Revolutionizing Agriculture with AgriEdge Or-Mange Ltd: A Salesforce-Driven Order Management Solution

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Project Overview

AgriEdge Or-Mange Ltd is a leading company in the agriculture and food production industry. The organization aims to modernize its order management process by creating a Salesforce-powered Order Management System (OMS). The project focuses on transforming the way orders, inventories, and customer data are managed, making business operations faster, more accurate, and more transparent.

The company's previous system involved manual record-keeping, which caused common issues such as order delays, data errors, and poor visibility of stock levels. To address these challenges, AgriEdge Or-Mange Ltd decided to implement a Salesforce-based solution that automates tasks, improves customer service, and strengthens data accuracy.

This new OMS allows the company to manage every stage of the order lifecycle from creation to delivery while giving real-time updates to both employees and customers. Through this system, AgriEdge can track inventory, monitor shipments, and view business insights all in one place, helping the company stay competitive in the fast-changing agricultural market.

Objectives

The main objective of this project is to design and develop a Salesforce-driven Order Management System that simplifies how AgriEdge Or-Mange Ltd processes its agricultural products. The system is built to automate and centralize operations, reduce manual work, and enhance decision-making through data visibility.

Specific objectives include:

- To automate the order creation, tracking, and approval process.

- To design custom Salesforce objects for Orders, Order Items, and Shipments.

- To calculate total order amounts automatically using Apex logic.
- To maintain real-time inventory and order status updates.
- To implement data security using profiles, roles, and permission sets.
- To build dashboards and reports for management insights and performance tracking.

Technology Description

The AgriEdge OMS is developed on the **Salesforce Platform**, combining declarative tools and programmatic components to create a complete end-to-end system. Salesforce provides flexibility, scalability, and strong data security ideal for managing business processes like order handling and customer service.

Technologies and Tools Used:

- **Salesforce CRM:** Core platform for managing orders, inventory, and customers.
- **Custom Objects:**
    - **AgriEdge_Order__c** – stores order information such as customer name, total amount, and payment status.
    - **AgriEdge_OrderItem__c** – tracks the products, quantity, and price per order.
    - **AgriEdge_Shipment__c** – manages delivery details and shipment status.
- **Apex Classes and Triggers:** Used for automating order total calculations and updating payment or shipment statuses.

- **Validation Rules:** Enforce correct data entry (e.g., delivery date must be after order date).

- **Flows and Process Builder:** Automate notifications, task creation, and approvals.

- **Reports and Dashboards:** Provide a visual summary of sales trends and inventory performance.

- **Profiles and Roles:** Define data visibility and access for users like Admin, Sales Agent, and Manager.

Project Phases

Phase 1: Requirement Analysis & Object Creation

The first phase involved identifying the company's operational pain points. AgriEdge needed a system that could automatically process orders, update records, and track product movement efficiently. Based on the requirements, the data model was designed using **custom Salesforce objects** and relationships.

Key Activities:

- Created custom objects: *AgriEdge_Order__c*, *AgriEdge_OrderItem__c*, and *AgriEdge_Shipment__c*.

- Added essential fields such as Order Date, Total Amount, Payment Status, and Shipment Date.

- Set relationships between objects (Master-Detail and Lookup) to link records properly.

- Created validation rules to ensure accurate data entry (e.g., shipment cannot be created without an order).

This phase established the foundation for how data would flow between different parts of the system.

Phase 2: Automation and Business Logic

After setting up the data model, the next step was to automate core processes. Using both **declarative tools** and **Apex programming**, the team built logic that ensures every action updates related records automatically.

Key Components Implemented:

- **Apex Triggers:** Automatically calculate total prices and update payment status when new items are added.
- **Process Builder:** Sends email alerts when orders are approved or marked as shipped.
- **Flows:** Create tasks for sales representatives when a new order is placed.
- **Approval Process:** Triggers for large orders requiring manager approval.
- **Workflow Rules:** Send reminders for overdue or pending deliveries.

These automations eliminated repetitive manual work and made the entire process more consistent and efficient.

Phase 3: App Development & UI Customization

The third phase focused on building the **AgriEdge OMS Lightning App**, designed for ease of use and accessibility. Salesforce's Lightning App Builder was used to create a user-friendly interface where employees can manage orders, view shipments, and track progress.

Key Activities:

- Created a custom app named "AgriEdge OMS."
- Added navigation tabs for Orders, Order Items, Shipments, and Reports.
- Customized layouts and page visibility depending on user roles.
- Designed dashboards showing total sales, shipment status, and product performance.
- Ensured responsive design for both desktop and mobile access.

This phase enhanced the overall user experience and improved collaboration across departments.

Phase 4: Testing, Deployment, and Security

Before deployment, the system was thoroughly tested to ensure it functioned as intended. **Apex Test Classes** were written to verify that all triggers and business logic worked correctly.

Testing and Deployment Activities:

- Conducted unit tests with over 87% code coverage.
- Performed user acceptance testing (UAT) with real order data.
- Deployed from the Developer Org to the UAT environment using Change Sets.

- Verified that all automations, flows, and validations worked as intended.

Security Measures:

- Implemented a role hierarchy: *Admin → Manager → Agent*.
- Assigned profiles and permission sets for object and field-level access.
- Configured sharing rules for region-based data visibility.
- Enabled audit trail and field history tracking for accountability.

These steps ensured the OMS was secure, stable, and compliant with Salesforce best practices.

Conclusion

The Salesforce-based Order Management System developed for AgriEdge Or-Mange Ltd successfully transformed the company's traditional manual processes into an automated and intelligent platform. It reduced human error, improved order visibility, and provided valuable insights through real-time dashboards.

The system not only enhances daily operations but also creates a scalable foundation for future business growth. With Salesforce as its backbone, AgriEdge is now better equipped to meet customer demands, manage inventory efficiently, and ensure consistent service delivery across its agricultural operations.

Skills and Knowledge Gained

Through the completion of this project, the following skills and concepts were developed:

- Salesforce Data Modeling and Object Relationships
- Formula Fields and Validation Rules
- Process Builder and Flow Automation
- Apex Triggers, Classes, and Test Coverage
- User Management, Roles, and Permission Sets
- Dashboard and Report Creation
- Change Set Deployment and System Maintenance

Future Scope

To further improve the AgriEdge OMS, the following future updates are recommended:

1. **Mobile App Integration:** Allow field agents to place and track orders using mobile devices.
2. **Customer Self-Service Portal:** Enable customers to view orders and track shipments online.
3. **AI-Based Forecasting:** Use Salesforce Einstein to predict demand and optimize stock levels.

4. **Customer Self-Service Portal:** Enable customers to view orders and track shipments online.

5. **IoT Integration:** Connect warehouse sensors to monitor live inventory and shipment conditions.

6. **WhatsApp/SMS Notifications:** Send real-time updates on orders and deliveries.

These improvements would continue to drive innovation, efficiency, and customer satisfaction for AgriEdge in the years ahead.