**Project Documentation: Salesforce Developer Org for Rice Mill Management System**

**Project Overview**

This project involves setting up a **Salesforce Developer Org** and building a custom application for managing rice mills, suppliers, consumers, and rice details. The system is designed to track rice distribution, consumer purchases, and manage relationships between rice mills and suppliers. It also includes automation for sending notifications to consumers and generating reports and dashboards.

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1. **Salesforce Developer Org Setup**

2. Go to [Salesforce Signup](#).

3. Fill in the details:

   - **First Name** & **Last Name**

   - **Email**

   - **Role**: Developer

   - **Company**: Your College Name

   - **Country**: India

   - **Postal Code**: Your Pin Code

   - **Username**: username@companyname.com

3. After signing up, verify your account via the email sent to the provided address.

## 2. Custom Objects Creation

### 2.1 Supplier Object

1. From the Setup page, navigate to **Object Manager**.

2. Click **Create** > **Custom Object**.

3. Enter the following details:

   - **Label**: Supplier

   - **Plural Label**: Suppliers

   - **Record Name**: Supplier Name

   - **Data Type**: Text

4. Enable the options for **Reports**, **Track Field History**, and **Allow Search**.

5. Click **Save**.

### 2.2 Rice Mill Object

1. From the **Object Manager**, click **Create** > **Custom Object**.

2. Enter the following details:

   - **Label**: Rice Mill

   - **Plural Label**: Rice Mills

   - **Record Name**: Auto Number

   - **Display Format**: rice-{000}

   - **Starting Number**: 1

3. Enable **Reports**, **Track Field History**, and **Allow Search**.

4. Click **Save**.

### 2.3 Consumer Object

1. Follow the same steps as above for creating the **Consumer** object.

2. Use the following display format:

   - **Display Format**: consumers-{000}

   - **Starting Number**: 1

### 2.4 Rice Details Object

1. Create **Rice Details** object following the same process.

2. Use:

   - **Display Format**: rice-{000}

   - **Starting Number**: 1

**3. Tabs Creation**

**3.1 Create a Tab for Supplier**

1. From the Setup page, type "Tabs" in the Quick Find bar.

2. Click on **Tabs** > **New** under Custom Object Tabs.

3. Select **Supplier**, choose a **Tab Style**, and click **Next**.

4. Uncheck the box for adding the tab to the Custom App, but ensure the box for "Append tab to users' existing personal customizations" is checked.

5. Click **Save**.

**3.2 Create Tabs for Other Objects**

Repeat the above steps for the remaining objects:

- Rice Mill
- Consumer
- Rice Details

**4.Creating a Lightning App**

1. From the Setup page, search for **App Manager**.

2. Click on **App Manager** > **New Lightning App**.

3. Fill in the app name as MY RICE and proceed with the default settings.

4. Upload a relevant image for the app.

5. Add **Supplier**, **Rice Mill**, **Consumer**, and **Rice Details** as Navigation Items.

6. Assign the **System Administrator** profile to the app.

**5. Creating Junction and Master-Detail Relationships**

**5.1 Junction Object Between Supplier & Rice Mill**

1. Navigate to the **Rice Details** object.

2. Create a new **Master-Detail** relationship with the **Supplier** object.

3. Label the field as "Supplier Name" and save.

4. Repeat the process to create another **Master-Detail** relationship with the **Rice Mill** object.

**5.2 Master-Detail Relationship Between Consumer & Rice Mill**

1. Navigate to the **Consumer** object.

2. Create a **Master-Detail** relationship with the **Rice Mill** object.

3. Label the field as "Rice Mill Name" and save.

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**6. Roll-up Summary Fields**

**6.1 Supplier Object**

1.  Navigate to the **Supplier** object.

2.  Create a **Roll-up Summary** field:

    - **Label**: Sum of Rice Distributed

    - **Summarized Object**: Rice Details

    - **Roll-up Type**: Sum

    - **Field to Aggregate**: Rice Distributed

**6.2 Rice Mill Object**

1.  Follow the same steps for the **Rice Mill** object.

2.  Create a Roll-up Summary field:

    - **Label**: Rice Distributed to Shops

    - **Summarized Object**: Rice Details

    - **Roll-up Type**: Sum

    - **Field to Aggregate**: Rice Distributed

7. **Cross-Object Formula Fields**

**Formula Field in Consumer Object**

1. Create a **Formula** field in the Consumer object:

    ▪ **Label**: Amount Paid

    ▪ **Formula**: rice_taken_by_shops__c * rice_mill_name__r.rice_price_kg__c

2. Create another formula field:

    ▪ **Label**: Consumer Name

    ▪ **Formula**: First_Name__c + ' ' + Last_Name__c

**8.Validation Rules**

**Validation for Phone Number and Email**

1. In the **Consumer** object, create a new **Validation Rule**.

2. Rule Name: Phonenumberoremailblankrule

3. Formula: OR(ISBLANK(phone_number__c), ISBLANK(email__c))

4. Error Message: "Please fill in your phone number."

5. Error Location: Top of the page.

**9. Page Layouts and Profiles**

**9.1 Page Layout for Consumer Object**

1. Create a new **Page Layout** named **Consumer Layout**.

2. Add the following sections and fields:

   - **Personal Details**: First Name, Last Name, Consumer Name, Phone Number, Email, Rice Mill Name

   - **Rice Details**: Rice Taken by Shop, Rice Type

   - **Receipt Details**: Mode of Payment, Amount Paid

**10. User Roles and Permissions**

**10.1 Creating Roles**

1. Create roles for **Owner**, **Employer**, and **Worker** under the **CEO** role.

**10.2 Creating Users**

1. Create users for the roles of **Owner**, **Employer**, and **Worker** with the corresponding profiles.

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**11. Reports and Dashboards**

**11.1 Creating a Report**

1. Create a report titled **Range of Amount per Day** for **Rice Mill with Consumers**.

2. Group rows by **Rice Taken by Shops** and select columns for **Consumer Name**, **Rice Type**, **Rice Price/kg**, **Mode of Payment**, and **Amount Paid**.

3. Save the report.

**11.2 Creating Dashboards**

1. Create a dashboard folder called **Amount Data Dashboard**.

2. Create a dashboard using **Vertical Bar Chart** and **Donut Chart** components to display **Rice Taken by Shops** and **Sum of Amount**.

## 12. Apex Classes and Triggers

### 12.1 Apex Class: ConsumerRecord

apex

Copy code

```
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.First_Name__c + ',\n\nWelcome to MY RICE!...');
            Messaging.sendEmail(new List<Messaging.SingleEmailMessage>{email});
        }
    }
}
```

### 12.2 Apex Trigger: consumerTrigger

apex

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

This documentation outlines the steps and processes for setting up a Salesforce-based rice mill management system.