demonstrated through the project video, this system lays a solid foundation for future enhancements, including advanced

analytics through dashboards, integration of Lightning Web Components, and automated data migration.

Overall, the project demonstrates how Salesforce can be effectively utilized to support business growth, strengthen customer relationships, and modernize internal operations at HandsMen Threads.

Future Enhancements

While the current Salesforce CRM implementation provides a solid foundation for managing customers, orders, inventory, and automated communication, several enhancements can further strengthen the system's capabilities and scalability. Future improvements may include the development of Reports and Dashboards to present real-time insights on sales performance, inventory status, and customer engagement metrics. Interactive user experiences can be introduced through Lightning Web Components (LWC), enabling features such as real-time stock monitoring, guided order creation, and interactive loyalty tracking.

To streamline bulk data handling, automated data import and synchronization processes may be added, reducing manual entry, and ensuring consistent information across systems. Advanced security features, including enhanced auditing, login monitoring, and automated compliance checks, can further strengthen data protection. Integration with AI-powered tools, such as Einstein Recommendations or chatbot support, may also help improve customer experience and personalize marketing interactions.

These enhancements will not only increase automation and efficiency but will also prepare the system for long-term growth as HandsMen Threads continues to expand its operations.