RePlastix Innovations: Transforming Plastic Waste into Sustainable Solutions

Abstract

This project aims to streamline the management of recycled plastic inventory, restock tracking, and customer orders using Salesforce.

It automates stock level monitoring, creates restock requests dynamically, and sends notifications when thresholds are breached. The system ensures efficient resource utilization and supports sustainability initiatives.

Objective

To develop an intelligent inventory and order management system using Salesforce that facilitates automation in monitoring recycled product stock levels and restocking operations while ensuring timely customer order fulfillment.

Technology Stack

- Salesforce Platform
- Apex Programming Language
- Custom Objects and Triggers
- Email Services (Messaging Class)
- Developer Console and Test Classes

Custom Objects in Salesforce

- Re_Plastic_Innovations_Recycled_Product__c: Stores recycled plastic product information such as stock and threshold.
- Re_Plastic_Innovations_Order__c: Manages customer orders for recycled products.
- Re_Plastic_Innovations_Restock_Request__c: Created when stock levels are low.
- Re_Plastic_Innovations_Customer__c: Stores customer-related data.

Project Phases

1. Requirement Analysis and Planning
2. Custom Object Creation and Schema Design
3. Apex Class Development (InventoryManager, EmailNotificationHelper)
4. Trigger Setup for Automation
5. Test Class Creation for Validation
6. Integration and Final Testing

Real-world Use Case

Consider a recycling plant that processes plastic waste into reusable products. The plant uses this Salesforce app to keep track of available stock and ensures automatic restocking by monitoring thresholds. When a customer's order is too large, the system sends an email to warehouse managers and triggers restock requests - allowing seamless operations without manual tracking.

Conclusion & Future Scope

This project demonstrates the power of Salesforce in automating essential operations in a recycling business. It reduces manual workload and enhances accuracy and responsiveness in supply chain operations.

Future enhancements can include analytics dashboards, integration with IoT bins or sensors, and customer notification modules for delivery updates.