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**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES**  
LOPEZ, QUEZON BRANCH  
**Bachelor of Science in Information Technology**

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

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**November 2025**





## Project Overview

This CRM project for HandsMen Threads was developed to bring together customer data and business operations into one centralized system. It manages everything from sales and product catalogs to orders, inventory tracking, and marketing campaigns. Having all this information in one place helps ensure that data stays accurate and consistent, which is really important for making good business decisions. The system uses automation features like flows, triggers, and Apex classes to cut down on manual work and speed things up. The end result is a solid framework that helps the company grow while keeping operations running smoothly.

Some of the main features include sending order confirmations automatically, running a loyalty program that updates based on customer activity, alerting staff when stock gets low, and scheduling bulk updates for large batches of orders. These features make it easier to stay in touch with customers and give them a better experience overall. The CRM also helps solve practical problems like keeping track of inventory and making sure workflows don't get bogged down. By putting this system in place, HandsMen Threads can work more efficiently, keep customers happier, and scale up as the business grows.

## Project Objectives

This document details the development of a tailored Salesforce Customer Relationship Management (CRM) system for **HandsMen Threads**, a premier men's fashion enterprise. The core mandate was to establish a unified digital infrastructure that **optimizes operational fluidity, reinforces client relationships, and ensures absolute data fidelity**. The solution is built upon a five-object data foundation: **Customer, Order, Product, Inventory, and Marketing Campaign**. Key automated capabilities, including real-time stock management, dynamic customer loyalty tiering, and instantaneous order confirmations, directly address the business imperatives for efficient, data-driven commerce.

This project has several main goals focused on improving how we manage customers, making operations more efficient, and keeping business data accurate. The system automates repetitive tasks, keeps data clean, and helps with making informed decisions.

Here are the key objectives:





- Bring all customer and business information together in one place.
- Automate tasks like sending order confirmations, updating loyalty status, and alerting teams about low stock.
- Keep data accurate and up-to-date through the user interface.
- Send automatic emails to the warehouse team when inventory drops below certain levels to avoid running out of stock.
- Help sales, inventory, and marketing teams work together more effectively.

## I. Phase 1: Requirement Analysis & Planning

### ❖ Understanding Business Requirements

To better handle client information, product details, orders, inventories, and marketing initiatives, HandsMen Threads requires a CRM system. Currently, there are problems with order confirmations taking too long, inventory being manually tracked, customer information being dispersed among many locations, and poor visibility into consumer involvement and loyalty. The CRM will unify everything, automate processes, and offer insights that enhance customer satisfaction and company decision-making.

### ❖ Defining Project Scope and Objectives

Building a CRM that enhances customer management, order processing, inventory control, marketing initiatives, and analytics is the goal of this project. The system must achieve a number of crucial goals:

**Managements of Customers:** Establish a single database that keeps track of clients' personal data, past purchases, and loyalty status.

**Order management:** Automate tracking, order confirmations, and email notifications when stock levels drop or loyalty status shifts.





**Monitoring Inventories:** To ensure timely restocking, send out automated alerts when stock drops below a predetermined level.

**Advertising Campaigns:** Monitor campaigns and assess their impact on consumer interaction.

**Analytics and Reporting:** Create dashboards and reports to facilitate more effective decision-making.

#### ❖ Design Data Model and Security Model

The CRM's data organization and access control mechanisms are described in this section. The Security Model ensures that users only view and modify the data necessary for their job, while the Data Model displays the objects and relationships needed to hold business information.

##### **Data Model:**

- **HandsMen Customer:** Stores customer details like Name, Email, Phone, Loyalty Status, and Total Purchases.
- **HandsMen Product:** Holds the product catalog with SKU, Price, and Stock Quantity.
- **HandsMen Order:** Keeps track of customer orders including Order Number, Status, Quantity, and Total Amount.
- **Inventory:** Monitors inventory levels for each product.
- **Marketing Campaign:** Stores information about campaigns and links them to customers.

##### **Relationships and the Relationship Model:**

- Lookup relationships are used to link orders to customers.
- Customers and marketing campaigns are linked by lookup relationships.
- Products and inventory have a master-detail connection.
- The many objects can cooperate for reporting and automation thanks to these linkages, which also guarantee data integrity.

##### **Security Model:**

- **Profiles:** Set the basic permissions for users (like the Platform 1 profile for general users).
- **Roles:** Create a hierarchy for Sales, Inventory, Marketing, and Management teams.





- Permission Sets: Give specific users additional permissions for certain actions like creating or editing records.
- Sharing Rules: Make sure records are shared appropriately based on department and who's responsible for what.

#### ❖ Stakeholders Mapping

- CEO/Management: Makes sure the project aligns with the overall business strategy.
- Sales Team: Uses the CRM to manage orders and keep track of customer interactions.
- Inventory Team: Watches stock levels and responds to alerts.
- Marketing Team: Tracks campaigns and promotions to boost customer engagement.
- IT/Admin Team: Keeps the system running, sets up automation, and makes sure data stays accurate.
- End Users: Sales and operations staff who use the CRM every day.

#### ❖ Execution RoadMap (Step-by-Step)

##### ❖ Phase 1: Requirements gathering and analysis

Collect information about business requirements, what users need, and current challenges.

##### ❖ Phase 2: Design of data model, security model, and stakeholder mapping

Define objects, relationships, roles, profiles, and permissions.

##### ❖ Phase 3: Salesforce development

Build custom objects, fields, validation rules, automation flows, triggers, and email alerts.

##### ❖ Phase 4: Testing and quality assurance

Do unit testing, system testing, and performance testing to make sure everything works correctly and reliably.

##### ❖ Phase 5: Deployment to production

Launch the system, train users, and provide support after going live to ensure smooth adoption.

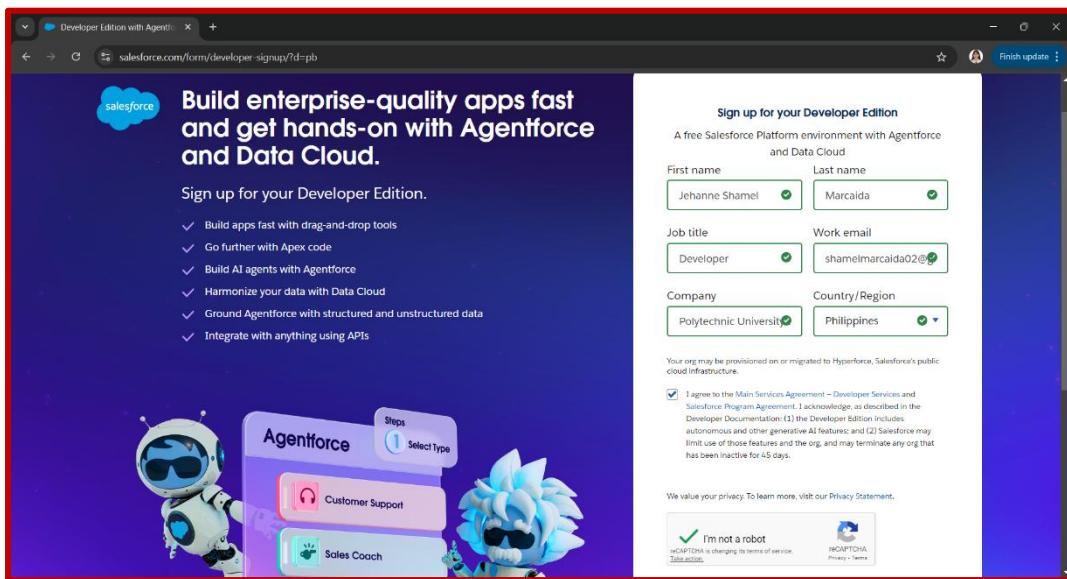




## II. Phase 2: Salesforce Development – Backend & Configuration

### ❖ Setup environment & DevOps workflow

We created a Salesforce Developer Org through <https://developer.salesforce.com/signup>, which serves as the main development environment. This web-based workspace lets us do all the backend configuration, testing, and automation safely before deploying to production, which supports a good DevOps workflow.



### ❖ Custom Objects and Fields

Custom objects were designed to manage important business data efficiently. Each object has the fields needed to capture critical information.

- **HandsMen Customer** – retains client data, including name, phone number, email address, and loyalty status.
- **HandsMen Order** – Records order details such as order number, status, quantity, and total amount.
- **HandsMen Product** – keeps track of the SKU, price, and stock amount in the product catalog.
- **Inventory** – Allows for proactive refilling by keeping track of stock levels.
- **Marketing Campaign** – Stores campaign information, promotions, and links to customers.





## ❖ Validation Rules

The HandsMen Threads project used validation rules to guarantee data integrity and stop inaccurate entries. The following guidelines were used:

### 1. HandsMen Order – Total Amount Validation

- Rule Name: Total\_Amount
- Error Condition Formula:  $\text{Total\_Amount\_c} \leq 0$
- Error Message: Please Enter Correct Amount
- Purpose: Makes sure the total amount of an order can't be zero or negative.

The screenshot shows a modal dialog box from the Salesforce interface. The title of the dialog is 'Information'. Inside, there are several input fields: 'HandsMen OrderNumber' (dropdown), 'Owner' (dropdown showing 'Jehanne Shamel Marcalda'), 'HandsMen Product' (dropdown showing 'T-shirt Cloth'), 'HandsMen Customer' (dropdown showing 'john'), 'Status' (dropdown showing '--None--'), 'Quantity' (text input), 'Total Amount' (text input showing '-200'), and 'Customer Email' (text input showing an empty value). A validation error message box is overlaid on the form, containing the text 'We hit a snag.' and 'Complete this field.' with a red 'X' icon. At the bottom of the dialog are buttons for 'Cancel', 'Save & New', and 'Save'.





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## 2. HandsMen Customer – Email Validation

- Rule Name: Email
- Error Condition Formula: NOT(CONTAINS>Email\_\_c,"@gmail.com"))
- Error Message: Please fill Correct Gmail
- Purpose: Ensures customer email addresses contain "@gmail.com".

The screenshot shows a Salesforce page for creating a new 'HandsMen Customer'. The 'Email' field is highlighted in yellow, indicating it is required. A red error message box titled 'We hit a snag.' contains the text 'Please fill Correct Gmail'. The page also includes fields for 'HandsMen Customer Name', 'Owner', 'Phone', 'Loyalty Status', 'FirstName', and 'LastName'.

## 3. Inventory – Stock Quantity Validation

- Rule Name: Stock\_Quantity
- Error Condition Formula: Stock\_Quantity\_\_c <= 0
- Error Message: The inventory count is never less than zero.
- Purpose: Prevents negative or zero stock quantities in the inventory system.

The screenshot shows a Salesforce page for creating a new 'Inventory' item. The 'Stock Quantity' field is highlighted in yellow, indicating it is required. A red error message box titled 'We hit a snag.' contains the text 'the inventory count is never less than zero.'. The page also includes fields for 'Inventory Number', 'HandsMen Product', 'Warehouse', and other inventory details.





## ❖ Automation

The HandsMen Threads project used the following automation elements to increase productivity, decrease manual labor, and streamline corporate processes:

- **Order Confirmation Email** – automatically notifies clients via email with the creation of a new order.
- **Low-Stock Alerts** – Triggers an email notification to the warehouse when inventory falls below a defined threshold.
- **Loyalty Status Update** – Automatically modifies a customer's loyalty status and points according to their past purchases and the overall amount they have made.
- **Scheduled Bulk Updates** – Runs daily to update financial records, inventory levels, and customer loyalty points.

## ❖ Automation

### 1. Order Confirmation Email

Your Order has been Confirmed! [Spam](#)

Jehanne Shamel Marcaida via 3fsooletshuyd.g1-fc9t5uaj.ca98.bnc.salesforce.com to me ▾

Thu, Nov 27, 3:28 PM (9 hours ago) [Star](#) [Smile](#) [Reply](#) [Forward](#) [More](#)

Why is this message in spam? This message is similar to messages that were identified as spam in the past.

[Report not spam](#)

Dear John,  
Your order #O-0001 has been confirmed!  
Thank you for shopping with us.  
Best Regards,  
Sales Team





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## 2. Low Stock Alert

Low Stock Alert Email Spam x

Jehanne Shamel Marcaida via wzlnrgar77ian.g1-fc9t5uaj.can98.bnc.salesforce.com to me ▾

Thu, Nov 27, 3:44 PM (9 hours ago) ☆ 😊 ↶ ⋮

Why is this message in spam? This message is similar to messages that were identified as spam in the past.

Report not spam  ⓘ

Dear Inventory Manager,  
This is to inform you that the stock for the following product is running low.  
Product Name: T-shirt Cloth  
Current Stock Quantity: 4  
Please take the necessary steps to restock this item immediately.  
Best Regards,  
Inventory Monitoring System

↶ Reply ↷ Forward  ⓘ

## 3. Loyalty Status Update

Jehanne Shamel N. Marcaida via wzlnrgar77ian.g1-fc9t5uaj.can98.bnc.salesforce.com to me ▾

4:33 PM (10 minutes ago) ☆ 😊

Why is this message in spam? This message is similar to messages that were identified as spam in the past.

Report not spam

Congratulations, Jehane! 🎉  
You are now a Gold member and you are eligible for our Loyalty Rewards Program.  
Enjoy exclusive discounts, early access to offers, and special member benefits.  
Thank you for your continued support. ☺.

## 4. Scheduled Bulk Updates

Edit Flow Save As New Version ⋮

Tue, Nov 25, 2025, 12:00:00 AM, Daily Start  
Flow Starts: Tue, Nov 25, 2025, 1... Edit  
Frequency: Daily  
+ Choose Object (Optional)

get customers  
Get Records

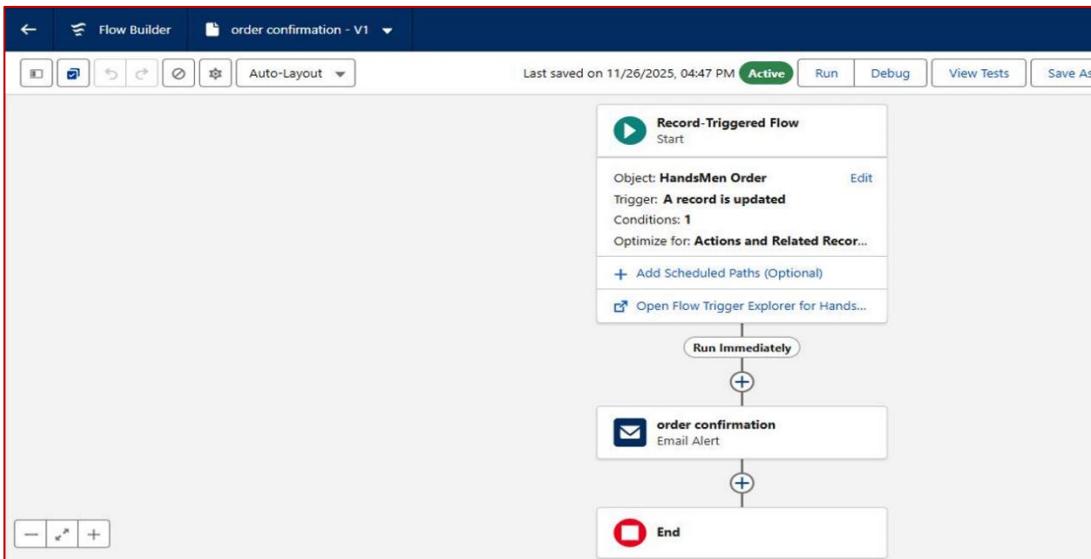




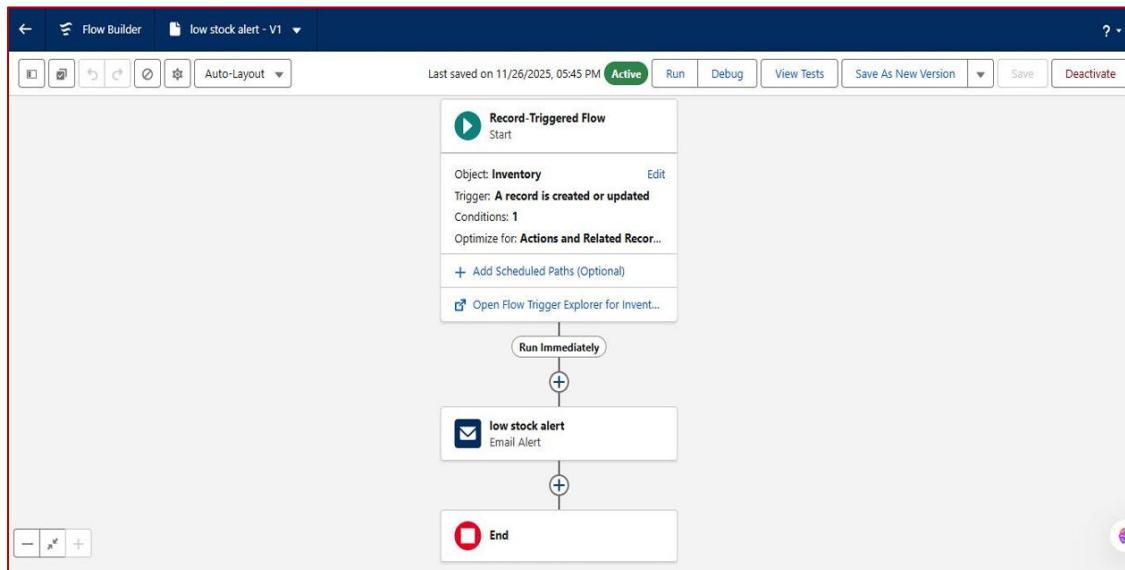
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❖ Screenshots of Automation Implementation in Flow

**1. Order Confirmation**

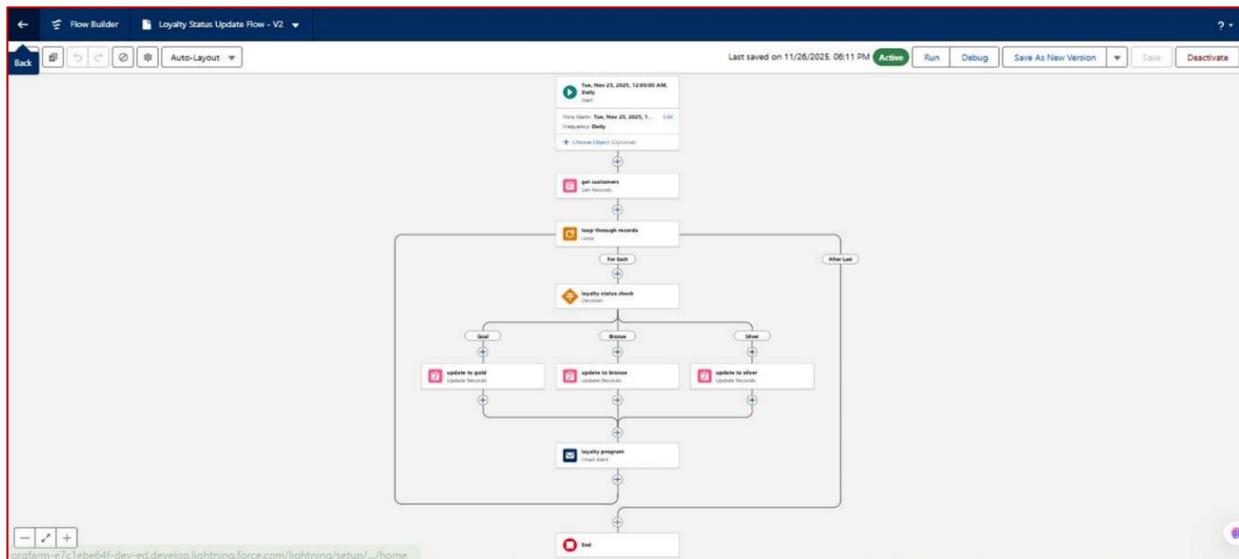


**2. Low Stock Alert**



**3. & 4. Loyalty Status Update and Scheduled Bulk Update**





## ❖ ApexClasses, Triggers,AsynchronousApex Classes Apex Triggers

### OrderTotalTrigger

- Object: HandsMen\_Order\_\_c
- Event: Before insert, before update
- Purpose: Calculates Total\_Amount\_\_c for an order automatically.
- Logic:
  - Multiplies order Quantity\_\_c by HandsMen\_Product\_\_c.Price\_\_c
  - Ensures accurate order totals before saving the record. Type: Synchronous trigger (runs right away before the record is saved.)

```
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 }
```





## StockDeductionTrigger

- Object: HandsMen\_Order\_\_c
- Event: After insert, after update
- Purpose: Deducts the ordered quantity from inventory after order confirmation.
- Logic:
  - Checks if order Status\_\_c = Confirmed
  - Reduces Stock\_Quantity\_\_c of the related product in Inventory\_\_c
- Type: Synchronous trigger (runs immediately after record is saved, but could affect related records)

```
File ▸ Edit ▸ Debug ▸ Test ▸ Workspace ▸ Help ▸ < >
InventoryBatchJob.apxc OrderTotalTrigger.apxc StockDeductionTrigger.apxc OrderTriggerHandler.apxc
Code Coverage: None ▾ API Version: 65 ▾
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    );
Logs Tests Checkpoints Query Editor View State Progress Problems
```

```
File ▸ Edit ▸ Debug ▸ Test ▸ Workspace ▸ Help ▸ < >
InventoryBatchJob.apxc OrderTotalTrigger.apxc StockDeductionTrigger.apxc OrderTriggerHandler.apxc
Code Coverage: None ▾ API Version: 65 ▾
18
19    List<Inventory__c> inventoriesToUpdate = new List<Inventory__c>();
20
21    for (HandsMen_Order__c order : Trigger.new) {
22        if (order.Status__c == 'Confirmed' && order.HandsMen_Product__c != null) {
23            for (Inventory__c inv : inventoryMap.values()) {
24                if (inv.HandsMen_Product__c == order.HandsMen_Product__c) {
25                    inv.Stock_Quantity__c -= order.Quantity__c;
26                    inventoriesToUpdate.add(inv);
27                    break;
28                }
29            }
30        }
31    }
32
33    if (!inventoriesToUpdate.isEmpty()) {
34        update inventoriesToUpdate;
35    }
36 }
```





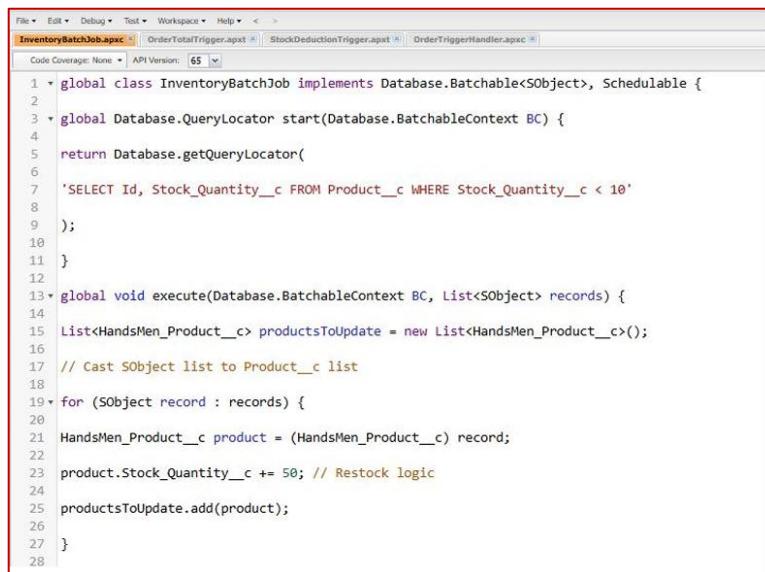
## ❖ Apex Classes

### OrderTriggerHandler

- Purpose: Validates order quantities based on the order status before insert or update.
- Rules enforced:
  - Confirmed → Quantity must be greater than 500
  - Pending → Quantity must be greater than 200
  - Rejection → Quantity must be equal to 0
- Called by: OrderTrigger
- Type: Synchronous Apex (runs immediately during record save)

### InventoryBatchJob

- Purpose: Automatically restocks products with low inventory and can be scheduled to run daily
- Properties:
  - Implements Database.Batchable<SObject> → handles large volumes of records efficiently.
  - Implements Schedulable → can run on a schedule automatically.
  - start() → Selects products with stock < 10.
  - execute() → Adds 50 units to low-stock products.
  - finish() → Logs completion.
  - execute(SchedulableContext SC) → Schedules the batch job.
- Type: Asynchronous Apex (runs in background, scheduled or batch)



```
File • Edit • Debug • Test • Workspace • Help • < >
InventoryBatchJob.apc OrderTotalTrigger.apc StockDeductionTrigger.apc OrderTriggerHandler.apc
Code Coverage: None • API Version: 65
1 * global class InventoryBatchJob implements Database.Batchable<SObject>, Schedulable {
2
3     global Database.QueryLocator start(Database.BatchableContext BC) {
4
5         return Database.getQueryLocator(
6
7             'SELECT Id, Stock_Quantity__c FROM Product__c WHERE Stock_Quantity__c < 10'
8
9         );
10    }
11 }
12
13 * global void execute(Database.BatchableContext BC, List<SObject> records) {
14
15     List<HandsMen_Product__c> productsToUpdate = new List<HandsMen_Product__c>();
16
17     // Cast SObject list to Product__c list
18
19     for (SObject record : records) {
20
21         HandsMen_Product__c product = (HandsMen_Product__c) record;
22
23         product.Stock_Quantity__c += 50; // Restock logic
24
25         productsToUpdate.add(product);
26
27     }
28 }
```



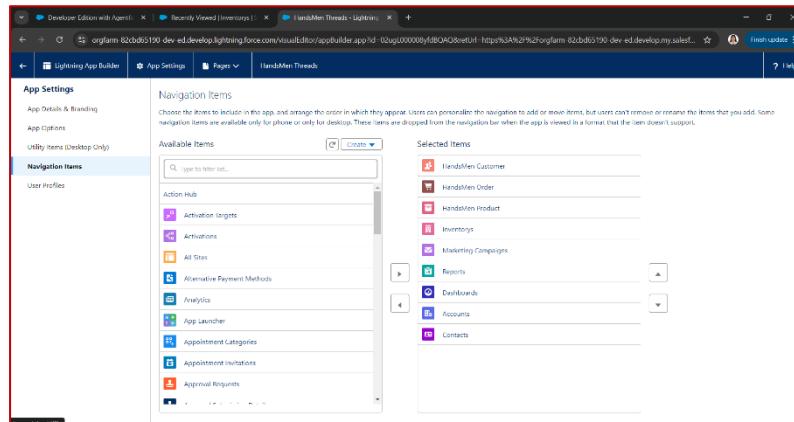


```
28
29  if (!productsToUpdate.isEmpty()) {
30
31    try {
32
33      update productsToUpdate;
34
35    } catch (DmlException e) {
36
37      System.debug('Error updating inventory: ' + e.getMessage());
38
39    }
40
41  }
42
43}
44
45  global void finish(Database.BatchableContext BC) {
46
47    System.debug('Inventory Sync Completed');
48
49  }
50
51 // Scheduler Method
52
53  global void execute(SchedulableContext SC) {
54
55    InventoryBatchJob batchJob = new InventoryBatchJob();
56
57    Database.executeBatch(batchJob, 200);
58
59  }
60
```

### III. Phase 3: UI/UX Development & Customization

#### ❖ Lightning App setup through App Manager.

A specific Lightning application called "HandsMen" is part of the HandsMen Threads project. The Salesforce App Manager was used to build and implement "Threads." This application offers consolidated access to all essential CRM elements, such as HandsMen Customer, Inventory, Marketing Campaigns, Reports, HandsMen Order, HandsMen Product, Dashboards, Accounts, and Contacts, guaranteeing smooth operation and navigation effectiveness. Additionally, the application was linked to the System Administrator profile in order to offer complete management and access, enabling administrators to effectively control automation, objects, and other app elements





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The screenshot shows the Lightning App Builder interface. On the left, there's a sidebar with options like 'App Settings', 'App Details & Branding' (which is selected), 'App Options', 'Utility Items (Desktop Only)', 'Navigation Items', and 'User Profiles'. The main area is titled 'App Details & Branding' with the sub-section 'App Details'. It contains fields for 'App Name' (HandsMen Threads), 'Developer Name' (HandsMen\_Threads), and a 'Description' text area with placeholder text. To the right, there's a 'App Branding' section with an 'Image' field containing a blue square icon with 'HT' and a 'Primary Color Hex Value' field set to '#0070D2'. Below these are 'Org Theme Options' and an 'App Launcher Preview' showing a small preview of the app icon.

## ❖ PageLayouts, Dynamic Forms

Page layouts in the HandsMen Threads App control how data is presented on the pages of records. For instance, fields are arranged in the New HandsMen Order page style, such as product, quantity, and total for simple input. This is improved by dynamic forms by enhancing usability by displaying or concealing sections or features according on order specifics and effectiveness.

The screenshot shows the Salesforce Lightning Experience. At the top, there's a navigation bar with links for 'HandsMen Threads', 'HandsMen Customer' (which is selected), 'HandsMen Order', 'HandsMen Product', 'Inventory', 'Marketing Campaigns', 'Reports', 'Dashboards', 'Accounts', 'Contacts', and a 'New' button. Below the navigation is a 'Recently Viewed' section for 'HandsMen Customer'. It shows a list with one item: 'john'. There are also search and filter tools at the bottom of the list.





The screenshot displays the Salesforce Lightning interface for creating a new HandsMen Order. The main focus is the 'Information' section of the 'New HandsMen Order' page. The 'HandsMen Product' field is populated with 'T-shirt Cloth'. The 'HandsMen Customer' field shows 'john'. The 'Status' dropdown is set to '--None--'. The 'Quantity' input field contains '2'. The 'Total Amount' input field contains '100'. The 'Owner' field is assigned to 'Jehanne Shamel Marcaida'. On the left, a sidebar titled 'Recently Viewed' lists three items: 'O-0003', 'O-0002', and 'O-0001'. The top navigation bar shows tabs for 'Developer Edition with Agent', 'New HandsMen Order | Salesfo...', and 'App Manager | Salesforce'. The bottom right of the page has standard Salesforce buttons: 'Cancel', 'Save & New', and 'Save'.

## ❖ User Management

Salesforce roles, authorization sets, and profiles are used by the HandsMen Threads CRM to regulate user access and specify the actions that each user is permitted to take. Users are allocated positions according to their duties: Sales handles client orders, pursues leads, and keeps track of interactions; inventory updates quantities, keeps an eye on stock levels, and manages replenishments; marketing organizes and monitors campaigns, evaluates consumer interaction, and manages promotions; Management monitors overall operations, generates reports, and guarantees the performance of the team. Baseline permissions are determined by profiles, but permission sets provide additional access as needed. This organized configuration guarantees that users can only pertinent data, upholds system security, and facilitates effective processes between departments.

## ❖ Reports and Dashboard

Reports in the HandsMen Threads CRM include comprehensive information about orders, clients, inventory, and advertising campaigns. They enable users to organize, filter, and condense data for analysis, performance and make wise choices. The structured report view is displayed in the screenshot with arranged summary and tables





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The screenshot shows the Salesforce Reports page. The top navigation bar includes links for HandsMen Threads, HandsMen Customer, HandsMen Order, HandsMen Product, Inventorys, Marketing Campaigns, Reports, Dashboards, Accounts, Contacts, and a search bar. The Reports section is active. On the left, a sidebar lists 'Recent' reports, including 'Sample Flow Report: Screen Flows' (Created by Me, Public Reports, Automated Process, 11/20/2025, 1:02 AM). Below this are sections for Private Reports, Public Reports, All Reports, Folders, and Favorites.

## ❖ Dashboard

Dashboards offer a graphic depiction of important business indicators, such as overall sales, low-stock items, and interaction with customers. Using graphs, charts, and KPIs, they provide management with a brief summary. The dashboard structure is seen in the screenshot, which instantly highlights key performance metrics.

The screenshot shows the Salesforce Dashboards page. The top navigation bar is identical to the Reports page. The Dashboards section is active. On the left, a sidebar lists 'Recent' dashboards, including 'Created by Me' (Private Dashboards). The main area features a decorative illustration of a cactus and clouds. A message at the bottom says 'Recent dashboards appear here' and 'Go to All Dashboards to see what's available.' A link 'View All Dashboards' is provided.

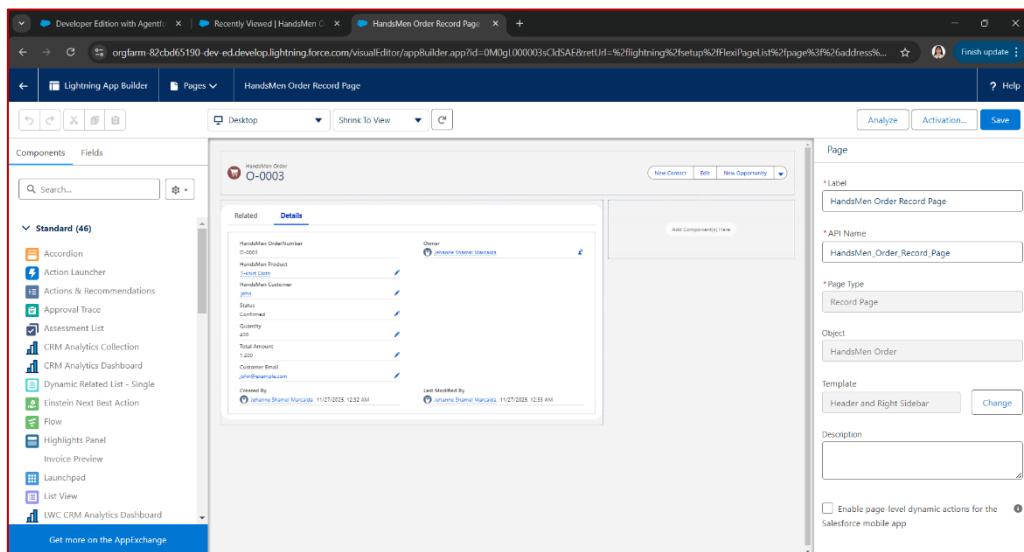




## ❖ LWC Development

### Lightning Pages

The Lightning App Builder was used to customize the HandsMen Threads Lightning Page. Utilizing tab sections, fields, and components to enhance the user experience. The arrangement contains important tabs such as Related for related data and Details for core record information. orders, goods, or activities, for example. The page makes use of the Components and Fields panels was set up to guarantee easy navigation and rapid access to crucial CRM data.



## IV. Phase IV: Data Migration, Testing & Security

### ❖ Data Loading Process

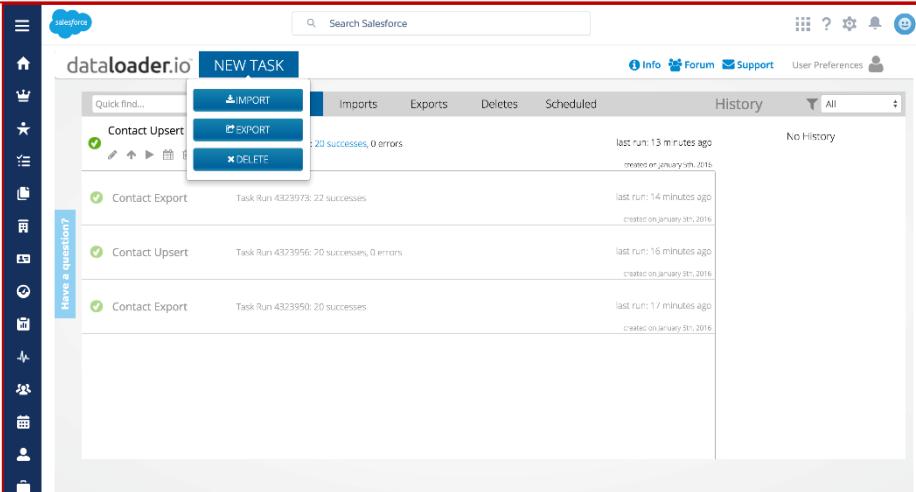
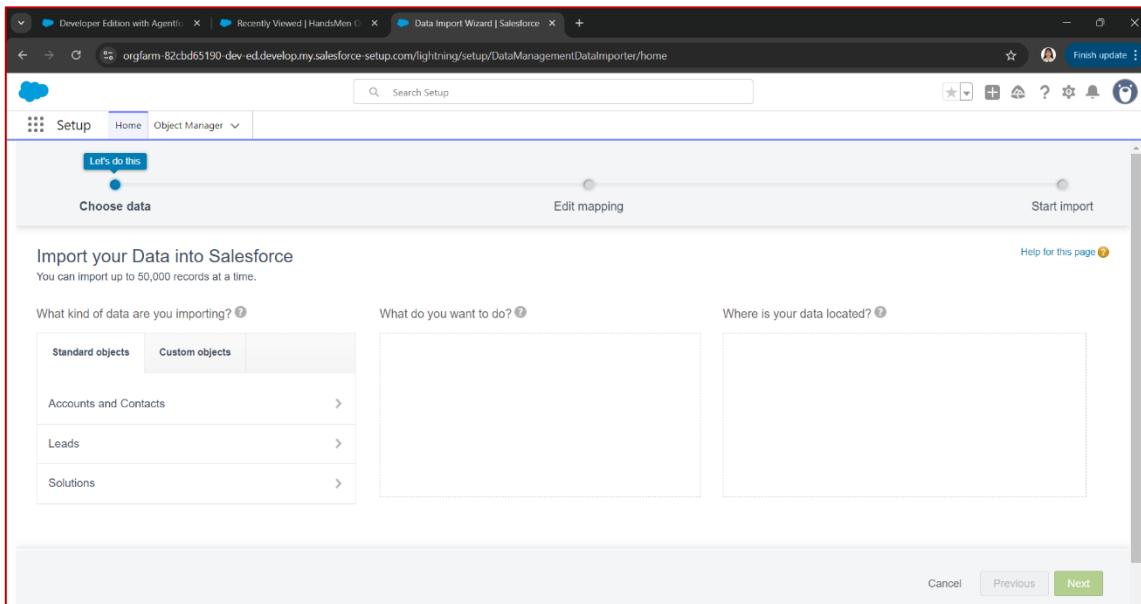
The HandsMen Threads CRM used Salesforce Data Import Wizard and Data Loader to upload initial datasets such as customer records, product lists, and inventory levels.

- i. **Data Import Wizard** was used for small to medium data uploads directly from the Salesforce UI.
- ii. **Data Loader** was used for larger datasets, allowing bulk insert, update, and upsert operations.





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## ❖ Field History Tracking

Field History Tracking was turned on to keep an eye on significant data changes in the system. Important information like Owner, Total Purchase, Loyalty Status, and Email were chosen in order for the project to document who updated and when it happened. This promotes data audits, guarantees openness, and aids in maintaining precise documentation.





The screenshot shows the 'HandsMen Customer' object in the 'Object Manager'. Under the 'Fields & Relationships' tab, the 'Fields & Relationships' section is selected. A modal window titled 'HandsMen Customer Field History' is open, showing a list of fields: Email, FirstName, LastName, Owner, Loyalty Status, Phone, and Total Purchases. Each field has a checkbox next to it, with some checked (Email, Loyalty Status, Owner, Total Purchases). Buttons for 'Save' and 'Cancel' are at the bottom of the modal.

## ❖ Matching Rules

The purpose of the HM Customer Email Matching Rule is to determine the HandsMen Threads CRM compares potential duplicate customer records using the Exact Match method based on the email field. Salesforce determines whether a customer record has already been created or updated and shares the same email address. This enhances data accuracy, avoids redundancy, and guarantees accurate client information for sales, marketing, and support.

The screenshot shows the 'Matching Rules' page in the 'Setup' section. The title bar says 'd SETUP Matching Rules'. Below it, a sub-header says 'All Matching Rules'. A table lists matching rules:

Action	Date Name	Object	Status	Description	Last Modified Date	Last Modified By
Del / Deactivate	HM_Customer_Email_Match	Contact	Active		11/27/2025	Jehanne Shamel
Deactivate	Standard Account Matching Rule	Account	Active	Matching rule for account records. <a href="#">More info</a>	11/19/2025	OEPIG
Deactivate	Standard Contact Matching Rule	Contact	Active	Matching rule for contact records. <a href="#">More info</a>	11/19/2025	OEPIG
Deactivate	Standard Lead Matching Rule	Lead	Active	Matching rule for lead records. <a href="#">More info</a>	11/19/2025	OEPIG

## ❖ Duplicate Rule

The HandsMen Threads CRM employs a Duplicate Rule (HM\_Customer\_DuplicateRule\_Email) to stop users from adding duplicate contacts based on email addresses. This rule is linked to a Matching Rule (HM\_Customer\_Email\_Match), which verifies exact email matches. If someone tries to create or update a contact with an email already in the system, they receive a prompt saying: "Use one of these records?" This mechanism





safeguards data integrity, eliminates duplicate entries, and keeps customer records organized and accurate within the CRM.

The screenshot shows the 'Duplicate Rules' setup page in Salesforce. The page title is 'Duplicate Rules'. A sub-header 'What Are Duplicate Rules?' is present. A dropdown menu shows 'All Duplicate Rules'. A navigation bar at the top includes links for A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, and Other. Below the navigation is a table with columns: Rule Name, Description, Object, Matching Rule, Active, Last Modified By, and Last Modified Date. The table contains four rows:

Rule Name	Description	Object	Matching Rule	Active	Last Modified By	Last Modified Date
HM_Customer_DuplicateRule_Email	Identify accounts that duplicate other accounts.	Contact	HM_Customer_Email_Match	✓	Jehanne Shamel	11/27/2025
Standard Account Duplicate Rule	Identify contacts that duplicate other contacts and leads.	Account	Standard Account Matching Rule	✓	QEPIC	11/19/2025
Standard Contact Duplicate Rule	Identify leads that duplicate other leads and contacts.	Contact	Standard Lead Matching Rule	✓	QEPIC	11/19/2025
Standard Lead Duplicate Rule	Identify leads that duplicate other leads and contacts.	Lead	Standard Lead Matching Rule	✓	QEPIC	11/19/2025

## ❖ Profiles, Roles and Role Hierarchy, Permission sets, Sharing Rules

### Profiles

Profiles in Salesforce define the permissions a user has, including access to objects, fields, and system features. Each user is assigned a profile that determines what actions they can perform.

In this project:

- **Profile Used:** Platform 1 (cloned from Standard User)
- **Permissions Granted:** Full access (Read, Create, Edit, Delete) for HandsMen Customer, HandsMen Product, HandsMen Order, Inventory, and Marketing Campaign objects.

### Assigned Users:

- Niklaus Mikaelson (Sales)
- Kol Mikaelson (Inventory)
- Daniel Mikaelson (Marketing)

The screenshot shows the 'Profiles' setup page in Salesforce. The page title is 'Profiles'. A sub-header 'Platform 1' is present. A search bar 'Search Setup' is available. A navigation bar at the top includes links for A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, and Other. Below the navigation is a table with columns: Action, Full Name, Alias, Username, Role, Active, and Profile. The table contains four rows:

Action	Full Name	Alias	Username	Role	Active	Profile
<input type="checkbox"/>	Salesperson-Demo	dmika	dmika00@gmail.com	Sales	✓	Platform 1
<input type="checkbox"/>	Salesperson-AD	emika	emika00@gmail.com	Sales	✓	Platform 1
<input type="checkbox"/>	Salesperson-Niklaus	nmika	nmika00@gmail.com	Sales	✓	Platform 1





## Roles and Hierarchy

Roles govern data visibility according to hierarchy and specify a user's place in the organizational structure. Records owned by users below them are accessible to people higher in the hierarchy.

In this project:

### Sales Role:

- User: Niklaus Mikaelson
- Reports To:CEO
- Purpose: Manages sales operations and monitors subordinate records.

### Inventory Role:

- User: Kol Mikaelson
- Reports To:CEO
- Purpose: Oversees inventory and stock management.

### Marketing Role:

- User: Daniel Mikaelson
- Reports To:CEO
- Purpose: Handles marketing campaigns and customer engagement

## Permission Sets

Permission sets extend the access provided by a user's profile, enabling certain individuals to perform additional tasks without altering their main profile settings.

### Project Details:

- Set Name: Permission\_Platform\_1





- Access Granted: Complete permissions for the *HandsMen Customer* and *HandsMen Order* objects
- Assigned Users: Niklaus Mikaelson, Kol Mikaelson, Daniel Mikaelson

## Sharing Rules

Sharing rules define how records are distributed among users, roles, or groups. They make sure the right people can view the necessary information without being given unrestricted system access.

### Project Details:

- Rule: Orders created by Sales users are shared with Marketing to support joint campaign efforts
- Purpose: Guarantees appropriate record visibility to improve operational efficiency

## Creation of Test Classes

In HandsMen Threads CRM, test classes are used to verify the functionality of all Apex code, triggers, and batch processes. They replicate real-world scenarios—such as placing orders, updating inventory, and sending automated emails—to ensure the business logic behaves correctly. Assertions are applied to confirm that actual results align with expected outcomes, helping identify issues before release. Executing these test classes also guarantees that Salesforce code coverage meets the required 75% threshold for deployment to production.

The screenshot shows the Salesforce IDE interface. The top navigation bar includes File, Edit, Debug, Test, Workspace, Help, and tabs for InventoryBatchJob.apxc, OrderTotalTrigger.apxt, StockDeductionTrigger.apxt, and OrderTriggerHandler.apxc. The main code editor window displays the following Apex code:

```
17 * (Subject record : records) {
18
19     for (HandsMen_Product__c product : (HandsMen_Product__c) record) {
20
21         product.Stock_Quantity__c += 50; // Restock logic
22
23         productsToUpdate.add(product);
24
25     }
26
27 }
28
29 * if (!productsToUpdate.isEmpty()) {
30 }
```

Below the code editor is the Test Results panel, which is currently active. It shows a single test run named "707gl00000PuxSY" that was enqueued on Thursday, November 27, 2025, at 20:44:04 GM... The test run had 0 failures and 1 total. The overall code coverage table is as follows:

Overall Code Coverage		
Class	Percent	Lines
Overall	0%	
InventoryBatchJob	0%	0/17
OrderTotalTrigger	0%	0/11
StockDeductionTrigger	0%	0/18

## V. Phase 5: Deployment, Documentation & Maintenance





- **Deployment Strategy (Change Sets and Alternatives)**

The HandsMen Threads CRM is deployed from the Salesforce Developer Org to the Production environment primarily through Change Sets. This method enables developers and administrators to package and transfer selected components—such as custom objects, fields, validation rules, Apex classes, triggers, flows, and Lightning Pages—in a controlled way. By including all dependencies, Change Sets help prevent errors during deployment.

For larger or more complex deployments, tools like the Salesforce CLI or the Metadata API may be used, offering greater flexibility and precision in managing components. Before any deployment, all elements are rigorously tested in a sandbox or developer environment to confirm proper functionality and to ensure that existing processes remain unaffected.

- **System Maintenance and Monitoring**

Once the system is live, it must be actively managed to keep operations running smoothly and data reliable. The IT/Admin team takes charge of monitoring overall performance, keeping an eye on automated processes such as order confirmations, inventory alerts, and scheduled batch jobs, while also ensuring that dashboards and reports reflect accurate information. Regular checks of user activity and system logs help spot unusual patterns, errors, or possible security concerns early. Maintenance tasks include adjusting user roles and profiles, reviewing sharing rules, and validating records for customers, orders, and inventory. To safeguard against data loss, backups are scheduled routinely, providing a safety net for quick recovery if unexpected issues arise.

- **Troubleshooting Documentation**

Clear documentation plays a vital role in ongoing system maintenance. A dedicated troubleshooting guide is kept to outline step-by-step solutions for frequent issues, including trigger errors, failed flows, validation problems, and incorrect data entries. To investigate and diagnose these problems, administrators rely on tools such as the Developer Console, Debug Logs, and System Audit Trails. Each incident is carefully reviewed to determine its root cause, and corrective measures are recorded for future use. This structured approach allows errors to be resolved quickly while ensuring that lessons learned contribute to greater system stability. In addition, the documentation serves as a shared knowledge base, enabling administrators and developers especially new team members to gain a clear understanding of the system's configuration, processes, and automation logic.





- **Conclusion**

The HandsMen Threads CRM initiative delivers a centralized platform that unifies business and customer information, streamlining the management of sales, products, orders, inventory, and marketing activities. By incorporating automation, Apex triggers, validation rules, and batch processes, the system minimizes manual errors, safeguards data accuracy, and boosts overall efficiency. Key features such as automated order confirmations, loyalty program updates, and proactive inventory alerts not only improve customer engagement but also provide valuable support for informed business decisions.

With Salesforce capabilities—including Lightning Apps, Page Layouts, Dynamic Forms, Reports, Dashboards, and role-based access through profiles and permission sets—the CRM ensures secure workflows and smooth collaboration across teams. Rigorous testing, structured deployment practices, and ongoing monitoring further reinforce system reliability and scalability.

In essence, HandsMen Threads CRM equips the organization with a robust, secure, and scalable solution that enhances productivity, strengthens customer relationships, and lays the foundation for sustainable growth.

#### **Future Enhancements**

- 1) **AI-Driven Product Suggestions** – Leverage customer purchase history and preferences to deliver tailored product recommendations, increasing upsell and cross-sell opportunities.
- 2) **Chatbot Integration with Salesforce** – Offer round-the-clock automated support for order tracking, FAQs, and customer inquiries, reducing response times and improving service quality.
- 3) **Predictive Insights & Advanced Reporting** – Apply artificial intelligence to anticipate sales trends, optimize inventory levels, and guide smarter business decisions.
- 4) **Next-Level Marketing Automation** – Launch personalized email campaigns and targeted promotions automatically, enhancing customer engagement and loyalty.
- 5) **Mobile CRM Access** – Provide a mobile-friendly interface so users can manage orders, inventory, and customer data anytime, anywhere.
- 6) **Advanced Analytics** - Integration of AI-powered forecasting dashboards.

