Project Title: CRM Application for Laptop Rentals

I . Project Overview

This project aims to develop a cutting-edge Customer Relationship Management (CRM) application tailored for the Laptop Rentals industry. By leveraging Salesforce's cloud-based infrastructure, the application seeks to streamline the rental process by efficiently managing laptop bookings, tracking customer interactions, and automating key workflows such as notifications and data management. The solution addresses the inefficiencies and inaccuracies associated with manual data handling, ensuring a more reliable, scalable, and seamless experience for both the organization and its customers.

Objectives

- **Operational Efficiency:** Enhance the efficiency of booking processes to minimize wait times and eliminate errors.
- **Data Integrity:** Guarantee precise recording and management of booking data for improved analytics and reporting.
- **Enhanced User Experience:** Design an intuitive and user-friendly interface that optimizes the customer journey.

Key Benefits

- Deliver timely and personalized communication, fostering stronger customer relationships.
- Enable robust reporting capabilities to monitor and analyze rental trends effectively.
- Ensure accurate and centralized data accessibility, fostering inter-departmental collaboration and operational coherence.

Significance

The implementation of this CRM application represents a strategic leap toward operational excellence. It reduces inefficiencies, automates repetitive tasks, and equips the business with the tools needed to scale effectively in a competitive market.

II. Objectives

Business Goals:

- Streamline the laptop rental process to improve overall operational efficiency and reduce delays.

- Enhance customer engagement by automating notifications and communication.
- Foster business growth by implementing scalable solutions that adapt to increasing demand.
- Strengthen decision-making through real-time access to accurate and comprehensive data.

Specific Outcomes:

- Develop an automated booking process to minimize human error and accelerate order fulfillment.
- Implement a notification system to keep customers informed about their bookings, returns, and service updates.
- Establish a unified platform for storing and accessing customer, rental, and inventory data.
- Create advanced reporting dashboards to identify rental trends, customer preferences, and operational bottlenecks.
- Deliver an intuitive user interface for both customers and staff, ensuring seamless navigation and interaction.
- Ensure adherence to data privacy regulations and implement robust security measures for sensitive customer data.

III. Salesforce Key Features and Concepts Utilized

This Salesforce CRM project incorporates a variety of essential features:

- **Standard Objects:** Standard objects are the kind of objects that are provided by salesforce.com such as users, contracts, reports, dashboards, etc.

- **Custom Objects:** Custom objects are those objects that are created by users. They supply information that is unique and essential to their organization. They are the heart of any application and provide a structure for sharing data.

- **Tab :** A tab is like a user interface that is used to build records for objects and to view the records in the objects.

- **Custom Tabs :** Custom object tabs are the user interface for custom applications that you build in salesforce.com. They look and behave like standard salesforce.com tabs such as accounts, contacts, and opportunities.

- **The Lightning App :** An app is a collection of items that work together to serve a particular function. In Lightning Experience, Lightning apps give your users access to sets of objects, tabs, and other items all in one convenient bundle in the navigation bar. Lightning apps let you brand your apps with a custom color and logo. You can even include a utility bar and Lightning page tabs in your Lightning app. Members of your org can work more efficiently by easily switching between apps.

- **Fields :** represent the data stored in the columns of a relational database. It can also hold any valuable information that you require for a specific object. Hence, the overall searching, deletion, and editing of the records become simpler and quicker.

- **Standard Fields :** predefined fields in Salesforce that perform a standard task. The main point is that you can't simply delete a Standard Field until it is a non-required standard field. Otherwise, users have the option to delete them at any point from the application freely.

- **Custom Fields** are highly flexible, and users can change them according to requirements. Moreover, each organizer or company can use them if necessary. It means you need not always include them in the records, unlike Standard fields. Hence, the final decision depends on the user, and he can add/remove Custom Fields of any given form.

- **Validation rules** are applied when a user tries to save a record and are used to check if the data meets specified criteria. If the criteria are not met, the validation rule triggers an error message and prevents the user from saving the record until the issues are resolved. Improve the quality of your data using validation rules. Validation rules verify that the data a user enters in a record meets the standards you specify before the user can save the record. A validation rule can contain a formula or expression that evaluates the data in one or more fields and returns a value of "True" or "False". Validation rules also include an error message to display to the user when the rule returns a value of "True" due to an invalid value.

- **Profile** is a group/collection of settings and permissions that define what a user can do in salesforce. Profile controls "Object permissions, Field permissions, User permissions, Tab settings, App settings, Apex class access, Visualforce page access, Page layouts, Record Types, Login hours & Login IP ranges. You can define profiles by the user's job function.

- **Role** in Salesforce defines a user's visibility access at the record level. Roles may be used to specify the types of access that people in your Salesforce organization can have to data. Simply put, it describes what a user could see within the Salesforce organization.

- **User** is anyone who logs in to Salesforce. Users are employees at your company, such as sales reps, managers, and IT specialists, who need access to the company's records. Every user in Salesforce has a user account. The user account identifies the user, and the user account settings determine what features and records the user can access.
- **Record-Triggered Flows:** These are flows that are triggered when records meet specified criteria. They are often used for automating record updates and related actions.
- **Dashboards** help you visually understand changing business conditions so you can make decisions based on the real-time data you've gathered with reports. Use dashboards to help users identify trends, sort out quantities, and measure the impact of their activities. Before building, reading, and sharing dashboards, review these dashboard basics.

IV. Detailed Steps to Solution Design

The following steps outline the approach utilized in designing the Salesforce CRM application for managing laptop rentals.

Step 1 : Object Creation

1.1 Creation of Total Laptop Object

1. From the setup page >> Click on Object Manager >> Click on Create >> Click on Custom Object.

    1) Enter the label name>> Total Laptops

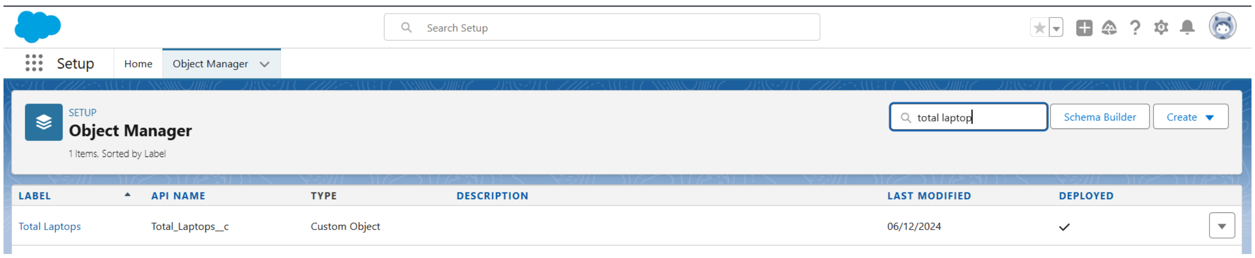
    2) Plural label name>> Total Laptops

    3) Enter Record Name Label and Format

Record Name >>Total Laptops

Data Type >> Text

2. Click on Allow reports,Allow search and Track Field History,
3. Allow search >> Save.



1.2 Creation of Consumer Object

From the setup page >> Click on Object Manager >> Click on Create >> Click on Custom Object.

1) Enter the label name >> consumer

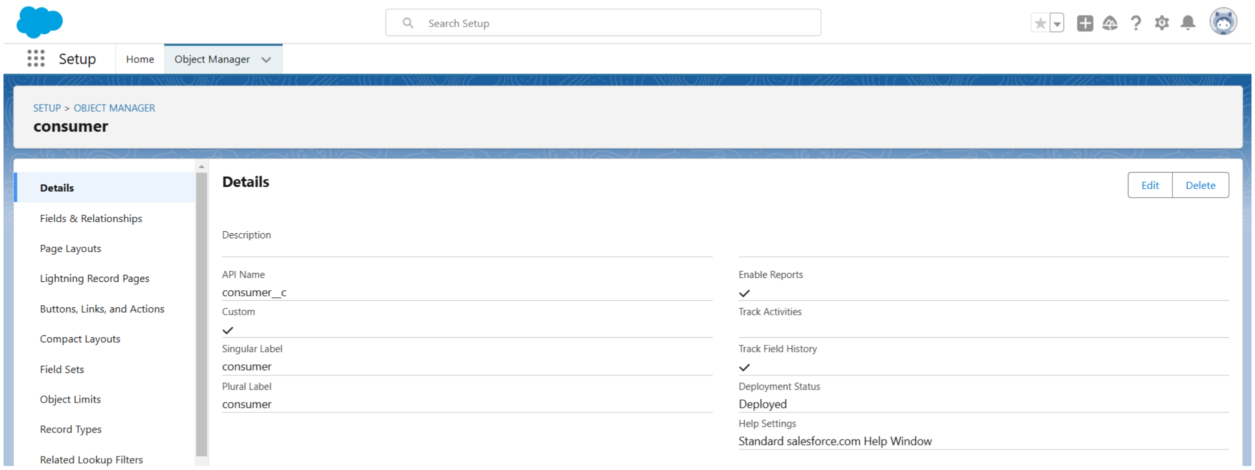
2) Plural label name >> consumer

3) Enter Record Name Label and Format

Record Name >> consumer_name

Data Type >> Name

2. Click on Allow reports,Allow search and Track Field History,
3. Allow search >> Save.



1.3 Creation of Laptop Bookings Object

From the setup page >> Click on Object Manager >> Click on Create >> Click on Custom Object.

1) Enter the label name >> Laptop Bookings

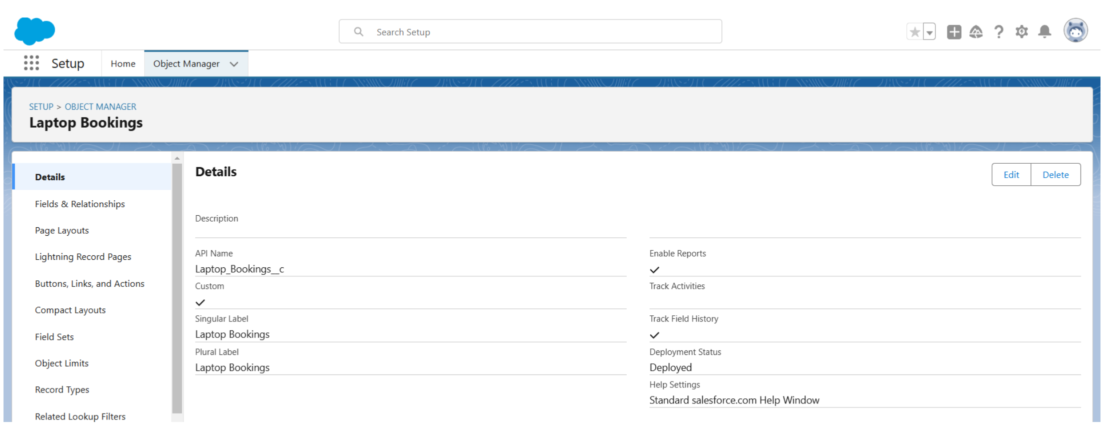
2) Plural label name >> Laptop Bookings

3) Enter Record Name Label and Format

Record Name >> Laptop Bookings

Data Type >> Name

2. Click on Allow reports,Allow search and Track Field History,
3. Allow search >> Save.



1.4 Creation of Billing Process Object

From the setup page >> Click on Object Manager >> Click on Create >> Click on Custom Object.

1) Enter the label name >> Billing Process

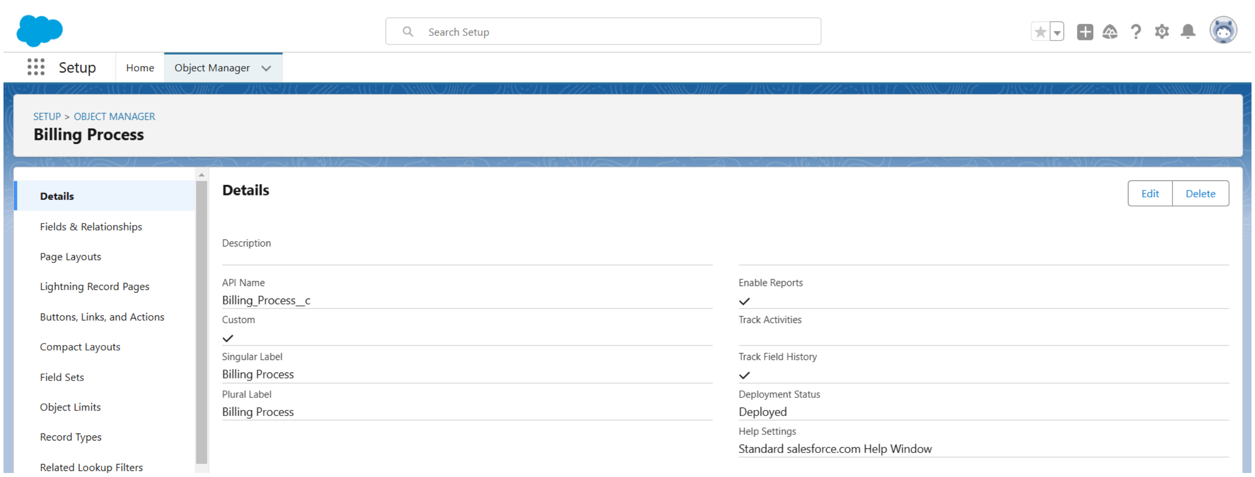
2) Plural label name >> Billing Process

3) Enter Record Name Label and Format

Record Name >> Billing ProcessName

Data Type >> Name

2. Click on Allow reports,Allow search and Track Field History,
3. Allow search >> Save.



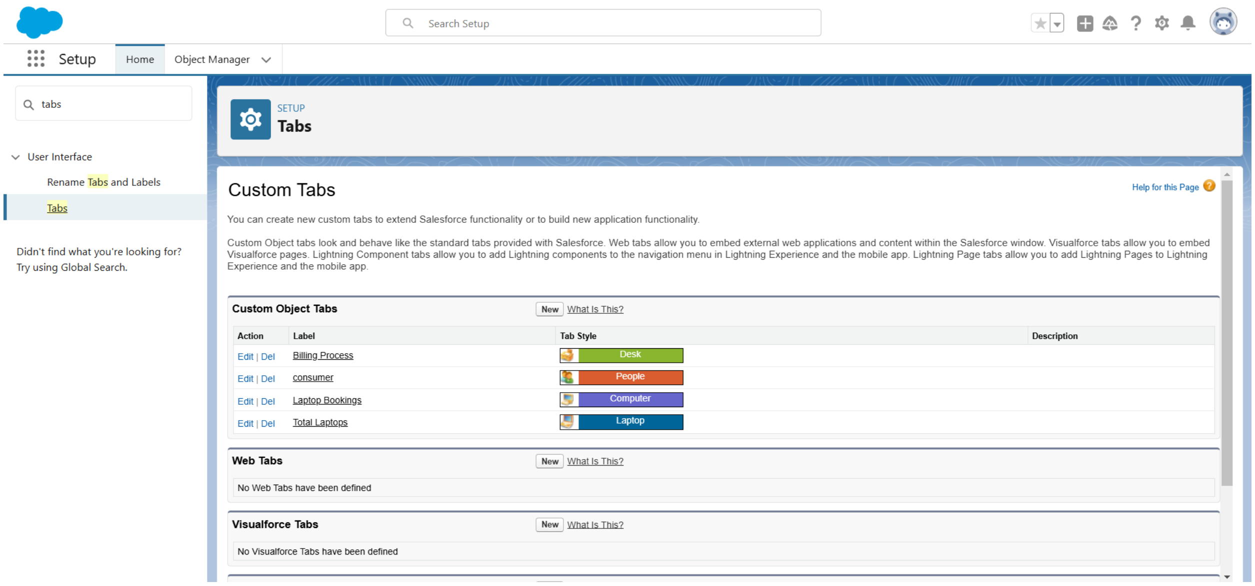
Step 2 : Tab Creation

To create a Tab:( )

1. Go to setup page >> Type Tabs in Quick Find bar >> click on tabs >> New (under custom object tab)
2. Select Object(Total Laptops) >> Select the tab style >> Next (Add to profiles page) keep it as default >> Next (Add to Custom App) uncheck the include tab .
3. Make sure that the Append tab to users' existing personal customizations is checked.
4. Click save.

