

# 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.

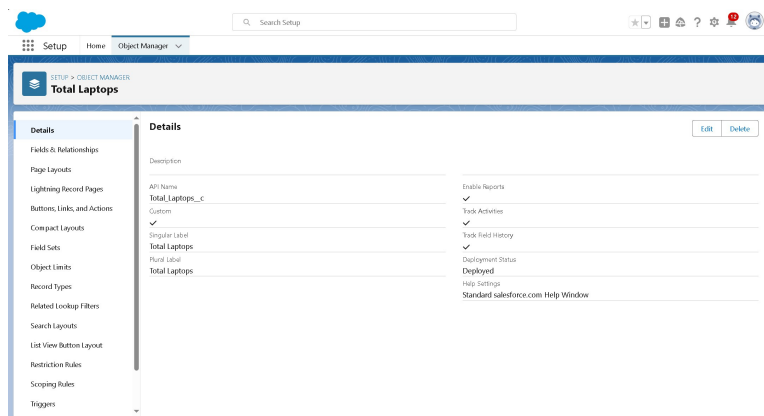
### Detailed Setup Instructions:

#### 1. Creating Custom Objects

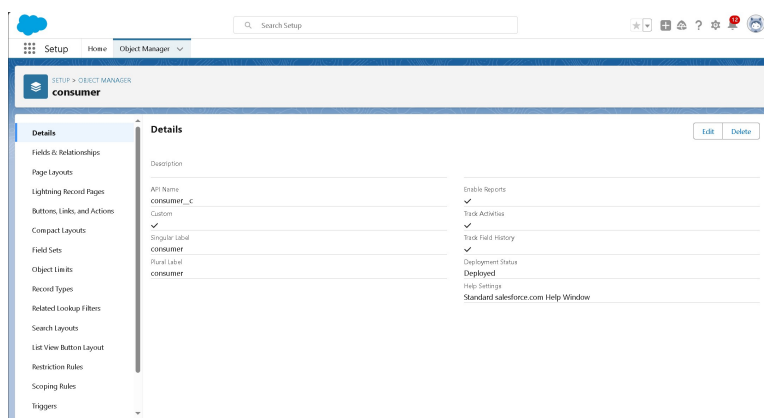
- **Navigate to Setup:** Go to the Setup page and click on Object Manager.
- **Create Custom Object: Total Laptops**
  - Click on **Create > Custom Object**.
  - Enter the following details:
    - **Label Name:** Total Laptops
    - **Plural Label Name:** Total Laptops

- **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**

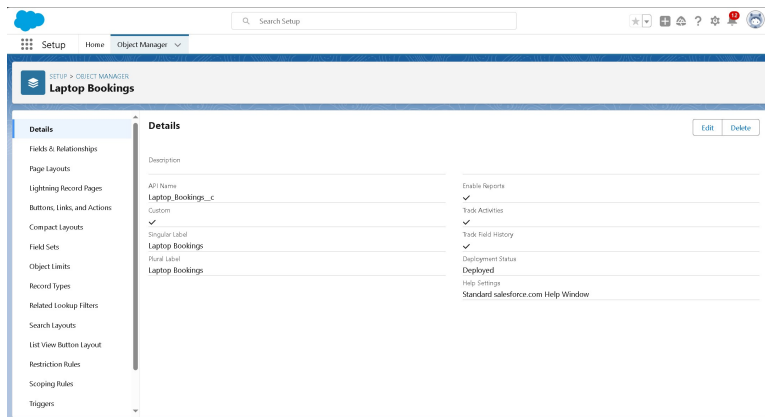
### **Total Laptops Object:**



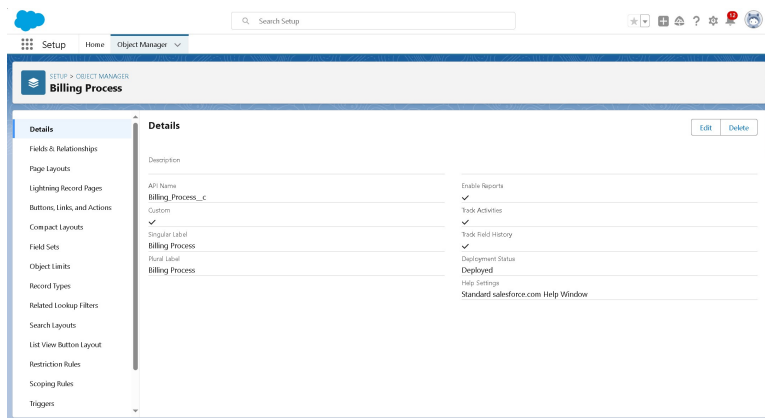
### **Consumer Object:**



## Laptop Booking Object:



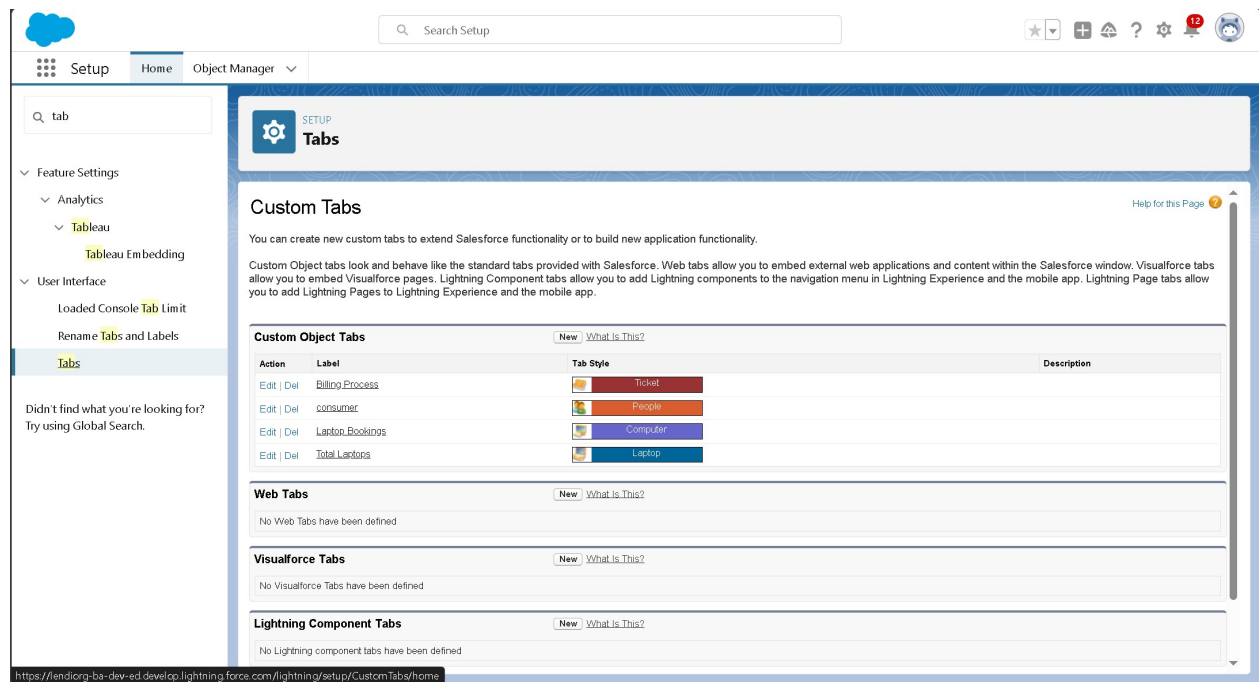
## Billing Process Object:



## 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:

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 ⓘ

#0070C2

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

Create

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 Periods

Assets

Selected Items

Initial Laptops

computer

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

B2B Recurring Portal Buyer Profile

Contract Manager

Custom Marketing Profile

Custom Sales Profile

Custom Support Profile

Customer Community Login User

Customer Community Plus Login User

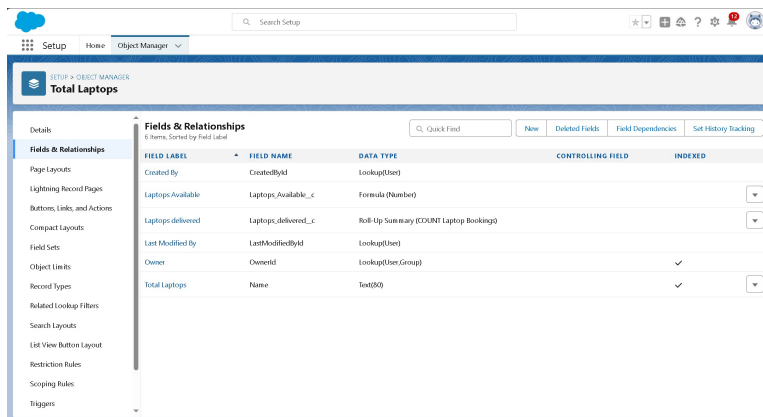
Selected Profiles

System Administrator

## 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.

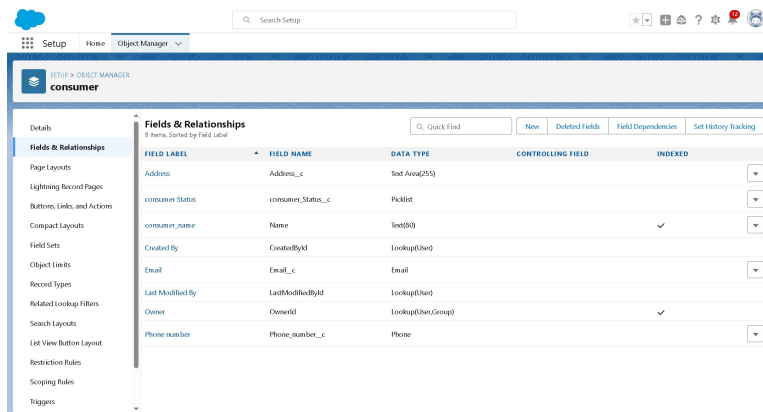
### Total Laptops Fields:



The screenshot shows the Salesforce Setup interface for the 'Total Laptops' object. The 'Fields & Relationships' tab is selected, 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(50)).

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(50)		✓

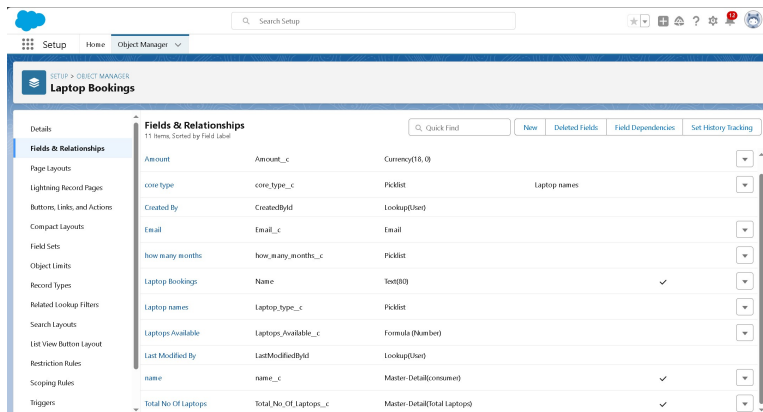
### Consumer Fields:



The screenshot shows the Salesforce Setup interface for the 'Consumer' object. The 'Fields & Relationships' tab is selected, 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(50)), 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(50)		✓
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		

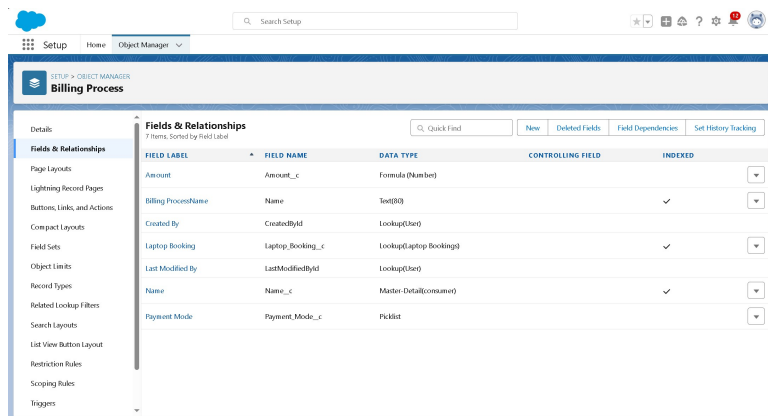
### Laptop Booking Fields:



The screenshot shows the Salesforce Setup interface for the 'Laptop Bookings' object. The 'Fields & Relationships' tab is selected, 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 (Amount\_\_c, Currency(16, 0)), core type (core\_type\_\_c, Picklist), Created By (CreatedById, Lookup(User)), Email (Email\_\_c, Email), how many months (how\_many\_months\_\_c, Picklist), Laptop Bookings (Name, Text(50)), 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)), and Total No Of Laptops (Total\_No\_Of\_Laptops\_\_c, 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(50)		✓
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:



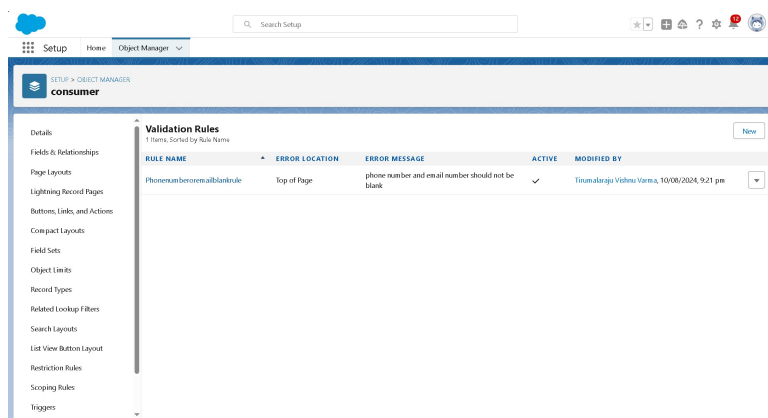
The screenshot shows the 'Billing Process' configuration page in Salesforce Setup. The 'Fields & Relationships' tab is active, displaying a table of fields for the Billing Process object. The table has columns for Field Label, Field Name, Data Type, Controlling Field, and Indexed. The fields listed are Amount, Billing Process Name, Created By, Laptop Booking, Last Modified By, Name, and Payment Mode.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Amount	Amount__c	Formula (Number)		
Billing Process Name	Name	Text(50)		✓
Created By	CreatedById	Lookup(30)		
Laptop Booking	Laptop_Booking__c	Lookup(Laptop_Booking)		✓
Last Modified By	LastModifiedById	Lookup(30)		
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 'Validation Rules' configuration page for the 'consumer' object in Salesforce Setup. The 'Validation Rules' tab is active, displaying a table with one validation rule named 'Phonenumeroemailblankrule'. The table has columns for Rule Name, Error Location, Error Message, Active, and Modified By.

RULE NAME	ERROR LOCATION	ERROR MESSAGE	ACTIVE	MODIFIED BY
Phonenumeroemailblankrule	Top of Page	phone number and email number should not be blank	✓	Tinularaj Vishnu Varma, 10/06/2024, 9:21 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:

**SETUP Users**

**All Users** [Help for this Page](#)

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	chatterv000dm000000@t23uai.acimrtdsruie@chatter.salesforce.com		✓	Chatter Free User
<input type="checkbox"/> Edit	ramesh ram	ram	vishnu2049@so.com	Agent	✓	Standard Platform User
<input type="checkbox"/> Edit	User Integration	inteo	integration@000dm000000@t23uai.com		✓	Analytics Cloud Integration User
<input type="checkbox"/> Edit	User Security	sas	insightsecurity@000dm000000@t23uai.com		✓	Analytics Cloud Security User
<input type="checkbox"/> Edit	Vishnu Varma Tirumalaraju	TVish	21ed1a1562@endi.org		✓	System Administrator
<input type="checkbox"/> Edit	y_siddh	yy	vishnu2049@so.com	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 += '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});
        }
    }
}
```

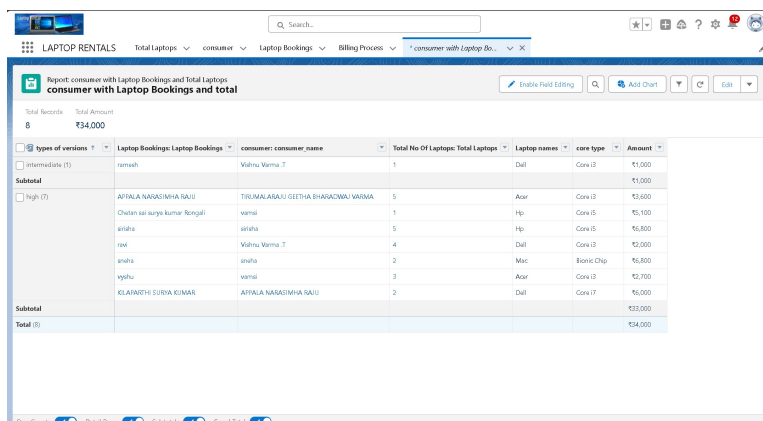
## Laptop Booking Trigger:

```
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:



types of versions	Laptop Bookings: Laptop Bookings	consumer: consumer_name	Total No Of Laptops: Total Laptops	Laptop names	core type	Amount
intermediate (1)	namah	Vishnu Varma .T	1	Dell	Core i3	₹1,000
Subtotal						₹1,000
High (7)	APRILA NARASIMHA RAO	TRIMMALABAI GEETHA BHARADWAJ VARMA	5	Acer	Core i3	₹3,600
	Chetan sai surya kumar Rongali	varma	1	Hp	Core i5	₹5,100
	anisha	anisha	5	Hp	Core i5	₹5,800
	raai	Vishnu Varma .T	4	Dell	Core i3	₹2,000
	anaha	anaha	2	Mac	Bionic Chip	₹5,800
	yghu	varma	3	Acer	Core i3	₹2,700
	ELAIANETH SURYA KUMAR	APRILA NARASIMHA RAO	2	Dell	Core i7	₹5,000
Subtotal						₹33,000
Total (8)						₹34,000

### Dashboard:

