

A CRM Application for Wholesale Rice Mill

1. Project Overview

This project is focused on the **Rice Mill CRM Application**, designed to address the challenges of tracking rice production, daily sales, and inventory management in a wholesale rice mill. The goal is to deliver a comprehensive solution by leveraging **Salesforce CRM** to enhance operational efficiency, improve data accuracy, and streamline reporting. Through this project, we aim to provide real-time insights for owners, optimize resource allocation, and support the long-term goals of effective business management and growth in the rice mill industry.

2. Objectives

Business Goals:

- Streamline the daily tracking of rice production, sales, and inventory to improve operational transparency.
- Enhance customer relationship management by providing detailed insights on customer buying patterns and preferences.
- Optimize reporting and data analytics to enable data-driven decision-making for the rice mill's future planning and resource allocation.
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Specific Outcomes:

- Implement detailed **Reporting and Dashboards** that generate daily summaries of rice production, sales, and income, accessible by the mill's owner.
- Develop a **Rollup Summary Field** to display total rice quantities supplied, giving accurate, up-to-date data on inventory levels.
- Utilize **Cross-Object Formula Fields** to calculate and display the total payment due based on rice quantity and price, simplifying financial tracking.
- Set up **Validation Rules** to ensure data accuracy and alert users of any missing or incorrect information.

3. Salesforce Key Features and Concepts Utilized

The **Rice Mill CRM Application** includes the following essential features:

1. **Daily Reporting and Analytics:** Tracks daily rice production, sales, and revenue for real-time insights.
2. **Rollup Summary Fields:** Summarizes supplier contributions, showing total rice supplied per supplier.
3. **Cross-Object Formula Fields:** Calculates total payment amounts for rice purchases, aiding financial tracking.

4. **Validation Rules:** Ensures data accuracy, like verifying required fields are completed.
5. **Role-Based Access:** Customizes data access by role, allowing owners full visibility, with restricted access for employers and workers.
6. **Custom Dashboards:** Visualizes sales, top-selling rice types, and revenue trends for quick monitoring.

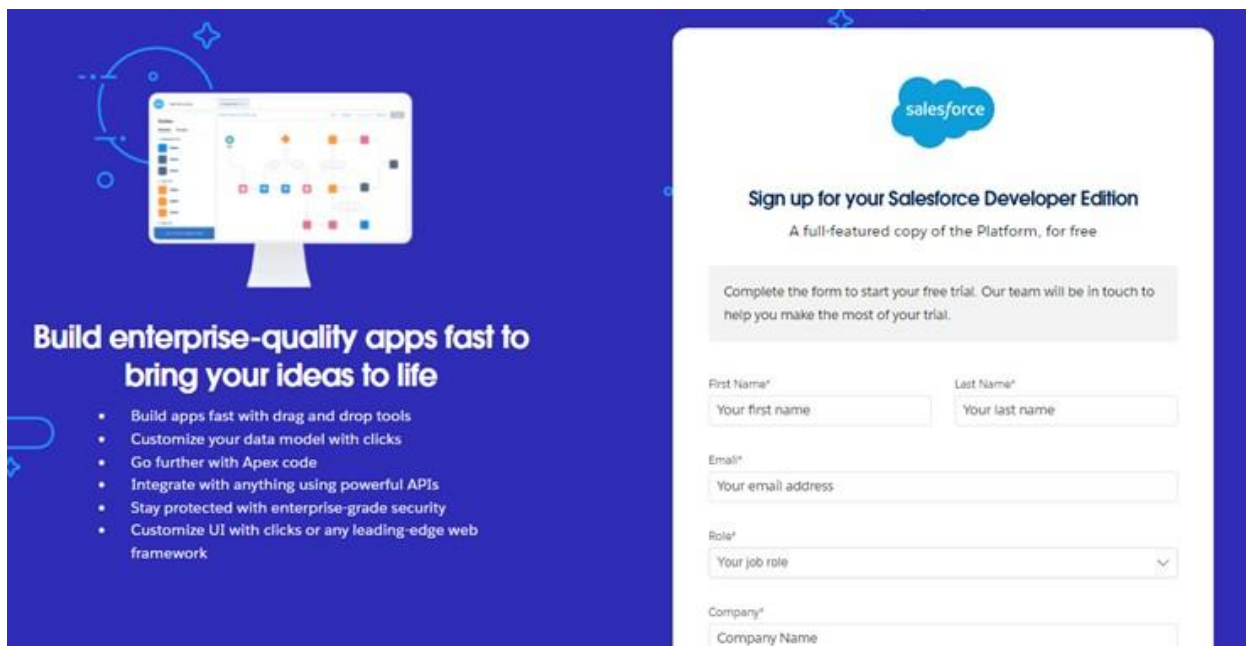
4. Detailed Steps to Solution Design

Prerequisites

- Salesforce Developer account
- Knowledge of Salesforce admin concepts
- Installed with two web browsers
- Good internet connectivity

1. Creating Developer Account

- Sign up for a Salesforce Developer account.



2. Creating Objects

- Supplier Object: Manage supplier details

The screenshot shows the Salesforce Setup interface for the 'supplier' object. The top navigation bar includes the Setup icon, Home, and Object Manager. The left sidebar lists various configuration options for the 'supplier' object, including Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, and List View Button Layout. The main content area displays the 'Details' for the 'supplier' object, including a description, API Name (supplier__c), Custom checkbox, Singular Label (supplier), Plural Label (supplier), Enable Reports (checked), Track Activities, Track Field History (checked), Deployment Status (Deployed), and Help Settings (Standard salesforce.com Help Window). Edit and Delete buttons are visible in the top right corner.

- Rice Mill Object: Manage rice mill details.

The screenshot shows the Salesforce Setup interface for the 'rice mill' object. The top navigation bar includes the Setup icon, Home, and Object Manager. The left sidebar lists various configuration options for the 'rice mill' object, including Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, and List View Button Layout. The main content area displays the 'Details' for the 'rice mill' object, including a description, API Name (rice_mill__c), Custom checkbox, Singular Label (rice mill), Plural Label (rice mills), Enable Reports (checked), Track Activities, Track Field History (checked), Deployment Status (Deployed), and Help Settings (Standard salesforce.com Help Window). Edit and Delete buttons are visible in the top right corner.

- Consumer object: Manage consumer details.

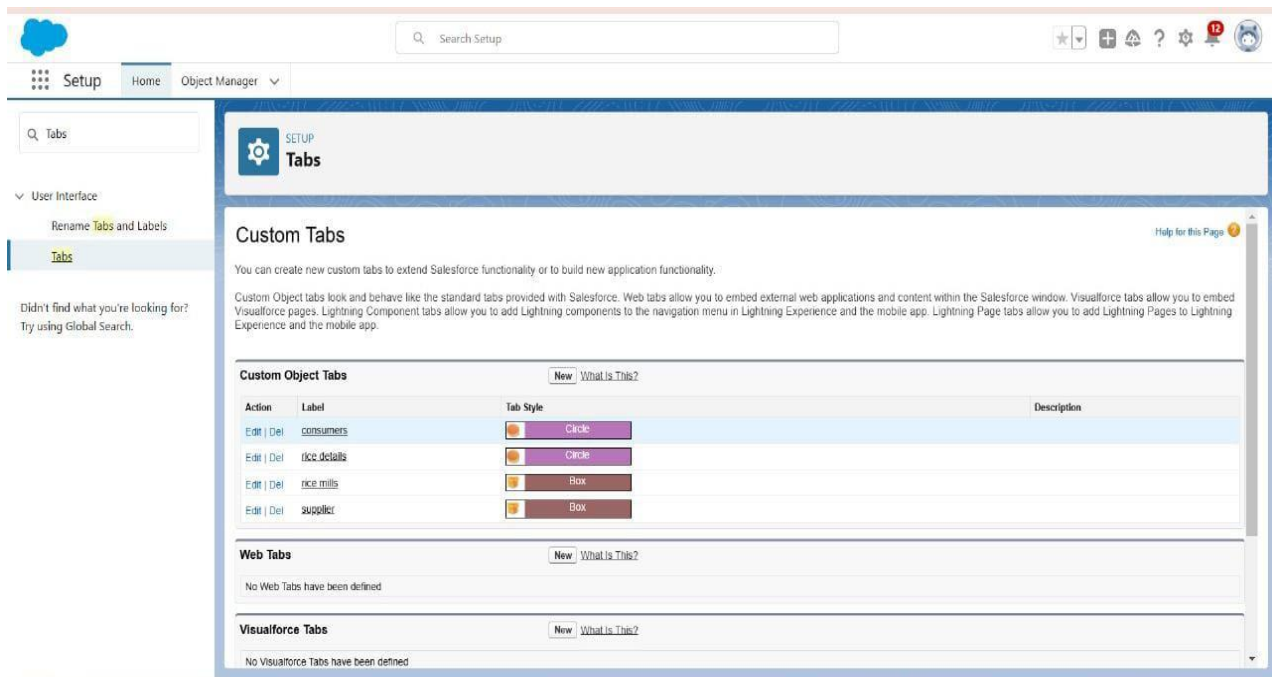
The screenshot shows the Salesforce Setup interface for the 'consumer' object. The left sidebar contains a list of configuration options: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, and List View Button Layout. The 'Details' section is selected and expanded. The main content area displays the 'Details' for the 'consumer' object, including fields for Description, API Name (consumer__c), Custom (checked), Singular Label (consumer), Plural Label (consumers), Enable Reports (checked), Track Activities, Track Field History (checked), Deployment Status (Deployed), Help Settings (Standard salesforce.com Help Window), and Edit/Delete buttons.

- Rice details: manage rice details.

The screenshot shows the Salesforce Setup interface for the 'rice details' object. The left sidebar contains a list of configuration options: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, and List View Button Layout. The 'Details' section is selected and expanded. The main content area displays the 'Details' for the 'rice details' object, including fields for Description, API Name (rice_details__c), Custom (checked), Singular Label (rice details), Plural Label (rice details), Enable Reports (checked), Track Activities, Track Field History (checked), Deployment Status (Deployed), Help Settings (Standard salesforce.com Help Window), and Edit/Delete buttons.

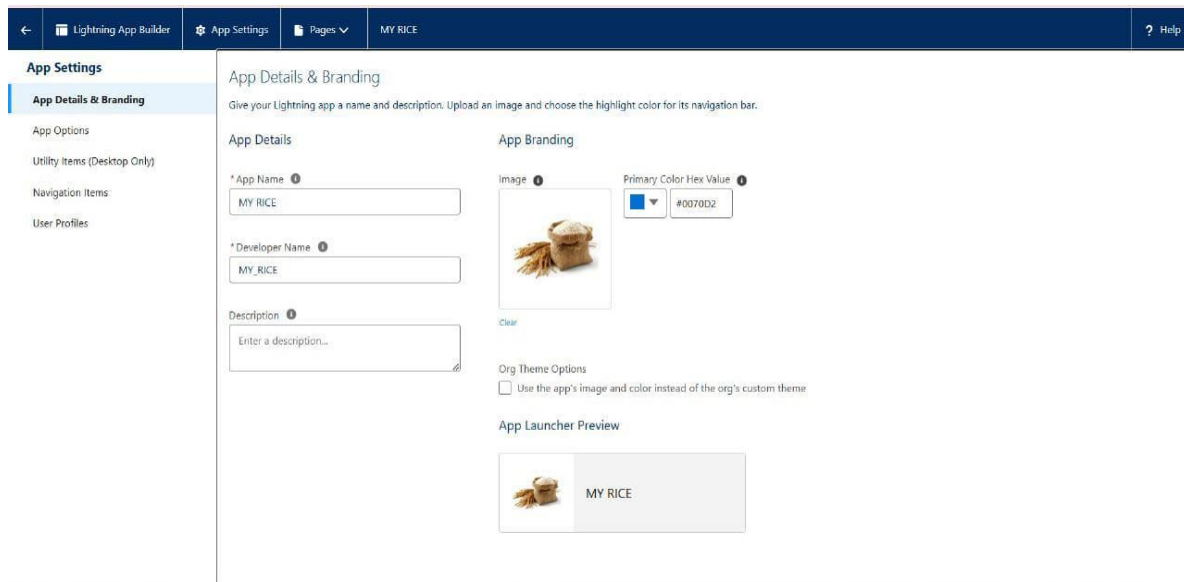
3. Creating Tabs

- Create custom tabs for each object to easily access data.



4. Creating Lightning App

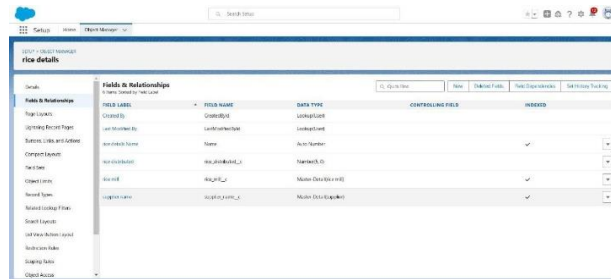
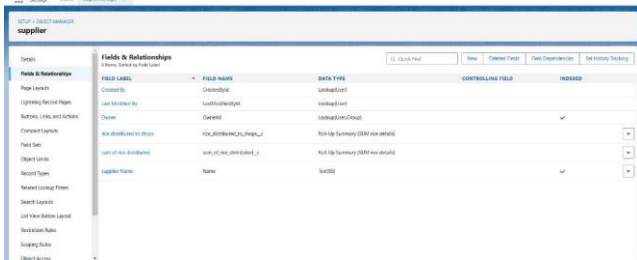
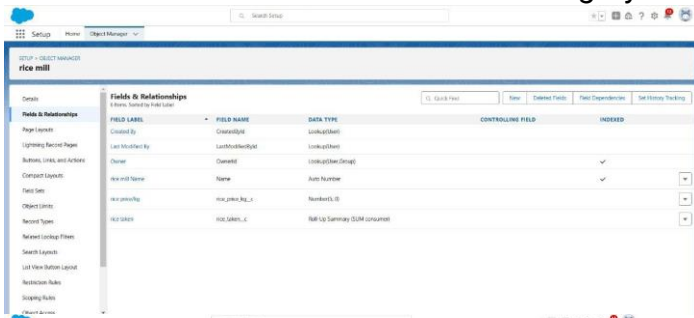
- Steps to create a Lightning app for the CRM application.



5. Creating Fields

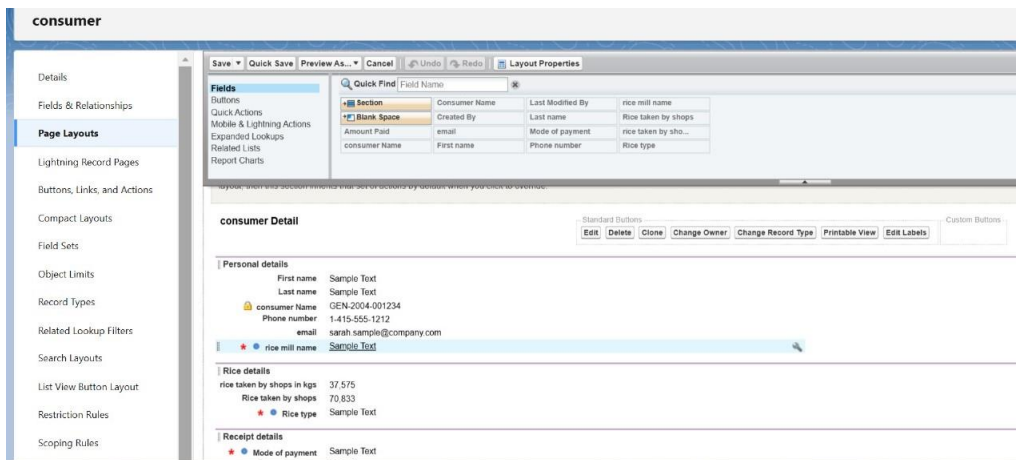
- Number fields: Track quantities and prices.
- Rollup Summary Fields: Summarize data from child to parent objects.

- Cross-Object Formula Fields: Calculate total amounts.
- Validation Rules: Ensure data integrity.



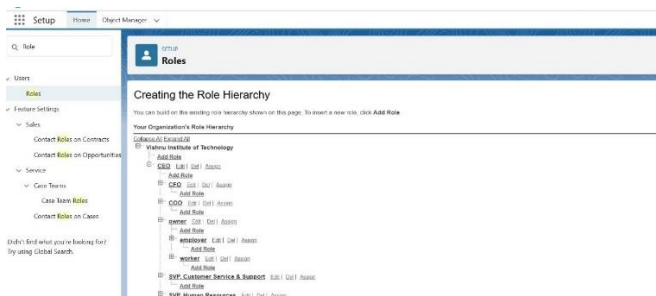
6. Creating Page Layouts

Page Layout in Salesforce allows us to customize the design and organize detail and edit pages of records in Salesforce.



7. Creating Profiles, Roles, and Role Hierarchy

- A profile is a group/collection of settings and permissions that define what a user can do in salesforce.
- Create roles and set up a role hierarchy to establish data access levels.



8. Creating Users

- Add users to the Salesforce organization and assign appropriate profiles and roles.

9. Creating Permission Sets

- Define permission sets to grant additional permissions to users beyond their profiles.

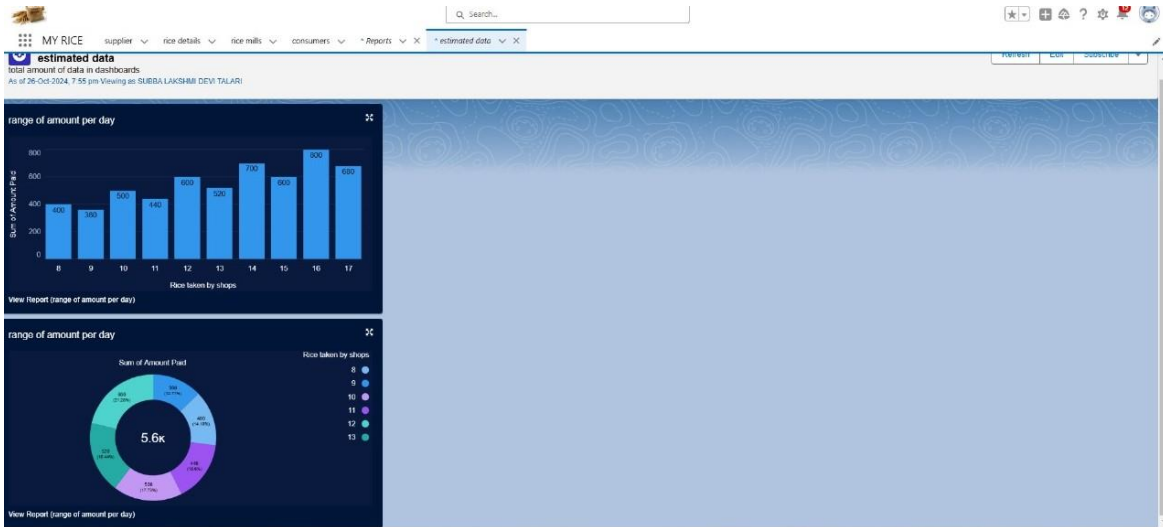
10. Creating Reports

- Create detailed reports to track rice production, sales, and other key metrics.

Report: rice mills with consumers range of amount per day					
Total Records	Total rice price/kg	Total Amount Paid			
10	90	5,600.00			
<input type="checkbox"/> Rice taken by shops ↑	consumer: consumer Name	Rice type	rice price/kg	Mode of payment	Amount Paid
<input type="checkbox"/> 8 (1)	consumers-001	Basmati	50	Credit card	400.00
Subtotal			50		400.00
<input type="checkbox"/> 9 (1)	consumers-002	Basmati	40	UPI	360.00
Subtotal			40		360.00
<input type="checkbox"/> 10 (1)	consumers-003	Normal rice	50	UPI	500.00
Subtotal			50		500.00
<input type="checkbox"/> 11 (1)	consumers-004	Normal rice	40	Cash	440.00
Subtotal			40		440.00
<input type="checkbox"/> 12 (1)	consumers-005	Basmati	50	Debit card	600.00
Subtotal			50		600.00
<input type="checkbox"/> 13 (1)	consumers-006	Normal rice	40	Debit card	520.00
Subtotal			40		520.00
<input type="checkbox"/> 14 (1)	consumers-007	Basmati	50	UPI	700.00
Subtotal			50		700.00
<input type="checkbox"/> 15 (1)	consumers-008	Basmati	40	Net banking	600.00
Subtotal			40		600.00
<input type="checkbox"/> 16 (1)	consumers-009	Normal rice	50	Cash	800.00
Subtotal			50		800.00
<input type="checkbox"/> 17 (1)	consumers-010	Basmati	40	UPI	680.00
Subtotal			40		680.00
Total (10)			90		5,600.00

11. Creating Dashboards

- Design dashboards to provide visual summaries of key metrics and reports.



5. Testing and Validation

Unit Testing: Create tests for ConsumerRecord and consumerTrigger to validate email notifications and trigger behavior.

User Interface Testing: Confirm that custom tabs, layouts, and trigger-related actions display and function correctly in the UI.

```

1 trigger consumerTrigger on consumer__c (After Insert) {
2     if(trigger.isAfter && trigger.isInsert) {
3         ConsumerRecord.sendEmailNotification(trigger.new);
4     }
5 }

1 public class ConsumerRecord {
2     public static void sendEmailNotification(List<consumer__c> con){
3         for(consumer__c c:con)
4         {
5             Messaging.SingleEmailMessage email = new Messaging.SingleEmailMessage();
6             email.setToAddresses(new List<String>(c.email__c));
7             email.setSubject('Welcome to our company');
8             email.setPlainTextBody('Dear ' + ' ' + ',\nWelcome to MY RICE!' + 'You have been seen as a valuable customer to us. Please continue ');
9             Messaging.sendEmail(new List<Messaging.SingleEmailMessage>{email});
10        }
11    }
12 }
13 }
  
```


6. Key Scenarios Addressed by Salesforce in the Implementation Project

- **Daily Sales Tracking:** Automates daily reports on rice quantities, types, and revenues.
- **Automated Notifications:** Notifies customers upon specific triggers, enhancing engagement.
- **Data Security and Integrity:** Uses validation rules and permissions to safeguard data quality and access.

7. Conclusion

The CRM application successfully streamlines daily operations in the rice mill, enhancing efficiency, automates daily reporting, secures data, and provides valuable insights, enabling better resource management and decision-making, and increased customer satisfaction in the rice mill factory.

