RENTWARE

Project Documentation: CRM Application for Laptop Rentals

Category: Salesforce
Skills Required: Salesforce Developer

Project Overview

The **CRM Application for Laptop Rentals** is designed to streamline the process of renting laptops to customers. The application utilizes Salesforce's robust CRM capabilities to enhance customer interactions, optimize store operations, and increase overall efficiency. A key feature of the application is the integration of email communication, enabling effective engagement with potential and existing customers.

Features and Functionalities

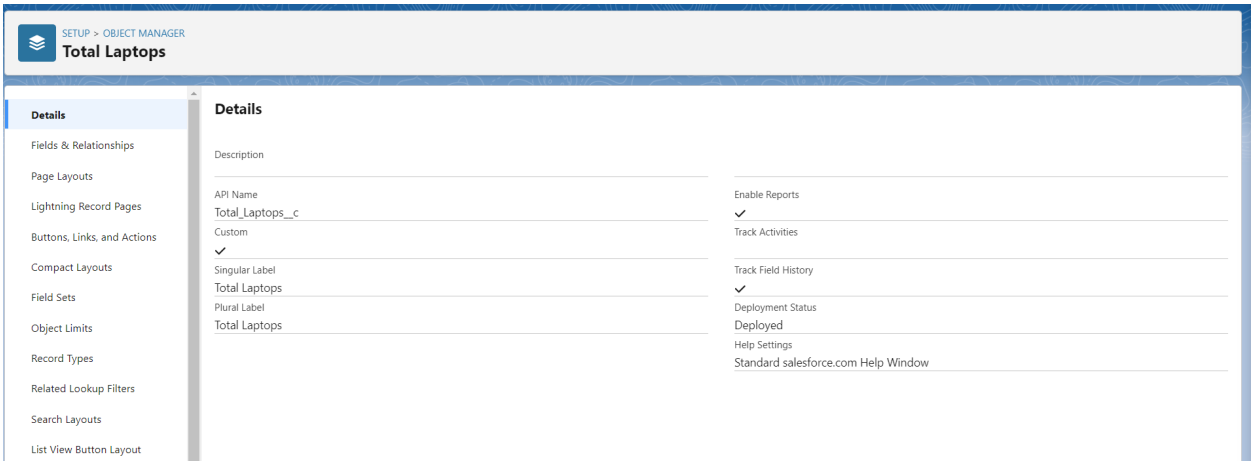
- **Total Laptops Management**: Tracks and manages the inventory of laptops available for rent.
- **Consumer Management**: Manages customer details and their interactions with the rental service.
- **Laptop Booking Process**: Facilitates the booking of laptops and manages the entire booking lifecycle.
- **Billing Process**: Automates billing and payment processes for rentals.
- **User Roles and Profiles**: Defines different levels of access and roles, such as Owner and Agent, within the application.
- **Validation Rules**: Ensures the accuracy and completeness of critical data fields such as phone number and email.
- **Automation via Flows and Apex**: Automates key processes like laptop distribution using Salesforce Flows and Apex triggers.
- **Reports and Dashboards**: Provides actionable insights through reports and visual data dashboards.

Detailed Setup Instructions

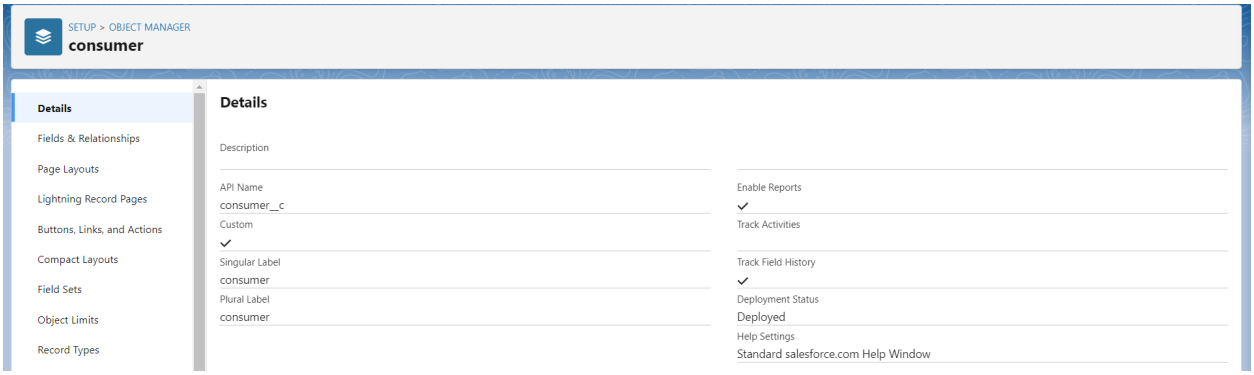
1. Creating Custom Objects

1. **Navigate to Setup**:
    - Go to the Setup page in Salesforce and click on Object Manager.
2. **Create Custom Object: Total Laptops**
    - Click on `Create > Custom Object`.
    - Fill in the following details:
        - **Label Name**: Total Laptops
        - **Plural Label Name**: Total Laptops
        - **Record Name Label**: Total Laptops
        - **Data Type**: Text
    - Enable the following options:
        - Allow Reports
        - Allow Search
        - Track Field History
    - Click `Save`.
3. **Repeat the process** for the following custom objects:
    - Consumer
    - Laptop Booking
    - Billing Process

