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POLYTECHNIC UNIVERSITY OF THE PHILIPPINES
Lopez, Quezon Campus
Bachelor of Science in Information Technology

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

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Project Overview

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

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

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

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Objectives

1. Optimize Data Management

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

2. Maintain Data Integrity

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

3. Enhance Customer Engagement

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

4. Improve Operational Efficiency

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

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5. Support Business Growth

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

Technology Description

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

Core Technologies Used:

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



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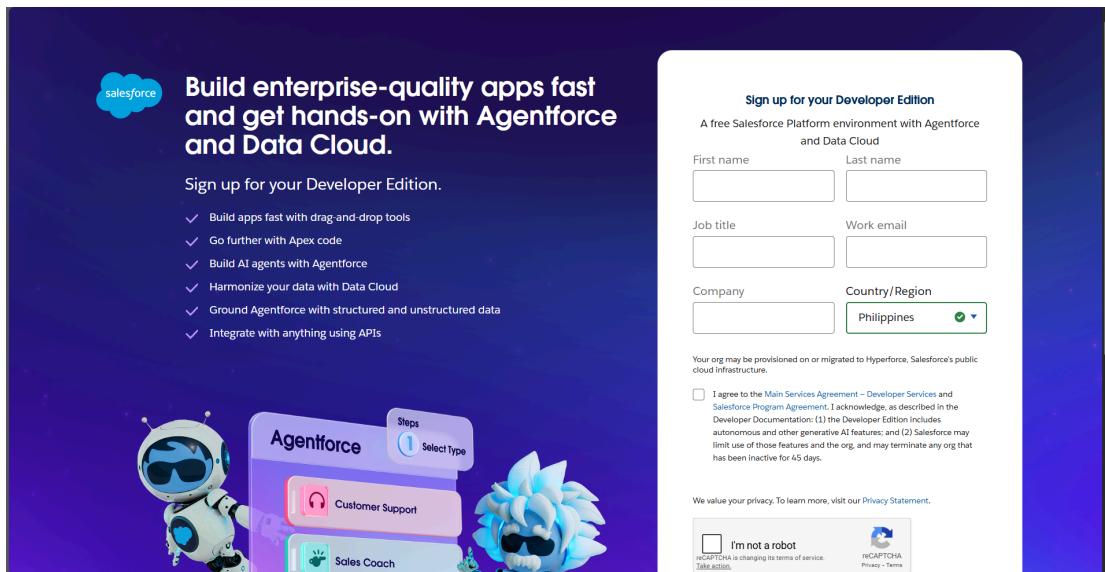
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- **Flows (Record-Triggered & Scheduled)** – No-code automation tools that handle repetitive tasks like sending notifications, updating loyalty statuses, and processing bulk orders at midnight.
- **Apex & Apex Triggers** – Salesforce's programming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

Detailed Execution of Project Phase

1. Environment Setup

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



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2. Data Model Configuration

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

A screenshot of the Salesforce Object Manager. The page title is "Object Manager". There are three items listed: "HandsMen Customer", "HandsMen Order", and "HandsMen Product". Each item has columns for Label, API Name, Type, Description, Last Modified, and Deployed. All objects were last modified on 11/26/2025 and are deployed.

A screenshot of the "Fields & Relationships" section for the "HandsMen Customer" object. It shows various fields like Email, FirstName, FullName, etc., and their relationships to other objects like CreatedBy, LastModifiedBy, and Owner.



3. Application and User Interface

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

A screenshot of the HandsMen Orders Lightning App interface. The top navigation bar includes tabs for HandsMen Threads, HandsMen Customers, HandsMen Orders (which is selected), HandsMen Products, Inventory, Marketing Campaigns, Reports, Dashboards, Accounts, and Contacts. A search bar and various navigation icons are also present. The main content area shows a list titled "Recently Viewed" with three items: O-0001, O-0003, and O-0002. There are buttons for New, Import, Change Owner, and Assign Label, along with a search bar and other list management tools.



4. Data Integrity and Security

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

The image contains two screenshots of the Salesforce setup interface. The top screenshot shows the 'Validation Rules' page under 'Object Manager'. It lists one rule named 'Total_Amount' which checks 'Total Amount' and displays the error message 'Please Enter Correct Amount'. The bottom screenshot shows the 'Permission Sets' page under 'Setup'. It displays the 'sales permission set' for the 'HandsMen Orders' object. The 'Tab Settings' section shows 'Available' and 'Visible' tabs. The 'Object Permissions' section lists permissions like Read, Create, Edit, Delete, View All Records, Modify All Records, and View All Fields, all of which are checked. The 'Field Permissions' section shows permissions for 'Created By' and 'Customer Email' fields, also with checkboxes checked.

