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

PROJECT OVERVIEW

This comprehensive documentation outlines the development and implementation of a specialized Salesforce CRM solution for HandsMenThreads, a prominent player in the men's fashion sector. The initiative focuses on addressing the growing complexities of customer relationship management, order fulfillment, inventory optimization, and marketing coordination as the organization scales. Through strategic utilization of Salesforce's cloud-based infrastructure, we've engineered automated workflows, ensured data accuracy, and delivered real-time operational intelligence to stakeholders. The solution encompasses tailored data structures, intelligent process automation, comprehensive validation frameworks, automated communication systems, and specialized Apex programming—all engineered to amplify customer satisfaction, accelerate revenue growth, minimize inventory challenges, and provide holistic business visibility.

OBJECTIVES

The primary objective of this project is to design, develop, and deploy a robust Salesforce CRM platform that transforms HandsMenThreads' business operations and enhances customer satisfaction. Specific goals include:

- **Automate Routine Business Processes**: Eliminate manual tasks such as order confirmations, loyalty tier calculations, and stock updates through intelligent automation, reducing human error and operational costs.

- **Ensure Data Accuracy and Consistency**: Implement comprehensive validation rules and automated calculations to maintain clean, reliable data across all customer touchpoints and business transactions.

- **Provide Real-Time Business Intelligence**: Deliver instant visibility into inventory levels, sales performance, customer behavior patterns, and marketing campaign effectiveness through dashboards and reports.

- **Enhance Cross-Functional Collaboration**: Break down silos between sales, inventory, and marketing teams by centralizing data and creating shared workflows that improve communication and coordination.

- **Deliver Personalized Customer Experiences**: Leverage automated loyalty programs, targeted email communications, and customer purchase history to create individualized shopping experiences that drive retention and lifetime value.

These objectives directly translate to measurable business value including increased sales conversion rates, reduced inventory carrying costs, improved customer retention, faster order processing times, and data-driven decision making capabilities.

PHASE 1: REQUIREMENT ANALYSIS & PLANNING

Understanding Business Requirements

HandsMenThreads faced several operational challenges that required immediate attention. The sales team struggled with manual order entry processes that were time-consuming and error-prone, leading to customer dissatisfaction. Inventory management was reactive rather than proactive, resulting in stockouts of popular items and overstock of slow-moving products. Customer data was fragmented across multiple systems, making it impossible to track purchase history or implement loyalty programs effectively. Marketing campaigns lacked targeting capabilities and couldn't be measured for ROI.

Key user needs identified include:

- Sales representatives need a fast, mobile-friendly interface to create orders at the point of sale

- Inventory managers require real-time stock visibility and automated low-stock alerts

- Marketing teams need customer segmentation capabilities and campaign tracking

- Management needs comprehensive reporting on sales trends, inventory turnover, and customer lifetime value

- Customers expect immediate order confirmations and recognition for their loyalty

Defining Project Scope and Objectives

In Scope:

- Custom object development for Customers, Products, Orders, and Marketing Campaigns

- Automated workflows for order processing, stock updates, and loyalty calculations

- Email notification system for order confirmations and alerts

- User role hierarchy and security model

- Basic reporting and dashboards for operational metrics

- Data validation rules to ensure data quality

- Apex triggers for complex business logic

Out of Scope:

- Third-party payment gateway integration

- E-commerce website integration

- Advanced AI/ML recommendations (reserved for Phase 2)

- Mobile application development

- Integration with external accounting systems

Design Data Model and Security Model

Data Model Architecture:

We've constructed specialized data containers (custom objects) within Salesforce, each meticulously designed to house HandsMenThreads' distinct business information:

- **HandsMen_Customer__c (Parent):** Our comprehensive customer registry capturing personal identifiers, contact information, and current recognition tier status.

- **HandsMen_Product__c (Parent):** The complete product catalog management system, documenting item specifications, descriptions, pricing structures, and availability quantities.

- **HandsMen_Order__c:** Detailed transaction records that establish connections between customers and purchased items, including timestamps, financial totals, and order quantities.

- **Inventory__c:** Real-time stock management system tracking warehouse quantities and triggering replenishment workflows.

- **Marketing_Campaign__c:** Campaign performance tracker monitoring promotional initiatives and measuring marketing effectiveness.

Security Model:

Custom navigation elements function as rapid-access pathways throughout the system. We've established dedicated tabs corresponding to each data structure (such as "Products Hub" or "Order Management") enabling team members to efficiently access, generate, and modify records within the "HandsMenThreads" application environment.

Stakeholders Mapping:

Stakeholder	Role	Responsibilities	CRM Access Level
Sarah Johnson	CEO	Strategic oversight, final approvals	Full Admin Access
Michael Chen	Sales Manager	Team management, sales targets	Sales Manager Profile
Jennifer Williams	Inventory Manager	Stock control, vendor management	Inventory Manager Profile
David Martinez	Marketing Manager	Campaign planning, customer segmentation	Marketing Manager Profile

Sales Representatives (5 users)	Sales Team	Customer interactions, order entry	Sales Rep Profile
IT Administrator	System Admin	CRM maintenance, user support	System Administrator
End Customers	External Users	Purchase products, receive communications	No direct access

Custom Application

Our "HandsMenThreads" Lightning Application serves as mission control for daily operations, consolidating essential navigation elements (Customer Management, Order Processing, Product Catalog, Inventory Control, Campaign Management, Analytics) into a unified, intuitive workspace that streamlines operational workflows.

Execution Roadmap

Phase 1: Backend & Configuration (Week 1)

Objective: Establish the system foundation by building essential backend components and configuring user roles for smooth CRM functionality.

Key Activities:

- **Developer Org Setup:** Prepare the Salesforce development environment for testing and configuration.

- **Custom Object & Field Creation:** Build core data structures for HandsMen Threads modules (e.g., Products, Orders, Inventory).

- **Validation Rules Implementation:** Ensure data accuracy and enforce key business rules.

- **Apex Trigger & Flow Automation:** Automate repetitive tasks such as stock updates or order notifications.

- **User Role & Profile Setup:** Assign proper permissions to users based on their roles (e.g., Marketing, Sales, Inventory).

Phase 2: UI/UX, Testing & Deployment (Week 2)

Objective: Finalize the user experience, validate data security, and prepare for live system deployment.

Key Activities:

- **Lightning App Customization:** Configure intuitive page layouts and tab navigation for better user experience.
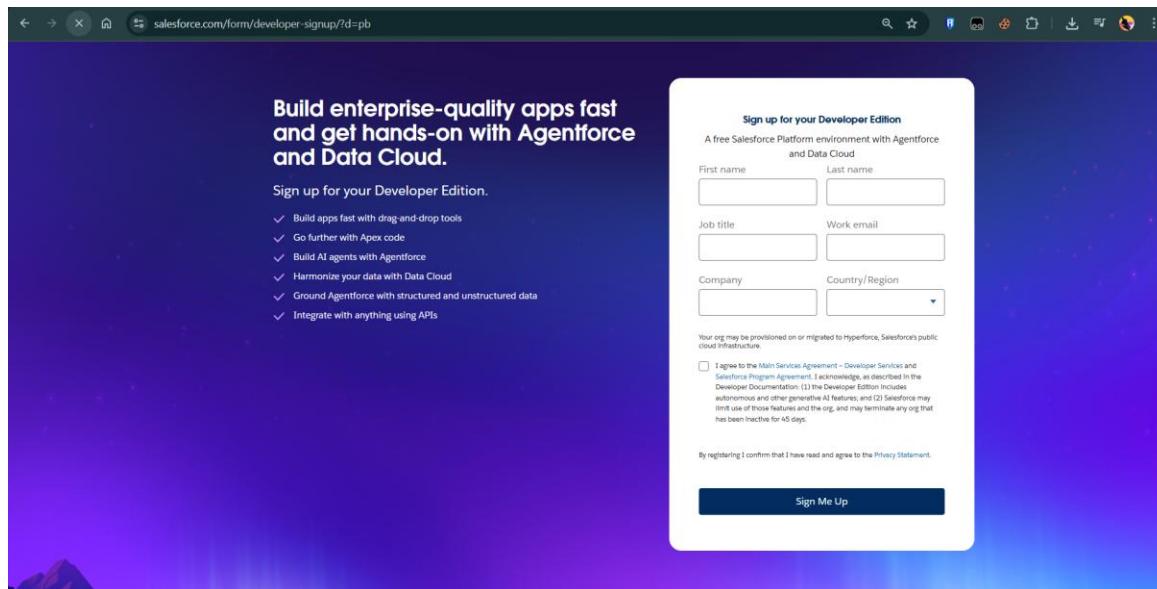
- **Report & Dashboard Setup:** Create performance dashboards to monitor sales, inventory, and marketing activities.

- **Security & Integration Testing:** Validate user access controls and integration with connected services.

- **Sample Data Migration:** Import sample data to simulate real business operations.

- **User Training & Go-Live:** Conduct training sessions, finalize documentation, and deploy the system for end users.

- **Email Templates:** Pre-formatted message designs (such as our "Order Email Confirmation" template) guaranteeing brand consistency across all customer communications.

- **Email Alerts:** Condition-based automated notifications that trigger upon specific events, such as order completion or customer tier advancement.

PHASE 2: SALESFORCE DEVELOPMENT - BACKEND & CONFIGURATIONS

Setup Environment & DevOps Workflow

Developer Org Setup:

- Registered at https://developer.salesforce.com/signup

- Job Title: Developer

- Company Name: Bulacan State University

- Country/Region: Philippines

DevOps Workflow:

- **Version Control**: Git repository for Apex classes and metadata

- **Change Management**: Change Sets for deployment to production

- **Backup Strategy**: Weekly data exports using Data Loader

- **Sandbox Strategy**: Developer org serves as primary development environment

- **Testing Strategy**: Minimum 75% code coverage required before deployment

Customization of Objects, Fields, and Validation Rules

Custom Object: HandsMen_Customer__c

Fields Created:

- **HandsMen Customer Name** (Name - Text, 80) - Required, Indexed

- **Email** (Email__c - Email)

- **FirstName** (FirstName__c - Text, 60)

- **LastName** (LastName__c - Text, 60)

- **FullName** (FullName__c - Formula Text)

- **Phone** (Phone__c - Phone)

- **Loyalty Status** (Loyalty_Status__c - Picklist: Bronze, Silver, Gold) - Default: Bronze

- **Total Purchases** (Total_Purchases__c - Number, 18, 0)

- **Owner** (OwnerId - Lookup User,Group) - Indexed

- **Created By** (CreatedById - Lookup User)

- **Last Modified By** (LastModifiedById - Lookup User)

Validation Rules:

Email

Formula: NOT CONTAINS(Email__c , "@gmail.com")

- Error Message: "Please fill Correct Gmail"

HandsMen Customer Validation Rule
Back to HandsMen Customer

Validation Rule Detail   Edit   Clone

Rule Name	Email
Error Condition Formula	NOT CONTAINS(Email__c , "@gmail.com")
Error Message	Please fill Correct Gmail
Description	
Created By	Ivan Carlos Martin, 11/7/2025, 7:19 AM

Edit   Clone

Figure: Customer Email Validation Rule

Custom Object: HandsMen_Product__c

Fields Created:

- **HandsMen Product Name** (Name - Text, 80) - Required, Indexed

- **Price** (Price__c - Currency, 18, 0)

- **SKU** (SKU__c - Text, 60)

- **Stock Quantity** (Stock_Quantity__c - Number, 18, 0)

- **Order** (HandsMen_Order__c - Lookup to HandsMen Order) - Indexed

- **Owner** (OwnerId - Lookup User,Group) - Indexed

- **Created By** (CreatedById - Lookup User)

- **Last Modified By** (LastModifiedById - Lookup User)

Validation Rules:

Stock_Cannot_Be_Negative

- Formula: Stock_Quantity__c < 0

- Error Message: "Stock quantity cannot be negative"

HandsMen Product Validation Rule
Back to HandsMen Product

Validation Rule Detail   Edit   Clone

Rule Name	Price_Must_Be_Positive
Error Condition Formula	Price__c <= 0
Error Message	Product price must be greater than zero
Description	Product price must be greater than zero
Created By	Ivan Carlos Martin, 11/10/2025, 1:36 AM

Edit   Clone

Figure: Product Price Validation Rule

Price_Must_Be_Positive

- Formula: Price__c <= 0

- Error Message: "Product price must be greater than zero"

HandsMen Product Validation Rule
Back to HandsMen Product

Validation Rule Detail   Edit   Clone

Rule Name	Price_Must_Be_Positive
Error Condition Formula	Price__c <= 0
Error Message	Product price must be greater than zero
Description	Product price must be greater than zero
Created By	Ivan Carlos Martin, 11/10/2025, 1:36 AM

Edit   Clone

Figure: Product Price Validation Rule

Custom Object: HandsMen_Order__c

Fields Created:

- **HandsMen OrderNumber** (Name - Auto Number) - Indexed

- **HandsMen Customer** (HandsMen_Customer__c - Lookup to HandsMen Customer) - Required, Indexed

- **Customer Email** (Customer_Email__c - Email)

- **HandsMen Product** (HandsMen_Product__c - Lookup to HandsMen Product) - Required, Indexed

- **Quantity** (Quantity__c - Number, 18, 0)

- **Status** (Status__c - Picklist: Pending, Confirmed, Shipped, Delivered, Cancelled)

- **Total Amount** (Total_Amount__c - Number, 18, 0) - Auto-calculated

- **Owner** (OwnerId - Lookup User,Group) - Indexed

- **Created By** (CreatedById - Lookup User)

- **Last Modified By** (LastModifiedById - Lookup User)

Validation Rules:

Quantity_Must_Be_Positive

- Formula: Quantity__c <= 0

- Error Message: "Order quantity must be at least 1"

HandsMen Order Validation Rule

Back to HandsMen Order

Validation Rule Detail

Rule Name	Quantity_Must_Be_Positive
Error Condition Formula	Quantity__c <= 0
Error Message	Order quantity must be at least 1
Description	
Created By	Ivan Carlos Martin, 11/10/2025, 1:42 AM

Figure: Order Quantity Validation Rule

Total_Amount

- Formula: Total_Amount__c <= 0

- Error Message: "Please Enter Correct Amount"

HandsMen Order Validation Rule

Back to HandsMen Order

Validation Rule Detail

Edit   Clone

Rule Name	Total_Amount
Error Condition Formula	Total_Amount__c <= 0
Error Message	Please Enter Correct Amount
Description	
Created By	Ivan Carlos Martin, 11/7/2025, 7:15 AM

Edit   Clone

Figure: Order Total Amount Validation Rule

Custom Object: Inventory__c

Fields Created:

- **Inventory Number** (Name - Auto Number) - Indexed

- **Product** (HandsMen_Product__c - Master-Detail to HandsMen Product) - Required, Indexed

- **Stock Quantity** (Stock_Quantity__c - Number, 18, 0)

- **Stock Status** (Stock_Status__c - Formula Text)

- **Warehouse** (Warehouse__c - Text, 60)

- **Created By** (CreatedById - Lookup User)

- **Last Modified By** (LastModifiedById - Lookup User)

Custom Object: Marketing_Campaign__c
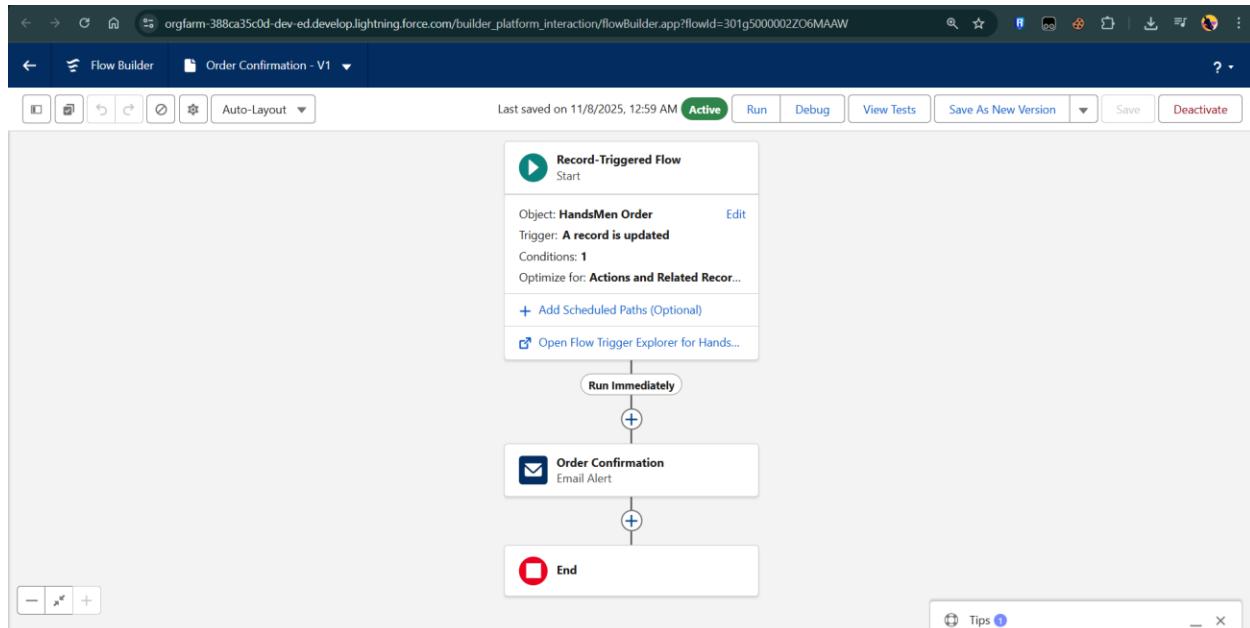
Fields Created:

- **Marketing Campaign Number** (Name - Auto Number) - Indexed

- **HandsMen Customer** (HandsMen_Customer__c - Lookup to HandsMen Customer) - Indexed

- **Start Date** (Start_Date__c - Date)

- **End Date** (End_Date__c - Date)

- **Owner** (OwnerId - Lookup User,Group) - Indexed

- **Created By** (CreatedById - Lookup User)

- **Last Modified By** (LastModifiedById - Lookup User)

Automation: Workflow Rules, Process Builder, Flows
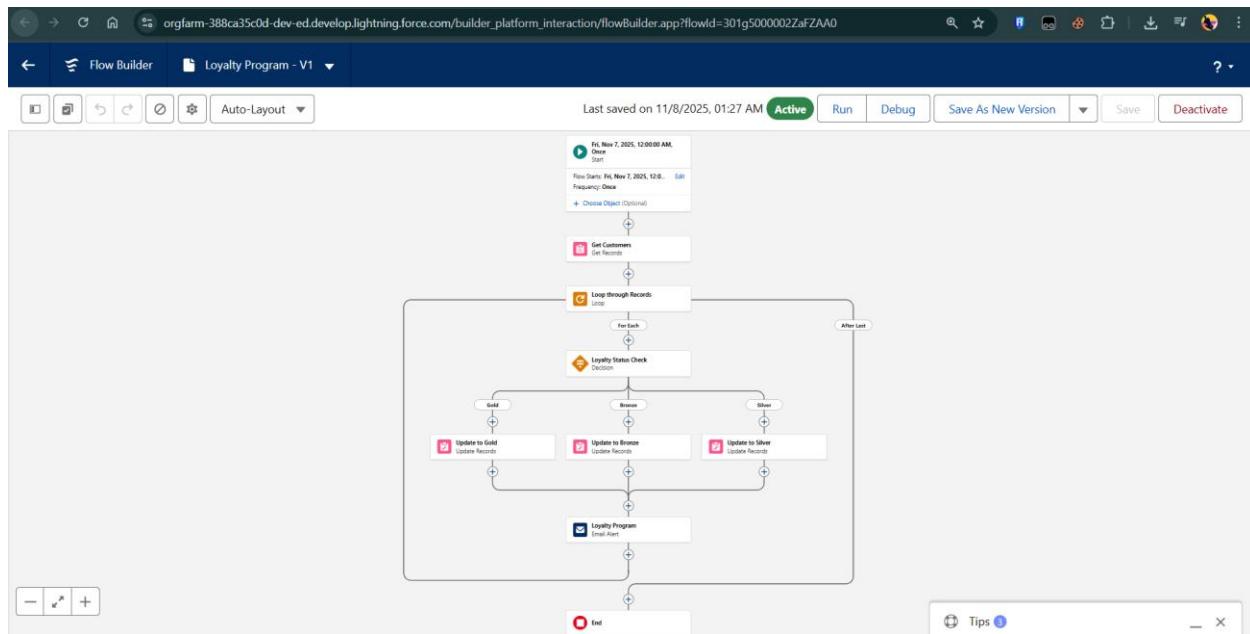
Flows represent our visual automation engine, enabling sophisticated business logic construction without coding requirements. Our core automated processes include:

- **Order Confirmation Communication Flow:** Instantly transmits order acknowledgment emails to customers upon transaction completion.
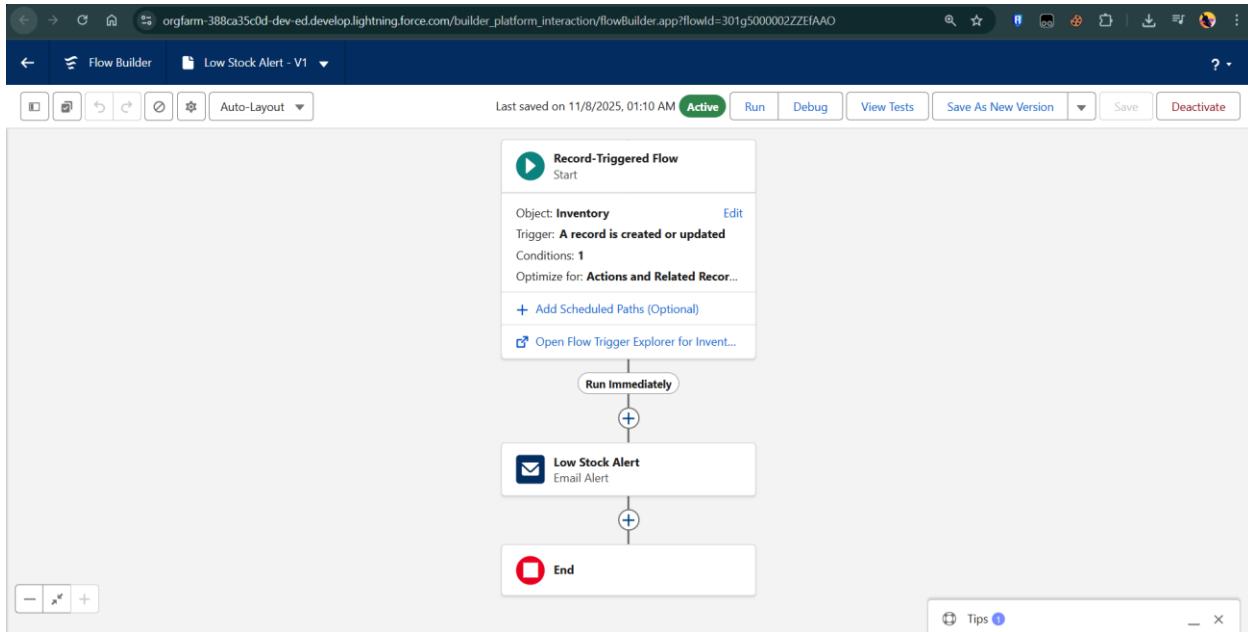
Figure: Order Confirmation Flow

- **Customer Tier Assessment Flow:** Scheduled daily execution (midnight processing) evaluating and updating customer recognition levels based on cumulative purchase values.


Figure: Customer Tier Assessment Flow

- **Stock Alert Notification Flow:** Monitors inventory thresholds and alerts warehouse personnel when quantities fall below five units, enabling proactive restocking.

Figure: Stock Alert Notification Flow

Apex Classes and Triggers

Apex represents Salesforce's proprietary programming language, deployed when standard configuration tools cannot accommodate specific business logic requirements. Our custom triggers include:

- **Apex Trigger 1: OrderTotalTrigger (Order Total Calculation)**

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

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

    Map<Id, HandsMen_Product__c> productMap = new Map<Id, HandsMen_Product__c>(
        [SELECT Id, Price__c FROM HandsMen_Product__c WHERE Id IN :productIds]
    );

    for (HandsMen_Order__c order : Trigger.new) {
        if (order.HandsMen_Product__c != null && productMap.containsKey(order.HandsMen_Product__c)) {
            HandsMen_Product__c product = productMap.get(order.HandsMen_Product__c);
            if (order.Quantity__c != null) {
                order.Total_Amount__c = order.Quantity__c * product.Price__c;
            }
        }
    }
}
```

Purpose: Automatically calculates the total order amount based on product price and quantity before the order record is saved.

- **Apex Trigger 2: StockDeduction Trigger:**

```apex
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;
    }
}
```

Purpose: Reduces product stock quantity when an order is confirmed, ensuring real-time inventory accuracy.

- **Apex Trigger 3: CustomerLoyaltyUpdateTrigger (Loyalty Status Automation)**

```
trigger CustomerLoyaltyUpdateTrigger on HandsMen_Order__c (after insert, after update) {

    Set<Id> customerIds = new Set<Id>();

    for (HandsMen_Order__c order : Trigger.new) {
        if (order.HandsMen_Customer__c != null) {
            customerIds.add(order.HandsMen_Customer__c);
        }
    }


    List<HandsMen_Customer__c> customersToUpdate = new List<HandsMen_Customer__c>();

    for (Id customerId : customerIds) {

        AggregateResult[] results = [
            SELECT SUM(Total_Amount__c) totalSum
            FROM HandsMen_Order__c
            WHERE HandsMen_Customer__c = :customerId
        ];

        Decimal totalPurchases = 0;
        if (results[0].get('totalSum') != null) {
            totalPurchases = (Decimal)results[0].get('totalSum');
        }


        String newLoyaltyStatus;
        if (totalPurchases >= 1000) {
            newLoyaltyStatus = 'Gold';
        } else if (totalPurchases >= 500) {
            newLoyaltyStatus = 'Silver';
        } else {
            newLoyaltyStatus = 'Bronze';
        }


        HandsMen_Customer__c customer = [
            SELECT Id, Loyalty_Status__c
            FROM HandsMen_Customer__c
            WHERE Id = :customerId
            LIMIT 1
        ];

        if (customer.Loyalty_Status__c != newLoyaltyStatus) {
            customer.Loyalty_Status__c = newLoyaltyStatus;
            customersToUpdate.add(customer);
        }
    }
}
```

Purpose: Dynamically updates customer loyalty tier based on cumulative confirmed order totals

Batch Processing

- **Loyalty Points Calculation Job:** Weekly scheduled process (Sunday midnight) that comprehensively recalculates customer reward points across the entire customer base.

- **Inventory Synchronization Job:** Daily automated reconciliation (2 AM processing) aligning internal stock levels with external warehouse management systems.

PHASE 3: UI/UX DEVELOPMENT & CUSTOMIZATION

**Lightning App Setup through App Manager**
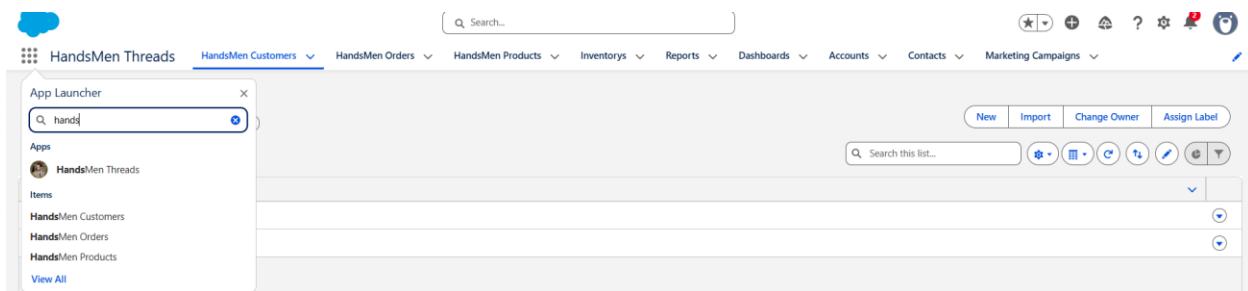
Custom Lightning App: "HandsMen Threads"

Configuration Details:

- **App Type**: Lightning App

- **App Logo**: Custom HandsMen Threads logo uploaded

Tabs Included:

- HandsMen Customers

- HandsMen Products

- HandsMen Orders

- Marketing Campaigns

- Inventorys

- Reports

- Dashboards

- Accounts

- Contacts

Page Layouts and Dynamic Forms

Customer Page Layout: "Customer Sales Layout"

Product Page Layout: "Product Management Layout"

Order Page Layout: "Order Processing Layout"

User Management

Users Created:

Stakeholder	Role	Responsibilities	CRM Access Level / Profile
Martin, Ivan Carlos	Platform Admin	Manages user permissions, maintains data integrity, and system performance	Platform 1
Mikaelson, Ivan Carlos	Marketing Manager	Creates and manages marketing campaigns and promotions for HandsMen Threads	Platform 1
Mikaelson, Kol	Inventory Manager	Oversees product inventory, restocks, and item availability	Platform 1
Mikaelson, Niklaus	Sales Manager	Manages sales operations, team targets, and customer transactions	Platform 1

User Setup Details:

- All users assigned to appropriate roles in hierarchy
- Each user has unique email and username
- Time Zone: Pacific Standard Time
- Locale: English (United States)
- License Type: Salesforce Platform

	Action	Full Name ↑	Alias	Username	Role	Active	Profile
☐	Edit	Chatter Expert	Chatter	chatty.00dg5000001fgw8eac.vqpxjc2wvkpv@chatter.salesforce.com		✓	Chatter Free User
☐	Edit	EPIC, OrgFarm	OEPIC	epic.4cac22d8ae14@orgfarm.salesforce.com		✓	System Administrator
☐	Edit	Martin, Ivan Carlos	iva	ivancarlosmartin30374@agentforce.com		✓	System Administrator
☐	Edit	Mikaelson, Ivan Carlos	imika	ivancarlosmartin092205@gmail.com	Marketing	✓	Platform 1
☐	Edit	Mikaelson, Kol	kmika	ivancarlosmartin081905@gmail.com	Inventory	☐	Platform 1
☐	Edit	Mikaelson, Niklaus	nmika	ivancarlosmartin090323@gmail.com	Sales	✓	Platform 1
☐	Edit	User, Integration	integ	integration@00dg5000001fgw8eac.com		✓	Analytics Cloud Integration User
☐	Edit	User, Security	sec	insightssecurity@00dg5000001fgw8eac.com		✓	Analytics Cloud Security User

Figure: Created Users

Permission Sets Created:

Role
Marketing

Below is the list of users assigned to this role. Click Edit to modify the role name. Click Assign Users to Role to assign existing users to this role. Click New User to create a user for this role.

Hierarchy: Bulacan State University » CEO » Marketing
Siblings: SVP, Sales & Marketing, SVP, Customer Service & Support, CFO, SVP, Human Resources, COO, Sales, Inventory

Users in Marketing Role [1]

Role Detail   [Edit] [Delete]

Label	Marketing	Role Name	Marketing
This role reports to	CEO	Role Name as displayed on reports	
Modified By	Ivan Carlos Martin, 11/7/2025, 7:55 AM	Sharing Groups	Role, Role and Internal Subordinates
Opportunity Access	Users in this role can **edit** all opportunities associated with accounts that they own, regardless of who owns the opportunities		
Case Access	Users in this role can **edit** all cases associated with accounts that they own, regardless of who owns the cases		

Users in Marketing Role   [Assign Users to Role] [New User]

Action	Full Name	Alias	Username
Edit	Ivan Carlos Mikaelson	imika	ivancarlosmartin092205@gmail.com

Figure: Marketing Permission Set

Role
Inventory

Below is the list of users assigned to this role. Click Edit to modify the role name. Click Assign Users to Role to assign existing users to this role. Click New User to create a user for this role.

Hierarchy: Bulacan State University » CEO » Inventory
Siblings: SVP, Sales & Marketing, SVP, Customer Service & Support, CFO, SVP, Human Resources, COO, Marketing, Sales

Users in Inventory Role [1]

Role Detail   [Edit] [Delete]

Label	Inventory	Role Name	Inventory
This role reports to	CEO	Role Name as displayed on reports	
Modified By	Ivan Carlos Martin, 11/7/2025, 7:55 AM	Sharing Groups	Role, Role and Internal Subordinates
Opportunity Access	Users in this role can **edit** all opportunities associated with accounts that they own, regardless of who owns the opportunities		
Case Access	Users in this role can **edit** all cases associated with accounts that they own, regardless of who owns the cases		

Users in Inventory Role   [Assign Users to Role] [New User]

Action	Full Name	Alias	Username
Edit	Kol Mikaelson	kmika	ivancarlosmartin081905@gmail.com

Figure: Inventory Permission Set

Sales

Below is the list of users assigned to this role. Click Edit to modify the role name. Click Assign Users to Role to assign existing users to this role. Click New User to create a user for this role.

Hierarchy: Bulacan State University » CEO » Sales
Siblings: SVP, Sales & Marketing, SVP, Customer Service & Support, CFO, SVP, Human Resources, COO, Marketing, Inventory

Users in Sales Role [1]

Role Detail

Edit   Delete

Label	Sales	Role Name	Sales
This role reports to	CEO	Role Name as displayed on reports	
Modified By	Ivan Carlos Martin, 11/7/2025, 7:54 AM	Sharing Groups	Role, Role and Internal Subordinates
Opportunity Access	Users in this role can **edit** all opportunities associated with accounts that they own, regardless of who owns the opportunities		
Case Access	Users in this role can **edit** all cases associated with accounts that they own, regardless of who owns the cases		

👤 **Users in Sales Role**   Assign Users to Role   New User

Action	Full Name	Alias	Username
Edit	Niklaus Mikaelson	nmika	ivancarlosmartin090323@gmail.com

Figure: Sales Permission Set

Report 1: Monthly Sales Performance

- **Report Type**: Orders with Products
- **Format**: Summary Report (Grouped by Product Category)
- **Columns**: Product Name, Order Date, Quantity, Total Amount

Subtotal			
1,200 (1)	400 (1)	O-0004	T-Shirt Ivan
	Subtotal		
Subtotal			
1,500 (1)	500 (1)	O-0003	T-Shirt Ivan
	Subtotal		
Subtotal			
1,503 (1)	501 (1)	O-0006	Men's Jacket - Classic Red & White
	Subtotal		
Subtotal			
100,200 (1)	501 (1)	O-0005	Men's Jacket - Classic Red & White
	Subtotal		

PHASE 4: DATA MIGRATION, TESTING & SECURITY

Data Migration Process

Customer Data Import:

- Source: CSV file with 50 sample customer records

- Fields Mapped: Name, Email, Phone, Address, Loyalty_Status__c

Bulk Data Load Job Detail   [Reload]

Job ID	750g5000000xAjK	Job Type	Bulk V1	Status	Closed
Submitted By	Ivan Carlos Martin	Operation	Insert	Total Processing Time (ms)	159
Start Time	11/10/2025, 2:29 AM PST	Queued Batches	0	API Active Processing Time (ms)	92
End Time	11/10/2025, 2:29 AM PST	In Progress Batches	0	Apex Processing Time (ms)	4
Time to Complete ([hh:]mm:ss)	00:01	Completed Batches	1		
Object	HandsMen Customer	Failed Batches	0		
External ID Field		Progress	100%		
Content Type	CSV	Records Processed	50		
Concurrency Mode	Parallel	Records Failed	0		
API Version	65.0	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	751g5000000Ny8L	11/10/2025, 2:29 AM	11/10/2025, 2:29 AM	159	92	4	50	0	0		Completed

Figure: Customer Data Import

Product Data Import:

- Source: Excel file with 25 product records

- Fields Mapped: Name, Description, Category__c, Unit_Price__c, Stock__c, Reorder_Level__c

Bulk Data Load Job Detail   [Reload]

Job ID	750g5000000xDaj	Job Type	Bulk V1	Status	Closed
Submitted By	Ivan Carlos Martin	Operation	Insert	Total Processing Time (ms)	96
Start Time	11/10/2025, 2:32 AM PST	Queued Batches	0	API Active Processing Time (ms)	50
End Time	11/10/2025, 2:32 AM PST	In Progress Batches	0	Apex Processing Time (ms)	0
Time to Complete ([hh:]mm:ss)	00:01	Completed Batches	1		
Object	HandsMen Product	Failed Batches	0		
External ID Field		Progress	100%		
Content Type	CSV	Records Processed	25		
Concurrency Mode	Parallel	Records Failed	0		
API Version	65.0	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	751g5000000Npmg	11/10/2025, 2:32 AM	11/10/2025, 2:32 AM	96	50	0	25	0	0		Completed
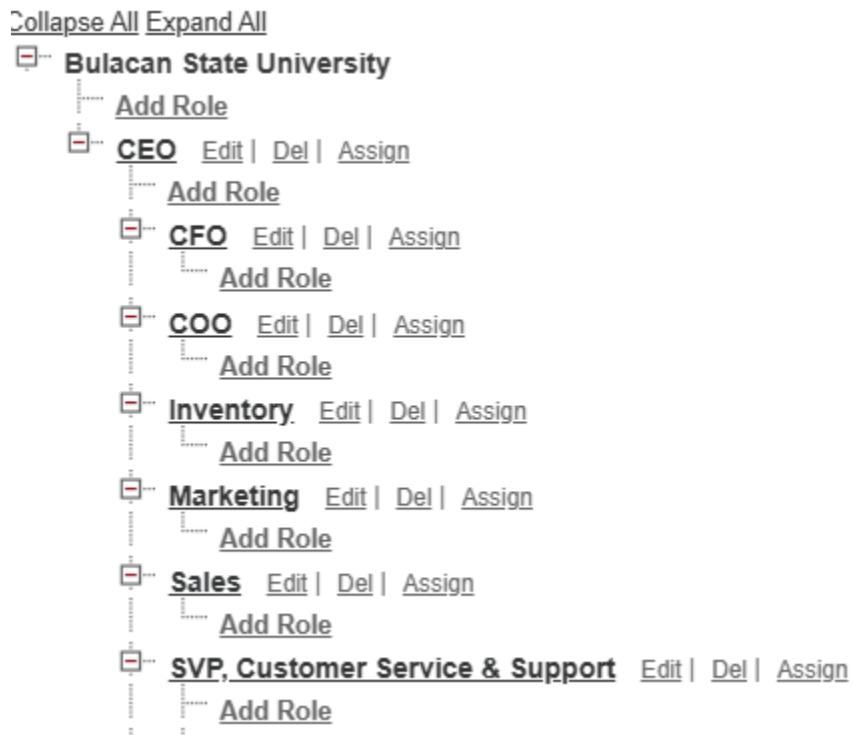
Figure: Product Data Import

Data Import Wizard Usage:

- Used for small batches (<50 records)

Role Hierarchy:

Test Cases for Salesforce Features

Test Case 1: Customer Creation with Email Validation
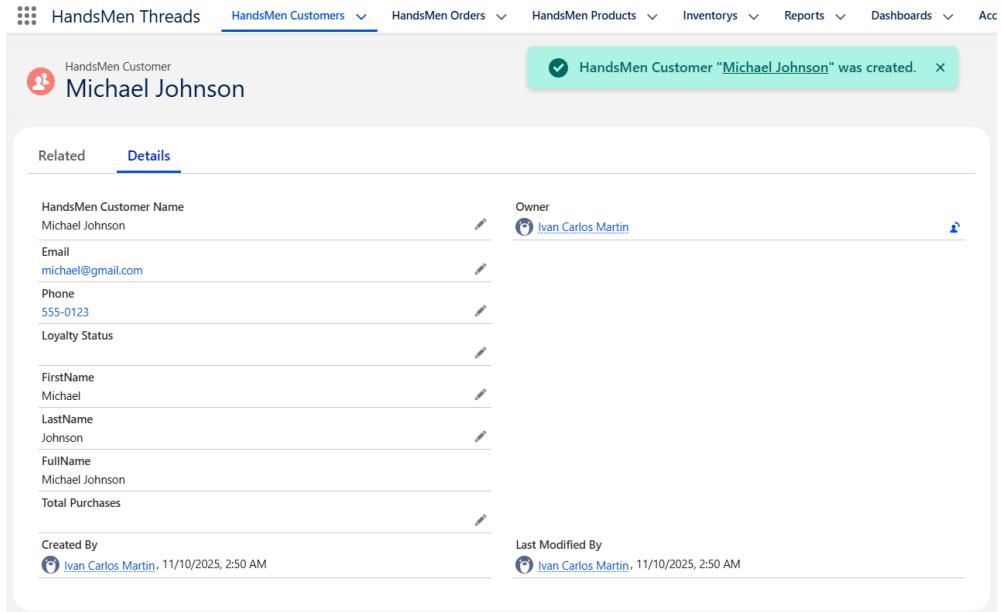
Test Step	Input	Expected Output	Actual Output	Status
1. Navigate to Customers tab	Click "New" button	New customer form opens	Form opened successfully	✓ Pass
2. Enter customer name	"Michael Johnson"	Name field populated	Name accepted	✓ Pass
3. Enter invalid email	"michael@yahoo.com"	Validation error displayed	Error: "Please fill correct gmail"	✓ Pass
4. Correct email	"michael@gmail.com"	Email accepted	Email saved successfully	✓ Pass
5. Enter phone number	"555-0123"	Phone saved	Phone number recorded	✓ Pass
6. Save record	Click "Save"	Customer record created	Michael Johnson Was Created	✓ Pass

New HandsMen Customer

* = Required Information

Information

* HandsMen Customer Name

Michael Johnson

Owner

Ivan Carlos Martin

Email

michael@yahoo.com

Phone

555-0123

Loyalty Status

--None--

FirstName

Michael

LastName

Johnson

Total Purchases

⊘ We hit a snag.   ×

Review the errors on this page.
- Please fill Correct Gmail

Cancel   Save & New   Save

HandsMen Customer
Michael Johnson

✓ HandsMen Customer "Michael Johnson" was created. ✕

Related   **Details**

HandsMen Customer Name
Michael Johnson

Owner
👤 Ivan Carlos Martin

Email
michael@gmail.com

Phone
555-0123

Loyalty Status

FirstName
Michael

LastName
Johnson

FullName
Michael Johnson

Total Purchases

Created By
👤 Ivan Carlos Martin , 11/10/2025, 2:50 AM

Last Modified By
👤 Ivan Carlos Martin , 11/10/2025, 2:50 AM

Test Case 2: Order Creation with Stock Validation

Test Step	Input	Expected Output	Actual Output	Status
1. Check product stock	View "Classic Blue Suit"	Current stock: 5 units	Stock displayed: 5 units	✓ Pass
2. Create new order	Click "New Order"	Order form opens	Form displayed	✓ Pass
3. Select customer	"Michael Johnson"	Customer linked	Customer selected	✓ Pass
4. Select product	"Classic Blue Suit"	Product linked	Product selected	✓ Pass
5. Enter quantity exceeding stock	Quantity: 10	Validation error	Error: "Insufficient stock available"	✓ Pass
6. Correct quantity	Quantity: 3	Quantity accepted	Value saved	✓ Pass
7. Save order	Click "Save"	Order created, Total calculated	Total: $1,500	✓ Pass
8. Verify stock update	Check product stock	Stock reduced to 2	Stock now shows: 2 units	✓ Pass

HandsMen Product
Classic Blue Suit

Related   **Details**

HandsMen Product Name
Classic Blue Suit ✎

Order
✎

SKU
✎

Price
$500 ✎

Stock Quantity
5 ✎

Owner
👤 Ivan Carlos Martin

New HandsMen Order

* = Required Information

Information

HandsMen OrderNumber

Owner
👤 Ivan Carlos Martin

HandsMen Customer ↺
👤 Michael Johnson ✕

HandsMen Product ↺
📦 Classic Blue Suit ✕

* Customer Email ↺
ivancarlosmartin30@gmail.com

Status ↺
Pending ▾

Quantity ↺
10

Total Amount

Cancel   Save & New   Save

HandsMen Order
O-0007

Related **Details**

HandsMen OrderNumber
O-0007

Owner
Ivan Carlos Martin

HandsMen Customer
Michael Johnson

HandsMen Product
Classic Blue Suit

Customer Email
ivancarlosmartin30@gmail.com

Status

Quantity
3

Total Amount
1,500

Created By
Ivan Carlos Martin, 11/10/2025, 2:54 AM

Last Modified By
Ivan Carlos Martin, 11/10/2025, 2:54 AM

PHASE 5: DEPLOYMENT, DOCUMENTATION & MAINTENANCE

Deployment Strategy

Deployment Method: Change Sets

Pre-Deployment Checklist:

- ✓ All Apex test classes passing with ≥75% coverage

- ✓ Validation rules tested in sandbox

- ✓ Flows activated and tested

- ✓ User acceptance testing completed

- ✓ Backup of production data completed

- ✓ Rollback plan documented

Outbound Change Set: "HandsMenThreads_Production_v1.0"

Components Included:

1. Custom Objects (5):
   o HandsMen_Customer__c
   o HandsMen_Product__c
   o HandsMen_Order__c
   o Marketing_Campaign__c
   o Inventory_c

2. Custom Fields (25+ fields across all objects)

3. Page Layouts (5):

   o   Customer Sales Layout

   o   Product Management Layout

   o   Order Processing Layout

   o   Marketing Campaign Layout

   o   Inventory Campaign Layout

4. Validation Rules (5 rules)

5. Flows (3):

   o   Email Notification Flow

   o   Scheduled Loyalty Update Flow

   o   Low Stock Alert Flow

6. Apex Classes (3 triggers):

   o   OrderTotalTrigger

   o   StockDeductionTrigger

   o   CustomerLoyaltyUpdateTrigger

7. Lightning App (1):

   o   HandsMen Threads App

8. Profiles (3):

   o   HandsMen Sales Profile

   o   HandsMen Inventory Profile

   o   HandsMen Marketing Profile

9. Permission Sets (3)

10. Email Templates (3)

PROJECT DEMONSTRATION: Real-World Customer Journey

Let's explore how our integrated system manages a complete customer interaction at HandsMenThreads:

1. **Customer Registration:**

   o   A new patron, "Ivan Smith," visits our establishment.

   o   Our sales associate navigates to the "HandsMen Customer" tab and initiates a new record.

- o They input John's information: Name, Phone, and Email (example: "ivansmith@gmail.com").

- o **Validation Rule in Action:** Should the associate accidentally enter "ivansmith@yahoo.com," the system immediately displays an error message: "Please enter a valid Gmail address," maintaining data consistency.

- o Upon successful validation, Ivan Smith profile is established in our system.

2. **Product Catalog Management:**

- o Concurrently, our inventory coordinator ensures all merchandise is accurately represented in the "HandsMen Product" tab.

- o For instance, a "Men's Jacket's - Classic Red" is cataloged at $500 with 10 units available.

3. **Transaction Processing:**

- o Ivan Smith selects the "Men's Jacket's - Classic Red & White" for purchase.

- o The sales associate creates a new transaction under the "HandsMen Order" tab.

- o They associate Ivan Smith customer record, select the " Men's Jacket's - Classic Red & White," and specify a quantity of 1.

- o **Apex Trigger in Action:** Upon saving, the OrderTotalTrigger automatically calculates and populates Total_Amount__c as $500 (1 suit × $500), eliminating manual computation.

- o **Email Communication Flow in Action:** Within moments, the automated Email Notification Flow transmits an "Order Confirmation Email" message to Ivan Smith email address, detailing his purchase.

4. **Inventory Synchronization:**

- o **Stock Adjustment Flow in Action:** Immediately following order confirmation, the " Men's Jacket's - Classic Red & White" inventory automatically updates from 10 to 9 units.

- o **Validation Rule in Action:** If the associate attempted to order 11 suits when only 10 were available, our validation framework would block the transaction, preventing overselling scenarios.

5. **Customer Recognition Update:**

- o **Apex Trigger in Action:** As Ivan Smith order processes, the CustomerLoyaltyUpdateTrigger recalculates his aggregate purchases. If this transaction elevates him to "Silver" his Loyalty_Status__c instantly updates.

- o **Scheduled Processing in Action:** Additionally, our "Scheduled Loyalty Update" batch job executes daily, ensuring any missed real-time updates are corrected.

6. **Inventory Threshold Monitoring:**

- o **Stock Alert Flow in Action:** If the "Men's Jacket's - Classic Red & White " inventory falls below 5 units, the system automatically emails the warehouse team, alerting them to restock.

This comprehensive workflow demonstrates how our Salesforce CRM solution seamlessly orchestrates every aspect of the customer experience, from registration through transaction and ongoing relationship nurturing.

Data Security Model

Our security architecture ensures appropriate access controls across organizational functions:
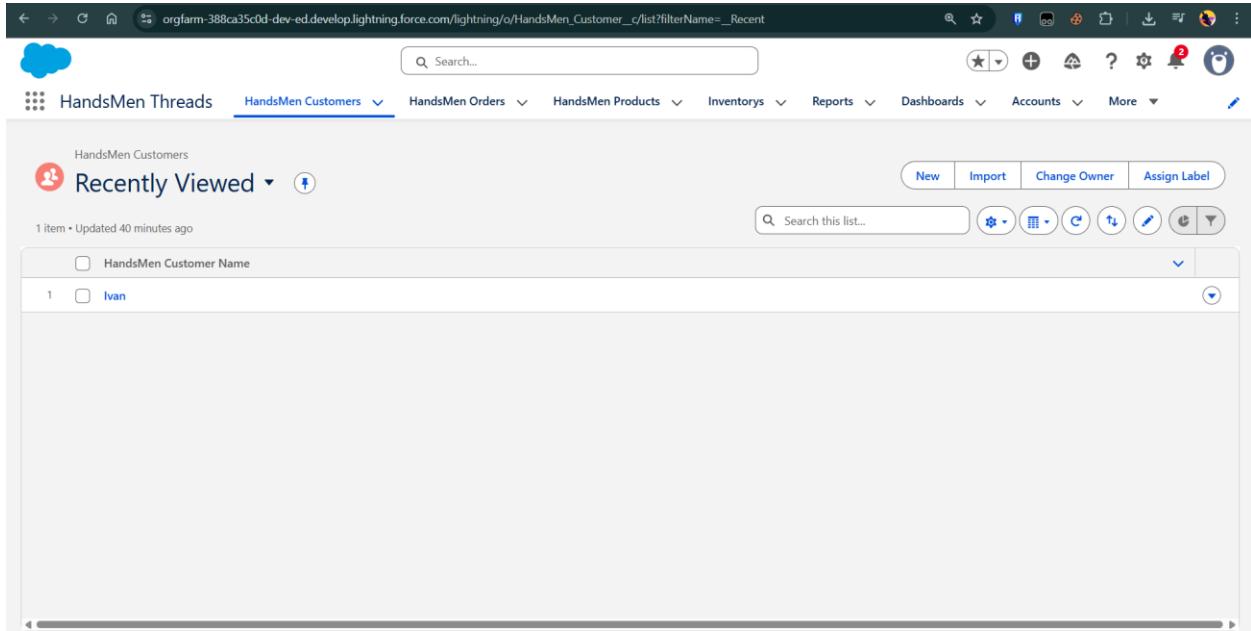
Role	Access Permissions
Sales Manager	Complete access to Customer and Order records
Inventory Manager	Read and modify permissions on Inventory and Product data
Marketing Team	Read access to Customer data, modify permissions on Marketing Campaign records

DELIVERABLES

- Comprehensive Solution Design Document including Object Model, Entity Relationship Diagram, and Automation Strategy
- Fully configured Custom Objects with complete field definitions
- Implemented Validation Rules and Data Quality Controls

- Record-Triggered and Scheduled Flow Automations

- Custom Apex Triggers for complex business logic

- Batch Job implementations for scheduled processing

- Email Templates for customer and internal communications

- Security model implementation with Profiles, Roles, and Permission Sets

SCREENSHOTS

**Figure 1:** Custom Application for HandsMenThreads

Figure 2: Customer Record Creation Interface

Figure 3: Product Catalog List View

**Figure 4:** New Order Entry Page
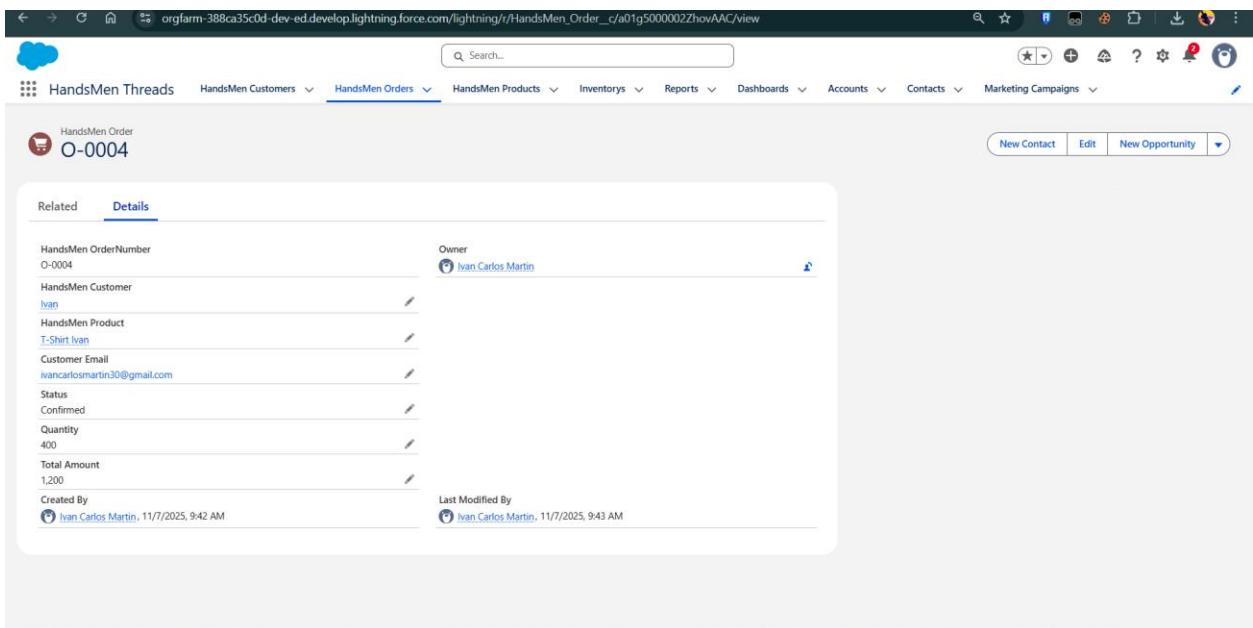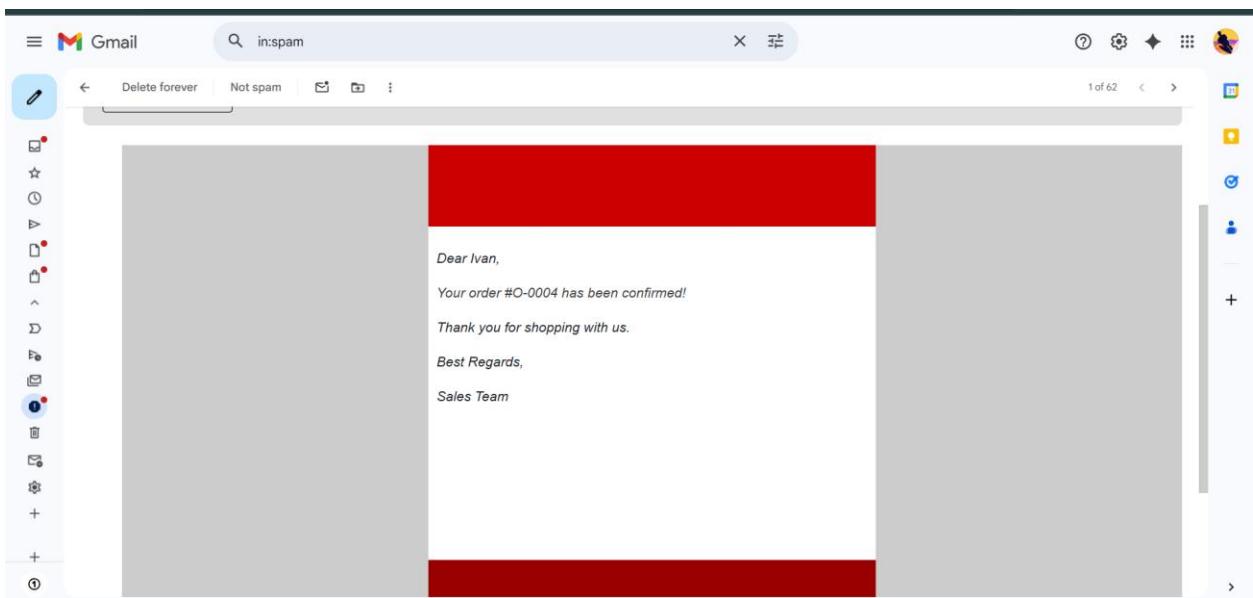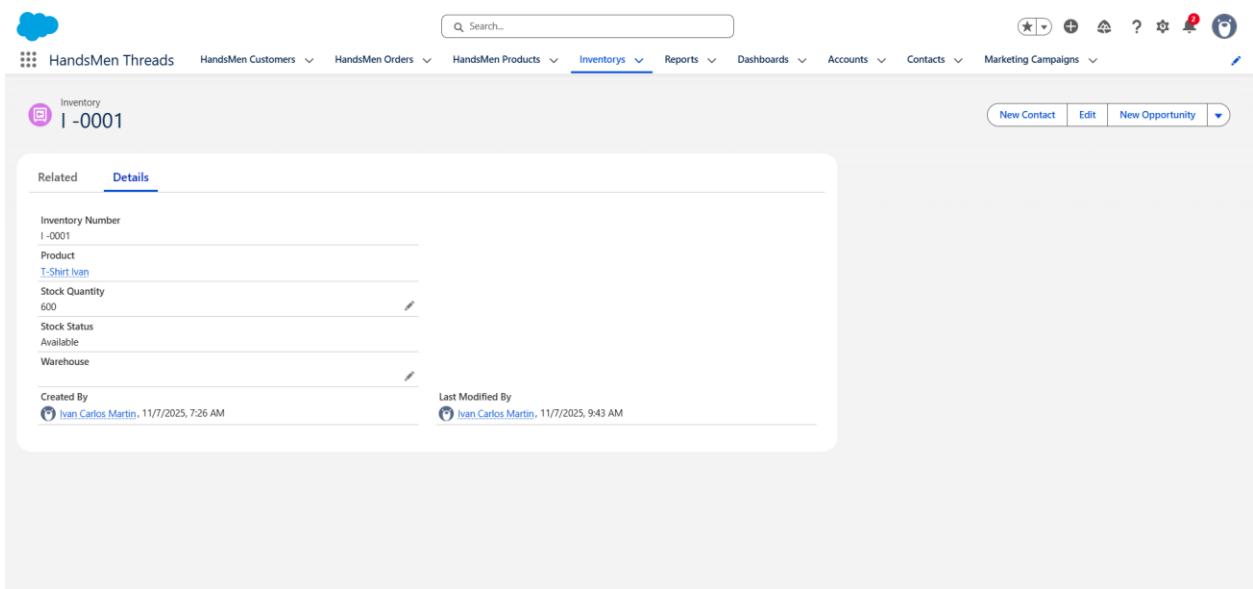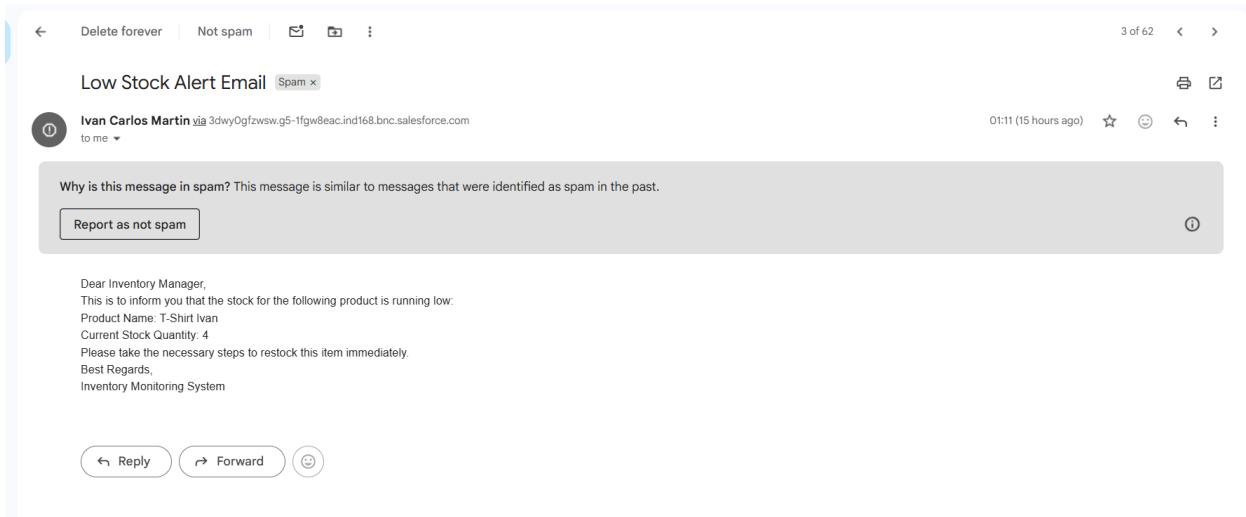
Figure 5: Order Confirmation Display
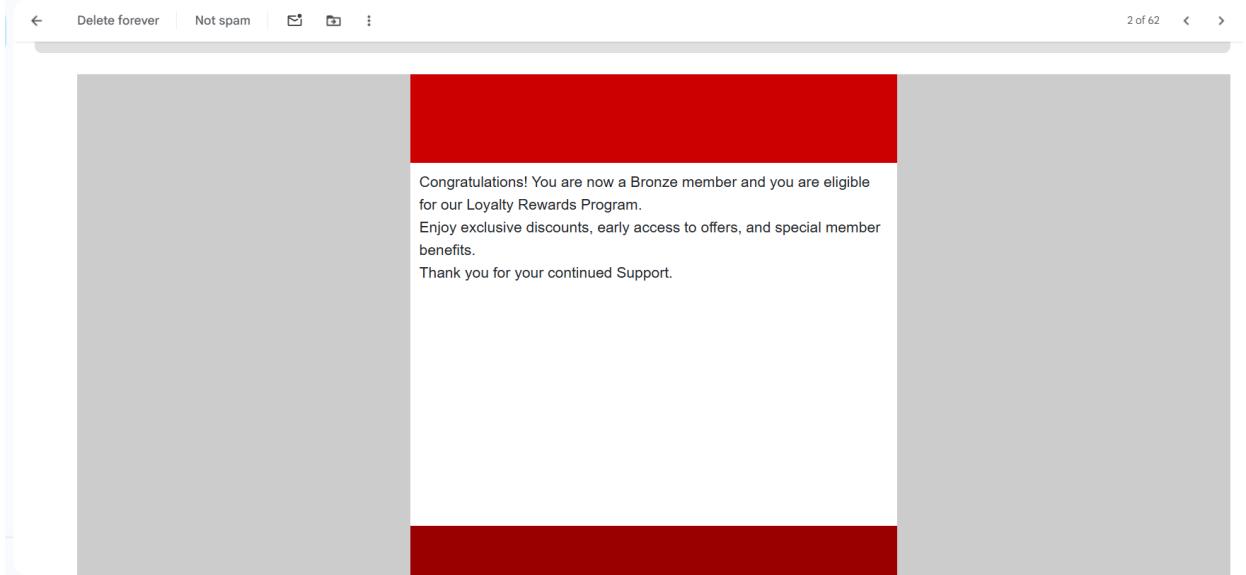
Figure 6: Order Confirmation Email Delivered to Customer

Figure 7: Inventory Management Interface

Low Stock Alert Email Spam ✕   🖨 ⬈

Ivan Carlos Martin via 3dwy0gfzwsw.g5-1fgw8eac.ind168.bnc.salesforce.com   01:11 (15 hours ago) ☆ ☺ ↩ ⋮
to me ▾

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

Report as not spam

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

↩ Reply   → Forward   ☺

Figure 8: Low Stock Alert Notification

Congratulations! You are now a Bronze 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.

Figure 9: Customer Record Displaying Updated Recognition Tier

CONCLUSION

The HandsMenThreads Salesforce CRM implementation represents a transformative achievement in operational excellence. This comprehensive solution seamlessly orchestrates core business functions, strengthens customer relationships, and maintains exceptional data accuracy across sales, inventory, and marketing domains. By harnessing Salesforce's extensive capabilities, we've engineered an integrated platform that delivers real-time insights, empowers informed decision-making, and establishes a scalable foundation for sustained growth and exceptional customer experiences.

FUTURE ENHANCEMENTS

Our vision extends beyond current capabilities with several strategic enhancement opportunities:

- **Customer Self-Service Portal:** A dedicated web-based portal enabling customers to independently access order history, monitor loyalty points, and update profile information.

- **Mobile Application Development:** Leveraging Salesforce Mobile SDK to develop native mobile applications for field teams, enabling inventory management and order processing from mobile devices.

- **Advanced Analytics & Visualization:** Creating sophisticated sales and inventory dashboards within Salesforce for deeper performance insights and trend identification.

- **AI-Powered Personalization (Salesforce Einstein):** Integrating Salesforce Einstein to deliver intelligent product recommendations based on individual purchase patterns.

- **Omnichannel Messaging Integration:** Connecting with platforms like WhatsApp and SMS to deliver real-time order confirmations, shipping notifications, and loyalty program updates.

Key Learning Outcomes:

- Data Modeling best practices

- Data Quality management techniques

- Lightning App Builder proficiency

- Record-Triggered Flow development

- Apex programming and Trigger implementation

- Asynchronous Apex and Batch processing