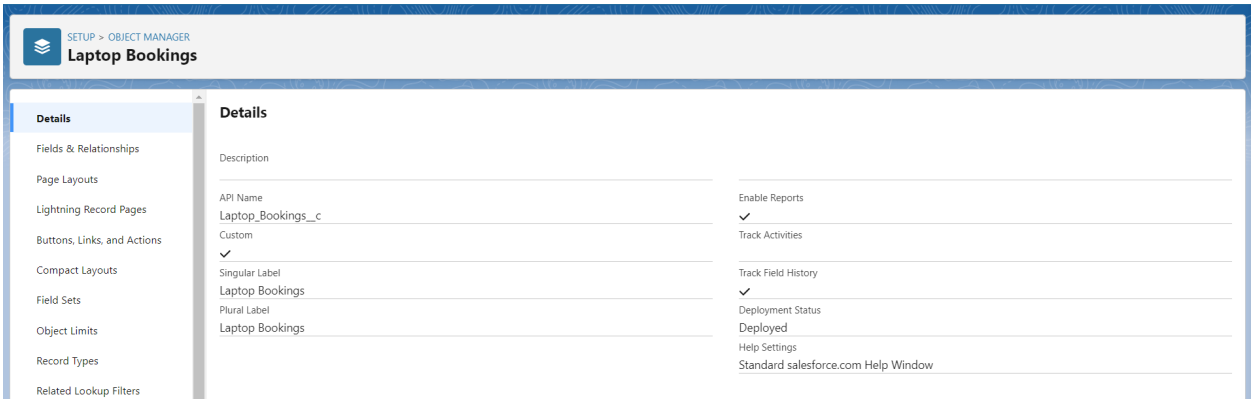
Total Laptops Object:



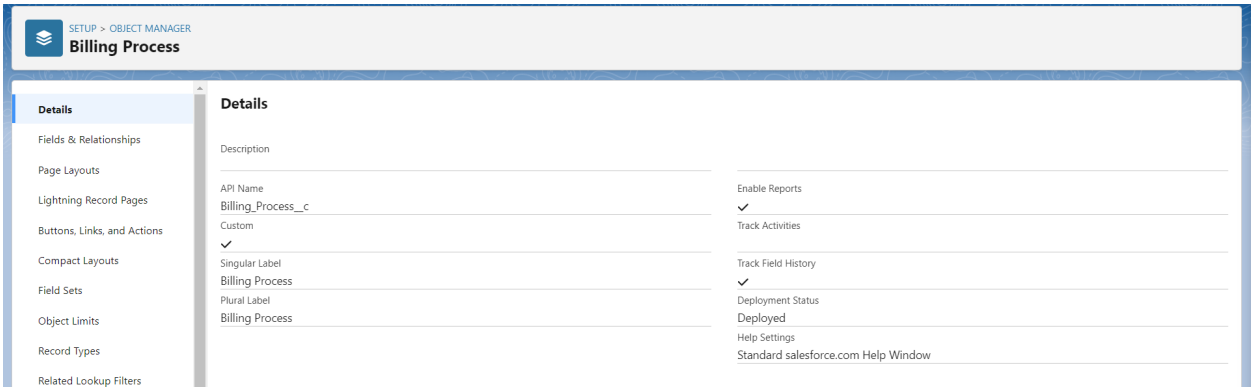
Consumer Object:



Laptop booking Object:



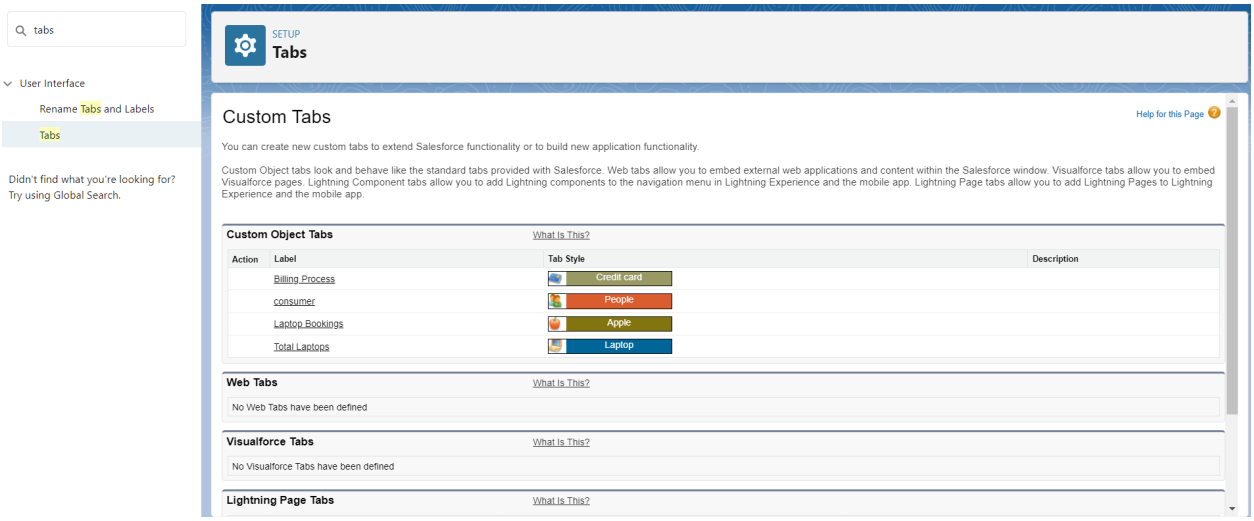
Billing process Object:



2. Creating Tabs

1. **Navigate to Setup**:
   - Type "Tabs" in the Quick Find bar and select `Tabs`.
2. **Create a New Tab**:
   - Click on `New` under Custom Object Tabs.
   - Select the custom object `Total Laptops` and choose a Tab Style.
   - Keep default settings and uncheck **Include Tab in Custom App**.
   - Click `Save`.
3. **Repeat for the following objects**:
   - Consumer
   - Laptop Booking
   - Billing Process

Tabs:

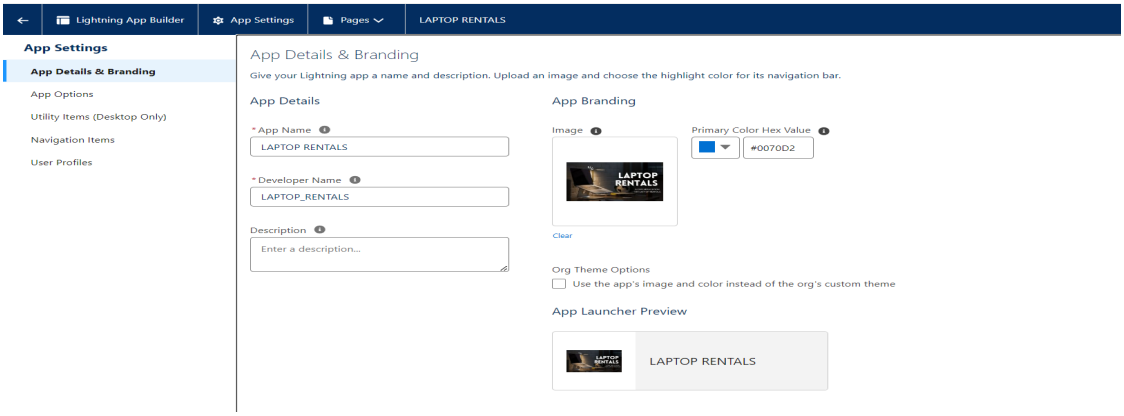


3. Creating a Lightning App Page

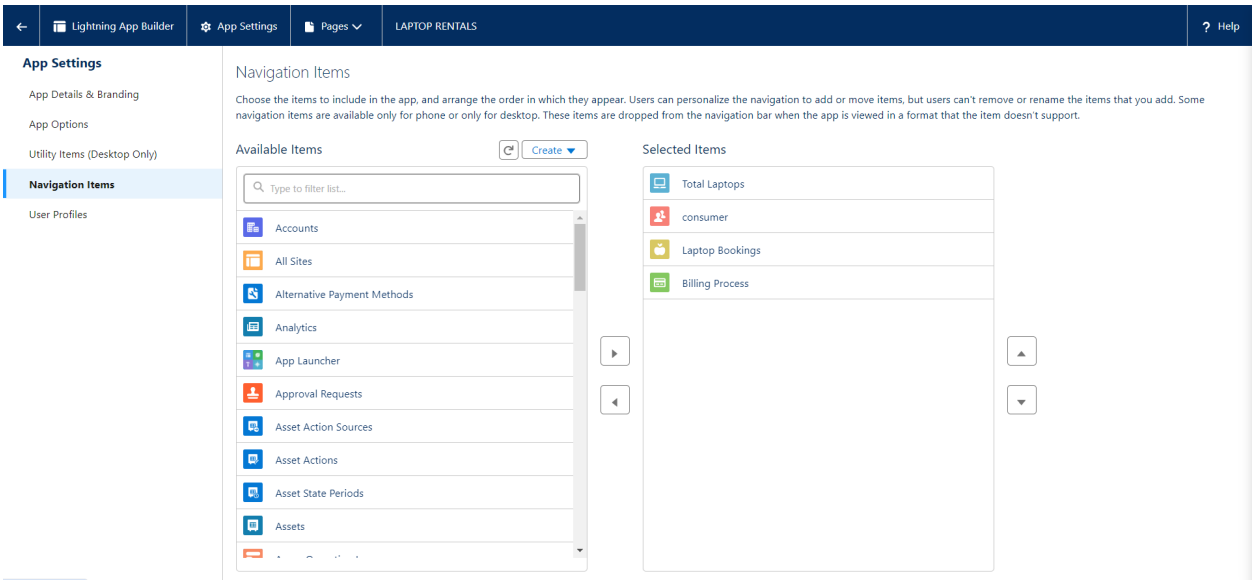
1. **Navigate to App Manager**:
   - Search for `App Manager` in the Quick Find bar.

2. **Create a New Lightning App**:
    - Click `New Lightning App` and name it `LAPTOP RENTALS`.
    - Add relevant Navigation Items such as Total Laptops, Consumer, Laptop Booking, and Billing Process.
    - Add System Administrator to the User Profiles section.
    - Click `Save & Finish`.

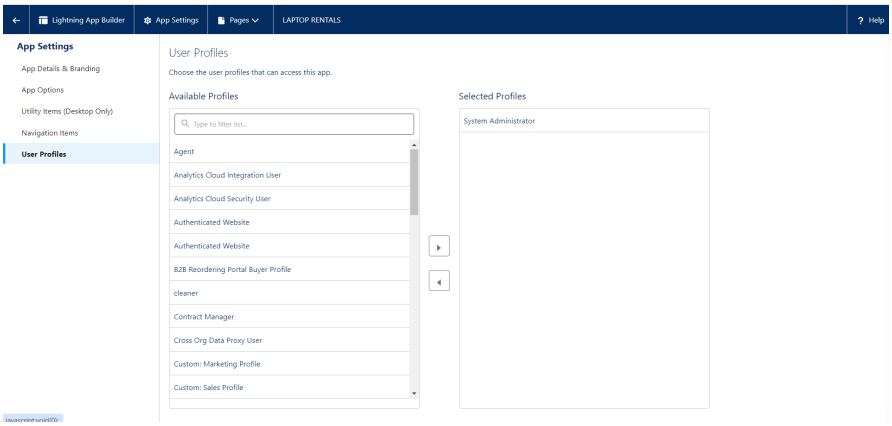
App Details:



App navigation:



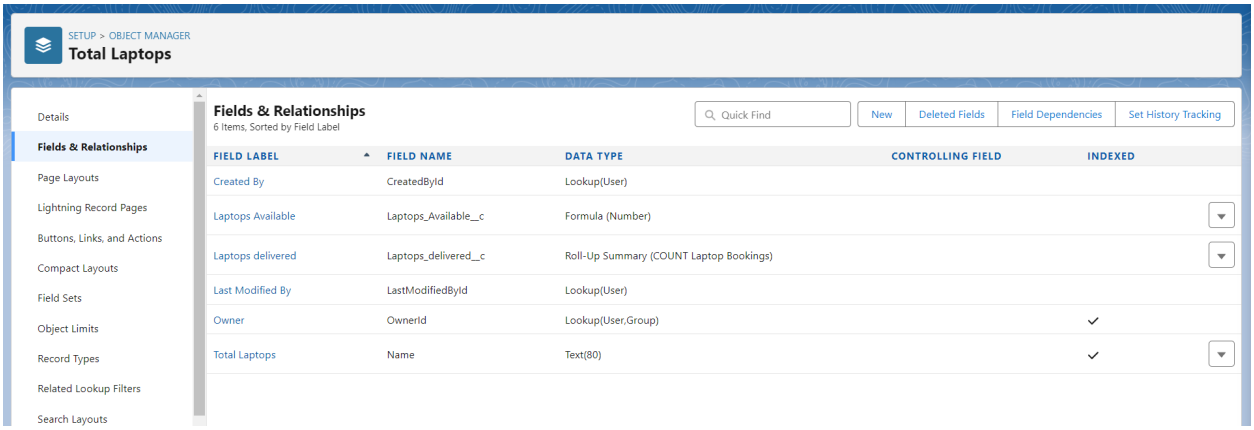
App user profiles:



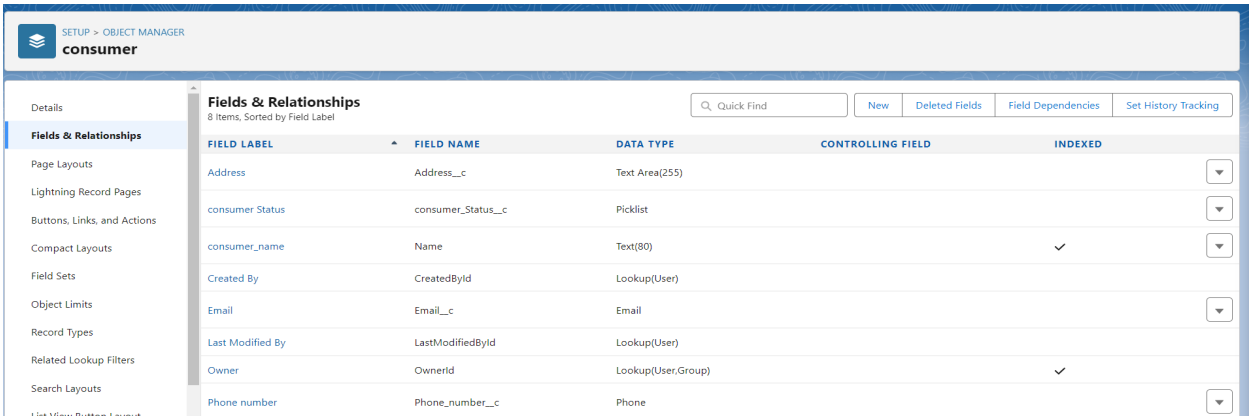
4. Adding Fields to the Objects

Follow standard Salesforce procedures to add required fields to the following objects:

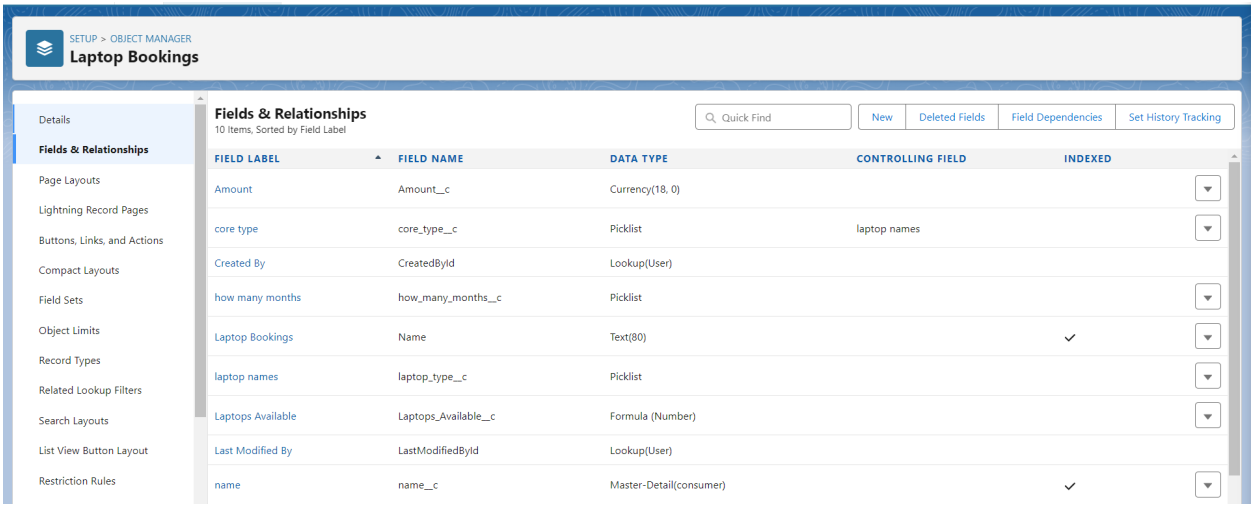
1. **Total Laptops**



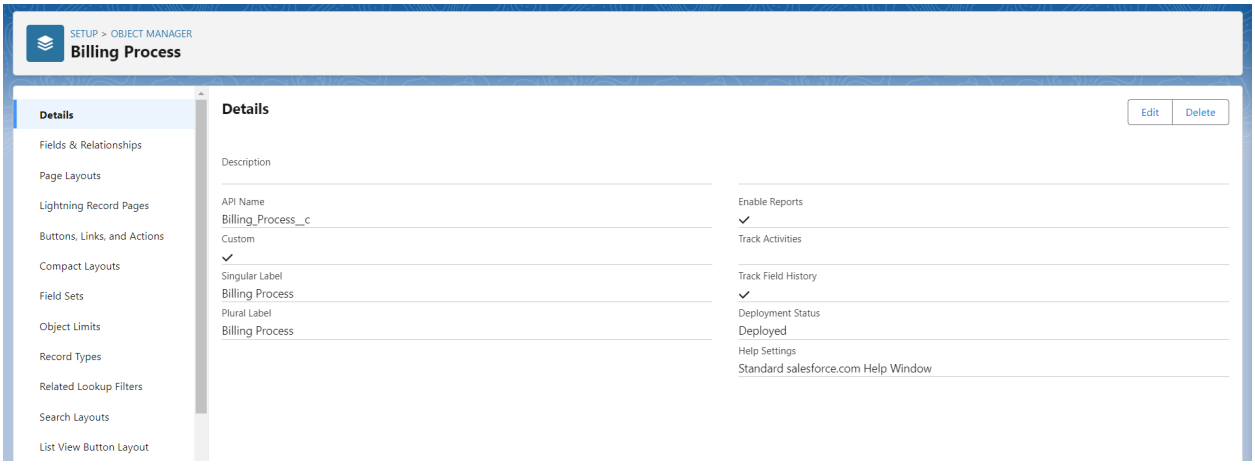
2. **Consumer**



3. **Laptop Booking**



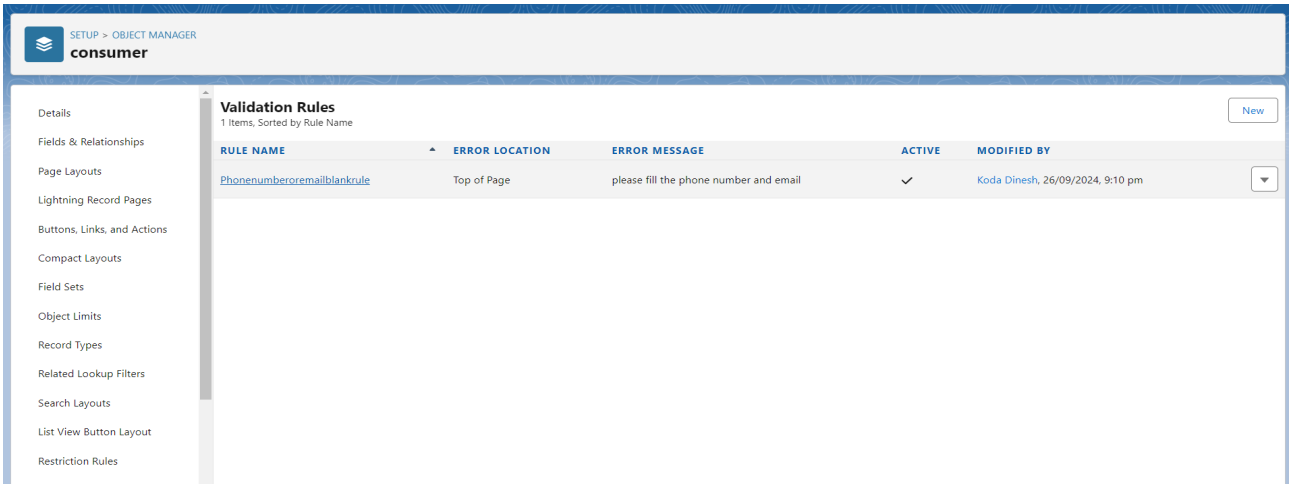
4. **Billing Process**



5. Creating a Validation Rule

1. **Navigate to Object Manager**:
   - Go to the Setup page and select `Object Manager`.
2. **Edit Consumer Object**:
   - Choose the Consumer object and click `Edit`.
3. **Create a Validation Rule**:
   - Click on `Validation Rules > New`.
   - Enter the following details:
     - **Rule Name**: Phonenumberoremailblankrule
     - **Description**: Ensure that both phone number and email are not blank.
     - **Formula**: `OR(ISBLANK(phone_number__c), ISBLANK(email__c))`
   - Click `Save`.

Rule:



6. Creating Users

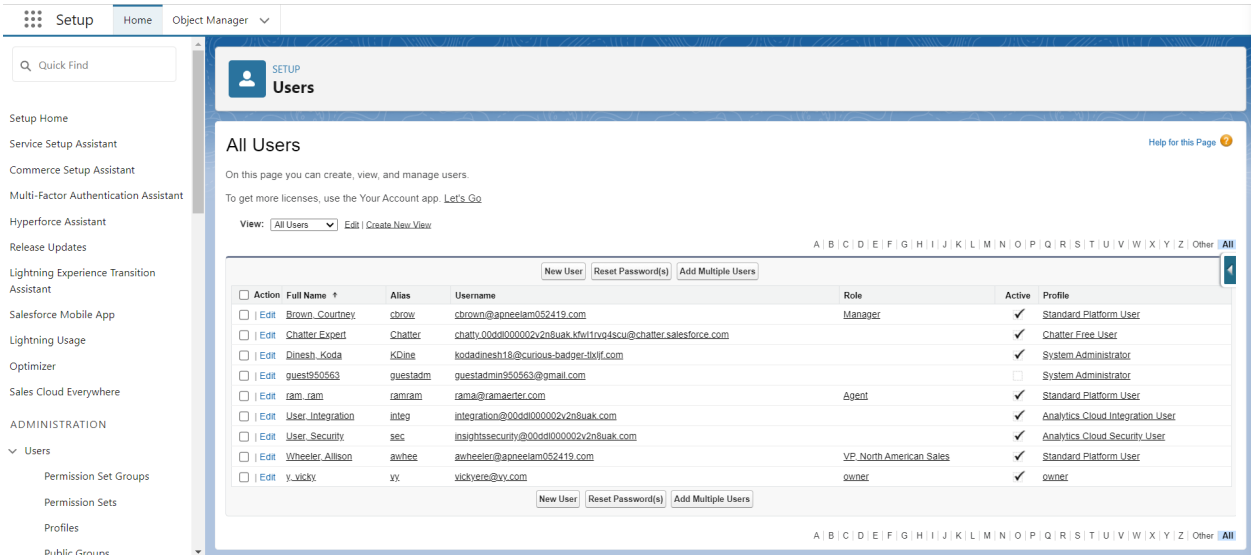
Follow these steps to create users in Salesforce for the Laptop Rentals CRM:

1. **Navigate to Users**:
   - Go to Setup in Salesforce.
   - In the **Quick Find** box, type **Users** and select the **Users** option.
2. **Create New User (Owner)**:
   - Click on **New User**.
   - Fill in the following details:
     - **First Name**: Vicky
     - **Last Name**: Y
     - **Alias**: [Alias Name]
     - **Email**: [Your Personal Email]
     - **Username**: text@text.text
     - **Nickname**: [Nickname]
     - **Role**: Owner
     - **User License**: Salesforce
     - **Profiles**: Owner
   - Click **Save**.
3. **Create Another User (Agent)**:
   - Click on **New User** again.
   - Fill in the following details:
     - **First Name**: Ram
     - **Last Name**: Ram

- **Alias**: [Alias Name]
- **Email**: [Your Personal Email]
- **Username**: text@text.text
- **Nickname**: [Nickname]
- **Role**: Agent
- **User License**: Salesforce Platform
- **Profiles**: Standard Platform User

- Click **Save**.

Users:



7. Creating a Flow for Laptop Distribution

To automate the laptop distribution process, follow these steps to create a Salesforce Flow that assigns laptops to customers based on availability and booking details.

Steps to Create a Salesforce Flow for Laptop Distribution:

1. **Navigate to Setup**:
   - In Salesforce, go to **Setup** and type **Flows** in the Quick Find bar.
   - Select **Flows** from the dropdown menu.
2. **Create a New Flow**:
   - Click on **New Flow** and choose **Record-Triggered Flow** as the type of flow.
   - This type of flow will trigger automatically when a laptop booking is created or updated.
3. **Select the Trigger Object**:

- In the next step, choose the **Laptop Booking** object as the trigger for the flow.
- Set the trigger to fire when a record is **created or updated**.

4. **Define Criteria**:
   - Add a condition to check the availability of laptops in the **Total Laptops** object.
   - The flow should only proceed if there are available laptops that match the booking details, such as laptop type and configuration.
5. **Assignment Element**:
   - Add an **Assignment** element to assign laptops to customers.
   - The flow should retrieve available laptops from the **Total Laptops** object and assign the first available one to the booking.
6. **Update Records**:
   - Add an **Update Records** element to update the booking with the assigned laptop details.
   - Update the **Laptop Booking** record with the assigned laptop's ID, status (Booked), and any additional details.
7. **Send Confirmation**:
   - Optionally, add an email notification to confirm the booking and notify the customer. Use **Email Alert** or **Apex Action** to send emails.
8. **Test the Flow**:
   - Save and activate the flow.
   - Run tests to ensure that it correctly assigns laptops based on availability and updates the booking records.

8. Developing Apex Code

To automate the business processes involved in laptop bookings, such as updating laptop availability and sending notifications, you need to create both an Apex class and an Apex trigger.

Apex Class: LaptopBookingHandler

The **LaptopBookingHandler** class contains the business logic for handling the key processes, including sending email notifications when a laptop is booked.

```
public class LaptopBookingHandler {
   public static void sendEmailNotification (List<Laptop_Bookings__c> lapList){
      for(Laptop_Bookings__c lap: lapList){
         Messaging.SingleEmailMessage email = new Messaging.SingleEmailMessage();
         email.setToAddresses(new List<String>{lap.Email__c});
         email.setSubject('Welcome to our company');
         string body = 'Dear ' + lap.Name + ',\n';
         body += 'Welcome to Laptop Rentals! You have been seen as a valuable
customer.\n';
         body += 'Laptop Amount = ' + lap.Amount__c + '\n';
         body += 'Core type = ' + lap.core_type__c + '\n';
         email.setPlainTextBody(body);
         Messaging.sendEmail(new List<Messaging.SingleEmailMessage>{email});
      }
   }
}
```

Apex Trigger: LaptopBooking

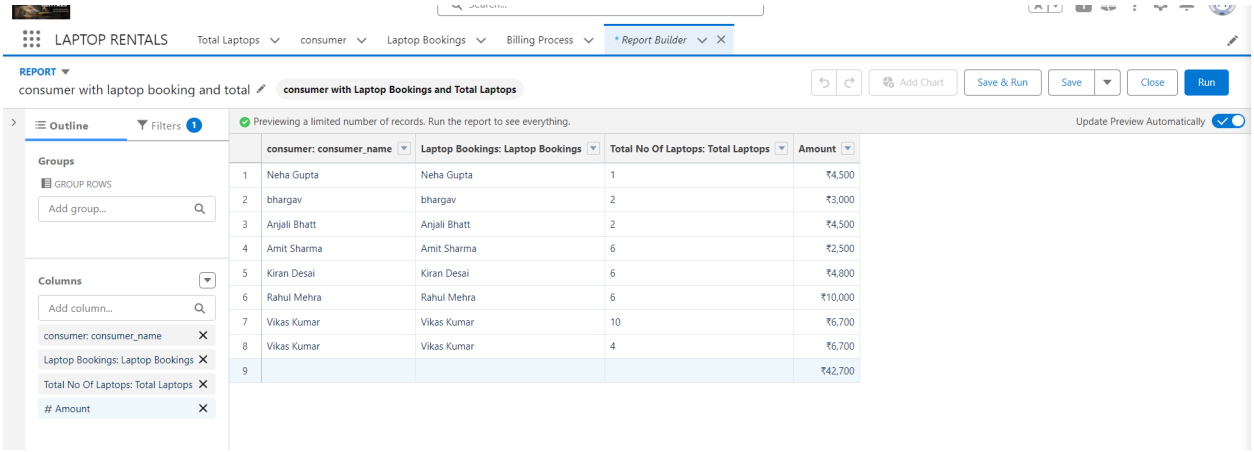
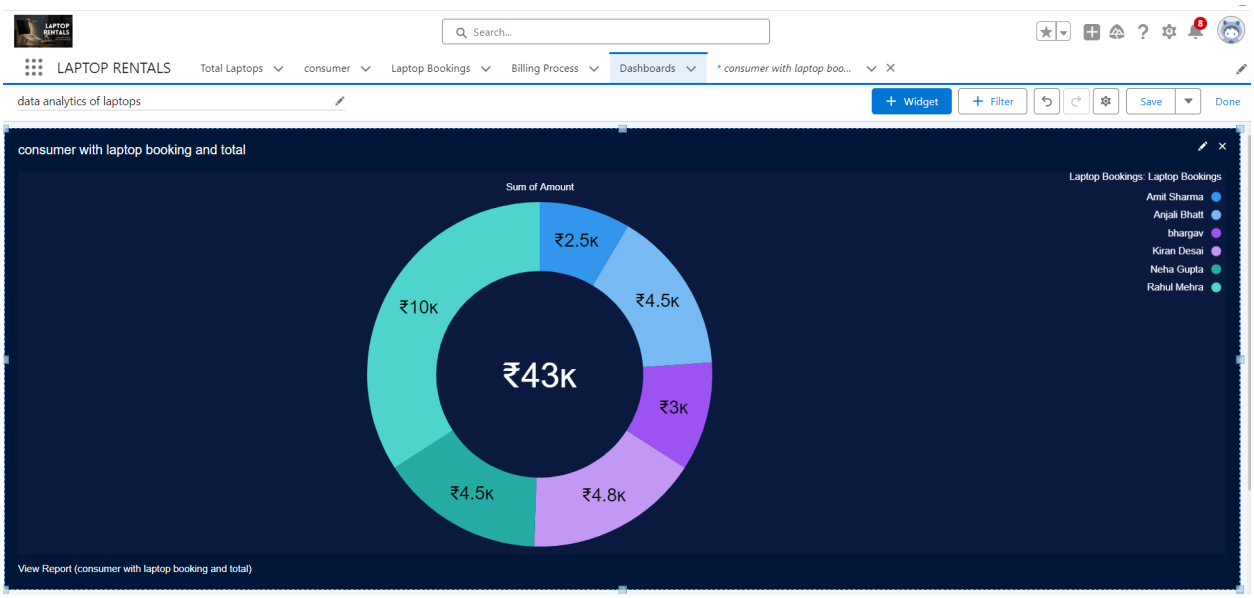
The trigger you've provided is designed to send email notifications after a laptop booking record is inserted or updated. Below is a refined version with some improvements in readability and clarity.

```
trigger LaptopBooking on Laptop_Bookings__c (after insert, after update) {

   // Check if the trigger is after insert or after update
   if (trigger.isAfter && (trigger.isInsert || trigger.isUpdate)) {

      // Call the method to send email notifications from the LaptopBookingHandler
class
      LaptopBookingHandler.sendEmailNotification(trigger.new);
   }
}
```

9. Generating Reports and Dashboards

In Salesforce, **Reports** and **Dashboards** are powerful tools that allow you to visualize and analyze key metrics. Here's how you can generate reports and create a dashboard for the Laptop Rentals CRM application.

Reports:



Dashboard: