# Project Report

## Project Overview: Rice Mill CRM Application

The Rice Mill CRM Application is designed to streamline operations and enhance efficiency in a rice mill factory using Salesforce CRM. It aims to optimize rice tracking, sales management, and reporting processes, providing comprehensive insights to stakeholders.

### Key Objectives:

- **Efficient Operations**: Simplify rice production and distribution processes.
- **Enhanced Sales Management**: Track sales volume, rice types, and revenue.
- **Comprehensive Reporting**: Generate daily reports for informed decision-making.
- **Data Integrity**: Ensure accuracy and reliability through validation rules and data aggregation.

### Features:

- **Object Management**: Includes Supplier, Rice Mill, Consumer, and Rice Details objects for comprehensive data capture.
- **Automation**: Utilizes roll-up summaries and cross-object formulas to automate data aggregation and calculations.
- **Visualization**: Employs dashboards and reports to visualize key metrics such as rice distribution and sales performance.
- **User Access Control**: Configures sharing settings to manage data access and security across the platform.

### Benefits:

- **Improved Efficiency**: Streamlines operations from production to sales tracking.
- **Enhanced Decision-Making**: Provides real-time insights for informed decision-making.
- **Customer Satisfaction**: Enhances customer service through accurate order tracking and fulfillment.
- **Scalability**: Designed to scale with the growing needs of the rice mill business.

# Objects in Rice Mill CRM Application

## 1. Rice Mill

- **Fields**:
    - Rice Price/kg (Number, Length: 5)
- **Roll-Up Summary**:
    - **Field Label**: Rice Distributed to Shops
    - **Summarized Object**: Rice Details
    - **Roll-Up Type**: Sum
    - **Field to Aggregate**: Rice Distributed

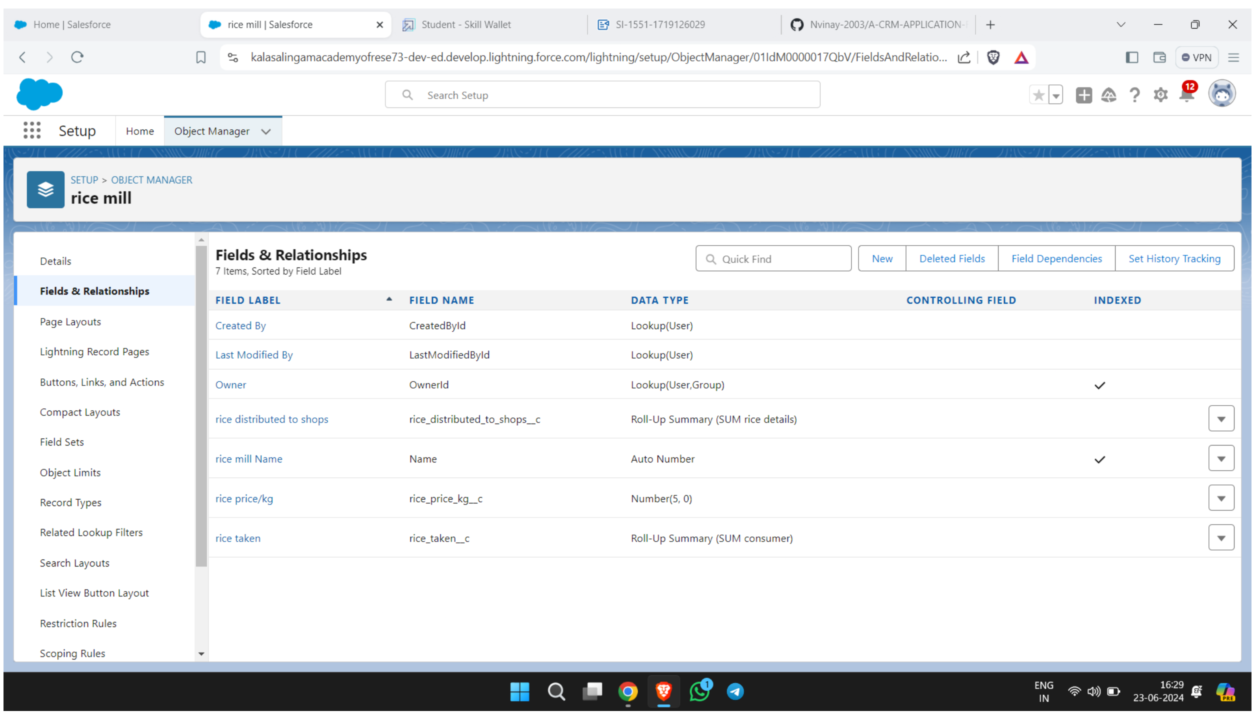



Fig 1: rice mill Object and Fields

## 2. Consumer

- **Fields**:
    - First Name (Text)
    - Last Name (Text)
    - Phone Number (Phone)
    - Email (Email)

- Rice Taken by Shops (Number, Length: 5)
- Rice Type (Picklist: Basmati, Normal Rice)
- Mode of Payment (Picklist: Credit Card, Debit Card, Net Banking, UPI, Cash)

- **Cross-Object Formula Fields**:
  - **Amount Paid**:
    - **Field Label**: Amount Paid
    - **Formula Return Type**: Number
    - **Formula**: `rice_taken_by_shops__c * rice_mill_name__r.rice_price_kg__c`
  - **Consumer Name**:
    - **Field Label**: Consumer Name
    - **Formula Return Type**: Text
    - **Formula**: `First_Name__c + ' ' + Last_Name__c`
- **Validation Rules**:
  - **Phone Number or Email Blank**:
    - **Rule Name**: Phonenumberoremailblankrule
    - **Formula**: `OR(ISBLANK(phone_number__c), ISBLANK(email__c))`
    - **Error Message**: "Please fill in your phone number."

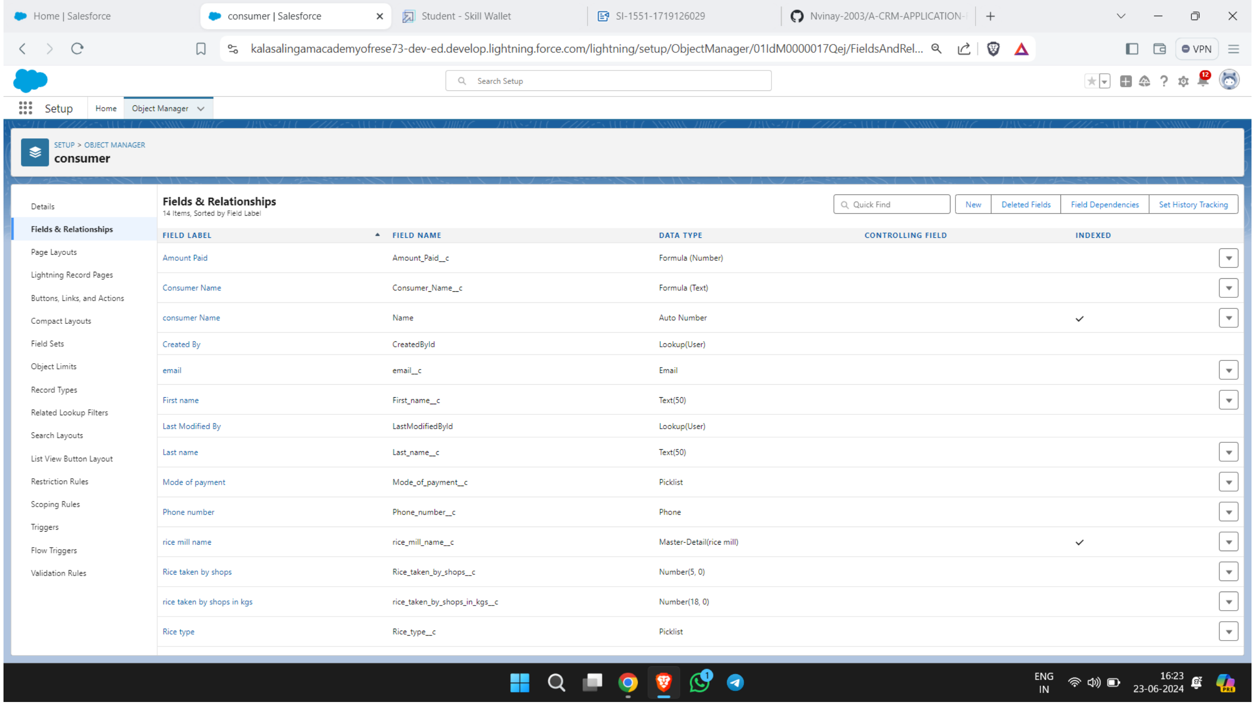



Fig 2: Consumer Objects and Fields

## 3. Supplier

- **Fields**: Standard fields as needed
- **Roll-Up Summary**:
  - **Field Label**: Sum of Rice Distributed
  - **Summarized Object**: Rice Details
  - **Roll-Up Type**: Sum
  - **Field to Aggregate**: Rice Distributed

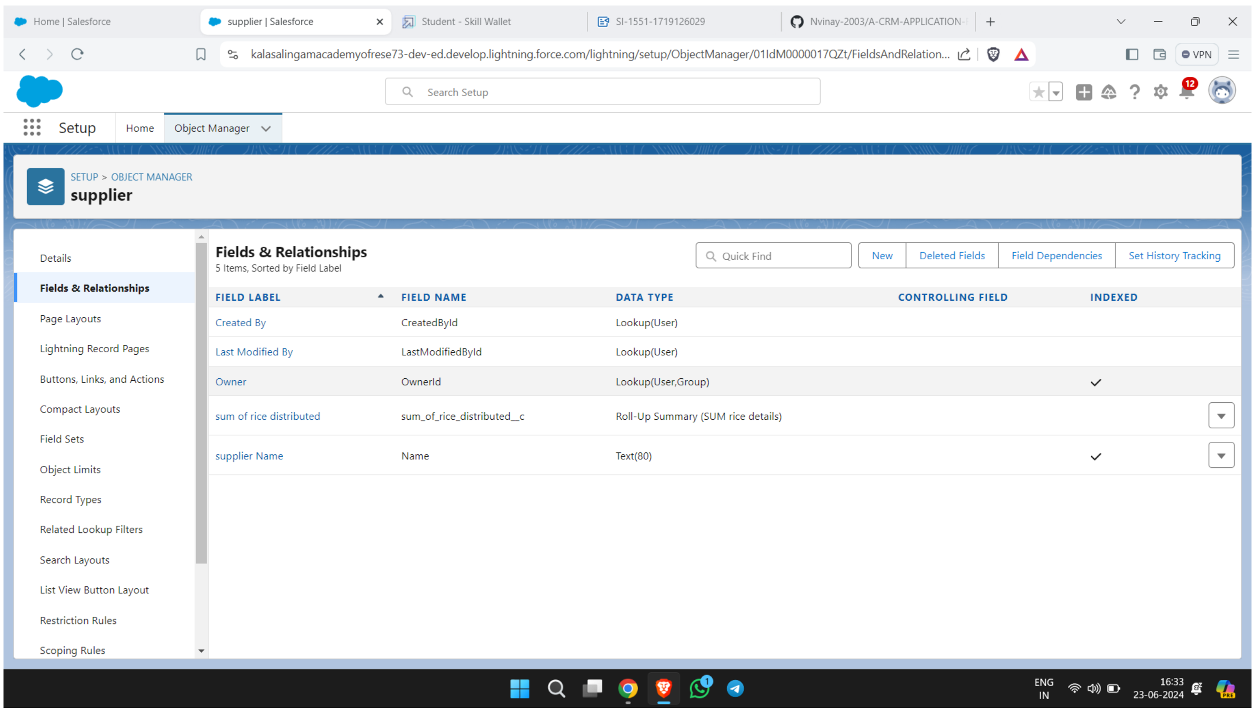



Fig 3 : supplier object and Fields

## 4. Rice Details

- **Fields**:
  - Rice Distributed (Number, Length: 5)
- **Master-Detail Relationships**:
  - With Supplier
  - With Rice Mill

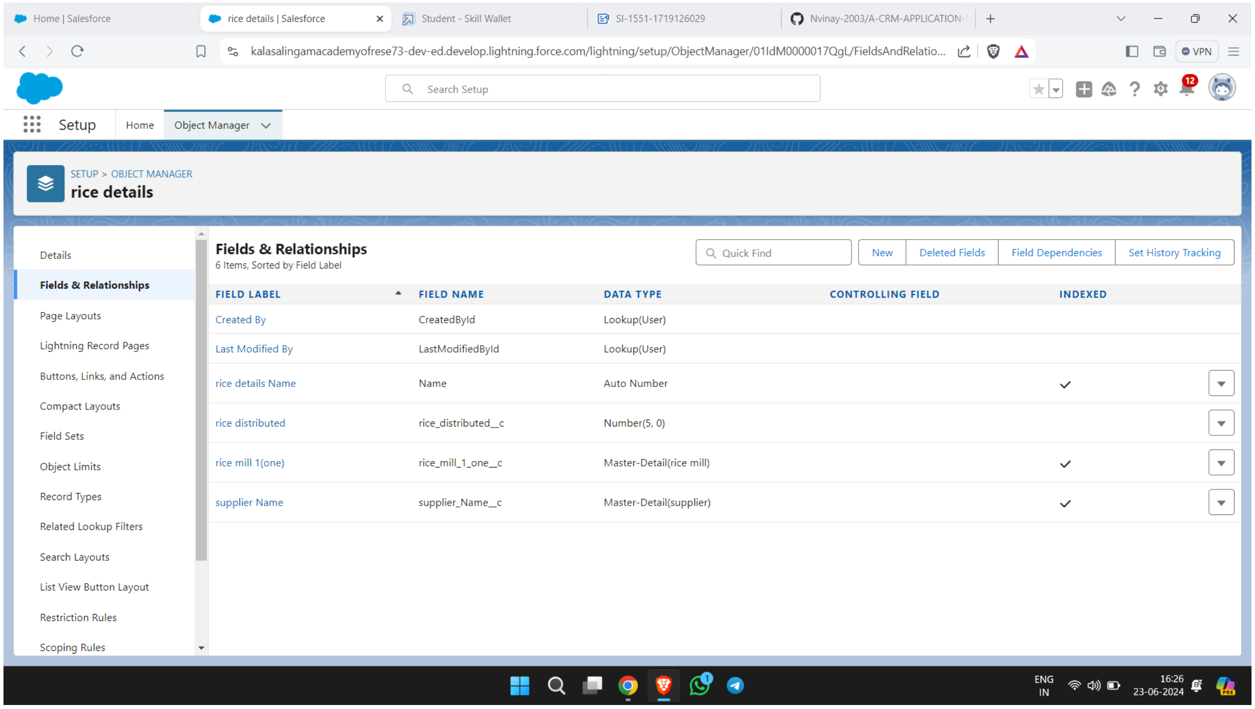



Fig 4 : rice details objects and Fields

# Creating Tabs for Objects

**1. Rice Mill**

- **Object Name**: Rice Mill
- **Tab Label**: Rice Mill
- **Tab Style**: Choose an appropriate style
- **Visibility**: Ensure it's visible to appropriate profiles (e.g., System Administrator, Owner)

**2. Consumer**

- **Object Name**: Consumer
- **Tab Label**: Consumers
- **Tab Style**: Choose an appropriate style
- **Visibility**: Ensure it's visible to appropriate profiles (e.g., System Administrator, Owner)

**3. Supplier**

- **Object Name**: Supplier
- **Tab Label**: Suppliers
- **Tab Style**: Choose an appropriate style
- **Visibility**: Ensure it's visible to appropriate profiles (e.g., System Administrator, Owner)

**4. Rice Details**

- **Object Name**: Rice Details
- **Tab Label**: Rice Details
- **Tab Style**: Choose an appropriate style
- **Visibility**: Ensure it's visible to appropriate profiles (e.g., System Administrator, Owner)

## Steps to Create Tabs:

1. **Setup**: Go to Salesforce Setup.
2. **Object Manager**: Click on "Object Manager" in the Quick Find box.
3. **Select Object**: Select the respective object (e.g., Rice Mill).
4. **Create Tab**:
    - Click on "Tabs & Labels" or "Tab" (depending on Salesforce version).
    - Click on "New" to create a new tab.
5. **Tab Settings**:
    - Enter the **Tab Label** (e.g., Rice Mill).
    - Choose a **Tab Style** (icon representation).

■ Set **Visibility** for profiles that should see this tab.

6. **Save**: Click "Save" to create the tab.

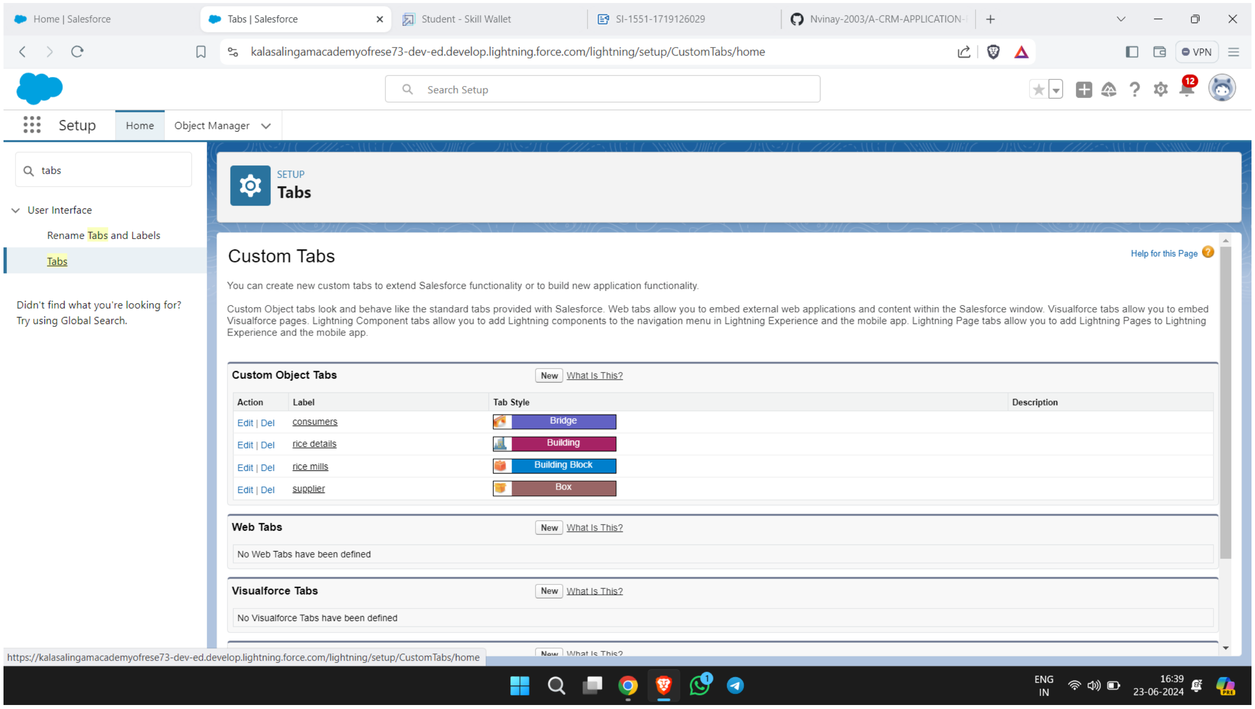


Fig 5: Custom tabs for the objects

## Assign Tabs to Apps (Lightning App Builder):

- After creating tabs, you can add them to an app using the Lightning App Builder:
    - ■ Go to Setup -> App Manager -> Select your app.
    - ■ Edit the Lightning App and add the tabs (e.g., Rice Mill, Consumer, Supplier, Rice Details) to the app's navigation items.
    - ■ Save the changes.

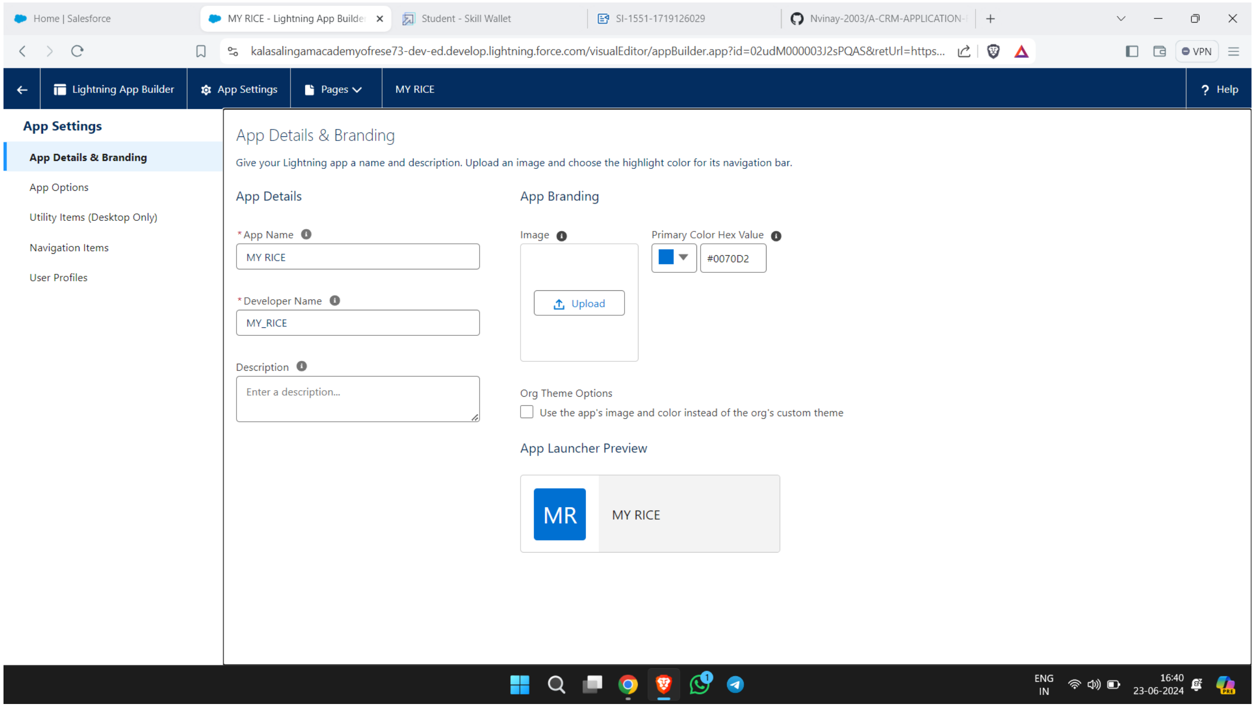
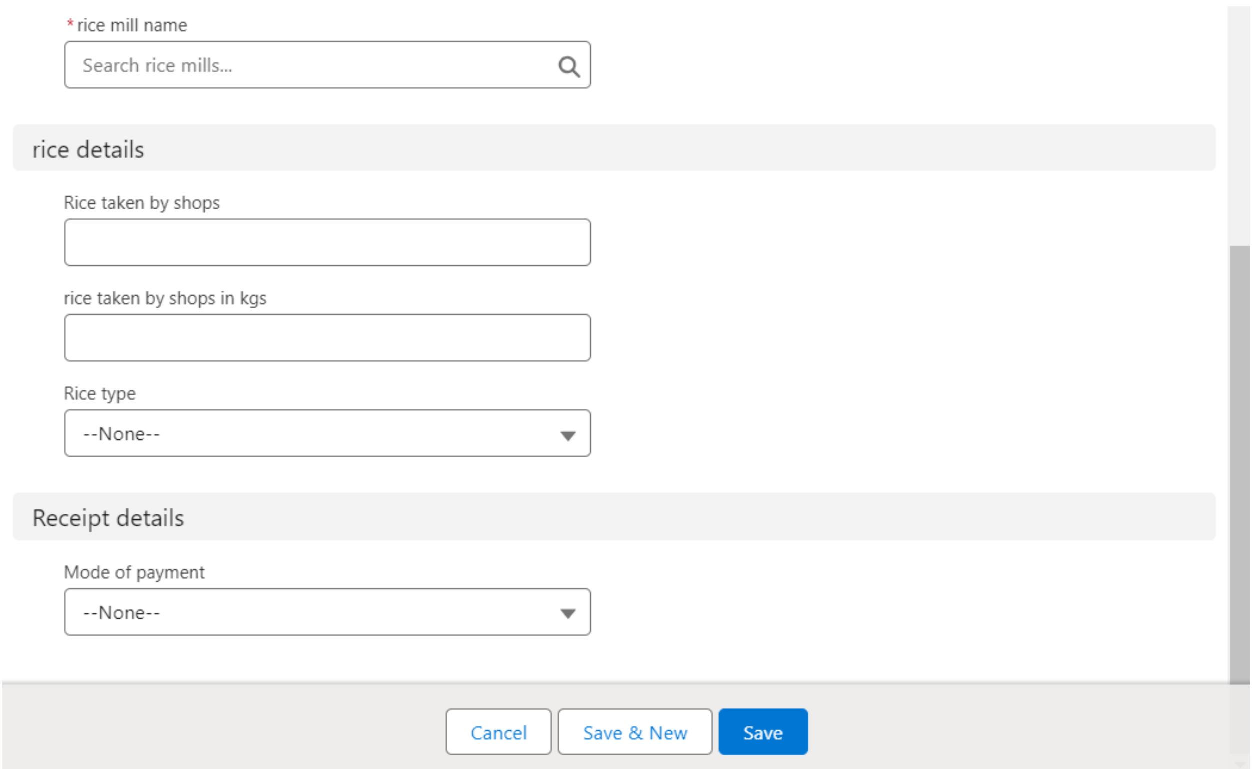



Fig 6: My Rice App

# Page Layouts:

- For every object creation, we can have different page layouts. Here in the consumer object, we are changing the default layout.
- We are going to make it three sections based on the available field we are going to segregate
- The sections are:
  - Personal Details
  - rice details
  - Receipt details



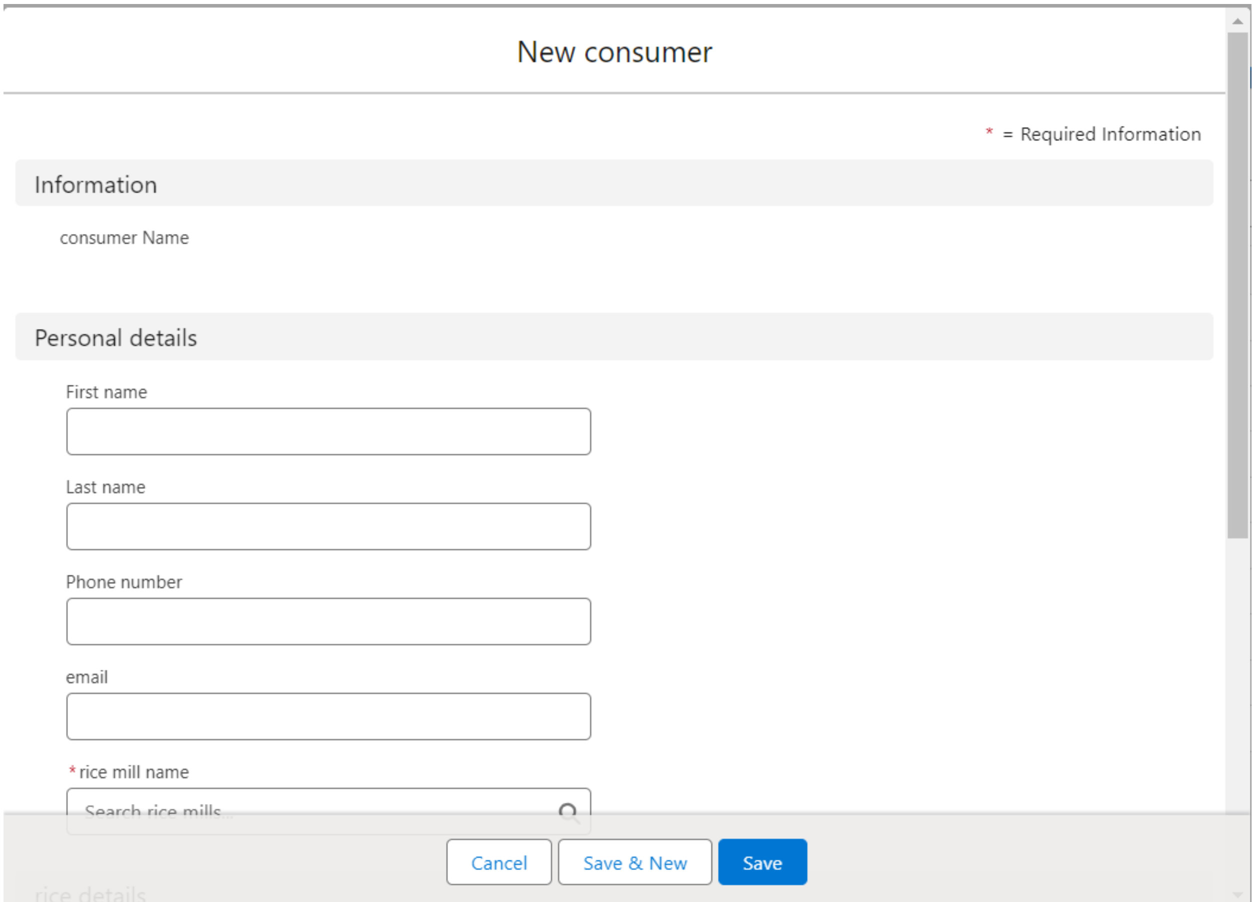



Fig 7: Page layout for Consumer

# Profiles:

Profiles in Salesforce are a powerful mechanism for managing user permissions and access control. They define what users can see and do within the Salesforce environment. Each user is assigned a profile, which determines their level of access to data, applications, and various features. Here is an overview of the profiles created for the Rice Mill CRM Application:

### Owner Profile

- **Purpose**: The Owner profile is designed for the top-level user who needs full access to all data and functionality within the application.
- **Permissions**:
  - Full Create, Read, Edit, Delete (CRED) permissions for all custom objects (Rice Mill, Consumer, Supplier, Rice Details).
  - Access to all tabs and features within the application.
  - Ability to view, create, and manage reports and dashboards.
  - High-level administrative capabilities, including managing users and assigning roles.

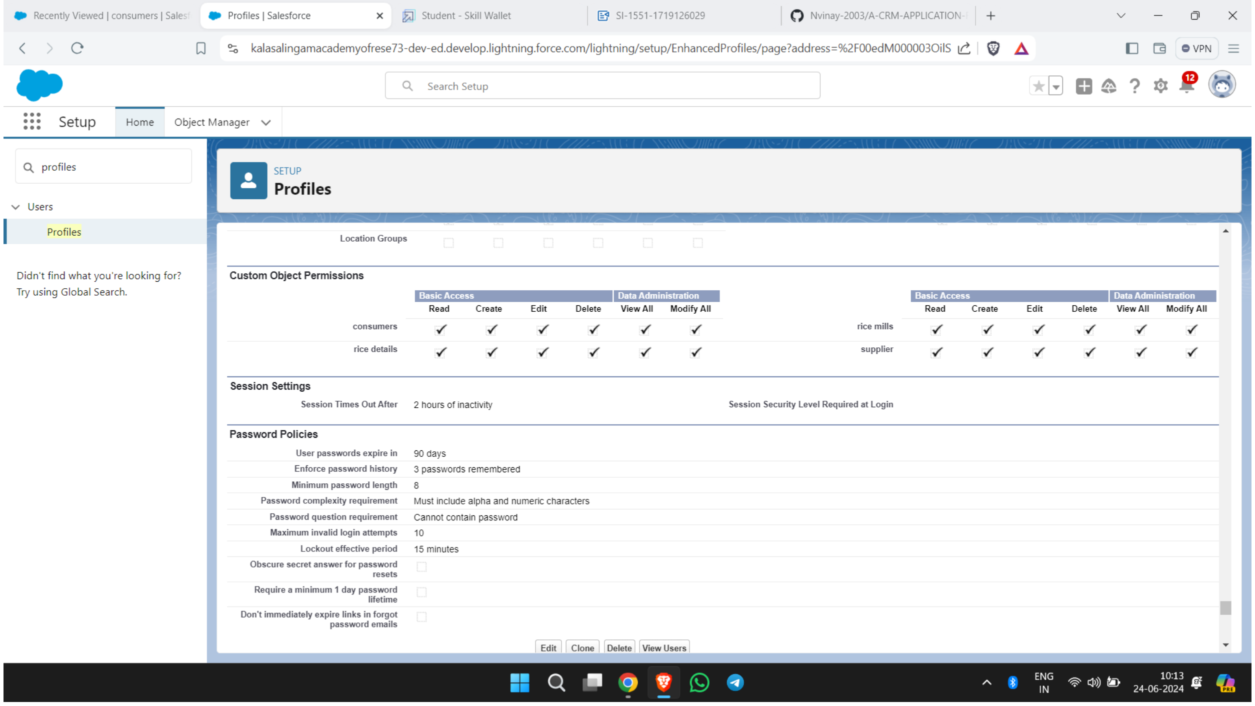



Fig 8: Custom Object permission of the Owner profile

### Employer Profile

- **Purpose**: The Employer profile is intended for users who manage operations and need comprehensive access to data but with some restrictions compared to the Owner profile.

- **Permissions**:
  - CRED permissions for most custom objects.
  - Read-only access to some administrative settings.
  - Ability to view and generate reports and dashboards.
  - Access to critical tabs and features needed for managing day-to-day operations.

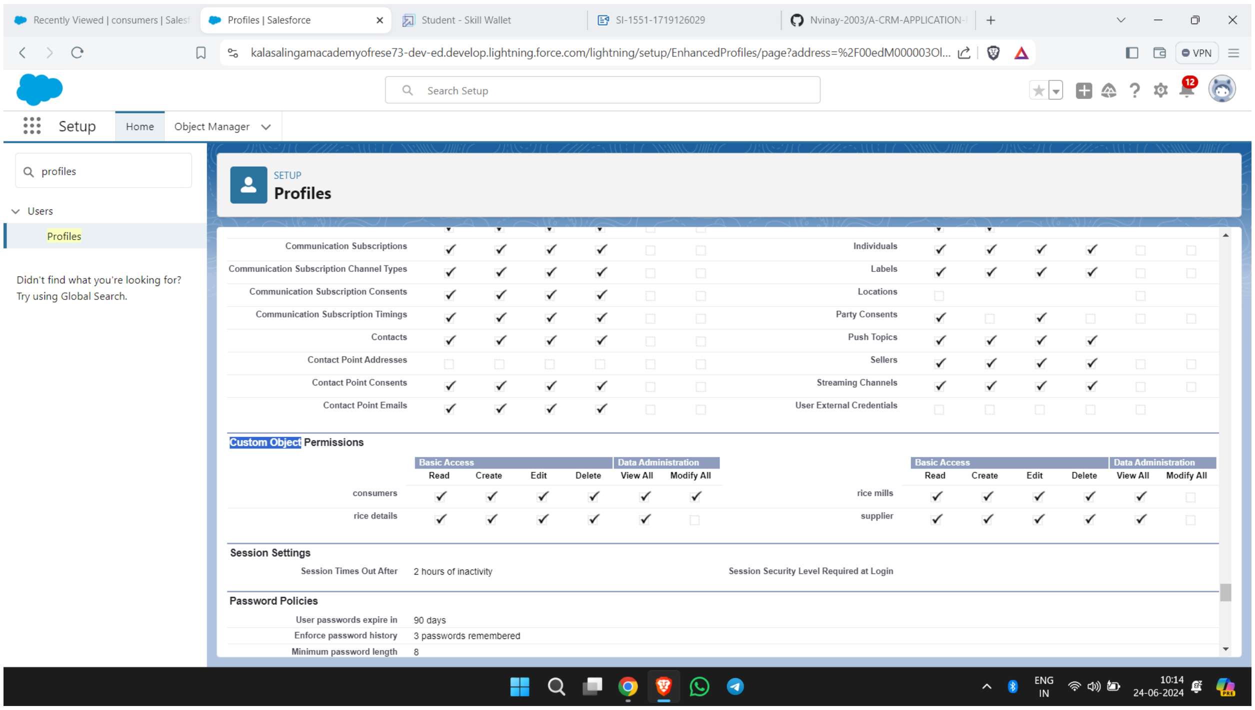


Fig 9: Custom Object permissions of Employer

**Worker Profile**

- **Purpose**: The Worker profile is for users who need access to specific data related to their tasks but with limited administrative capabilities.
- **Permissions**:
  - Read and Edit permissions for essential custom objects (e.g., Consumer, Rice Details).
  - Limited Create and Delete permissions to prevent unauthorized changes.
  - Access to necessary tabs and features for their role.
  - Ability to view but not create or manage reports and dashboards.

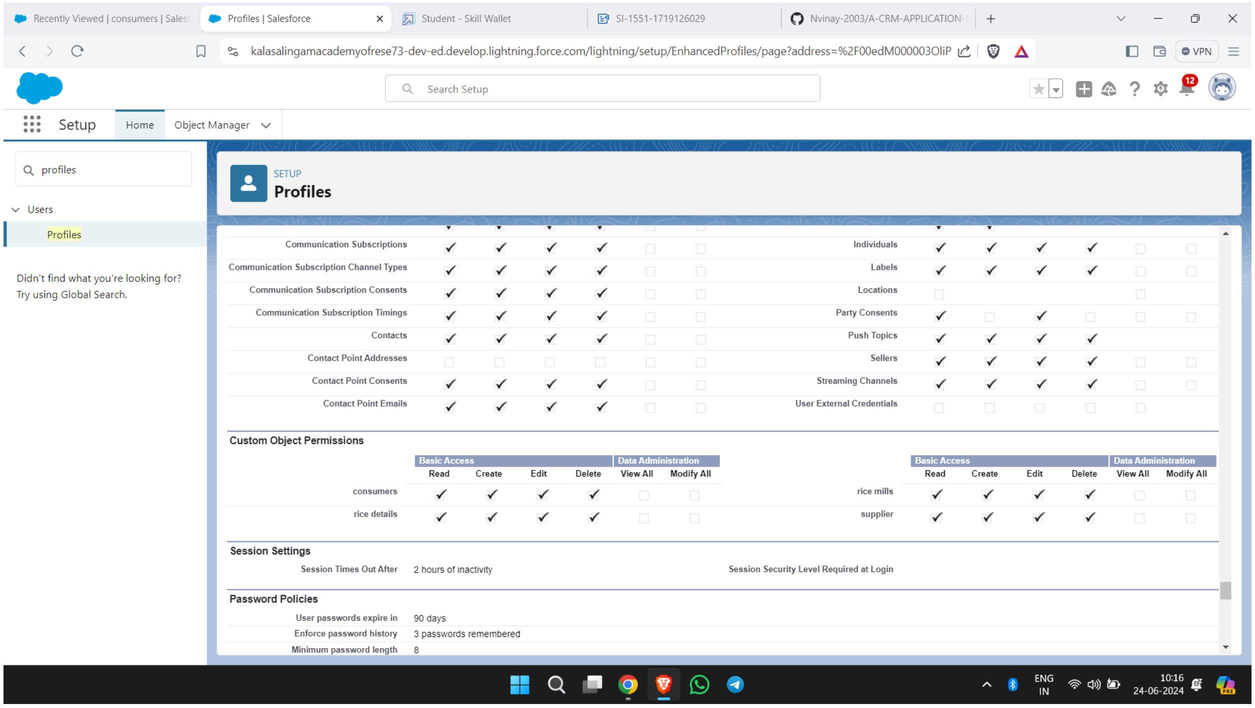


Fig 10: Custom Object permissions of worker

## Steps to Create Profiles

1. **Setup**: Log in to Salesforce and go to Setup.
2. **Profiles**: In the Quick Find box, type "Profiles" and click on Profiles.
3. **Clone Profile**: For each new profile, clone an existing profile (e.g., Standard User for Owner, Standard Platform User for Employer and Worker).
4. **Profile Name**: Enter the name for the new profile (e.g., Owner, Employer, Worker) and save.
5. **Edit Profile**:
   - **Custom App Settings**: Set the default app as the Rice Mill app.
   - **Custom Object Permissions**: Assign permissions for custom objects as per the role requirements (CRED for Owner, relevant permissions for Employer and Worker).
   - **Field-Level Security**: Configure visibility and editability of fields for each profile.
   - **Tab Settings**: Determine which tabs are visible, default on, or hidden for each profile.
   - **Administrative Permissions**: Assign necessary administrative permissions based on the role.

# Roles and Role Hierarchy in Salesforce

Roles and role hierarchy in Salesforce are essential for managing data visibility and user permissions in an organization. They define how records are shared and ensure that users can access the data they need while maintaining security and privacy. Here is an overview of the roles and role hierarchy created for the Rice Mill CRM Application:

**Roles Created**

1. **Owner Role**
    - **Purpose**: The Owner role is assigned to the highest-level user in the organization, typically responsible for overseeing all operations and having full access to data and records.
    - **Responsibilities**: The owner can view, edit, and manage all records and has administrative privileges across the application.
2. **Employer Role**
    - **Purpose**: The Employer role is assigned to users who manage various departments or teams within the organization. They report directly to the Owner.
    - **Responsibilities**: Employers can view and manage records related to their teams and have significant access to data to perform their managerial duties.
3. **Worker Role**
    - **Purpose**: The Worker role is assigned to employees who perform day-to-day tasks and operations. They report to Employers.
    - **Responsibilities**: Workers have access to records and data necessary for their job functions but with limited permissions compared to Employers and Owners.

## Role Hierarchy

The role hierarchy in Salesforce determines the level of access users have to records owned by other users. It allows for data visibility based on the user's position within the hierarchy. Here's how the role hierarchy is structured in the Rice Mill CRM Application:

1. **CEO**
    - **Owner Role**
        - **Employer Role**
            - **Worker Role**

## Steps to Create Roles and Role Hierarchy

1. **Setup**: Log in to Salesforce and go to Setup.
2. **Roles**: In the Quick Find box, type "Roles" and click on "Roles" under "Users."
3. **Set Up Roles**: Click on "Set Up Roles."
4. **Add Role**:
    - Click on "Expand All" to view the role hierarchy.
    - Click on "Add Role" under the CEO to create the Owner role.
    - Fill in the Role Label as "Owner" and the Role Name will be auto-populated. Click

Save.

- Click on "Add Role" under the Owner role to create the Employer role.
- Fill in the Role Label as "Employer" and the Role Name will be auto-populated. Click Save.
- Click on "Add Role" under the Employer role to create the Worker role.
- Fill in the Role Label as "Worker" and the Role Name will be auto-populated. Click Save.

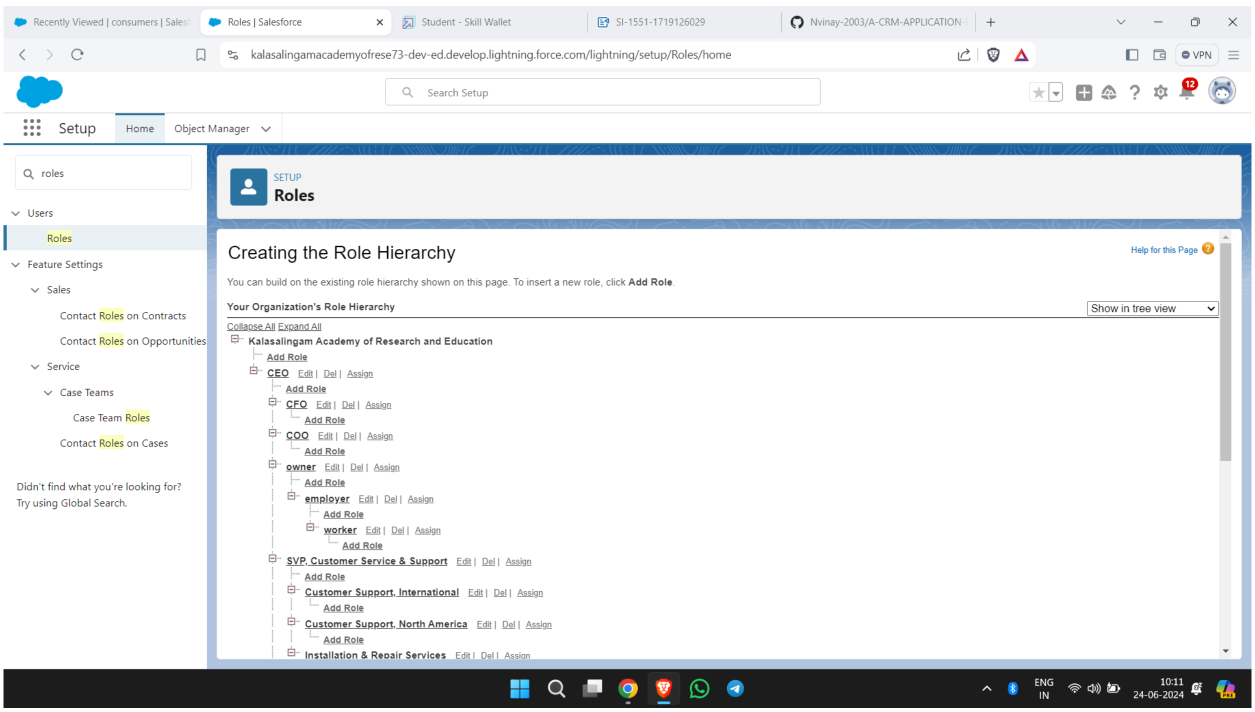



Fig 11: Roles Hierarchy of Owner,Employer,Worker

# Users: Assigning Roles and Profiles

In Salesforce, assigning roles and profiles to users is crucial for managing access, permissions, and data visibility. Roles determine the hierarchy and data access level, while profiles control the specific permissions a user has within the Salesforce environment. Here is an overview of the users created for the Rice Mill CRM Application and how their roles and profiles were assigned:

### Users Created

1. **Vicky Y**
   - **Role**: Owner
   - **Profile**: Owner
2. **Ram Ram**
   - **Role**: Employer
   - **Profile**: Employer
3. **Ragu Raj**
   - **Role**: Worker
   - **Profile**: Worker

## Assigning Roles and Profiles

### Steps to Create and Assign Users

1. **Create New User - Vicky Y (Owner Role)**
   - Go to Setup.
   - In the Quick Find box, type "Users" and select "Users."
   - Click on "New User."
   - Fill in the user details:
     - **First Name**: Vicky
     - **Last Name**: Y
     - **Alias**: Vicky
     - **Email**: [Personal Email]
     - **Username**: text@text.text
     - **Nickname**: Vicky
     - **Role**: Owner
     - **User License**: Salesforce
     - **Profile**: Owner
   - Click "Save."

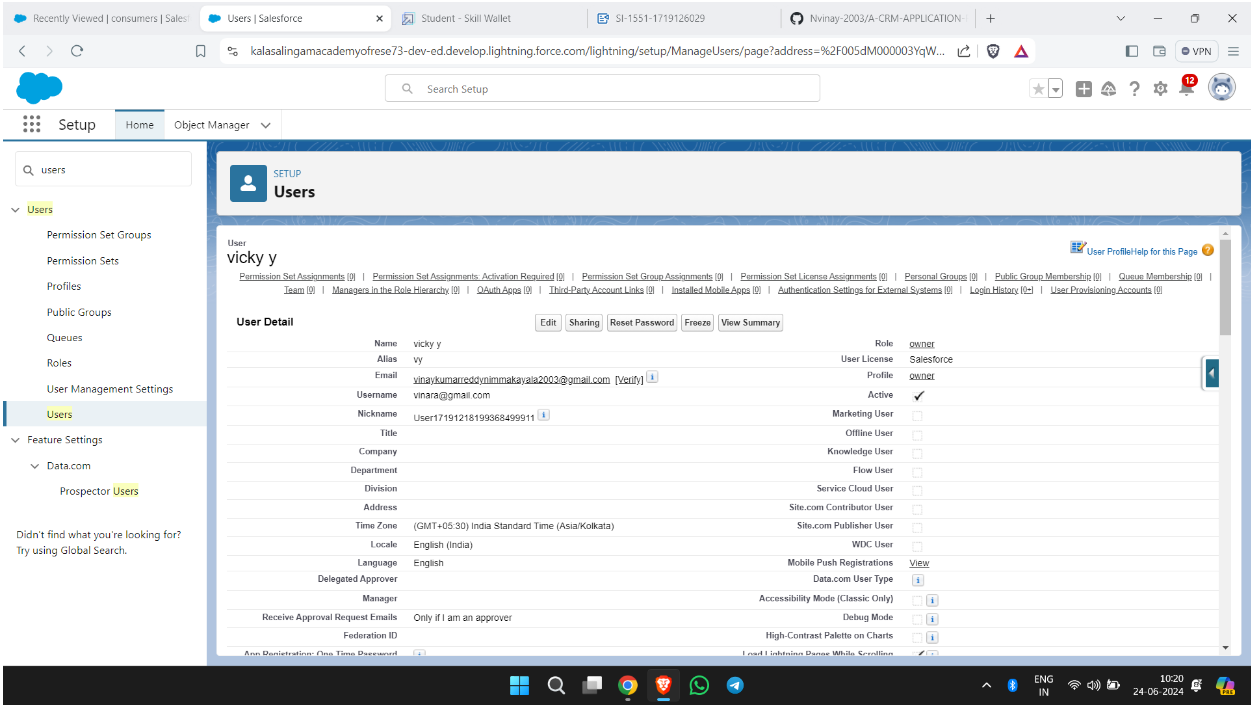


Fig 12: Owner User

2. **Create New User - Ram Ram (Employer Role)**
    - Go to Setup.
    - In the Quick Find box, type "Users" and select "Users."
    - Click on "New User."
    - Fill in the user details:
        - **First Name**: Ram
        - **Last Name**: Ram
        - **Alias**: Ram
        - **Email**: [Personal Email]
        - **Username**: text@text.text
        - **Nickname**: Ram
        - **Role**: Employer
        - **User License**: Salesforce Platform
        - **Profile**: Employer
    - Click "Save."

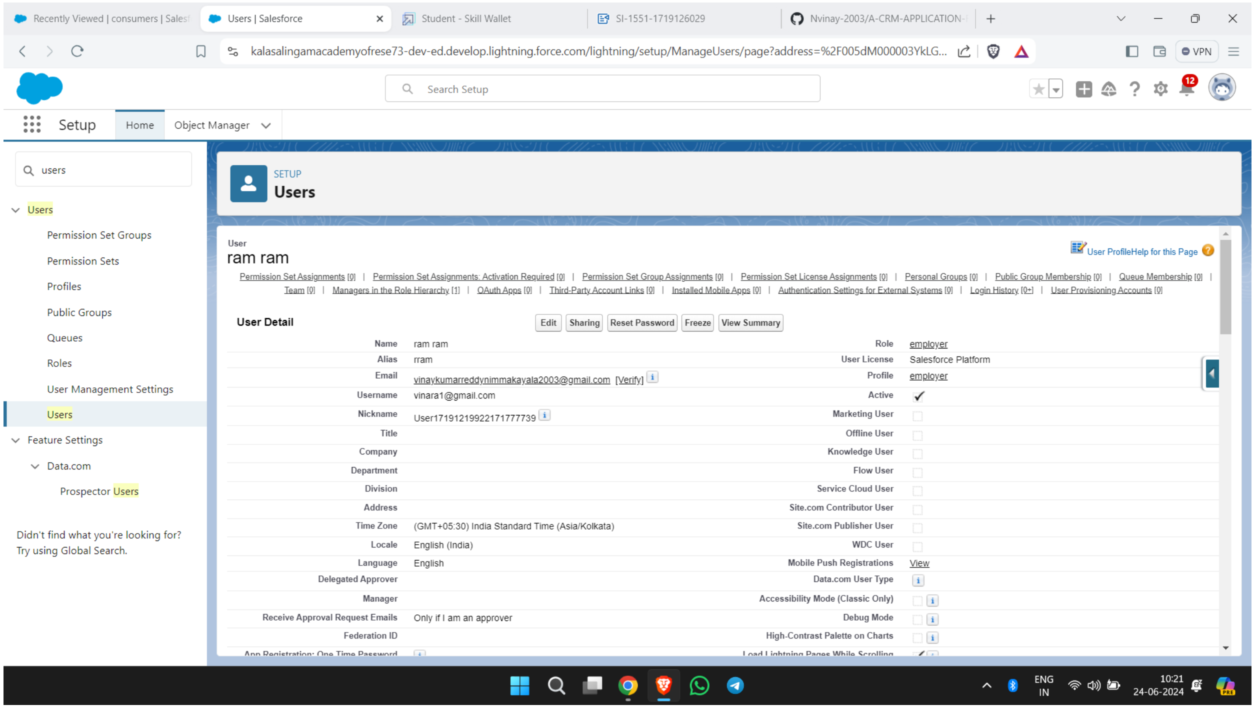


Fig 13: User Employer

3. **Create New User - Ragu Raj (Worker Role)**
   - Go to Setup.
   - In the Quick Find box, type "Users" and select "Users."
   - Click on "New User."
   - Fill in the user details:
     - **First Name**: Ragu
     - **Last Name**: Raj
     - **Alias**: Ragu
     - **Email**: [Personal Email]
     - **Username**: text@text.text
     - **Nickname**: Ragu
     - **Role**: Worker
     - **User License**: Salesforce Platform
     - **Profile**: Worker
   - Click "Save."

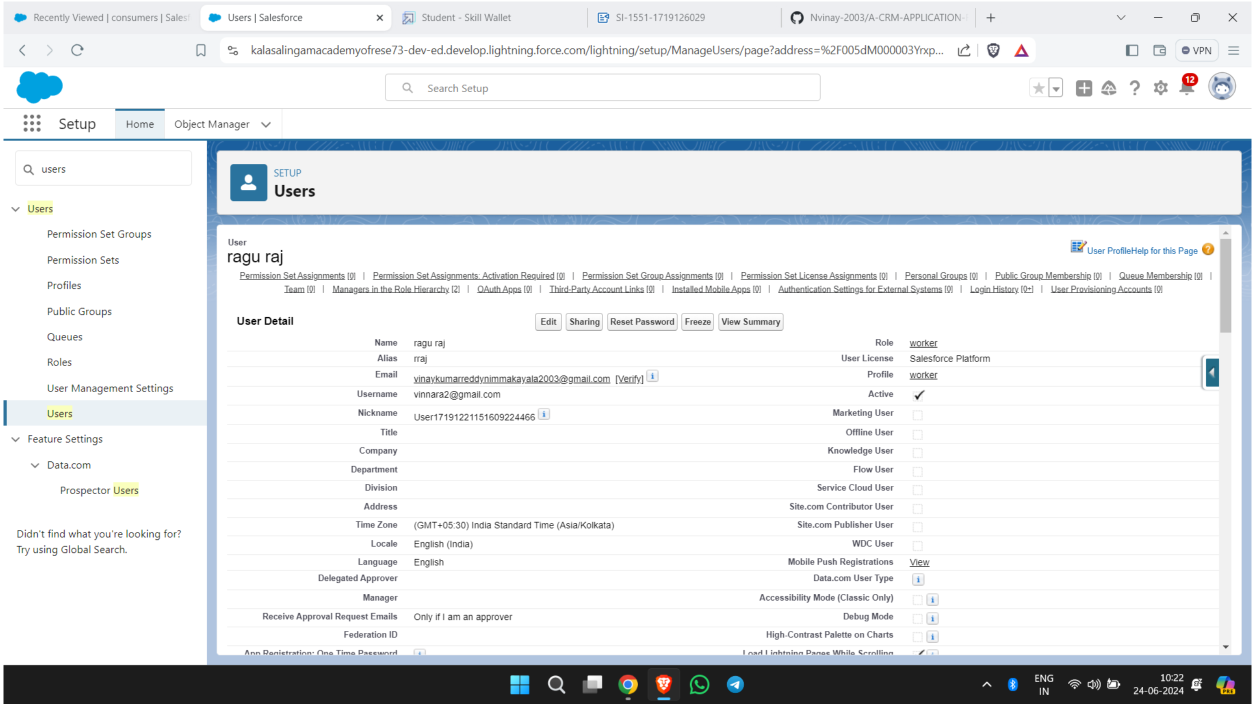


Fig 14: User Worker

# Permission Sets:

A permission set is a collection of settings and permissions that give users access to various tools and functions. Permission sets extend users' functional access without changing their profiles and are the recommended way to manage your users' permissions.

Here we are going to Sharing Settings where we are going to make rice mill and supplier to "Public - Read only" which are by default "Public Read/Write" Which can make these such that all the users will be able to see the information but they can't edit.

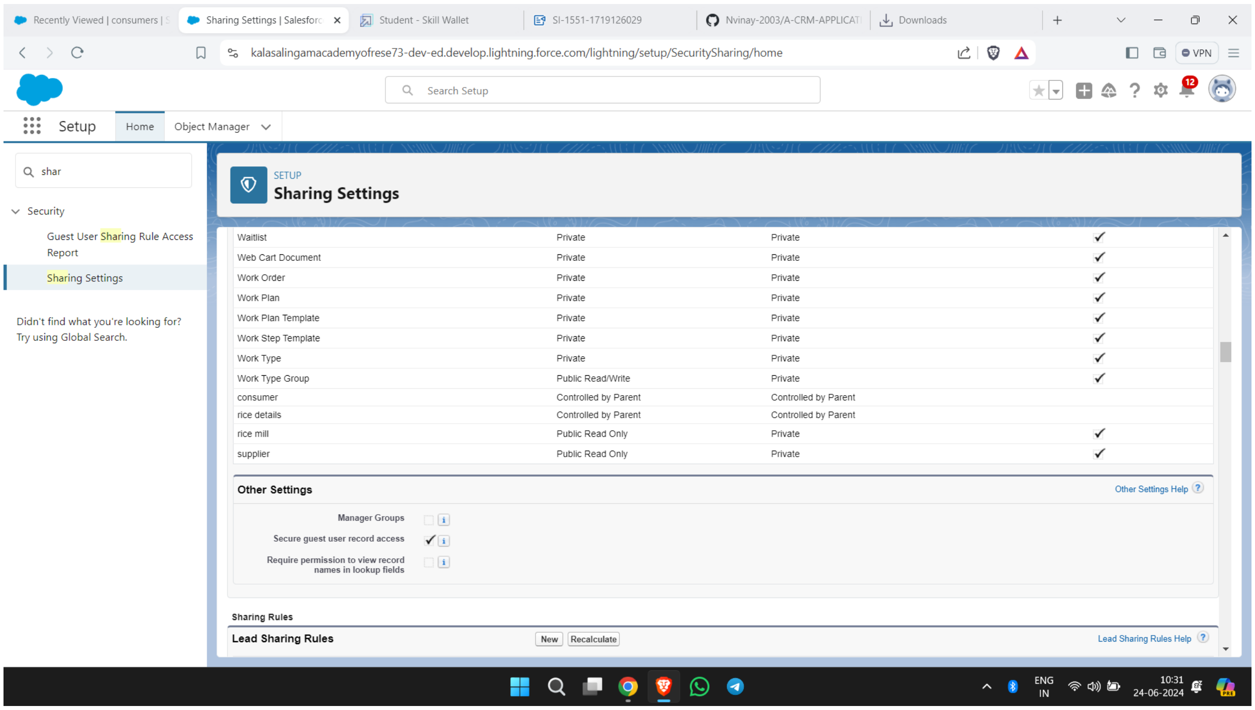



Fig 15: OWD of the Custom Objects

# Reports :

Reports in Salesforce are a powerful tool for analyzing and presenting data stored within your CRM. They allow users to summarize, filter, and group data in meaningful ways to derive insights and make informed decisions. Here's a detailed overview of reports, including their creation, customization, and benefits.

**Example: Creating a Rice Mill Report**

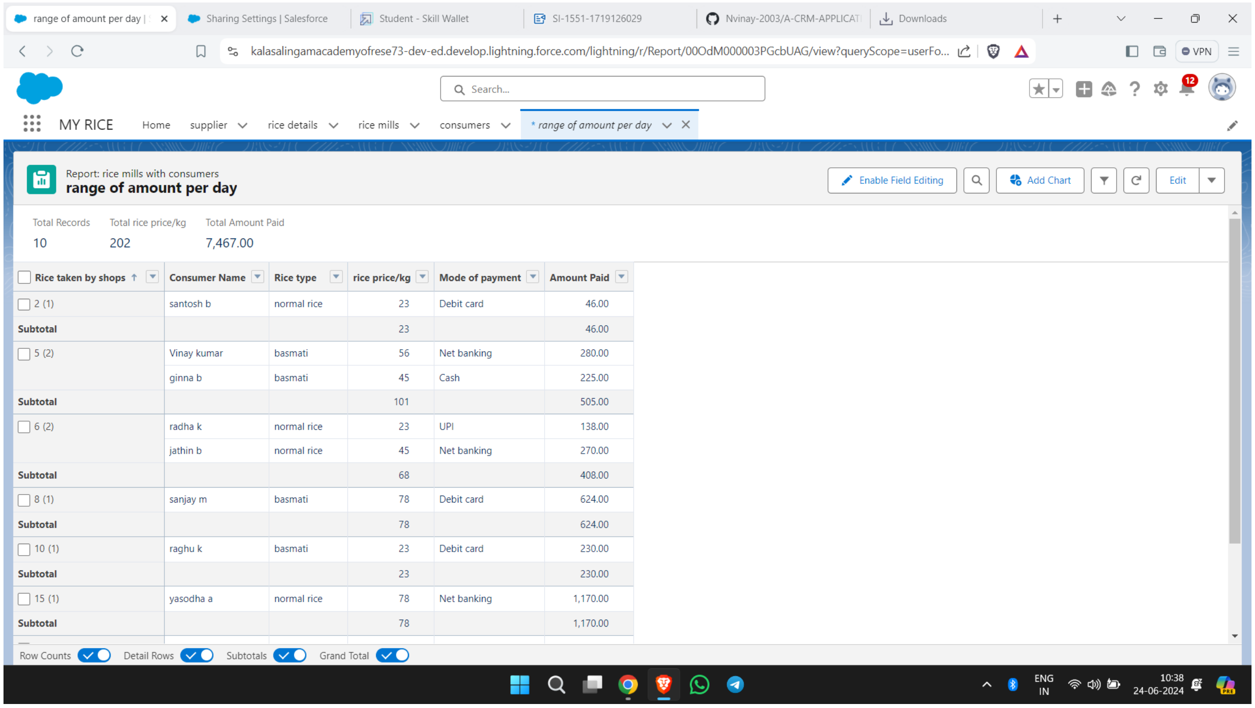
**Creating a report on rice mills with consumer data:**

1. **Navigate to Reports**:
    - Go to the app and click on the "Reports" tab.
2. **Select Report Type**:
    - Choose "Rice Mill with Consumers" as the report type.
3. **Add Fields**:
    - In the column section, add:
        - Consumer Name
        - Rice Type
        - Rice Price/Kg
        - Mode of Payment
        - Amount Paid
4. **Group Rows**:
    - Group the report by "Rice Taken by Shops".
5. **Run and Save**:
    - Click "Save and Run" and name the report "Range of Amount Per Day".

**Sharing Reports**

**Sharing reports with specific users:**

1. **Subscribe to the Report**:
    - Click the edit dropdown and select the "Subscribe" option.
2. **Set Subscription Preferences**:
    - Choose to run the report as "another person" and select the recipient's email.
3. **Save the Subscription**:
    - Save the settings to ensure the owner receives daily email notifications of the rice mill report.




| Rice taken by shops | Consumer Name | Rice type | rice price/kg | Mode of payment | Amount Paid |
|---|---|---|---|---|---|
| 2 (1) | santosh b | normal rice | 23 | Debit card | 46.00 |
| Subtotal | | | 23 | | 46.00 |
| 5 (2) | Vinay kumar | basmati | 56 | Net banking | 280.00 |
| | ginna b | basmati | 45 | Cash | 225.00 |
| Subtotal | | | 101 | | 505.00 |
| 6 (2) | radha k | normal rice | 23 | UPI | 138.00 |
| | jathin b | normal rice | 45 | Net banking | 270.00 |
| Subtotal | | | 68 | | 408.00 |
| 8 (1) | sanjay m | basmati | 78 | Debit card | 624.00 |
| Subtotal | | | 78 | | 624.00 |
| 10 (1) | raghu k | basmati | 23 | Debit card | 230.00 |
| Subtotal | | | 23 | | 230.00 |
| 15 (1) | yasodha a | normal rice | 78 | Net banking | 1,170.00 |
| Subtotal | | | 78 | | 1,170.00 |

Fig 16: Range of Amount Per day Report

# Dashboards in Salesforce

Dashboards in Salesforce provide a visual representation of key metrics and trends for your business data. They allow users to monitor real-time performance, analyze results, and make informed decisions based on graphical data presentations. Dashboards can display data from multiple reports, offering a comprehensive view of business operations.

**Creating a Dashboard**

To create a dashboard in Salesforce:

1. **Navigate to the Dashboards Tab**:
    - Click on the app launcher and select the "Dashboards" tab.
2. **Create a New Dashboard Folder**:
    - Click "New Folder" and give the folder a label such as “Amount Data Dashboard”.
    - The folder unique name will be auto-populated.
    - Click save.
3. **Create the Dashboard**:
    - Click the "New Dashboard" button.
    - Give the dashboard a name and select the folder created in the previous step.
    - Click "Create".
4. **Add Components**:
    - Click "Add Component" to start adding components to your dashboard.
    - Select the report you want to use for the component and click "Select".
5. **Customize the Component**:
    - Choose the display type (e.g., vertical bar chart, donut chart).
    - Set the X-axis, Y-axis, and other component properties.
    - Example settings:
        - **Vertical Bar Chart**:
            - X-axis: Rice taken by shops
            - Y-axis: Sum of amount
            - Y-axis range: Automatic
            - Sort by: Rice taken by shops
            - Component theme: Dark
        - **Donut Chart**:
            - Sort by: Sum of amount
            - Title: Range of amount per day
            - Component theme: Dark
6. **Save and Finish**:
    - Click "Add" to add the component to the dashboard.
    - After adding all desired components, click "Save" and then "Done" to finalize the

dashboard.

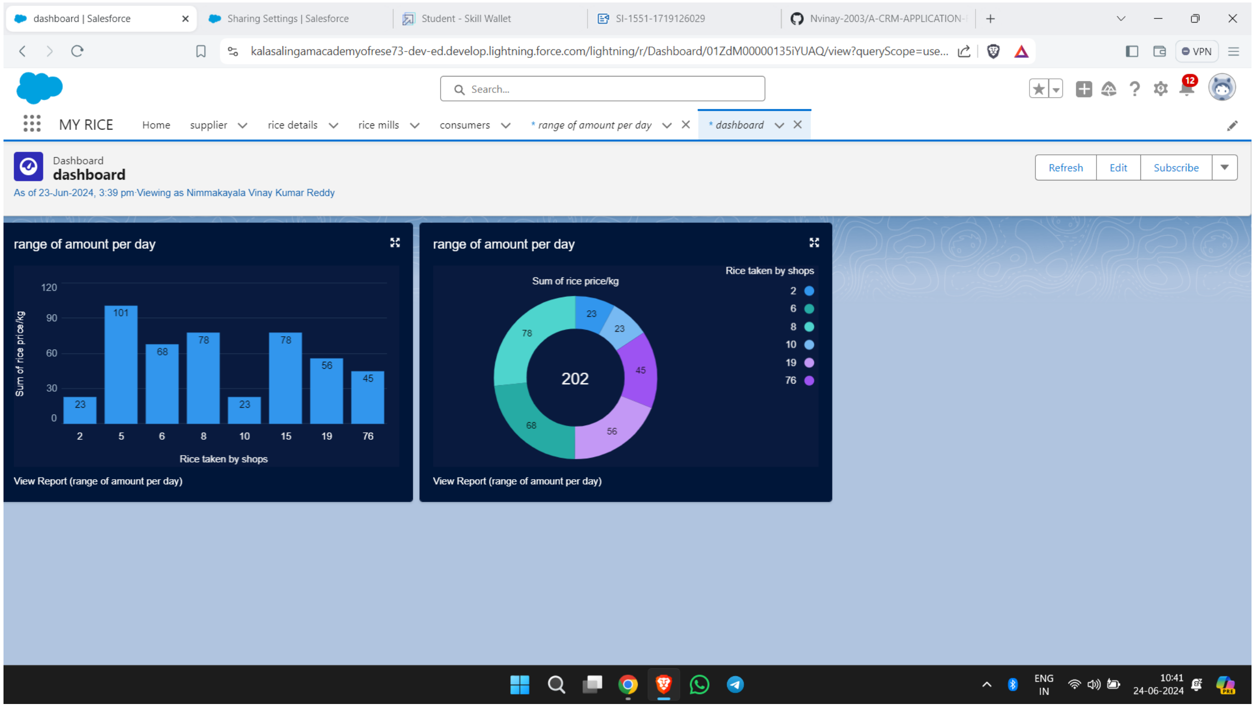



Fig 17: Dashboard

# Final Output of Application:

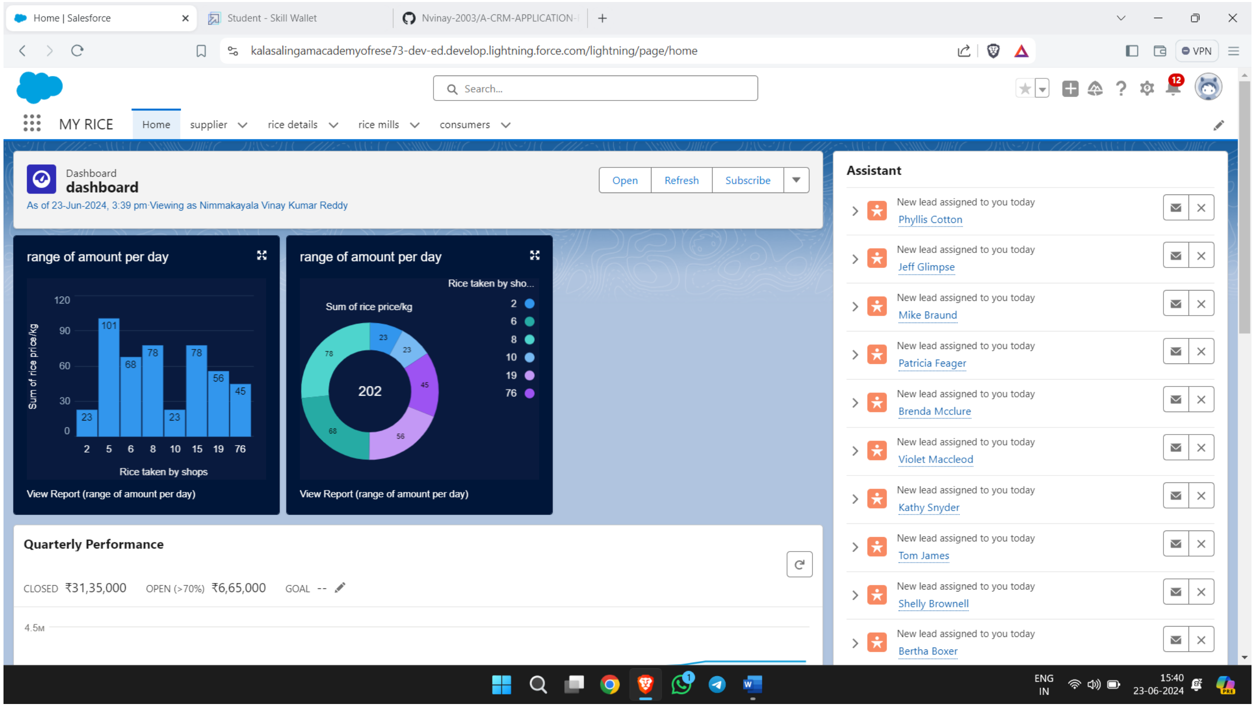
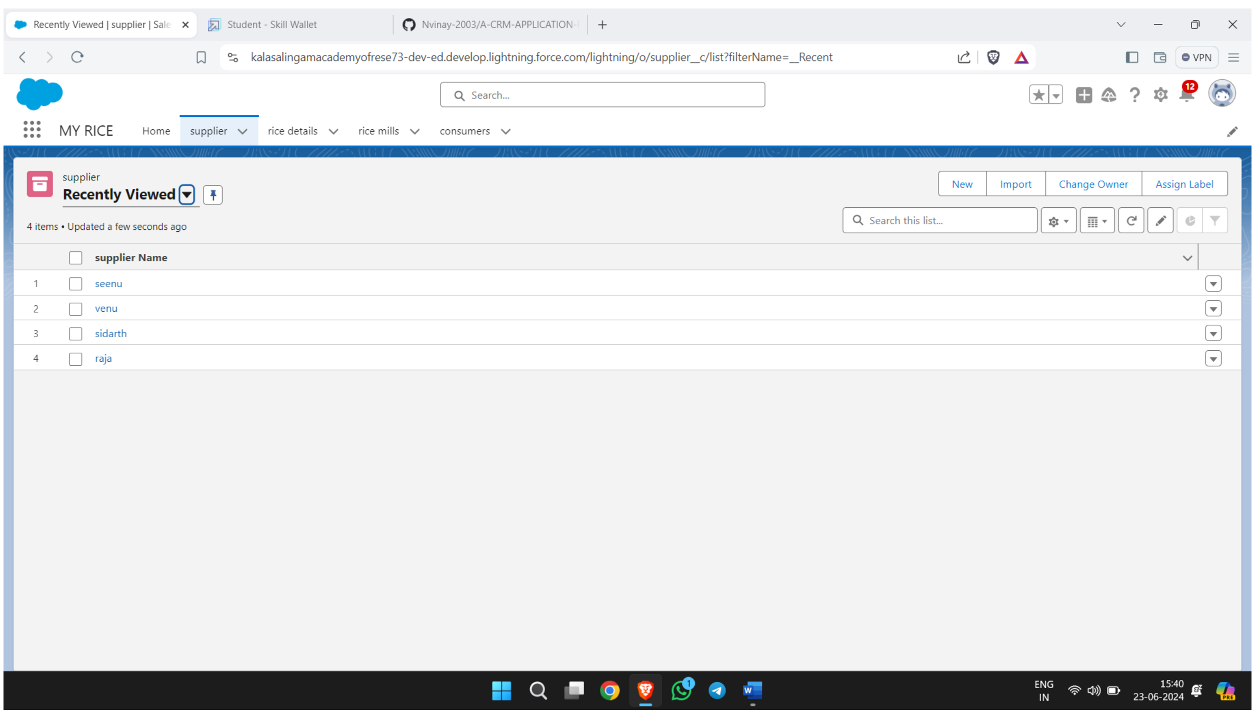



Fig 18.1: Home Page



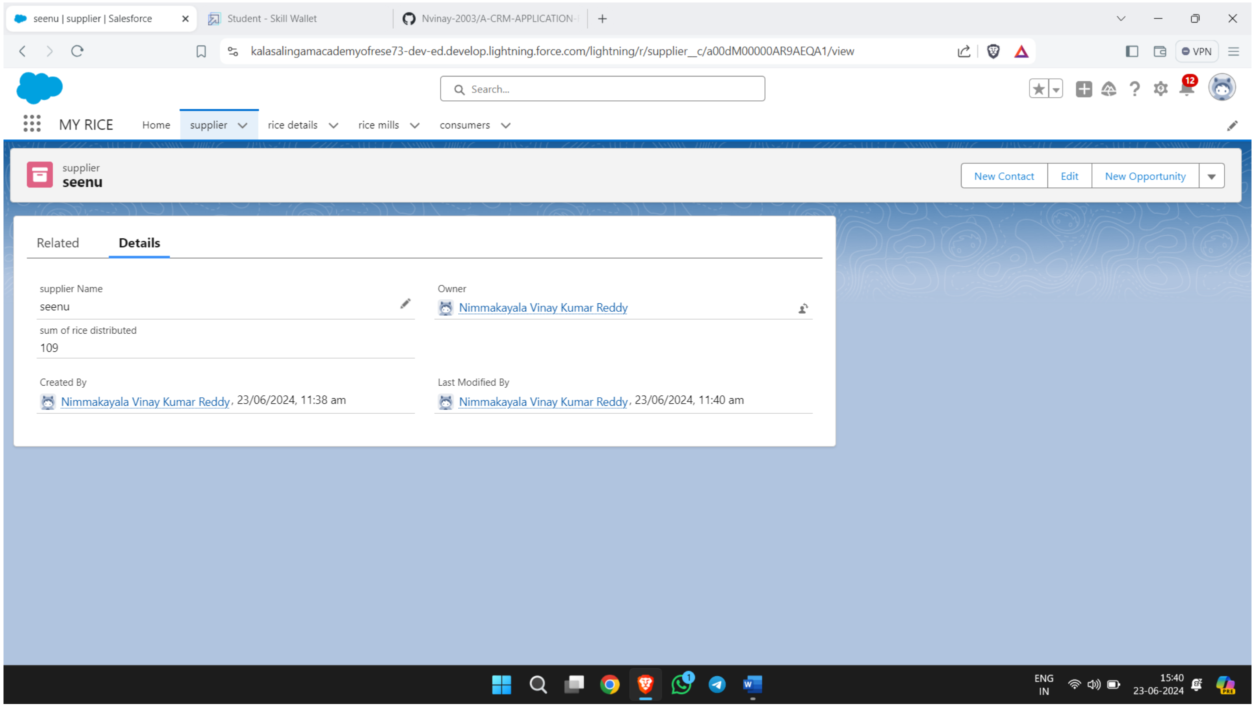
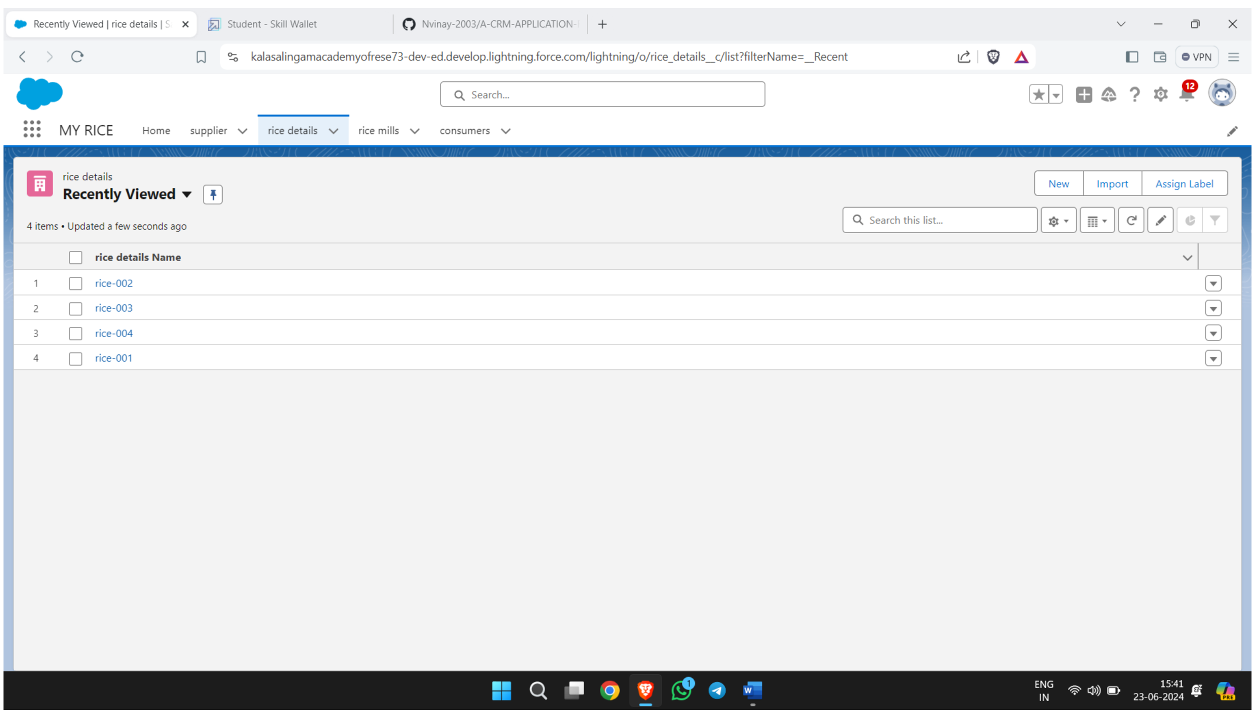



Fig 18.2: Supplier



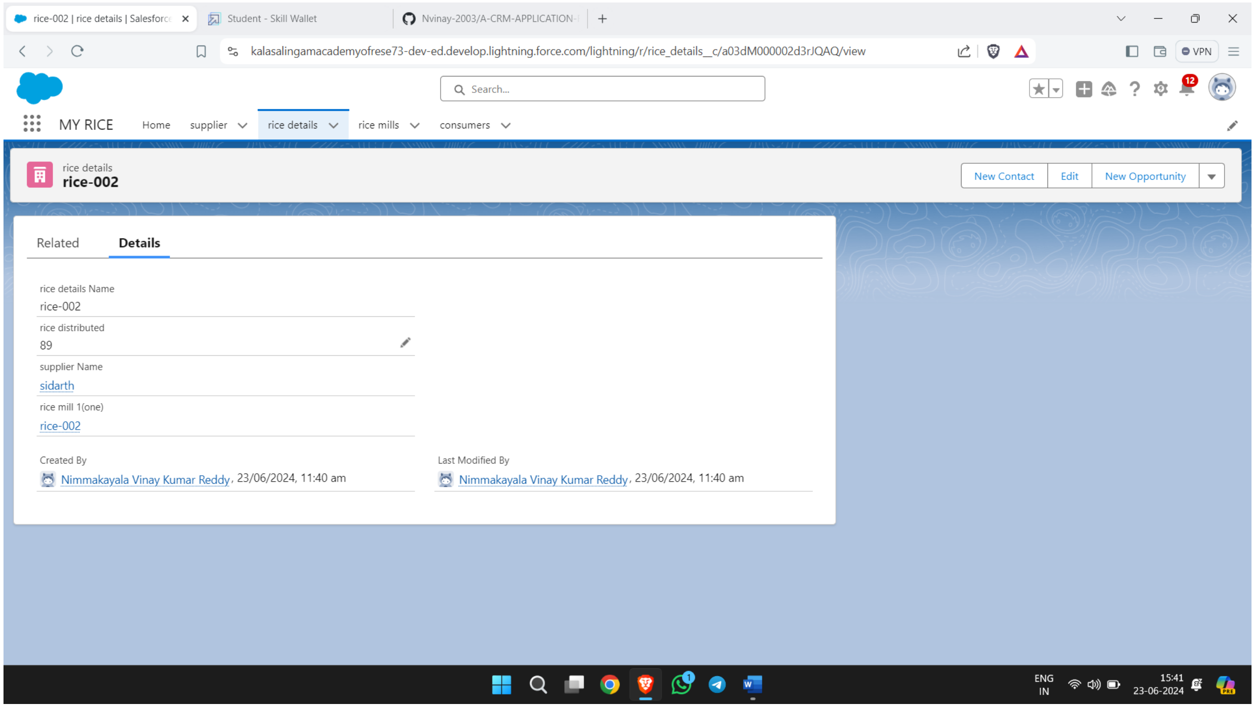
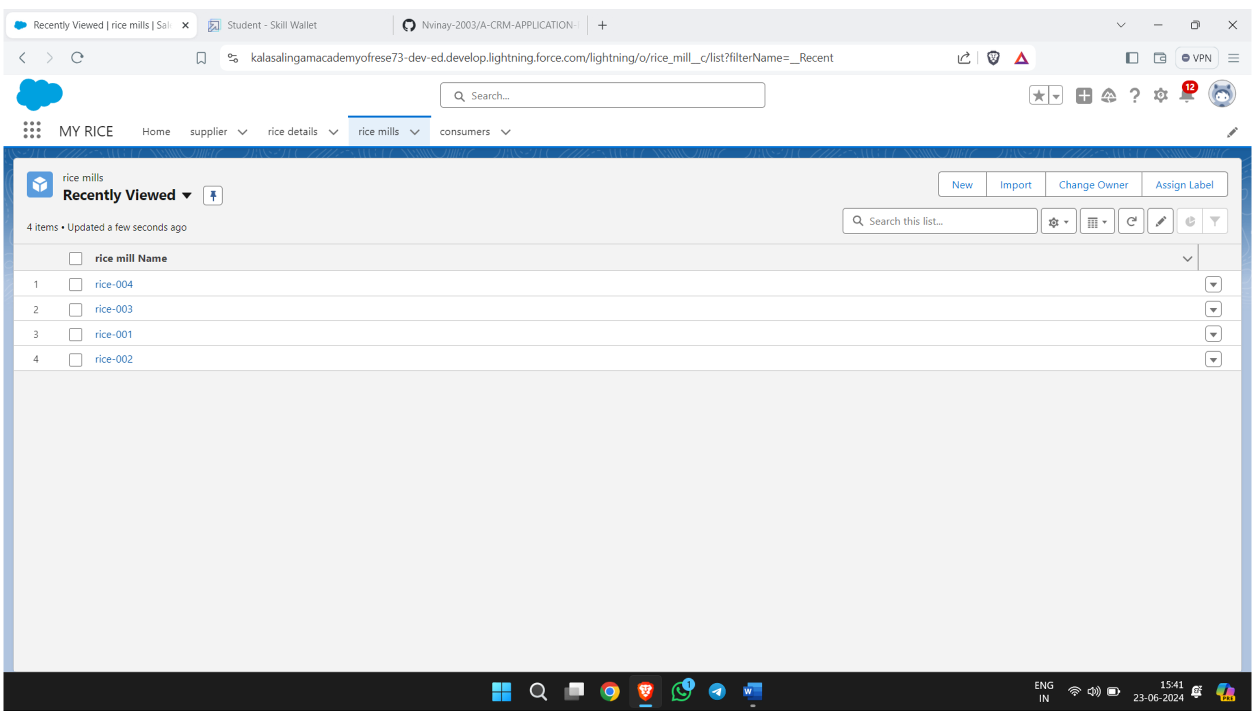



Fig 18.3: Rice Details



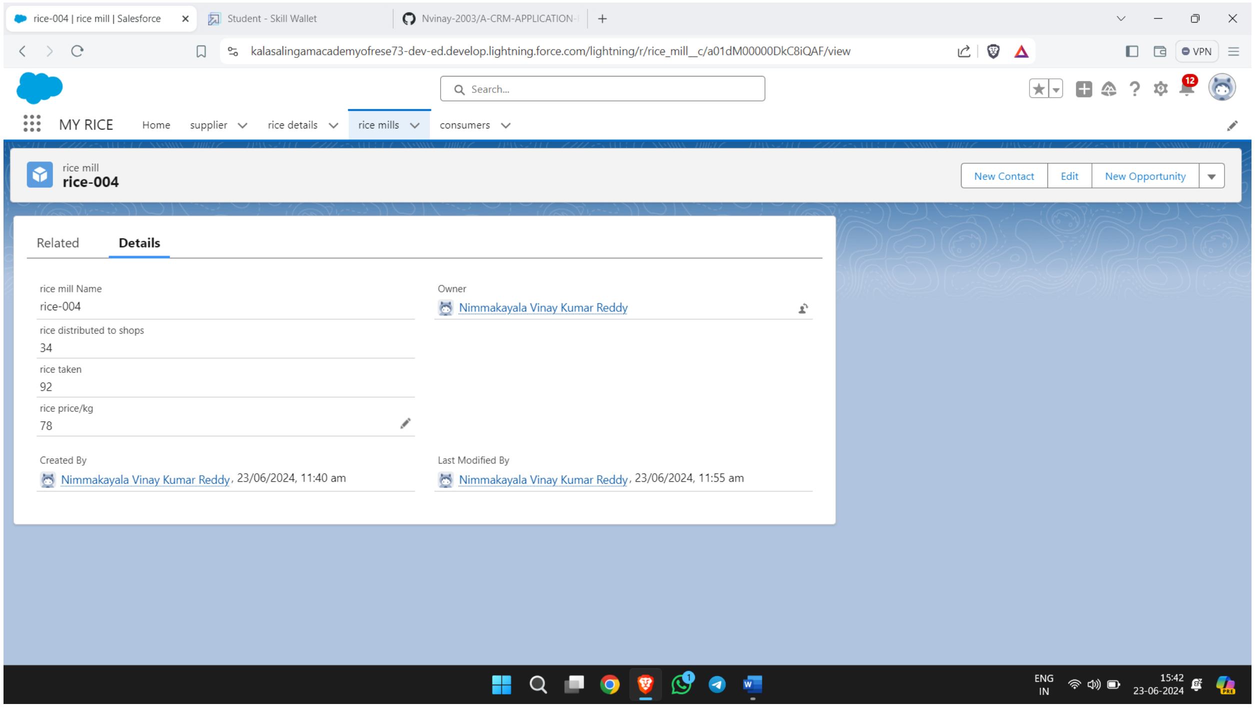
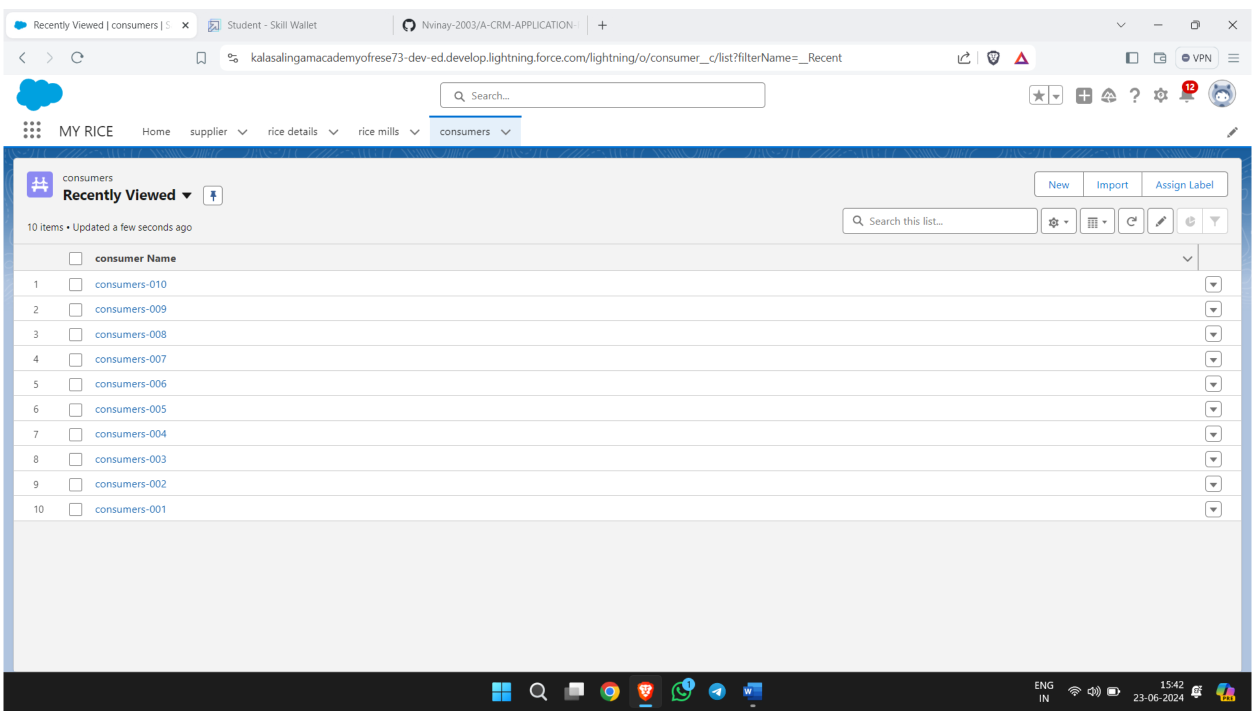



Fig 18.4 : Rice Mills



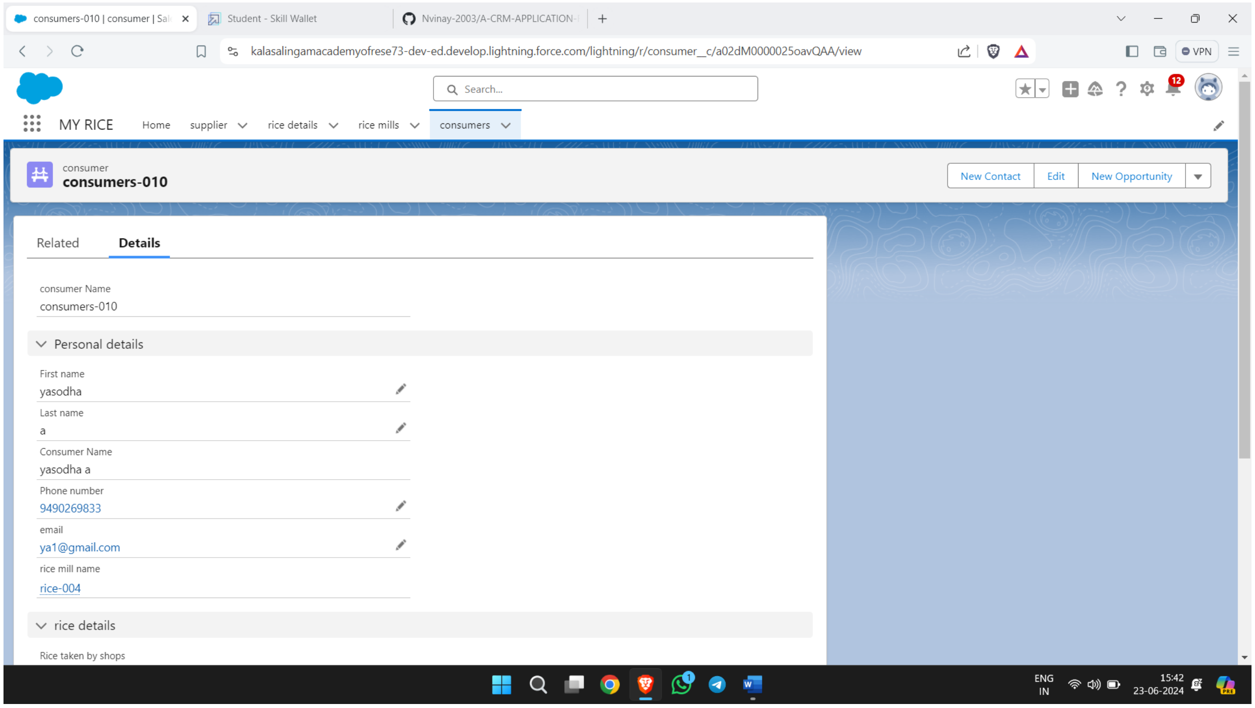



Fig 18.5: Consumers