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**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES**

**Lopez, Quezon Campus**

**Bachelor of Science in Information Technology**

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***HandsMen Threads :***  
***Elevating the Art of Sophistication in***  
***Men's Fashion***

***Submitted by:***

**Vaness Evander Legion**

**Bachelor of Science in Information Technology - 3**

**Polytechnic University of The Philippines - Lopez Campus**



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## **Project Overview**

The advent of digital technology has opened a new chapter in business innovation, making information systems an essential part of everyday organizational life. Companies now rely on technology to streamline operations, strengthen customer relationships, and ensure sustainable growth. In the fashion industry, where customer engagement and operational efficiency are critical, technology plays a vital role in managing data, automating workflows, and enhancing service delivery.

HandsMen Threads, which is an organization in the fashion sector, recognizes the importance of modernizing its processes to remain competitive. The company is embarking on a Salesforce project designed to revolutionize its data management and customer relations. A well-built system will reduce the workload of employees, minimize errors, and ensure that all business data flows seamlessly across the organization. This project is particularly useful in enabling the company to retrieve accurate customer and inventory information, which is crucial for decision-making and service improvement.

The traditional manual processes in managing orders, loyalty programs, and inventory often lead to inefficiencies such as delayed customer communication, inaccurate stock monitoring, and inconsistent record-keeping. These challenges can result in customer dissatisfaction, missed opportunities for engagement, and operational setbacks. To address these issues, HandsMen Threads aims to develop a fast, accurate, and reliable Salesforce-based system that will automate core business functions, safeguard data integrity, and enhance customer experience.



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## **Objectives**

### **1. Optimize Data Management**

- Build a robust Salesforce data model to store and organize all critical business information.
- Ensure seamless flow of data across departments for accurate reporting and decision-making.

### **2. Maintain Data Integrity**

- Enforce validation rules directly from the user interface to guarantee accuracy and consistency.
- Prevent errors in customer, order, and inventory records.

### **3. Enhance Customer Engagement**

- Automate order confirmation emails to strengthen communication and trust with customers.
- Implement a dynamic loyalty program that updates statuses based on purchase history, encouraging repeat business.

### **4. Improve Operational Efficiency**

- Introduce proactive stock alerts to notify warehouse teams when inventory drops below five units.
- Schedule daily bulk order updates at midnight to keep financial records and inventory levels accurate.



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## **5. Support Business Growth**

- Provide a scalable CRM solution capable of adapting to future expansion.
- Strengthen collaboration among sales, marketing, and inventory teams through centralized processes.

## **Technology Description**

The proposed system for HandsMen Threads is built on Salesforce, a cloud-based Customer Relationship Management (CRM) platform that enables organizations to manage customer data, automate workflows, and enhance overall business performance. The project leverages both point-and-click configuration tools and programmatic features to deliver a customized solution.

### **Core Technologies Used:**

- **Salesforce Custom Objects** – Function like database tables, created to store business-specific data such as Customers, Orders, Products, Inventory, and Marketing Campaigns.
- **Tabs & Custom App** – Provide user-friendly access to records and group related components into a centralized Lightning App for streamlined operations.
- **Profiles, Roles, and Permission Sets** – Define user access, visibility, and security controls, ensuring data integrity and collaboration across Sales, Marketing, and Inventory teams.
- **Validation Rules** – Enforce business logic at the UI level, preventing incorrect or incomplete data entry (e.g., stock quantity cannot be negative).
- **Email Templates & Alerts** – Automate customer communication, such as order confirmations and loyalty updates, using predefined formats triggered by workflows.



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- **Flows (Record-Triggered & Scheduled)** – No-code automation tools that handle repetitive tasks like sending notifications, updating loyalty statuses, and processing bulk orders at midnight.
- **Apex & Apex Triggers** – Salesforce’s programming language used for complex automation, such as recalculating order totals, reducing inventory counts, and running batch jobs for low-stock monitoring.

## Detailed Execution of Project Phase

### 1. Environment Setup

- Created a Salesforce Developer Org through the official signup page.
- Verified account credentials and prepared the workspace for configuration.

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## 2. Data Model Configuration

- Built custom objects for Customers, Products, Orders, Inventory, and Marketing Campaigns.
- Added essential fields (e.g., SKU, price, stock quantity, loyalty status).
- Established relationships between objects to support reporting and automation.

The screenshot shows the 'Object Manager' interface with a search bar and a table of objects. The table has columns for Label, API Name, Type, Description, Last Modified, and Deployed. Three objects are listed: HandsMen Customer, HandsMen Order, and HandsMen Product.

LABEL	API NAME	TYPE	DESCRIPTION	LAST MODIFIED	DEPLOYED
HandsMen Customer	HandsMen_Customer__c	Custom Object		11/26/2025	✓
HandsMen Order	HandsMen_Order__c	Custom Object		11/26/2025	✓
HandsMen Product	HandsMen_Product__c	Custom Object		11/26/2025	✓

The screenshot shows the 'Fields & Relationships' interface for the 'HandsMen Customer' object. It includes a sidebar with navigation options and a main table of fields. The table has columns for Field Name, API Name, Type, and a dropdown menu. Fields include Created By, Email, FirstName, FullName, HandsMen Customer Name, Last Modified By, LastName, Loyalty Status, Owner, Phone, and Total Purchases.

Field Name	API Name	Type	Dropdown
Created By	CreatedById	Lookup(User)	
Email	Email__c	Email	
FirstName	FirstName__c	Text(60)	
FullName	FullName__c	Formula (Text)	
HandsMen Customer Name	Name	Text(80)	✓
Last Modified By	LastModifiedById	Lookup(User)	
LastName	LastName__c	Text(60)	
Loyalty Status	Loyalty_Status__c	Picklist	
Owner	OwnerId	Lookup(User/Group)	✓
Phone	Phone__c	Phone	
Total Purchases	Total_Purchases__c	Number(18, 0)	



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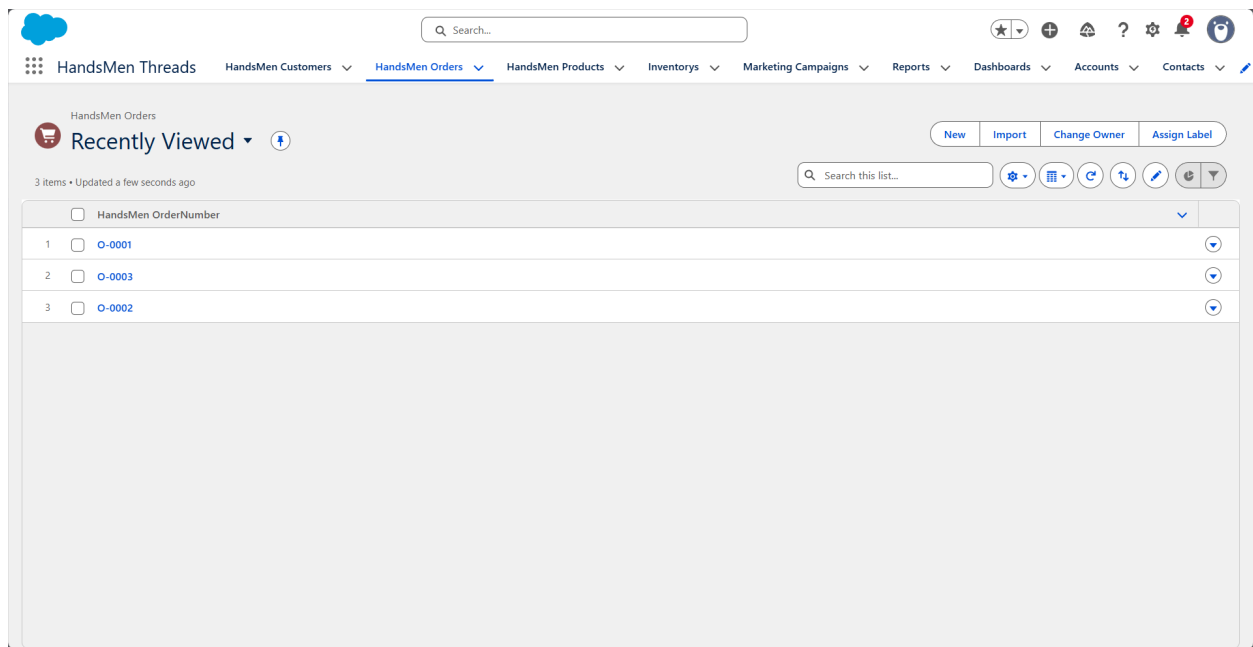
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### 3. Application and User Interface

- Developed a HandsMen Threads Lightning App with navigation tabs for all core objects.
- Designed page layouts and record pages to streamline data entry and review.
- Enabled reporting and search features for analytics.



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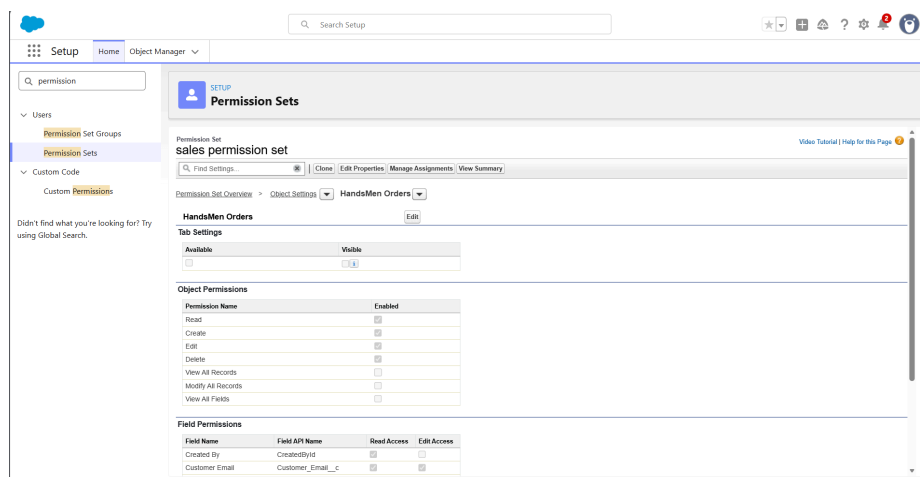
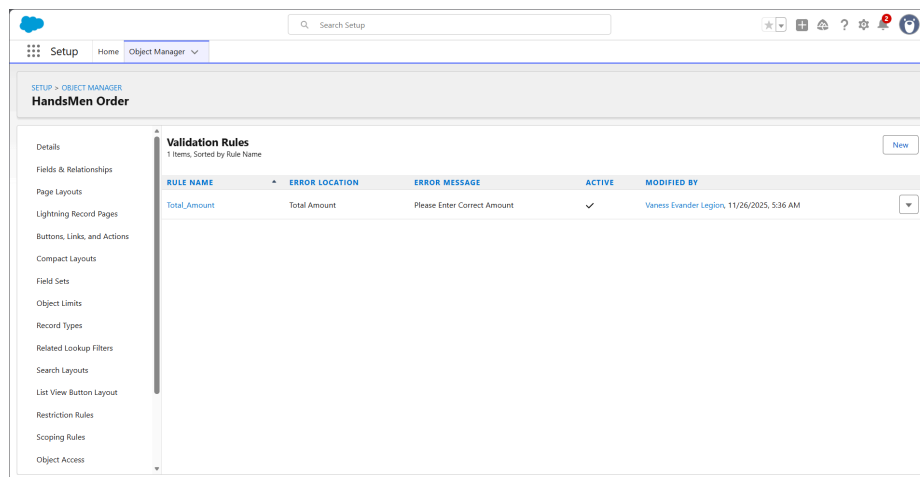
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#### 4. Data Integrity and Security

- Implemented validation rules to prevent incorrect entries (e.g., negative stock, invalid emails).
- Configured profiles, roles, and permission sets to control access and maintain security.
- Created user accounts with appropriate permissions for Sales, Inventory, and Marketing teams.



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## 5. User Role & Profile Setup

- Defined roles to reflect organizational hierarchy (e.g., Sales, Inventory, Marketing, Admin).
- Configured profiles to control object and field-level access, ensuring least-privilege security.

The screenshot displays the Salesforce Setup interface for the 'Roles' section. The left sidebar shows a navigation menu with 'Setup' selected, and 'Roles' highlighted under 'Feature Settings'. The main content area is titled 'Roles' and 'Creating the Role Hierarchy'. It includes a search bar and a 'Show in tree view' button. The role hierarchy is shown as a tree structure starting with 'Polytechnic University of the Philippines Lopez Campus'. Below this, several roles are listed, each with 'Add Role', 'Edit', 'Del', and 'Assign' options. The roles listed are: CEO, CFO, COO, Inventory, Marketing, Sales, SVP\_Customer\_Service & Support, SVP\_HumanResources, and SVP\_Sales & Marketing. Each role has an 'Add Role' button below it.

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## 6. User Creation

- Created user accounts for staff members in Sales, Inventory, and Marketing.
- Assigned appropriate profiles and roles to each user.
- Applied permission sets for additional access.

The screenshot shows the Salesforce Setup interface for managing users. The left sidebar contains navigation options like Setup, Home, Object Manager, and a search bar. The main content area is titled 'All Users' and includes a table of existing users. The table has columns for Action, Full Name, Alias, Username, Role, Active status, and Profile. The table lists several users, including Chatter Expert, EPIC\_OrgFarm, Legion\_Vanessa\_Evander, Mikaelson\_Koi, Mikaelson\_Mini, Mikaelson\_Niklaus, User\_Integration, and User\_Security. The bottom of the page shows the URL: https://orgfarm-064900f6-dev-ed.develop.my.salesforce-setup.com/lightning/setup/ManageUsers/home.

Action	Full Name	Alias	Username	Role	Active	Profile
<input type="checkbox"/> Edit	Chatter Expert	Chatter	chatty.00d900000f1jzuar.bajhpdqdvx@chatter.salesforce.com		✓	Chatter Free User
<input type="checkbox"/> Edit	EPIC_OrgFarm	OEPIG	epic.19cda1934c79@orgfarm.salesforce.com		✓	System Administrator
<input type="checkbox"/> Edit	Legion_Vanessa_Evander	van	vanessevanlegion069@agentforce.com		✓	System Administrator
<input type="checkbox"/> Edit	Mikaelson_Koi	kmika	vanessevanlegion0808@gmail.com	Inventory	✓	Platform_1
<input type="checkbox"/> Edit	Mikaelson_Mini	mmika	vanessevanlegion0909@gmail.com	Marketing	✓	Platform_1
<input type="checkbox"/> Edit	Mikaelson_Niklaus	nmika	vanessevanlegion08@gmail.com	Sales	✓	Platform_1
<input type="checkbox"/> Edit	User_Integration	inteq	integration@00d900000f1jzuar.com		✓	Analytics Cloud Integration User
<input type="checkbox"/> Edit	User_Security	sec	insightssecurity@00d900000f1jzuar.com		✓	Analytics Cloud Security User

## 7. Email Templates & Alerts

- Designed standardized templates for key communications:
  - Order Confirmation Emails – Sent immediately after a customer places an order, reinforcing trust and engagement.

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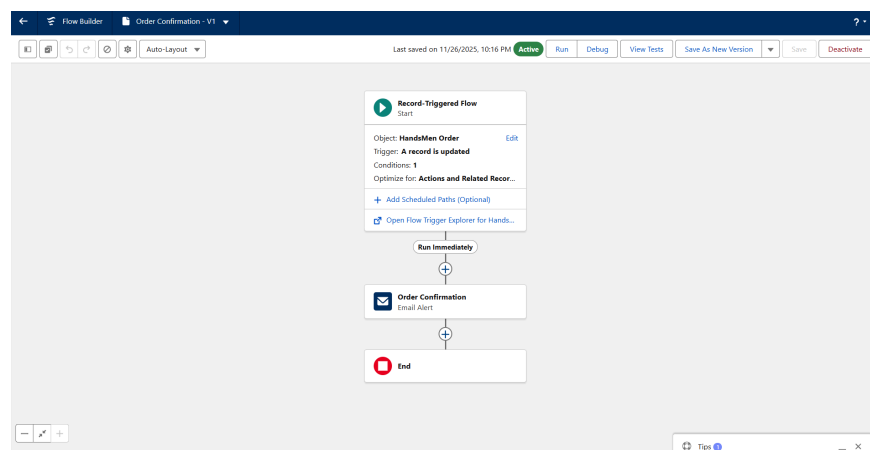
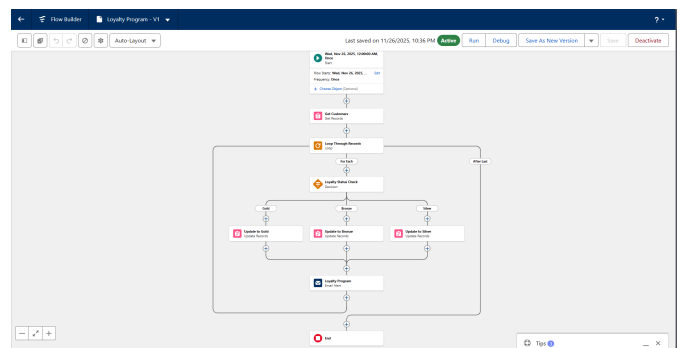
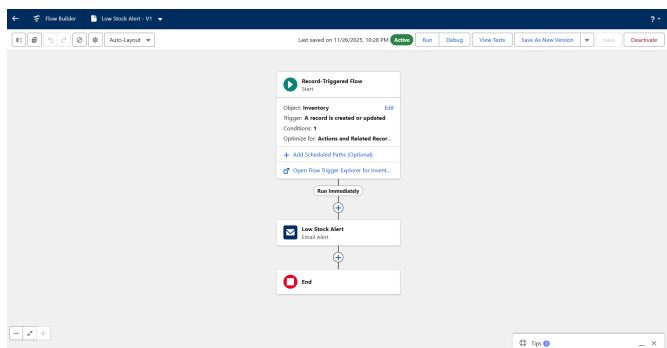
- Loyalty Program Updates – Notify customers when their loyalty status changes, encouraging repeat purchases.
- Stock Alert Notifications – Inform warehouse staff when product inventory drops below five units, ensuring timely restocking.
- Templates include company branding, dynamic merge fields (e.g., customer name, order number, product details), and clear call-to-action messages.

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## 8. Automation and Communication

- Designed email templates for order confirmations, loyalty updates, and stock alerts.
- Configured email alerts triggered by workflows and flows.
- Built record-triggered flows for:
  - Sending order confirmation emails.
  - Updating loyalty status based on purchase history.
  - Notifying warehouse when stock drops below five units.
- Scheduled flows to process bulk orders at midnight, updating financial records and inventory.





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## 9. Advanced Logic and Batch Jobs

- Developed Apex triggers to recalculate order totals and adjust inventory automatically.
- Created Apex classes for complex business logic beyond declarative tools.
- Implemented Batch Apex jobs to monitor inventory and update records at scale.

```
1 trigger OrderTotalTrigger on HandsMen_Order__c (before insert, before update) {
2     Set<Id> productIds = new Set<Id>();
3
4     for (HandsMen_Order__c order : Trigger.new) {
5         if (order.HandsMen_Product__c != null) {
6             productIds.add(order.HandsMen_Product__c);
7         }
8     }
9
10    Map<Id, HandsMen_Product__c> productMap = new Map<Id, HandsMen_Product__c>{
11        [SELECT Id, Price__c FROM HandsMen_Product__c WHERE Id IN :productIds]
12    };
13
14    for (HandsMen_Order__c order : Trigger.new) {
15        if (order.HandsMen_Product__c != null && productMap.containsKey(order.HandsMen_Product__c)) {
16            HandsMen_Product__c product = productMap.get(order.HandsMen_Product__c);
17            if (order.Quantity__c != null) {
18                order.Total_Amount__c = order.Quantity__c * product.Price__c;
19            }
20        }
21    }
22 }
```

```
1 trigger StockDeductionTrigger on HandsMen_Order__c (after insert, after update) {
2     Set<Id> productIds = new Set<Id>();
3
4     for (HandsMen_Order__c order : Trigger.new) {
5         if (order.Status__c == 'Confirmed' && order.HandsMen_Product__c != null) {
6             productIds.add(order.HandsMen_Product__c);
7         }
8     }
9
10    if (productIds.isEmpty()) return;
11
12    // Query related inventories based on product
13    Map<Id, Inventory__c> inventoryMap = new Map<Id, Inventory__c>{
14        [SELECT Id, Stock_Quantity__c, HandsMen_Product__c
15         FROM Inventory__c
16         WHERE HandsMen_Product__c IN :productIds]
17    };
18
19    List<Inventory__c> inventoriesToUpdate = new List<Inventory__c>();
20
21    for (HandsMen_Order__c order : Trigger.new) {
22        for (HandsMen_Product__c product : order.HandsMen_Product__c) {
23            Inventory__c inventory = inventoryMap.get(product.Id);
24            if (inventory != null) {
25                inventory.Stock_Quantity__c -= order.Quantity__c;
26                inventoriesToUpdate.add(inventory);
27            }
28        }
29    }
30
31    update inventoriesToUpdate;
32 }
```

```
1 global class InventoryBatchJob implements Database.Batchable<SObject>, Schedulable {
2
3     global Database.QueryLocator start(Database.BatchableContext BC) {
4         return Database.getQueryLocator(
5             'SELECT Id, Stock_Quantity__c FROM Product__c WHERE Stock_Quantity__c < 10'
6         );
7     }
8
9     global void execute(Database.BatchableContext BC, List<SObject> records) {
10        List<HandsMen_Product__c> productsToUpdate = new List<HandsMen_Product__c>();
11
12        // Cast SObject list to Product__c list
13        for (SObject record : records) {
14            HandsMen_Product__c product = (HandsMen_Product__c) record;
15
16            // Find the most recent order for this product
17            List<HandsMen_Order__c> orders = [SELECT Id, Quantity__c FROM HandsMen_Order__c WHERE HandsMen_Product__c = :product.Id ORDER BY CreatedDate DESC];
18
19            if (orders != null && orders.size() > 0) {
20                HandsMen_Order__c latestOrder = orders[0];
21                product.Stock_Quantity__c -= latestOrder.Quantity__c;
22            }
23
24            productsToUpdate.add(product);
25        }
26
27        update productsToUpdate;
28    }
29 }
```



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## **Project Explanation with Real World Example**

Let's walk through how a customer interacts with the Salesforce CRM system:

### **1. Customer Registration**

- A new customer, Evan Xen, visits HandsMen Threads either in-store or online.
- A Customer record is created in Salesforce with his personal details (name, phone, email).
- Built-in validation rules ensure the email address follows the correct format, preventing invalid entries.

### **2. Product Setup**

- The admin uploads fashion items such as shirts and jeans into the Product object.
- Each product record contains details like SKU, price, and description.
- Corresponding Inventory records are generated to monitor available stock levels.

### **3. Order Placement**

- Evan decides to buy two shirts priced at ₱2500 each.
- A new Order record is created in Salesforce.
- An Apex trigger automatically calculates the total order amount:
  - $2 \times \text{₱}2500 = \text{₱}5000$ .

### **4. Inventory Update**

- Once the order is confirmed:
  - The Inventory trigger deducts 2 units from the stock count.
  - Validation rules prevent the system from saving records if stock would fall below zero.

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## 5. Loyalty Program

- Evan's purchase history now totals ₱5000.
- A Customer trigger evaluates his cumulative spending and updates his loyalty tier:
  - Bronze → below ₱500
  - Silver → ₱500–₱1000
  - Gold → ₱1000 and above
- Based on this transaction, Evan is upgraded to Silver status.

## 6. Email Notifications

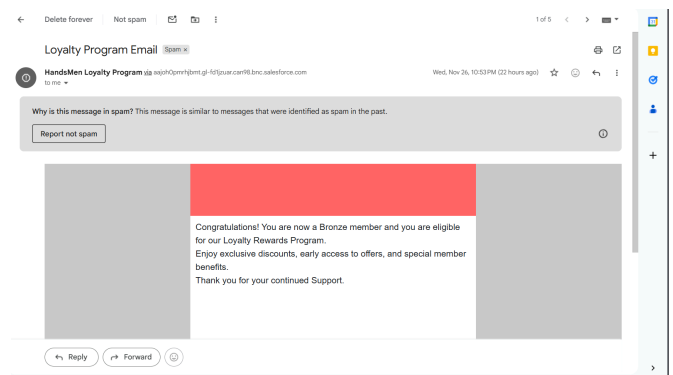
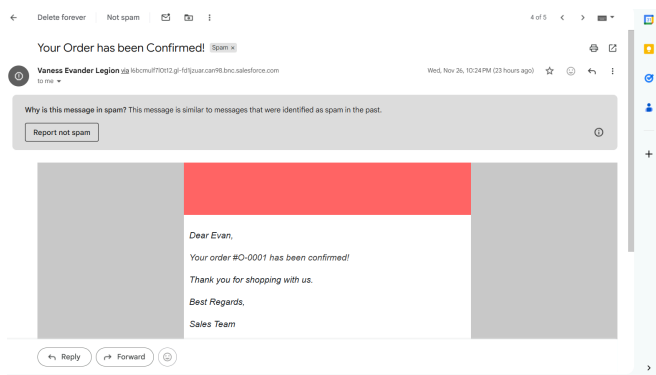
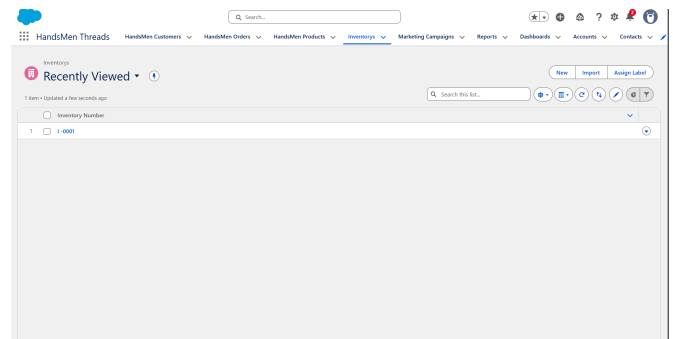
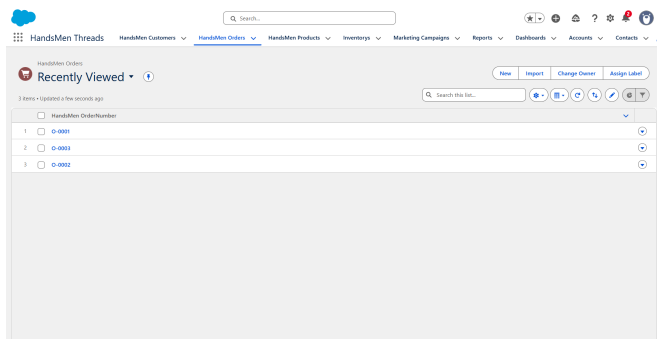
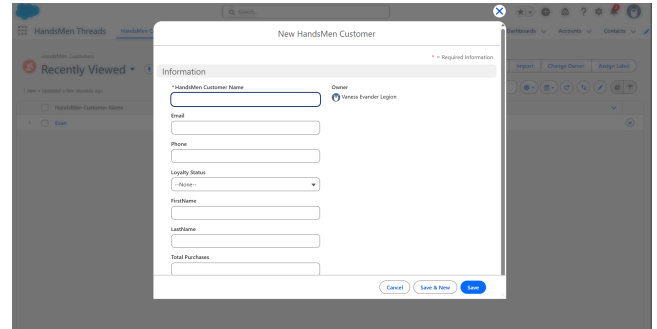
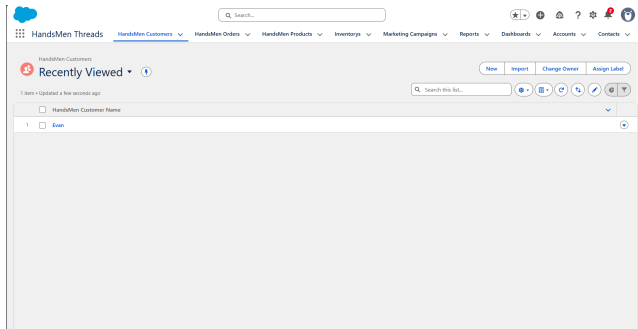
- Automated flows send personalized emails when key events occur:
  - Order confirmation → “Your order has been successfully placed.”
  - Loyalty update → “Congratulations! Your loyalty status is now Silver.”
- These notifications strengthen customer engagement and trust.





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## Screenshots



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## **Conclusion**

The Salesforce CRM project for HandsMen Threads improved business processes by integrating customer management, product tracking, order automation, and loyalty programs into a single system. With features such as validation rules, automated email alerts, inventory triggers, and role-based access, the organization can ensure data accuracy, improve customer engagement, and maintain operational efficiency. This system not only addresses the limitations of manual processes but also provides a scalable foundation for future growth in the fashion industry.

## **Future Scope**

In the future, the platform can be expanded to include advanced analytics for customer behavior, AI-driven product recommendations, and integration with e-commerce platforms for seamless online shopping. Mobile accessibility can be enhanced to allow staff and customers to interact with the system anytime, anywhere. Additionally, predictive inventory management and automated marketing campaigns can be introduced to further improve efficiency and customer engagement. These enhancements will ensure the system remains scalable, adaptable, and aligned with the company's growth.