Creating Remaining Tabs

1. Now create the Tabs for the remaining Objects, they are “consumer,Laptop Booking,Billing process”.



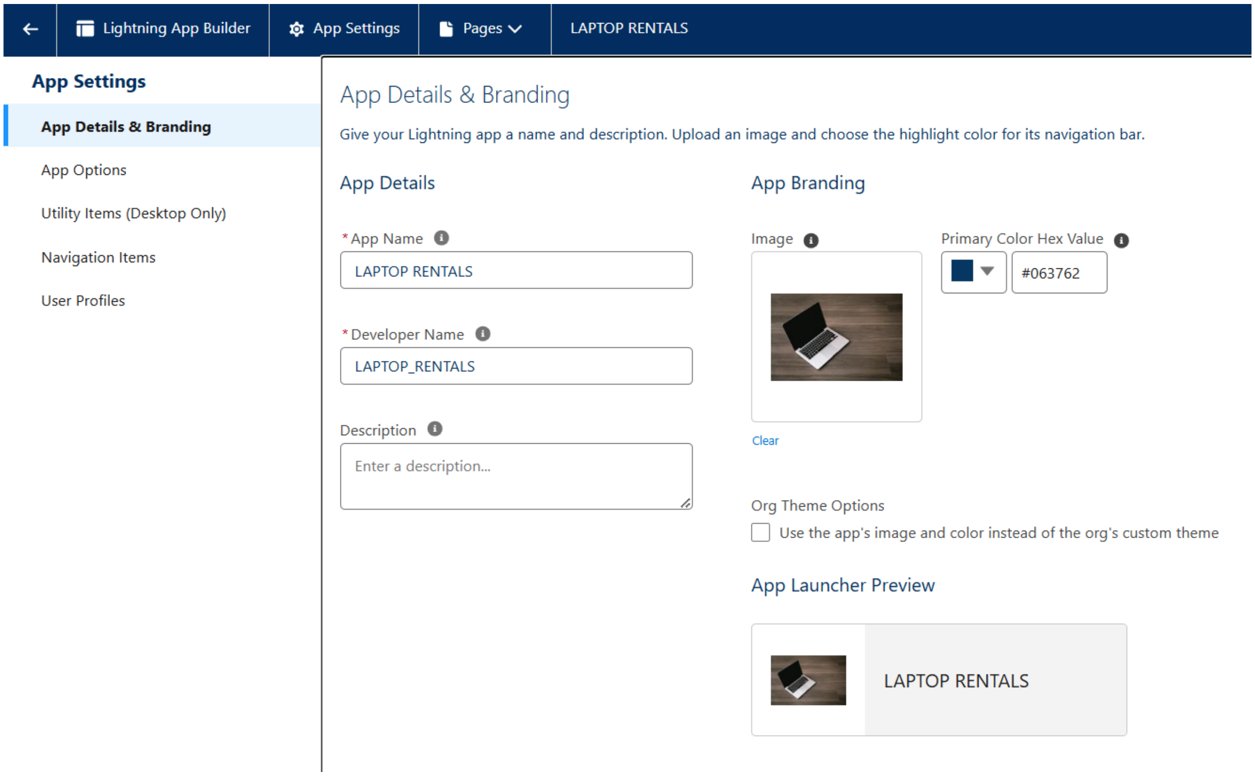
Step 3 : Lightning App Creation

To create a lightning app page:

1. Go to setup page >> search “app manager” in quick find >> select “app manager” >> click on New lightning App.

2. Fill the app name in app details as LAPTOP RENTALS >>Next >> (App option page) keep it as default >> Next >> (Utility Items) keep it as default >> Next.
3. Upload a photo that is related to your app.
4. To Add Navigation Items: Select the items (Total Laptops,consumer,Laptop Booking,Billing Process) from the search bar and move it using the arrow button >> Next.

5. To Add User Profiles: Search profiles (System administrator) in the search bar >> click on the arrow button >> save & finish.



Step 4 : Field Creation

4.1 Creating the field in consumer object

1. Go to setup >> click on Object Manager >> type object name(consumer) in search bar >> click on the object.
2. Now click on "Fields & Relationships" >> New
3. Select Data Type as a "Phone"
4. Click on next
5. Fill the Above as following:

- Field Label: Phone number
- Field Name : gets auto generated
- Click the required option checkbox.
- Click on Next >> Next >> Save and new.

To create another fields in an object:

1. Go to setup >> click on Object Manager >> type object name(consumer) in search bar >> click on the object.
2. Now click on "Fields & Relationships" >> New
3. Select Data type as a "Email" and Click on Next

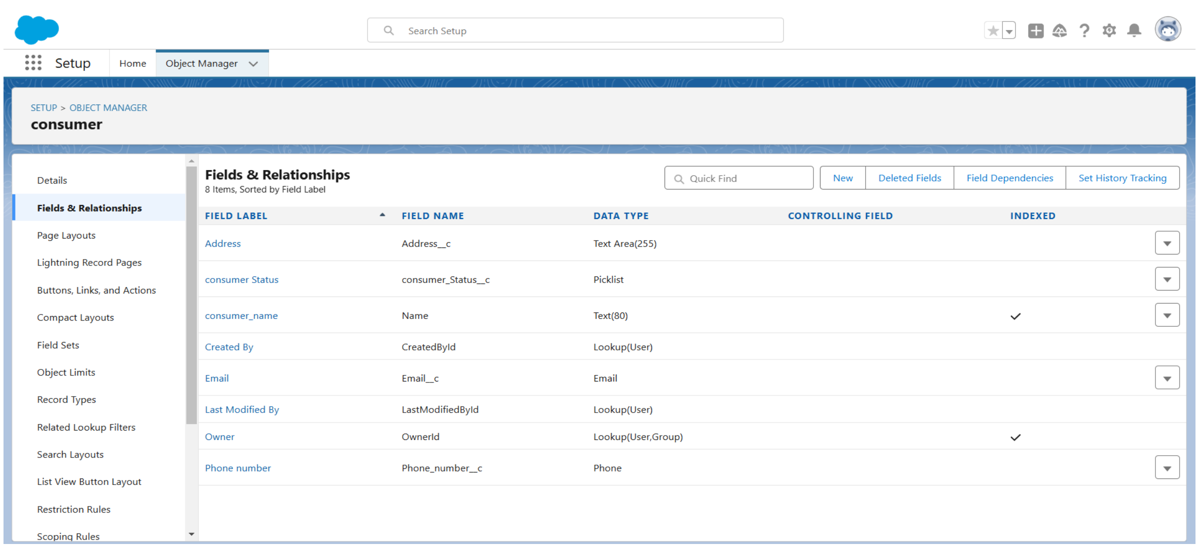
4. Fill the Above as following:
- Field Label: Email
- Field Name :It's gets auto generated
- Click on Next >> Next >> Save and new.

To create another fields in an object:

1. Go to setup >> click on Object Manager >> type object name(consumer) in search bar >> click on the object.
2. Now click on "Fields & Relationships" >> New
3. Select Data type as a "Text Area" and Click on Next
4. Fill the Above as following:
- Field Label: Address
- Field Name : It's gets auto generated
- Select Required field.
- Click on Next >> Next >> Save and new.

To create another fields in an object:

1. Go to setup >> click on Object Manager >> type object name(consumer) in search bar >> click on the object.
2. Now click on "Fields & Relationships" >> New
3. Select Data type as a "Picklist" and Click on Next
4. Fill the Above as following:
- Field Label: consumer Status
- Value - Select enter values with each value separated by a new line
1. Student
2. Employee
3. Others
- Select required
- Field Name :It's gets auto generated
- Click on Next >> Next >> Save and new.



4.2 Creating the field in Laptops Bookings object

To create fields in an object:

1. Go to setup >> click on Object Manager >> type object name(Laptop Booking) in the search bar >> click on the object.
2. Now click on “Fields & Relationships” >> New
3. Select Data Type as a “Picklist”
4. Label: Laptop Names
5. Picklist values are:-1.Dell 2. Acer 3.Hp 4.Mac
6. Select required
7. Click on Next >> Next >> Save and new

2. To Create a Fields & Relationship to an Laptop Booking Object

To create fields & relationship to an object:

1.Go to setup >> click on Object Manager >> type object name(Laptop Booking) in the search bar >> click on the object.
2.Now click on “Fields & Relationships” >> New

3.Select Data Type as a “Picklist” and Label: Core Type

4.Picklist values are:-1.core i3 2. Core i5 3. Core i7 4.Bionic Chip .

5.Select required

6.Click on Next >> Next >> Save and new

3. To Create a Field Dependency in the Laptop Booking Object

To create field dependency to an object:

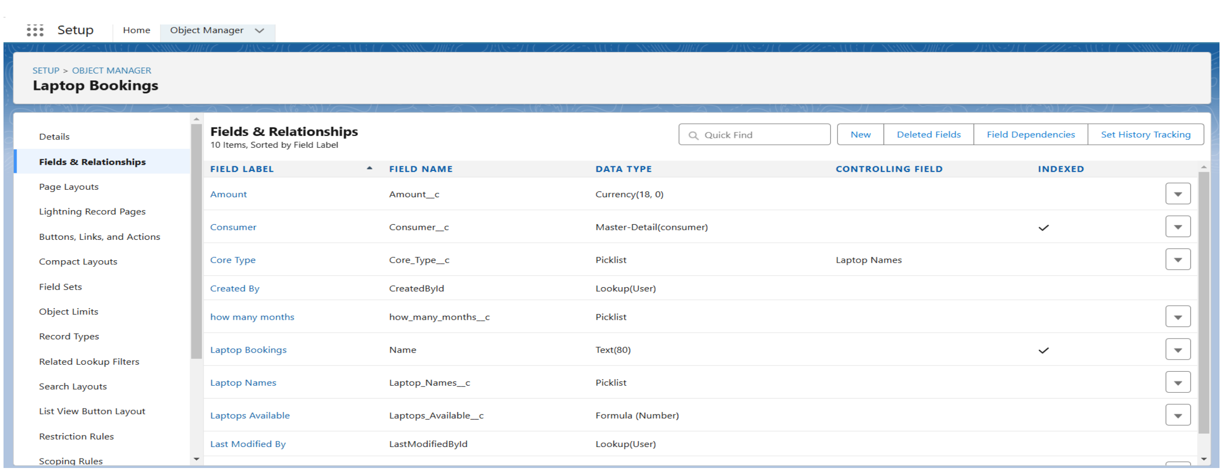
1.Go to setup >> click on Object Manager >> type object name(Laptop Booking) in the search bar >> click on the object.

2.click field dependency and next

3. Select **Controlling Field** as Laptop Names and **Dependent Field** as Core Type

4. Click the include value for dell-core i3,i5,i7 and for acer i3,i5,i7 and for hp i3,i5,i7 and also for mac bionic chip include the values for it.

Click save.



4.3 Create a Fields & Relationship to an Laptop Booking and Total Laptops Objects

To create fields & relationship to an object:

1. Go to setup >> click on Object Manager >> type object name(Laptop Booking) in the search bar >> click on the object.
2. Now click on “Fields & Relationships” >> New
3. Select Data Type as a “Master-Detail Relationship”
4. Click on Next
5. Click on the Related to drop down and Select the “consumer” object and click on Next
6. Fill the Above as following:
- Change the Field Label: Consumer
- Field Name :It’s gets auto generated
7. Click on Next >> Next >> Save and new.

To create fields in an object:

1.Go to setup >> click on Object Manager >> type object name(Laptop Booking) in the 2.search bar >> click on the object.

3.Now click on “Fields & Relationships” >> New

4.Select Data Type as a “Currency”

5.Click on Next

Fill the Above as following:

- Field Label: Amount
- Length: (18,0)
- Field Name :It’s gets auto generated
- Click on Next >> Next >> Save and new

To Create a Fields & Relationship to an Object

1. Go to setup >> click on Object Manager >> type object name(Laptop Booking) in the search bar >> click on the object.
2. Now click on “Fields & Relationships” >> New
3. Select Data Type as a “Lookup Relationship”

4. Click on Next
6. Click on the Related to drop down and Select the "Total Laptops" object and click on Next

- Fill the Above as following:
- Change the Field Label: Total No Of Laptops
- Field Name :It's gets auto generated
- Click on Next >> Next >> Save and new.

4. To Create a Fields & Relationship to an Laptop Booking Object

To create fields & relationship to an object:

8. Go to setup >> click on Object Manager >> type object name(Laptop Booking) in the search bar >> click on the object.
9. Now click on "Fields & Relationships" >> New
10. Select Data Type as a "Email"
11. Click on Next and save it.

To Create a Rollup Summary Field in "Total Laptops Object"

1. After Creating the Master-Detail Relationship Than Only you can create the Rollup Summary
2. Go to setup >> click on Object Manager >> type object name(Total Laptops) in the search bar >> click on the object.
3. Now click on "Fields & Relationships" >> New
4. Select Data type as a "Roll-up Summary" and Click on Next

- Fill the Above as following:
- Field Label: Laptops delivered
- Field Name :It's gets auto generated

6. Select the Laptop Bookings in the Summarized Object
7. Select the count Radio button in the select Roll-up Type

To create fields in an object:

1. Go to setup >> click on Object Manager >> type object name(Laptop Booking) in the search bar >> click on the object.
2. Now click on "Fields & Relationships" >> New
3. Select Data type as a "Formula" and Click on Next
4. Fill the Above as following:

- Field Label: Laptops Available

- Field Name : It's gets auto generated
- Select the Formula Return Type as "Number"
- Select the Decimal places as "0" and Click on Next
- Click on the Advanced Formula and Enter the value in formula box " 50 - " and Click on insert field than you will find a pop window under the Laptop Booking select the Total No Of Laptops in the second Column and select the Laptops delivered in the third column and click on insert
- " 50 - Total_no_of_laptops__r.Laptops_delivered__c " and Check Syntax
- Click on Next >> Next >> Save and new

To create fields in an object:

1.Go to setup >> click on Object Manager >> type object name(Laptop Booking) in the 2.search bar >> click on the object.

3.Now click on "Fields & Relationships" >>New

4.Select Data Type as a "picklist" and Label: how many months

5. Picklist values are 1.2.3.4.5
6. Click and save it.

4.4 Creation of Fields & Relationship for Billing Process Object

To create fields & relationship to an object:

1. Go to setup >> click on Object Manager >> type object name(Billing Process) in the search bar >> click on the object.
2. Now click on "Fields & Relationships" >> New
3. Select Data Type as a "Master-detail Relationship"
4. Click on Next
5. Click on the Related to drop down and Select the consumer object and click on Next
6. Fill the Above as following:

- Change the Field Label: Name
- Field Name :It's gets auto generated
- Click on Next >> Next >> Save and new.

2. To create another fields & relationship to an object:

1. Go to setup >> click on Object Manager >> type object name(Billing Process) in the search bar >> click on the object.
2. Now click on "Fields & Relationships" >> New

3. Select Data Type as a “Lookup Relationship”
4. Click on Next
5. Click on the Related to drop down and Select the Laptop Booking object and click on Next

Creation of another fields for the billing process object

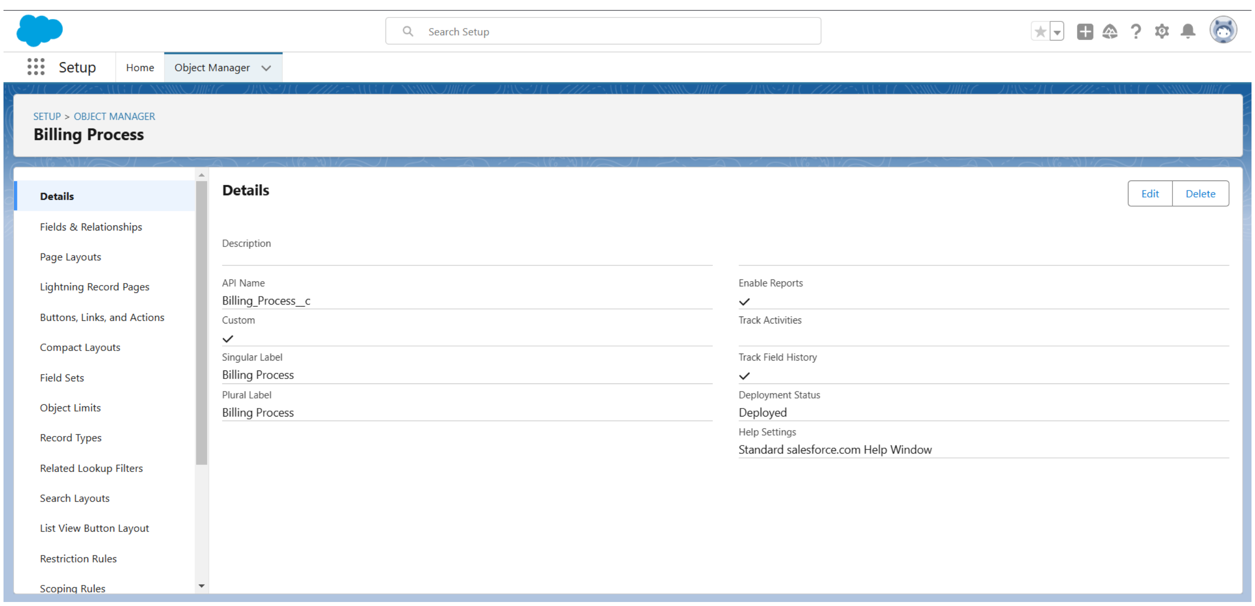
To create fields in an object:

1. Go to setup >> click on Object Manager >> type object name(Billing Process) in the search bar >> click on the object.
2. Now click on “Fields & Relationships” >> New
3. Select Data Type as a “Picklist”
4. Fill the Above as following:

- Field Label: Payment Mode
- Value >> Select enter values with each value separated by a new line

1. Cash
2. Check
3. Credit card
4. Debit card
5. UPI
6. Phonepe
7. Gpay
8. Paytm

- Select required
- Click on Next >> Next >> Save and new.



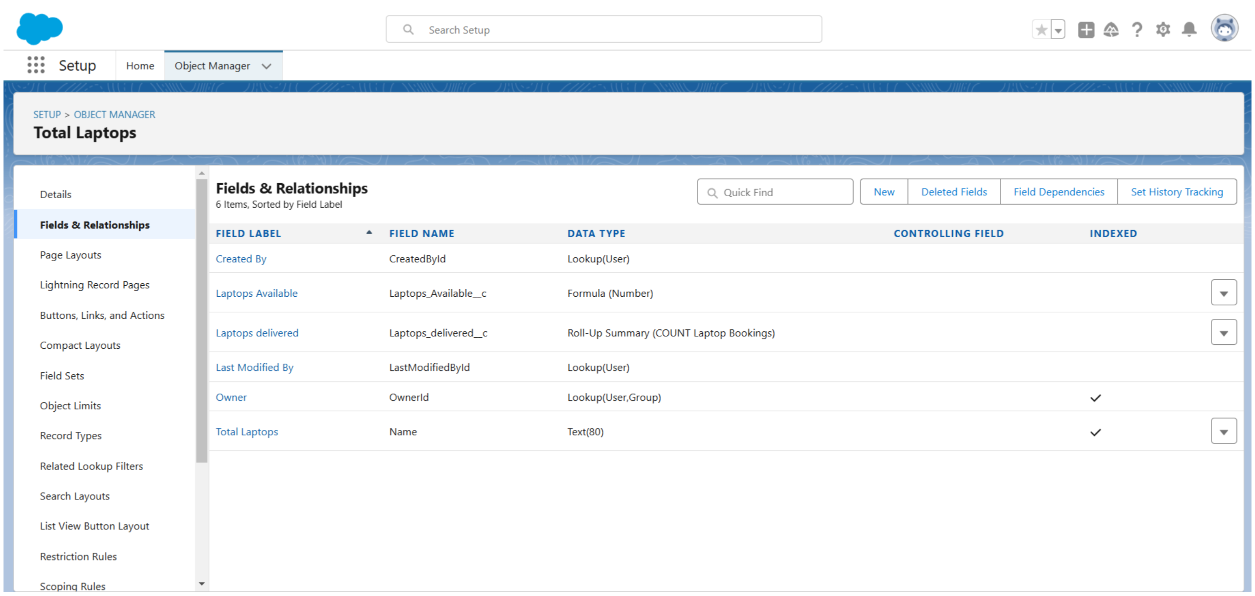
4.5 Creating the field in Total Laptops object

1. To create fields in an object:

1. Go to setup >> click on Object Manager >> type object name(Total Laptops) in search bar >> click on the object.
2. Now click on “Fields & Relationships” >> New
3. Select Data type as a “Formula” and Click on Next
4. Fill the Above as following:
5. Field Label: Laptops Available
6. Field Name : It’s gets auto generated
7. Select the Formula Return Type as “Number”
1. Select the Decimal places as “0” and Click on Next

Note: I am Considering “Total No Of Laptops = 50” While creating a new record in Total Laptops Object.

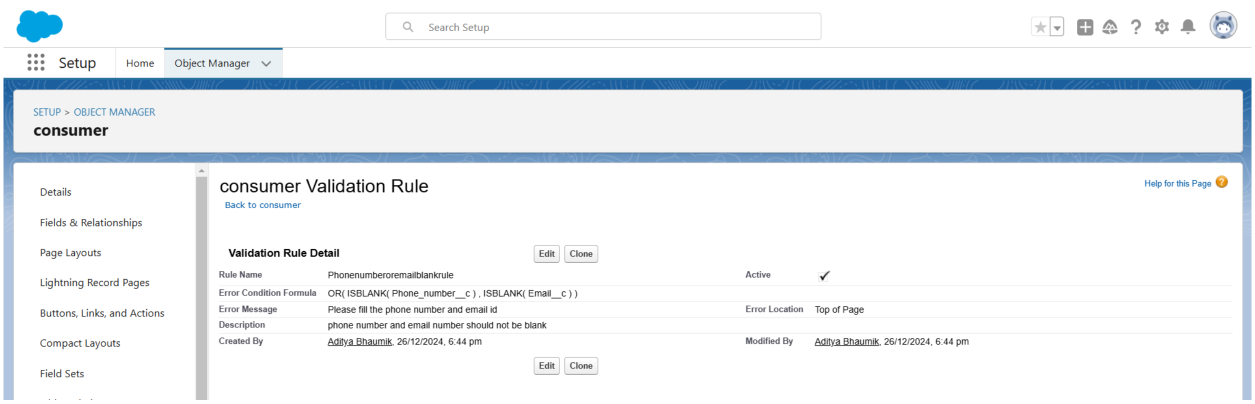
1. Click on the Advanced
2. Formula “ 50 - Laptops_delivered__c ” and Check Syntax
3. Click on Next >>Next >>Save and new.



Step 5 : Validation Rule Creation

Creating the validation rule for phone number field in consumer object

1. Go to the setup page >> click on object manager >> From drop down click edit for consumer object.
2. Click on the validation rule >> click New.
3. Enter the Rule name as “Phonenumberoremailblankrule ”.
4. Enter the description as “phone number and email number should not be blank”.
5. Enter the formula as “OR(ISBLANK(phone_number__c) , ISBLANK(email__c))” and check the syntax.
6. Save the validation rule.

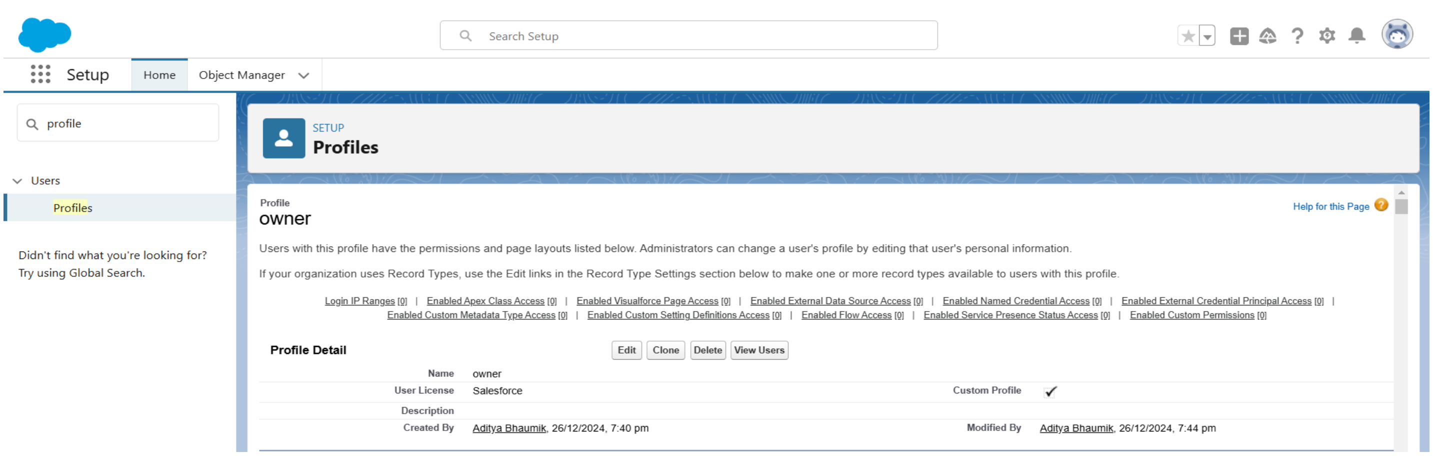


Step 6 : Profiles Creation

6.1 Owner Profile Creation

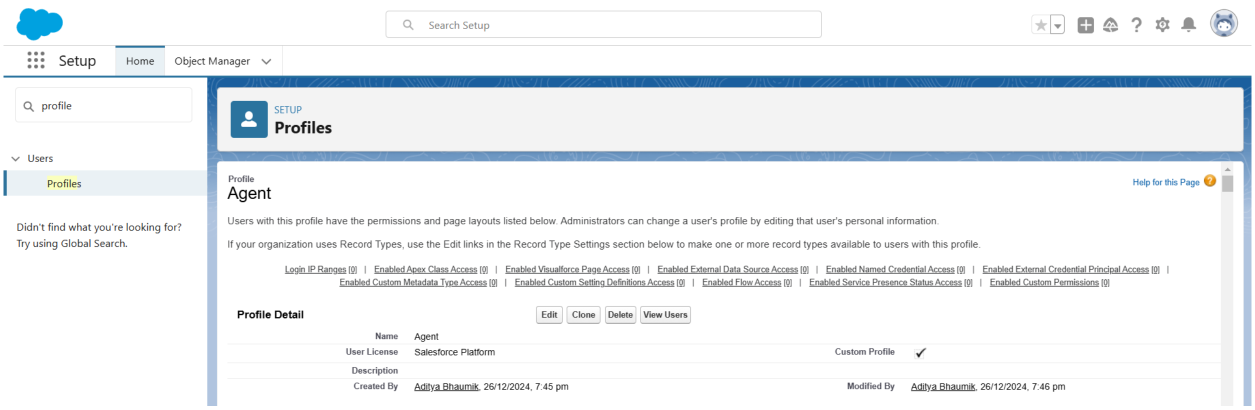
To create a new profile:

1. Go to setup >> type profiles in quick find box >> click on profiles >> clone the desired profile (Standard User) >> enter profile name (owner) >> Save.
2. Scroll down to Custom Object Permissions and Give access permissions for Total Laptops, consumers , Laptop Booking and Billing Process objects as mentioned in the below diagram.
3. Give Access and Save it.



6.2 Agent Profile Creation

1. Go to setup >> type profiles in quick find box >> click on profiles >> clone the desired profile (Standard Platform User) >> enter profile name (Agent) >>Save.
2. While still on the profile page, then click Edit.
3. Scroll down to Custom Object Permissions and Give access permissions for Total Laptops, consumer , Laptop Bookings and Billing Process objects as mentioned in the below diagram.
4. Give access and save it.



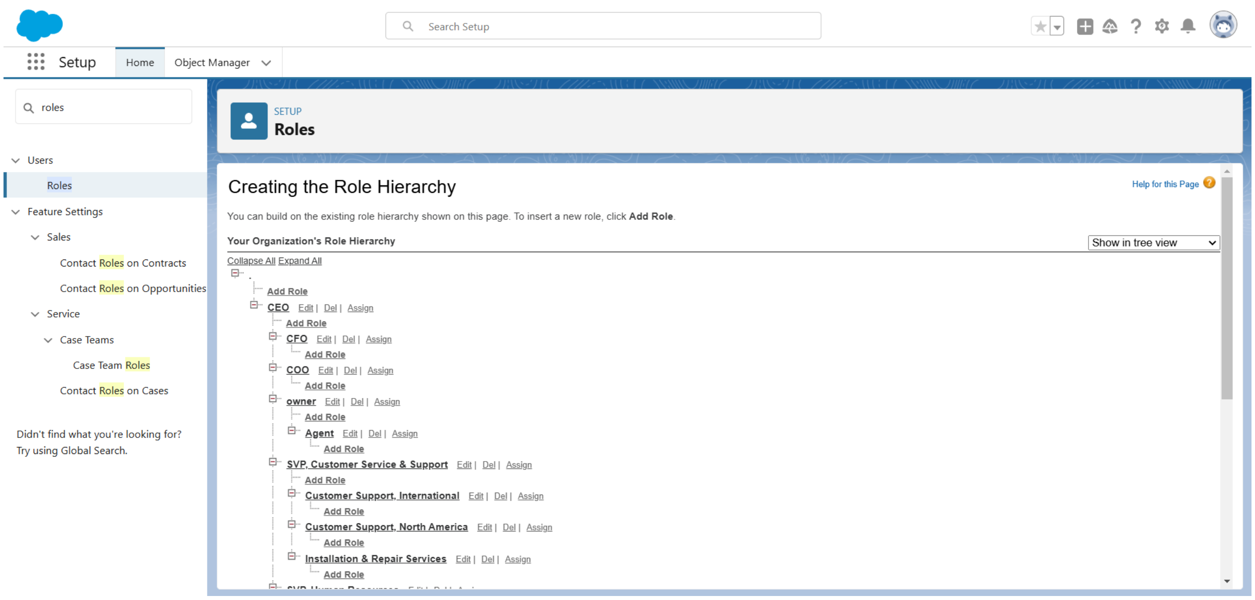
Step 7 : Role and Hierarchy Creation

Creating owner Role:

1. Go to quick find >> Search for Roles >> click on set up roles.
2. Click on Expand All and click on add role under whom this role works.
3. Give Label as “owner” and Role name gets auto populated. Then click on Save.
4. Click and save it.

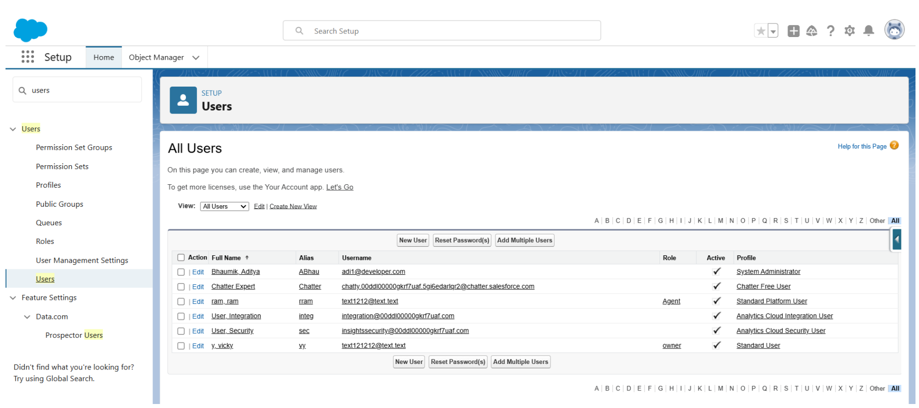
Creating another two roles under Owner

1. Go to quick find - Search for Roles - click on set up roles.
2. Click plus on CEO role, and click add role under owner.



Step 8 : Users Creation

1. Go to setup - type users in quick find box - select users -click New user.
2. Fill in the fields
3. First Name : vicky
4. Last Name : y
5. Alias : Give a Alias Name
6. Email id : Give your Personal Email id
7. Username : Username should be in this form: text@text.text
8. Nick Name : Give a Nickname
9. Role : owner
10. User license : Salesforce
11. Profiles : owner.

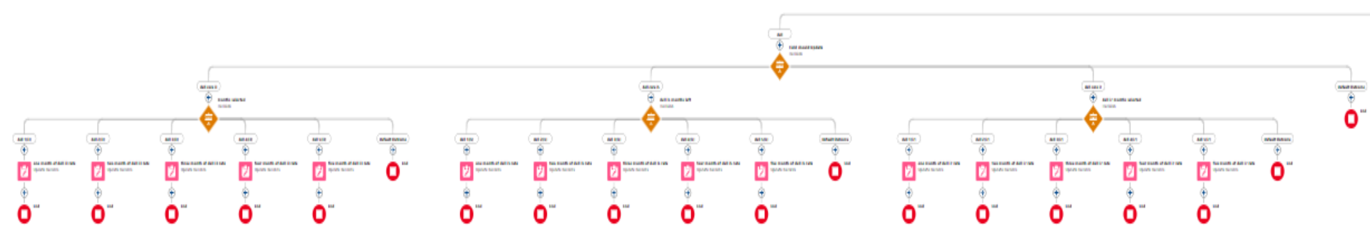


Step 9 : Flows Creation

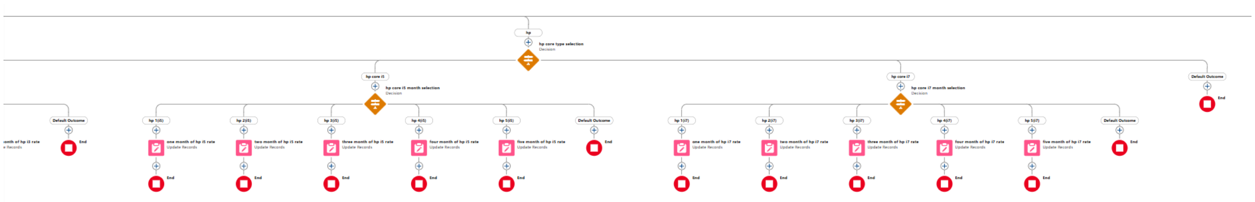
In Salesforce, a flow is a powerful tool that allows you to automate business processes, collect and update data, and guide users through a series of screens or steps. Flows are built using a visual interface and can be created without any coding knowledge.

In Salesforce, "flows" typically refer to Salesforce Flow, which is a powerful automation tool that allows you to create custom, automated processes in your Salesforce org without writing code. Salesforce Flow is a point-and-click tool that enables you to design and automate complex business processes, collect data, and interact with users in a visual interface. There are different types of flows in Salesforce, including:
Screen Flows: These are used to guide users through a series of screens to collect or display information. Screen Flows are often used for data entry and updates.

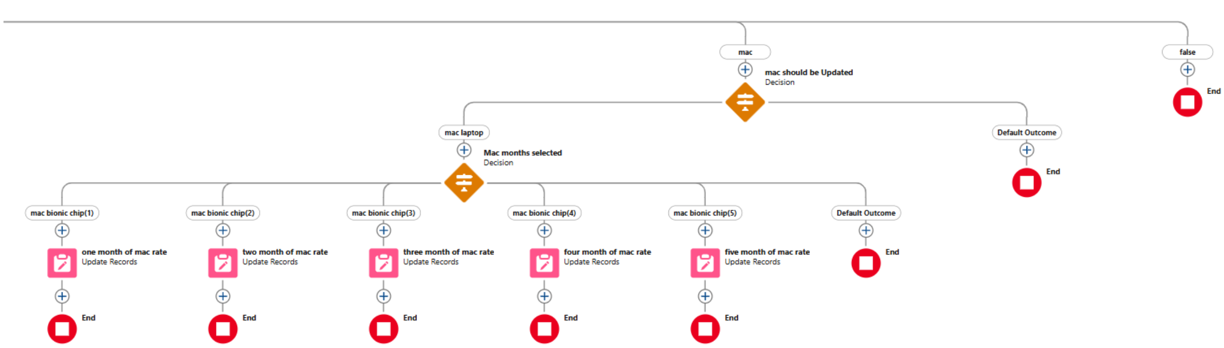
9.1 Dell Laptop Flow



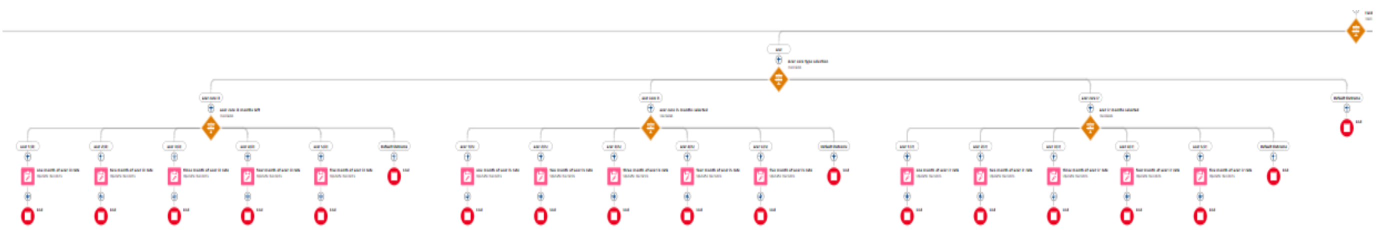
9.2 Hp laptop Flow



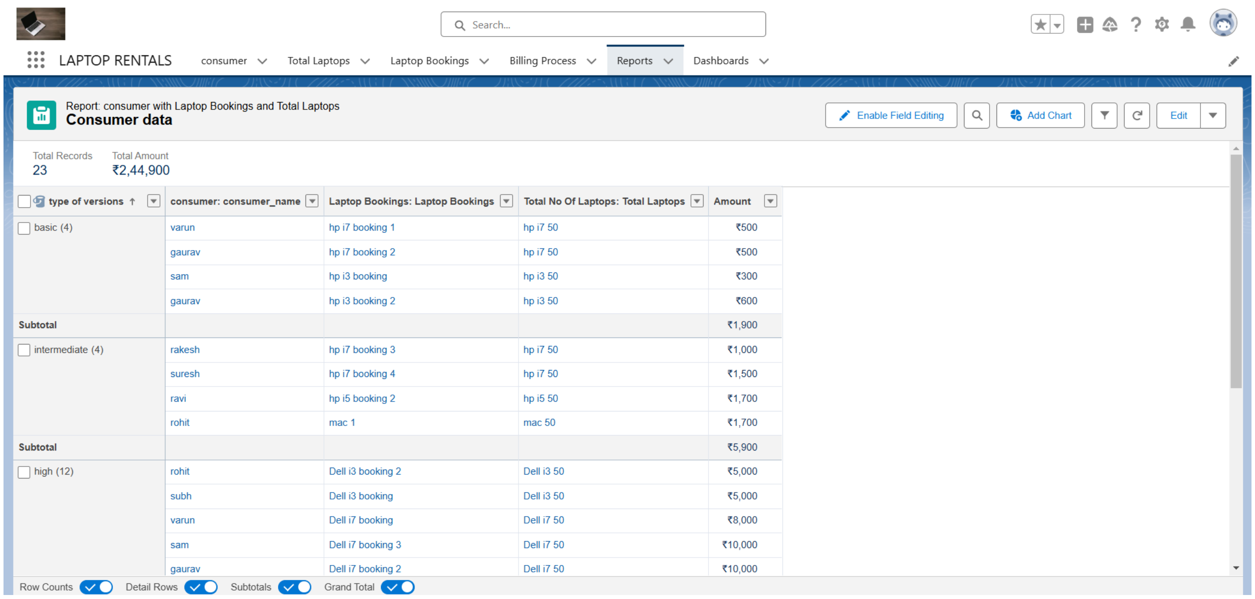
9.3 Mac laptop Flow



9.4 Acer Laptop Flow



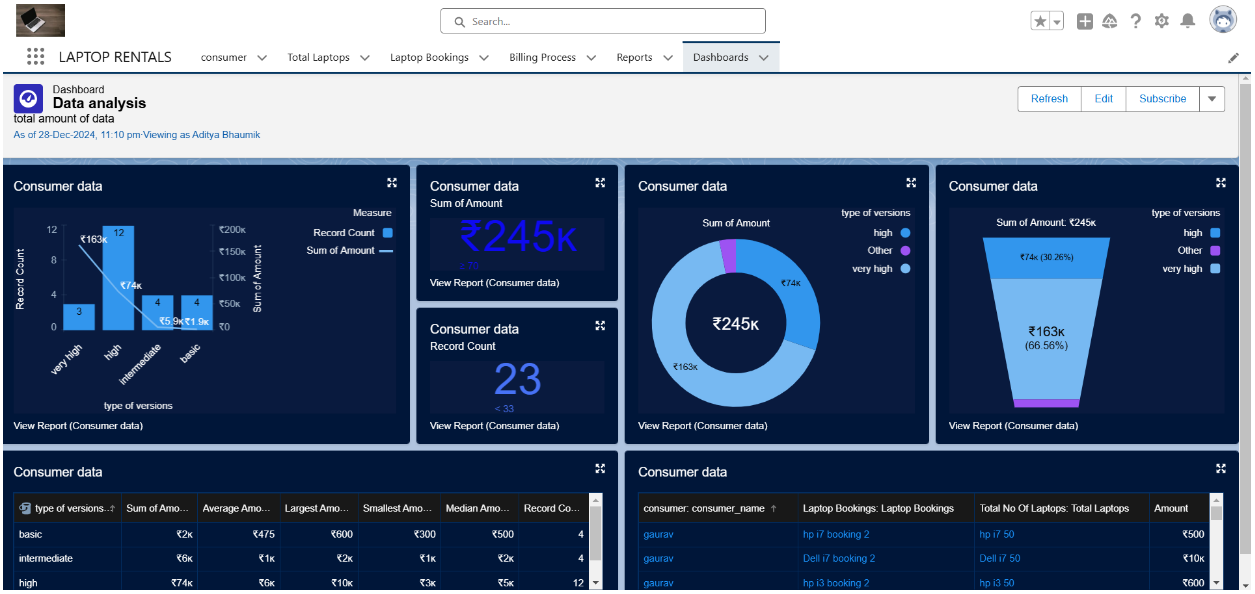
Step 10 : Report Creation



Reports give you access to your Salesforce data. You can examine your Salesforce data in almost infinite combinations, display it in easy-to-understand formats, and share the resulting insights with others. Before building, reading, and sharing reports, review these reporting basics.

In Salesforce.com we can easily generate reports in different styles. And can create reports in a very short time and also schedule the reports. Salesforce provides a powerful suit of analytic tools to help you organize, view and analyze your data.

Step 11 : Dashboard Creation



Dashboards help you visually understand changing business conditions so you can make decisions based on the real-time data you've gathered with reports. Use dashboards to help users identify trends, sort out quantities, and measure the impact of their activities. Before building, reading, and sharing dashboards, review these dashboard basics.

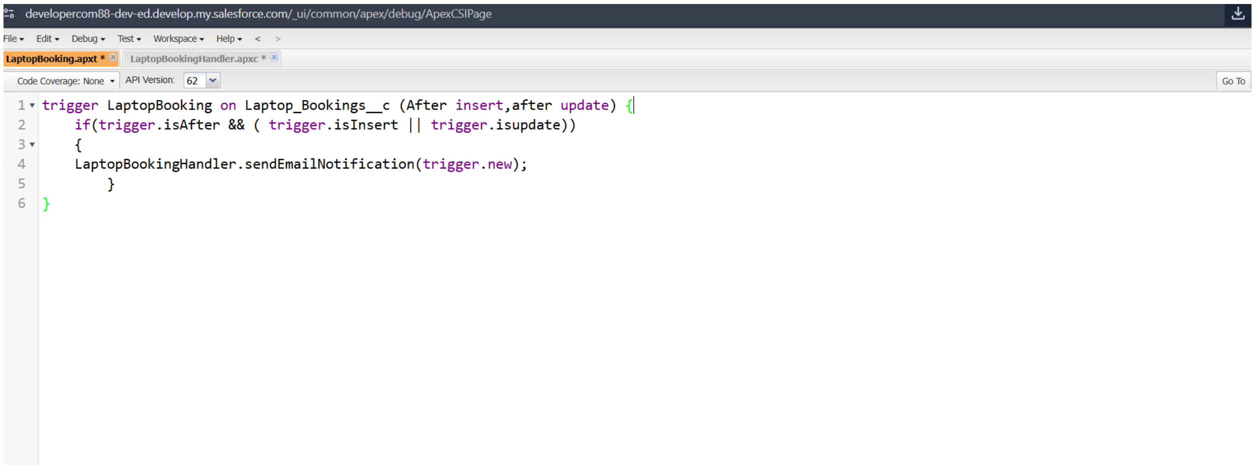
V. Testing and Validation

Apex Handler 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 Customer, \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 tr
             email.setPlainTextBody(body);
                Messaging.sendEmail(new List<Messaging.SingleEmailMessage>{email});
        }
    }

}
```

Apex Trigger



VI. Key Scenarios Addressed by Salesforce in the Implementation Project

This project tackles critical business challenges by implementing several streamlined solutions:

- Automating customer notifications to send confirmation emails whenever a laptop booking is created or updated, ensuring timely and efficient communication.
- Enhancing data integrity by enforcing validation rules to guarantee accurate entries, such as validating laptop model details.
- Implementing role-based access to provide different authorization levels for managers, customer service representatives, and other users, safeguarding data security and privacy.
- Delivering advanced reporting tools that generate detailed insights into customer behavior and rental trends, supporting informed decision-making.
- Introducing real-time dashboards that allow business managers to visualize rental performance and inventory metrics with ease, facilitating better operational oversight.

VII. Conclusion

The development of this CRM application for Laptop Rentals represents a transformative approach to addressing key operational challenges and enhancing customer satisfaction. By automating critical processes such as booking confirmations, notifications, and data validation, the solution minimizes errors and accelerates service delivery. The implementation of role-based access ensures data security and privacy while providing tailored access to various stakeholders.

Advanced reporting tools and real-time dashboards empower managers with actionable insights into rental performance, customer behavior, and inventory metrics, facilitating data-driven decision-making. The platform’s ability to integrate seamlessly with third-party tools further optimizes operations and supports business scalability.

This project not only streamlines the rental process but also positions the organization to adapt to future growth and changing market demands. By prioritizing operational efficiency, data integrity, and user experience, the CRM application lays a solid foundation for enhanced business performance and long-term success.