

# Project Documentation:A CRM Application for Laptop Rentals

## Category: Salesforce

### Skills Required:

- Salesforce Developer

### Project Overview:

The Laptop Rental CRM Application is designed to simplify the laptop rental process for customers. By utilizing Salesforce's robust CRM features, the application aims to enhance customer satisfaction, optimize operational efficiency, and streamline communication with potential renters via email.

### Key Features and Functionalities:

- **Laptop Inventory Management:-** Monitor and manage the available laptop inventory efficiently.
- **Customer Management:-** Keep track of customer information and interactions seamlessly.
- **Booking System:-** Facilitate laptop booking requests and oversee the entire booking process.
- **Billing and Payment Management:-** Streamline billing and payment processes related to laptop rentals.
- **User Roles and Profiles:-** Establish different access levels for users, such as Owners and Agents, to maintain security and efficiency.
- **Data Validation Rules:-** Implement rules to ensure the accuracy and completeness of data entered into the system.
- **Process Automation:-** Utilize Salesforce Flows and Apex triggers to automate key functions like laptop distribution.
- **Reporting and Dashboards:-** Create comprehensive reports and visual data representations through customizable dashboards.

# 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:








The screenshot shows the Salesforce Setup interface for the 'Total Laptops' custom object. The top navigation bar includes the Salesforce logo, a search bar, and various utility icons. The left sidebar shows the 'Setup' menu with 'Object Manager' selected. The main content area is titled 'Total Laptops' and contains a 'Details' section. The 'Details' section is divided into two columns. The left column lists various configuration options, and the right column shows the current settings for the 'Total Laptops' object. The 'Details' section includes a 'Description' field, an 'API Name' field (Total\_Laptops\_\_c), a 'Custom' checkbox (checked), a 'Singular Label' field (Total Laptops), a 'Plural Label' field (Total Laptops), and a 'Track Field History' checkbox (checked). The 'Details' section also includes a 'Deployed' status (Deployed) and a 'Help Settings' link (Standard salesforce.com Help Window). The 'Details' section includes 'Edit' and 'Delete' buttons.

Field	Value
Description	
API Name	Total_Laptops__c
Custom	✓
Singular Label	Total Laptops
Plural Label	Total Laptops
Track Field History	✓
Deployment Status	Deployed
Help Settings	Standard salesforce.com Help Window

## Consumer Object:



Search Setup



SetupHomeObject Manager

SETUP > OBJECT MANAGER  
**consumer**

**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

Details

EditDelete

Description

API Name  
consumer\_\_c

Custom

Singular Label  
consumer

Plural Label  
consumer

Enable Reports  
✓


Track Activities

Track Field History  
✓








Deployment Status  
Deployed

Help Settings  
Standard salesforce.com Help Window

## Laptop Booking Object:



Search Setup



SetupHomeObject Manager

SETUP > OBJECT MANAGER  
**Laptop Bookings**

**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

Details

EditDelete

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

## Billing Process Object:



Search Setup



SetupHomeObject Manager

SETUP > OBJECT MANAGER  
**Billing Process**

**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

Details

EditDelete

Description

API Name  
Billing\_Process\_\_c

Custom

Singular Label  
Billing Process

Plural Label  
Billing Process

Enable Reports  
✓

Track Activities

Track Field History  
✓

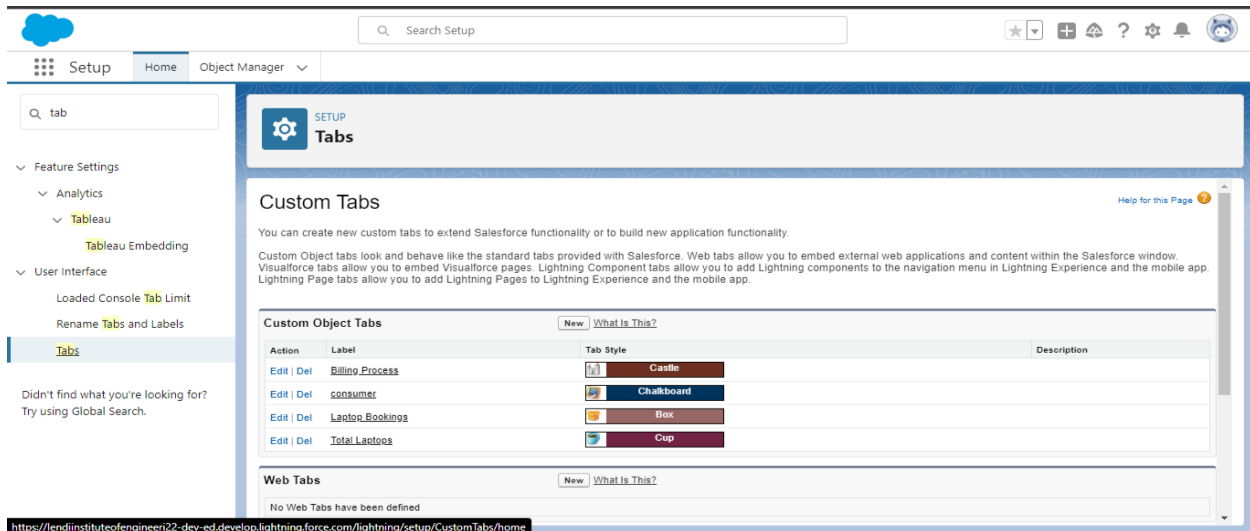
Deployment Status  
Deployed

Help Settings  
Standard salesforce.com Help Window

## 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.

- ### App Details:

### App Naviagtion:

←

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 ▾

📁 Accounts

🌐 All Sites

💳 Alternative Payment Methods

📊 Analytics

🚀 App Launcher

📅 Appointment Categories

📅 Appointment Invitations

📅 Annual Recurrence

Selected Items

📁 Total Laptops

📁 consumer

📁 Laptop Bookings

📁 Billing Process

▶

◀

⬆

⬇

## App User Profiles:

**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

**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:

**Setup** > **Object Manager**

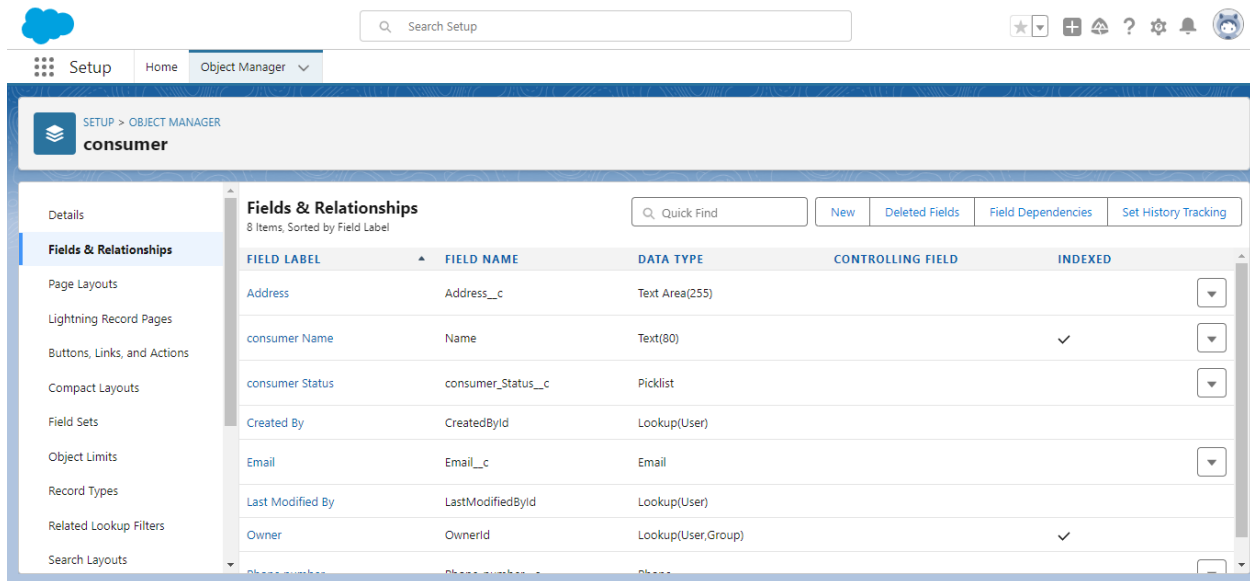
**Total Laptops**

**Fields & Relationships**

6 Items, Sorted by Field Label

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	Name	Text(80)		✓

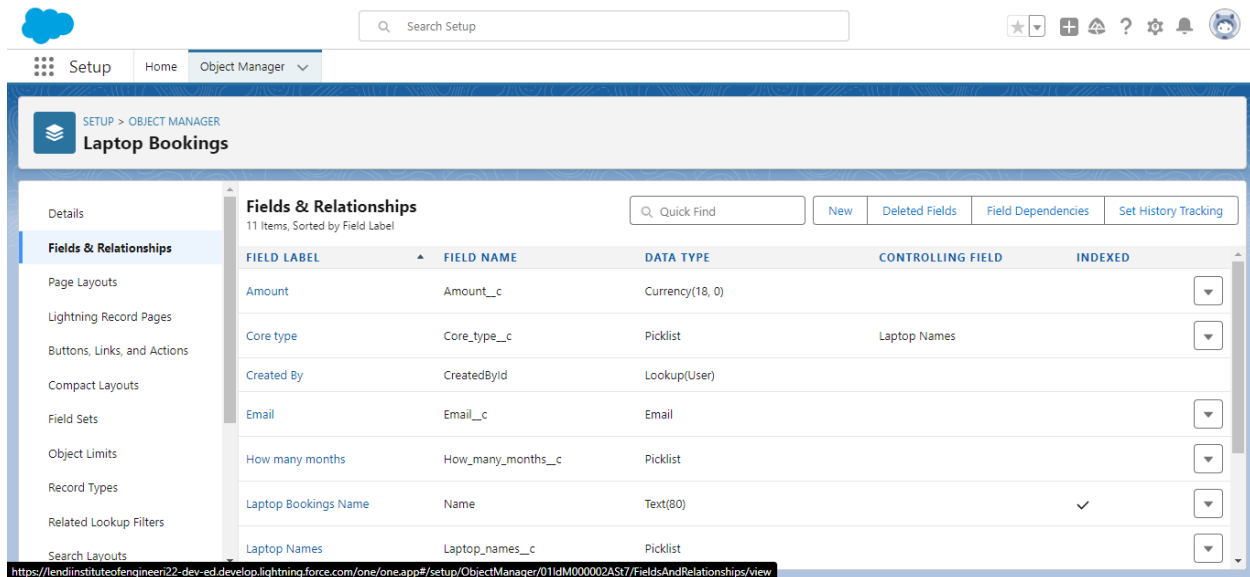
## Consumer Fields:



The screenshot shows the Salesforce Object Manager interface for the 'consumer' object. The left sidebar contains a navigation menu with options: Details, Fields & Relationships (selected), Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, and Search Layouts. The main content area is titled 'Fields & Relationships' and shows 8 items, sorted by Field Label. A table lists the fields with columns: FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The fields are: Address (Text Area(255)), consumer Name (Text(80)), consumer Status (Picklist), Created By (Lookup(User)), Email (Email), Last Modified By (Lookup(User)), Owner (Lookup(User,Group)), and Phone number (Phone). The 'consumer Name' and 'Owner' fields are indexed.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Address	Address__c	Text Area(255)		
consumer Name	Name	Text(80)		✓
consumer Status	consumer_Status__c	Picklist		
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 Object Manager interface for the 'Laptop Bookings' object. The left sidebar contains a navigation menu with options: Details, Fields & Relationships (selected), Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, and Search Layouts. The main content area is titled 'Fields & Relationships' and shows 11 items, sorted by Field Label. A table lists the fields with columns: FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The fields are: Amount (Currency(18, 0)), Core type (Picklist), Created By (Lookup(User)), Email (Email), How many months (Picklist), Laptop Bookings Name (Text(80)), and Laptop Names (Picklist). The 'Laptop Bookings Name' field is indexed.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Amount	Amount__c	Currency(18, 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	Name	Text(80)		✓
Laptop Names	Laptop_names__c	Picklist		

<https://lendlinstituteofengineer22-dev-ed.develop.lightning.force.com/one/one.app#/setup/ObjectManager/01dM000002ASi7/FieldsAndRelationships/view>

## Billing Process Fields:

The screenshot shows the Salesforce Object Manager interface for the 'Billing Process' object. The left sidebar contains a navigation menu with options: Details, Fields & Relationships (selected), Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, and Search Layouts. The main content area is titled 'Fields & Relationships' and shows a list of 7 fields. The fields are: Amount (Formula (Number)), Billing Process Name (Text(80)), Created By (Lookup(User)), Laptop Booking (Lookup(Laptop Bookings)), Last Modified By (Lookup(User)), Name (Master-Detail(consumer)), and Payment Mode (Picklist). The 'Indexed' column shows checkmarks for Billing Process Name, Laptop Booking, Name, and Payment Mode. The 'Controlling Field' column is empty for all fields.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Amount	Amount__c	Formula (Number)		
Billing Process Name	Name	Text(80)		✓
Created By	CreatedById	Lookup(User)		
Laptop Booking	Laptop_Booking__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 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:** Phonenumbereoremailblankrule
    - **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 Validation Rules page for the 'consumer' object. The left sidebar contains a navigation menu with options: Details, Fields & Relationships (selected), Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, and Search Layouts. The main content area is titled 'Validation Rules' and shows a list of 1 item. The rule is: Phonenumbereoremailblankrule, located at the Top of Page, with the error message 'Please fill the phone number and email id'. The rule is active and was modified by Allu Pravalika on 20/08/2024 at 11:32 am.

RULE NAME	ERROR LOCATION	ERROR MESSAGE	ACTIVE	MODIFIED BY
Phonenumbereoremailblankrule	Top of Page	Please fill the phone number and email id	✓	Allu Pravalika, 20/08/2024, 11:32 am



## 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:

The screenshot shows the Salesforce Setup page with the 'Users' section selected in the left sidebar. The main content area displays the 'All Users' page, which includes a table of existing users and buttons for creating new users.

**Users Table:**

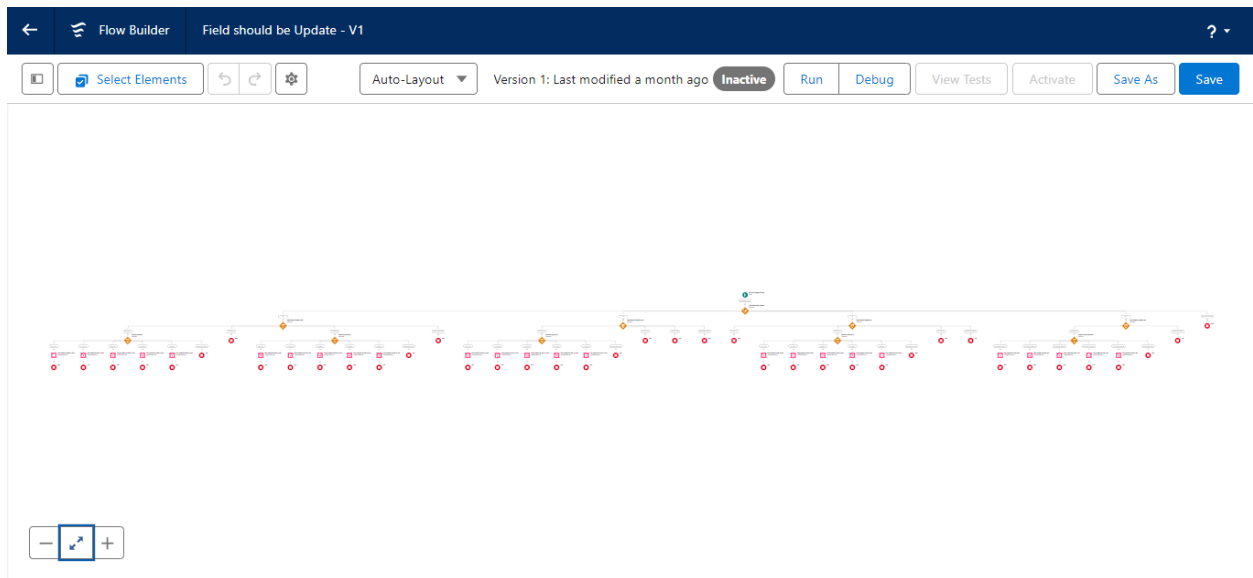
Action	Full Name ↑	Alias	Username	Role	Active	Profile
<input type="checkbox"/> <a href="#">Edit</a>	Chatter Expert	Chatter	chattv00ddm00000au21uad.f3ay3z5evz2@chatter.salesforce.com		✓	Chatter Free User
<input type="checkbox"/> <a href="#">Edit</a>	Pravalika .Allu	APravar	pravalikaallu@lendi.inst		✓	System Administrator
<input type="checkbox"/> <a href="#">Edit</a>	ram .ram	ram	ram@rock.com	Agent	✓	Standard Platform User
<input type="checkbox"/> <a href="#">Edit</a>	User .Integration	inteo	integration@00ddm00000au21uad.com		✓	Analytics Cloud Integration User
<input type="checkbox"/> <a href="#">Edit</a>	User .Security	sec	insightsecurity@00ddm00000au21uad.com		✓	Analytics Cloud Security User
<input type="checkbox"/> <a href="#">Edit</a>	y .yicky	yicky	myyicky@v.com	owner	✓	owner

Buttons at the bottom of the table: [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 lapList){
        for(Laptop_Bookings__c lap:lapList)
        {
            Messaging.SingleEmailMessage email = new Messaging.SingleEmailMessage();
            email.setToAddresses( new List{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{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:

Report: consumer with Laptop Bookings and Total Laptops  
**laptop**

Total Records: 10, Total Amount: ₹13,800

consumer Status	Laptop Bookings: Laptop Bookings Name	Laptop Names	consumer: consumer Name	Total No Of Laptops: Total Laptops Name	Core type	Amount
Student (7)	Manogna	Mac	manogna	4	1.core i3	₹1,500
	Pravallika	Acer	Pravallika	3	1.core i3	₹2,000
	Jahnavi	Dell	Jahnavi	4	3. Core i7 .	₹1,000
	Sahithi	Dell	Sahithi	2	1.core i3	₹500
	Prem	Hp	Prem	4	2. Core i5	₹1,500
	Naveen	Dell	Naveen	1	1.core i3	₹1,800
	koushik	Mac	koushik	4	2. Core i5	₹1,600
<b>Subtotal</b>						₹9,900
Employee (3)	Nanendra	Acer	nanendra	3	2. Core i5	₹1,200

Row Counts: ☒ Detail Rows: ☒ Subtotals: ☒ Grand Total: ☒

Dashboard:

