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

Project Overview:

This project focuses on developing a Salesforce CRM solution tailored to support the operations of HandsMen Threads. The project is designed showcase a structured approach to managing customer, order, and inventory information within a fashion retail setting. The system models the core business data and introduces automated workflows that help simulate real operational processes. Key features include automated order confirmations, loyalty status updates based on purchase behavior, low-stock alerts for inventory control, and scheduled updates for bulk order processing. Together, these components demonstrate how the CRM enables smoother workflows and a more responsive customer experience across the organization.

Objectives:

The main objective of this CRM project is to provide HandsMen Threads with a streamlined, reliable system that improves how the business manages customer information, order processing, and inventory operations. By automating key tasks and ensuring data accuracy, the CRM is designed to enhance daily workflows and support better customer service. The following specific goals outline how the system contributes to overall business efficiency and value:

- **Centralize customer, order, and inventory data** to improve accuracy, consistency, and accessibility across the business.
- **Automate routine processes** such as order confirmations, loyalty status updates, and inventory alerts to reduce manual workload.
- **Enhance customer engagement** by ensuring timely communication and loyalty statyus updates.
- **Improve operational efficiency** by streamlining workflows and minimizing errors caused by manual processes.
- **Strengthen inventory management** with proactive low-stock notifications and scheduled bulk order updates.

Phase 1:Requirement Analysis & Planning

Understanding Business Requirements

During this phase, the operational needs of HandsMen Threads were analyzed to determine the core functionalities required in the CRM. The system is designed to manage customer information, track orders, and monitor inventory levels efficiently. Key problems addressed include maintaining accurate records, automating routine communications, and ensuring timely notifications for low-stock items and order confirmations.

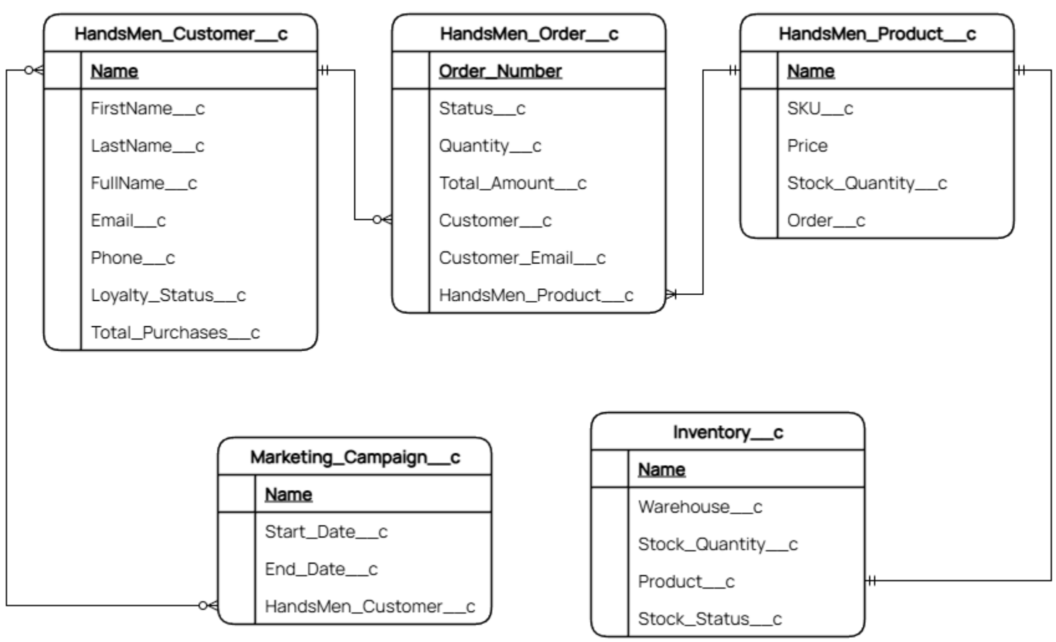
Defining Scope and Objectives

The project scope and objectives were defined to ensure a clear roadmap and realistic deliverables:

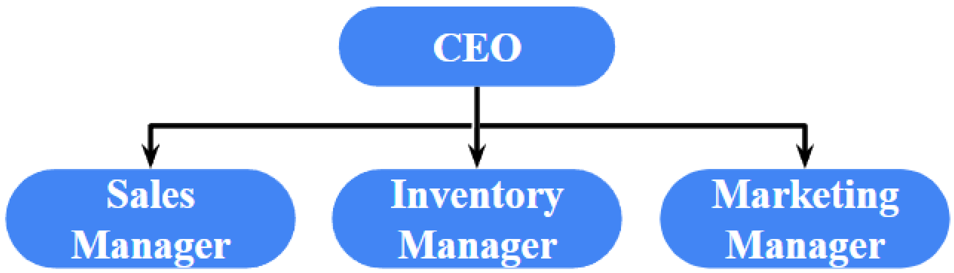
- Develop a Salesforce CRM tailored for HandsMen Threads' customer, product, order, inventory, and marketing management.
- Ensure data integrity through validation rules and structured relationships between objects.
- Implement data security measures by defining roles, profiles, and permission sets to control access to objects and fields based on user role.
- Enable proactive notifications and communication through email templates.
- Implement automation for order confirmations, loyalty status updates, and inventory alerts using Flows, Apex triggers, and batch jobs.

Data Model and Security Model

The data model was designed to organize all essential business data for HandsMen Threads, including customers, products, orders, inventory, and marketing campaigns. Relationships, fields, and formula fields were defined to ensure accurate and consistent data.



Data security was implemented through roles, profiles, and permission sets to control access based on responsibilities.



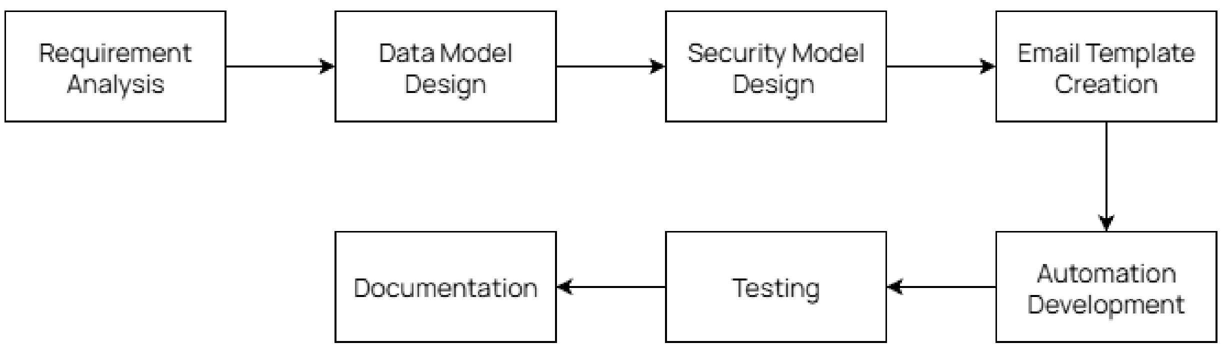
Stakeholders Mapping

The key stakeholders involved in the project are:

- **Developer**: Responsible for all aspects of design, development, and documentation.
- **Instructor**: Provided guidance, requirements, and evaluation.
- **End Users**: HandsMen Threads staff (sales, inventory, and marketing managers) as the intended beneficiaries of the CRM features.

Execution RoadMap

The roadmap outlines the step-by-step plan to implement the CRM:

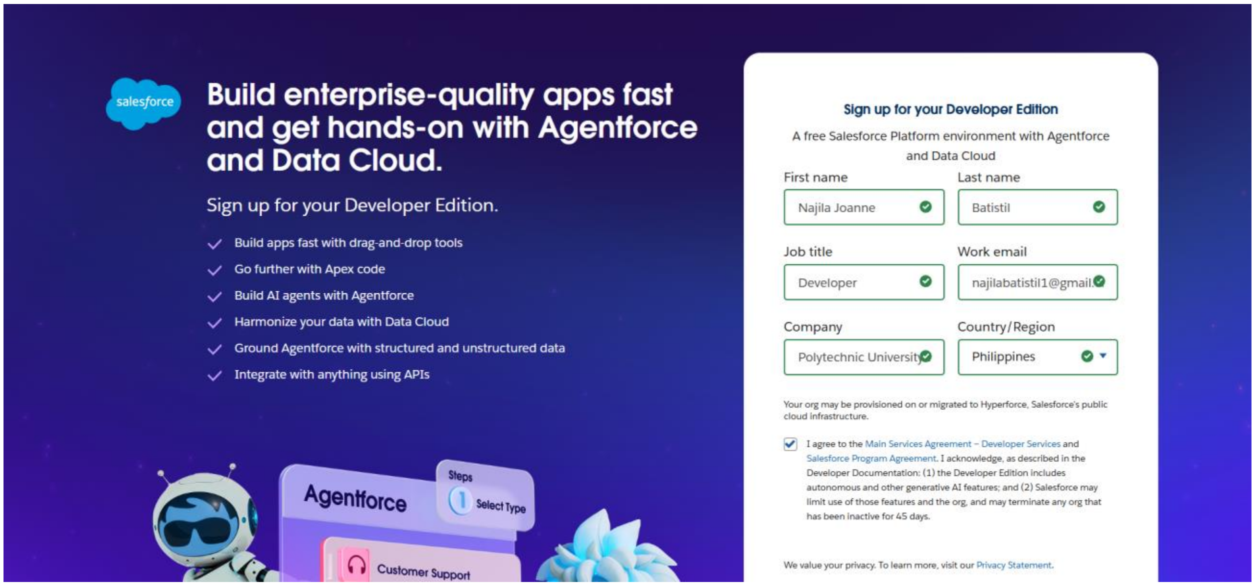


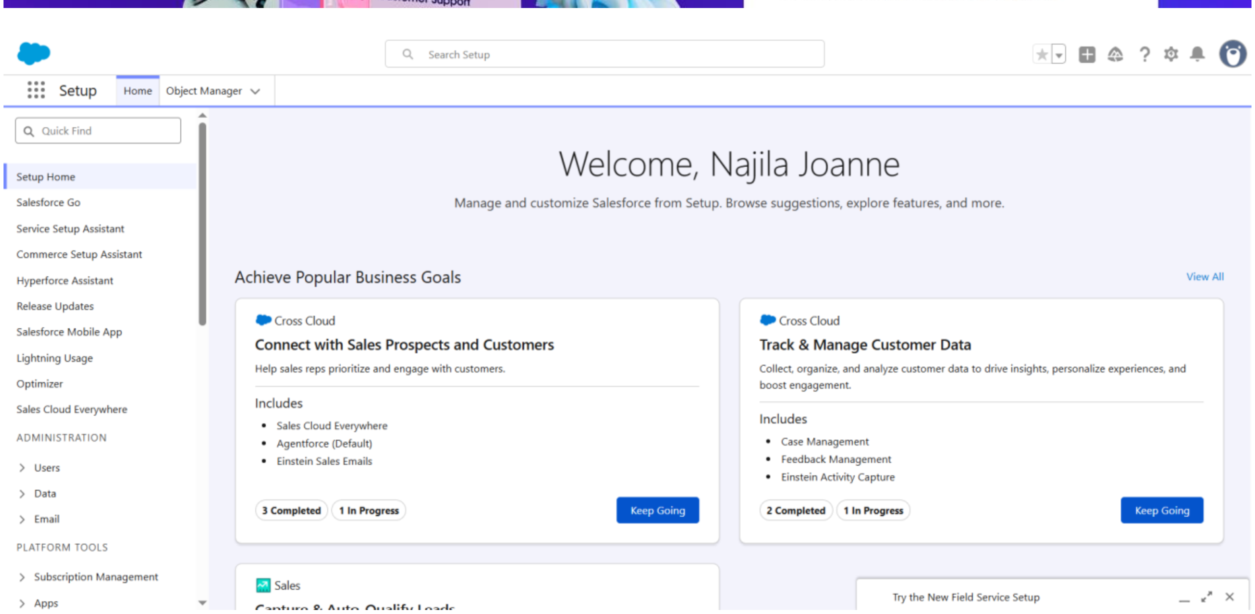
1. **Requirement Analysis** – Identify business needs, problems, and objectives.
2. **Data Model Design** – Define objects, fields, relationships, formula fields, and validation rules, as well as create tabs and app.
3. **Security Model Design** – Set up roles, profiles, and permission sets.
4. **Email Template Design** – Create email templates for orders, loyalty updates, and stock alerts.
5. **Automation Development** – Implement Flows, Apex triggers, and batch jobs.
6. **Testing** – Validate data integrity, automation, and role-based access.
7. **Documentation** – Record all design choices, workflows, and configurations for reference.

Phase 2:Salesforce Development - Backend & Configurations

Setup Environment

The development environment for this project was a Salesforce Developer Org, which provided all the tools needed to build and test the CRM. All configurations, development, and testing were performed directly in this org.

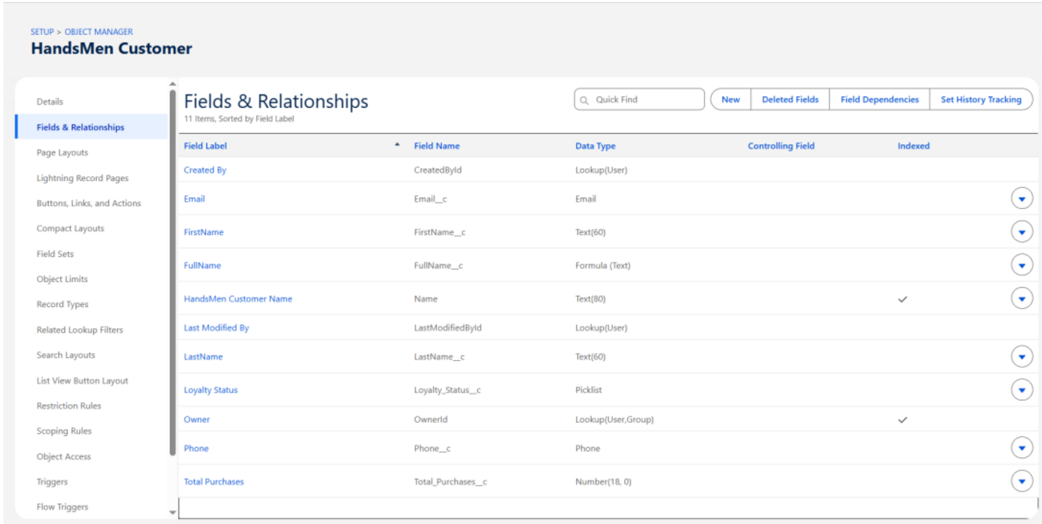




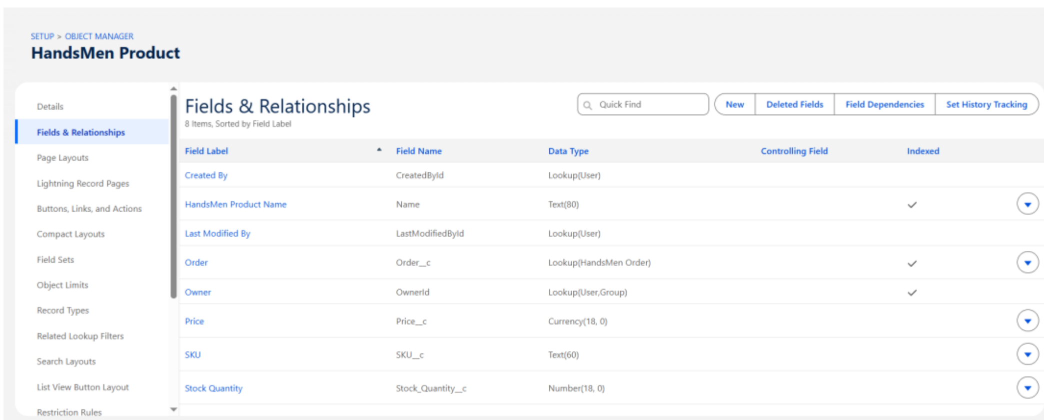
Customization of Objects, Fields, Validation Rules, Email Templates, and Automation

- **Custom Objects and Fields**
  The CRM was designed with several custom objects to capture the core business data of HandsMen Threads. These objects store information about customers, orders, products, inventory, and marketing campaigns. Relationships between objects and key fields were defined to ensure accurate tracking and automation across the system.

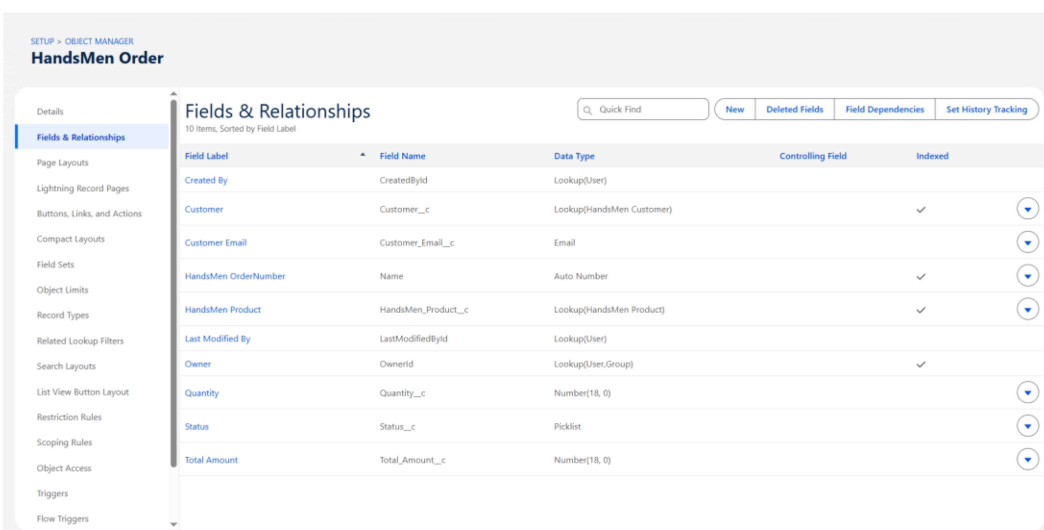
- **HandsMen_Customer__c** - stores customer details



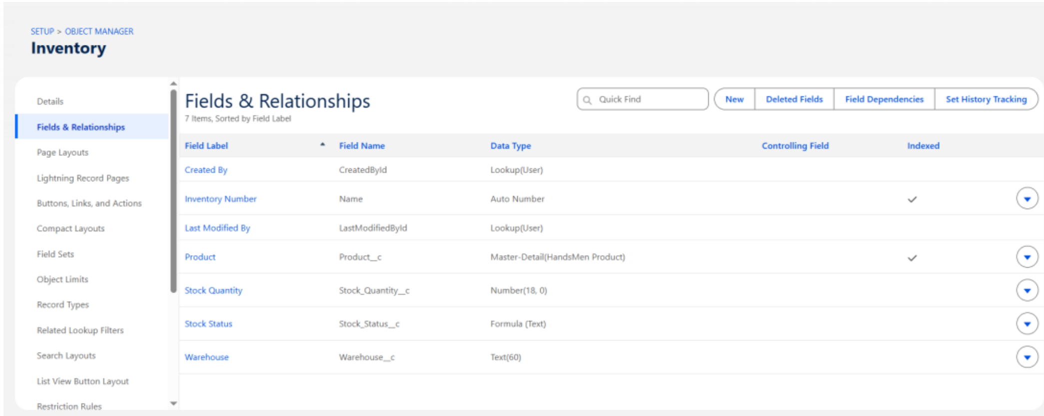
- **HandsMen_Product__c** - stores product catalog



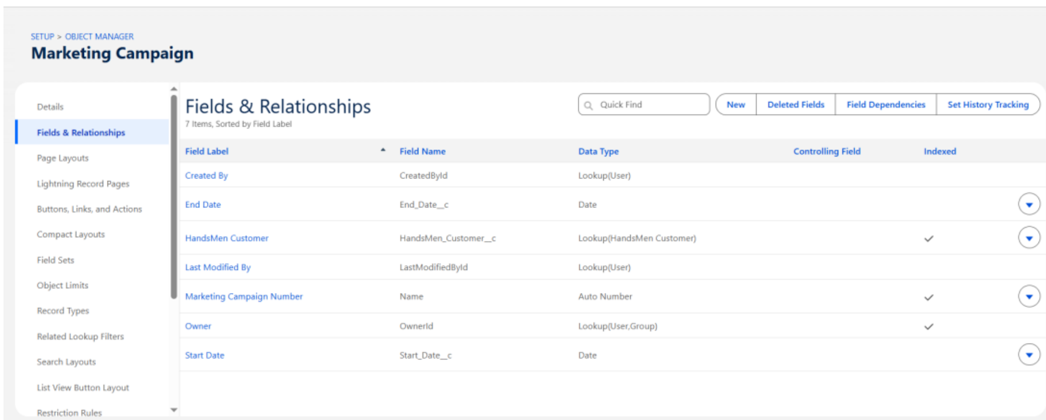
- **HandsMen_Order__c** - stores customer orders



- **Inventory__c** - tracks inventory levels



- **Marketing_Campaign__c** - records promotional campaigns



- **Validation Rules**

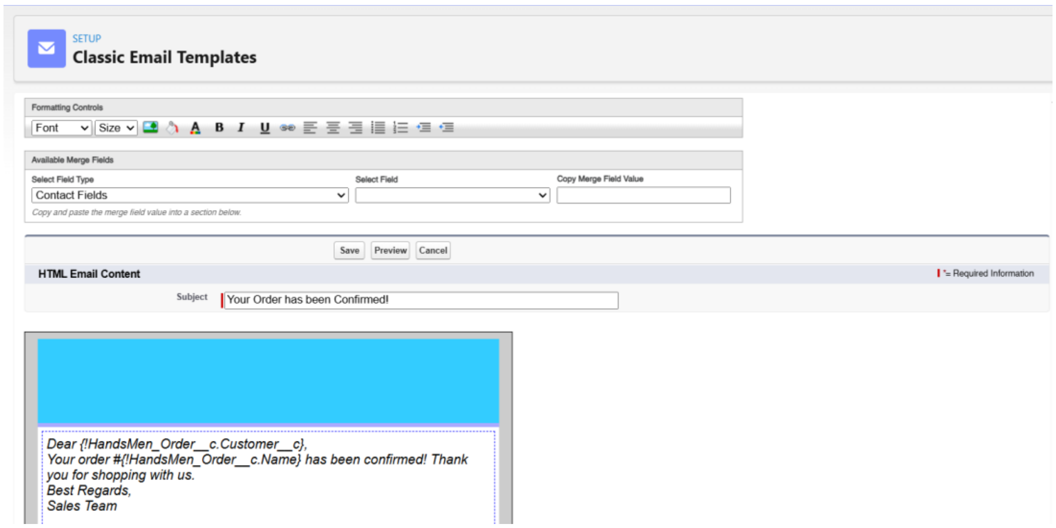
  Validation rules were implemented to ensure data accuracy and prevent incorrect records from being saved in the system. These rules check critical fields in key objects and enforce logical constraints that reflect real-world business requirements.

  - **HandsMen Order__c Object Validation Rule**
    - Purpose: Prevents orders from being saved with zero or negative amounts
    - Rule: `Total_Amount__c <= 0`
    - Error Message: “Please Enter Correct Amount”

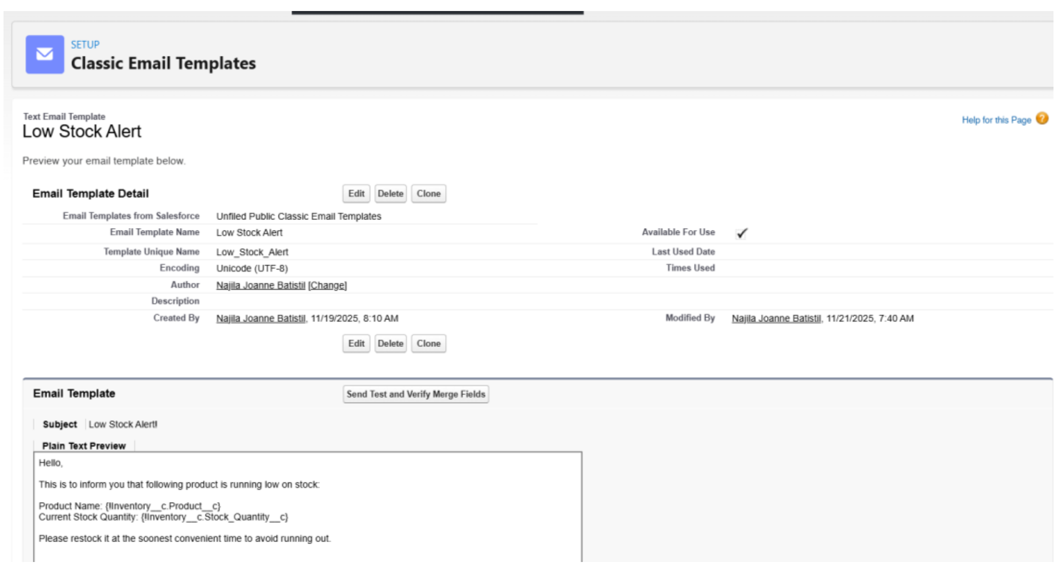
  - **Inventory__c Object Validation Rule**
    - Purpose: Prevents inventory records with zero or negative stock levels.
    - Rule: `Stock_Quantity__c < = 0`
    - Error Message: “The inventory count is never less than zero.”

  - **HandsMen Customer__c Object Validation Rule**
    - Purpose: Ensures only valid email addresses with “@gmail.com” are entered.
    - Rule: `NOT CONTAINS(Email, "@gmail.com")`
    - Error Message: “Please fill Correct Gmail”

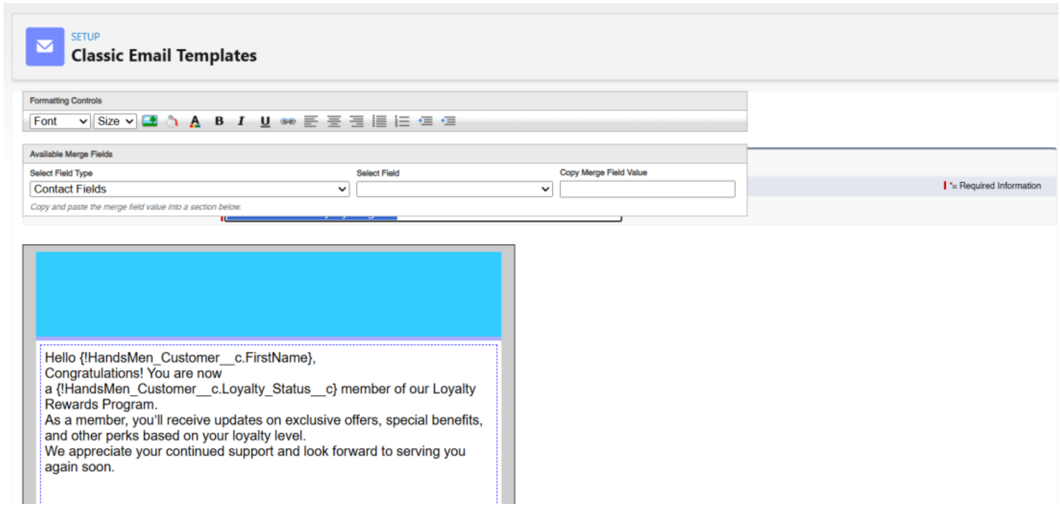
- **Email Templates**
  Email templates were created for communication with customers and staff. These templates use merge fields to dynamically include relevant data such as customer names, order details, and inventory information.
  - **Order Confirmation Email**



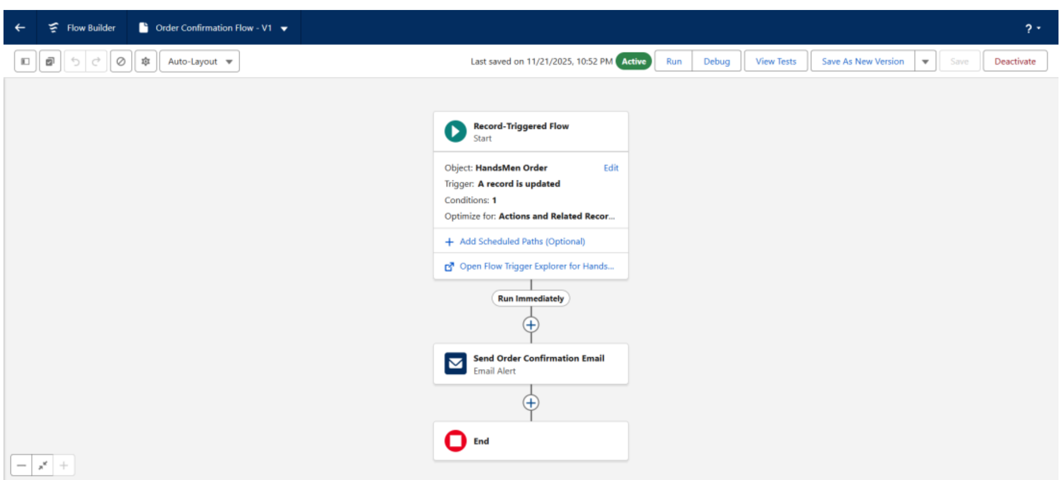
  - **Low Stock Alert Email**



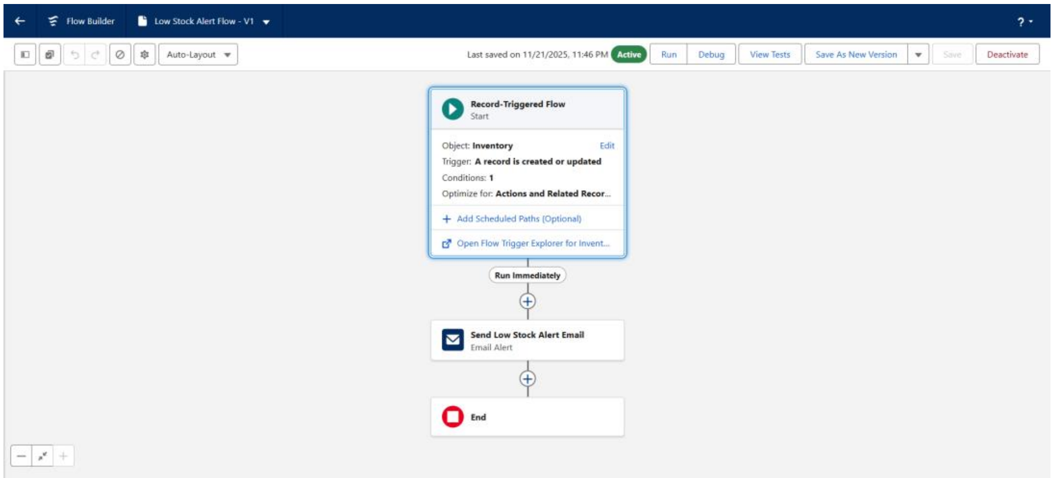
  - **Loyalty Program Email**



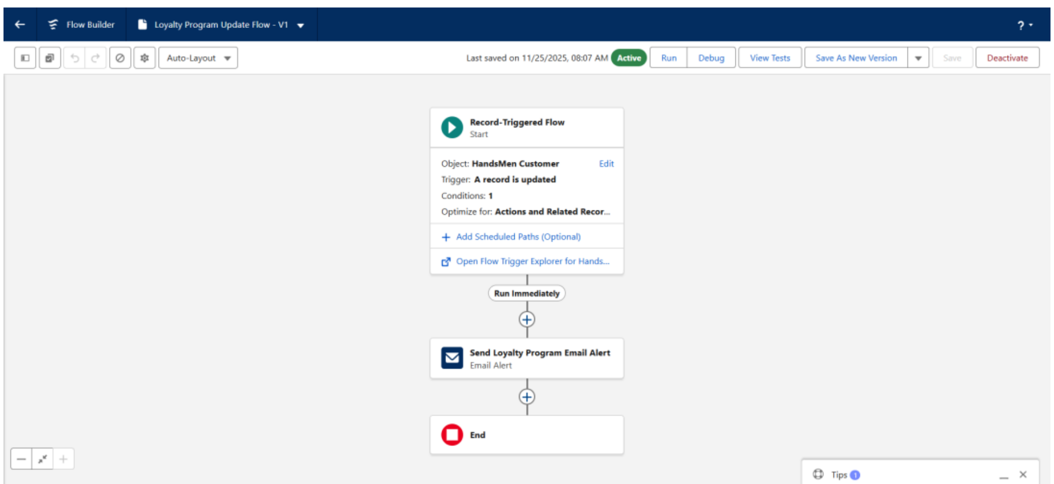
- **Automation**
  Automation was implemented to streamline routine business processes and reduce manual effort. Flows were primarily used to handle tasks such as sending confirmation email, updating loyalty status, and sending inventory alerts. Automation ensures that critical business operations occur consistently and efficiently without manual intervention.
  - **Order Confirmation Flow**
    - A record-triggered flow that automatically sends an email to the customer after order status is updated to confirmed.



  - **Low Stock Alert Flow**
    - A record-triggered flow that automatically sends an email to inventory managers when stock drops below 5 units.



- **Loyalty Status Flow**
  - A record-triggered flow that automatically sends an email to customers when their loyalty status is changed.



Apex Classes and Triggers

Apex was used to handle more complex logic that could not be fully achieved through standard automation. This includes custom triggers and classes to manage order details, inventory updates, customer loyalty status, and bulk order processing. Apex ensures that business rules are consistently enforced and data integrity is maintained, even during high-volume operations.

- **Order Validation**
  - Updates order status based on order quantity.
  - **OrderTrigger Trigger**
    - Object: HandsMen_Order__c
    - Fires: before insert, before update
  - **OrderTriggerHandler Class**

        - Method: validateOrderQuantity(List<HandsMen_Order__c> orderList)
        - Checks rules:
            - Confirmed - Quantity > 500
            - Pending - Quantity > 200
            - Rejection - Quantity = 0

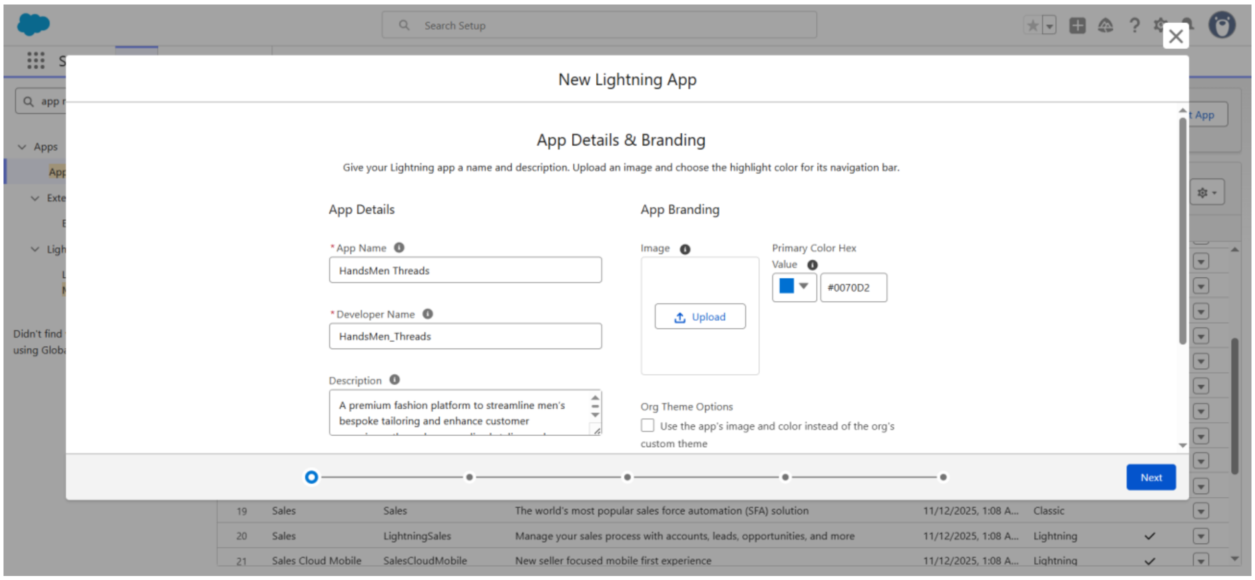
- **Update Order Total**
  - Automatically calculate Total Amount as Quantity × Product Price.
    - **OrderTotalTrigger Trigger**
        - Object: HandsMen_Order__c
        - Fires: before insert, before update
    - **OrderTotalHandler Class**
        - Method: updateOrderTotal(List<HandsMen_Order__c> orders)
        - Queries HandsMen_Product__c to get Price__c
        - Updates Total_Amount__c for each order.
- **Stock Deduction**
  - Reduce stock quantity when order is confirmed.
    - **StockDeductionTrigger Trigger**
        - Object: HandsMen_Order__c
        - Fires: after insert, after update
    - **StockDeductionHandler Class**
        - Method: deductStock(List<HandsMen_Order__c> orders)
        - Queries inventory for product(s) in the orders.
        - Deducts quantity from stock.
- **Loyalty Status Update**
  - Automatically update customer's loyalty status based on their total purchases.
    - **LoyaltyStatusUpdateTrigger Trigger**
        - Object: HandsMen_Customer__c
        - Fires: after update
    - **LoyaltyStatusHandler Class**
        - Method: updateLoyaltyStatus(Set<Id> customerIds)
        - Queries customers whose total purchases changed.
        - Updates Loyalty_Status__c:
            - Gold – Total Purchases > 1000
            - Silver – Total Purchases > 500
            - Bronze – Total Purchases < 500

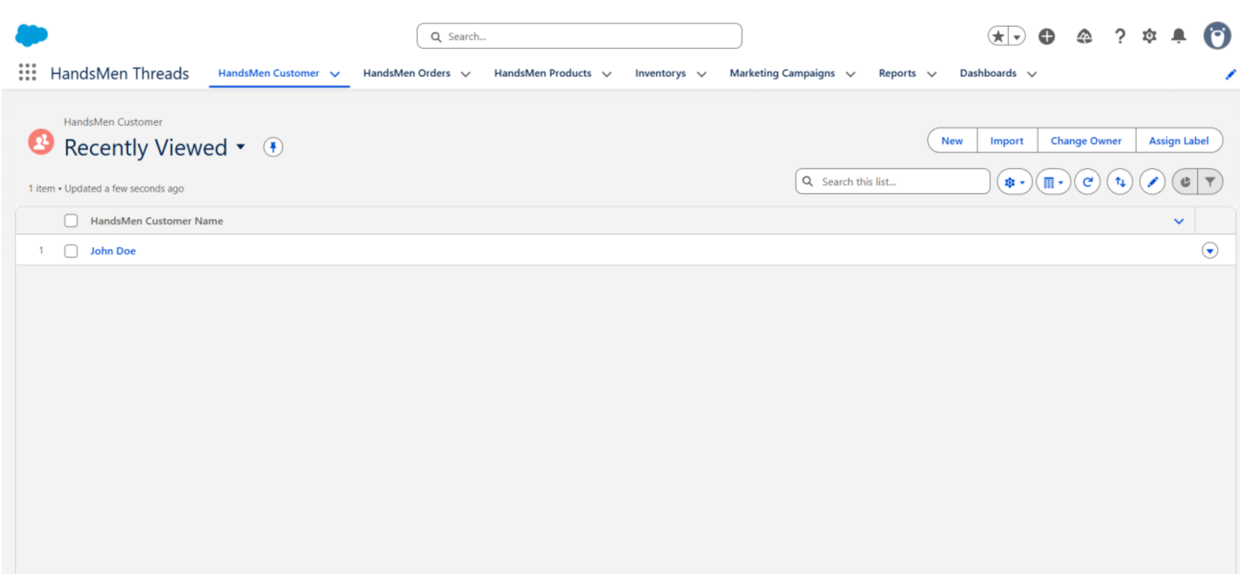
- **Inventory Batch Job / Scheduler**
  - Automatically restock products with low inventory every midnight.

Phase 3:UI/UX Development & Customization

Lightning App Setup

The Salesforce Lightning App was configured to provide users with a tailored interface that organizes all CRM functionality for HandsMen Threads. Through the App Manager, the app was set up to include tabs involving all key objects: HandsMen Customer, HandsMen Order, HandsMen Product, Inventory, and Marketing Campaign, allowing users to easily access records within a single workspace.

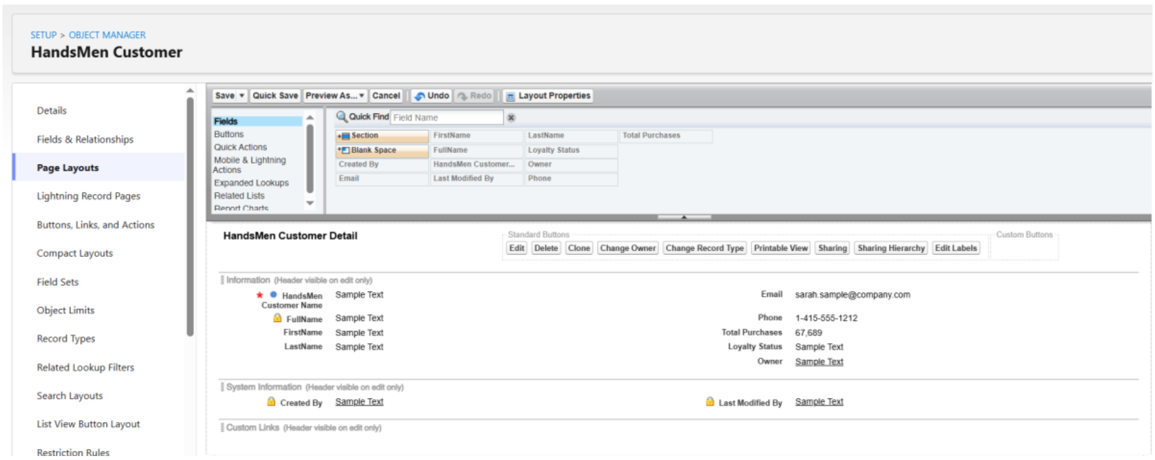




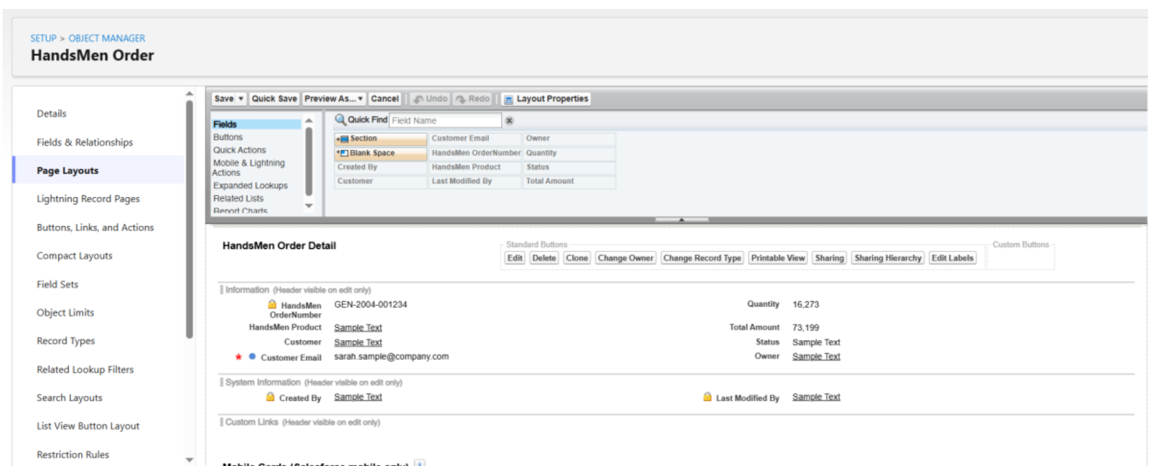
Page Layouts

Page layouts were customized across all key objects to improve clarity and ease of use when viewing or editing records. Fields were displayed in a two-column format to make information easier to scan. This structured layout ensures that users can quickly locate critical information and navigate records more efficiently within the app.

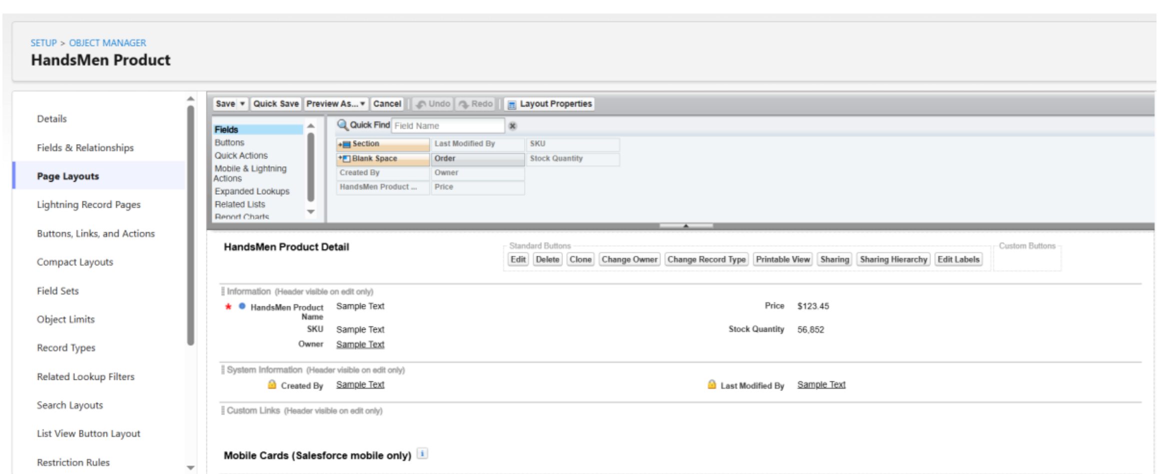
- **HandsMen Customers**



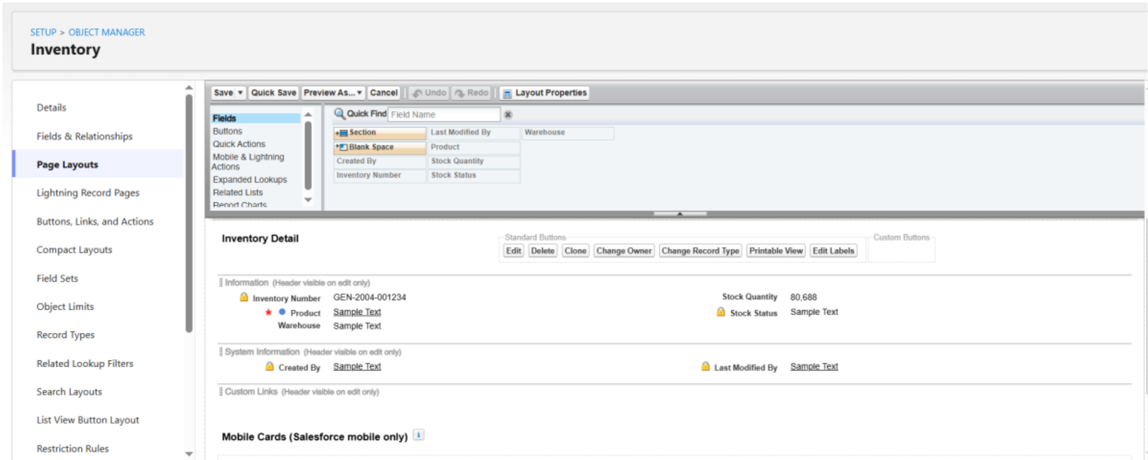
- **HandsMen Orders**



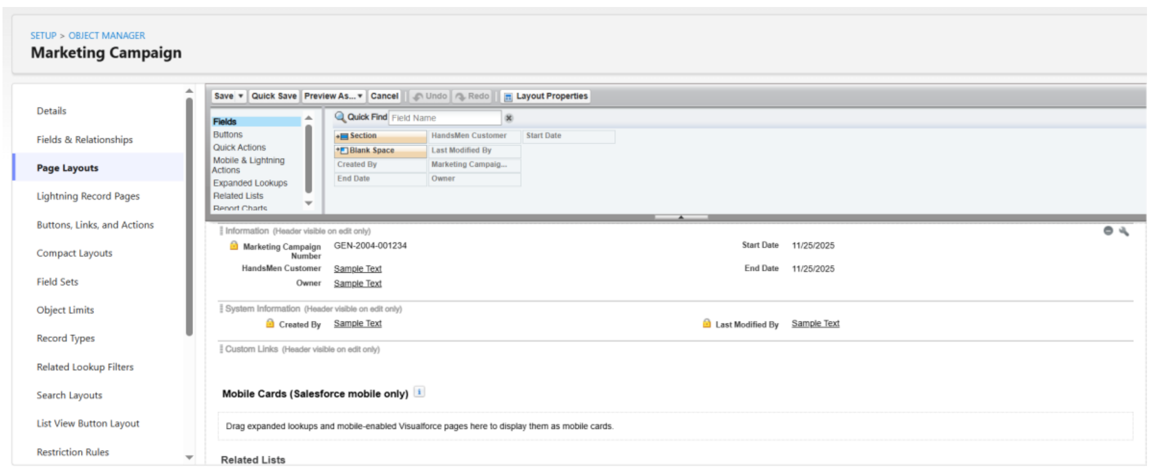
- **HandsMen Products**



- **Inventory**



- **Marketing Campaigns**



User Management

User management was configured to ensure that system access aligns with business roles and responsibilities. Three users were created, each assigned to a specific role: Sales Manager, Inventory Manager, and Marketing Team. Profiles and permission sets were used to control which users can view, edit, or manage customer, order, product, inventory, and marketing data. Basic security measures such as object-level permissions and field-level access were applied to maintain data protection and prevent unauthorized modifications. This setup ensures that users have the appropriate level of access needed to perform their tasks while safeguarding the integrity of the CRM data.

Roles	**Access Level**
Sales Manager	Full access to Customers, Orders
Inventory Manager	Read & Edit on Inventory, Products
Marketing Team	Read on Customers, Edit on Marketing Campaigns

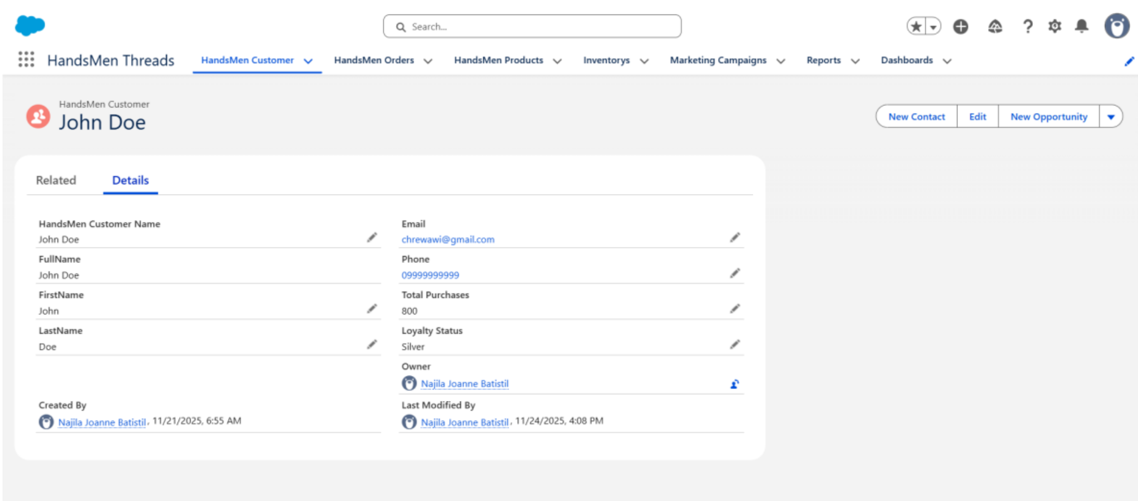
Reports and Dashboards

While no reports or dashboards were configured in this implementation, the HandsMen Threads Salesforce CRM supports generating custom reports and dashboards to monitor key business metrics. Reports could include summaries of orders, inventory levels, and customer loyalty status, while dashboards could visually display trends and highlight critical data for management. These features would enable HandsMen Threads to make informed business decisions and track operational performance effectively.

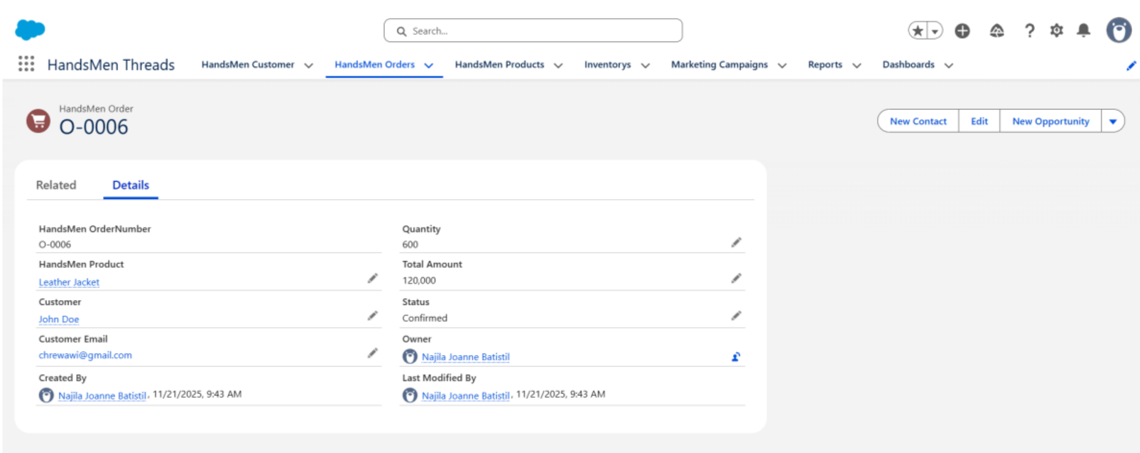
Lightning Pages

The Lightning Pages for each object were customized using the Lightning App Builder, ensuring that users can efficiently navigate customer, order, product, inventory, and campaign records. A simple two-column layout was used to balance visual structure and readability of the record details.

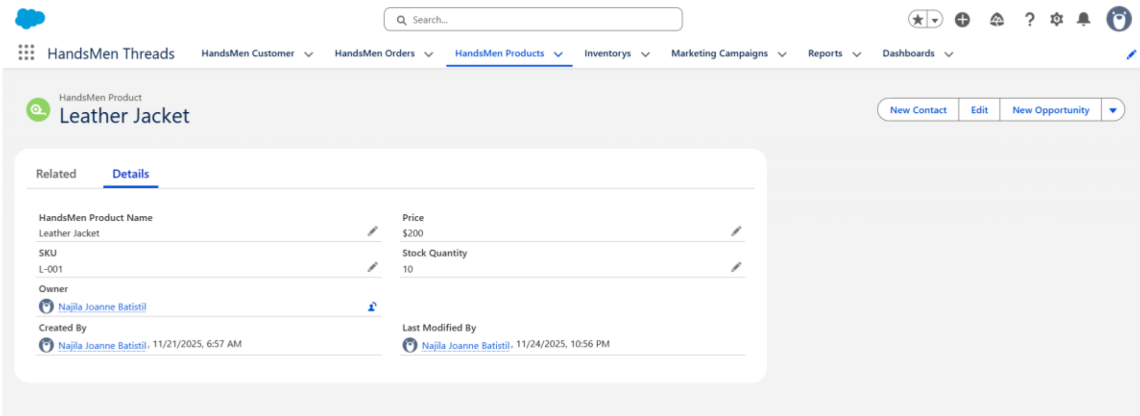
- **HandsMen Customers**



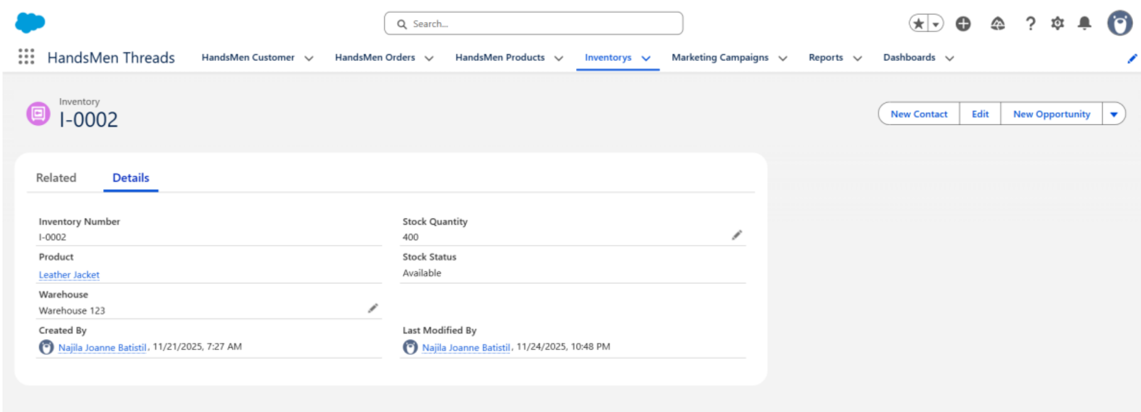
- **HandsMen Orders**



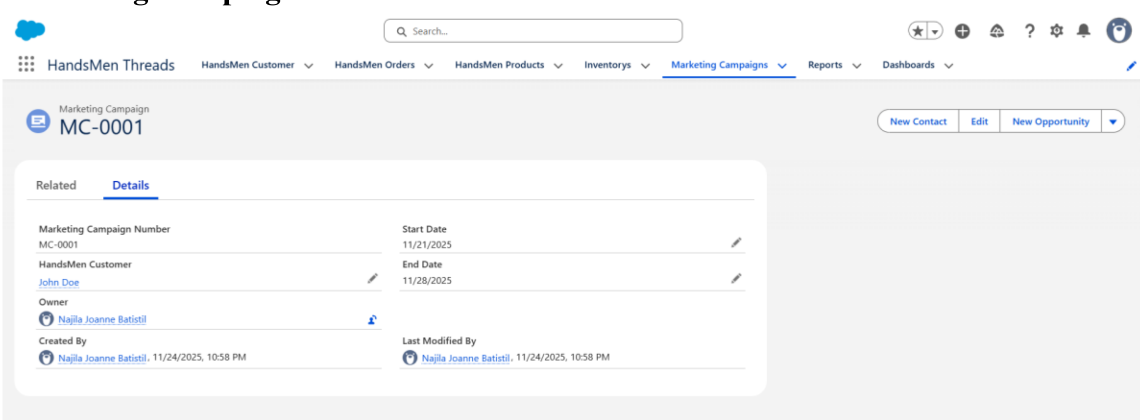
- **HandsMen Products**



- **Inventory**



- **Marketing Campaigns**

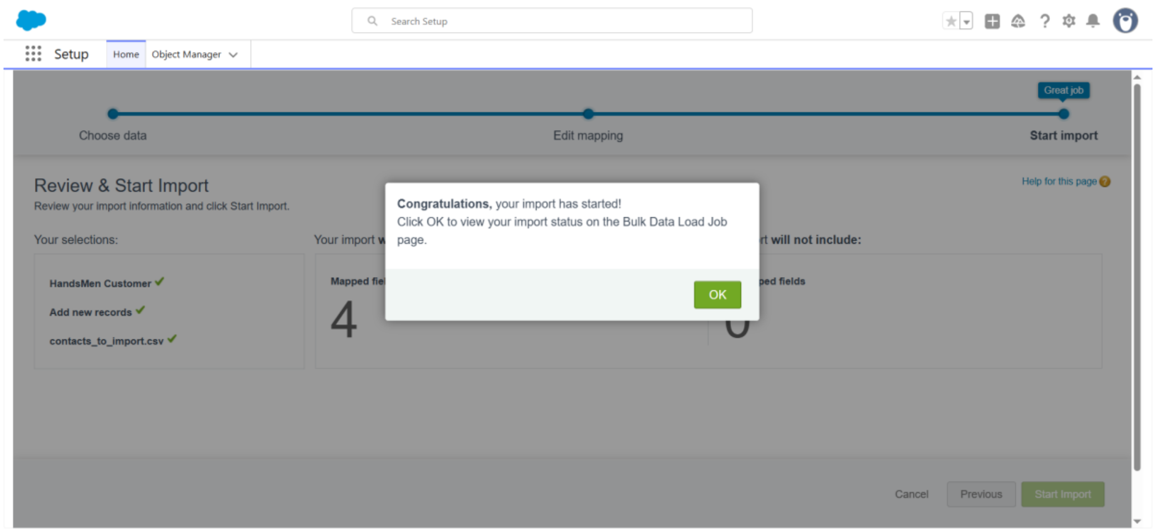


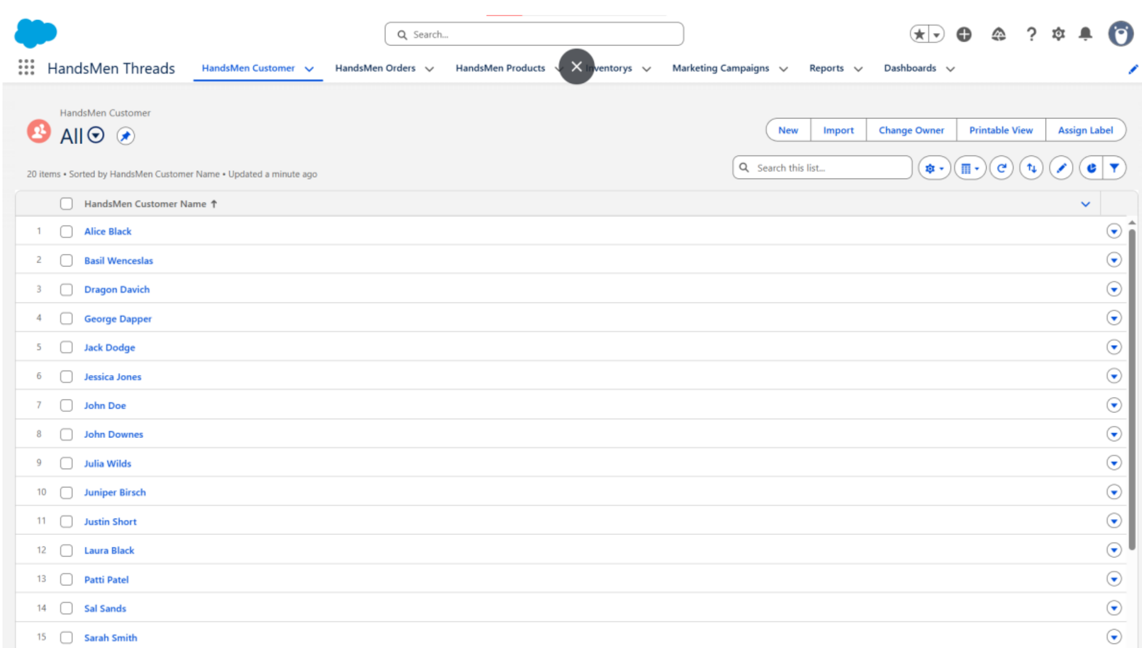
Phase 4:Data Migration, Testing & Security

Data Loading Process

Data migration was performed to populate the Salesforce CRM with relevant business data for HandsMen Threads. The Data Import Wizard was used to import records for the HandsMen Customers object. Field mappings were carefully configured to ensure data integrity and consistency during the migration process.

- **HandsMen Customers Data Import**





Field History Tracking, Duplicate Rules, Matching Rules

In this project, Field History Tracking, Duplicate Rules, and Matching Rules were not implemented. These features are typically used to monitor changes to important fields, prevent duplicate records, and define criteria for identifying matching data. Although they were not configured in this version of the system, they can be added in future enhancements to further improve data accuracy, security, and auditability.

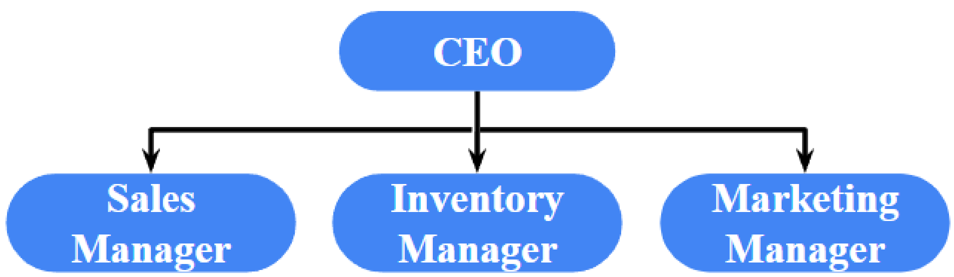
<u>Profiles, Roles and Role Hierarchy, Permission sets, Sharing Rules</u>

The security model of the Salesforce CRM was configured to ensure that each user has appropriate access to data based on their function within HandsMen Threads. Multiple layers of Salesforce security were used to balance usability with data protection.

- **Profiles**
  A custom profile called Platform 1 was created by cloning the Standard User profile. This profile was adjusted to fit the needs of HandsMen Threads by granting additional object permissions.

  Key configurations include:
  - Read and Create access for HandsMen Products
  - Read, Create, and Edit access for Inventory

- **Roles and Role Hierarchy**
  Three roles were added to the system: Sales, Inventory, and Marketing. All three roles report directly to the CEO, establishing a simple role hierarchy.

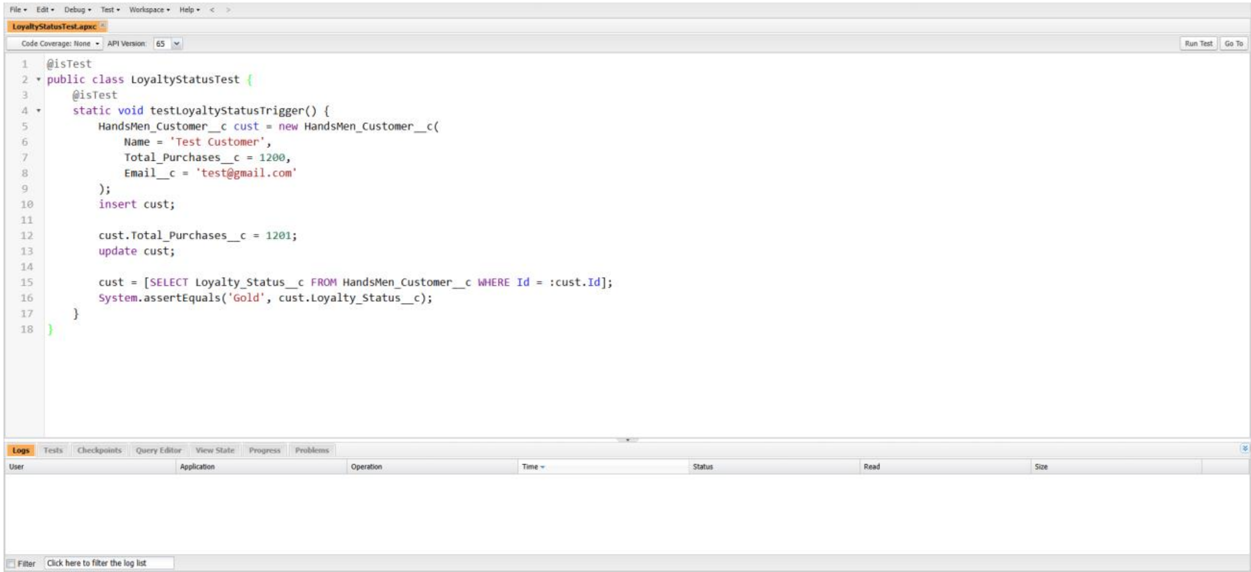


- **Permission Sets**
  Permission Sets were used to provide additional access without modifying the user's assigned profile. These were helpful for granting specific privileges selectively. The following Permission Sets were implemented for HandsMen Threads:

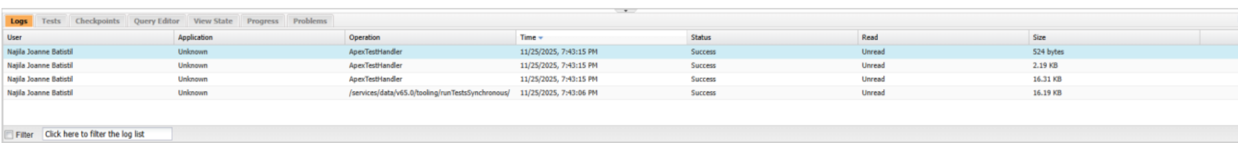
Roles	Access Level
Sales Manager	Full access to Customers, Orders
Inventory Manager	Read & Edit on Inventory, Products
Marketing Team	Read on Customers, Edit on Marketing Campaigns

<u>Creation of Test Classes</u>

A test class was created to validate the functionality of the Loyalty Status trigger. The test inserts a sample HandsMen Customer record with a defined Total_Purchases__c value and verifies that the trigger correctly updates the Loyalty_Status__c field based on the purchase amount. This minimal test class demonstrates the application of automated testing in the CRM to maintain data integrity and verify business rules.



Result:



User	Application	Operation	Time	Status	Read	Size
Najila Joanne Batistil	Unknown	ApexTestHandler	11/25/2025, 7:43:15 PM	Success	Unread	524 bytes
Najila Joanne Batistil	Unknown	ApexTestHandler	11/25/2025, 7:43:15 PM	Success	Unread	2.19 KB
Najila Joanne Batistil	Unknown	ApexTestHandler	11/25/2025, 7:43:15 PM	Success	Unread	16.31 KB
Najila Joanne Batistil	Unknown	/services/data/v65.0/tooling/runTestsSynchronous/	11/25/2025, 7:43:06 PM	Success	Unread	16.19 KB

In addition to running an Apex test class, the functionality of triggers and handlers was manually verified by creating test records in Salesforce and observing the expected updates to fields such as Order Status, Total Amount, and Inventory stock quantities.

Phase 5:Deployment, Documentation & Maintenance

Deployment Strategy

The CRM solution for HandsMen Threads was developed and tested in a Salesforce Developer Org. In a real scenario, Salesforce allows you to move the system from the developer environment to a live environment so it can be used by actual users.

System Maintenance and Monitoring

The system will be maintained by periodically reviewing workflows, flows, and Apex jobs to ensure they operate correctly. Regular monitoring of debug logs, scheduled jobs, and user feedback will help identify any issues or bottlenecks. Updates to business logic, objects, or automation can be applied incrementally and tested in a sandbox before deployment.

Troubleshooting Approach

Any errors or unexpected behavior will be addressed through a structured approach:

1. Review error messages and debug logs in Salesforce.
2. Check validation rules, flows, and Apex triggers for conflicts or logic issues.
3. Test changes in a sandbox or developer environment before applying to production.
4. Document each troubleshooting step and resolution to maintain a knowledge base for future reference.

Conclusion

The Salesforce CRM developed for HandsMen Threads demonstrates how customer, order, product, and inventory data can be efficiently managed in an integrated and automated system. Key features such as automated order confirmations, loyalty status updates, inventory alerts, and role-based access control provide a reliable foundation for improved operational efficiency and enhanced customer engagement.

While certain advanced features were not implemented in this version, the CRM offers a robust framework that can be expanded in the future.

Future Enhancements

- **Field History Tracking** – Track changes to important fields for auditing and accountability.
- **Duplicate Rules & Matching Rules** – Maintain clean and accurate data by preventing duplicate records.
- **Reports and Dashboards** – Visualize key metrics such as orders, inventory levels, and customer loyalty trends for informed decision-making.
- **AI-Powered Suggestions** – Provide automated recommendations for promotions or stock replenishment based on historical data.
- **Chatbot Integration –** Enable customers to receive instant updates and support via automated messaging.

Overall, the project illustrates how Salesforce can streamline workflows, enforce business rules consistently, and provide actionable insights, while also allowing for future growth and enhancements to further support HandsMen Threads' business objectives.