

# Project Report On Airlines Management System – Developer

## Milestone - 01: Creating Salesforce Org

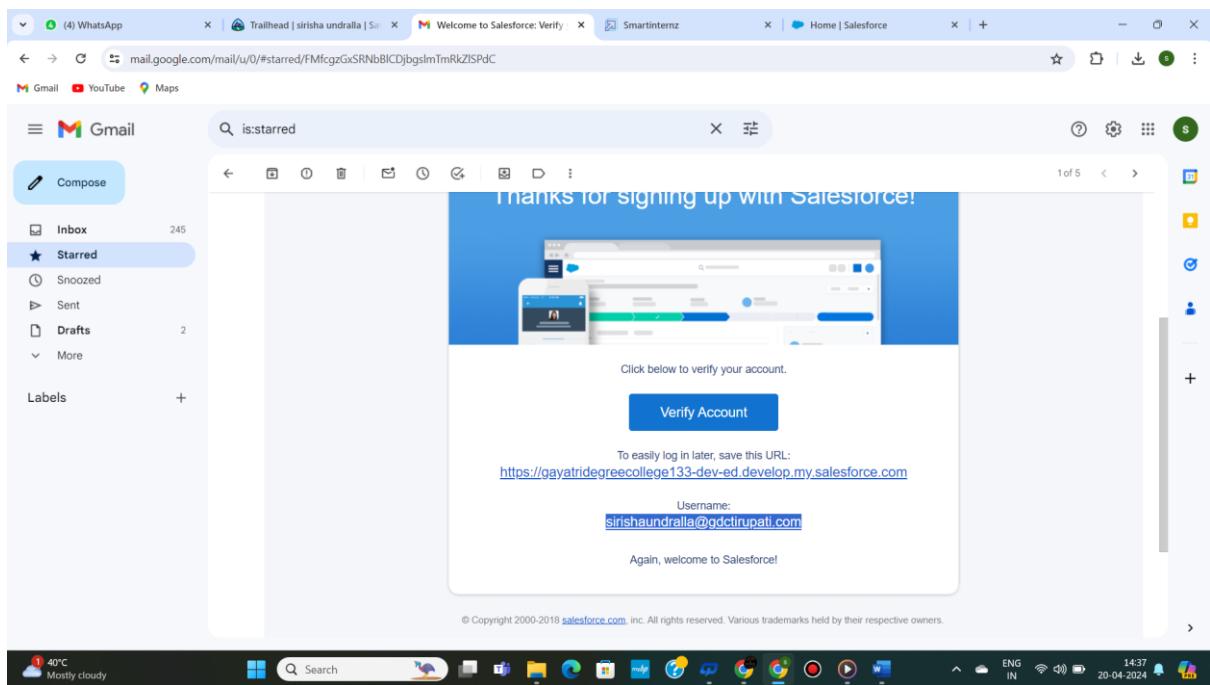
Go to <https://developer.salesforce.com/signup>

On the sign up form, enter the following details :

1. First name & Last name – UNDRALLA SIRISHA
2. Email – [sirishaundralla@gmail.com](mailto:sirishaundralla@gmail.com)
3. Role : **Developer**
4. Company : Gayatri Degree College
5. County : India
6. Postal Code : 517502
7. Username : [sirishaundralla@gdctirupati.com](mailto:sirishaundralla@gdctirupati.com)

## Account Activation

Go to the inbox of the email that you used while signing up. Click on the verify account to activate your account. The email may take 5-10mins.

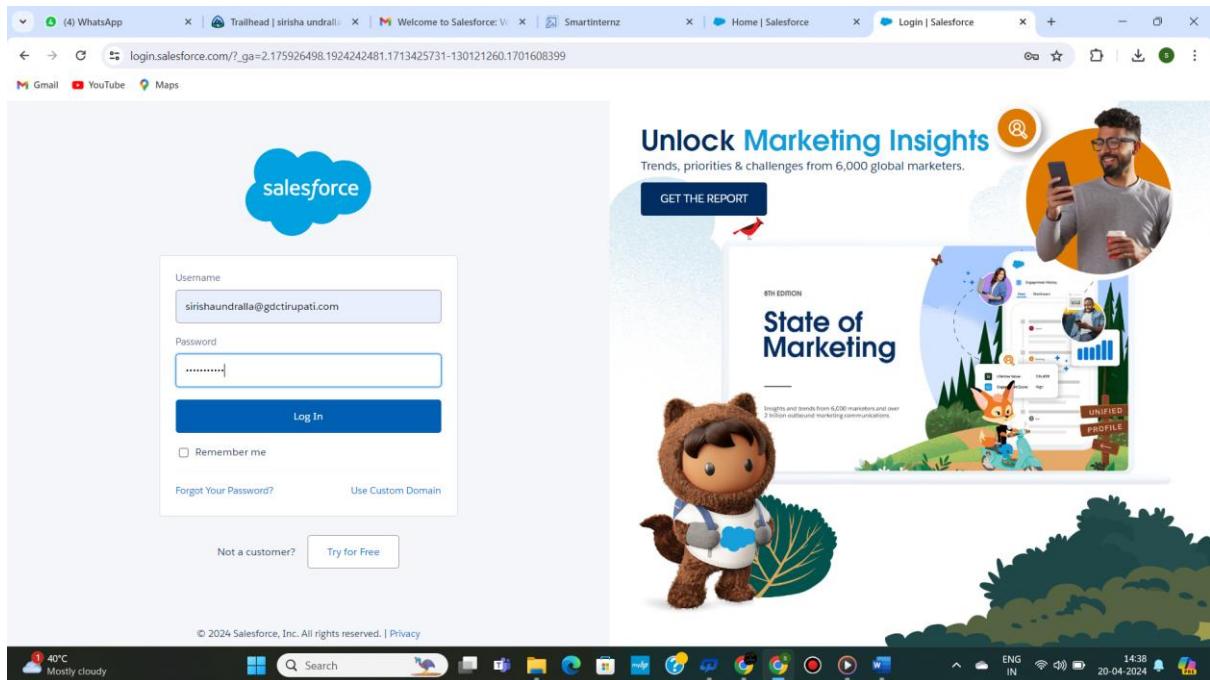


Click on Verify Account

Give a password and answer a security question and click on change password.

Login To Salesforce Account

- 1.Go to salesforce.com and click on login.
- 2.Enter the username and password that you just created.
- 3.After login this is the home page which you will see.



## Milestone - 02 : Objects Creation

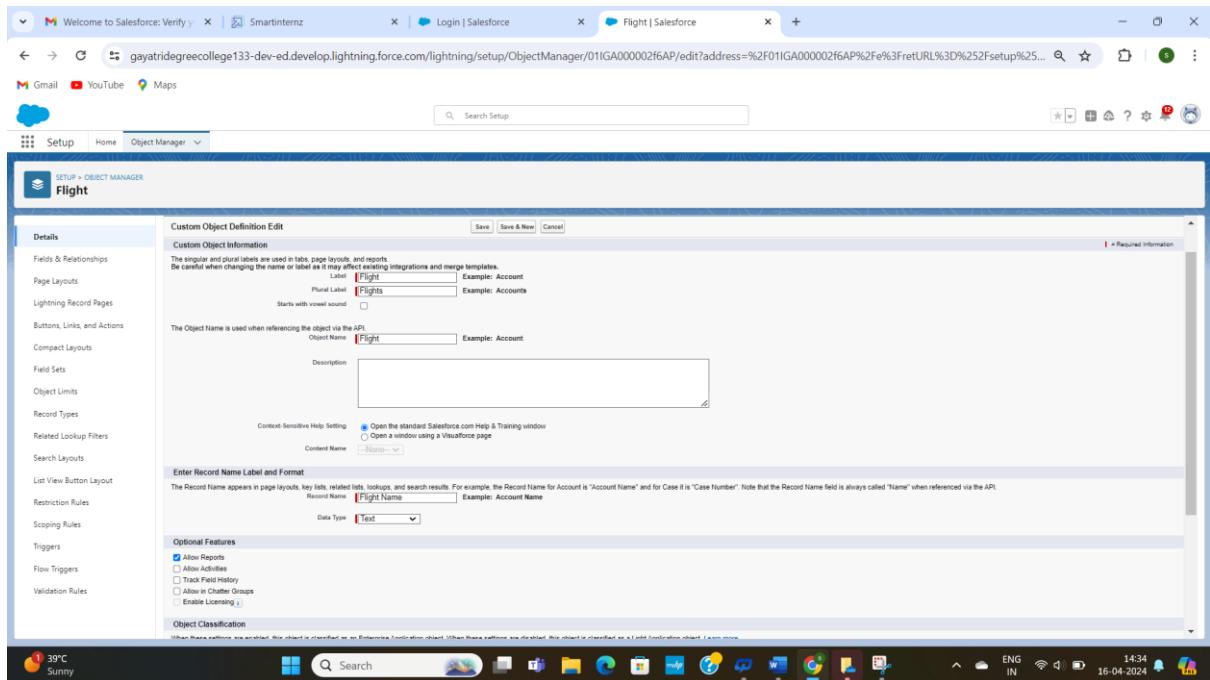
### Create Flight Object

The purpose of creating a Flight custom object is to have a clear picture of the flight details.

To create an object:

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

1. Enter the label name--> Flight
2. Plural label name--> Flights
3. Enter Record Name Label and Format
  - Record Name : Flight Name
  - Data Type : Text
- 4.Click on Allow reports,
- 5.Allow search --> Save.



## Create Booking Object

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

1. Enter the label name--> Booking
2. Plural label name--> Bookings
3. Enter Record Name Label and Format
  - Record Name : Booking Id
  - Data Type : Auto Number
  - Display Format : Bk-{0000}
  - Starting Number : 1
- 4.Click on Allow reports,
- 5.Allow search --> Save

Object Manager						
LABEL	API NAME	TYPE	DESCRIPTION	LAST MODIFIED	DEPLOYED	
Booking	Booking__c	Custom Object		15/04/2024	✓	<a href="#">Edit</a> <a href="#">Delete</a>

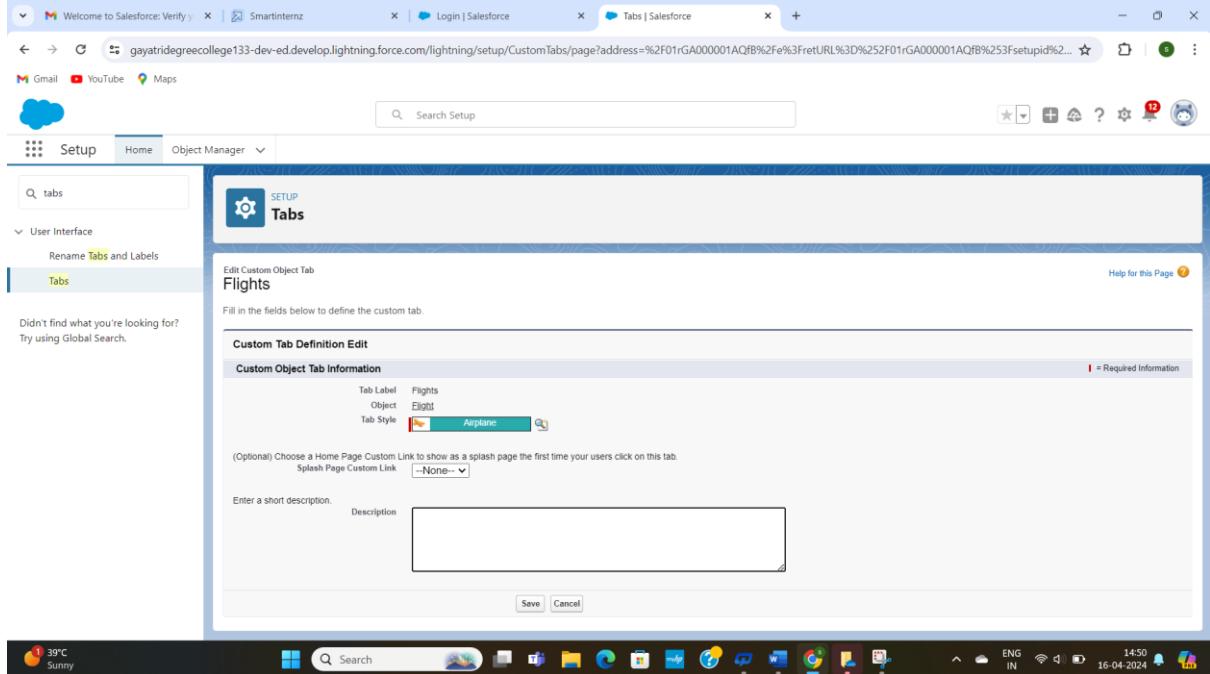
## Create passenger and Crew

Create 2 more objects with record names as Passenger Id and Crew Id

### Milestone - 03 : Tabs

#### Creating A Custom Tab(Flight)

1. Go to setup page --> type Tabs in Quick Find bar --> click on tabs --> New (under custom object tab)
2. Go to setup page --> type Tabs in Quick Find bar --> click on tabs --> New (under custom object)

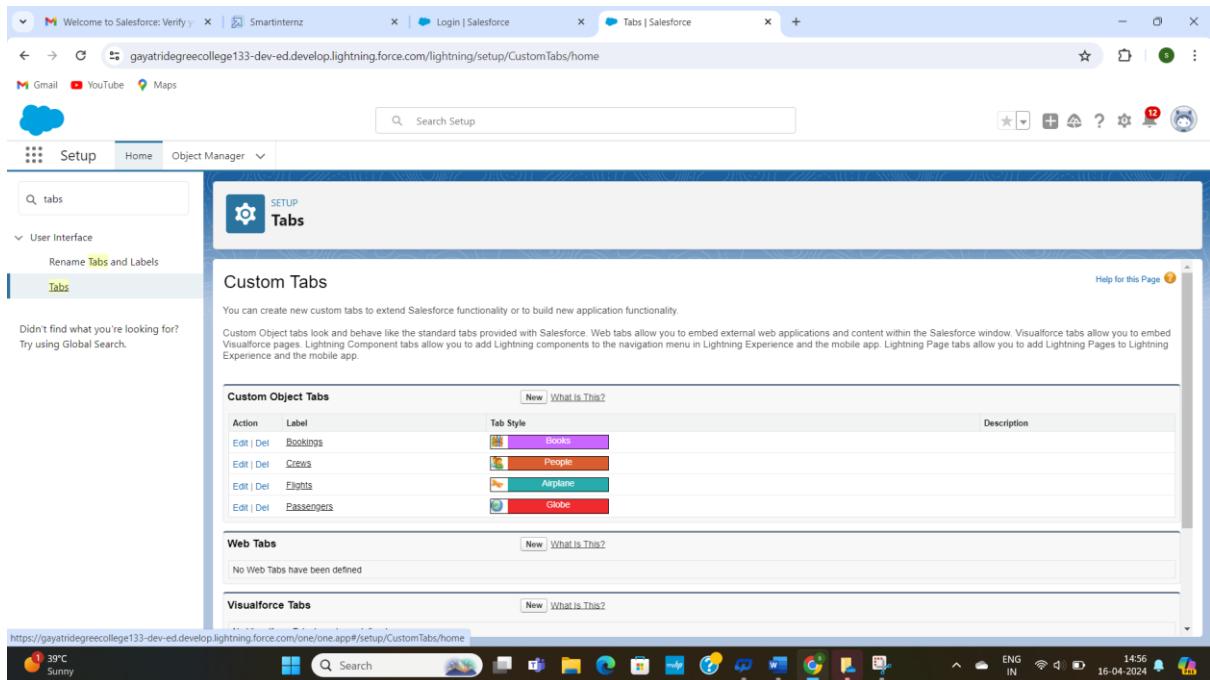


#### Creating A Custom Tab(Booking)

1. Go to setup page --> type Tabs in Quick Find bar --> click on tabs --> New (under custom object tab)
2. Select Object(Booking) Select the tab style --> Next (Add to profiles page) keep it as default --> Next (Add to Custom App) keep it as default --> Save.

#### Creating Custom Tabs(Crew and Passengers)

Now create tabs for Crew and Passengers objects.



## Milestone-04: The Lightning App

### Create A Lightning App

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

1. Fill the app name in app details and branding as follow

App Name : AirLine Management System

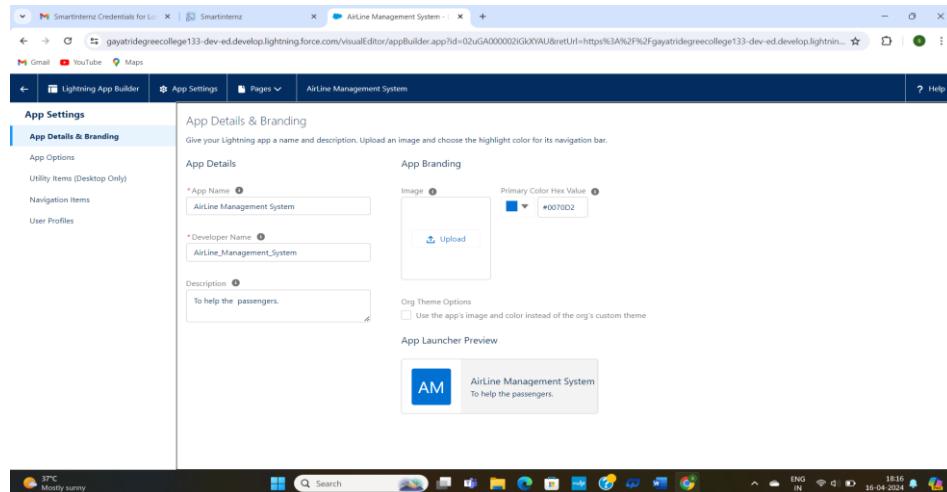
Developer Name : this will auto populated

Description : Give a meaningful description

Image : optional (if you want to give any image you can otherwise not mandatory)

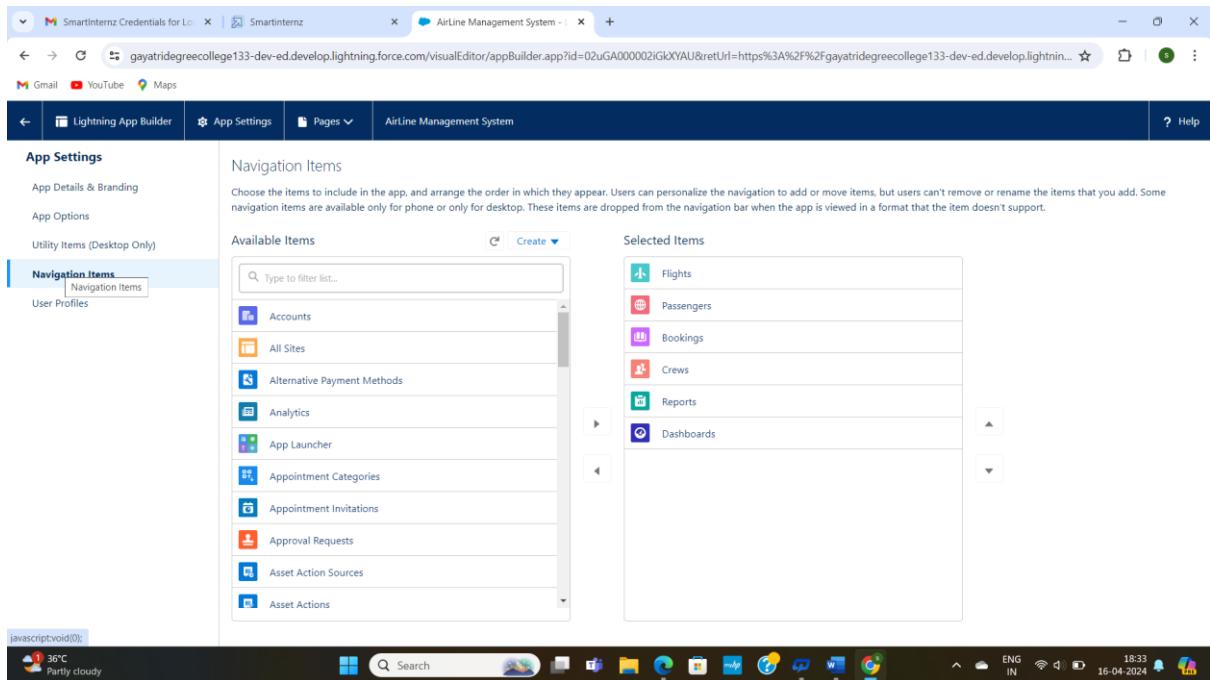
Primary color hex value : keep this default

2. Then click Next --> (App option page) keep it as default --> Next --> (Utility Items) keep it as keep it as default --> Next.



3. To Add Navigation Items:

Search the items in the search bar(Flight, Passengers, Booking, Crew, Reports, Dashboard) from the search bar and move it using the arrow button --> Next.  
 Note: select the custom object which we have created in the previous activity.



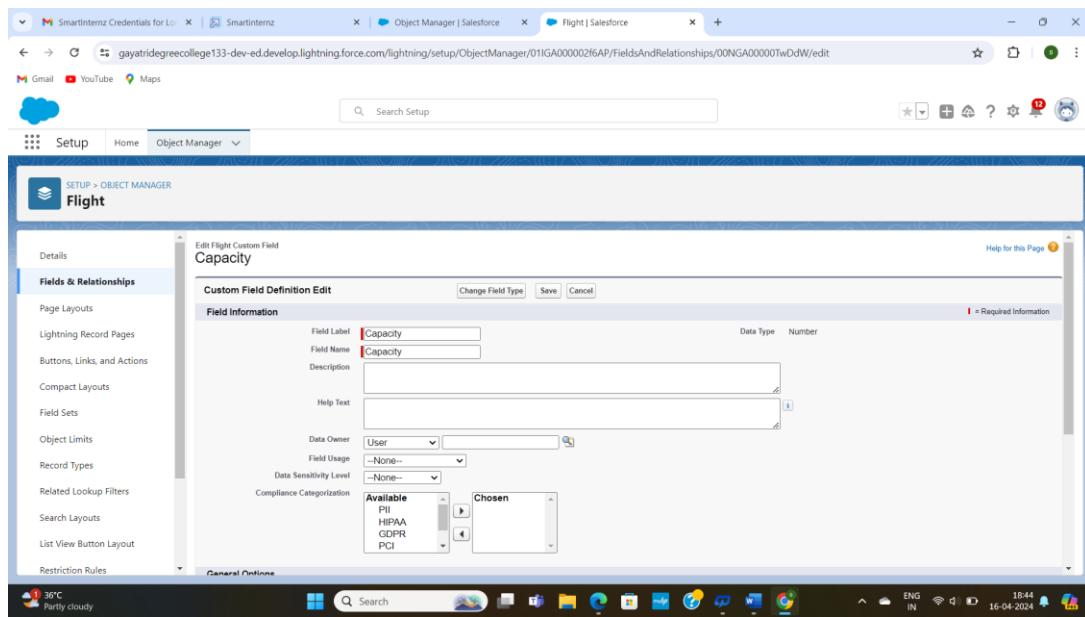
#### 4.To Add User Profiles:

Search profiles (System administrator) in the search bar --> click on the arrow button --> save & finish.

## Milestone 05: Fields

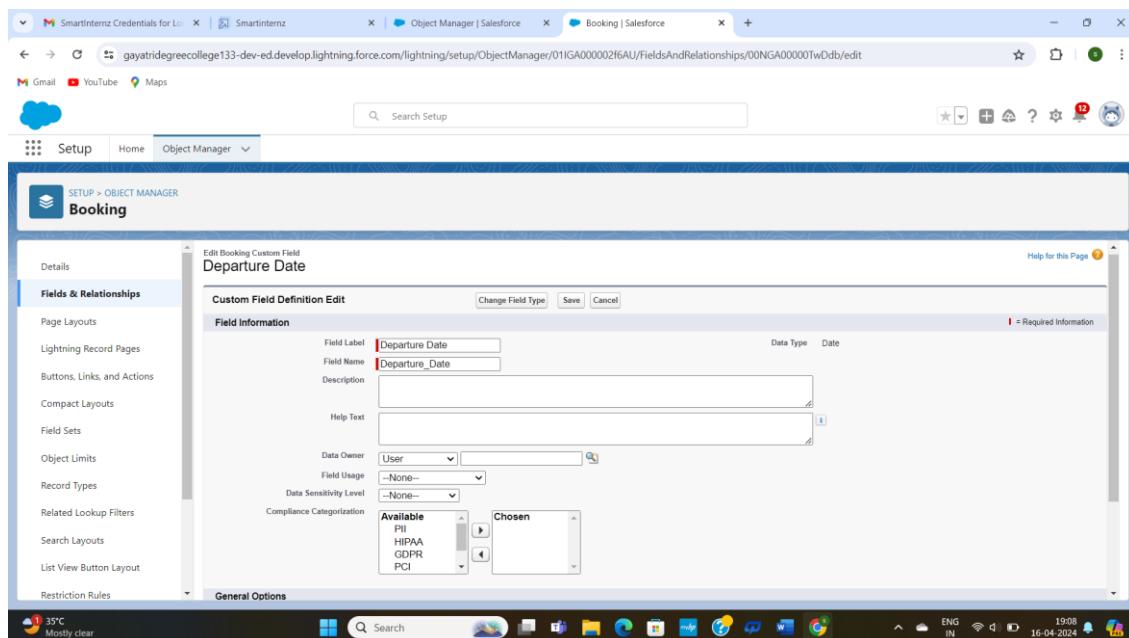
### Creating Field In Flight Object

1. Go to setup --> click on Object Manager --> type object name(Flight) in quick find bar--> click on the object.
2. Now click on “Fields & Relationships” --> New
3. Select Data type as “Number”.
4. Click on Next
5. Fill the above as following:
  - Field Label: Capacity
  - Length : 18
  - Field Name : gets auto generated
  - Click on Next ? Next --> Save and new



## Creating Departure Date On Booking Object

1. Go to setup ? click on Object Manager ? type object name(Booking) in quick find bar? click on the object.
2. Now click on “Fields & Relationships” ? New.
3. Select Data type as “Date” and click Next.
4. Click on Next.
5. Fill the above as following:
  - o Field Label:Departure Date.
  - o Field Name : gets auto generated.
  - o Click on Next --> Next --> Save and new.

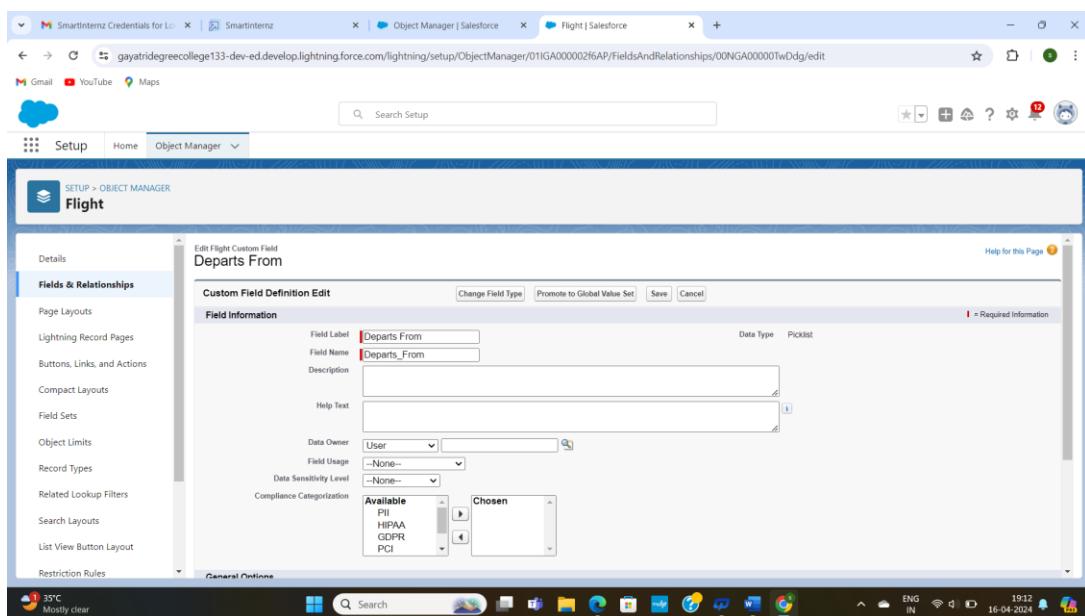


## Creating Picklist Field On Flight Object.

1. Go to setup --> click on Object Manager --> type object name(Flight) in quick find bar--> click on the object.
2. Now click on “Fields & Relationships” -->New.
3. Select Data type as “Picklist” and click Next.
4. Enter Field Label as “Departs From”, under values select “Enter values, with each value separated by a new line” and enter values as shown below:

Delhi  
Mumbai  
Bengaluru  
Chennai  
Kolkata

5.Click Next--> Next --> Next --> Save & New.



## Creating Lookup Relationship Between Flight And Booking

### Creating Lookup Relationship between Flight & Booking Object

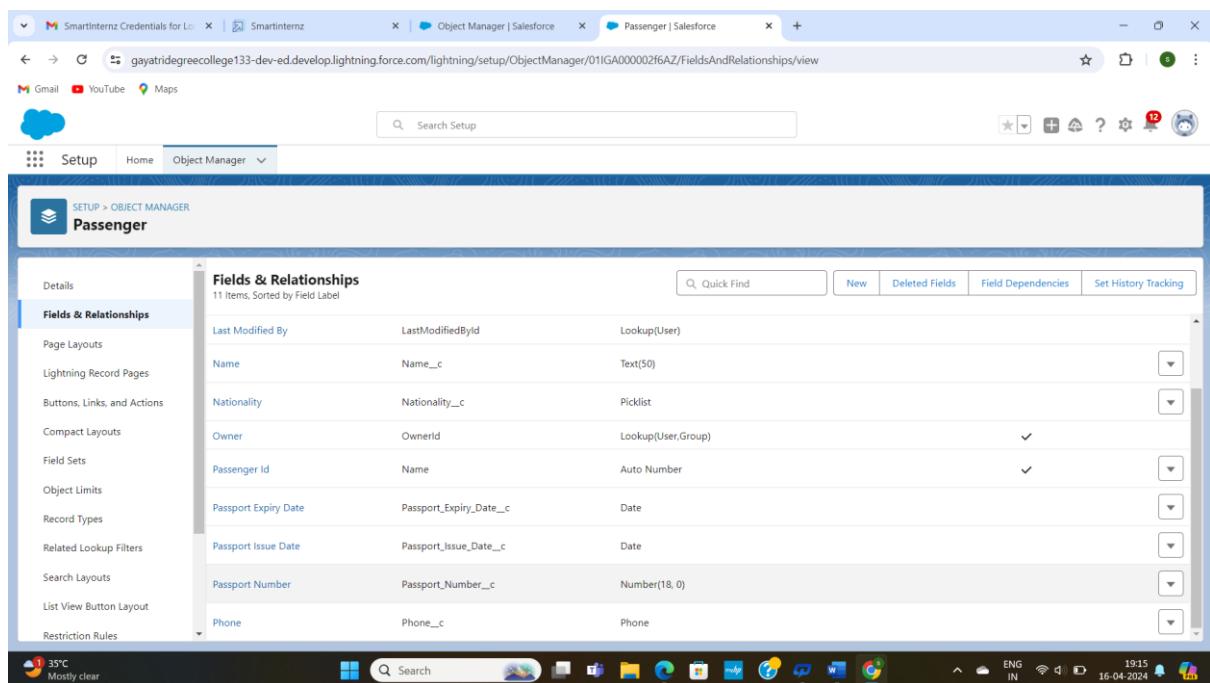
To Create a lookup relationship

1. Go to the setup page --> click on object manager -->type object name(Booking) in the quick find bar--> click on the object.
2. Click on fields & relationships --> click on New.
3. Select “lookup relationship” as data type and click Next.
4. For field label related to: select “Flight” object and click Next.
5. Give Field Label as “Flight” and click Next.
6. Next --> Next --> Save.

## Creating Remaining Fields

Now create the remaining fields using the data types mentioned in the table.

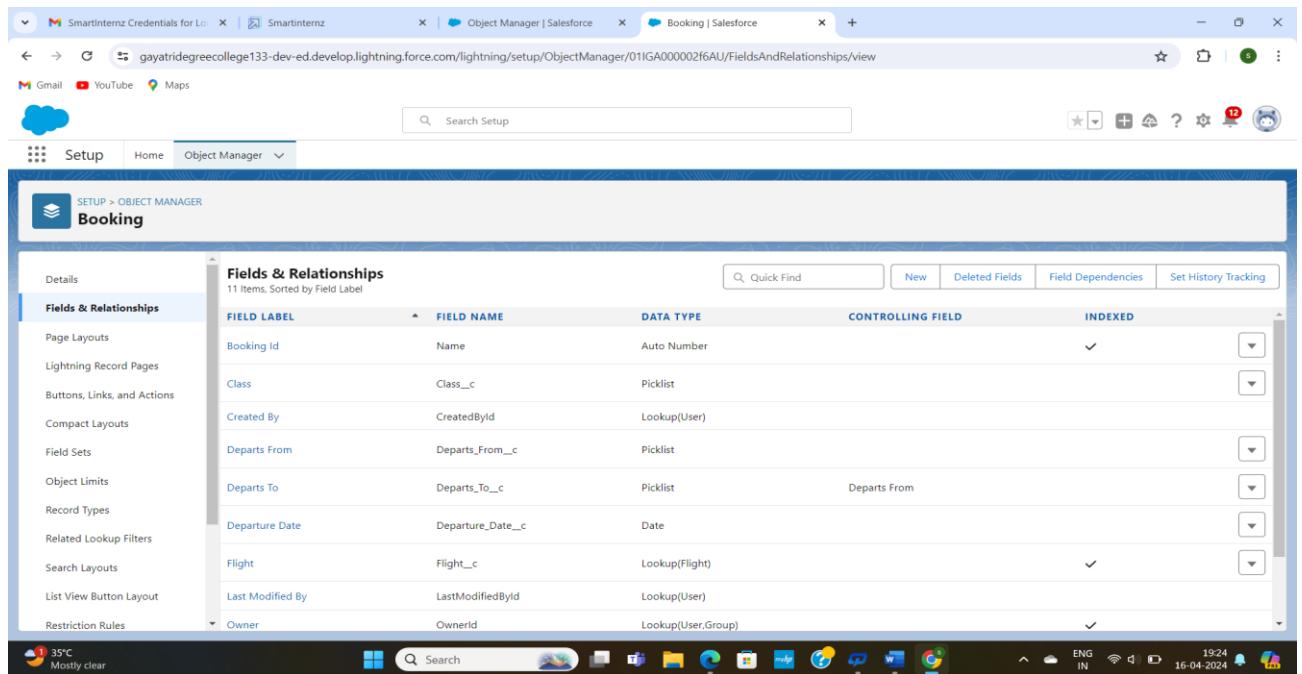
Sl No	Object	Field	Datatype
1	Passenger	1. Name 2. Phone 3. Passport Number 4. Passport Issue Date 5. Passport Expiry Date 6. Date of Birth 7. Nationality	Text Phone Number Date Date Date Picklist : Values as below  India China USA Canada Mexico Australia South Korea North Korea Germany



The screenshot shows the Salesforce Object Manager interface for the 'Passenger' object. The left sidebar lists various setup options like Details, Fields & Relationships, Page Layouts, Lightning Record Pages, etc. The main area displays the 'Fields & Relationships' section with 11 items. The fields listed are:

Field	Type	Description
Last Modified By	Lookup(User)	LastModifiedByld
Name	Text(50)	Name_c
Nationality	Picklist	Nationality_c
Owner	Lookup(User/Group)	OwnerId
Passenger Id	Auto Number	Name
Passport Expiry Date	Date	Passport_Expiry_Date_c
Passport Issue Date	Date	Passport_Issue_Date_c
Passport Number	Number(18, 0)	Passport_Number_c
Phone	Phone	Phone_c

Sl No	Object	Field	Datatype
2	Booking	Passenger Name Departs From Departs To Travellers  <b>Class</b>	Lookup relationship with Passenger Picklist : Values are same as Activity 3 Picklist : Values are same as Activity 3 Picklist : Values as below <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">             Adult              Child              Infant           </div> Picklist : Values as below <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">             Economy              Business              First Class           </div>

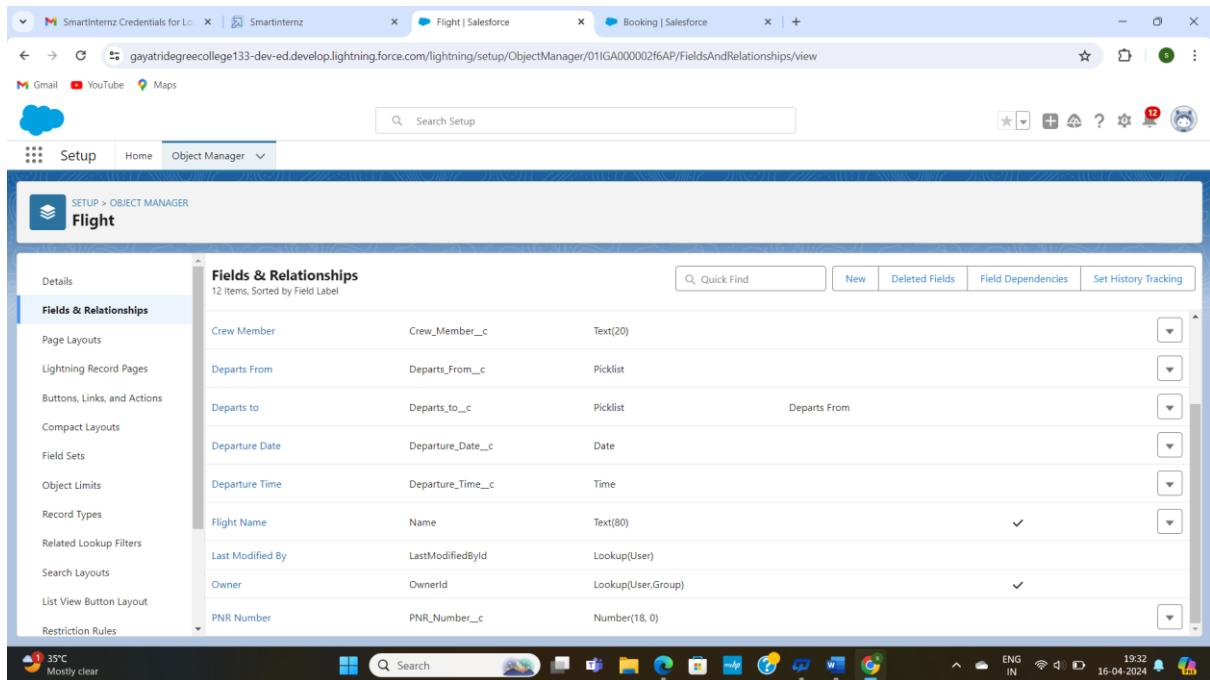


The screenshot shows the Salesforce Object Manager interface for the 'Booking' object. The left sidebar lists various setup options like Page Layouts, Lightning Record Pages, and Buttons, Links, and Actions. The main content area is titled 'Fields & Relationships' and displays a table of fields:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Booking Id	Name	Auto Number		✓
Class	Class__c	Picklist		✓
Created By	CreatedBy	Lookup(User)		✓
Departs From	Departs_From__c	Picklist		✓
Departs To	Departs_To__c	Picklist	Departs From	✓
Departure Date	Departure_Date__c	Date		✓
Flight	Flight__c	Lookup(Flight)		✓
Last Modified By	LastModifiedBy	Lookup(User)		✓
Owner	OwnerId	Lookup(User,Group)		✓

The status bar at the bottom shows the date as 16-04-2024 and the time as 19:24.

Sl No	Object	Field	Datatype
3	Flight	1. Departs to 2. PNR Number 3. Departure Date 4. Departure Time 5. Arrival Time	Picklist : Values are same as Activity 3 Number Date Time Time



The screenshot shows the Salesforce Object Manager interface for the 'Flight' object. On the left, there's a sidebar with various setup options like Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, etc. The main area is titled 'Fields & Relationships' and lists 12 items sorted by Field Label. The fields listed are:

Field Label	Name	Type
Crew Member	Crew_Member__c	Text(20)
Departs From	Departs_From__c	Picklist
Departs to	Departs_to__c	Picklist
Departure Date	Departure_Date__c	Date
Departure Time	Departure_Time__c	Time
Flight Name	Name	Text(80)
Last Modified By	LastModifiedById	Lookup(User)
Owner	OwnerId	Lookup(User.Group)
PNR Number	PNR_Number__c	Number(18, 0)

Sl No	Object	Field	Datatype
4	Crew	1. Flight 2. Crew Member 3. Phone 4. Email 5. Qualification 6. Role	Lookup relationship with Flight Text(20) Phone Email Text Picklist: Values as below <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">           Pilot            Co-Pilot            Flight Attendants            Air Hosts            Air Hostesses            Air Stewards            Air Stewardesses            On-Board Chefs         </div>

## Creating Field Dependencies

To create a field dependency:

1. Go to object manager -->select the object (flight) --> click fields & relationships --> click “Field Dependencies”.
2. Click “New” under Field Dependencies.
3. Select “Departs From” for Controlling Field.
4. Select “Departs to” for Dependent Field and click Continue.
5. While pressing CTRL button select the values as shown below and click on include values.
6. Click on save

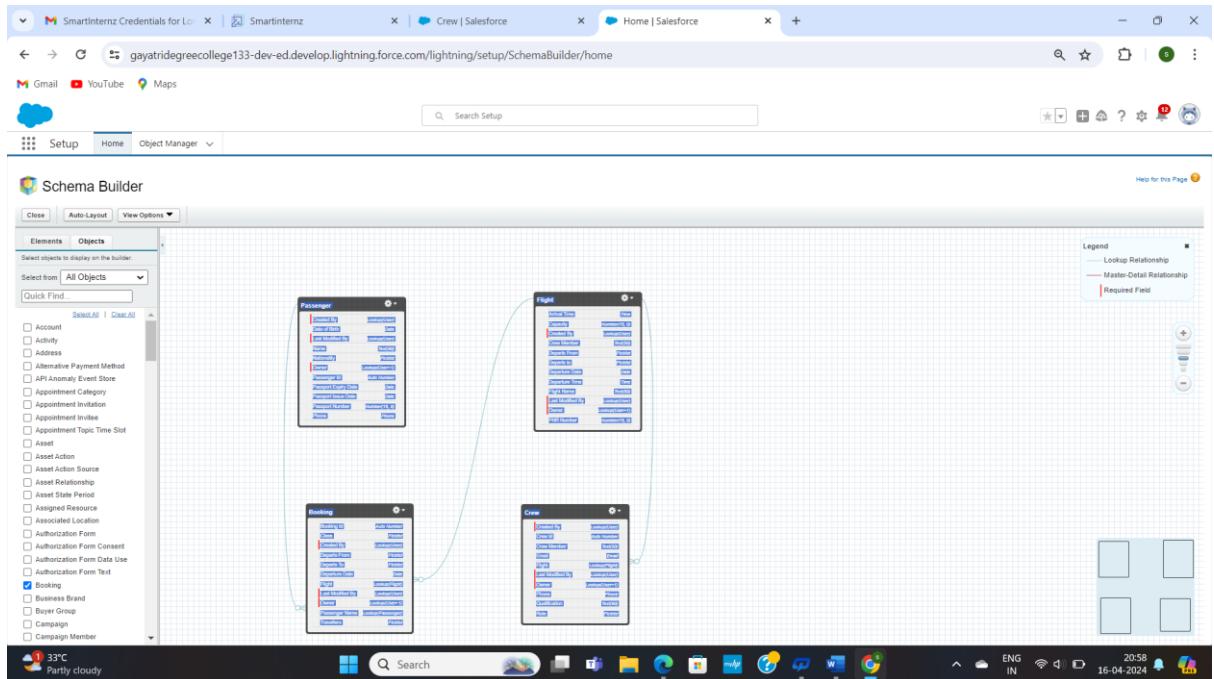
Create similar Field dependencies for booking object as we have done in activity 6.

## Schema Builder

Schema Builder is a powerful tool within Salesforce that allows you to visualise, explore, and design the relationships between objects in your Salesforce organisation. It provides a graphical representation of the data model, making it easier to understand the structure and connections between different objects.

Creating Schema Builder

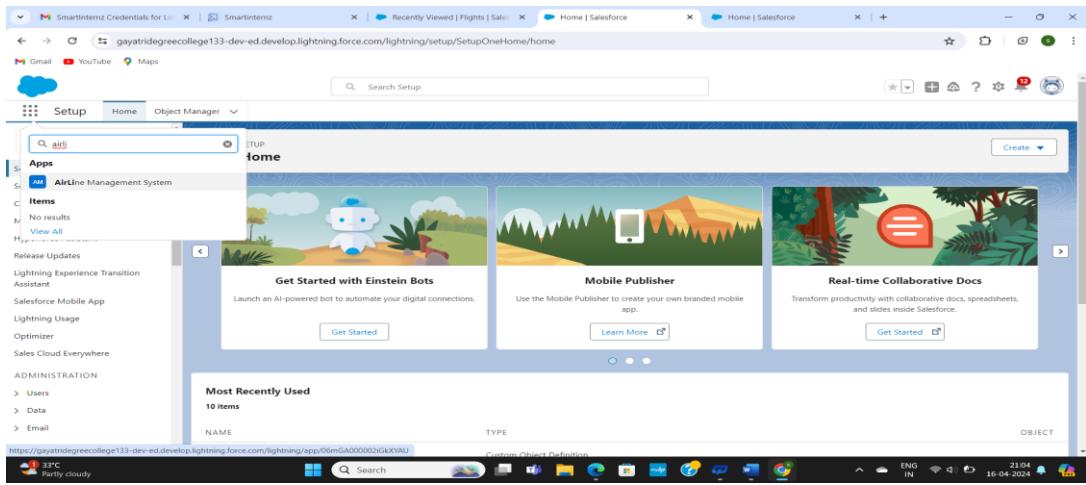
1. Go to setup --> click on Object Manager --> Schema Builder.
2. Click on Clear All
3. Select objects--> Enter Objects which we have created in the above Milestone 2 (Passenger, Booking, Flight & Crew) in a quick box and select them.



## Milestone 06: User Adoption

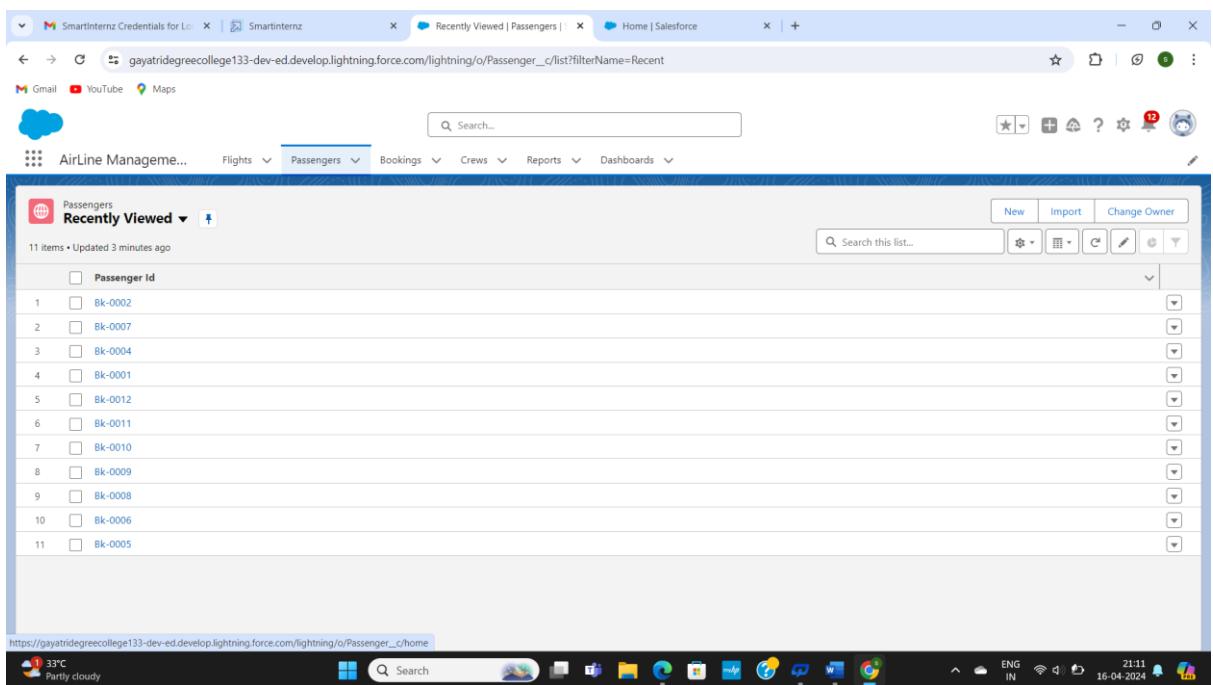
### Create A Record (Passenger)

1. Click on App Launcher on the left side of the screen.
2. Search AirLine Management System & click on it.
3. Click on the Passenger tab.
4. Click New.



## View A Record(Passenger)

1. Click on App Launcher on the left side of the screen.
2. Search AirLine Management System & click on it.
3. Click on the Passenger Tab.
4. Click on any record name. you can see the details of the Passenger.



## Delete A Record(Passenger)

1. Click on App Launcher on the left side of the screen.
2. Search AirLine Management System & click on it.
3. Click on the Passenger Tab.
4. Click on Arrow at right hand side on that Particular record.
5. Click delete.

Passenger Id

	Passenger Id
1	Bk-0002
2	Bk-0007
3	Bk-0004
4	Bk-0001
5	Bk-0012
6	Bk-0011
7	Bk-0010
8	Bk-0009
9	Bk-0008
10	Bk-0006
11	Bk-0005

Create at least 10 records for each of the objects: Passenger, Booking, Flight, Crew.

Flight Name

	Flight Name
1	Vande Bharat
2	Vistara
3	Lufthansa
4	spice jet
5	Alliancs air
6	Air India Express
7	airasia
8	IndiGo
9	Air India
10	singapore airline
11	Saudia

The screenshot shows a browser window with multiple tabs open, including WhatsApp, Trailhead, Welcome to Salesforce, Smartinternz, Recently Viewed | Crews, and Login | Salesforce. The main content area displays the 'Recently Viewed' list for 'Crews'. The list contains 11 items, each with a checkbox and a crew ID: Bk-0011, Bk-0010, Bk-0009, Bk-0008, Bk-0007, Bk-0006, Bk-0005, Bk-0004, Bk-0003, Bk-0002, and Bk-0001. The interface includes a search bar, a toolbar with New, Import, and Change Owner buttons, and a header with navigation links for Flights, Passengers, Bookings, Crews, Reports, and Dashboards.

The screenshot shows a browser window with the same tabs as the previous screenshot. The main content area displays the 'Recently Viewed' list for 'Bookings'. The list contains 11 items, each with a checkbox and a booking ID: Bk-0011, Bk-0006, Bk-0005, Bk-0004, Bk-0003, Bk-0002, Bk-0001, Bk-0010, Bk-0009, Bk-0008, and Bk-0007. The interface is identical to the Crews list, with a search bar, a toolbar with New, Import, and Change Owner buttons, and a header with navigation links for Flights, Passengers, Bookings, Crews, Reports, and Dashboards.

## Milestone-07: Profiles

### General Admin Profile

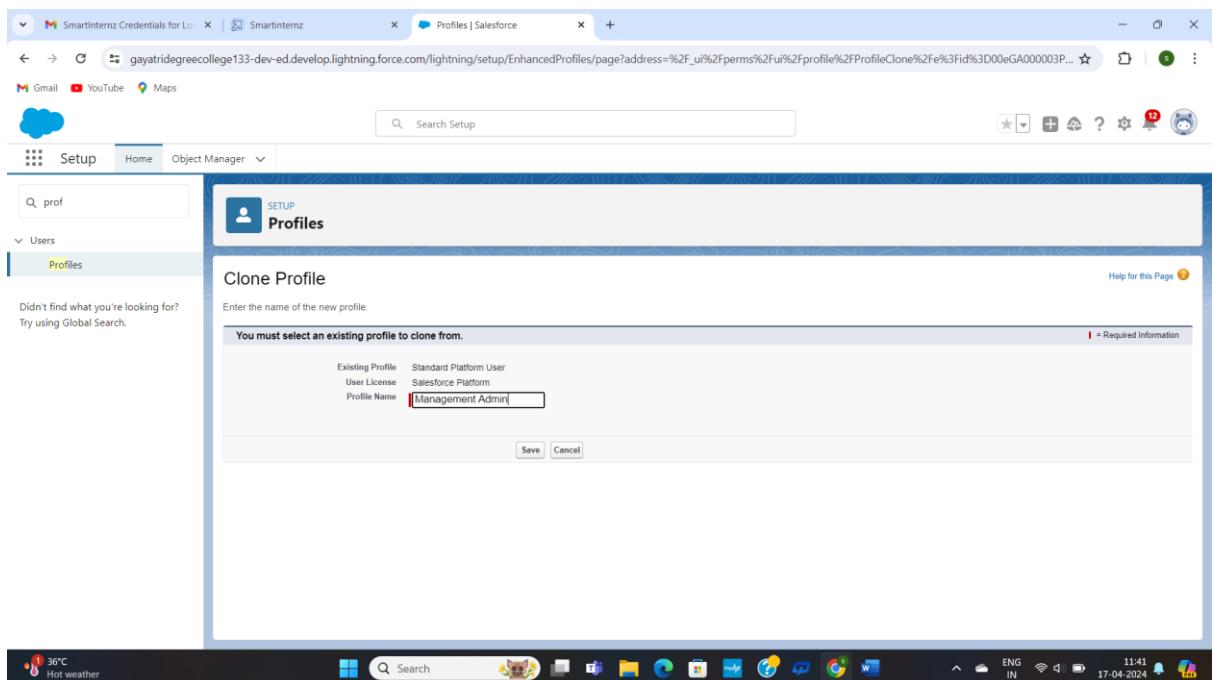
To create a new profile:

1. Go to setup --> type profiles in quick find box --> click on profiles --> clone the desired profile (Standard Platform User)-->enter profile name (General Admin)--> Save.
2. While still on the profile page, then click Edit.

3. Scroll down to Custom Object Permissions and Give access permissions for read, create and edit on Passenger, and booking objects.
4. Scroll down and Click on Save.

## Management Admin Profile

1. Go to setup --> type profiles in quick find box --> click on profiles --> clone the desired profile (Standard Platform User) --> enter profile name (Management Admin) -->Save.
2. While still on the profile page, then click Edit.
3. Scroll down to Custom Object Permissions and Give access permissions for read, edit and create Flight and Crew.
4. Scroll down and Click on Save.



## Create Senior Admin & Crew Member Profiles

Create Crew Member Profile for Crew Members and give them access permission to read only as we have done in the previous activity.

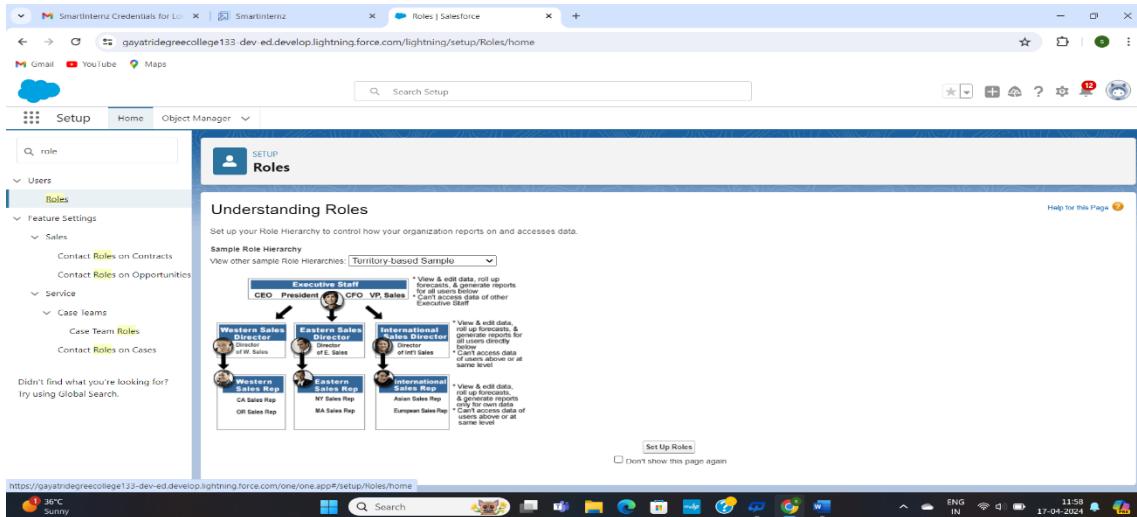
Create Senior Admin Profiles for Senior Admin in the Organization and give him access permission to read, create, edit and delete for all 4 objects.

Note: for Senior Admin clone System Administrator profile.

## Milestone-08 : Role

### Creating Admin Manager Role

Go to quick find --> Search for Roles --> click on set up roles.



1. Click on Expand All and click on add role under whom this role works.
2. Give Label as "Senior Admin" and Role name gets auto populated. Check to whom this role (Senior Admin) reports. Then click on Save.
3. Create three more roles for General Admin, Management Admin and Crew Member.  
Note: Crew Members report to Management Admin, Management Admin & General Admin Reports to Senior Admin and only Senior Admin reports to CEO.

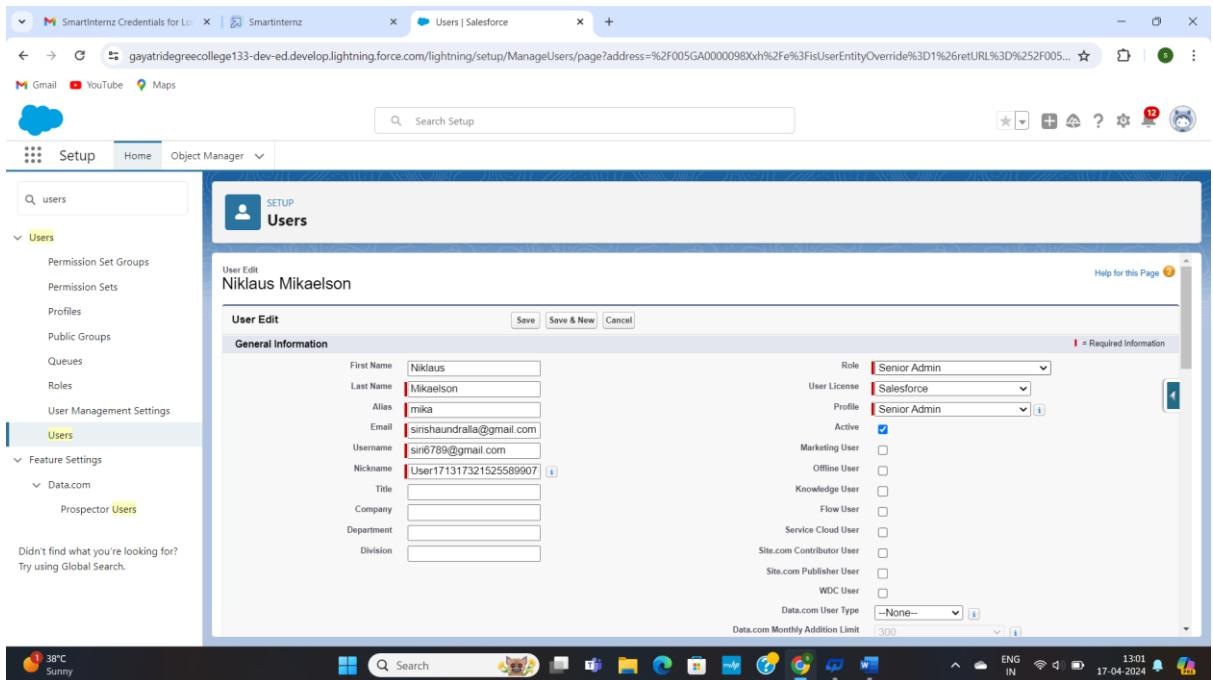
## Milestone 9 : Users

### Create User

Go to setup --> type users in quick find box --> select users --> click New user.

Fill in the fields

1. First Name : Niklaus
2. Last Name : Mikaelson
3. Alias : Give a Alias Name
4. Email id : Give your Personal Email id
5. Username : Username should be in this form: text@text.text
6. Nick Name : Give a Nickname
7. Role : Senior Admin
8. User licence : Salesforce
9. Profiles : Senior Admin



## Create user for General Admin

1. Go to setup --> type users in quick find box --> select users --> click New user.
2. Fill in the fields
  - First Name : Kol
  - Last Name : Mikaelson
  - Alias : Give a Alias Name
  - Email id : Give your Personal Email id
  - Username : Username should be in this form: text@text.text
  - Nick Name : Give a Nickname
  - Role : General Admin
  - User license : Standard Platform
  - Profiles : General Admin

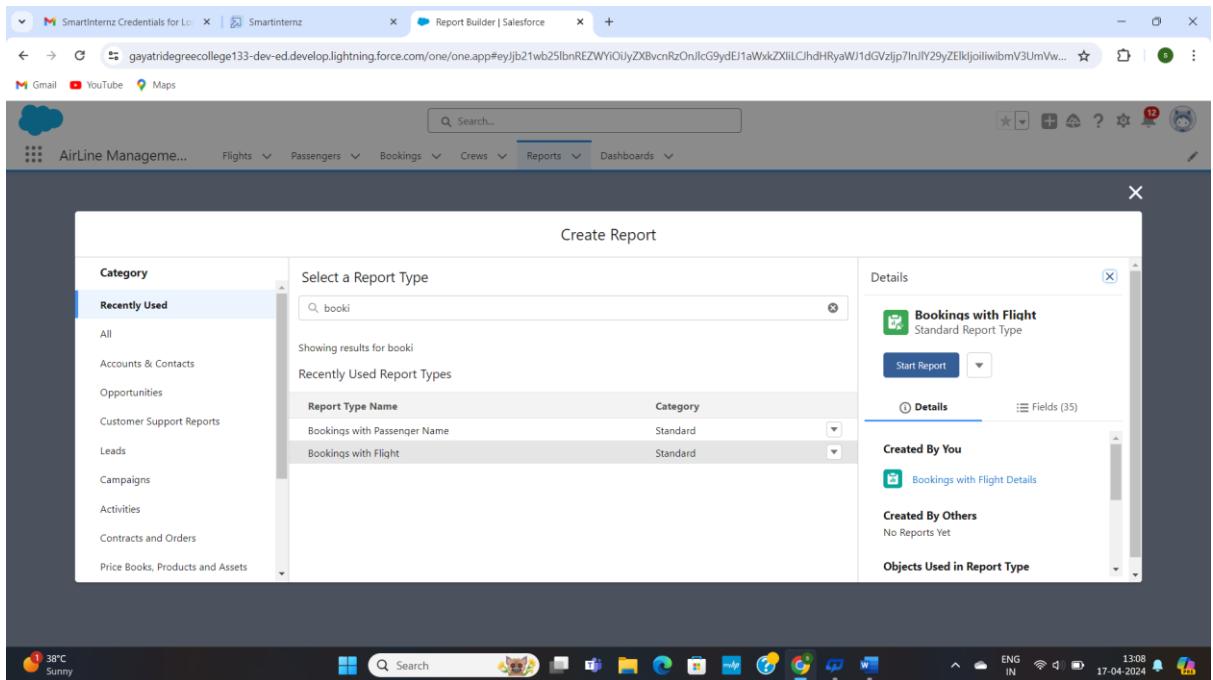
3.Save

Create two more users for Management Admin and Crew Members as mentioned in activity 2.

## Milestone 10 : Reports

### Create Report

1. Go to the app --> click on the reports tab
2. Click New Report.
3. Select report type from category or from report type panel or from search panel --> click on start report.

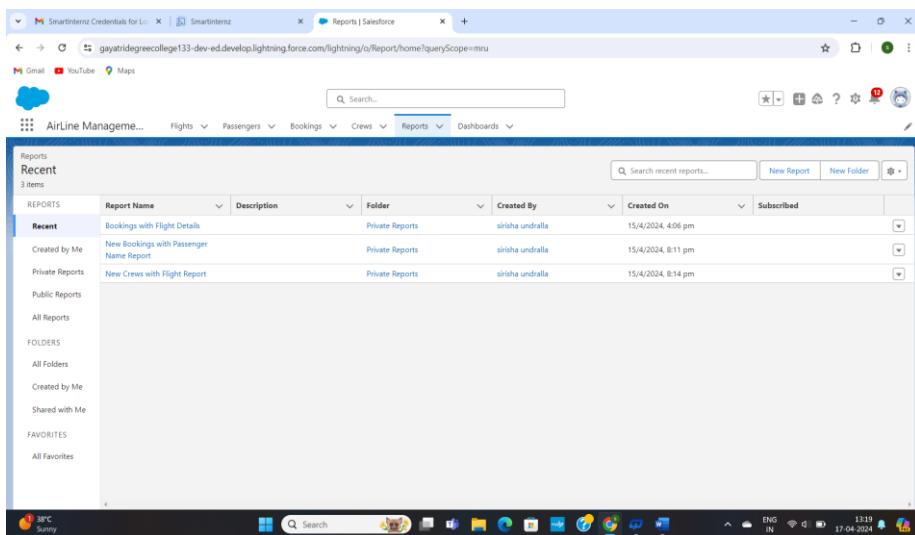


#### 4. Customize your report

- Check the toggle on the update preview automatically button.
  - Add fields from the left pane as shown below.
  - Add the “Traveller” field in Group Rows.
  - Turn the toggle off for the subtotal button.
- 5.Click on save.
- 6.Save the report as “Bookings with Flight Details”.
- 7.Click on Save.

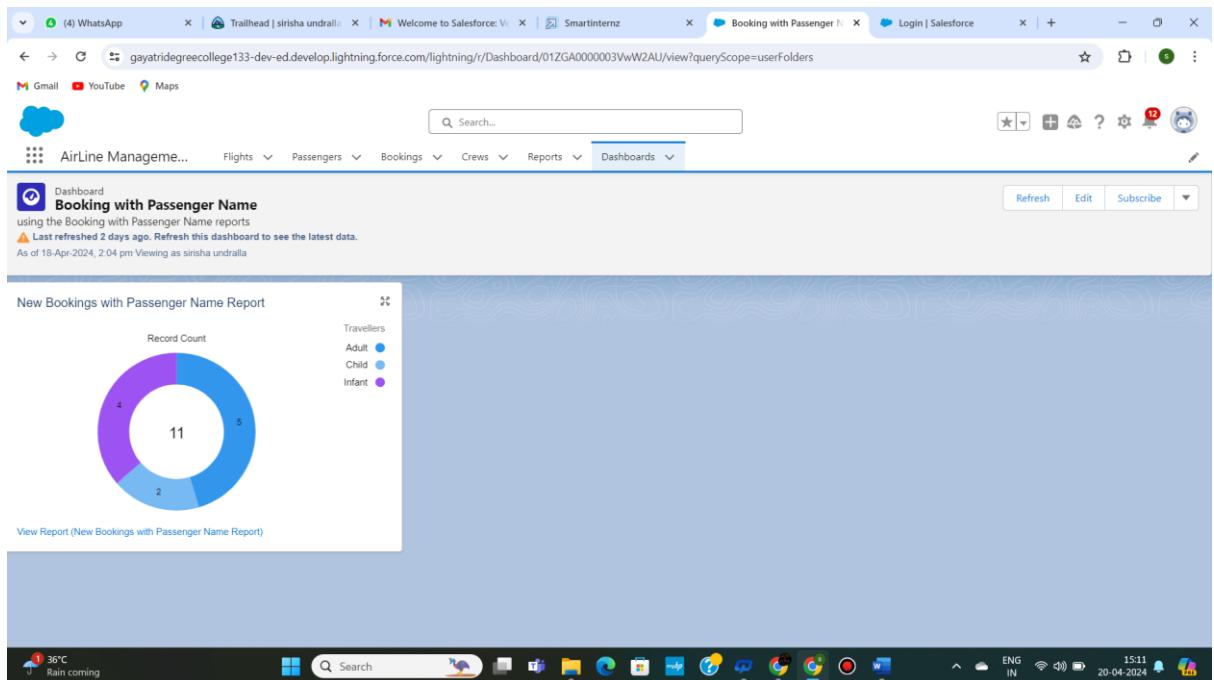
Note: Reports may get varied from the above pictures as the data might be different.

1. Create a report with a report type: “Booking with Passenger Name”.
2. Create a report with report type: “Crew with Flight”

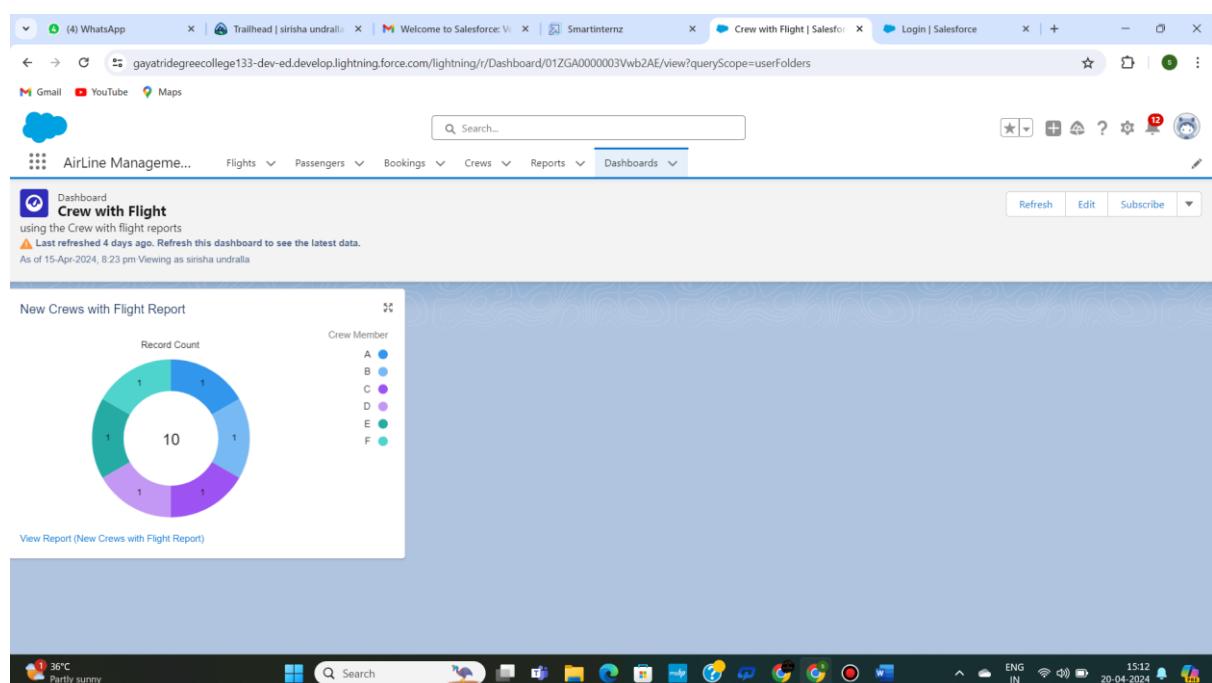


## Milestone 11 : Dashboards

1. Create Dashboard
2. Go to the app --> click on the Dashboards tabs.
3. Give a Name and click on Create.
4. Select add component.
5. Select a Report and click on select.



Create two more Dashboards using the reports which we have created in the milestone 10 activity 2.



## Milestone 12: Apex

### Create An Apex Class

1. Go to Setup --> Click on the gear icon --> Select Developer Console
2. Then we can see the Developer console. Click on the developer console and you will navigate to a new console window.

3. To create a new Apex Class follow the below steps:  
Click on the file --> New --> Apex Class.
4. Give the Apex Class name as “PhnValid\_PassengerObj”.
5. Click ok.
6. Now write the code logic here

Source Snippet:

```
public class PhnValid_PassengerObj {
    public static void valMethod(List<Passenger__c> newPass){
        for(Passenger__c p:newPass){
            if(p.Phone__c==null){
                p.Phone__c.addError('please Enter phone Number');
            }
        }
    }
}
```

7.Save the code.(click on file --> Save)

```
1 public class PhnValid_PassengerObj {
2
3     public static void valMethod(List<Passenger__c> newPass){
4
5         for(Passenger__c p:newPass){
6
7             if(p.Phone__c==null){
8
9                 p.Phone__c.addError('please Enter phone Number');
10
11         }
12
13     }
14
15 }
16
17 }
```

## Create An Apex Trigger

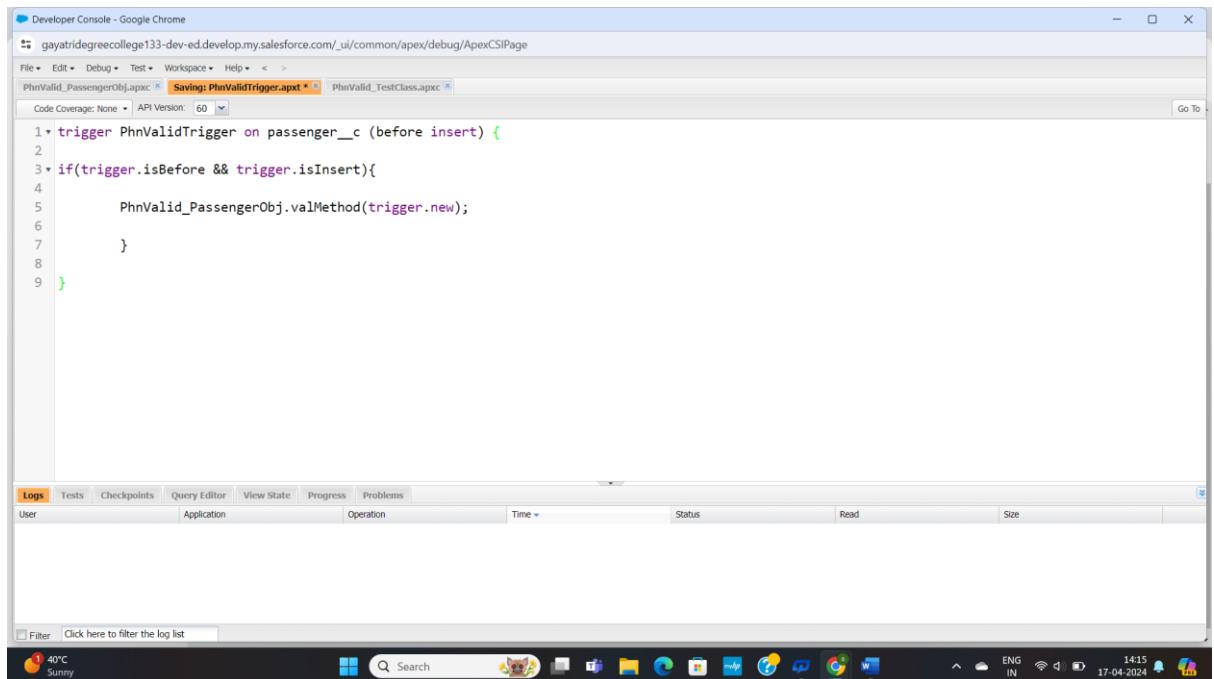
1. To create a new Apex Class follow the below steps:  
Click on the file --> New --> Apex Class.  
Give the Apex Trigger name as “PhnValidTrigger”, and select “Passenger\_\_c” from the dropdown for sObject.
2. Give the Apex Trigger name as “PhnValidTrigger”, and select “Passenger\_\_c” from the dropdown for sObject.

3. Click Submit.
4. Now write the code logic here

Source Code:

```
trigger PhnValidTrigger on passenger__c (before insert) {
    if(trigger.isBefore && trigger.isInsert){
        PhnValid_PassengerObj.valMethod(trigger.new);
    }
}
```

5. Save the code.(click on file --> Save)



## Create An Apex Test Class

1. To create a new Apex Class follow the below steps:  
Click on the file --> New --> Apex Class.
2. Give the Apex Class name as “PhnValid\_TestClass”.
3. Click ok.
4. Now write the code logic here
5. Source Code:

```
@isTest
public class PhnValid_TestClass {
    @isTest
    public static void testClass(){
        list<Passenger__c> varlis = new list<Passenger__c>();
        Passenger__c var = new Passenger__c();
        var.Phone__c = null;
        varlis.add(var);
        insert varlis;
        PhnValid_PassengerObj.valMethod(varlis);
    }
}
```

6. Save the code.(click on file --> Save).
7. Click on “Run Test” and then click on Test under the terminal section and do check that your overall code coverage should be more than 75%.

```

Developer Console - Google Chrome
File • Edit • Debug • Test • Workspace • Help • < >
PhnValid_PassengerObj.apxc | PhnValidTrigger.apext | PhnValid_TestClass.apxc
Code Coverage: None | API Version: 60 | Run Test | Go To ...
1  @isTest
2  public class PhnValid_TestClass {
3
4      @isTest
5
6      public static void testClass(){
7          list<Passenger__c> varlis = new list<Passenger__c>();
8          Passenger__c var = new Passenger__c();
9          var.Phone__c = null;
10         varlis.add(var);
11         insert varlis;
12         PhnValid_PassengerObj.valMethod(varlis);
13     }
14 }

```

Logs Tests Checkpoints Query Editor View State Progress Problems

Status	Test Run	Enqueued Time	Duration	Failures	Total
<span style="color: red;">✖</span>	TestRun @ 2:23:39 pm			1	1

Overall Code Coverage

Class	Percent	Lines
Overall	100%	
PhnValidTrigger	100%	2/2
PhnValid_PassengerObj	100%	4/4

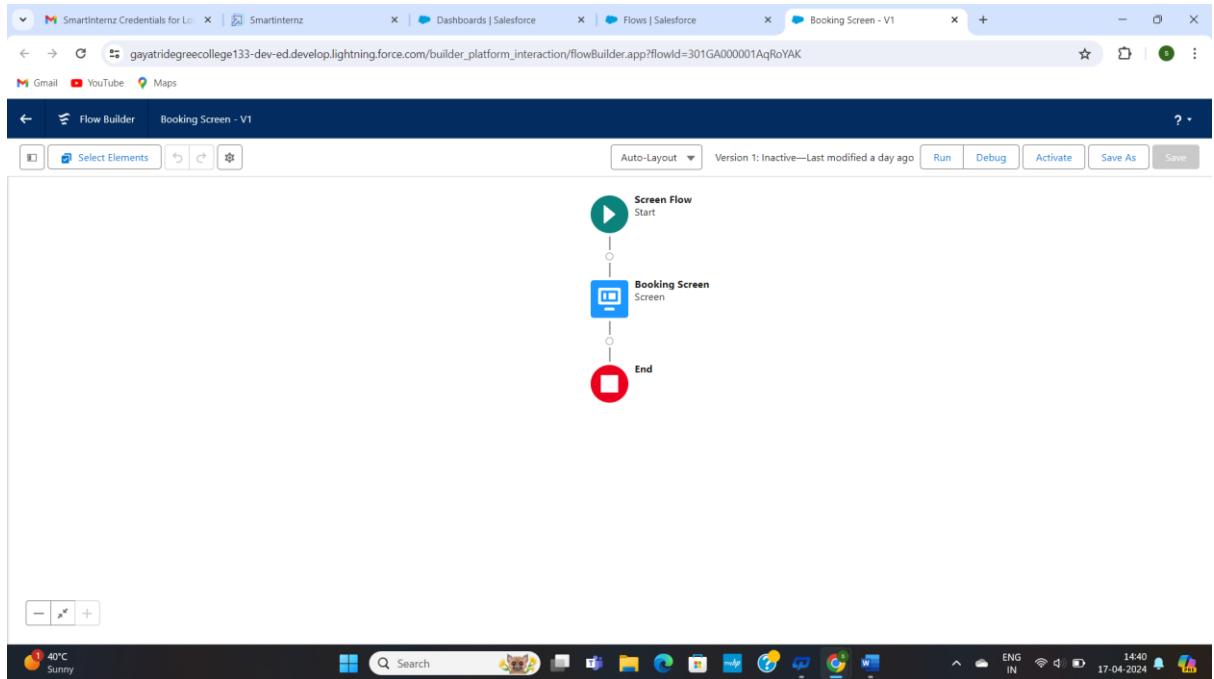
## Milestone 13 : Flows

### Creating A Screen Element On Booking Object

Let's start by creating a screen flow and adding a screen to it.

1. From Setup search for the “Flows” in quick find and select “New Flow”.  
Select “Screen Flow” and then click on “Create”.
2. Place the cursor in between the Start and End element, a “+” icon appears, click on that and select “Screen”.
3. Give the label as “Booking Screen”, and select “Fields”.
4. Click on the lookup icon in the input field and select “New Resource”.
5. Filling the fields as given below:
  - API name : bookingObject
  - Datatype : Record
  - Object : Booking
  - Available for input : Checked
  - Available for output: Checked
6. Click on done
7. Once you are done with the creation of a resource with the name “bookingObject” go back to step 5 and click on the lookup icon and select “bookingObject” from the list.
8. After selecting “bookingObject” you'll have all the fields which are in the object, drag and drop each field on the screen.

9. Your screen will look like as shown below:
10. Click on done and Save.
11. The flow will look like as shown below.
12. Let's create a "Create Element" and add it to screen flow.

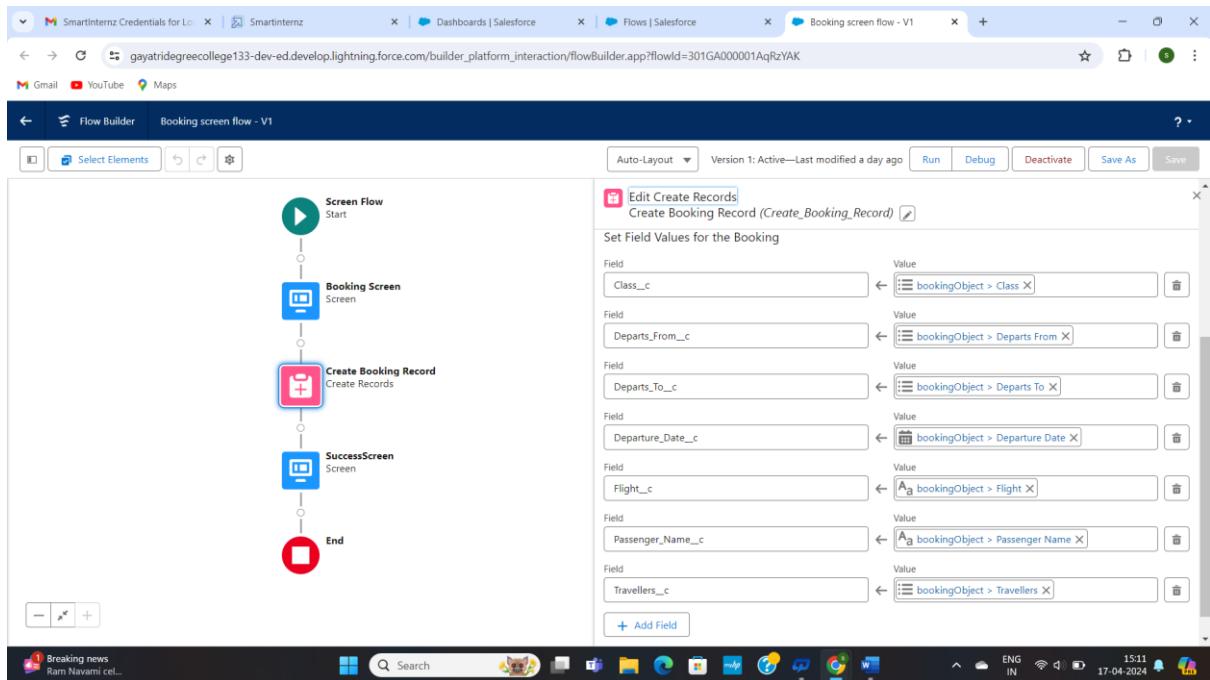


## Creating A Create Element On Booking Object

1. In the Create New path, hover over circle and click '+' icon in between booking screen and end.
2. Click Create Records.
3. In the New Create Records window, enter these values

Field	Value
Label	Create Booking Record
API name	Gets autopopulated
How many records to create	one
How to set the record fields	Use separate resources and literal values
Object	Booking

Map the fields as shown below:



Click Done.

## Creating A Success Screen Element

1. In the Create New path, hover over circle and click '+' icon in between Create Booking Record and end.
2. Click the Screen element.
3. Give a label name as “SuccessScreen”.
4. From components search “Display text” and drag that component in the canvas and give an API Name as “SuccessMessage”.
5. Inside the text area copy this message.

We are happy to inform you that your booking for [tour name] is confirmed! Get ready to create some unforgettable memories. We've made things easy for you and included all of your booking details in this very email. All you need to do is show us this email on the day you arrive, and you'll be good to go

Date: {!bookingObject.Departure\_Date\_\_c}

Departs from: {!bookingObject.Departs\_From\_\_c}

Departs to: {!bookingObject.Departs\_to\_\_c}

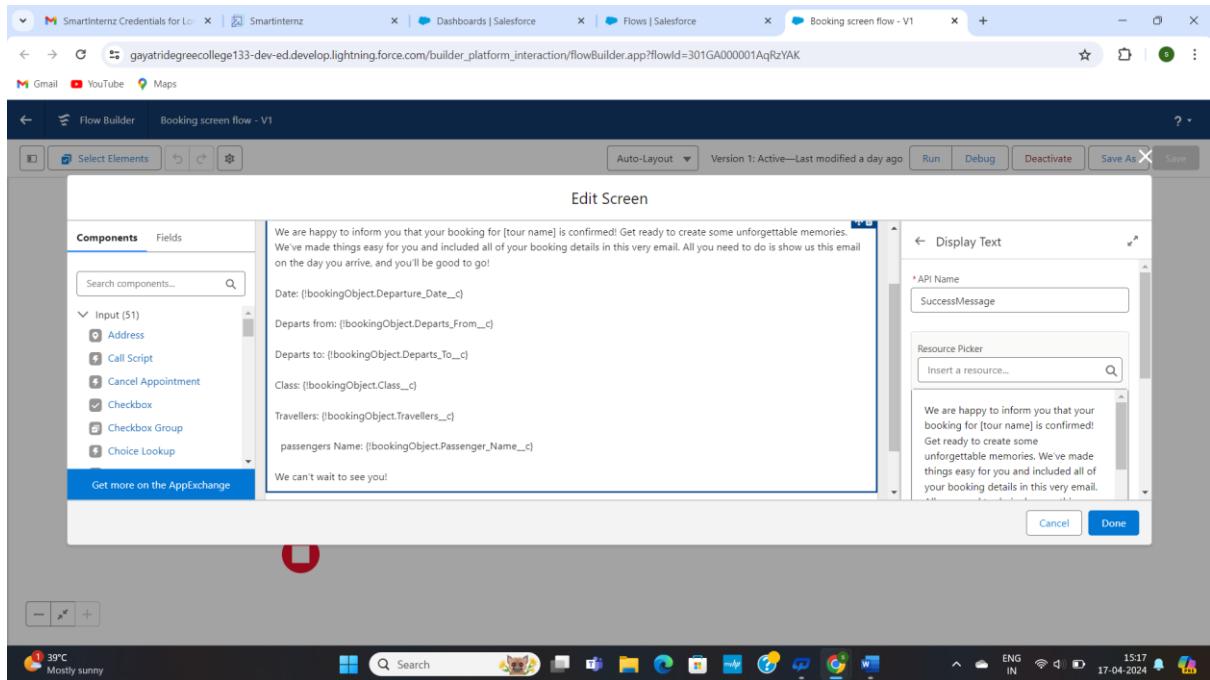
Class: {!bookingObject.Class\_\_c}

Travellers: {!bookingObject.Travellers\_\_c}

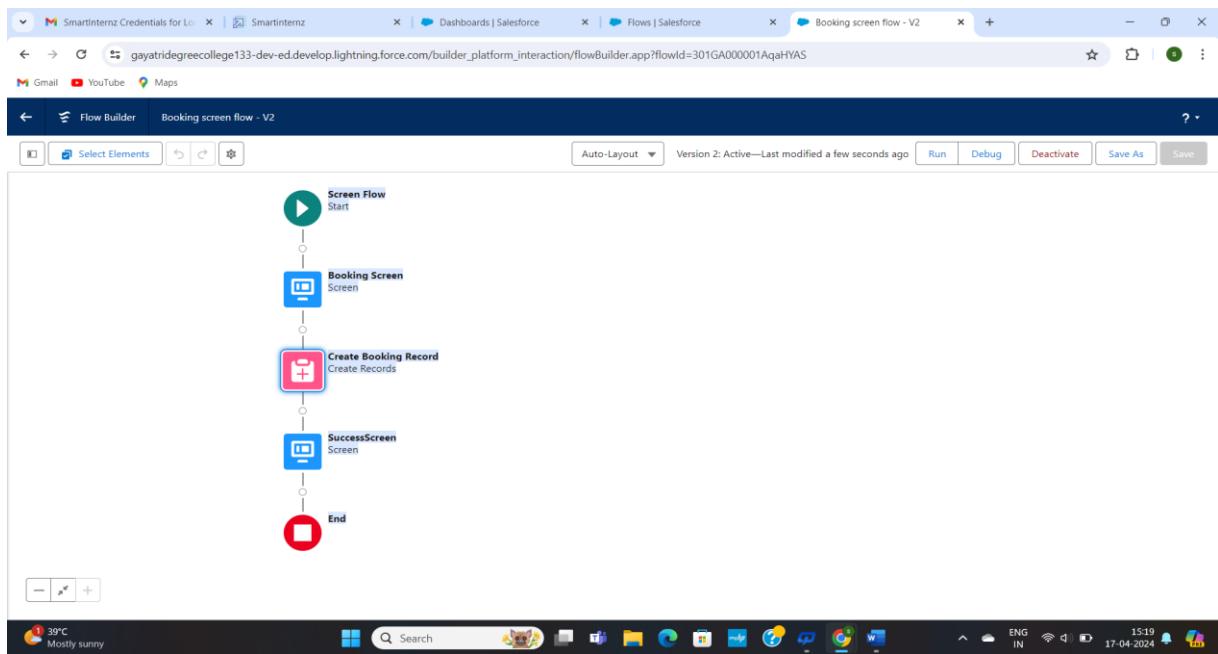
Passengers Name: {!bookingObject.Passenger\_Name\_\_r.Passenger\_Name\_\_c}

We can't wait to see you!

## 6. Click Done



## 6. Save the flow and Activate it.



END