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5. User Role & Profile Setup

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

A screenshot of the Salesforce Setup interface. The left sidebar shows navigation links like Setup, Home, Object Manager, and a search bar. Under 'Users', the 'Roles' link is selected. The main content area is titled 'Creating the Role Hierarchy' and displays a hierarchical tree of roles. The root node is 'Polytechnic University of the Philippines Lopez Campus'. Below it are nodes for 'CEO', 'CFO', 'COO', 'Inventory', 'Marketing', 'Sales', 'SVP_Customer_Service & Support', 'SVP_Human_Resources', and 'SVP_Sales & Marketing'. Each node has 'Edit', 'Del', and 'Assign' buttons. A message at the top says, 'You can build on the existing role hierarchy shown on this page. To insert a new role, click Add Role.' A help link 'Help for this Page' is in the top right.



6. User Creation

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

Action	Full Name	Alias	Username	Role	Active	Profile
<input type="checkbox"/>	Chatter_Expert	Chatter	chatty.00dg00000fd1jzuar.balyhgodghvv@chatter.salesforce.com		<input checked="" type="checkbox"/>	Chatter Free User
<input type="checkbox"/>	OEPIC	OEPIC	epic.19cd1934c79@orgfarm.salesforce.com		<input checked="" type="checkbox"/>	System Administrator
<input type="checkbox"/>	Legion_Vanessa_Evander	van	vanessevanlegion569@agentforce.com		<input checked="" type="checkbox"/>	System Administrator
<input type="checkbox"/>	Mikaelson_Kol	kmika	vanessevanlegion0008@gmail.com	Inventory	<input type="checkbox"/>	Platform 1
<input type="checkbox"/>	Mikaelson_Mint	mnika	vanessevanlegion0009@gmail.com	Marketing	<input checked="" type="checkbox"/>	Platform 1
<input type="checkbox"/>	Mikaelson_Niklaus	nnika	vanessevanlegion08@gmail.com	Sales	<input checked="" type="checkbox"/>	Platform 1
<input type="checkbox"/>	User_Integration	integ	integration@00dg00000fd1jzuar.com		<input checked="" type="checkbox"/>	Analytics Cloud Integration User
<input type="checkbox"/>	User_Security	sec	insightssecurity@00dg00000fd1jzuar.com		<input checked="" type="checkbox"/>	Analytics Cloud Security User

7. Email Templates & Alerts

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

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

A screenshot of the Salesforce Setup interface under the 'Email' section, specifically the 'Classic Email Templates' tab. A template named 'Loyalty Program Email' is selected. The template details show it was created by 'Vanessa.Exander.Lopez' on 11/26/2020 at 6:08 AM. The subject is 'Loyalty Program Email'. The preview window shows a redacted email body.

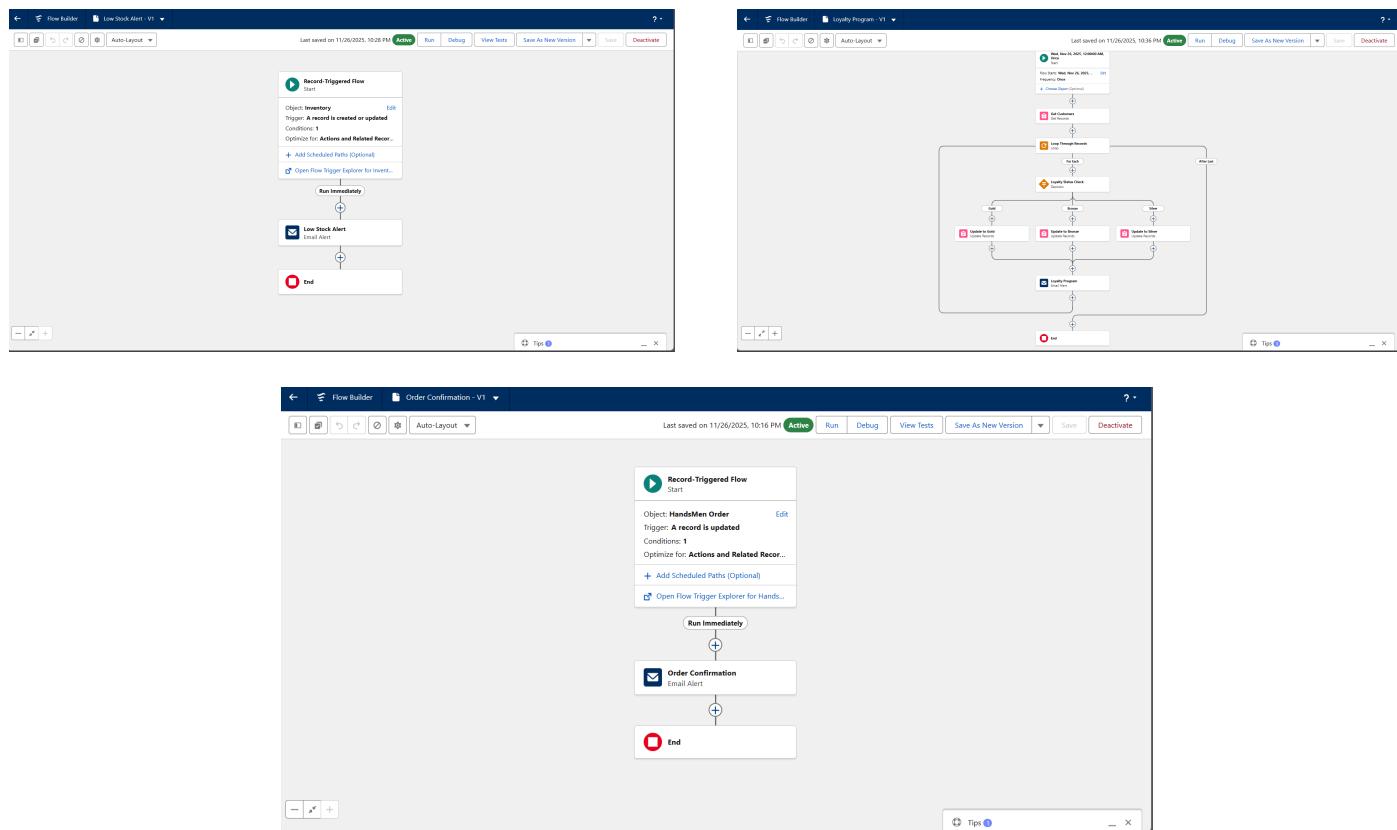
A screenshot of the Salesforce Setup interface under the 'Email' section, specifically the 'Classic Email Templates' tab. A template named 'Low Stock Alert' is selected. The template details show it was created by 'Vanessa.Exander.Lopez' on 11/26/2020 at 6:07 AM. The subject is 'Low Stock Alert'. The preview window shows a plain text email message about low stock levels.

