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Bachelor of Science in Information Technology

HandsMen Threads:

Elevating the Art of Sophistication in Men's Fashion

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Project Overview

HandsMen Threads, a dynamic organization dedicated to elevating sophistication in men's fashion, initiated this Salesforce CRM project to revolutionize its data management and enhance customer relationship management (CRM). The project addresses the challenges of disjointed data sources by creating a centralized Salesforce environment. This initiative aims to build a robust data model that consolidates all pertinent business data, providing a comprehensive view of operations. Key features include automated inventory management to streamline stock control, dynamic loyalty programs to foster customer engagement, and asynchronous bulk data processing to ensure efficient data handling without impacting system performance. The goal is to create a seamless flow of information, enabling informed decision-making and superior customer experiences.

Objectives

- Enhance Data Integrity: Ensure accuracy from the User Interface (UI).
- Automate Business Processes: Reduce manual effort with automated confirmations.
- Optimize Inventory Management: Prevent stockouts with low-stock notifications.
- Improve Customer Retention: Foster engagement through personalized communication.

Phase 1: Requirement Analysis & Planning

- Challenges: Manual data entry, delayed inventory updates, and lack of personalized engagement.
- Project Scope: End-to-end configuration of Salesforce, including:
 - Data Modelling: Schema for customers, orders, products, and inventory.
 - Process Automation: Flows for alerts.
 - Custom Development: Apex Triggers and Batch jobs.
 - User Interface: Custom App via Lightning App Builder.
- Stakeholders:
 - Sales Team: Needs customer data and loyalty status.
 - Warehouse Team: Needs real-time low stock alerts.
 - Management: Needs financial records and reports.
 - Customers: Receive engagement and loyalty rewards.
- Execution Roadmap:
 - Architecture & Planning: Define object schema and ERD.
 - Development: Create Objects, Fields, Flows, and Apex classes.



- Testing & QA: Unit testing and verify security roles.
- Deployment: Roll out to users.

Phase 2: Salesforce Development - Backend & Configurations

- Setup Environment & DevOps Workflow:
 - To kickstart the project, a dedicated Salesforce Developer Edition environment was provisioned. This environment served as the primary sandbox for all development and testing activities. The registration process was completed via the Salesforce Developer portal, ensuring the environment was properly mapped to the "HandsMen Threads" organization context. Security was paramount, with unique developer credentials assigned to protect the environment. This setup facilitated a controlled and secure space for building and testing the Salesforce solutions.

Custom Objects & Field Configuration

Five custom objects were configured:

- HandsMen Customer: Stores customer details.
 - Key Fields: Email, Phone, FirstName, LastName, FullName, Loyalty_Status__c, Total_Purchases__c.
- HandsMen Order: Tracks transactional data.
 - Key Fields: HandsMen OrderNumber, HandsMen Customer, HandsMen Product, Customer Email, Status, Quantity, Total Amount.
- HandsMen Product: Central product catalog.
 - Key Fields: SKU, Price, Stock_Quantity__c.
- Inventory: Manages stock levels.
 - Key Fields: Inventory Number, HandsMen Product, Warehouse, Stock Quantity, Stock Status.
- Marketing Campaign: Manages promotional timelines.
 - Key Fields: HandsMen Customer, Start Date, End Date.

Data Model & Relationships

- Master-Detail Relationship: Inventory (Detail) and HandsMen Product (Master).
- Lookup Relationships: HandsMen Order and Marketing Campaign to HandsMen Customer.



Validation Rules

- Financial Accuracy: Prevents negative Total_Amount__c on Orders.
- Inventory Integrity: Ensures Stock_Quantity__c is not less than zero.
- Data Standardization: Enforces valid Customer email domains.

Communication Strategy & Email Configuration

- Corporate Branding: "HandsMen Threads" Letterhead for consistent branding.
- Email Templates:
 - Order Confirmation (HTML): To Customers.
 - Loyalty Program (HTML): To Customers.
 - Low Stock Alert (Text): To Inventory Managers.

Process Automation (Flows)

- Order Confirmation Flow: Sends email when Order Status changes to "Confirmed."
- Stock Alert Flow: Emails Inventory Manager if Stock_Quantity__c drops below 5.
- Loyalty Status Update: Updates customer tiers daily.

Apex Development & Custom Logic

- Automated Financial Calculation (OrderTotalTrigger):
 - Type: before insert, before update
 - Logic: Looks up HandsMen Product Price__c and multiplies by Order Quantity__c.
- Real-Time Inventory Management (StockDeductionTrigger):
 - Type: after insert, after update
 - Logic: Deducts ordered quantity from Stock_Quantity__c when Order status is 'Confirmed'.

Asynchronous Apex & Batch Processing

- Automated Restocking Job (InventoryBatchJob):
 - Type: Batchable & Schedulable
 - Scope: Products where Stock_Quantity__c is below 10.
 - Logic: Adds 50 units to stock level.

Phase 3: UI/UX Development & Customization

- Lightning App Setup: "HandsMen Threads" app with tabs for Customers, Orders, Inventory, and Products.



- Page Layouts & Tabs: Configured for object visibility and user readability.

Analytics & Business Intelligence (Reports & Dashboards)

- Reports:
 - Monthly Sales Revenue Report: By order status.
 - Inventory Health & Low Stock Report: Stock_Quantity__c less than 20.
 - Customer Loyalty Breakdown: By Loyalty_Status__c.
- Executive Dashboard: Revenue, Inventory Levels, and Customer Acquisition.

Phase 4: Data Migration, Testing & Security

- Security Model:
 - Profiles: "Platform 1" for standard users.
 - Role Hierarchy: Sales and Inventory report to CEO.
 - Permission Sets: "Edit" and "Delete" access on Orders/Customers for senior Sales staff.
- Testing:
 - Unit Testing: Validated Apex Triggers.
 - User Acceptance Testing (UAT): Verified security model.

Phase 5: Deployment, Documentation & Maintenance

- Deployment: Change Sets from Sandbox to Production.
- Maintenance:
 - System Health: Monitor Apex Jobs and Debug Logs.
 - Data Integrity: Review reports monthly.

Conclusion

The HandsMen Threads CRM project automated a manual data process, providing a clear view of inventory and customer lifecycles.

Future Enhancements

- Einstein AI: Predict inventory depletion trends.
- LWC Development: Create a "Product Configurator" for Sales.