

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 leverages Salesforce's powerful CRM capabilities to enhance customer experience, optimize store operations, and improve overall efficiency. The application also includes features to effectively communicate with potential customers through email.

Features and Functionalities:

- **Total Laptops Management:** Track and manage the inventory of laptops available for rent.
- **Consumer Management:** Manage customer details and interactions.
- **Laptop Booking Process:** Handle laptop booking requests and manage bookings.
- **Billing Process:** Manage billing and payment processes for laptop rentals.
- **User Roles and Profiles:** Define roles like Owner and Agent to manage different levels of access within the application.
- **Validation Rules:** Ensure data accuracy and completeness.
- **Automation via Flows and Apex:** Automate key processes such as laptop distribution using Salesforce Flows and Apex triggers.
- **Reports and Dashboards:** Generate insightful reports and visualize data on the dashboard.

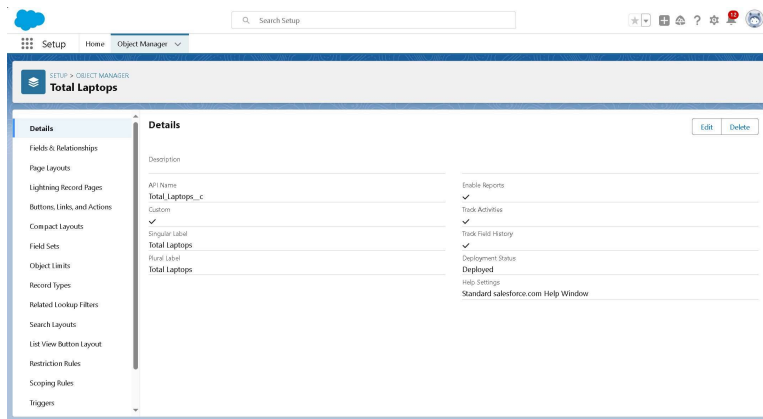
Detailed Setup Instructions:

1. Creating Custom Objects

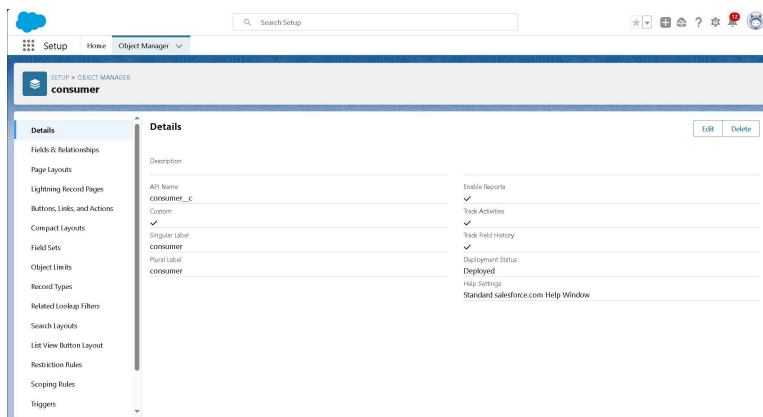
- **Navigate to Setup:** Go to the Setup page and click on Object Manager.
- **Create Custom Object: Total Laptops**
 - Click on **Create > Custom Object**.

- Enter 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**.
- Repeat for the following Custom Objects:
 - **Consumer**
 - **Laptop Booking**
 - **Billing Process**

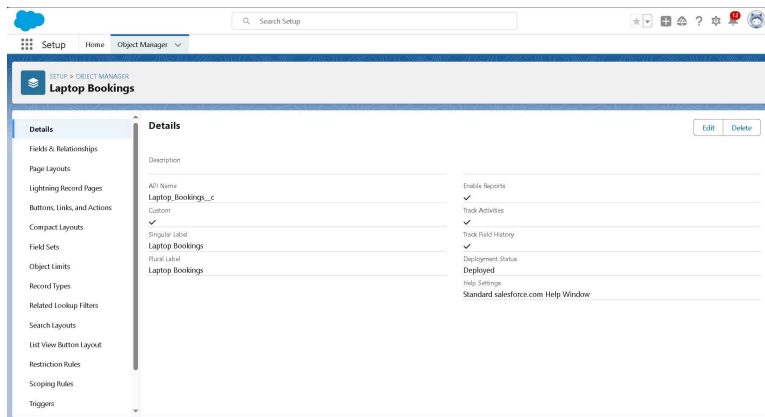
Total Laptops Object:



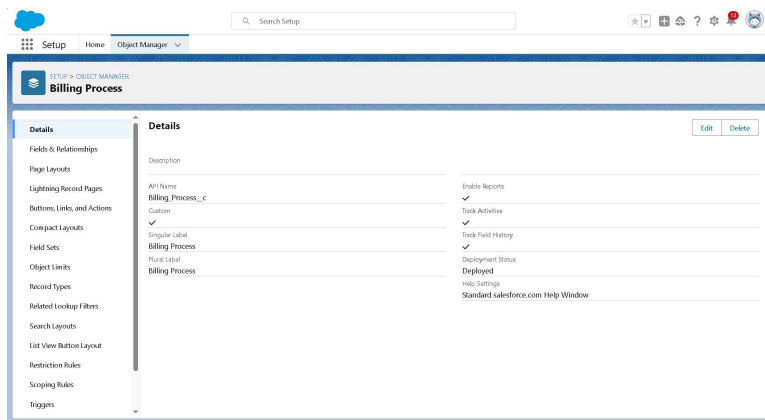
Consumer Object:



Laptop Booking Object:



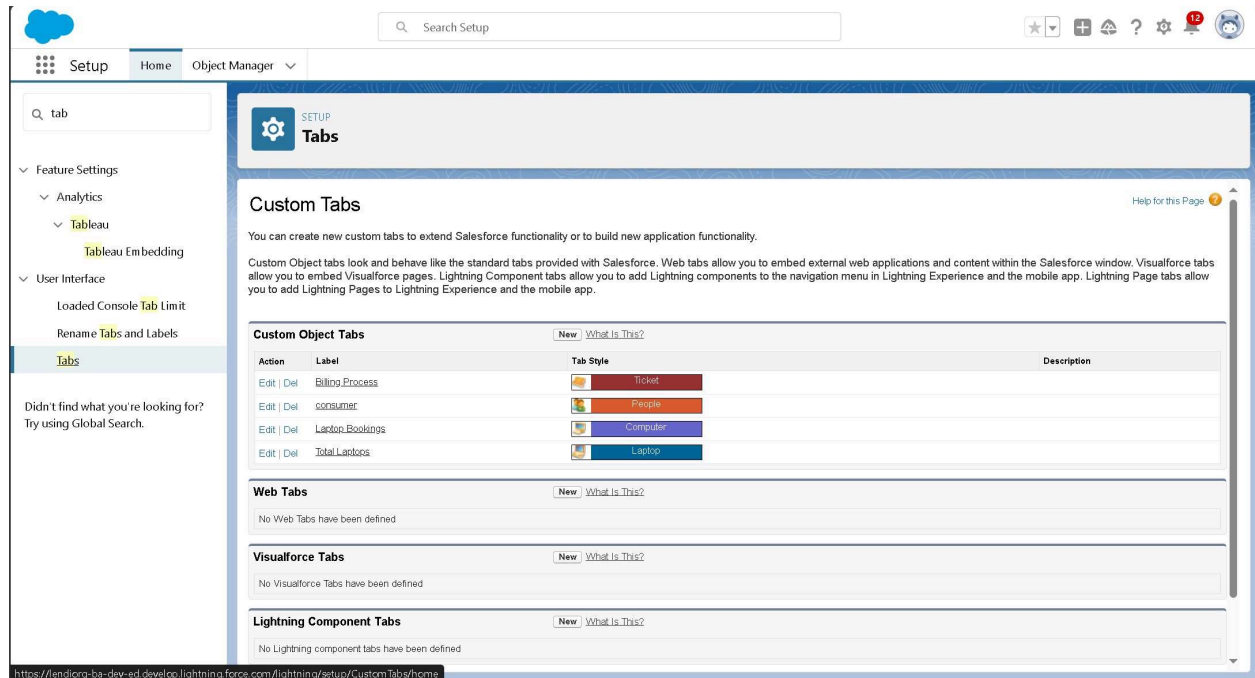
Billing Process Object:



2. Creating Tabs

- **Navigate to Setup:** Type **Tabs** in the Quick Find bar and select **Tabs**.
- **Create a New Tab:**
 - Click on **New** under Custom Object Tabs.
 - Select **Object:** Total Laptops
 - Choose a **Tab Style**.
 - Click **Next** and keep the default settings on the profiles page.
 - Uncheck **Include Tab in Custom App** and ensure **Append tab to users' existing personal customizations** is checked.
 - Click **Save**.
- **Repeat for the following Custom Objects:**
 - **Consumer**
 - **Laptop Booking**
 - **Billing Process**

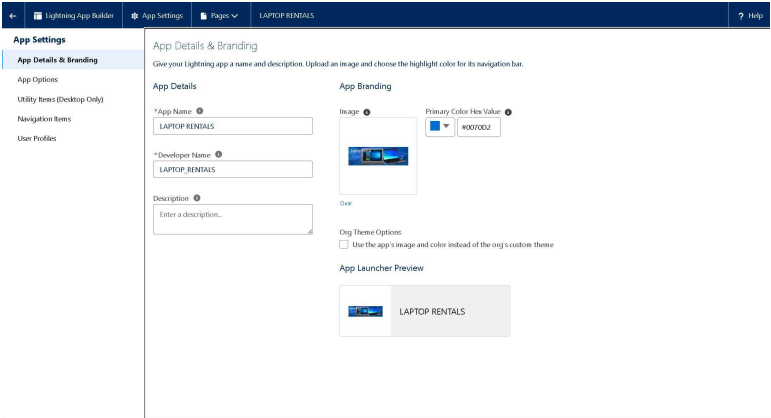
Tabs:



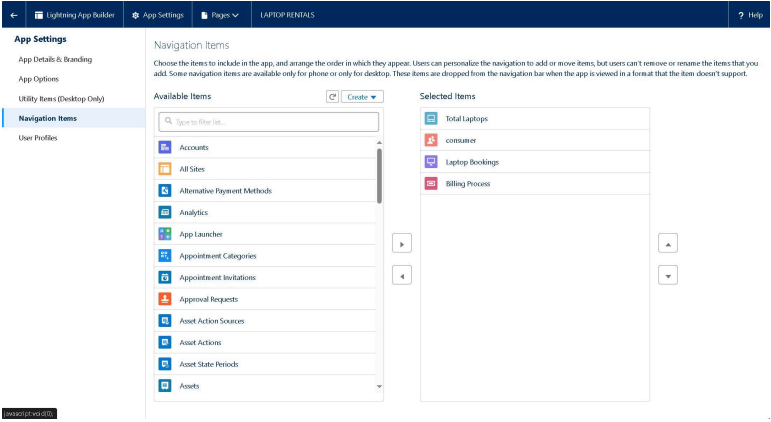
3. Creating a Lightning App Page

- **Navigate to App Manager:** Go to the Setup page and search for **App Manager** in the Quick Find bar.
- **Create a New Lightning App:**
 - Click on **New Lightning App**.
 - Fill in the **App Name**: LAPTOP RENTALS.
 - Click **Next** and keep the default settings on the App Options and Utility Items pages.
 - Upload a related photo for the app.
 - **Add Navigation Items:**
 - Select **Total Laptops**, **Consumer**, **Laptop Booking**, **Billing Process** from the search bar and move them using the arrow button.
 - **Add User Profiles:**
 - Search for **System Administrator** in the search bar and add it to the app.
 - Click **Save & Finish**.

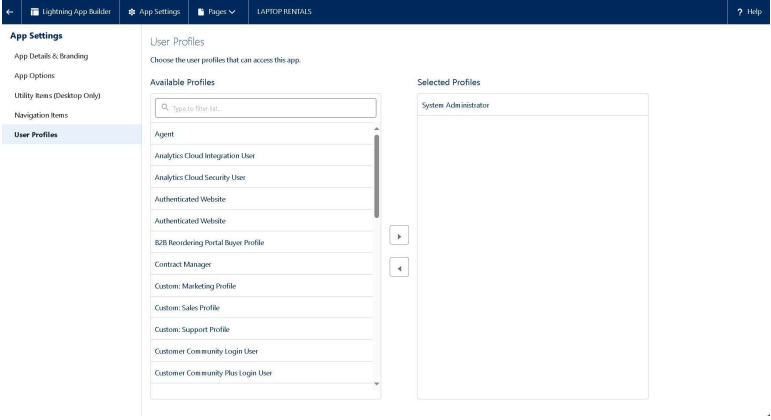
App Details:



App Naviagtion:



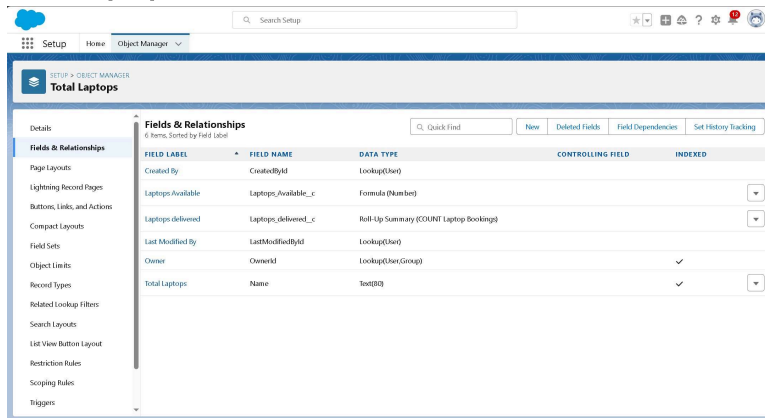
App User Profiles:



4. Adding Fields to the Objects

- Follow the standard Salesforce procedure to add necessary fields to the Total Laptops, Consumer, Laptop Booking, and Billing Process objects.

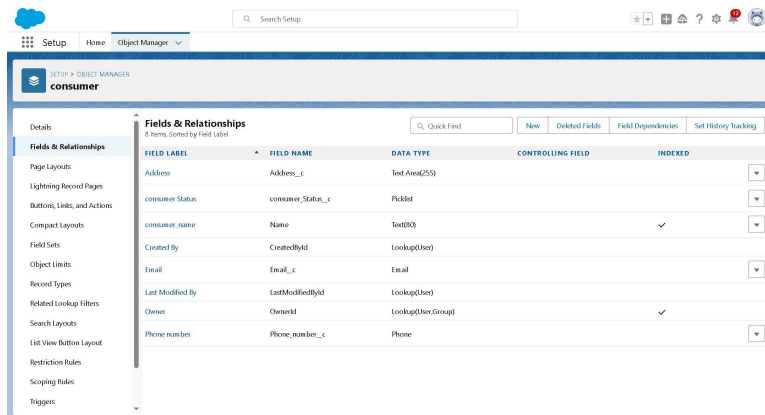
Total Laptops Fields:



The screenshot shows the Salesforce Setup interface for the 'Total Laptops' object. The 'Fields & Relationships' tab is active, displaying a table of fields. The table has columns for Field Label, Field Name, Data Type, Controlling Field, and Indexed. The fields listed are: Created By (Lookup(User)), Laptops Available (Formula (Number)), Laptops delivered (Roll-Up Summary (COUNT Laptop Bookings)), Last Modified By (Lookup(User)), Owner (Lookup(User, Group)), and Total Laptops (Text(80)).

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Laptops Available	Laptops_Available__c	Formula (Number)		
Laptops delivered	Laptops_delivered__c	Roll-Up Summary (COUNT Laptop Bookings)		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User, Group)		✓
Total Laptops	Name	Text(80)		✓

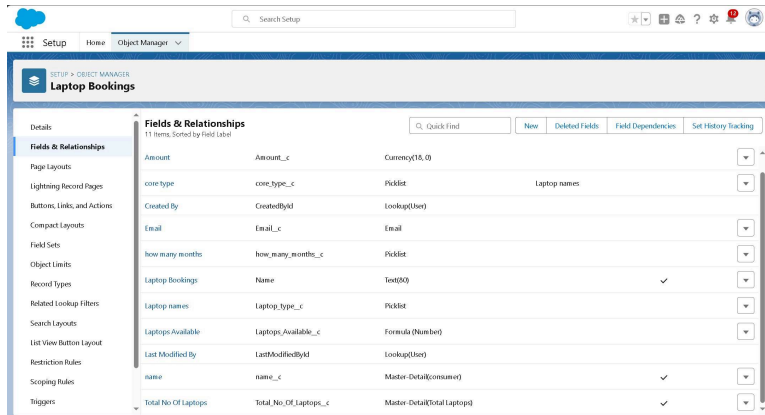
Consumer Fields:



The screenshot shows the Salesforce Setup interface for the 'consumer' object. The 'Fields & Relationships' tab is active, displaying a table of fields. The table has columns for Field Label, Field Name, Data Type, Controlling Field, and Indexed. The fields listed are: Address (Text Area(255)), consumer Status (Picklist), consumer_name (Text(80)), Created By (Lookup(User)), Email (Text(80)), Last Modified By (Lookup(User)), Owner (Lookup(User, Group)), and Phone number (Text(80)).

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Address	Address__c	Text Area(255)		
consumer Status	consumer_Status__c	Picklist		
consumer_name	Name	Text(80)		✓
Created By	CreatedById	Lookup(User)		
Email	Email__c	Email		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User, Group)		✓
Phone number	Phone_number__c	Phone		

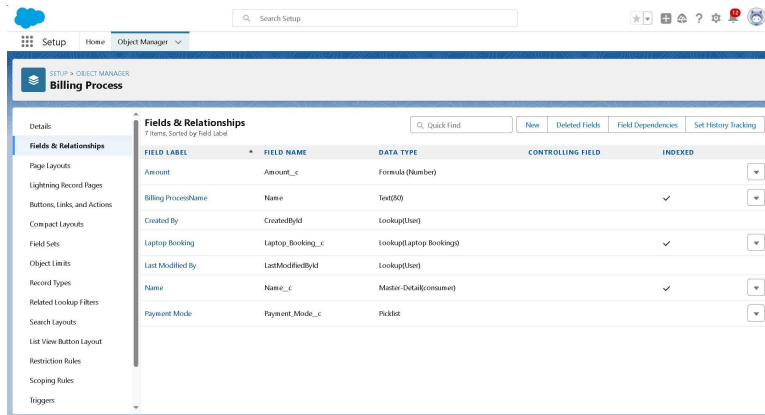
Laptop Booking Fields:



The screenshot shows the Salesforce Setup interface for the 'Laptop Bookings' object. The 'Fields & Relationships' tab is active, displaying a table of fields. The table has columns for Field Label, Field Name, Data Type, Controlling Field, and Indexed. The fields listed are: Amount (Currency(16, 0)), core type (Picklist), Created By (Lookup(User)), Email (Text(80)), how many months (Picklist), Laptop Bookings (Text(80)), Laptop names (Picklist), Laptops Available (Formula (Number)), Last Modified By (Lookup(User)), name (Master Detail (consumer)), and Total No. Of Laptops (Master Detail (Total Laptop)).

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Amount	Amount__c	Currency(16, 0)		
core type	core_type__c	Picklist	Laptop names	
Created By	CreatedById	Lookup(User)		
Email	Email__c	Email		
how many months	how_many_months__c	Picklist		
Laptop Bookings	Name	Text(80)		✓
Laptop names	Laptop_type__c	Picklist		
Laptops Available	Laptops_Available__c	Formula (Number)		
Last Modified By	LastModifiedById	Lookup(User)		
name	name__c	Master Detail (consumer)		✓
Total No. Of Laptops	Total_No_Of_Laptops__c	Master Detail (Total Laptop)		✓

Billing Process Fields:



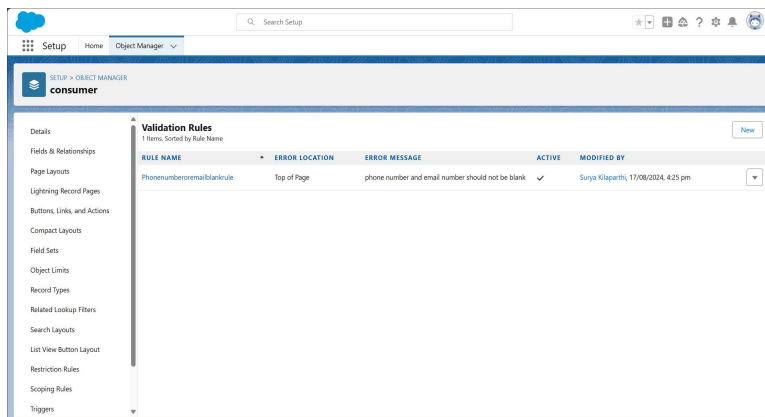
The screenshot shows the Salesforce Setup page with the 'Billing Process' object selected. The 'Fields & Relationships' tab is active, displaying a list of fields for the Billing Process object. The fields are sorted by field label. The table includes columns for Field Label, Field Name, Data Type, Controlling Field, and Indexed. The fields listed are: Amount (Amount__c, Formula (Number)), Billing Process Name (Name, Text(255)), Created By (CreatedById, Lookup(User)), Laptop Booking (Laptop_Booking__c, Lookup(Laptop Booking)), Last Modified By (LastModifiedById, Lookup(User)), Name (Name__c, Master-Detail(consumer)), and Payment Mode (Payment_Mode__c, Picklist).

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Amount	Amount__c	Formula (Number)		
Billing Process Name	Name	Text(255)		✓
Created By	CreatedById	Lookup(User)		
Laptop Booking	Laptop_Booking__c	Lookup(Laptop Booking)		✓
Last Modified By	LastModifiedById	Lookup(User)		
Name	Name__c	Master-Detail(consumer)		✓
Payment Mode	Payment_Mode__c	Picklist		

5. Creating a Validation Rule

- **Navigate to Object Manager:** Go to the Setup page and click on Object Manager.
- **Edit Consumer Object:** Select Consumer from the drop-down and click Edit.
- **Create a Validation Rule:**
 - Click on **Validation Rules > New**.
 - Enter the following details:
 - **Rule Name:** Phonenumeroemailblankrule
 - **Description:** Phone number and email number should not be blank.
 - **Formula:** OR(ISBLANK(phone_number__c) , ISBLANK(email__c))
 - Check the syntax and click **Save**.

Rule:



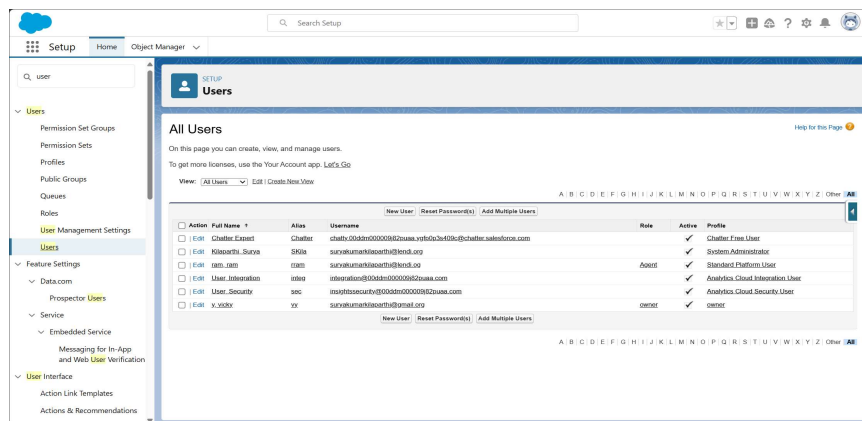
The screenshot shows the Salesforce Setup page with the 'Consumer' object selected. The 'Validation Rules' tab is active, displaying a list of validation rules for the Consumer object. The rules are sorted by rule name. The table includes columns for Rule Name, Error Location, Error Message, Active, and Modified By. The rule listed is: Phonenumeroemailblankrule (Top of Page, phone number and email number should not be blank, Active, Modified By: Surya Kilaparthi, 17/08/2024, 4:25 pm).

RULE NAME	ERROR LOCATION	ERROR MESSAGE	ACTIVE	MODIFIED BY
Phonenumeroemailblankrule	Top of Page	phone number and email number should not be blank	✓	Surya Kilaparthi, 17/08/2024, 4:25 pm

6. Creating Users

- **Navigate to Users:** Go to Setup, type **Users** in the Quick Find box, and select **Users**.
- **Create New User:**
 - Click **New User** and 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**.
- **Repeat for Another User:**
 - **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

- Create a Salesforce Flow to automate the laptop distribution process. This flow should handle the assignment of laptops to customers based on availability and booking details.

Flow:



8. Developing Apex Code

- **LaptopBookingHandler Class:** Write an Apex class to handle the business logic related to laptop bookings.
- **LaptopBooking Trigger:** Develop a trigger on the Laptop Booking object to automate processes like updating availability or sending notifications.

LaptopBookingHandler Class:

```
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 to us.\n Please continue your journey with us, while we try to provide you with good quality resources. \n Laptop Amount = ' + lap.Amount__c + ' \n core type = '+lap.core_type__c +' \n Laptop type = '+lap.Laptop_type__c;
            email.setPlainTextBody(body);
            Messaging.sendEmail(new List<Messaging.SingleEmailMessage>{email});
        }
    }
}
```

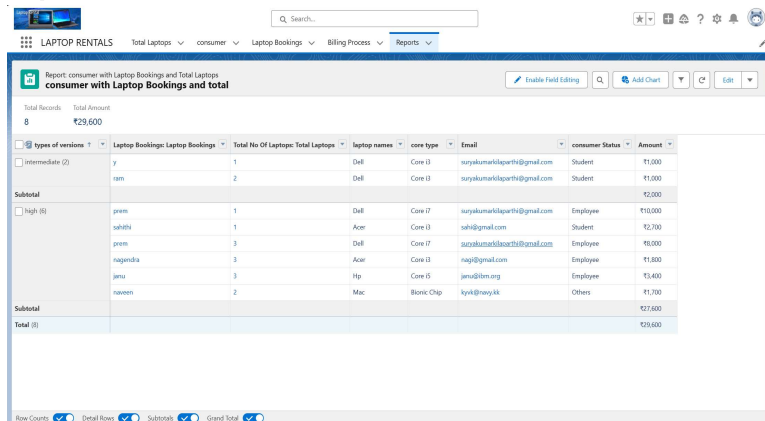
Laptop Booking Trigger:

```
trigger LaptopBooking on Laptop_Bookings__c (After insert,after update) {  
    if(trigger.isAfter && ( trigger.isInsert || trigger.isupdate))  
    {  
        LaptopBookingHandler.sendEmailNotification(trigger.new);  
    }  
}
```

9. Generating Reports and Dashboards

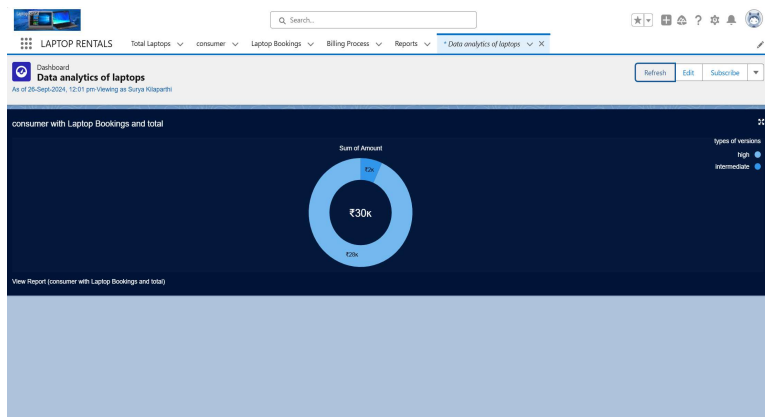
- **Generate Reports:** Create custom reports to track key metrics such as total laptops available, booking status, and customer details.
- **Create a Dashboard:** Place the generated reports on a Salesforce dashboard for quick and easy visualization.

Report:



Laptop Bookings: Laptop Bookings	Total No Of Laptops: Total Laptops	laptop names	core type	Email	consumer Status	Amount
y	1	Dell	Core i3	suryakumarkilaparthi@gmail.com	Student	₹1,000
ram	2	Dell	Core i3	suryakumarkilaparthi@gmail.com	Student	₹1,000
						₹2,000
pram	1	Dell	Core i7	suryakumarkilaparthi@gmail.com	Employee	₹10,000
subhiti	1	Acer	Core i3	subhiti@gmail.com	Student	₹2,700
pram	3	Dell	Core i7	suryakumarkilaparthi@gmail.com	Employee	₹6,000
nagendra	3	Acer	Core i3	naga@item.org	Employee	₹1,800
jana	3	Hp	Core i5	jana@item.org	Employee	₹3,400
naveen	2	Mac	Blower Chip	kyrk@nonyaki	Others	₹1,700
						₹27,600
						₹29,600

Dashboard:



By Surya Kumar Kilaparathi