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8. Automation and Communication

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



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9. Advanced Logic and Batch Jobs

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

The image displays three separate screenshots of the Salesforce IDE interface, each showing a different piece of Apex code:

- OrderTotalTrigger.apl**: This trigger handles the insertion and update of Orders. It collects product IDs from the order and updates a map of products and their prices. It then iterates through the order's products, checking if they exist in the map. If they do, it calculates the total amount for that product and updates the order's total amount. If they don't, it adds the product to the map and continues. Finally, it updates the order's total amount.

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

- StockReductionTrigger.apl**: This trigger handles the insertion and update of Orders. It collects product IDs from the order and updates a map of products and their stock quantities. It then iterates through the order's products, checking if they exist in the map. If they do, it reduces the stock quantity by the order quantity. If they don't, it adds the product to the map and continues. Finally, it updates the order's total amount.

```
trigger StockReductionTrigger on HandsMen_Order__c (after insert, after update) {
    Set<Id> productIds = new Set<Id>();
    Map<Id, HandsMen_Order__c> orderMap = new Map<Id, HandsMen_Order__c>(
        [SELECT Id, Status__c FROM HandsMen_Order__c WHERE Id IN :productIds]
    );
    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) {
        for (HandsMen_Order__c order : Trigger.new) {
            if (order.Quantity__c != null) {
                order.Total_Amount__c = order.Quantity__c * product.Price__c;
            }
        }
    }
}
```

- InventoryBatchJob.apl**: This class implements Database.Batchable<SObject>. It starts by querying products with low stock levels. It then iterates through the records, casting them to Product__c and updating their stock quantity. Finally, it executes the batch job.

```
global class InventoryBatchJob implements Database.Batchable<SObject>, Schedulable {
    global Database.QueryLocator start(Database.BatchableContext BC) {
        return Database.getQueryLocator(
            'SELECT Id, Stock_Quantity__c FROM Product__c WHERE Stock_Quantity__c < 10'
        );
    }
    global void execute(Database.BatchableContext BC, List<SObject> records) {
        List<HandsMen_Product__c> productsToUpdate = new List<HandsMen_Product__c>();
        // Cast SObject list to Product__c list
        for (SObject record : records) {
            HandsMen_Product__c product = (HandsMen_Product__c) record;
            if (product.Stock_Quantity__c < 10) {
                productToUpdate.add(product);
            }
        }
        update productsToUpdate;
    }
    global void finish() {
    }
}
```

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Project Explanation with Real World Example

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

1. Customer Registration

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

2. Product Setup

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

3. Order Placement

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

4. Inventory Update

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

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5. Loyalty Program

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

6. Email Notifications

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



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Screenshots

The image displays a grid of nine screenshots illustrating various software interfaces, likely from a Customer Relationship Management (CRM) system. The interfaces include:

- Customer List:** Shows a list of recent customers with columns for name and other details.
- New Customer Form:** A modal window for creating a new customer, requiring fields like Name, Email, Phone, Loyalty Status, First Name, Last Name, and Total Purchases.
- Order List:** Shows a list of recent orders with columns for order number and other details.
- Inventory List:** Shows a list of recent inventories with columns for inventory number and other details.
- Email Confirmation 1:** An email from 'Vanessa Evander Legion' confirming an order. It includes a message: 'Your Order has been Confirmed!', a note about spam, and a reply/forward button.
- Email Confirmation 2:** An email from 'HandsMen Loyalty Program' confirming a loyalty status update. It includes a message: 'Congratulations! You are now a Bronze member and you are eligible for our Loyalty Rewards Program.', a note about spam, and a reply/forward button.

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Conclusion

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

Future Scope

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