

A CRM Application for Wholesale Rice Mill

1. Project Overview

This project centers around building a dedicated **CRM application** tailored for a **Wholesale rice mill**, addressing key challenges in tracking rice production, managing daily sales, and overseeing inventory. By utilizing Salesforce CRM, the solution aims to boost operational efficiency, ensure accurate data handling, and simplify reporting processes. This CRM system will enable the rice mill to adapt quickly to changing demands and make informed decisions based on up-to-date data. Ultimately, the application will provide owners with valuable real-time insights, streamline resource management, and support the long-term growth and success of the business in the rice mill industry, laying a foundation for enhanced productivity and sustainable growth.

2. Objectives

Business Goals:

- Make it easier to track daily rice production, sales, and inventory, giving better visibility into operations.
- Build stronger customer relationships by understanding buying patterns and preferences more deeply.
- Improve reporting and data insights to help the rice mill make smart, data-backed decisions for future planning and resource management.

Specific Outcomes:

- Implement reports and dashboards that give the mill owner clear daily summaries of rice production, sales, and income.
- Add a Rollup Summary field to track total rice quantities supplied, helping maintain accurate, up-to-date inventory levels.
- Use Cross-Object Formula Fields to auto-calculate the total payment due based on rice quantity and price, simplifying financial tracking.
- Set up Validation Rules to ensure data accuracy and prompt users if any information is missing or incorrect.

3. Salesforce Key Features and Concepts Utilized

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

1. **Daily Reporting and Analytics:** Provides real-time insights by tracking daily rice production, sales, and revenue.

2. **Rollup Summary Fields:** Displays a summary of each supplier's contribution, highlighting the total rice supplied by each.
3. **Cross-Object Formula Fields:** Calculates total payment amounts for rice purchases, aiding financial tracking.
4. **Validation Rules:** Ensures data accuracy, like verifying that 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.

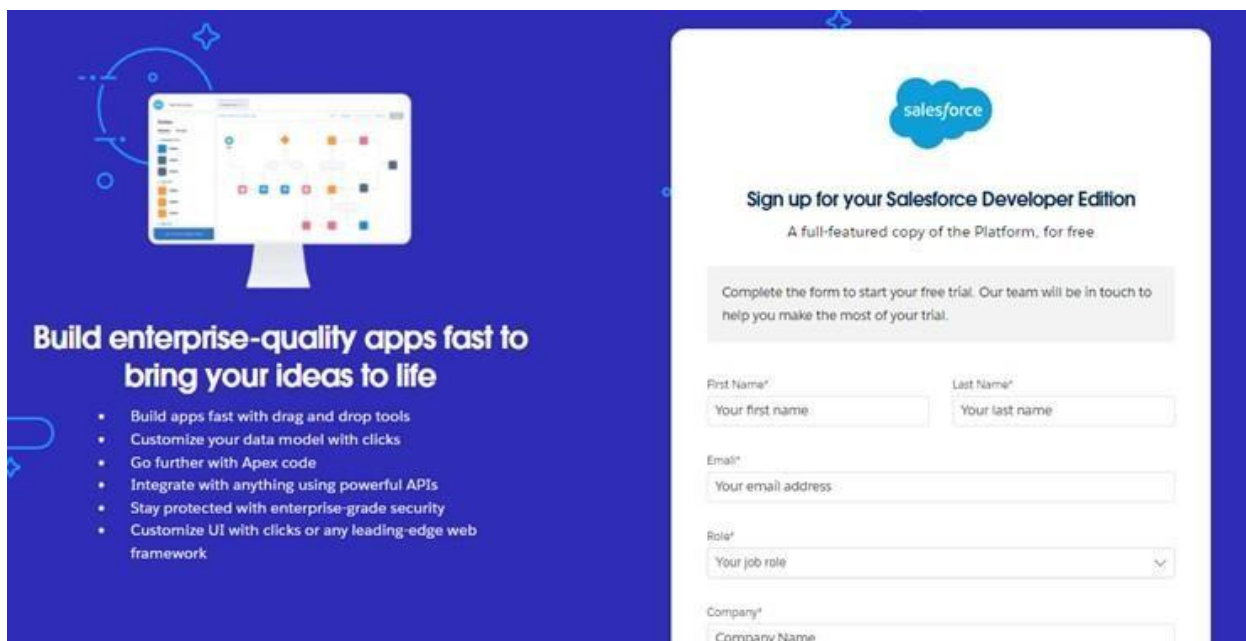
4. Detailed Steps to Solution Design

Prerequisites

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

1. Creating a Developer Account

- Sign up for a Salesforce Developer account.



2. Creating Objects

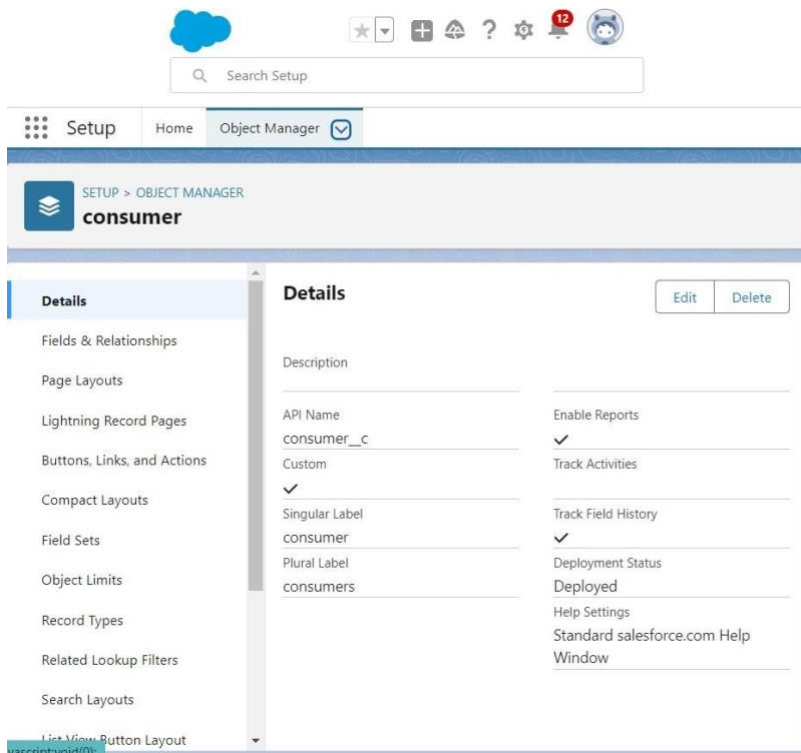
- Supplier Object: Manage supplier details

The screenshot shows the Salesforce Setup interface for the 'supplier' object. The top navigation bar includes the Salesforce logo, a search bar labeled 'Search Setup', and a menu with icons for stars, a plus sign, a shield, a question mark, a gear, a notification bell with '12', and a user profile. Below the navigation bar, the 'Setup' menu is open, showing 'Home' and 'Object Manager' (selected). The main content area is titled 'supplier' and contains a sidebar with a list of configuration options: Details (selected), 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 expanded, showing a 'Description' field, an 'API Name' field with the value 'supplier__c', a 'Custom' checkbox that is checked, a 'Singular Label' field with the value 'supplier', and a 'Plural Label' field with the value 'supplier'. To the right of these fields are several toggle switches: 'Enable Reports' (checked), 'Track Activities' (unchecked), 'Track Field History' (checked), 'Deployment Status' (set to 'Deployed'), 'Help Settings' (set to 'Standard salesforce.com Help Window'), and 'Help Settings' (set to 'Standard salesforce.com Help Window'). At the top right of the details section are 'Edit' and 'Delete' buttons.

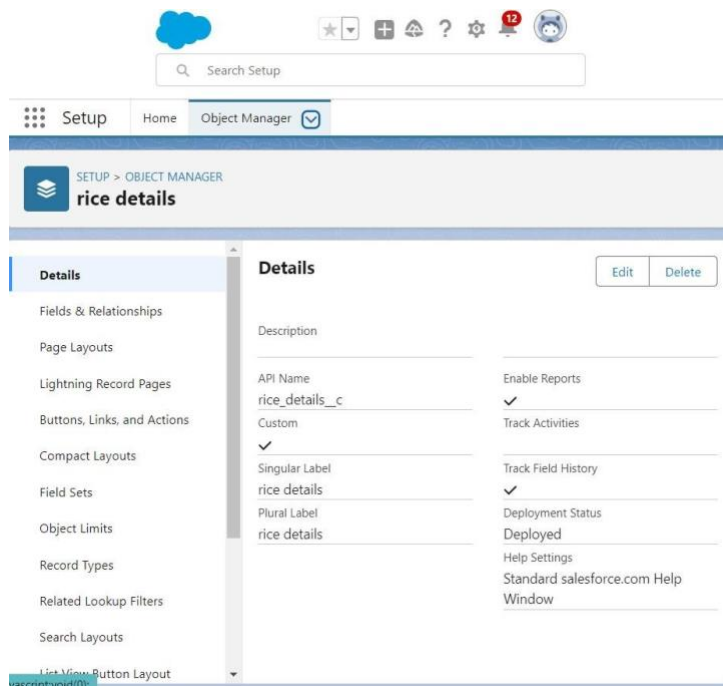
- Rice Mill Object: Manage rice mill details.

The screenshot shows the Salesforce Setup interface for the 'rice mill' object. The top navigation bar includes the Salesforce logo, a search bar labeled 'Search Setup', and a menu with icons for stars, a plus sign, a shield, a question mark, a gear, a notification bell with '12', and a user profile. Below the navigation bar, the 'Setup' menu is open, showing 'Home' and 'Object Manager' (selected). The main content area is titled 'rice mill' and contains a sidebar with a list of configuration options: Details (selected), 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 expanded, showing a 'Description' field, an 'API Name' field with the value 'rice_mill__c', a 'Custom' checkbox that is checked, a 'Singular Label' field with the value 'rice mill', and a 'Plural Label' field with the value 'rice mills'. To the right of these fields are several toggle switches: 'Enable Reports' (checked), 'Track Activities' (unchecked), 'Track Field History' (checked), 'Deployment Status' (set to 'Deployed'), 'Help Settings' (set to 'Standard salesforce.com Help Window'), and 'Help Settings' (set to 'Standard salesforce.com Help Window'). At the top right of the details section are 'Edit' and 'Delete' buttons.

- Consumer object: Manage consumer details.

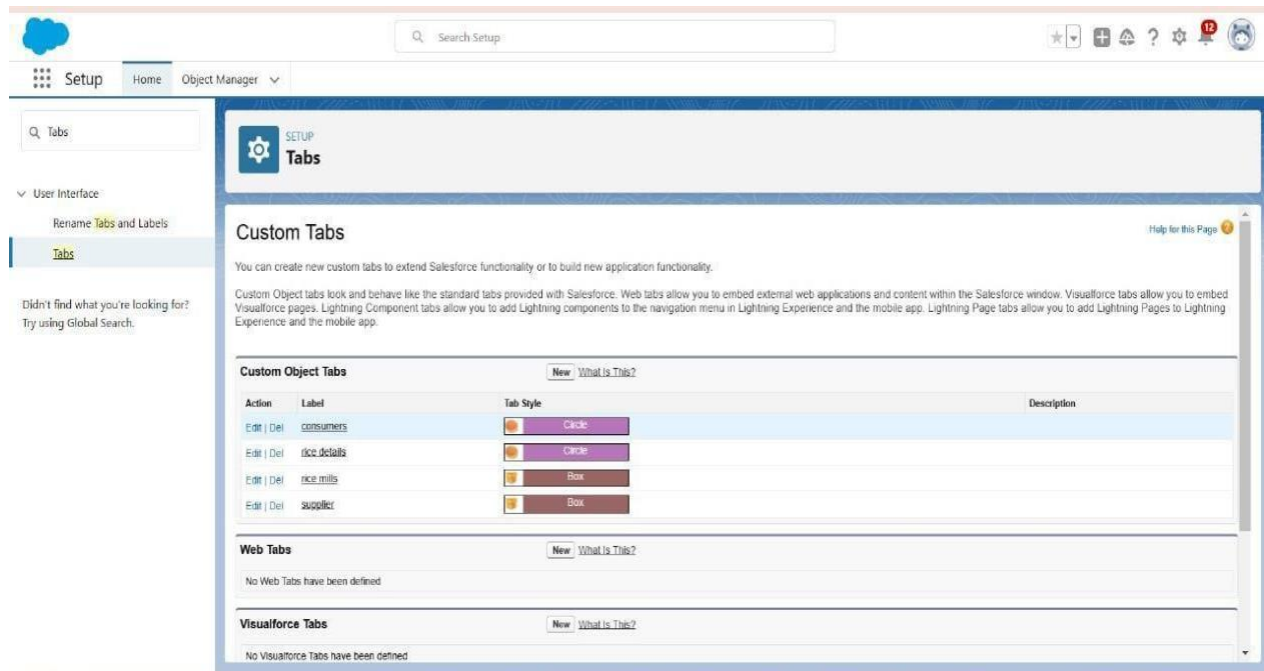


- Rice details: manage rice details.



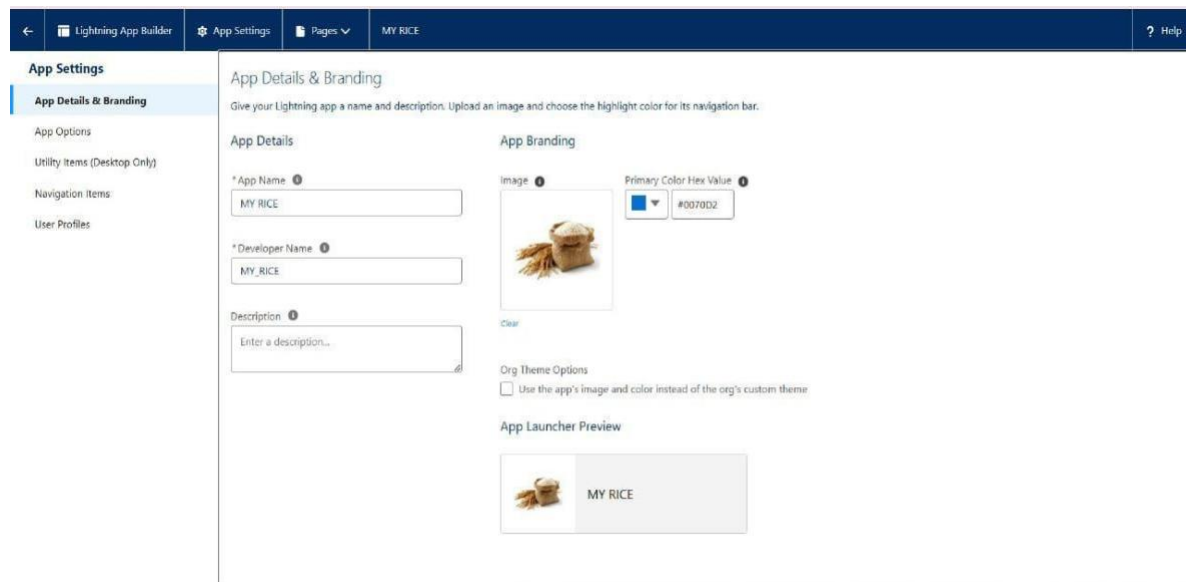
3. Creating Tabs

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



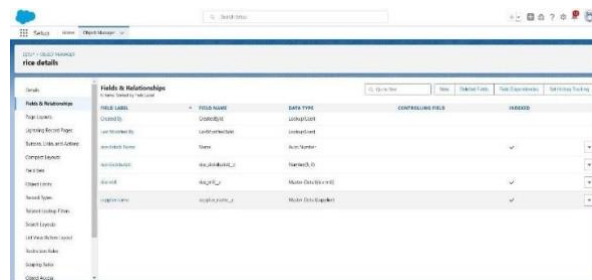
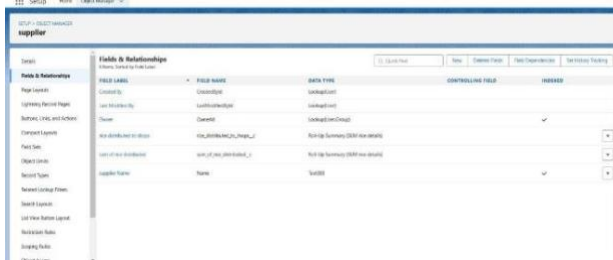
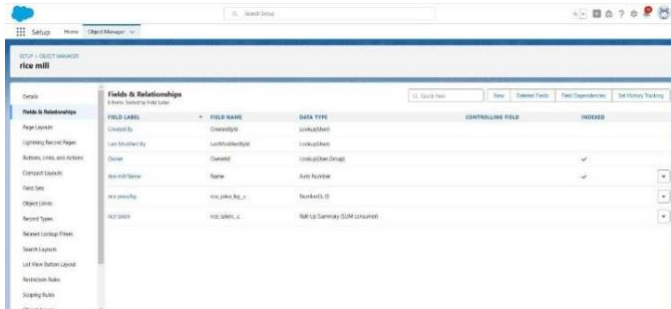
4. Creating Lightning App

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



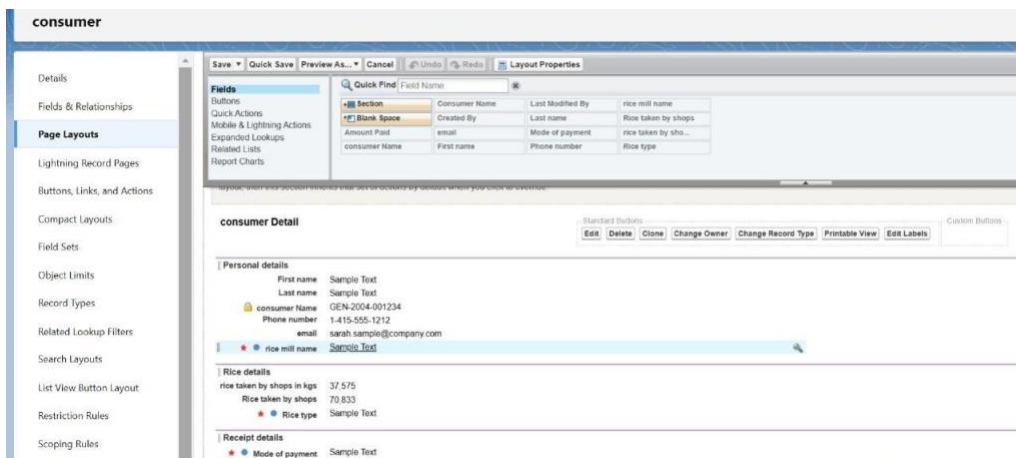
5. Creating Fields

- 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.



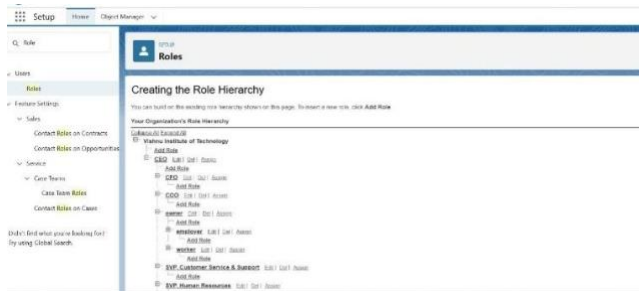
6. Creating Page Layouts

Page Layout in Salesforce allows us to customize the design organize details 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.

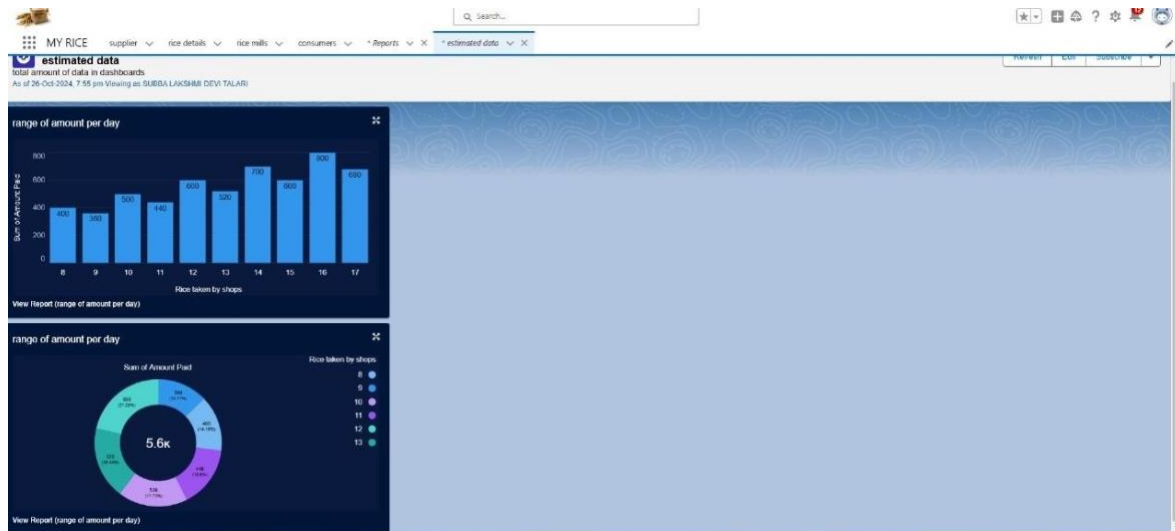
10. Creating Reports

- 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

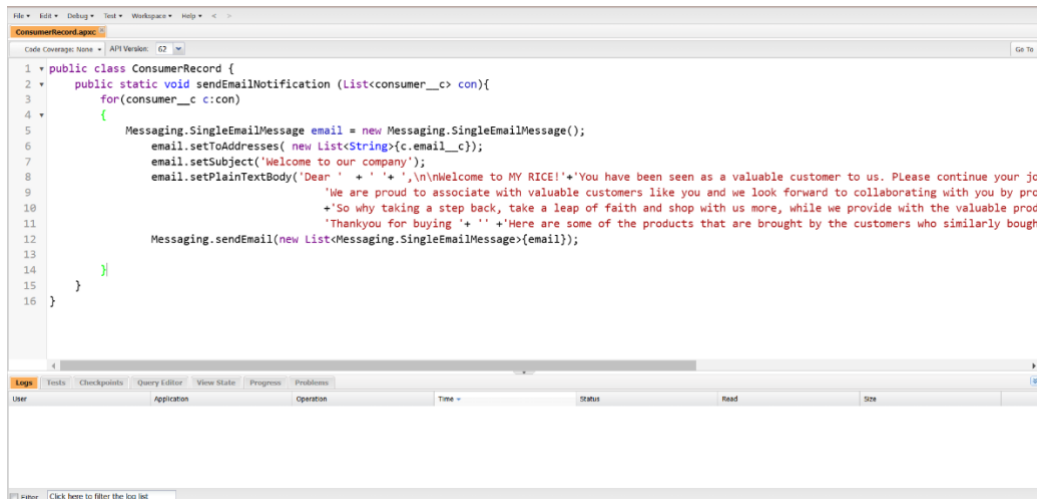
Unit Testing: Create tests for ConsumerRecord and consumerTrigger to validate email notifications and trigger behavior.

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

The screenshot shows the Salesforce Developer Console with the Apex code for 'consumerTrigger.apxt'. The code is as follows:

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

The console also shows the 'Logs' tab with a table of log entries. The table has columns for User, Application, Operation, Time, Status, Read, and Size. The table is currently empty.



```
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 ' + ' ' + ',\n\nWelcome to MY RICE!' + 'You have been seen as a valuable customer to us. Please continue your jo
9
10            + 'We are proud to associate with valuable customers like you and we look forward to collaborating with you by pro
11            + 'So why taking a step back, take a leap of faith and shop with us more, while we provide with the valuable prod
12            + 'Thankyou for buying ' + ' ' + 'Here are some of the products that are brought by the customers who similarly bough
13
14            Messaging.sendEmail(new List<Messaging.SingleEmailMessage>{email});
15
16        }
17    }
18 }
```

6. Key Scenarios Addressed by Salesforce in the Implementation Project

- **Daily Sales Tracking:** Automates the generation of daily reports on rice quantities, types, and revenue.
- **Automated Notifications:** Sends notifications to customers based on specific triggers, improving engagement and communication.
- **Data Security and Integrity:** Implements validation rules and permissions to ensure data quality and control access.

7. Conclusion

The CRM application successfully streamlines daily operations in the rice mill, enhancing efficiency, automating daily reporting, securing data, and providing valuable insights, enabling better resource management and decision-making, and increasing customer satisfaction in the rice millfactory.

