

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:

- **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:
 1. **Label Name:** Total Laptops
 2. **Plural Label Name:** Total Laptops
 3. **Record Name Label:** Total Laptops
 4. **Data Type:** Text
- Enable the following options:
 1. **Allow Reports**
 1. **Allow Search**
 2. **Track Field History**
- Click **Save**.

b. **Repeat for the following Custom Objects:**

- **Consumer**
- **Laptop Booking**
- **Billing Process**

Total Laptops Object:

Setup

Home

Object Manager

Search Setup

Setup > OBJECT MANAGER

Total Laptops

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

List View Button Layout

Restriction Rules

Scoping Rules

Details

Description

API Name
Total_Laptops__c

Custom

Singular Label
Total Laptops

Plural Label
Total Laptops

Enable Reports

Track Activities

Track Field History

Deployment Status
Deployed

Help Settings
Standard salesforce.com Help Window

Edit

Delete

Consumer Object:

Setup

Home

Object Manager

Search Setup

Setup > OBJECT MANAGER

consumer

Details

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Description

API Name
consumer__c

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consumer

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consumer

Enable Reports

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Deployment Status
Deployed

Help Settings
Standard salesforce.com Help Window

Edit

Delete

Laptop Booking Object:

Setup

Home

Object Manager

Search Setup

Setup > OBJECT MANAGER

Laptop Bookings

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

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List View Button Layout

Restriction Rules

Scoping Rules

Details

Description

API Name
Laptop_Bookings__c

Custom

Singular Label
Laptop Bookings

Plural Label
Laptop Bookings

Enable Reports

Track Activities

Track Field History

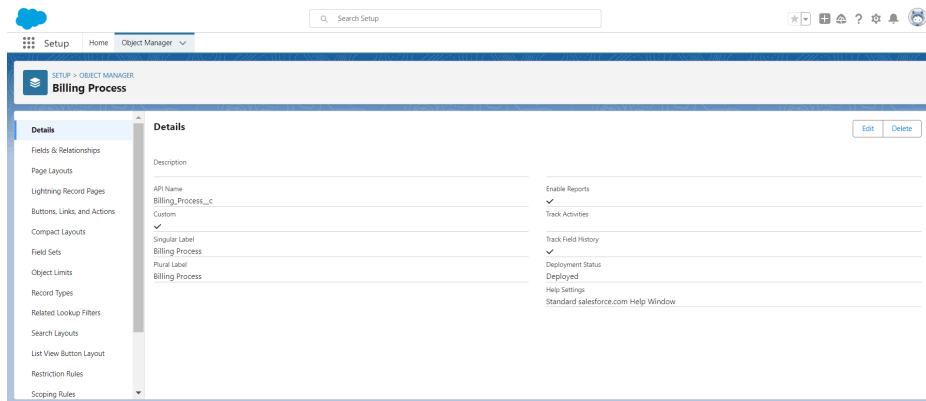
Deployment Status
Deployed

Help Settings
Standard salesforce.com Help Window

Edit

Delete

Billing Process Object:



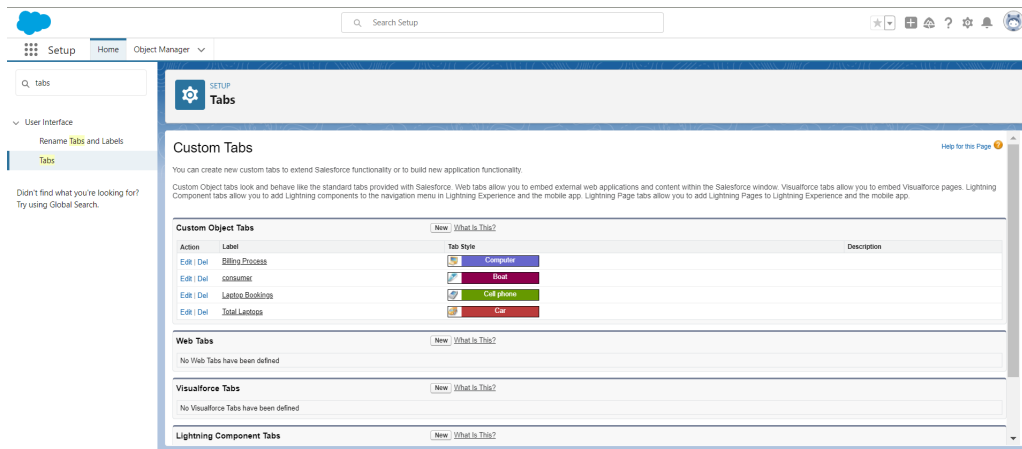
2.Creating Tabs

- **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 LightningApp 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:**
 1. Select **Total Laptops, Consumer, Laptop Booking, Billing Process** from the search bar and move them using the arrow button.
- **Add User Profiles:**
 2. Search for **System Administrator** in the search bar and add it to the app.
- Click **Save & Finish**.

App Details:

← Lightning App Builder

⚙ App Settings

📄 Pages ▾

LAPTOP RENTALS

🔍 ? Help

App Settings

App Details & Branding

App Options

Utility Items (Desktop Only)

Navigation Items

User Profiles

App Details & Branding

Give your Lightning app a name and description. Upload an image and choose the highlight color for its navigation bar.

App Details

*App Name ⓘ
LAPTOP RENTALS

*Developer Name ⓘ
LAPTOP_RENTALS

Description ⓘ
Enter a description...

App Branding

Image ⓘ

Primary Color Hex Value ⓘ
#0070D2

Clear

Org Theme Options
☐ Use the app's image and color instead of the org's custom theme

App Launcher Preview
 LAPTOP RENTALS

App Navigation:

← Lightning App Builder

⚙ App Settings

📄 Pages ▾

LAPTOP RENTALS

🔍 ? Help

App Settings

App Details & Branding

App Options

Utility Items (Desktop Only)

Navigation Items

User Profiles

Navigation Items

Choose the items to include in the app, and arrange the order in which they appear. Users can personalize the navigation to add or move items, but users can't remove or rename the items that you add. Some navigation items are available only for phone or only for desktop. These items are dropped from the navigation bar when the app is viewed in a format that the item doesn't support.

Available Items

🔍 Type to filter list...

Accounts

All Sites

Alternative Payment Methods

Analytics

App Launcher

Appointment Categories

Appointment Invitations

Approval Requests

Asset Action Sources

Asset Actions

Asset State Depends

Selected Items

Total Laptops

consumer

Laptop Bookings

billing Process

App User Profiles:

← Lightning App Builder

⚙ App Settings

📄 Pages ▾

LAPTOP RENTALS

🔍 ? Help

App Settings

App Details & Branding

App Options

Utility Items (Desktop Only)

Navigation Items

User Profiles

User Profiles

Choose the user profiles that can access this app.

Available Profiles

🔍 Type to filter list...

Agent

Analytics Cloud Integration User

Analytics Cloud Security User

Authenticated Website

Authenticated Website

B2B Reordering Portal Buyer Profile

Contract Manager

Custom: Marketing Profile

Custom: Sales Profile

Custom: Support Profile

Customer Community Login User

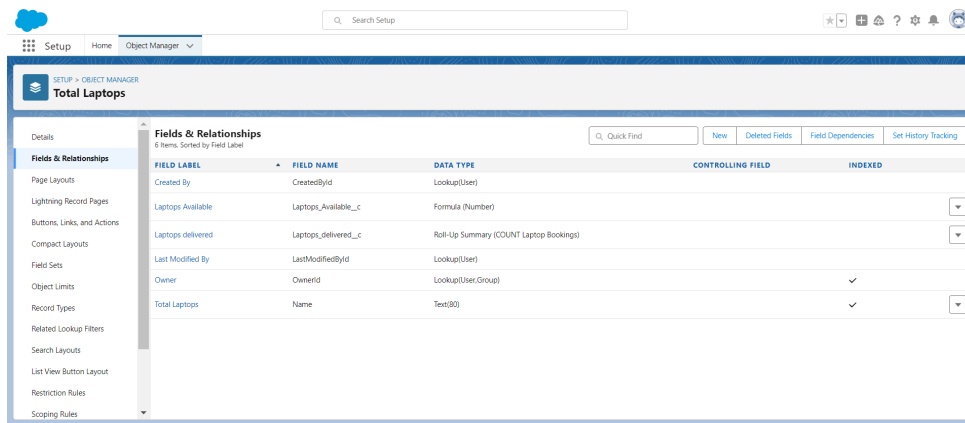
Selected Profiles

System Administrator

4. Adding Fields to the objects

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

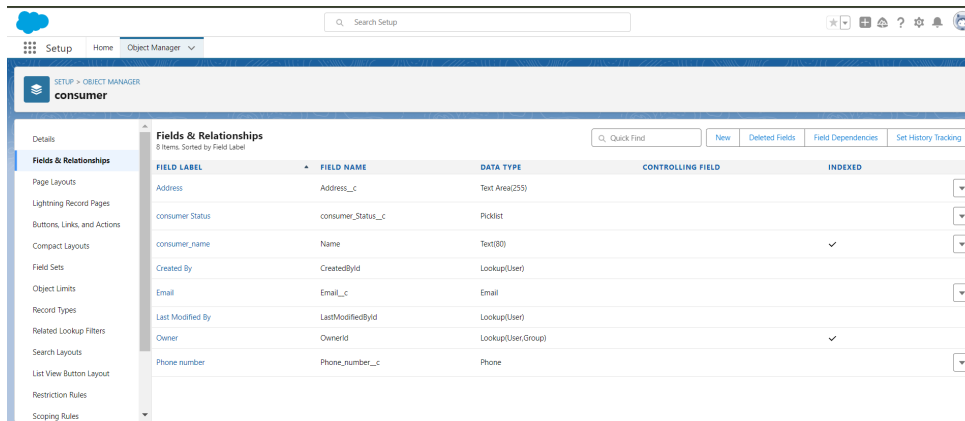
Total laptops Fields:



The screenshot shows the Salesforce Setup interface for the 'Total Laptops' object. The 'Fields & Relationships' section 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 (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)), and Total Laptops (Name, 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)		✓

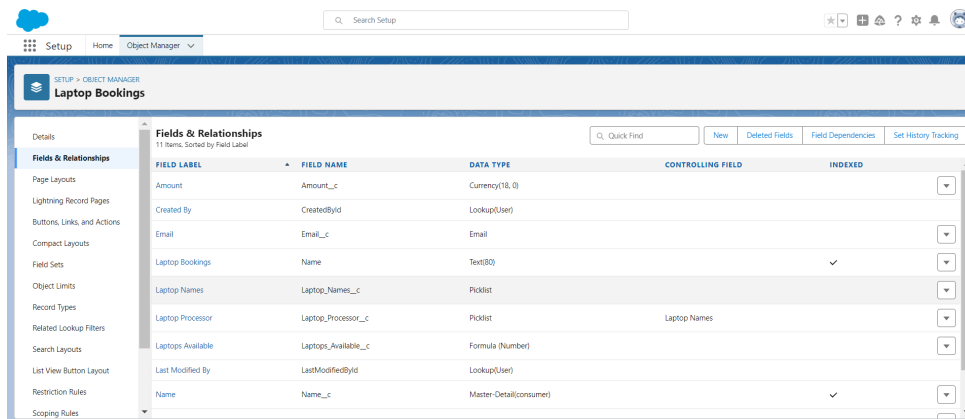
Consumer Fields:



The screenshot shows the Salesforce Setup interface for the 'consumer' object. The 'Fields & Relationships' section 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 (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)), and Phone number (Phone_number__c, Phone).

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		

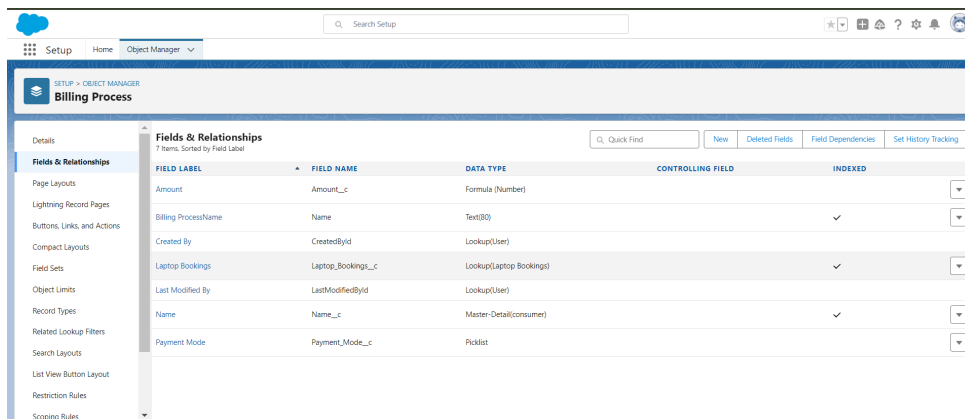
Laptop Booking Fields:



The screenshot shows the 'Laptop Bookings' object in the Salesforce Setup interface. The 'Fields & Relationships' section is active, displaying a list of 11 fields. The table below represents the data shown in the screenshot.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Amount	Amount__c	Currency (16, 0)		
Created By	CreatedById	Lookup (User)		
Email	Email__c	Email		
Laptop Bookings	Name	Text (80)		✓
Laptop Names	Laptop_Names__c	Picklist		
Laptop Processor	Laptop_Processor__c	Picklist	Laptop Names	
Laptops Available	Laptops_Available__c	Formula (Number)		
Last Modified By	LastModifiedById	Lookup (User)		
Name	Name__c	Master-Detail (consumer)		✓

Billing Process Fields:



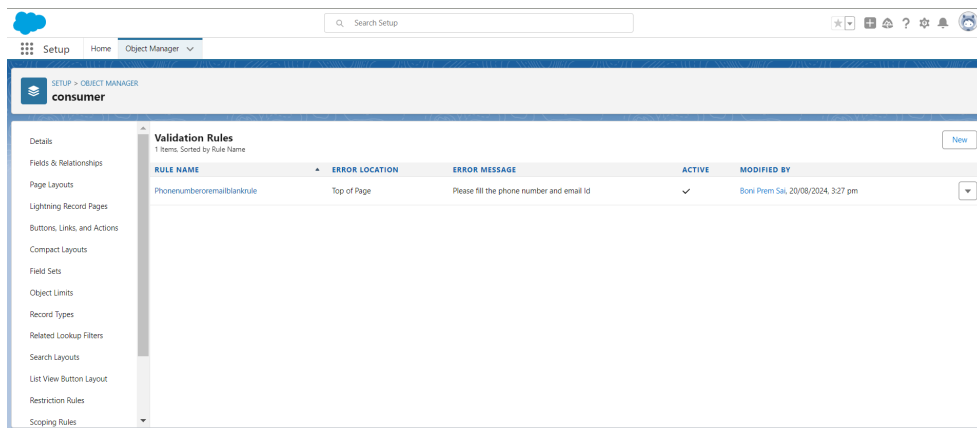
The screenshot shows the 'Billing Process' object in the Salesforce Setup interface. The 'Fields & Relationships' section is active, displaying a list of 7 fields. The table below represents the data shown in the screenshot.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Amount	Amount__c	Formula (Number)		
Billing ProcessName	Name	Text (80)		✓
Created By	CreatedById	Lookup (User)		
Laptop Bookings	Laptop_Bookings__c	Lookup (Laptop Bookings)		✓
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 ObjectManager.
- **Edit ConsumerObject:** Select Consumer from the drop-down and click Edit.
- **Create a Validation Rule:**
 - Click on **Validation Rules > New**.
 - Enter the following details:
 1. **Rule Name:** Phonenumeroemailblankrule
 2. **Description:** Phone number and email number should not be blank.
 3. **Formula:** `OR (ISBLANK (phone_number__c) , ISBLANK (email_____c))`
 - Check the syntax and click **Save**.

Rule:



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:** [AliasName]
 - **Email:** [Your PersonalEmail]
 - **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:** [AliasName]
- **Email:** [Your PersonalEmail]

- **Username:** [text@text.text](#)
- **Nickname:** [Nickname]
- **Role:** Agent
- **User License:** Salesforce Platform
- **Profiles:** Standard PlatformUser
- Click **Save**.

Users:

SETUP Users

All Users

On this page you can create, view, and manage users.
To get more licenses, use the Your Account app. [Let's Go](#)

View: [All Users](#) [Edit](#) [Create New View](#)

[New User](#) [Reset Password\(s\)](#) [Add Multiple Users](#)

Action	Full Name	Alias	Username	Role	Active	Profile
Edit	Chatter, Expect	Chatter	chatty.000dm0000@text@text.text		✓	Chatter Free User
Edit	Prem Sai, Boss	BPrem	preem@text@text.text		✓	System Administrator
Edit	ram, ram	ram	boni@text@text.text	Agent	✓	Standard Platform User
Edit	User Integration	Integ	integration@000dm0000@text@text.text		✓	Analytics Cloud Integration User
Edit	User Security	sec	insightssecurity@000dm0000@text@text.text		✓	Analytics Cloud Security User
Edit	y_vicky	yy	sai@text@text.text	owner	✓	owner

[New User](#) [Reset Password\(s\)](#) [Add Multiple Users](#)

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:** [AliasName]
 - **Email:** [Your PersonalEmail]
 - **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:** [AliasName]
- **Email:** [Your PersonalEmail]
- **Username:** [text@text.text](#)
- **Nickname:** [Nickname]
- **Role:** Agent
- **User License:** Salesforce Platform
- **Profiles:** Standard PlatformUser
- Click **Save**.

Users:

SETUP

Users

All Users

On this page you can create, view, and manage users.

To get more licenses, use the Your Account app. [Let's Go](#)

View: All Users Edit Create New View

New User

Reset Password(s)

Add Multiple Users

Action	Full Name	Alias	Username	Role	Active	Profile
<input type="checkbox"/> Edit	Chatter Expert	Chatter	chatter.000dm0000au@4uail-uk40lssae2@chatter.salesforce.com		✓	Chatter Free User
<input type="checkbox"/> Edit	Prem Sai .Boni	BPrem	psm@tendri.institute		✓	System Administrator
<input type="checkbox"/> Edit	ram .ram	ram	boni@tendri.inst	Agent	✓	Standard Platform User
<input type="checkbox"/> Edit	User Integration	Integ	Integration@000dm0000au@94uail.com		✓	Analytics Cloud Integration User
<input type="checkbox"/> Edit	User Security	sec	insightssecurity@000dm0000au@94uail.com		✓	Analytics Cloud Security User
<input type="checkbox"/> Edit	y_vicky	yx	aal@tendri.inst	owner	✓	owner

New User

Reset Password(s)

Add Multiple 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 += 'Welcometo Laptop Rentals!You have been seen as a valuablecustomer to  
            us.\n Please continue your journey with us, while we try to provide you with good quality  
            resources. \n LaptopAmount = ' + 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});  
        }  
    }  
}
```

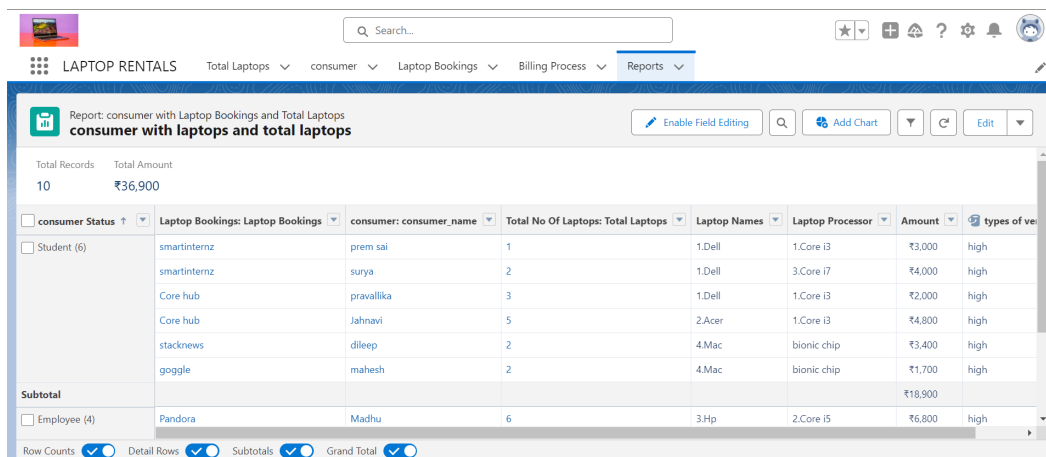
Laptop Booking Trigger:

```
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:



The screenshot shows a Salesforce report interface. At the top, there's a navigation bar with 'LAPTOP RENTALS' and several dropdown menus. Below this, the report title 'consumer with laptops and total laptops' is displayed. The report shows a table with columns for consumer status, laptop bookings, consumer name, total number of laptops, laptop names, laptop processors, amounts, and types of vehicles. The data is grouped by consumer status, with 'Student (6)' and 'Employee (4)' sections. A subtotal row is also present. At the bottom, there are checkboxes for 'Row Counts', 'Detail Rows', 'Subtotals', and 'Grand Total', all of which are checked.

consumer Status	Laptop Bookings: Laptop Bookings	consumer: consumer_name	Total No Of Laptops: Total Laptops	Laptop Names	Laptop Processor	Amount	types of ve
Student (6)	smartinternz	prem sai	1	1.Dell	1.Core i3	₹3,000	high
	smartinternz	surya	2	1.Dell	3.Core i7	₹4,000	high
	Core hub	pravallika	3	1.Dell	1.Core i3	₹2,000	high
	Core hub	Jahnavi	5	2.Acer	1.Core i3	₹4,800	high
	stacknews	dileep	2	4.Mac	bionic chip	₹3,400	high
	goggle	maresh	2	4.Mac	bionic chip	₹1,700	high
Subtotal						₹18,900	
Employee (4)	Pandora	Madhu	6	3.Hp	2.Core i5	₹6,800	high

Dashboard:

