A CRM APPLICATION FOR WHOLESALE RICE MILL

1. Project Overview

This project is focused on creating a CRM application for a wholesale rice mill, designed to address the management of customer relationships, order tracking, and inventory control. The goal is to deliver a comprehensive solution by leveraging modern web development frameworks and database systems. Through this project, we aim to enhance operational efficiency, data accuracy, and customer satisfaction and support the long-term goals of streamlining processes and improving customer retention for the rice mill business.

The Rice Mill CRM Application is a comprehensive solution tailored to streamline and simplify operations in a rice mill factory. It tracks daily rice production, sales, and types while generating automated reports sent to owners on a daily basis. By leveraging customer relationship management (CRM) concepts, this application enhances customer experiences, optimizes store operations, and improves overall efficiency.

2. Objectives

The Rice Mill CRM Application is a comprehensive solution designed to streamline and simplify how much rice per day,how many were sold that rice and which type of rice all reports send to owners daily wise. It leverages the power of customer relationship management (CRM) to enhance customer experiences, optimize store operations, and improve overall efficiency in the rice mill factory. This project aims to develop a user-friendly and feature-rich application that addresses the specific needs of a rice mill factory

Business Goals:

Streamline Customer Relationship Management: Enable efficient tracking and management of customer interactions, orders, and feedback.

Enhance Decision-Making: Provide detailed insights and analytics on sales, customer behavior, and inventory trends to support data-driven decisions.

Improve Customer Retention: Foster stronger customer relationships through personalized communication and timely support.

Specific Outcomes:

- User-Friendly CRM Dashboard: Deliver an intuitive interface for managing customers, orders, and inventory.
- Order Management System: Implement a streamlined workflow for tracking orders from placement to delivery.
- Reporting and Analytics Module: Provide customized reports on sales trends, inventory usage, and customer preferences.
- Create a dedicated portal where customers can view their order history, check order statuses, and communicate directly with the business.

3. Salesforce Key Features and Concepts Utilized

Accounts and Contacts:

- Manage wholesale customers (accounts) and their associated contact information efficiently.
- Categorize customers based on business type, purchase history, or location.

Leads and Opportunities:

- Track potential customers (leads) and convert them into opportunities.

- Manage sales pipelines for new bulk buyers and partnerships.

Custom Objects:

- Design custom objects for rice mill-specific data, such as "Order Details," "Shipment Tracking," and "Rice Varieties."

Reports and Dashboards:

- Generate real-time reports and visually engaging dashboards for sales trends, inventory updates, and customer behavior analysis.

Email Integration:

- Use Salesforce's email integration features for bulk communication, promotional campaigns, and personalized customer interaction.

Customizable CRM:

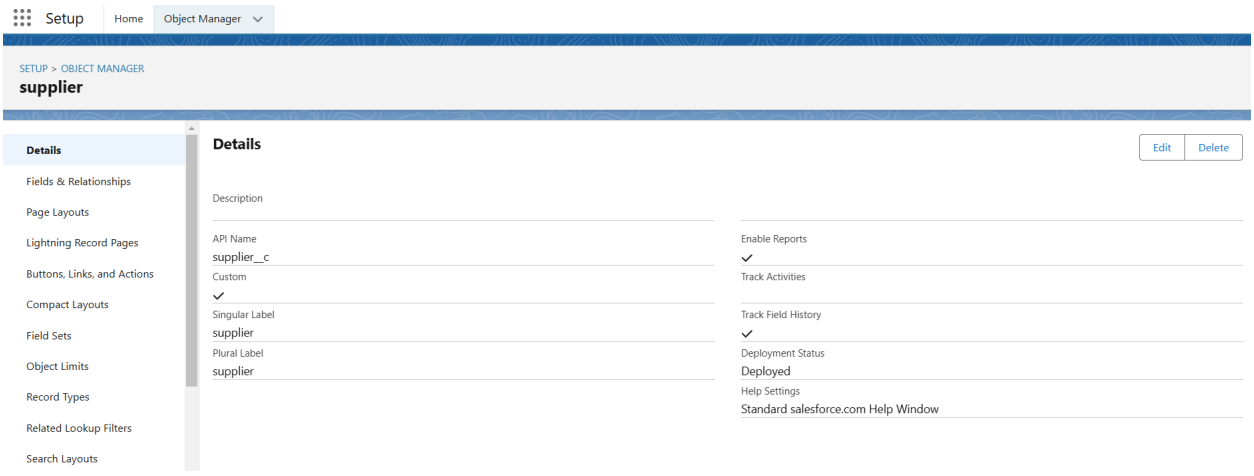
- Tailor Salesforce workflows and interfaces to meet the unique needs of the wholesale rice mill business.

4. Detailed Steps to Solution Design

Screenshots :

Objects:

• **Supplier Object**: Captures supplier details such as name, contact information, and total supply history.
• **Rice Mill Object**: Maintains core mill details including production capacity and operational schedules
• **Consumer Object:** Stores customer information, purchase history, and payment details.
• **Rice Details Object**: Tracks various rice types, stock levels, and pricing information.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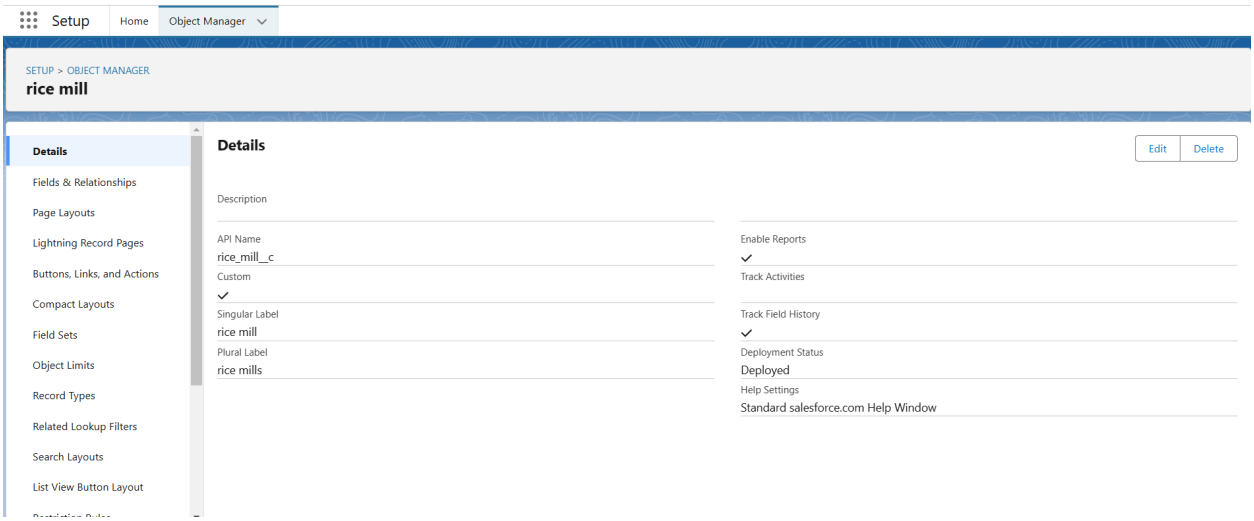
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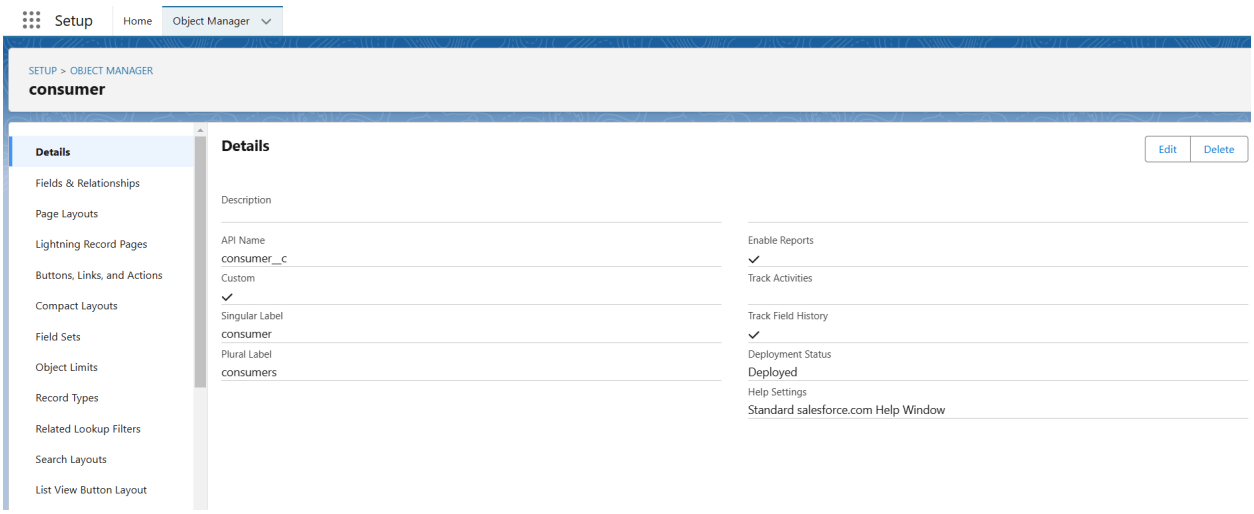
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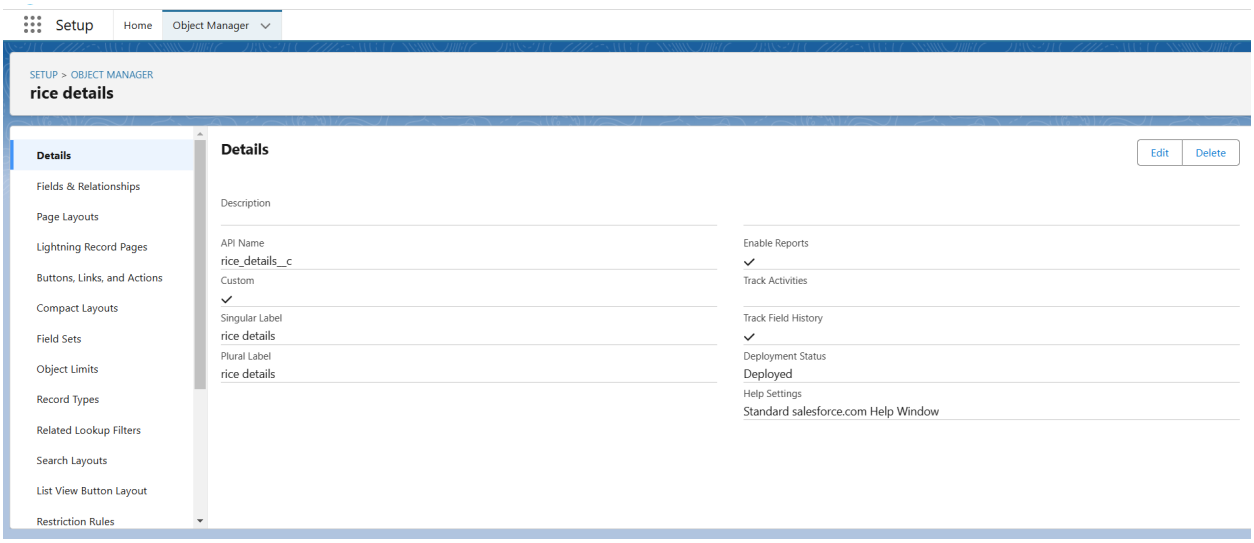
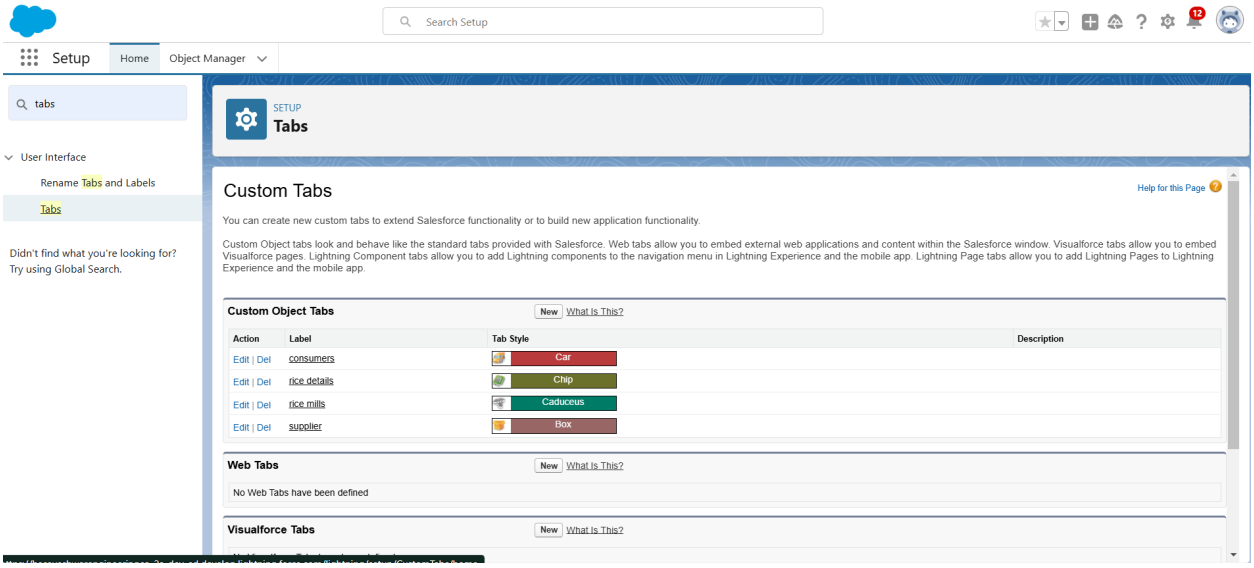


Tabs:

• **Custom Tab**: A unique tab designed for accessing critical data such as rice stock levels.

• **Remaining Tabs**: Additional tabs to navigate between objects like Suppliers, Consumers, and Reports.



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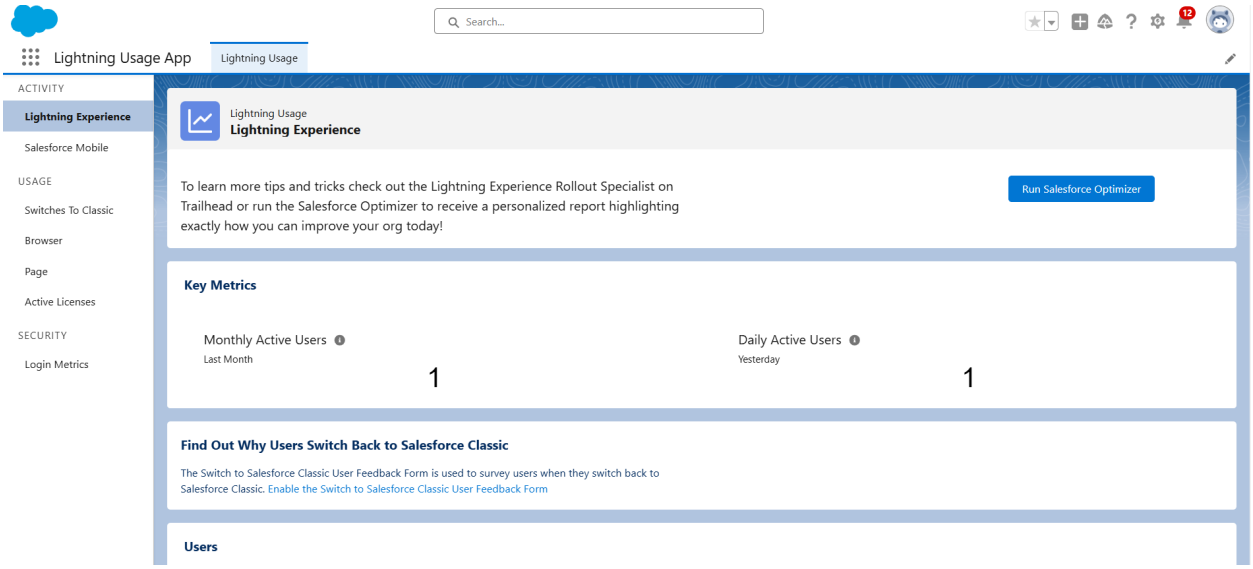


Fields:

Number Field in Rice Details Object: Used to log quantities for precise inventory management.

• Junction Object: Facilitates many-to-many relationships between Suppliers and Rice Details.

• Master-Detail Relationship: Links dependent objects for cascading data updates and summarization.

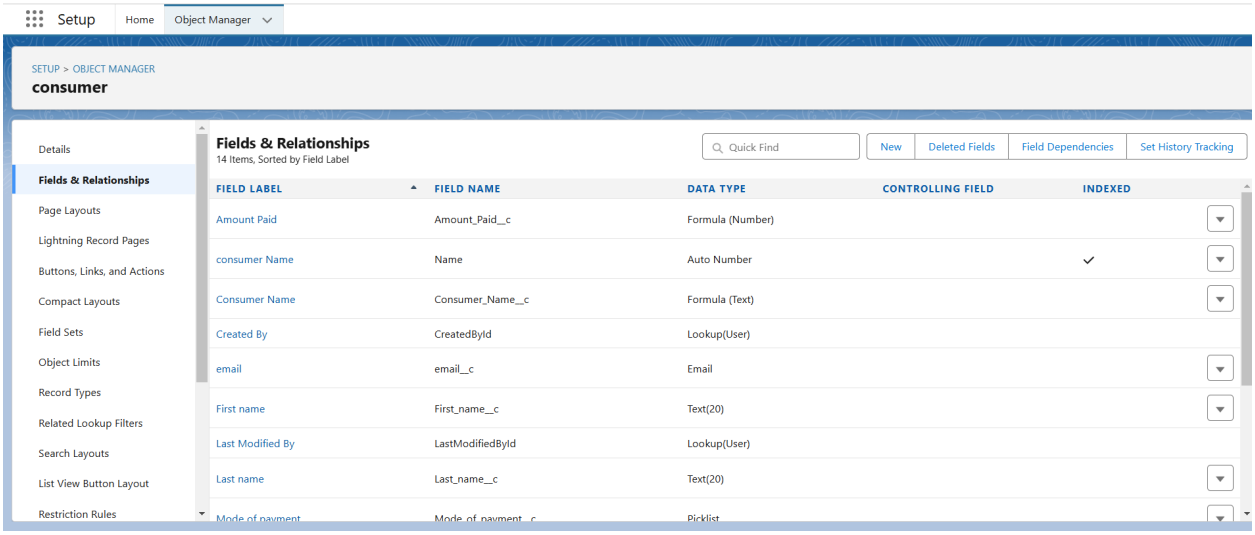
• Roll-Up Summary Field: Computes aggregate values like total revenue or rice supplied.

• Fields in Rice Mill Objects: Define operational metrics like daily production rates and sales.

• Fields in Consumer Objects: Include data points like total purchases and outstanding payments.

• Cross-Object Formula Field: Automatically calculates financial metrics, e.g., total cost.

• Validation Rule: Ensures critical fields like quantity and price are accurately filled.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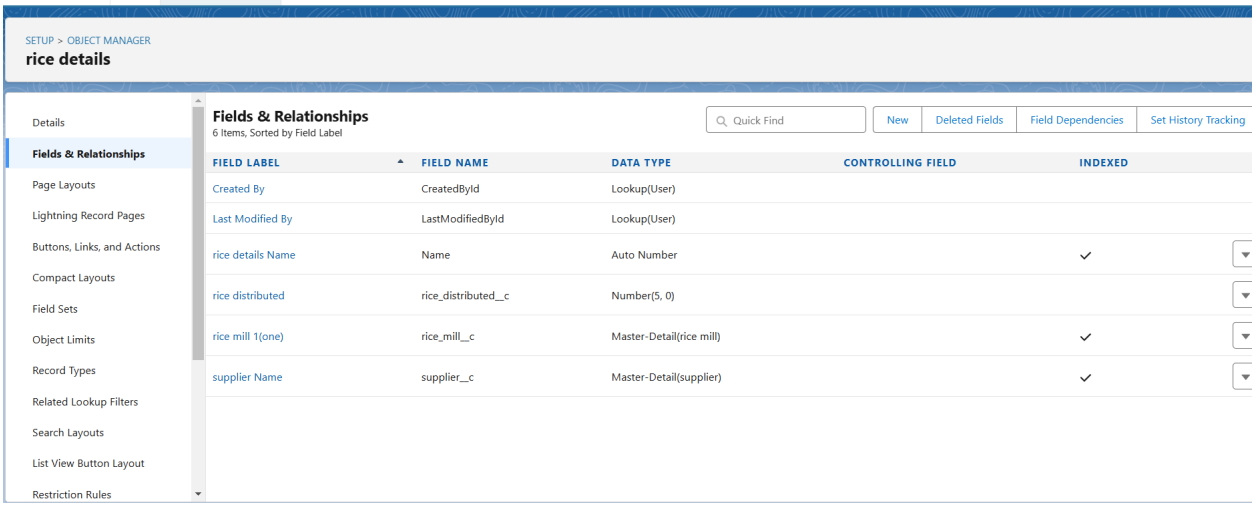
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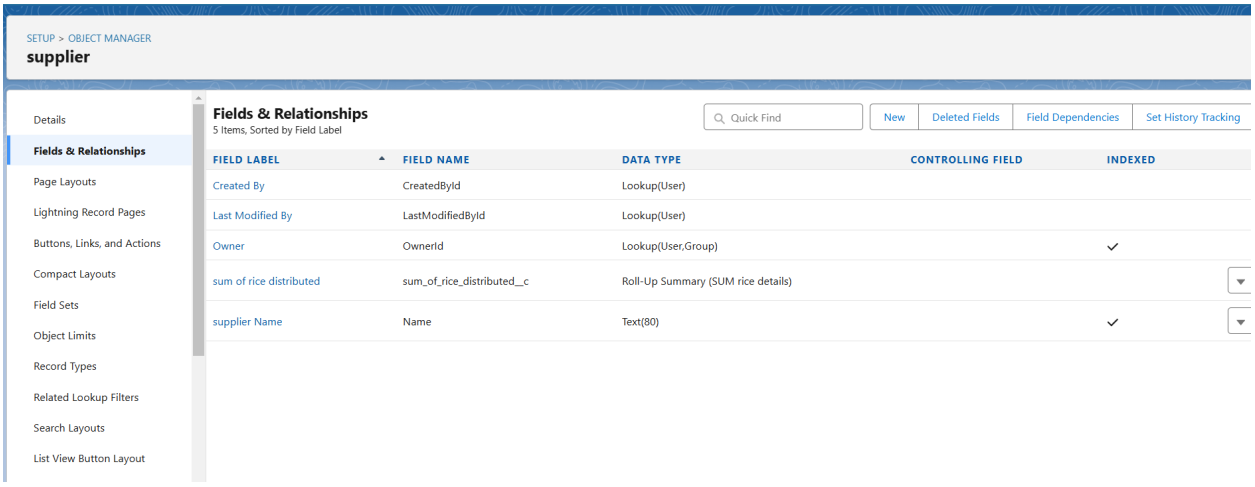
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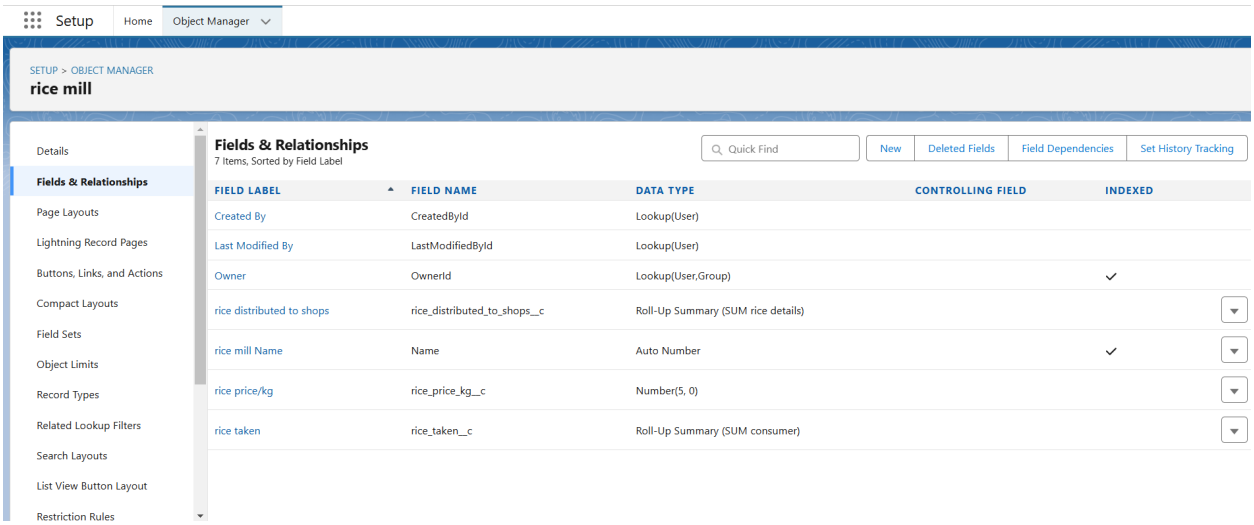
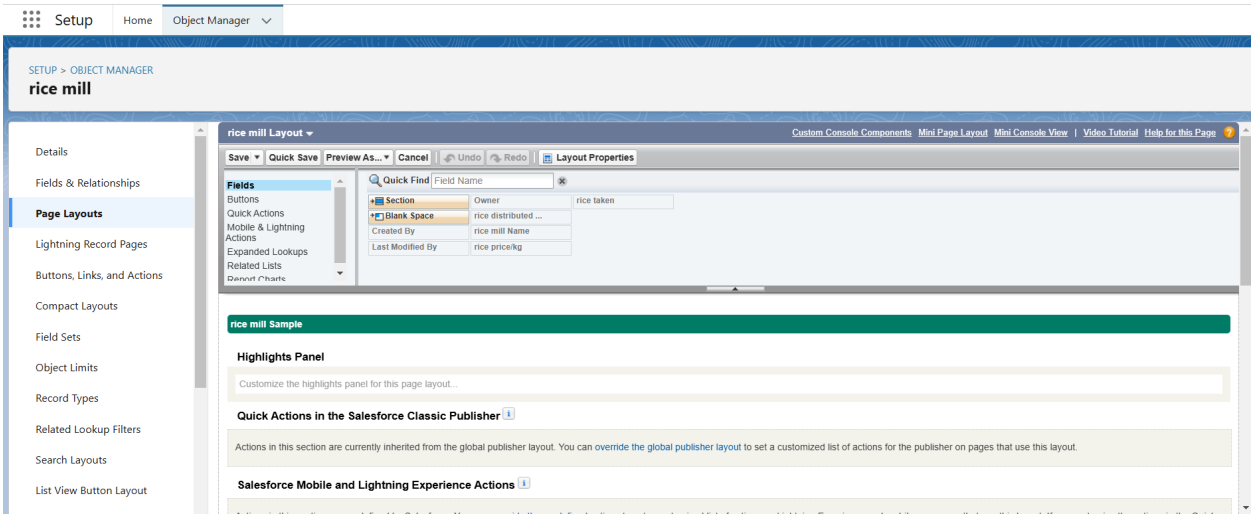


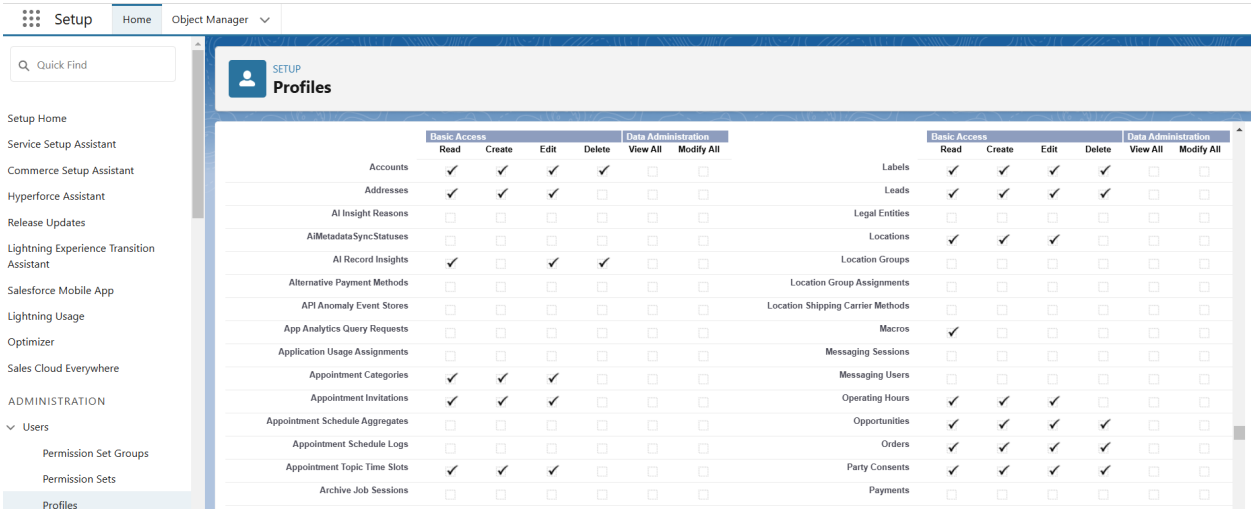
Page Layouts:

• Customized layouts to present relevant information for each user role (Owner, Employer, Worker).

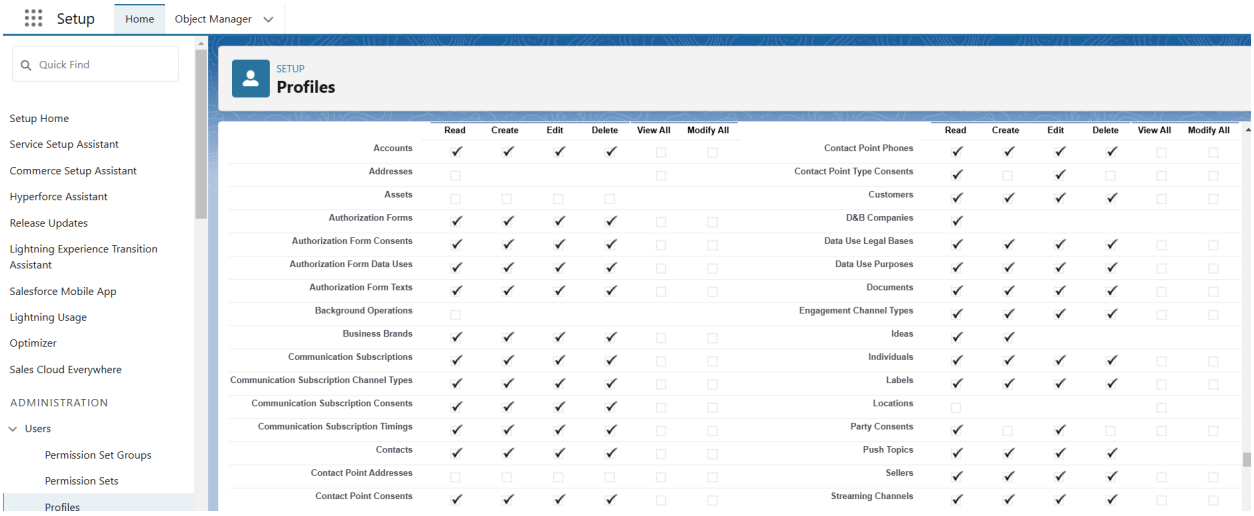


Profiles:

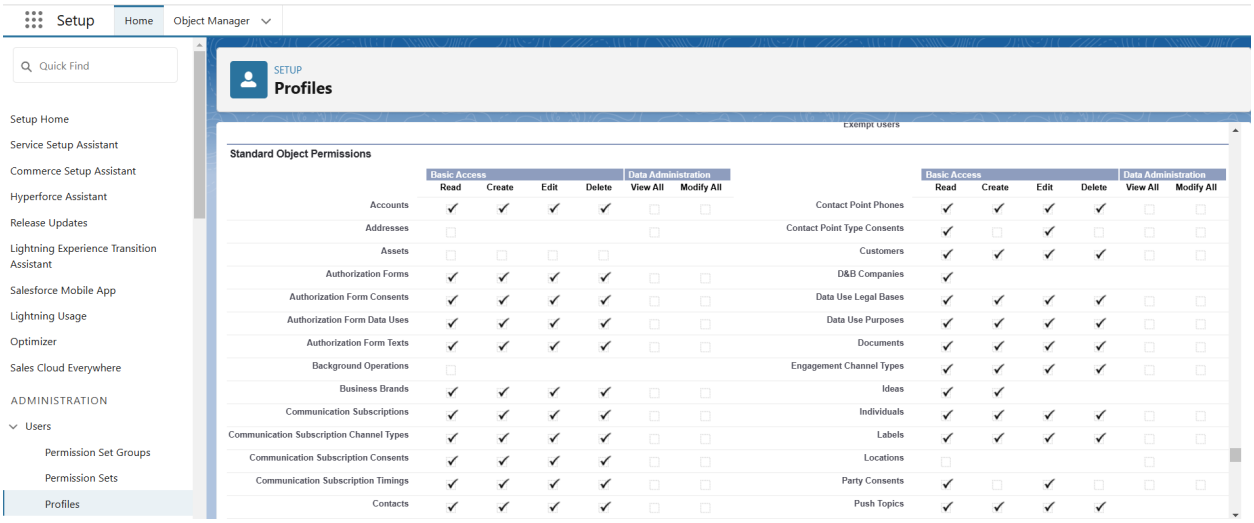
Owner Profile: : Full access to all data and functionalities.



Employer Profile: Limited access tailored to operational management needs



Worker Profile: Restricted access for task-specific data viewing.

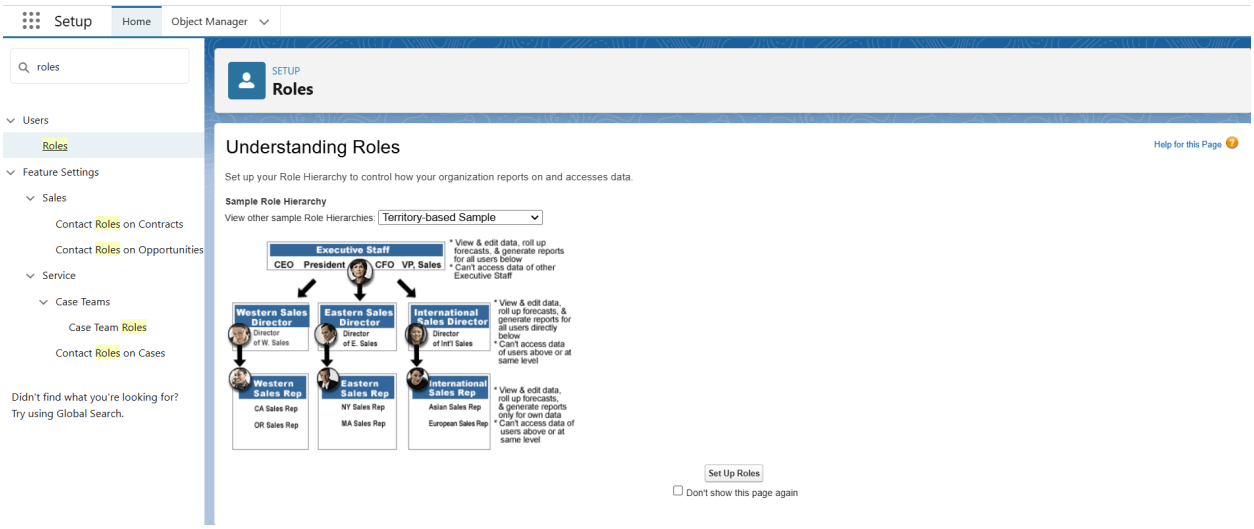


Role & Role Hierarchy:

• **Owner Role:** Top-level role with complete visibility and control over all records within the organization.

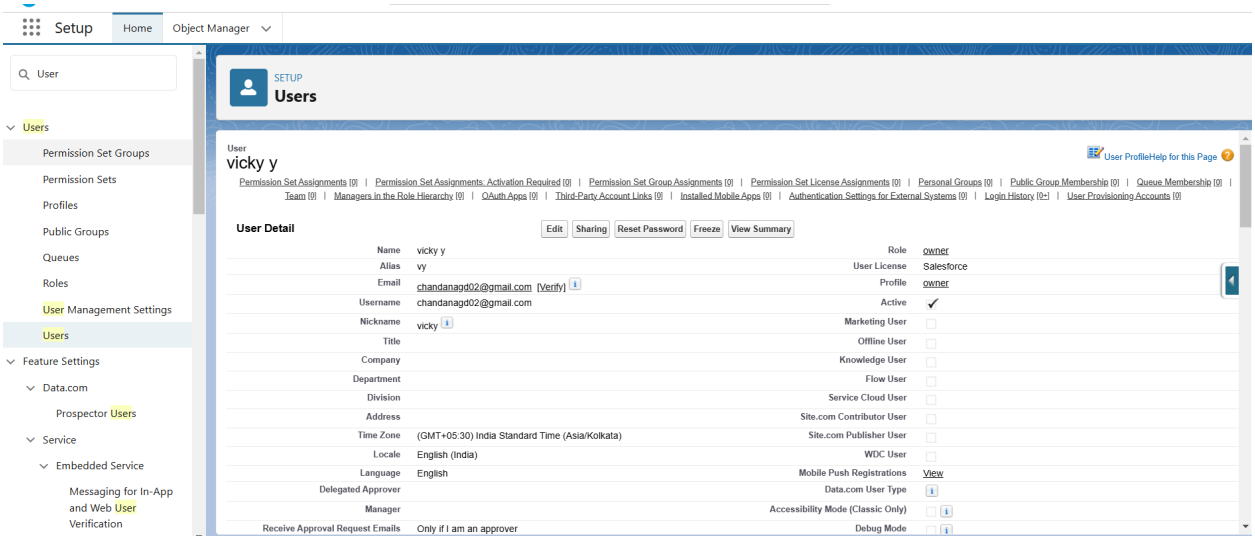
• **Employer Roles:** Mid-level roles that have access to specific operational data, such as department or team-level information, and manage employees or specific operational processes.

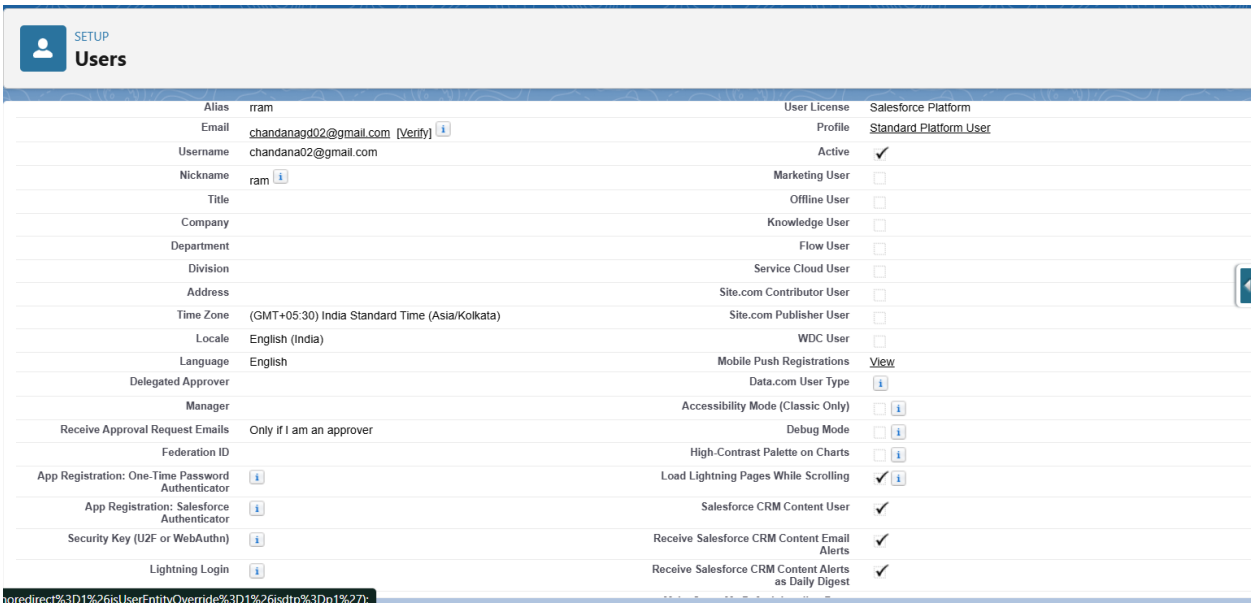
• **Worker Role:** Entry-level or operational role with restricted access to specific records or data. This role may have visibility limited to the records they are directly involved with, such as their tasks, projects, or cases, without visibility into higher-level operational data.

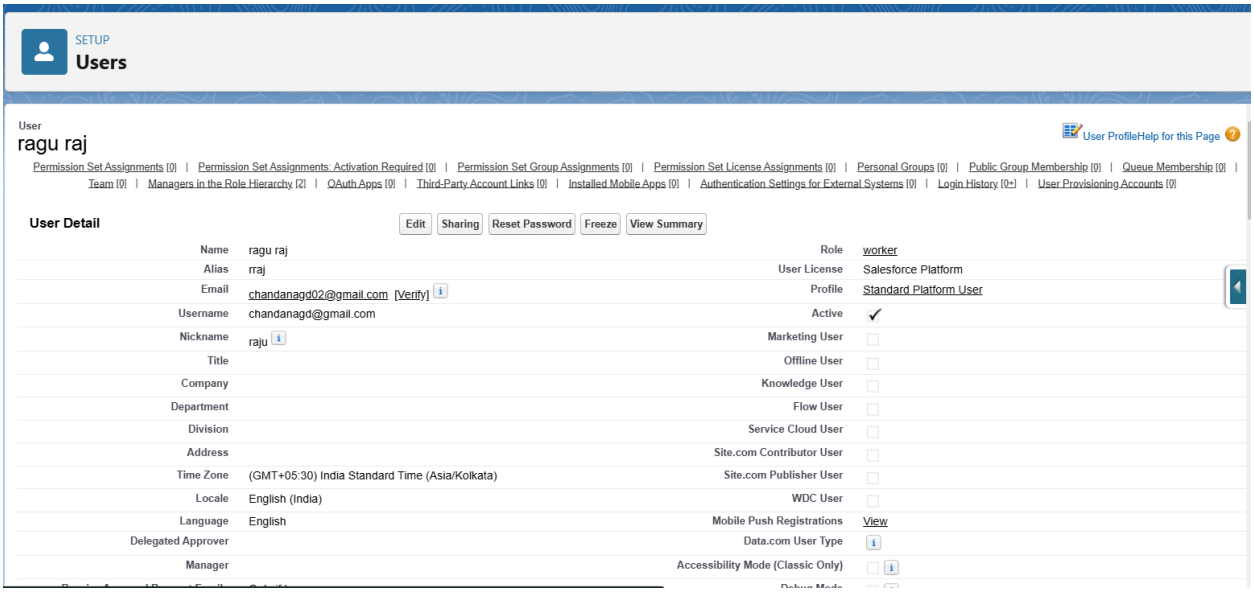


Users:

- User accounts with appropriate permissions based on role hierarchy.
- Additional users added for extended workforce access.

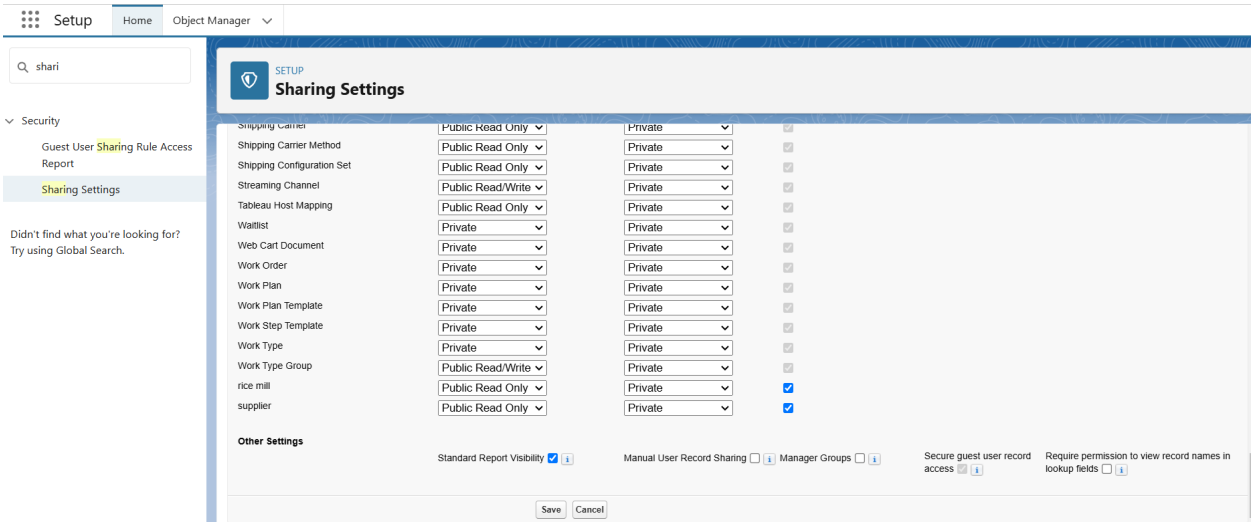






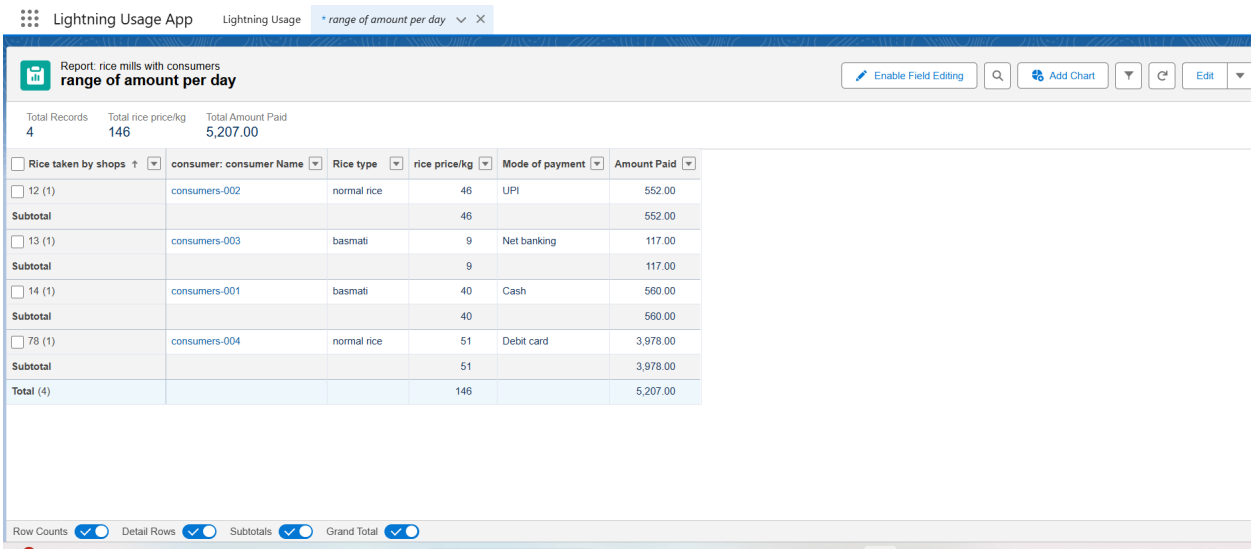
Permission Sets:

• OWD Setting: Organization-wide defaults configured for data security and selective sharing.



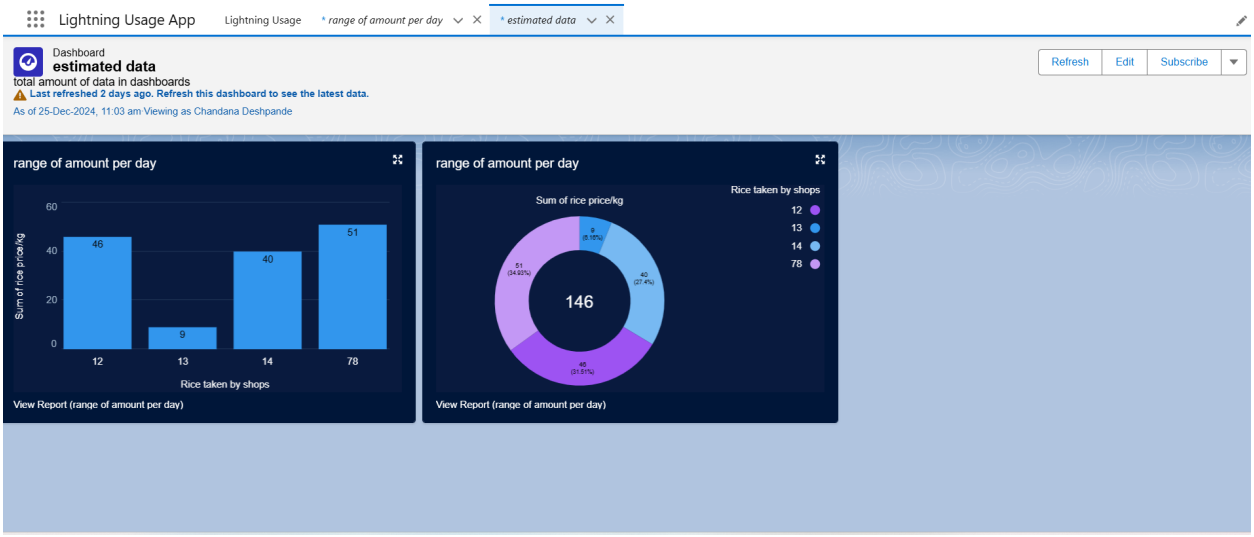
Reports:

- Create Report: Tracks key performance metrics like sales and production.
- Sharing Report to Owner: Automated report sharing for timely insights.
- Create a Report Folder: Organized storage for easy access to historical reports.



Dashboards:

- **Dashboard Folder**: Centralized repository for operational dashboards.
- **Dashboard**: Visual representation of KPIs such as daily sales and revenue.



5.Testing and Validation

APEX:

Apex Class:

ConsumerRecord Purpose: The ConsumerRecord Apex class is designed to send personalized email notifications to a list of consumers in Salesforce. It is specifically used to send a welcome email to each consumer, expressing appreciation for their business and informing them about the company's offerings, including discounts and product recommendations.

Functionality:

• The class defines a static method sendEmailNotification, which accepts a list of consumer__c records as input.

• It iterates over the provided list of consumers and for each consumer:

▪ An email is created using the Messaging.SingleEmailMessage class.

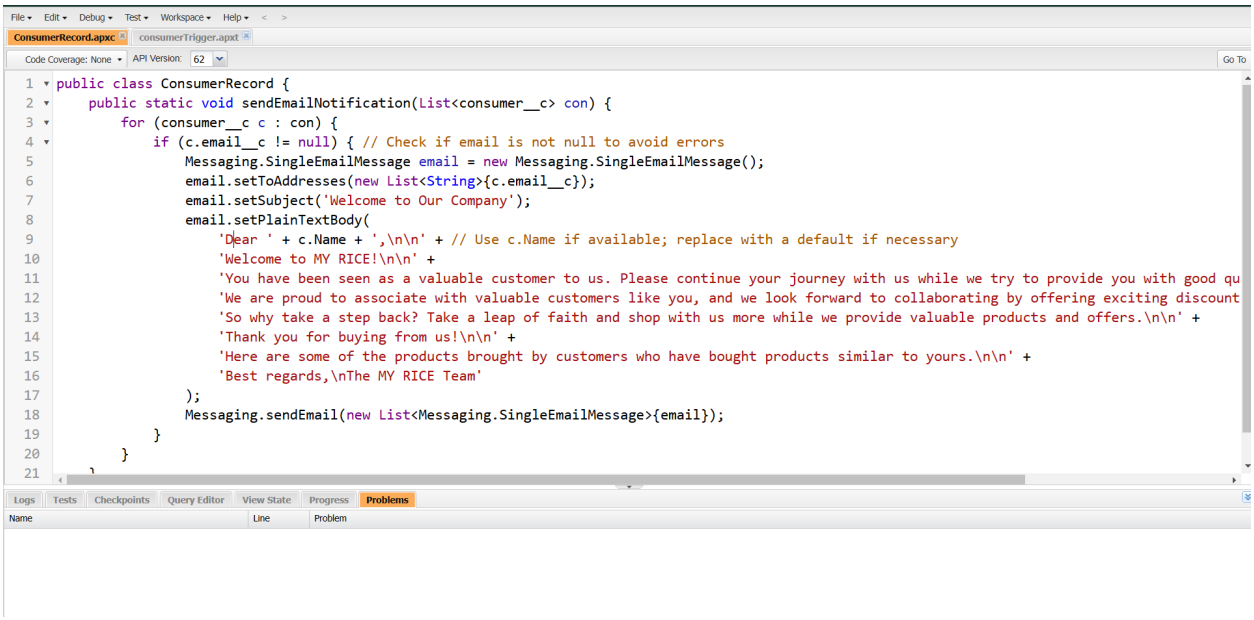
▪ The email is addressed to the consumer's email address (retrieved from the email__c field).

▪ The subject of the email is set to "Welcome to our company."

▪ The email body includes a personalized message welcoming the consumer to the company, offering them discounts, and encouraging continued shopping with the company.

• Once the email message is prepared, it is sent using the Messaging.sendEmail method.

• records.




```
public class ConsumerRecord {
    public static void sendEmailNotification(List<consumer__c> con) {
        for (consumer__c c : con) {
            if (c.email__c != null) { // Check if email is not null to avoid errors
                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' + // Use c.Name if available; replace with a default if necessary
                    'Welcome to MY RICE!\n\n' +
                    'You have been seen as a valuable customer to us. Please continue your journey with us while we try to provide you with good qu
                    'We are proud to associate with valuable customers like you, and we look forward to collaborating by offering exciting discount
                    '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 from us!\n\n' +
                    'Here are some of the products brought by customers who have bought products similar to yours.\n\n' +
                    'Best regards,\nThe MY RICE Team'
                );
                Messaging.sendEmail(new List<Messaging.SingleEmailMessage>{email});
            }
        }
    }
```

Apex Trigger:

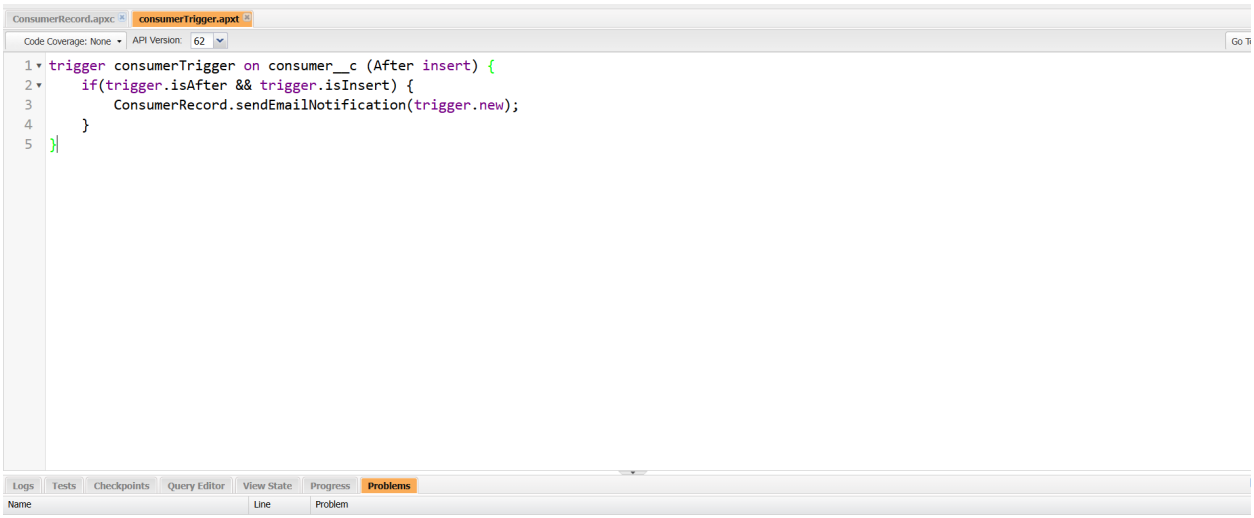
consumerTrigger Purpose:

The consumerTrigger Apex trigger is designed to automatically invoke the sendEmailNotification method from the ConsumerRecord Apex class after a new consumer__c record is inserted into Salesforce. The trigger is set to run after

insert,ensuring that a welcome email is sent to the consumer immediately upon record creation. ensuring that a welcome email is sent to the consumer immediately upon record creation.

Functionality:

• The trigger is set to fire after an insert event on the consumer__c object.
• When a new consumer record is added, the trigger invokes the sendEmailNotification method from the ConsumerRecord class.
• The trigger.new context variable, which contains the list of newly inserted consumer__c records, is passed to the sendEmailNotification method.
• The method sends personalized email notifications to the consumers, welcoming them and offering further company resources and promotions.



6. Conclusion

Summary of Achievements:

• Successfully developed a user-friendly CRM application for wholesale rice mills.
• Streamlined daily operations with automated reporting and role-based access control.
• Improved decision-making through actionable insights and real-time data

visualization.

• Enhanced understanding of Salesforce features such as rollup summary fields, validation rules, and dashboards.