PROJECT REPORT

Project Title: CRM Application for Wholesale Rice Mill

Project Overview

The CRM Application for the Wholesale Rice Mill is a comprehensive solution designed to streamline key business operations. The application simplifies inventory management, customer interactions, sales tracking, and daily reports. The goal is to enhance operational efficiency, provide insights into rice sales, and automate key processes like rollup summary calculations and detailed analytics reports.

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1. Introduction

The Rice Mill CRM application was developed to solve inefficiencies in tracking rice inventory, sales, and customer interactions in the wholesale rice industry. This project uses Salesforce's CRM functionalities to manage stock, process orders, analyze trends, and generate daily reports.The CRM Application for the Wholesale Rice Mill is a comprehensive solution designed to streamline key business operations. The application simplifies inventory management, customer interactions, sales tracking, and daily reports. The goal is to enhance operational efficiency, provide insights into rice sales, and automate key processes like rollup summary calculations and detailed analytics reports.

2. Object Definition

Objects represent data entities in the Salesforce system. The following objects were created:

Customer: Manages customer data such as contact details and buying history.

Rice Stock: Tracks the types of rice available, including quantity and price per kg.

Orders: Manages orders placed by customers, including items purchased, amount, and delivery status.

Supplier: Stores supplier details related to rice procurement.

3. Tabs

Customer Tab: Allows the rice mill team to view and manage customer details.

Order Tab: Provides easy access to track and manage all customer orders.

Stock Tab: Shows real-time information about rice availability, including types and quantities of rice.

Supplier Tab: Manages supplier information and tracks deliveries.

4. The Lightning App

The app was built using Salesforce Lightning for better user experience and responsiveness:

- Customizable dashboard for quick insights into daily rice sales and inventory.
- Dynamic components for managing customer orders and supplier relationships.
- Smooth navigation between tabs for ease of use.

5. Fields

The application makes use of both standard and custom fields:

Customer Object: Added fields such as "Last Order Date" and "Loyalty Score."

Order Object: Custom fields for order quantity, total price, and payment status.

Stock Object: Custom fields for "Quantity in Stock" and "Price per KG."

Formula fields include:

Rollup Summary Field: To calculate the total rice sold.

Cross-Object Formula Field: To calculate total revenue generated from each customer order.

Types of Fields:

1. Standard Fields

2. Custom Fields

3.Subfields Related to Specific Objects:

1. Standard Fields

Standard Fields are predefined by Salesforce and are common across all Salesforce applications. These fields are automatically created when an object is made and are essential for basic record management.

Examples of Standard Fields:

1. **Created By:** Indicates who created the record.

2. **Owner**: Refers to the user responsible for the record.

3. **Last Modified**: Displays the last time the record was updated.

4. **Field Created During Object Creation:** Standard fields that are automatically generated when an object is created in Salesforce.

2. Custom Fields:

Custom Fields are highly flexible fields that are created by users to capture data specific to the needs of a particular business or application. These fields allow you to tailor Salesforce to your specific use case, adding fields to objects based on the unique requirements of your organization.

Examples of Custom Fields:

1. **Rice Quantity (Number Field)**: Tracks the amount of rice in stock or sold.

2. **Price Per KG (Currency Field):** Stores the cost of each kilogram of rice.

3. **Supplier Name (Text Field):** Holds the supplier's name for rice inventory.

4. **Order Total (Formula Field):** Automatically calculates the total price of an order based on the quantity ordered and price per kg.

3. Subfields Related to Specific Objects:

3.1.Creating Fields in the Rice Mill Object:

This includes fields specifically related to managing the rice stock. Key fields include:

Rice Type (Picklist): Specifies the variety of rice (e.g., Basmati, Sona Masoori).

Quantity Available (Number Field): Keeps track of how much rice is currently in stock.

3.2.Creating Fields in Consumer Objects:

Consumer objects track customer details and order history:

Order History (Related List): Displays a list of all previous orders made by the customer.

Customer Loyalty Score (Number Field): Assigns a score to customers based on their purchase frequency.

3.3.Creating Cross-Object Formula Fields:

Cross-object formula fields allow you to reference fields from related objects and perform calculations across multiple objects.

For instance:

Total Revenue: A formula field that calculates the total revenue from each customer based on the number of orders and the total order value from a related object.

3.4.Creating Roll-up Summary Fields:

A Roll-up Summary Field is used when a master-detail relationship exists between objects.

For example:

Total Rice Sold: This field calculates the total quantity of rice sold across all orders and displays it on the Rice Mill object.

3.5.Validation Rules:

Validation rules ensure that users enter valid data into fields.

 For example:

Validation Rule for Minimum Order Quantity: Ensures that no order is placed for less than a certain quantity of rice (e.g., no order under 50 kg).

6. Page Layouts

Page layouts were customized for:

Customer: To display customer name, contact details, and order history.

Orders: To highlight critical information like order status, items ordered, and payment status.

Stock: To easily view the available types of rice and their quantities.

Supplier: To manage and track rice procurement from suppliers.

7. Profiles

Profiles were created to manage access rights and permissions:

Worker: Can view and manage customer orders and inventory.

Employer: Has full control over all objects, reports, and dashboards.

Owner: Can approve sales, view high-level analytics, and reports.

8. Roles & Role Hierarchy

The roles within the rice mill were defined as:

Owner: Oversees system-wide activities.

Manager: Reviews daily sales, approves large orders, and monitors stock levels.

Employer: Handles customer interactions, order management, and stock adjustments.

9. Users

Each user is assigned a specific profile and role to ensure access control:

- Admin users can add/remove stock, view reports, and manage user roles.
- Sales reps can access customer data, update orders, and check inventory levels.
- Users are employees at your company as managers and IT specialists, who need access to the company's records. Every user in Salesforce has a user account.

10. Permission Sets

Permission sets were used to give specific rights to certain users:

Report Access: Allows specific users to access detailed sales and stock reports.

Order Approval: Allows managers to approve or reject customer orders.

11. Reports

Salesforce Reports were created to track:

Daily Sales: A report showing how much rice was sold, total income, and popular rice types.

Customer Orders: A breakdown of customer orders by type, quantity, and revenue generated.

Inventory Reports: Daily stock levels, rice varieties, and pending procurement from suppliers.

12. Dashboards

The application dashboard provides a visual summary of key metrics:

Sales Overview: Shows daily and monthly sales trends.

Inventory Levels: A real-time view of current stock levels.

Top Customers: Lists the most frequent buyers and their purchase history.

13. APEX

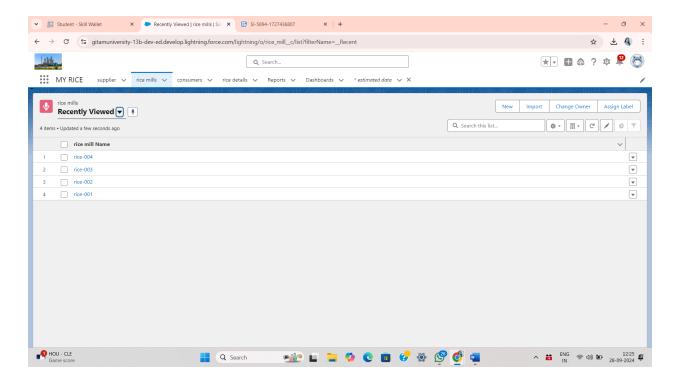Custom APEX triggers were used for advanced functionality:

- Automated updates to rice stock levels after an order is processed.
- Custom email alerts sent to managers when stock levels are low or orders exceed a certain threshold.

14.Conclusion

This Salesforce-based CRM helps the rice mill streamline operations, ensuring efficient order processing, better customer management, and improved decision-making with real-time reports. It transforms how the business runs, making it more responsive, efficient, and customer-focused. Automation, real-time analytics, and smooth communication between sales and management ensure the mill stays competitive, increases profitability, and scales easily.

15.Application Constructed: MY RICE
Rice Mills:

Consumers:

Reports:
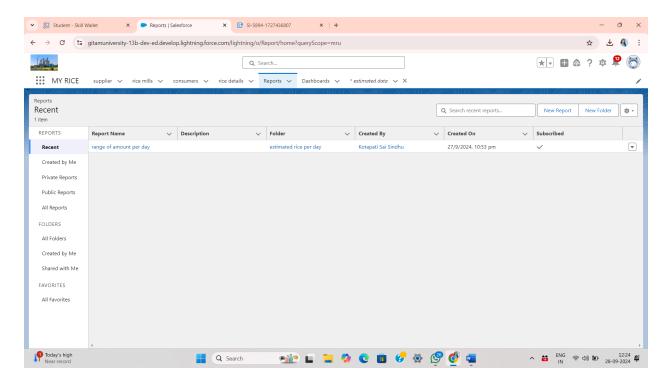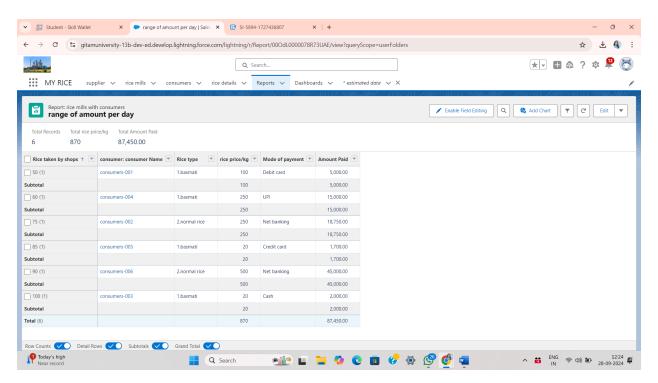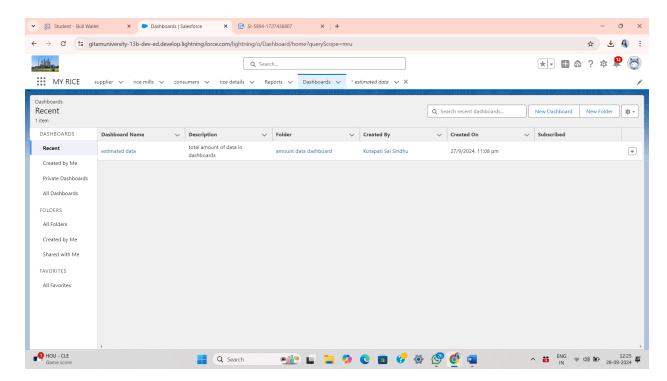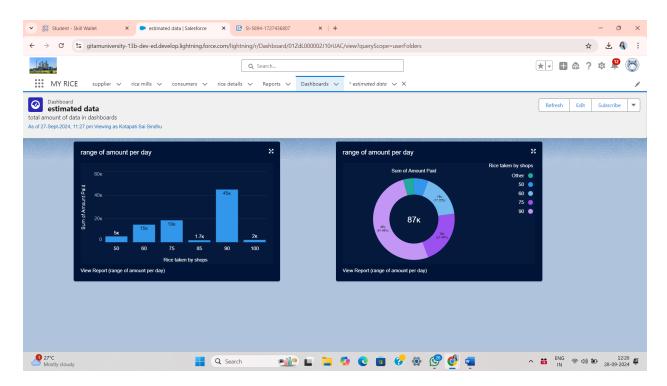

In the Range of amount per day

Dashboards:

In the Estimated Data Dashboard:

Codes: Apex Class: ConsumerRecord


```apex
public class ConsumerRecord {
    public static void sendEmailNotification (List<consumer__c> con){
        for(consumer__c c:con)
        {
            Messaging.SingleEmailMessage email = new Messaging.SingleEmailMessage();
                email.setToAddresses( new List<String>{c.email__c});
                email.setSubject('Welcome to our company');
                email.setPlainTextBody('Dear ' + c.Name + ',\n\n' +
                'Welcome to MY RICE! You have been seen as a valuable customer to us. ' +
                'Please continue your journey with us, while we try to provide you with good quality resources.\n\n' +
                'We are proud to associate with valuable customers like you, and we look forward to collaborating with you ' +
                'by providing more exciting discounts or even product offers.\n\n' +
                'So why take a step back? Take a leap of faith and shop with us more, while we provide valuable products and offers.\n\n' +
                'Thank you for buying with us!\n\n' +
                'Here are some products that are bought by other customers like you:\n\n' +
                '-- (Product details can be added here) --'
                );

            Messaging.sendEmail(new List<Messaging.SingleEmailMessage>{email});
```

Apex Trigger: ConsumerTrigger


```apex
trigger consumerTrigger on consumer__c (After insert) {
    if(trigger.isAfter && trigger.isInsert) {
        ConsumerRecord.sendEmailNotification(trigger.new);
    }
}
```