

PROJECT REPORT ON

**Build an Employee Travel Approval Application For Corporates
(Developer) – (Short Term)**

Milestone – 01 : Create Salesforce Org

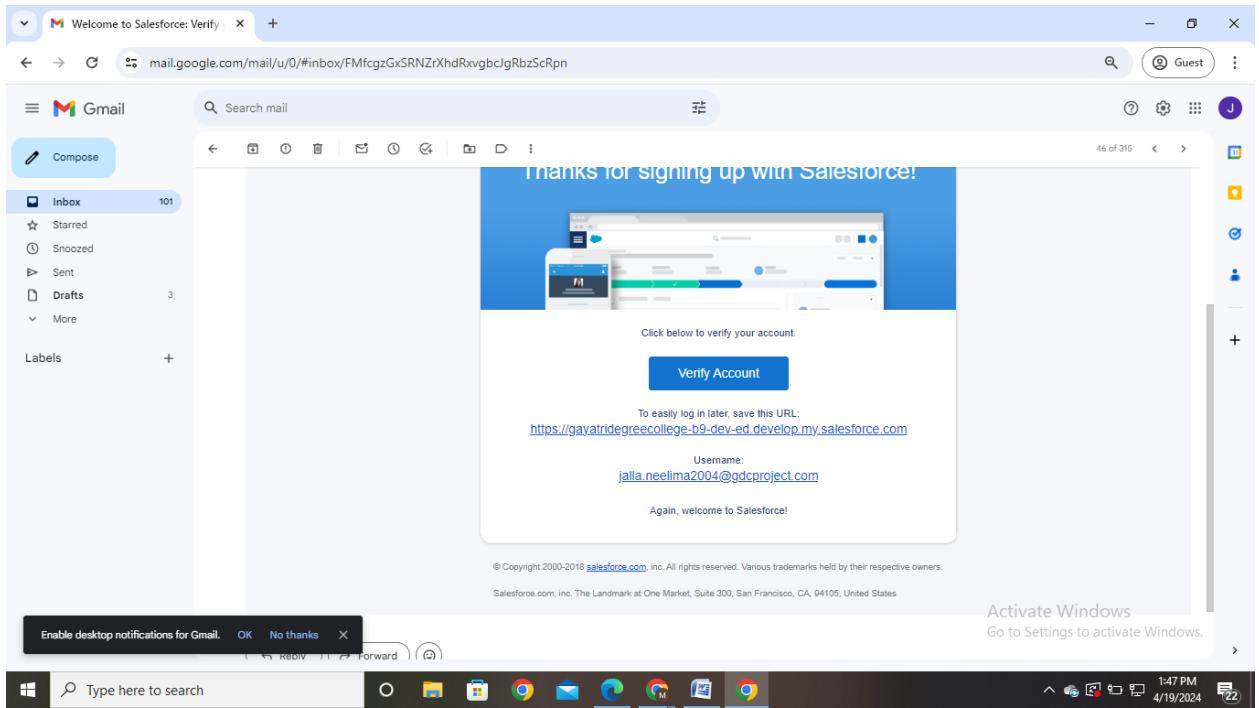
Go to **developer.Salesforce.com/Signup**

Click on Sign up.

On the sign-up form, enter the following details:

- 1. First Name & Last Name – BUKKE NANDINI**
- 2. Email –bukkenandini2022@gmail.com**
- 3. Role – Developer**
- 4. Company – GAYATRI DEGREE COLLEGE-TIRUPATHI**
- 5. Country – India**
- 6. Postal Code – 517501**
- 7. Username –bukkenandini2022@gdcproject.com**
- 8. 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 5-10min, as

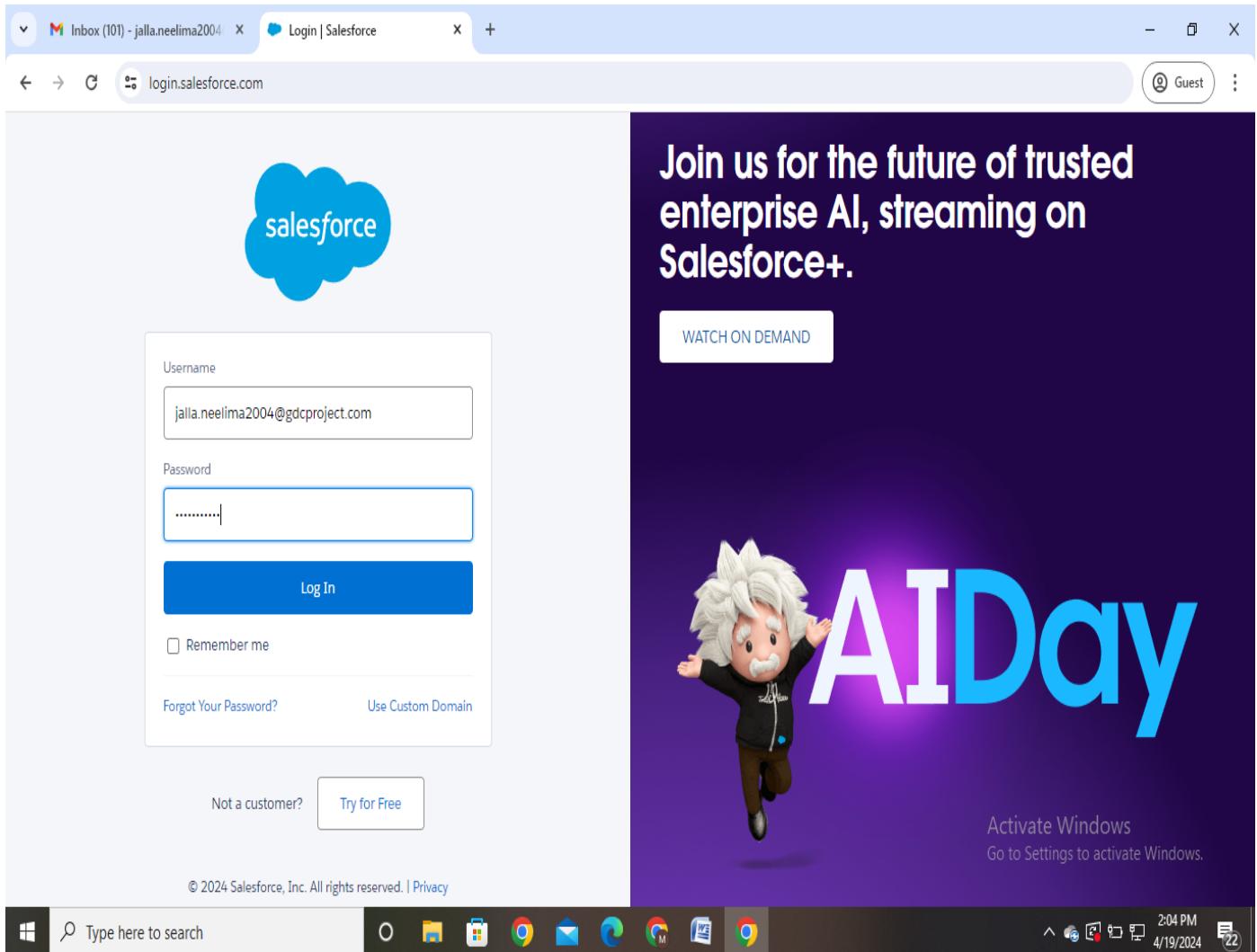


Login to your salesforce org

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.

Salesforce Login:

<https://login.salesforce.com>



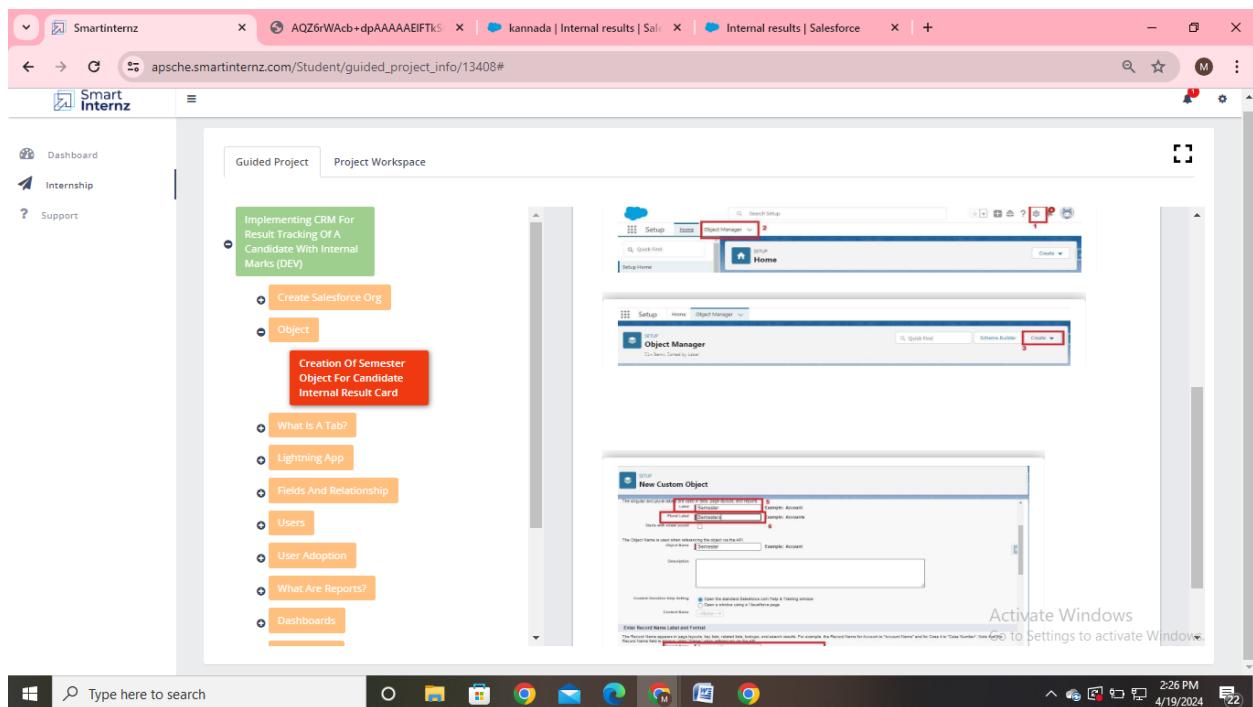
Milestone -02: Object for travel approval app

Create of Semester Object For Candidate Internal Result Card

1. Click on the gear icon and then select Setup.
2. Click on the object manager tab just beside the home tab.
3. After the above steps, have a look on the extreme right you will find a create Dropdownclick on that and select Custom Object.

4. On the Custom Object Definition page, create the object as follows.
5. Label: Semester
6. Plural Label: Semesters
7. Record Name: Semester Name
8. Check the Allow Reports
9. Check the Allow search
10. Click Save

In the same way create way create 4 more object as **Candidate**, **CourseDetails**, **Lecturer Details** and **Internal results**



Milestone – 03: What Is A Tab?

Tabs in Salesforce help users view the information at a glance . it display the data of objects and otherweb content in the application.

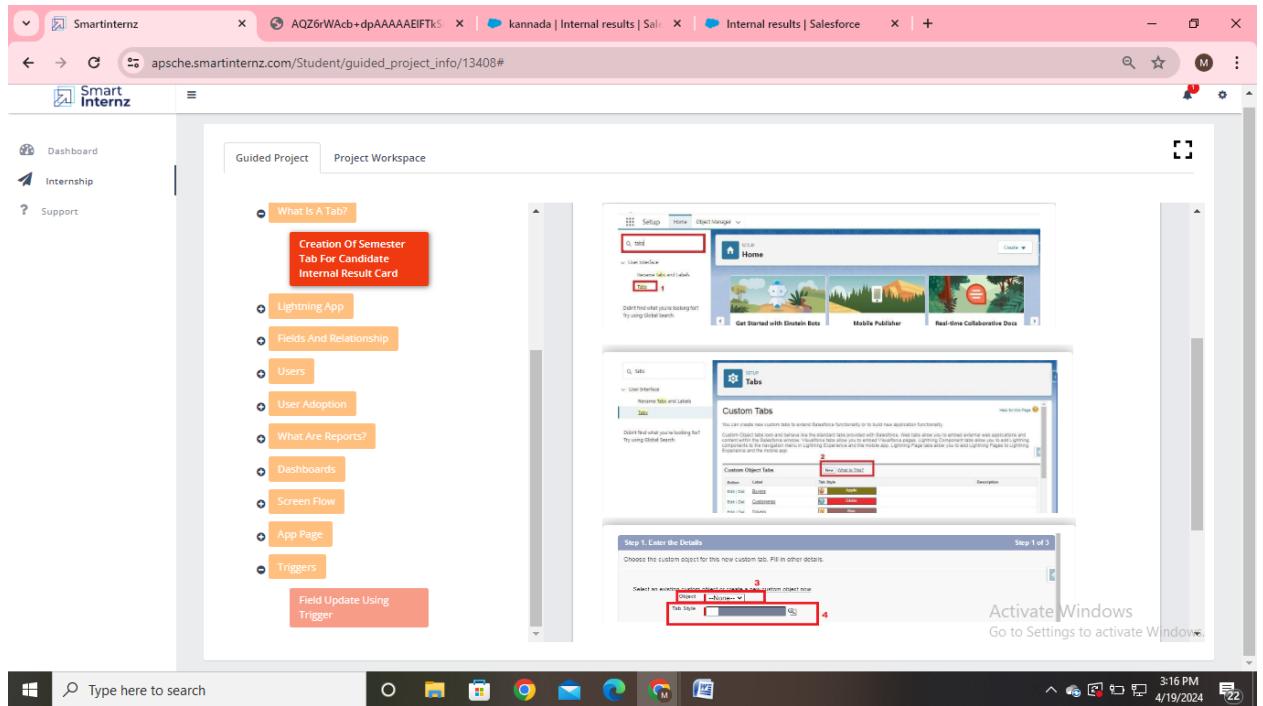
There are mainly 4 types of tabs:

- (A) Standard Object Tabs: Standard object tabs display data related to standard objects.
- (2) Custom Object Tabs: Custom object tabs display data related to custom objects.
- (3) WebTabs: Web Tabs display any external web based application or web page in a salesforce tabs.
- (D) Visualforce Tabs: Visualforce Tabs display data from a visualforce page.

Create Of Semester Tabs For Candidate Internal Result Card

Now create a custom tab. Click the Home tab.

1. Enter Tabs in Quick Find and select tabs.
2. Under Custom Object Tabs, Click New.
3. For Object, select Semester.
4. For Tab Style, select any icon.
5. Leave all defaults as is. Click Next,Next, and Save.
6. In the same way create Tabs for all Custom Object Candidate,Course Details.Lecturer Details, Internal results.



Mailestone – 04: Lightning App

App in salesforce are a group of tabs that help the application function by working together as unit. It has a name, a logo, and a particular set of tabs. The simplest app usually has just two tabs. There are two types of app

1. standard App: Standard apps come with every occurrence of salesforce as default. Many features like sales, Markting, Community, call center, content, Salesforce chatter, App Launcher ,etc are present in it.

Note: The description,Logo, and Label of standard app cannot be altered.

2. Custom Apps: Custom apps are created according to need of user.

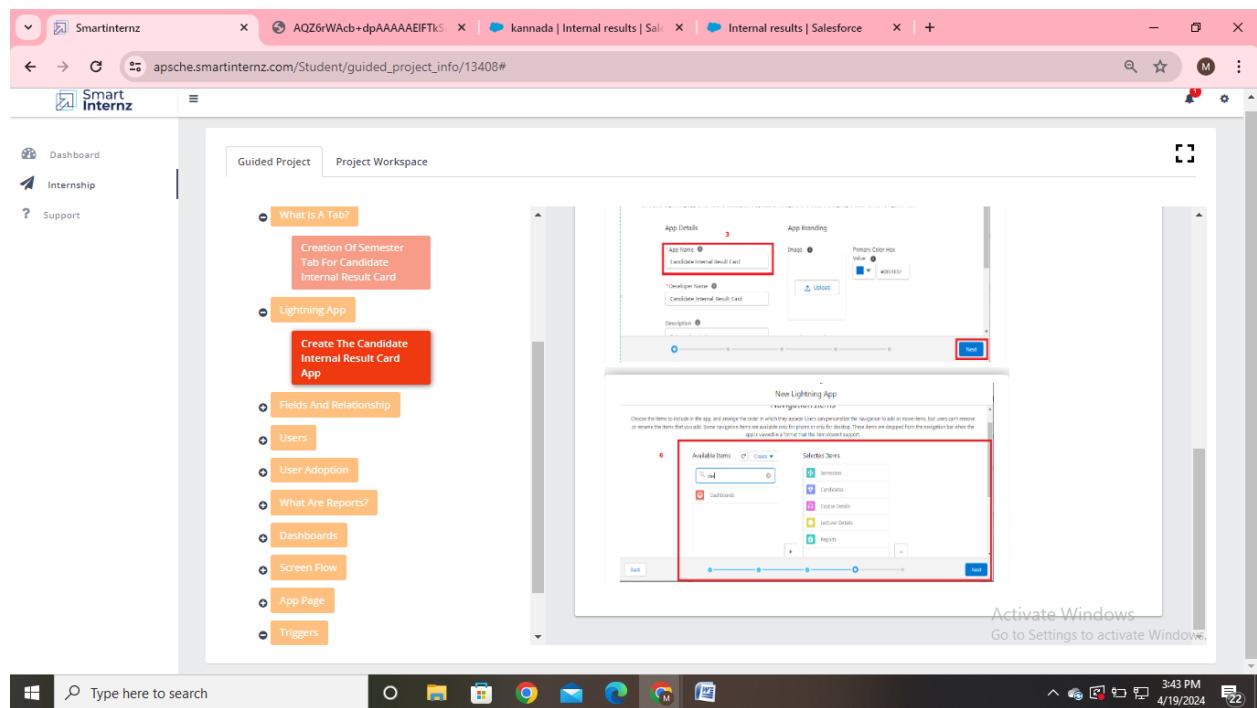
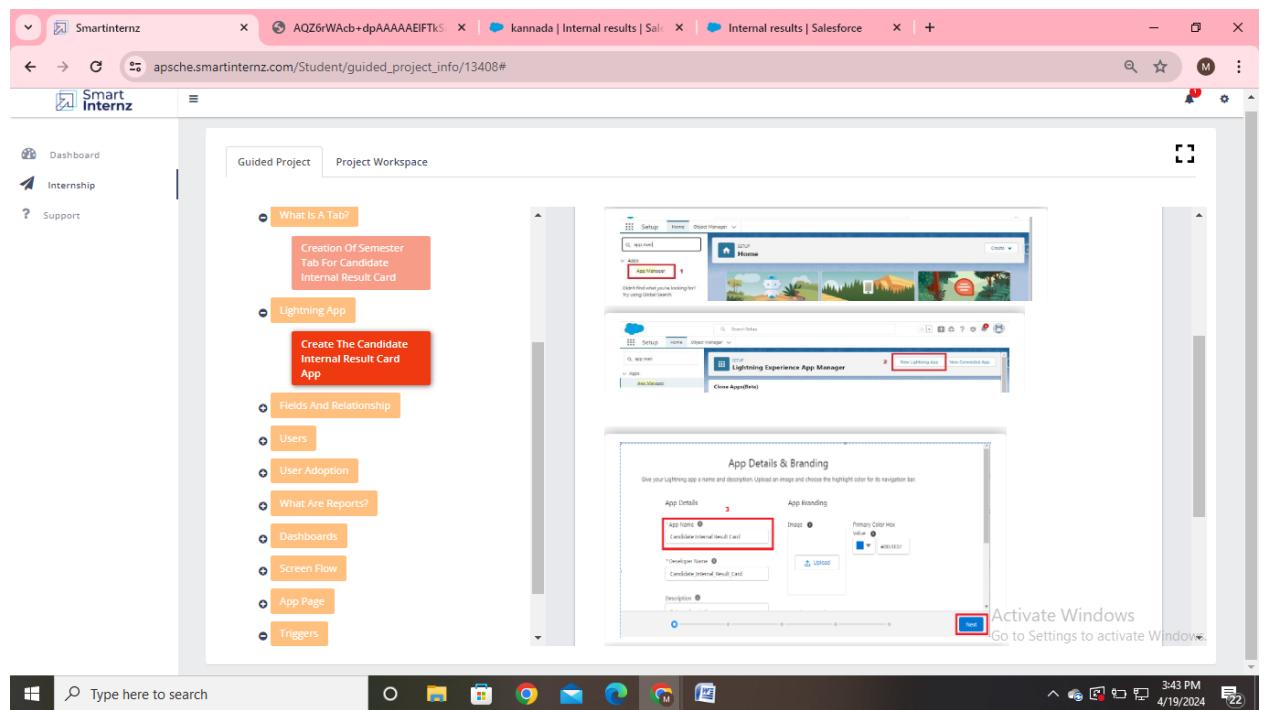
Custom Apps are made by using standard and custom tabs together.

Note: Logos for custom Apps can be changed.

Create The Candidate Internal Result Card App

1. From Setup, enter App Manager in the Quick Find and select App Manager.
2. Click New Lightning App.
3. Enter **Candidate Internal Result Card** as the App Name, then click next.
4. Under App Options, leave the default selection and click Next.
5. From Available items, leave as is and click Next.
6. From Available Items, select **Semester, Candidate, Course Details, Lecturer Details, Internalresults, Reports** and Dashboards and move them to selected items.
7. Click Next.

From Available Profile, select System Administrator and move it to Selected Profile. Click save & Finish.



Mailestone- 05: Fields And Relationship

Fields - Fields store data values that are required for a particular object a record.

An object relationship in salesforce is a two-way association between two objects.

Relationship are created by creating custom relationship fields on an objects.This is done so that when users view records, they can also see and access related data.

Object Name	Fields Name	Data type
Semester	Semester Name	Text(standard field)
Details)	Course	Lookup(Course

Candidate	Candidate Name	Text(Standard field)
	Candidate Roll Number	Auto Number
	Semester Name	

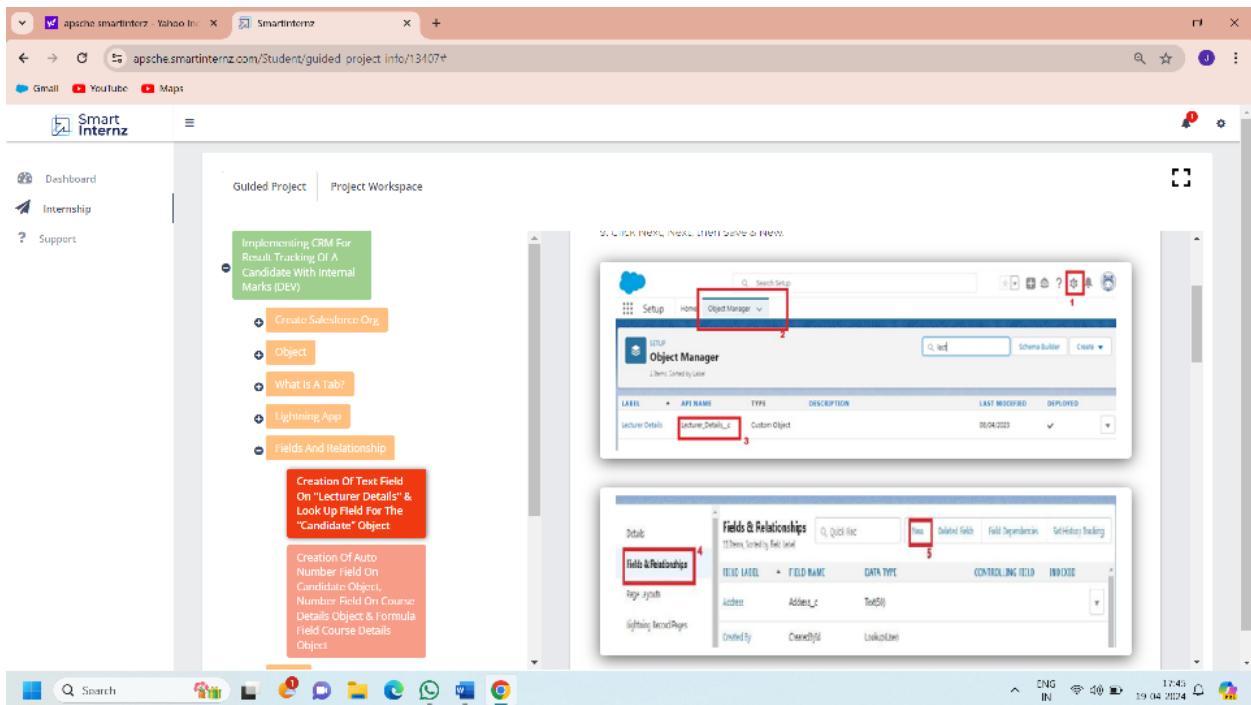
Lecturer	Lecturer Name
Text(standard field)	

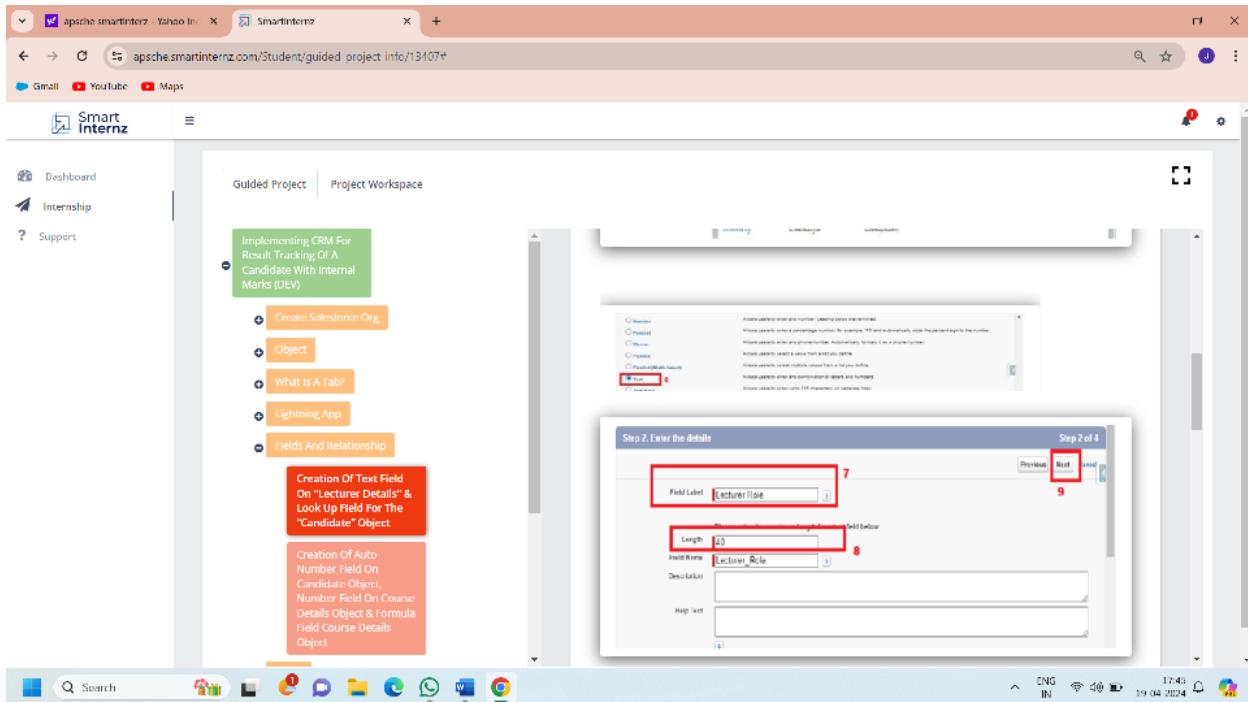
	Lecturer Role	Text
	Course	
Lookup(Course Details)		
Course Details	Course Name	
Text(Standard field)		
	Duration (years)	Number
Internal results	Candidate	
Lookup(Candidate)		
	Candidate Roll Number	Formula
Course		
Lookup(Course detail)		
	Marks	Pick
list		
	Status	Picklist
		Values:
		Pass
		Fail

Creation of Text Field on “Lecturer Details” & Look up Field For The “Candidate” Object

1. Click the gear icon and select setup. This launches Setup in a new tab.

2. Click the Object Manager tab next to Home.
3. Select Lecturer Details.
4. Select Field & Relationship from the left navigation.
5. Click New
6. Select the Text as the Data Type, click next.
7. For Field Label, enter Lecturer Role.
8. Enter Length 40.
9. Click Next, Next, then Save & New.





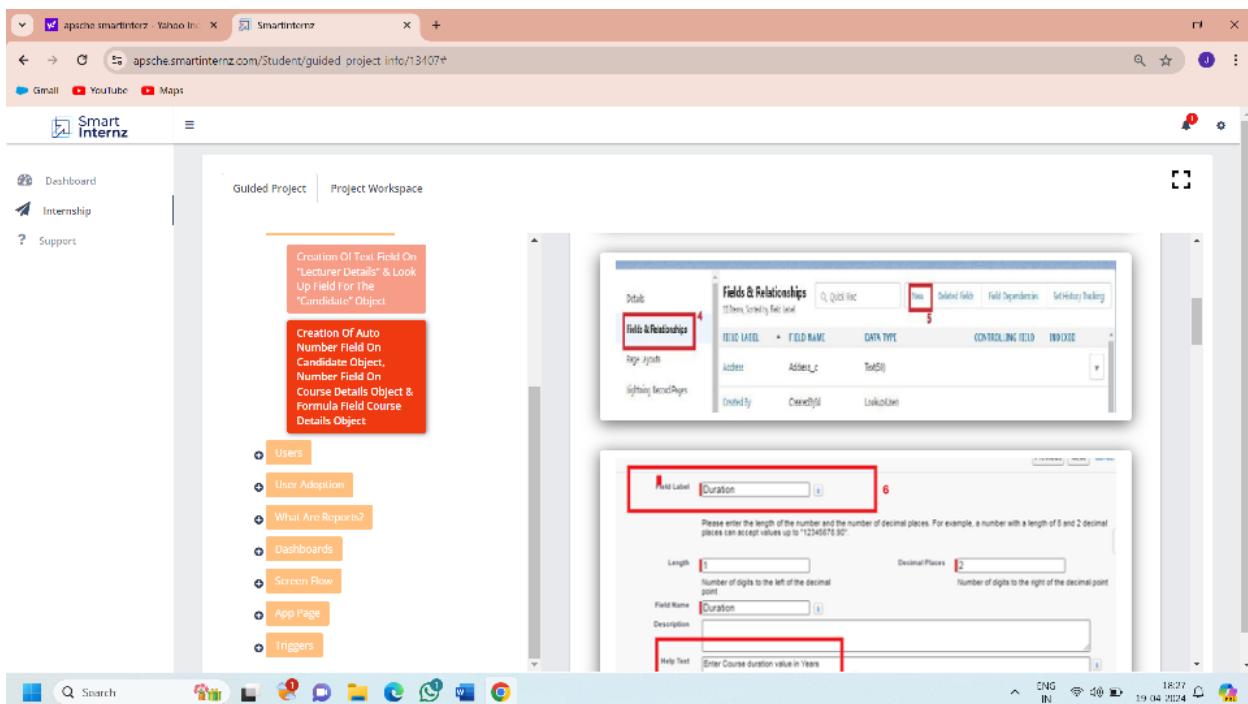
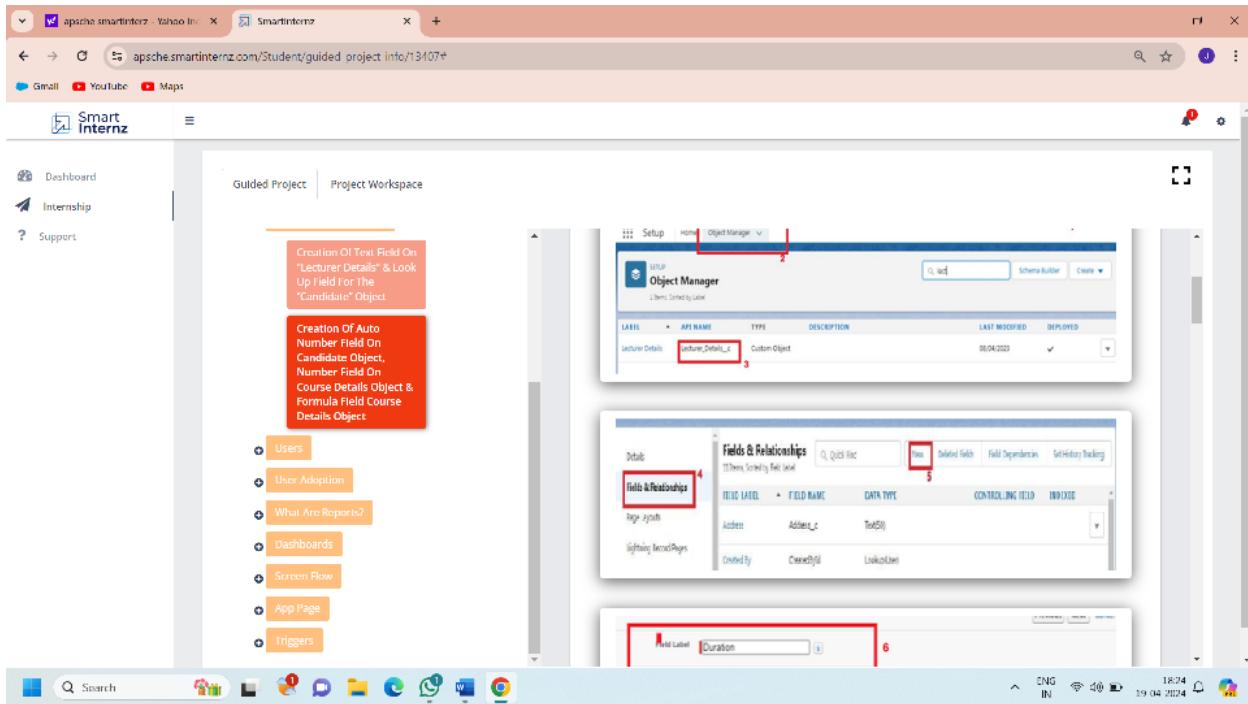
Now Let's create a Lookup field on candidate object

1. Click the gear icon and select Setup. This launches Setup in a new tab.
2. Click the Object Manager tab next to Home.
3. Select candidate.
4. Select Fields & Relationships from the left navigation
5. Click New
6. Select the lookup as the Data Type, then click Next.
7. In related select Semester
8. For Field Label Semester Name, enter.
9. Click Next, Next, then Save & New.

Creation of Auto Number Field On Candidate Object, Number Field On Course Details Object & Formula Field Course Details Object

Let's create a Number field on Course Details object

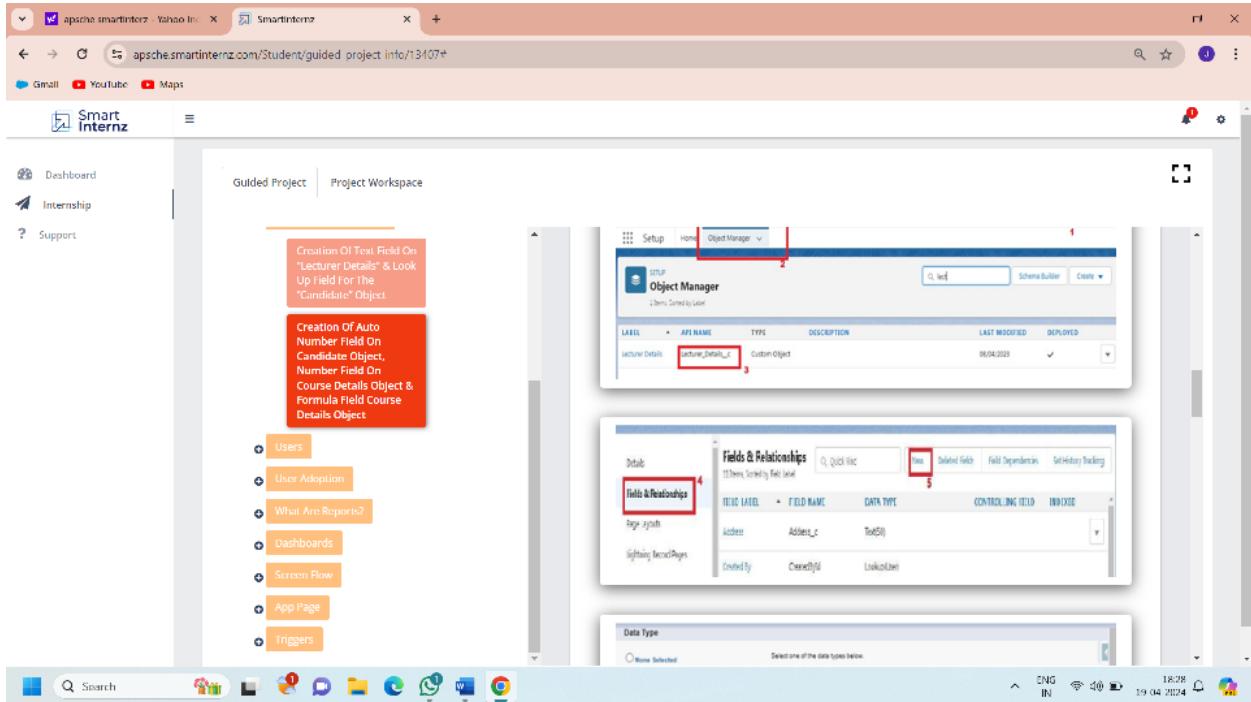
1. Click the gear icon and select Setup. This launches Setup in a new tab.
2. Click the Object Manager tab next to Home.
3. Select Course Detail.
4. Select Fields & Relationships from the left navigation
4. Click New & select number field, click Next
6. For Field Label Duration, enter.
7. Give Help Text- Enter Course duration value in Years
8. Click Next, Next, then Save & New.

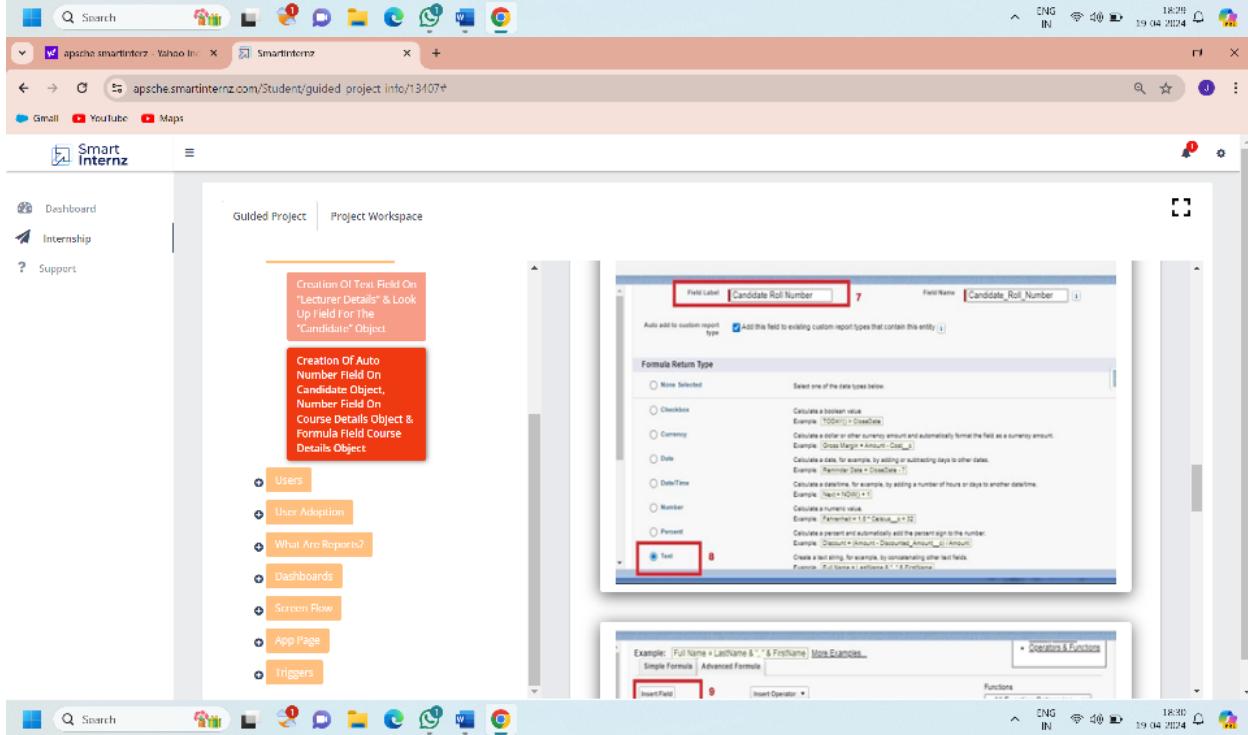
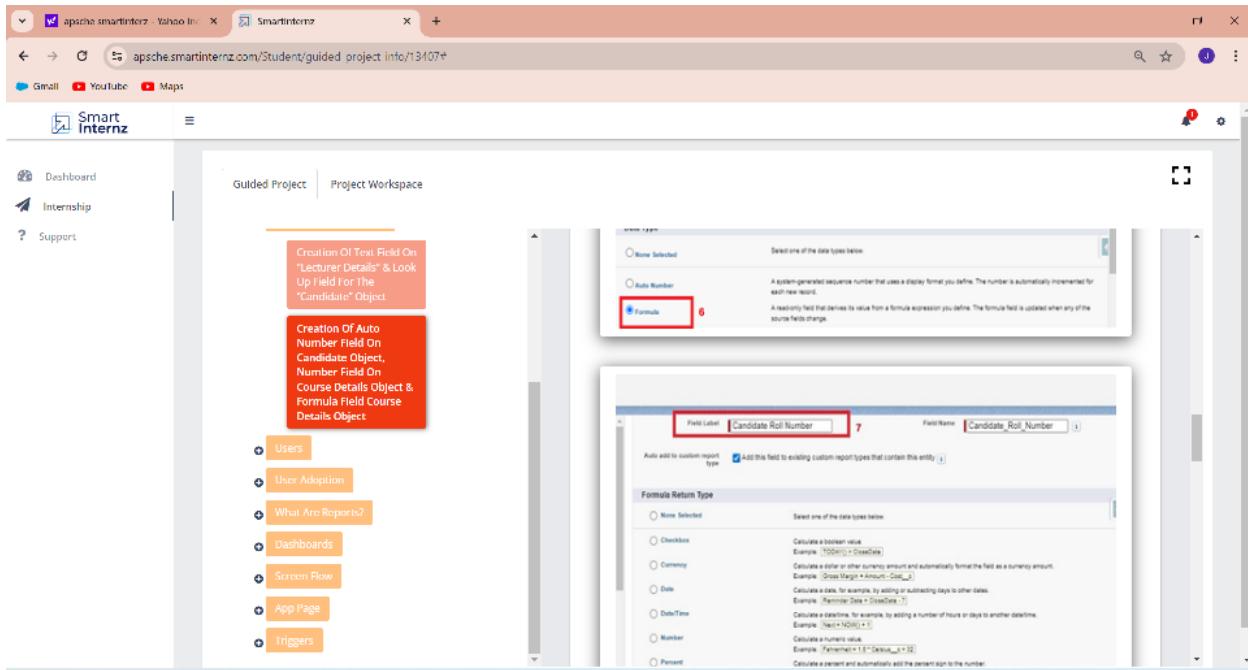


Now Let's create a Formula field on Internal Results object

1. Click the gear icon and select Setup. This launches Setup in a new tab.

2. Click the Object Manager tab next to Home.
3. Select Internal results.
4. Select Fields & Relationships from the left navigation.
5. Click New
6. Select the Formula as the Data Type, then click Next.
7. Give field label Candidate Roll Number
8. Select formula return type text, Click Next
9. Click Insert Field
10. Create and insert formula Candidate_r.Candidate_Roll_Number_c, and then click Insert.
11. Click Next, Next, then Save.





The image consists of two vertically stacked screenshots of a web-based application interface, likely Salesforce, titled "Smart Internz".

Screenshot 1 (Top): This screenshot shows a "Guided Project" workspace. On the left, a sidebar lists navigation items: Dashboard, Internship, Support, and several orange-highlighted options: "Creation Of Text Field On 'Lecturer Details' & Look Up Field For The 'Candidate' Object", "Creation Of Auto Number Field On Candidate Object", "Number Field On Course Details Object & Formula Field Course Details Object", and "Users". Below these are "User Adoption", "What Are Reports?", "Dashboards", "Screen Flow", "App Page", and "Triggers". The main area displays a "Formula Field" configuration window. It includes a "Simple Formula" tab, a "Functions" dropdown menu listing "ABS", "ACOS", "ADDMONTHS", "AND", "ASCII", "ASIN", and "Insert Selected Function", and an "Advanced Formula" tab.

Screenshot 2 (Bottom): This screenshot shows the same workspace and sidebar. The main area displays a "Formula Field" configuration window. The "Advanced Formula" tab is selected. It shows a formula bar with "10" and a dropdown menu with "AND", "ASCII", and "ASIN". Below it is an "Insert Field" dialog box. The left pane lists fields from "Internal results": \$Api, \$Organization, \$Profile, \$System, \$User, and \$UserRole. The right pane lists fields from the "Candidate" object: Candidate Name, Candidate Roll Number, City, Created By, Created Date, Internal results Name, Last Modified By, Last Modified Date, and Email. A message at the bottom says "You have selected Candidate__c.Candidate_Roll_Number__c Type: Auto Number API name: Candidate__c.Candidate_Roll_Number__c". The "Insert" button is highlighted with a red box.

Now Let's create an auto number field on Candidate object

1. Click the gear icon and select Setup. This launches Setup in a new tab.
2. Click the Object Manager tab next to Home.
3. Select Candidate.
4. Select Fields & Relationships from the left navigation
5. Click New
6. Select the Auto Number as the Data Type, then click Next.

7. For Field Label Candidate enter Roll Number.
8. Give a display format
9. Click Next, Next, then Save & New.

The image consists of two vertically stacked screenshots from a Salesforce interface. Both screenshots show a sidebar with navigation links like Dashboard, Internship, Support, Users, User Adoption, What Are Reports?, Dashboards, Screen Flow, App Page, and Triggers. The main area displays a 'Guided Project' workspace.

Screenshot 1 (Top): This screenshot shows the 'Object Manager' page. A red box highlights the 'Object Manager' tab in the top navigation bar. Another red box highlights the 'Lecturer_Details' object in the list, which is described as a 'Custom Object'. Below this, a 'Fields & Relationships' section is shown with a table:

FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Address	Text		
Created By	Lookup		

Screenshot 2 (Bottom): This screenshot shows the 'New Custom Field' configuration page. It's titled 'Candidate New Custom Field' and is on 'Step 2. Enter the details'. A red box highlights the 'Field Label' input field containing 'Candidate Roll Number'. Another red box highlights the 'Display Format' input field containing 'CAD-(000)'. A third red box highlights the 'Starting Number' input field containing '0'. A red box also highlights the 'Next' button at the bottom right of the form.

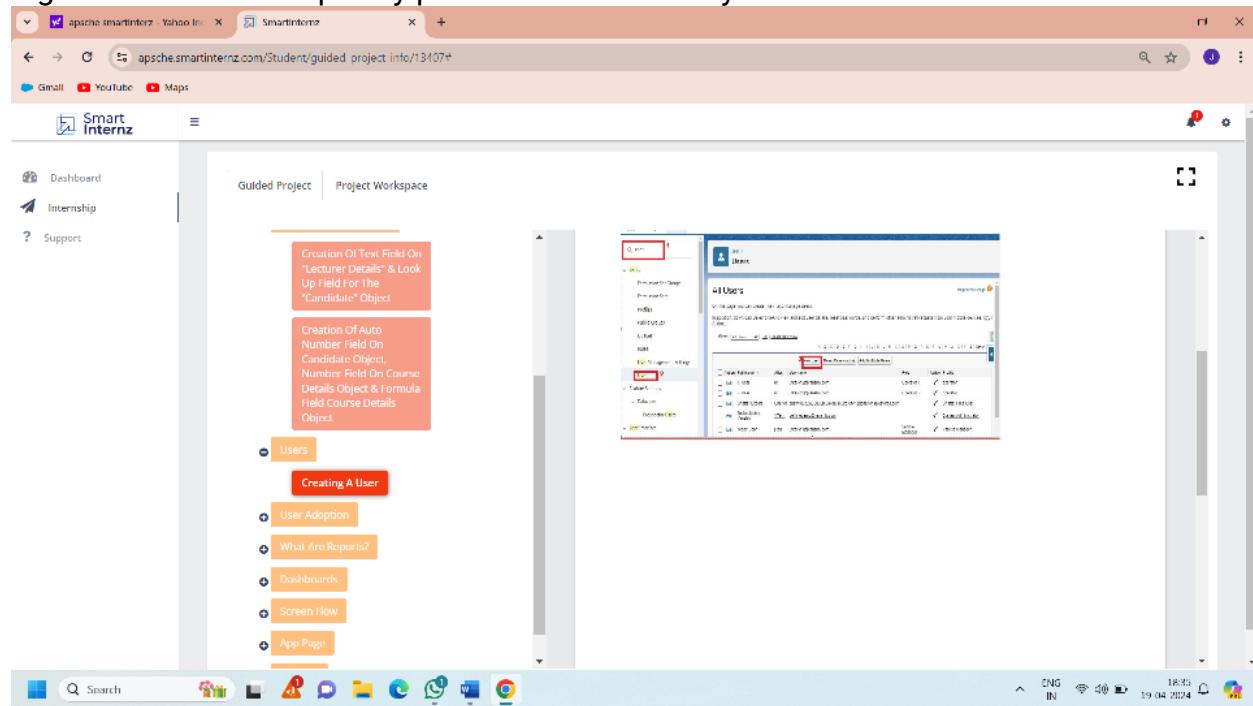
Mailstone- 06:Users

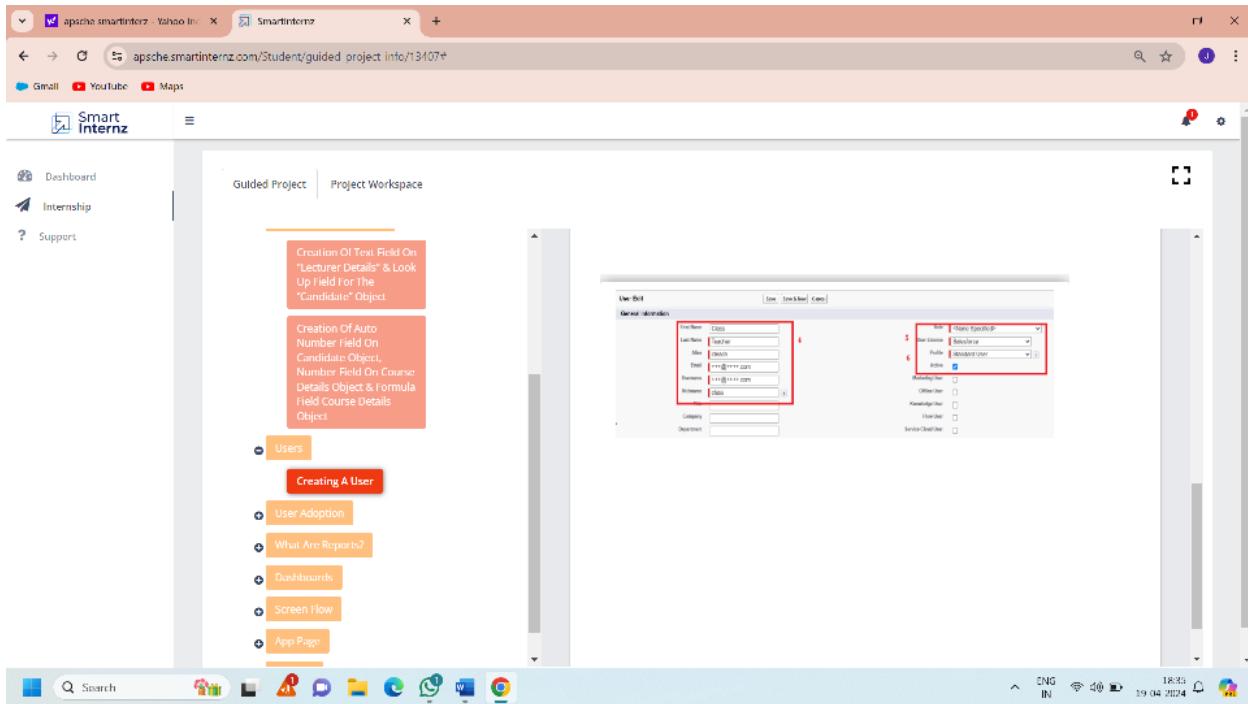
A user is anyone who logs in to Salesforce. Users are employees at your

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.

Creating A User

1. From Setup, in the Quick Find box, enter Users.
 2. Select Users.
 3. Click New User.
 4. Enter the First Name, Class, Last Name, Teacher and (Your) email address and a unique username in the form of an email address. By default, the username is the same as the email address.
 5. Select a User License as salesforce.
- NOTE- As Salesforce license can only be used by 2 Users at a time in Dev Org, so If you don't find salesforce license then deactivate a user who has salesforce license Or change the license type from Salesforce to any other.
6. Select a profile as Standard user.
 7. Check Generate new password and notify the user immediately to have the user's login name and a temporary password emailed to your email.





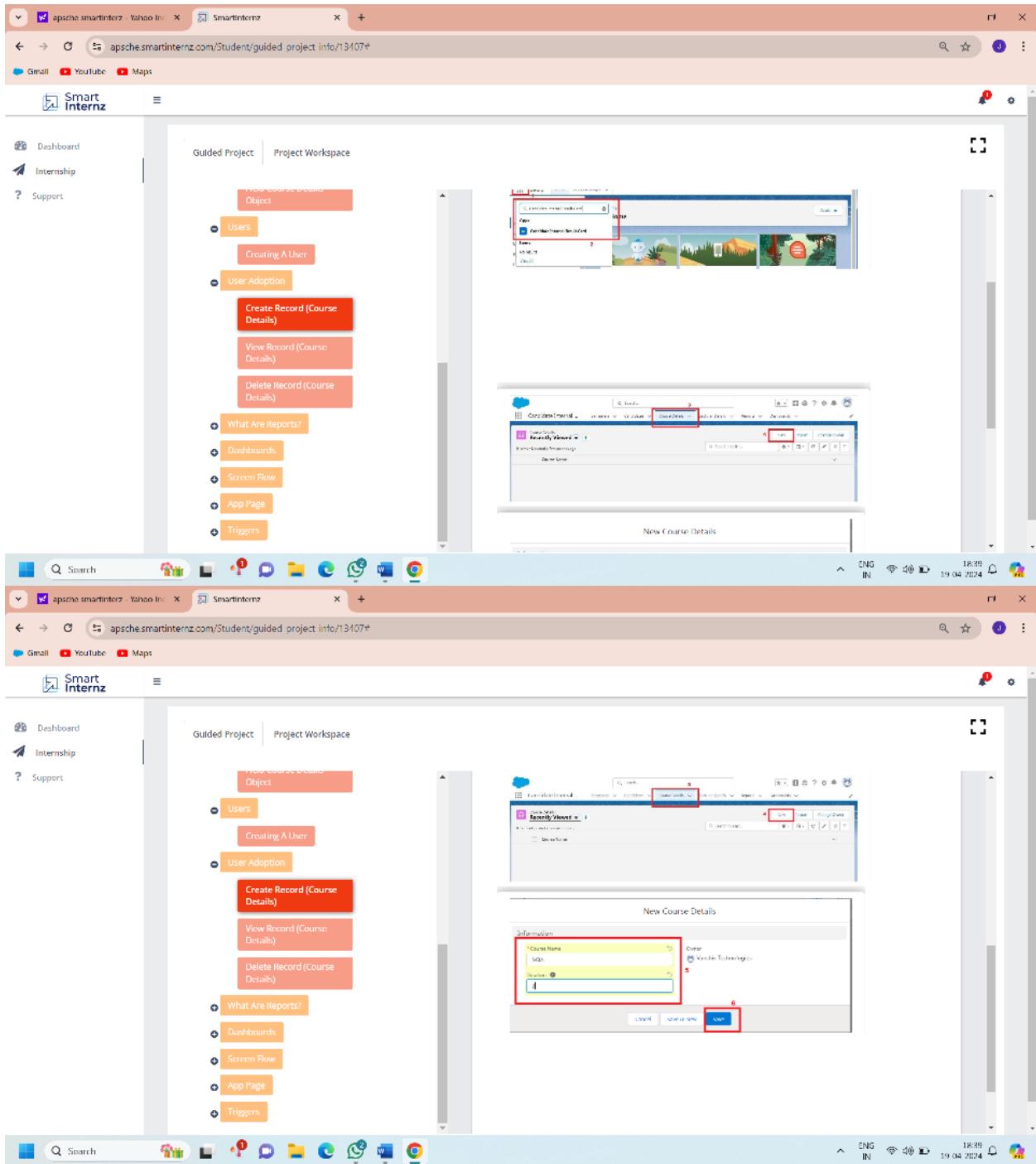
Malestone-07:User Adoption

Salesforce user adoption is the simple act of enabling a user to use SFDC's full CRM capabilities by creating strategies around onboarding, training, and continued development – all to drive overall digital adoption.

Create A Record(Course Details)

Create Records on Course Details Objects

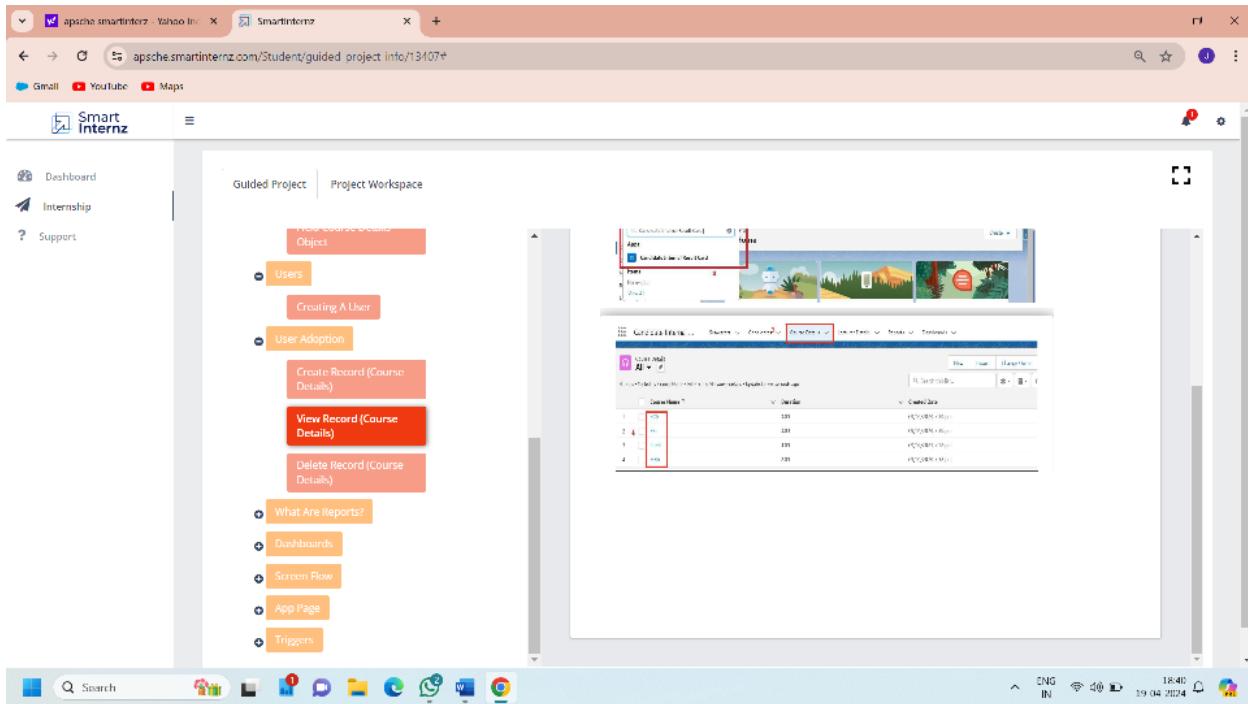
1. Click on App Launcher on left side of screen.
2. Search Candidate Internal Result Card App & click on it.
3. Click on Course Details tab.
4. Click new button
5. Fill all Course Details record details.
6. Click on Save Button.



View Record(Course Details)

Viewing the Records of Course Detail Object

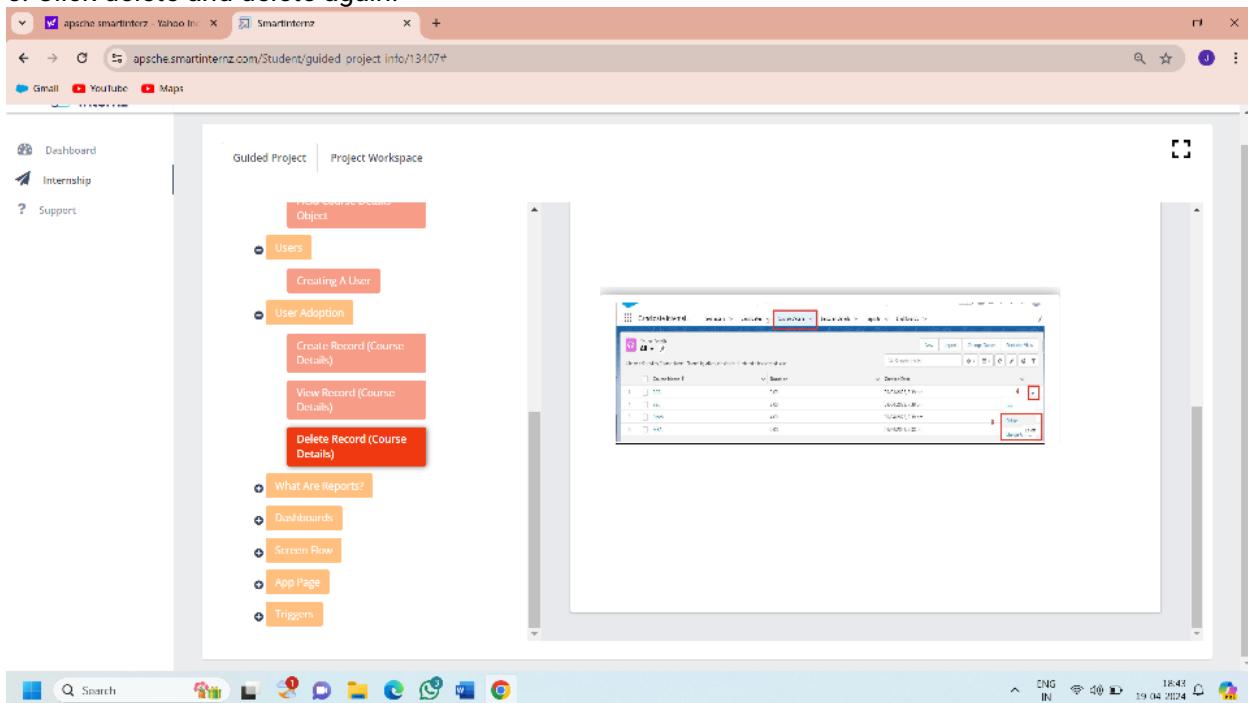
1. Click on App Launcher on left side of screen.
2. Search Candidate Internal Result Card & click on it.
3. Click on Course details Tab.
4. Click on any record name. you can see the details of the Driver



Delete Record(Course Details)

Deleting Records of Course Details Object

1. Click on App Launcher on left side of screen.
2. Search Candidate Internal Result Card & click on it.
3. Click on Course details Tab.
4. Click on Arrow at right hand side on that Particular record.
5. Click delete and delete again.



Milestone-08: What Are Reports?

Reports in Salesforce is a list of records that meet a particular criterion which gives an answer to a particular question. These records are displayed as a table that can be filtered or grouped based on any field.

There are 4 types of report formats in Salesforce:

Tabular Reports:

This is the most basic report format. It just displays the row of records in a table with a grand total. While easy to set up they can't be used to create groups of data or charts and also cannot be used in Dashboards. They are mainly used to generate a simple list or a list with a grand total.

Summary Reports:

It is the most commonly used type of report. It allows grouping of rows of data, view subtotal, and create charts.

Matrix Report:

It is the most complex report format. Matrix report summarizes information in a grid format. It allows records to be grouped by both columns and rows. It can also be used to generate dashboards. Charts can be added to this type of report.

Joined Reports:

These types of reports let us create different views of data from multiple report types. The data in joined reports are organized in blocks. Each block acts as a sub-report with its own fields, columns, sorting, and filtering. They are used to group and show data from multiple report types in different views.

Report types:

Report type determines which set of records will be available in a report. Every report is based on a particular report type. The report type is selected first when we create a report. Every report type has a primary object and one or more related objects. All these objects must be linked together either directly or indirectly.

A report type cannot include more than 4 objects. Once a report is created its report type cannot be changed.

There are 2 types of report types:

Standard Report Types: Standard Report Types are automatically included with standard objects and also with custom objects where "Allow Reports" is checked. Standard report types cannot be customized and automatically include standard and custom fields for each object within the report type. Standard report types get created when an object is created, also when a relationship is created.

Note: Standard report types always have inner joins.

Custom Report Types: Custom report types are reporting templates created to streamline the reporting process. Custom Reports are created by an administrator or User with “Manage Custom Report Types” permission. Custom report types are created when standard report types cannot specify which records will be available on reports.

In custom report types we can specify objects which will be available in a particular report.

The primary object must have a relationship with other objects present in a report type either directly or indirectly.

There are 3 types of access levels of folders:

Viewer: With this access level, users can see the data in a report but cannot make any changes except cloning it into a new report.

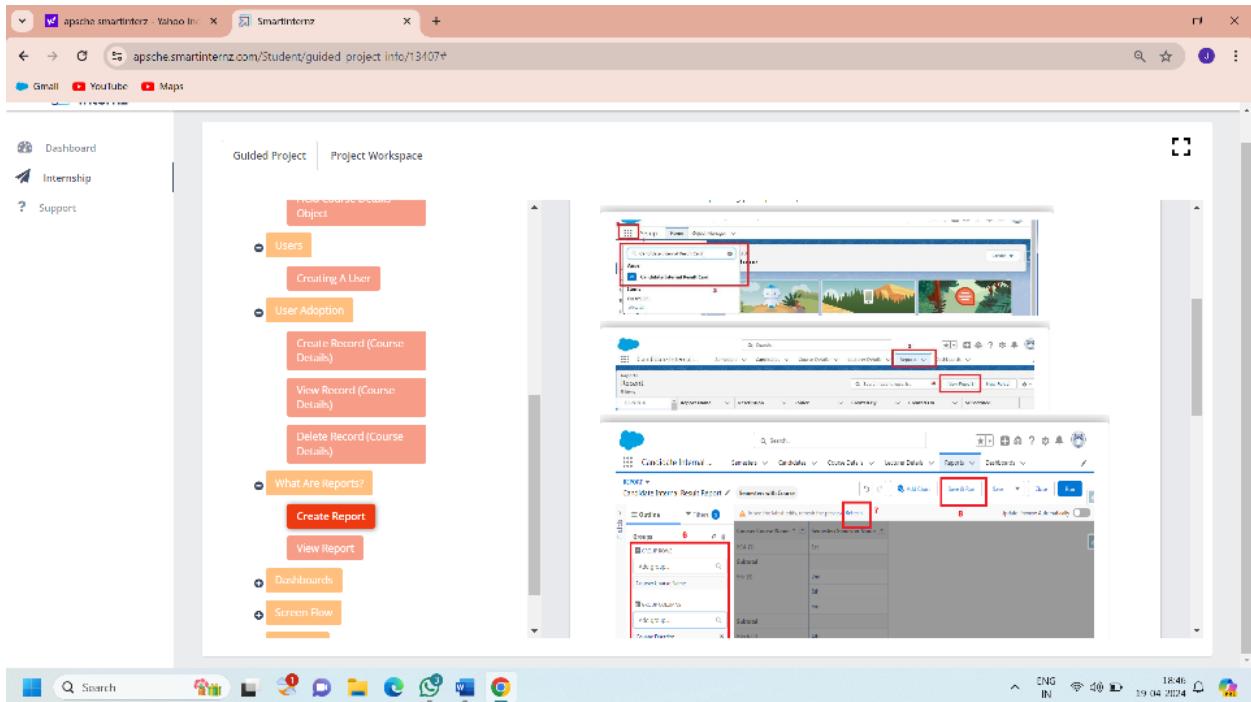
Editor: With this access level, users can view and modify the reports it contains and can also move them to/from any other folders they have access level as Editor or Manager.

Manager: With this access level, users can do everything Viewers & Editors can do, plus they can also control other user's access levels to this folder. Also, users with Manager Access levels can delete the report.

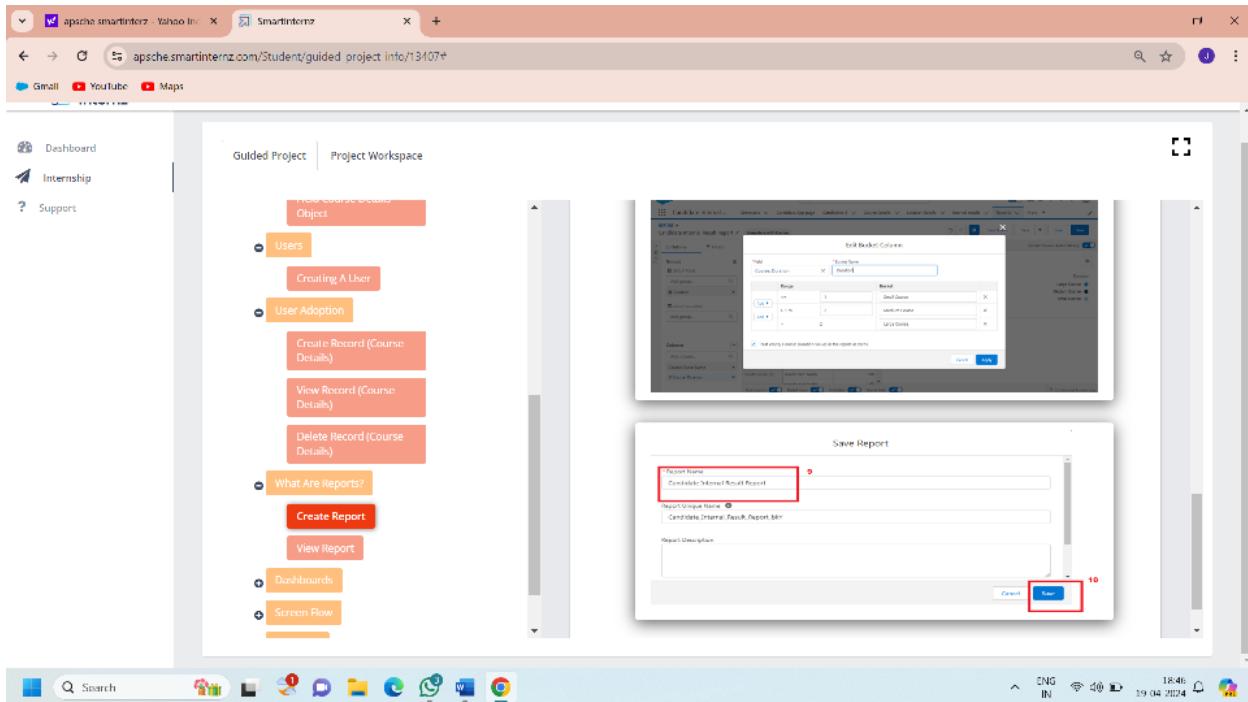
Create Report

1. Click App Launcher
2. Select Candidate Internal Result Card App
3. Click reports tab
4. Click New Report.
5. Click the report type as Semesters with Course Click Start report.
6. Customize your report, in group rows select - Course Name, in group column Select Duration (In this way we are making a Matrix Report).
7. Click refresh
8. Click save and run
9. Give report name – Candidate Internal Result Report
10. Click Save

NOTE: In this report you can see all record of the object you selected for reporting (What you Selects in “Select a report type option”).

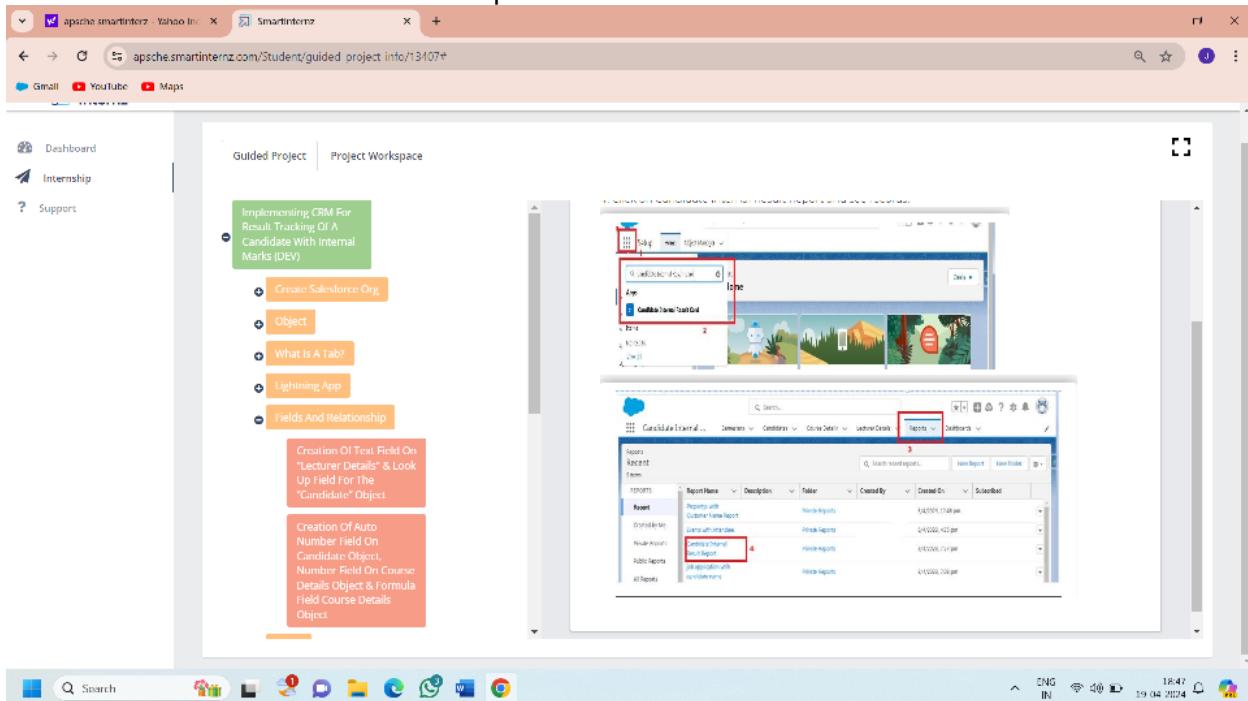


1. On the report builder page, locate the "Fields" pane on the left-hand side.
2. Find the field for which you want to create a bucket field and drag it to the report preview section.
3. Click on the field in the report preview to open the field properties.
4. In the field properties, locate the "Summarize" option and click the drop-down arrow.
5. Select "Bucket Field" from the available options.
6. In the bucket field settings, define the buckets based on your requirements. You can specify the bucket ranges, labels, and groupings.
7. Click "OK" or "Apply" to save the bucket field settings.
8. Customize the report layout and add any additional fields or filters as needed.
9. Once you are satisfied with the report setup, click "Save" to save the report.



View Report

1. Click on App Launcher on left side of screen.
2. Search Candidate Internal Result Card App & click on it.
3. Click on Reports Tab.
4. Click on Candidate Internal Result Report and see records.



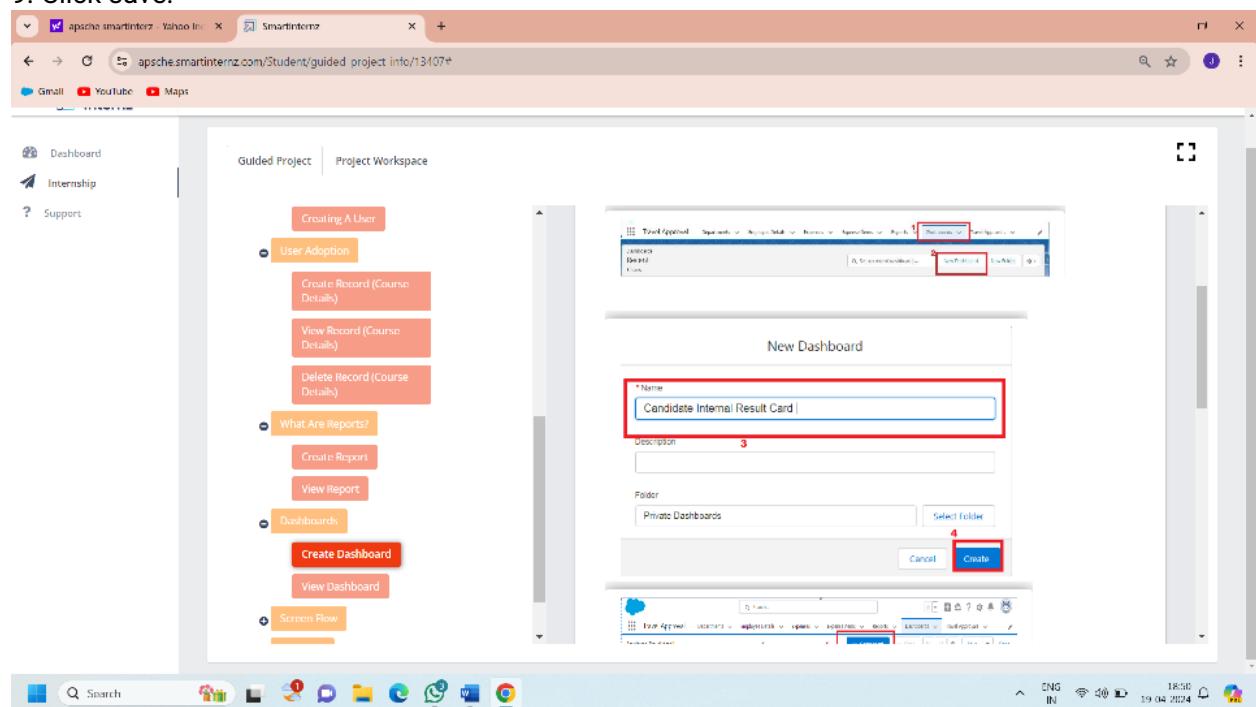
Dashboards

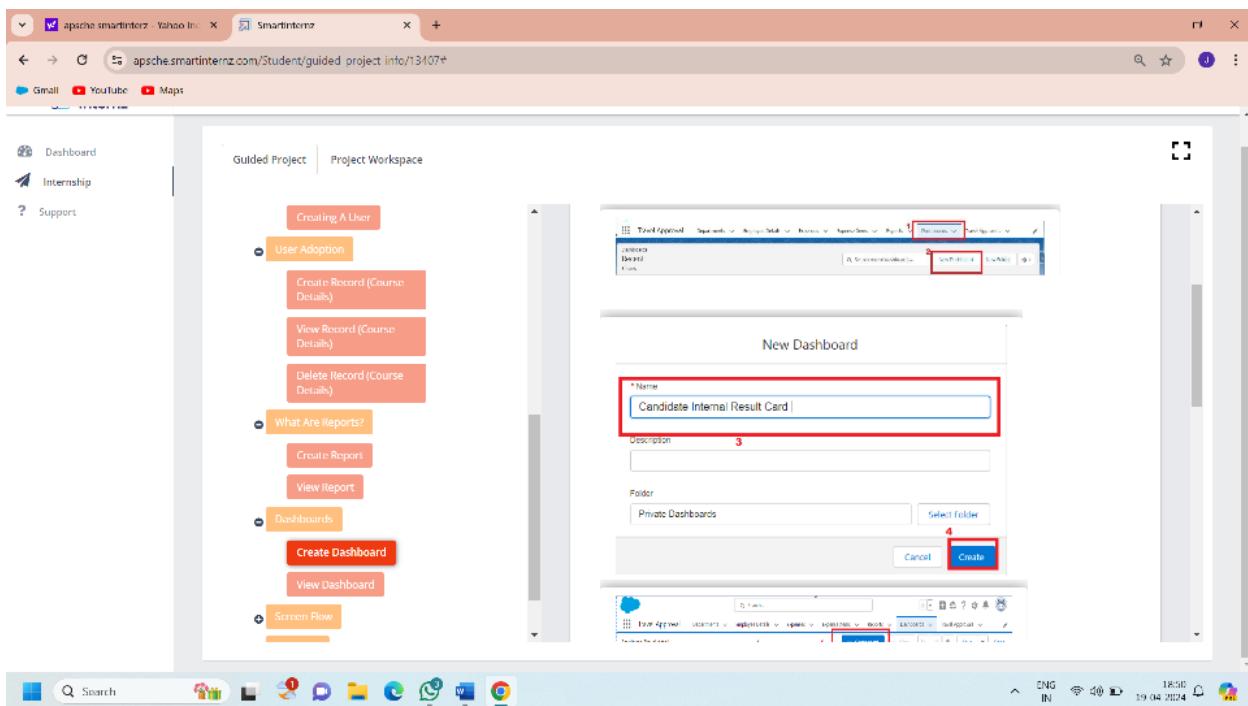
Dashboards let you curate data from reports using charts, tables, and metrics. If your

colleagues need more information, then they're able to view your dashboard's data-supplying reports. Dashboard filters make it easy for users to apply different data perspectives to a single dashboard.

Create Dashboard

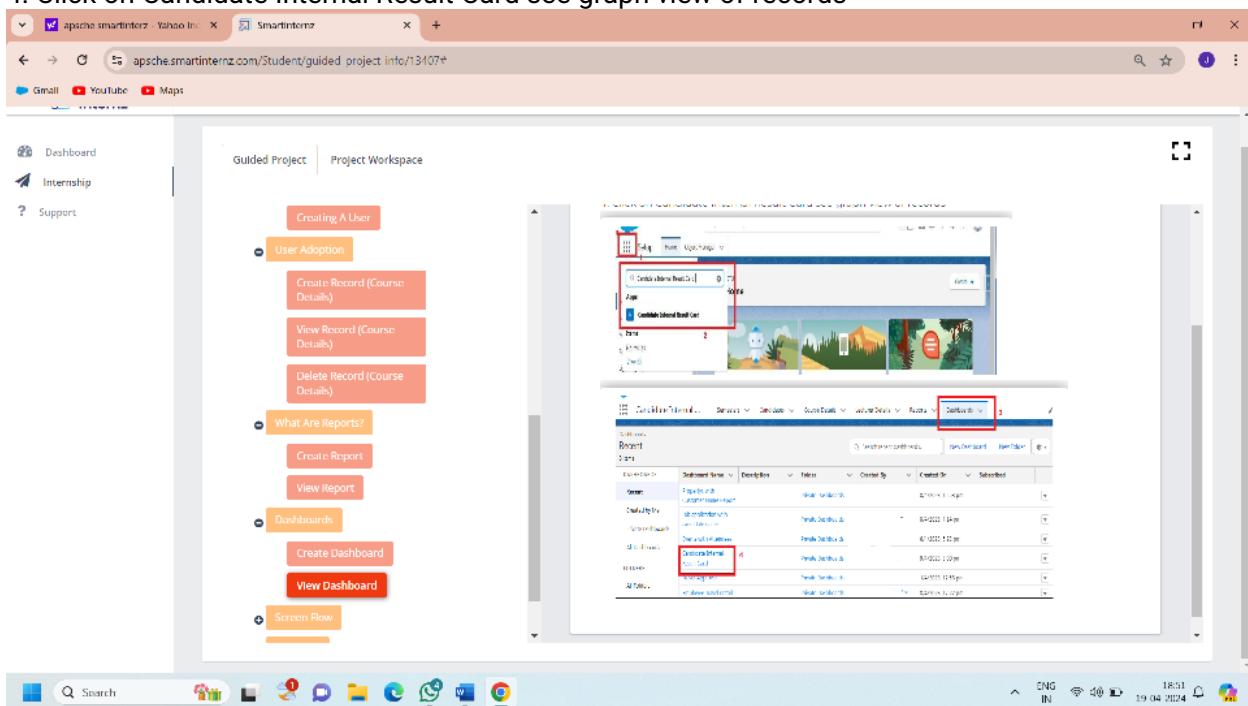
1. Click on Dashboards tab from the Candidate Internal Result Card application.
2. Click on new dashboard.
3. Give name- Candidate Internal Result Card
4. Click create
5. Give your dashboard a name and click on +component
6. Select the Candidate Internal Result Report which you created.
7. For the data visualization select any of the chart, table etc. as per your choice/requirement.
8. Click add.
9. Click save.





View Dashboard

1. Click on App Launcher on left side of screen.
2. Search Candidate Internal Result Card & click on it.
3. Click on Dashboard Tab.
4. Click on Candidate Internal Result Card see graph view of records



Milestone-08: Screen Flow

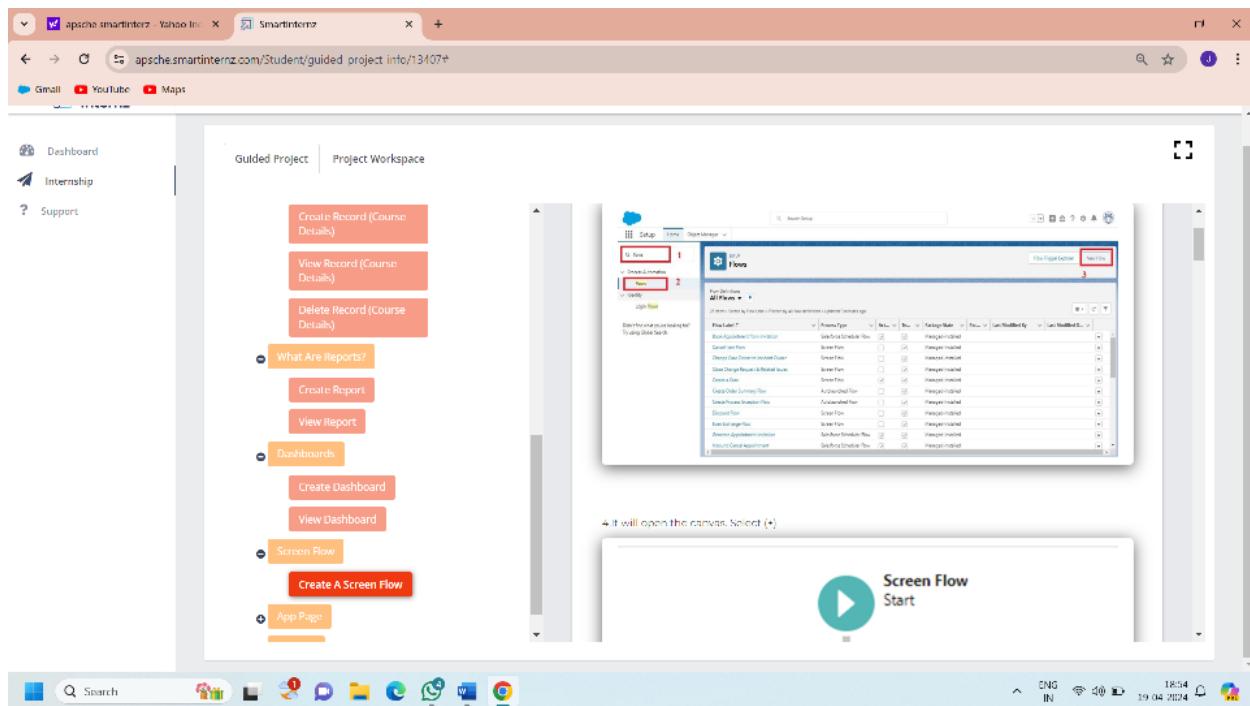
In Salesforce, flows are visual representations of business processes that can be created and

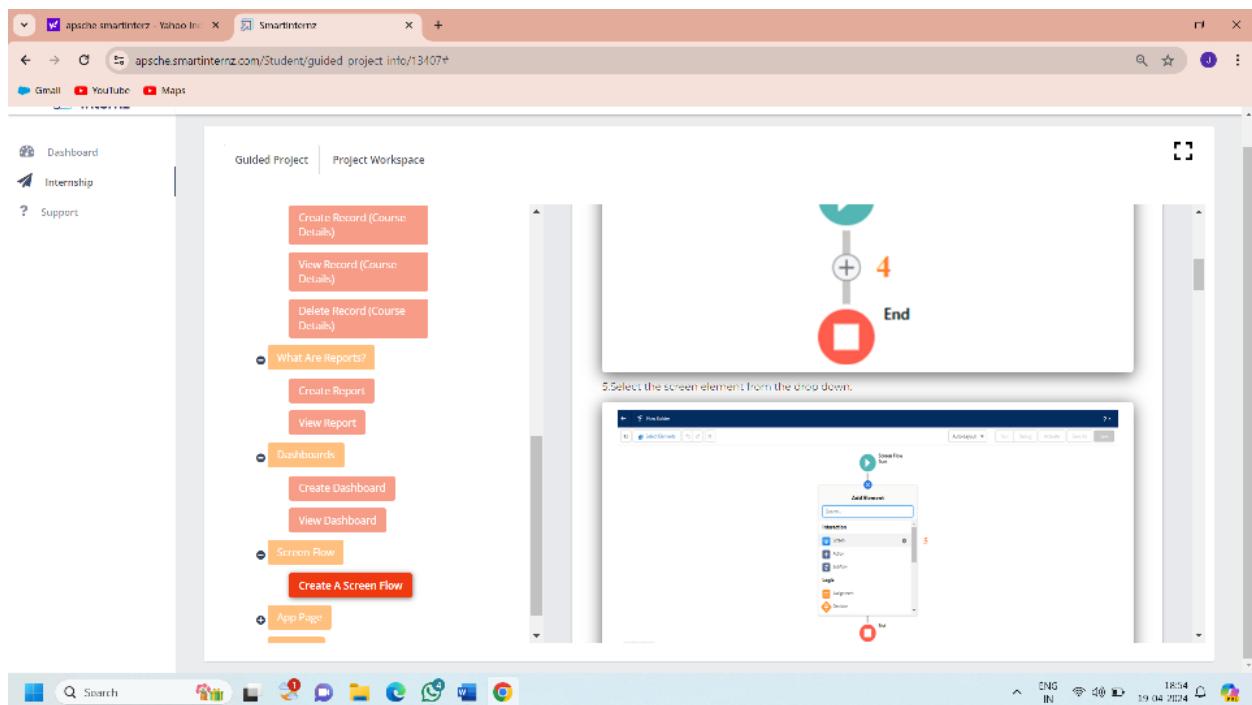
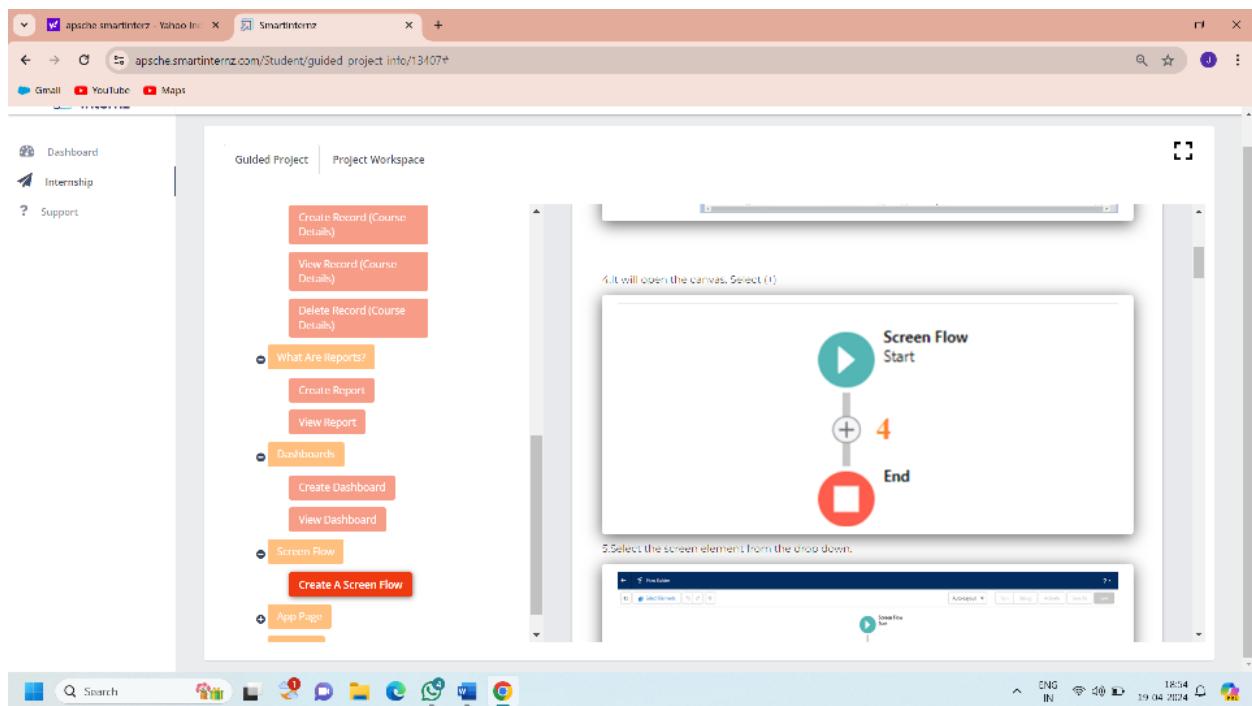
managed using the Salesforce Flow Builder. Flows are designed to automate and streamline complex business processes, such as collecting data, updating records, and integrating with external systems, without writing any code.

Screen Flows: Screen flows are flows that are designed to guide users through a series of screens to collect data or present information. They are typically used to create user-friendly data entry forms or wizards, and can include input fields, picklists, and other user interface components.

Create A Screen Flow

1. Click on Gear icon and select setup
2. In Quick find Box enter flow and select the flows
3. Click on New flow and Select Screen flow



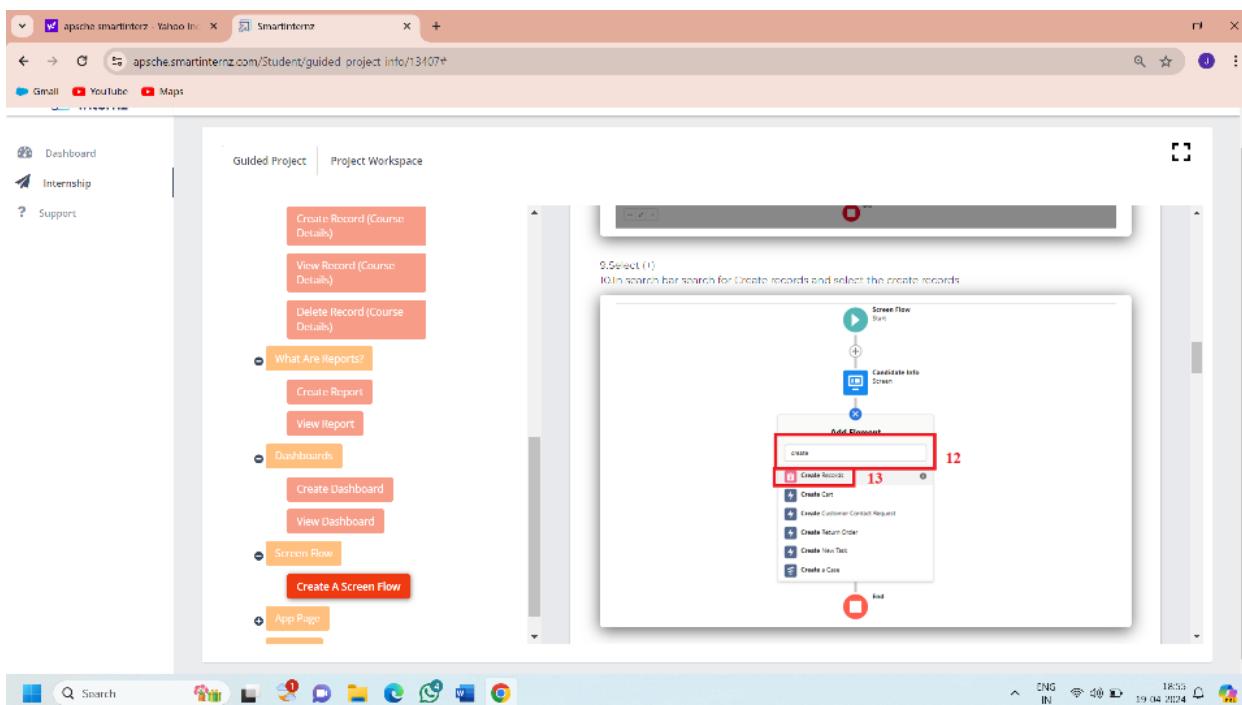
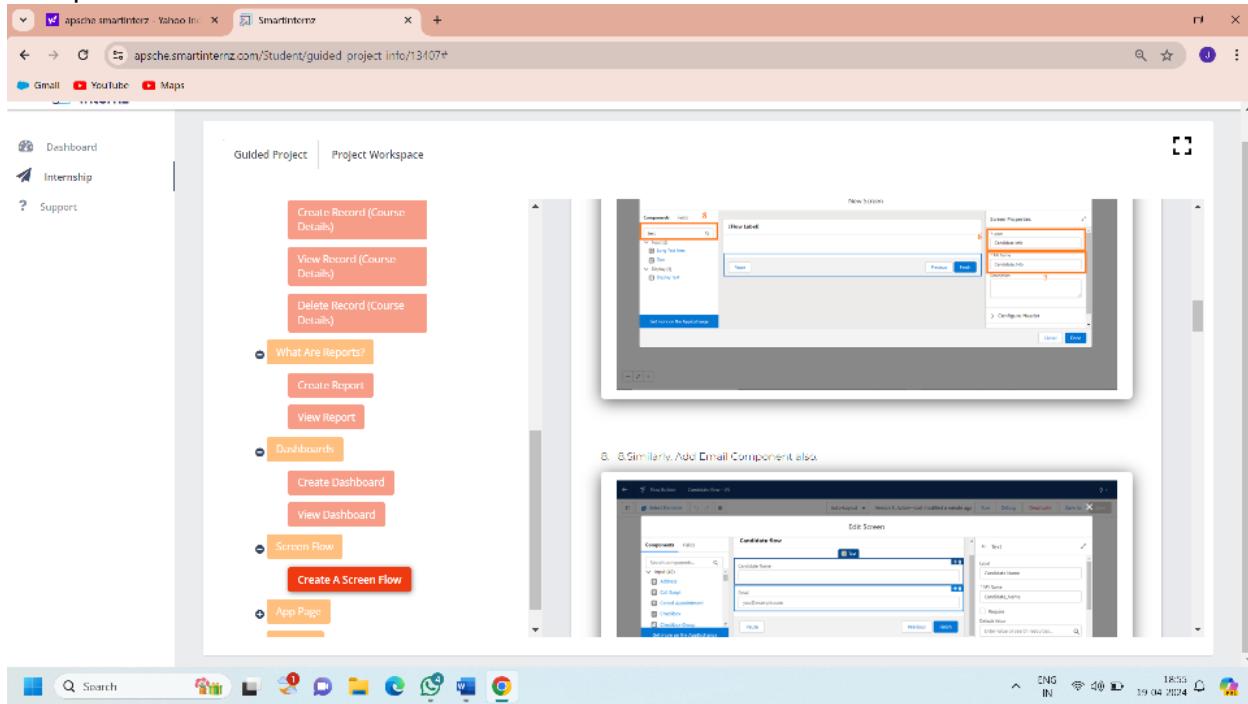


6. It will open the dialog box. Now give the label name and api name will be auto populated. These labels are for your screen Element.

Label: Candidate info

API Name: Candidate_Info (This field will be auto populated.)

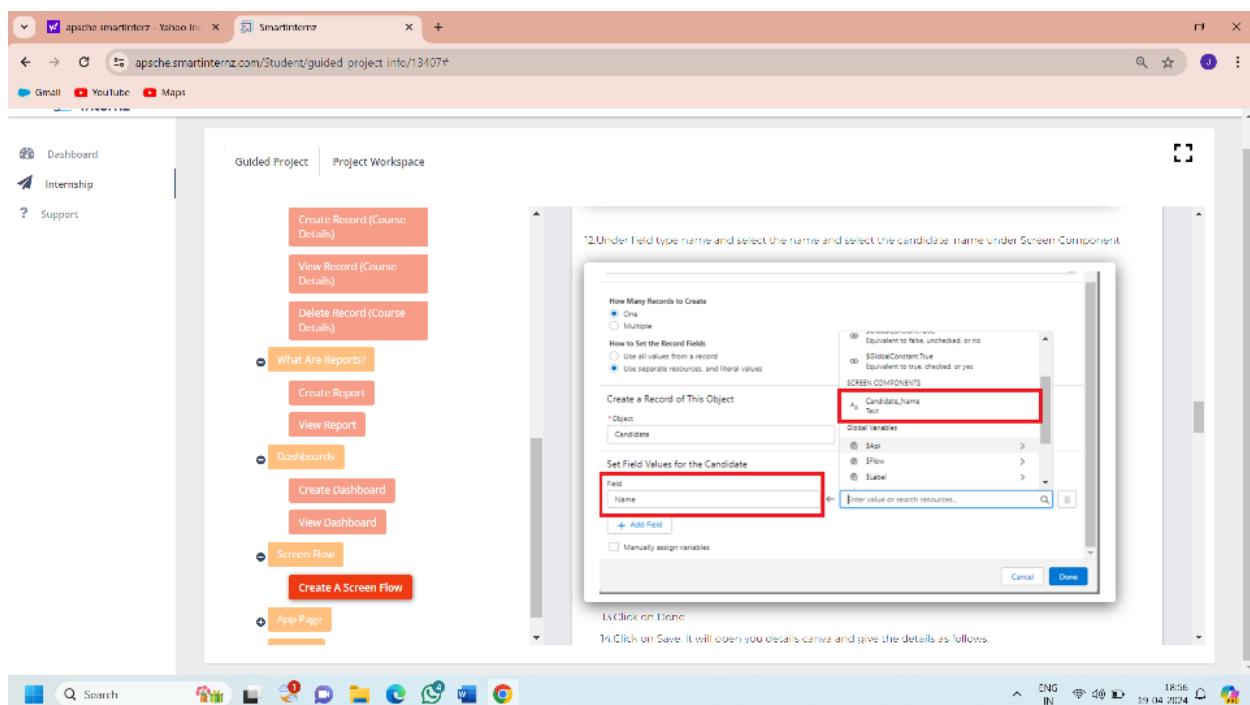
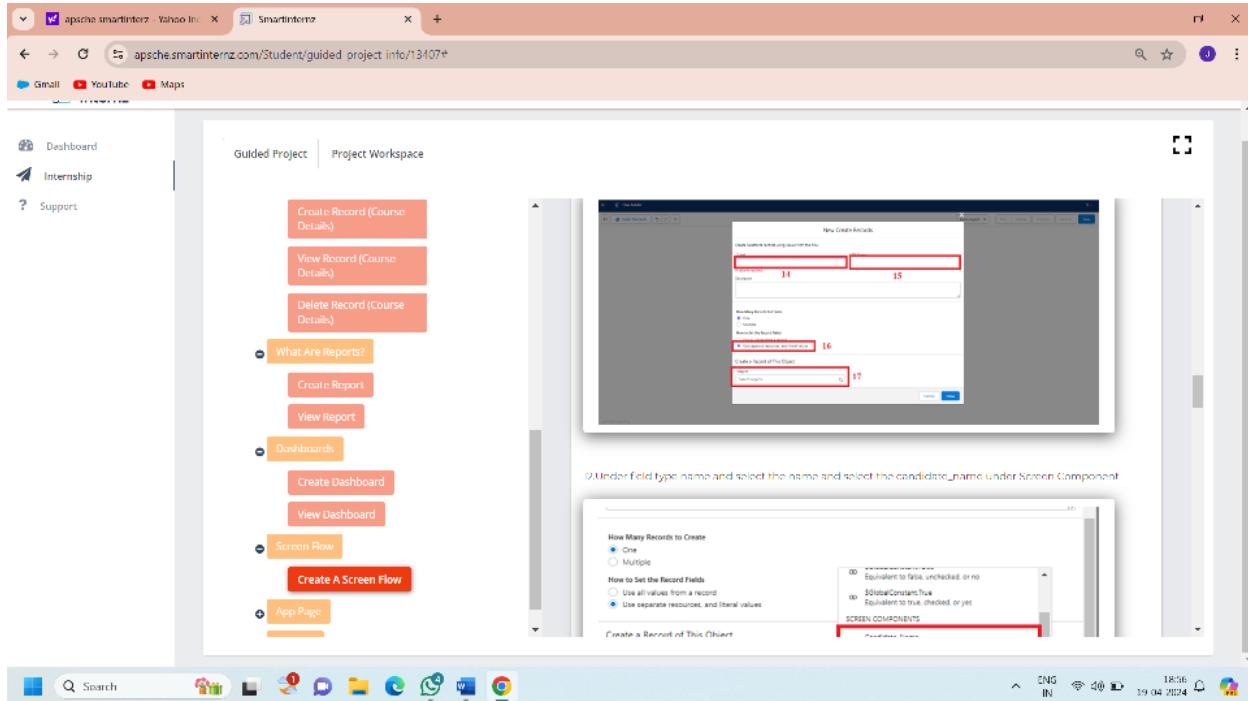
7..In search Component type text and drag the text component to canva and give the label and Api Name



11. It will open you the details section and give the label as follows:

Label: Create candidate Records
API Name: Create_candidate_Records

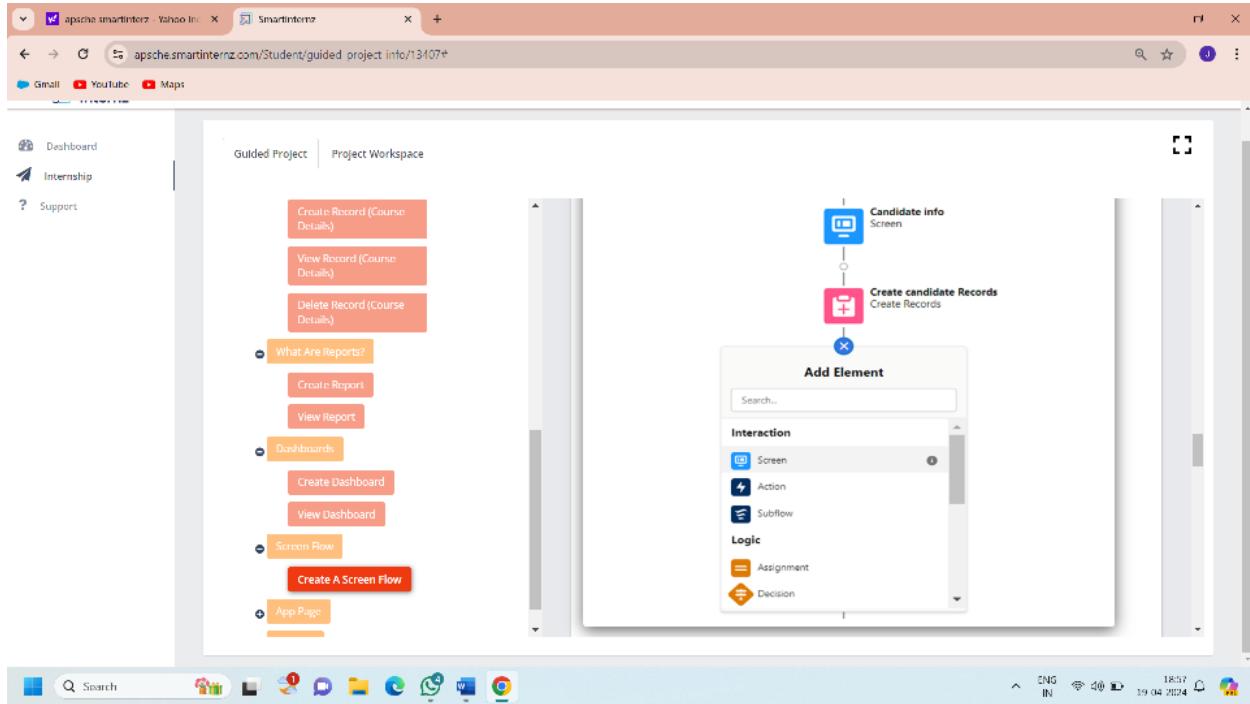
Then check the use separate resources and literal values Search for candidate Object



13.Click on Done

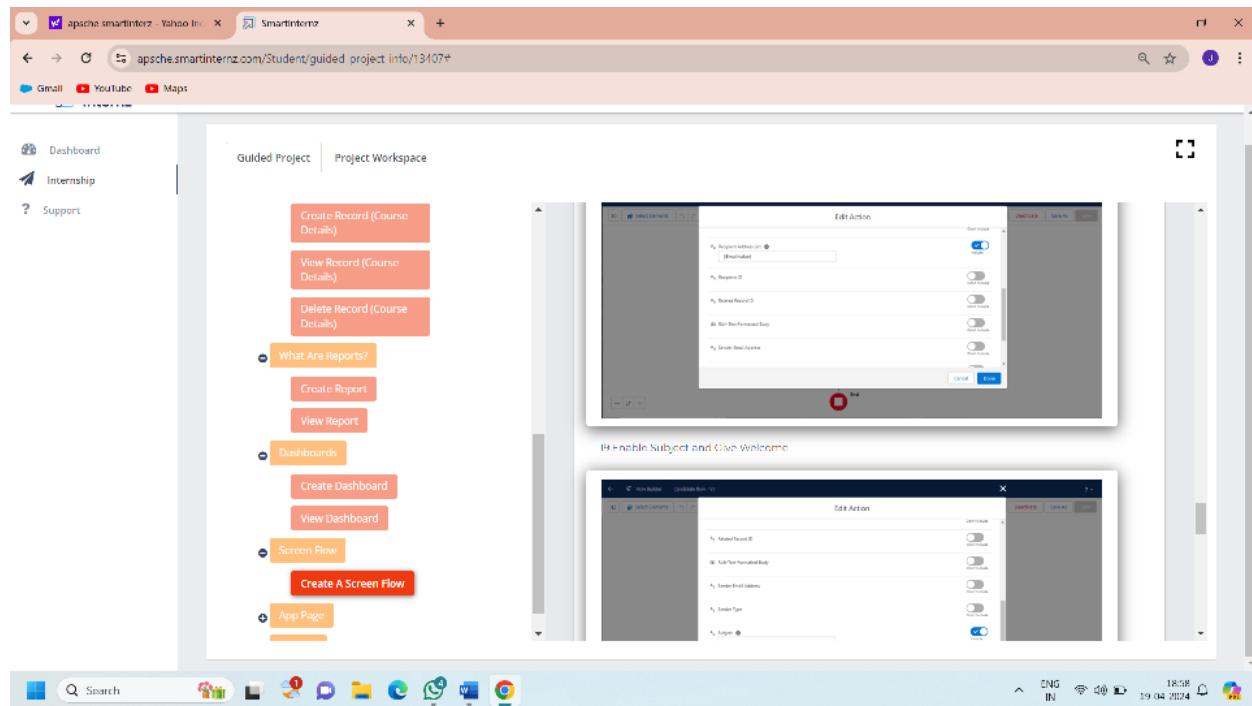
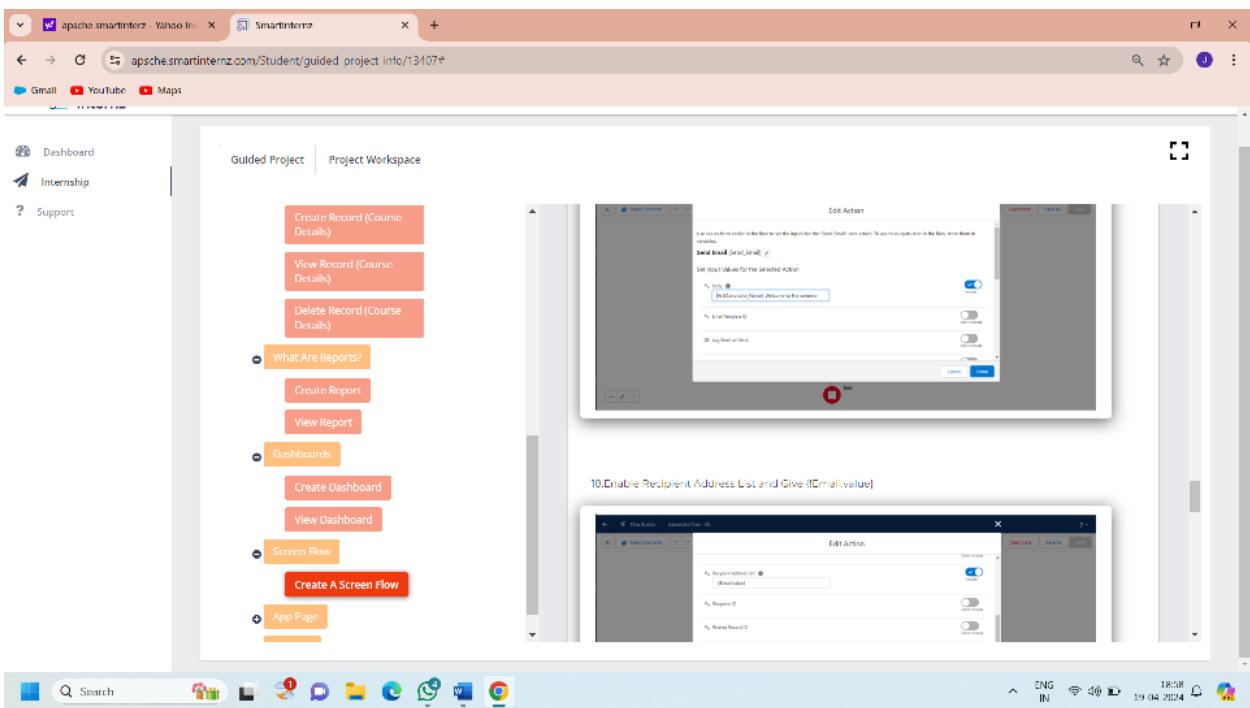
14.Click on Save. It will open you details canva and give the details as follows:

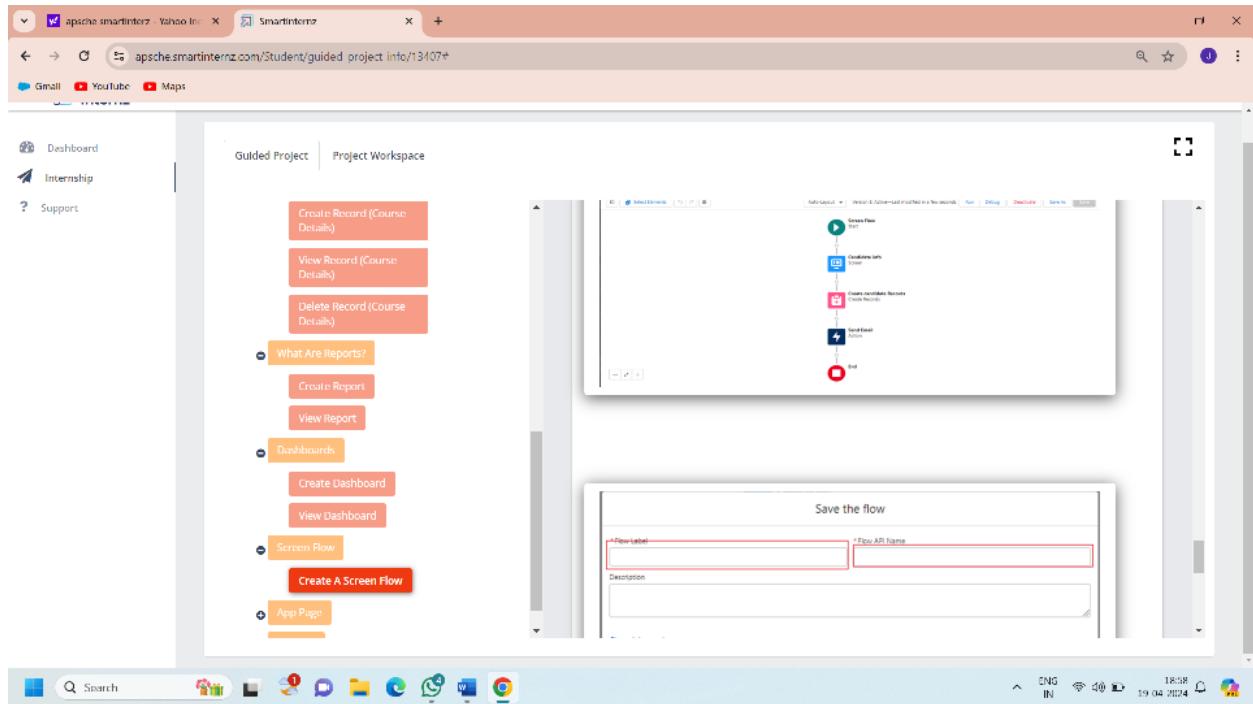
15. Select (+)



16.Select the Action element from the drop down.

17.Enable Body and Give Hi {!Candidate_Name}, Welcome to the semester



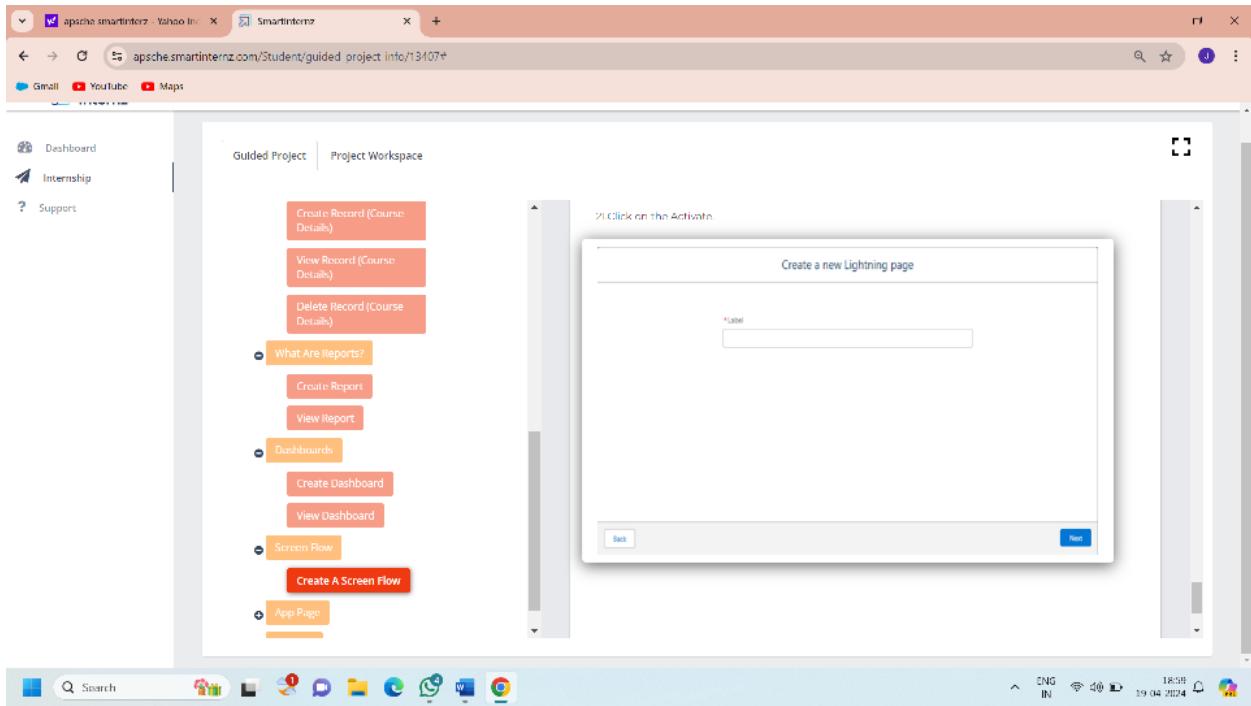


Flow label: Candidate flow

Flow API Name: Candidate_flow (this will be auto populated)

20.Click on save

21.Click on the Activate.

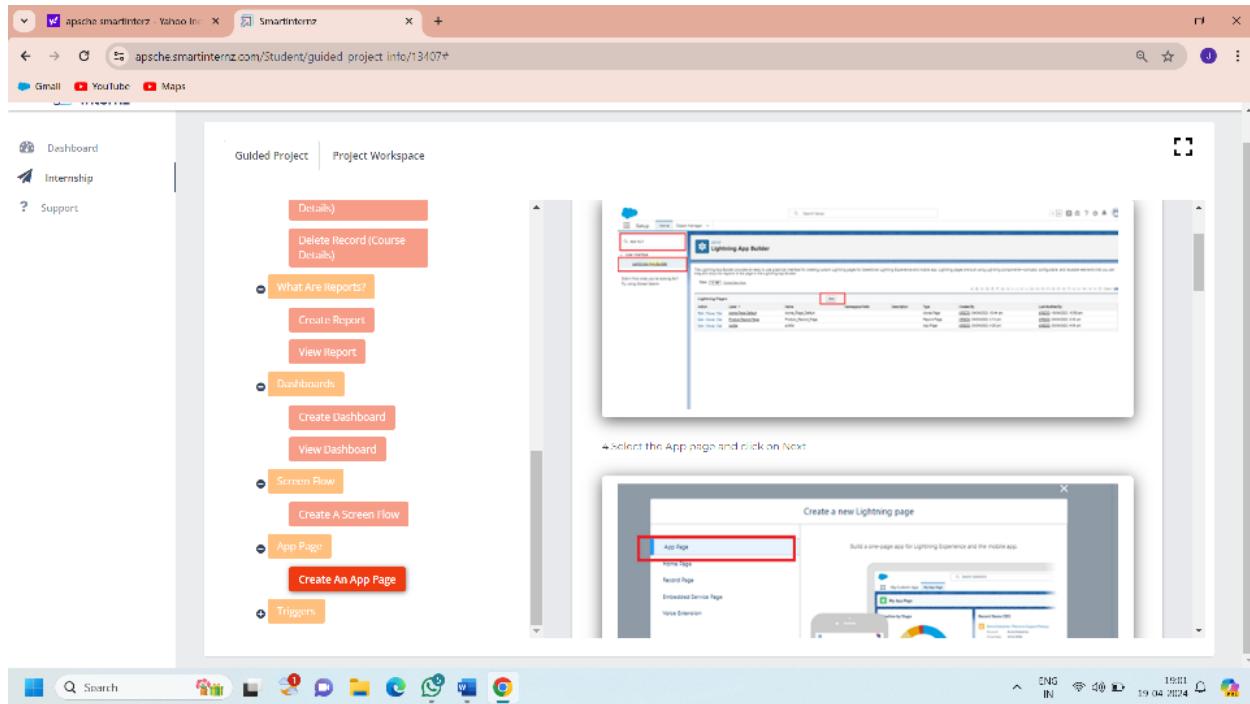


Milestone-09:App Page

App page descriptions in Salesforce refer to the metadata and configuration settings that define the visual layout, functionality, and behavior of custom app pages within a Salesforce org. App pages are created using the Salesforce App Builder, which is a visual drag-and-drop tool that allows users to create custom pages without writing code.

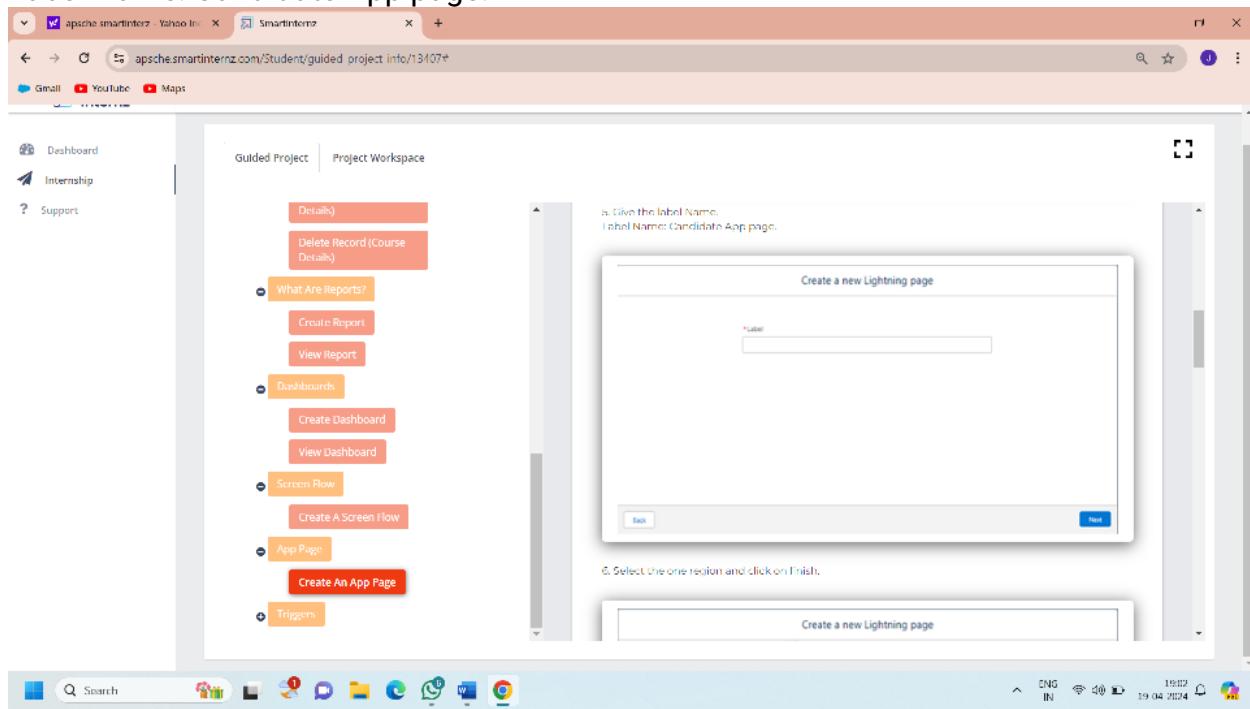
Create An App Page

1. Click on the Gear icon and select set up.
2. In Quick Find Box . Type app Builder and select the lighting app builder
3. Select New

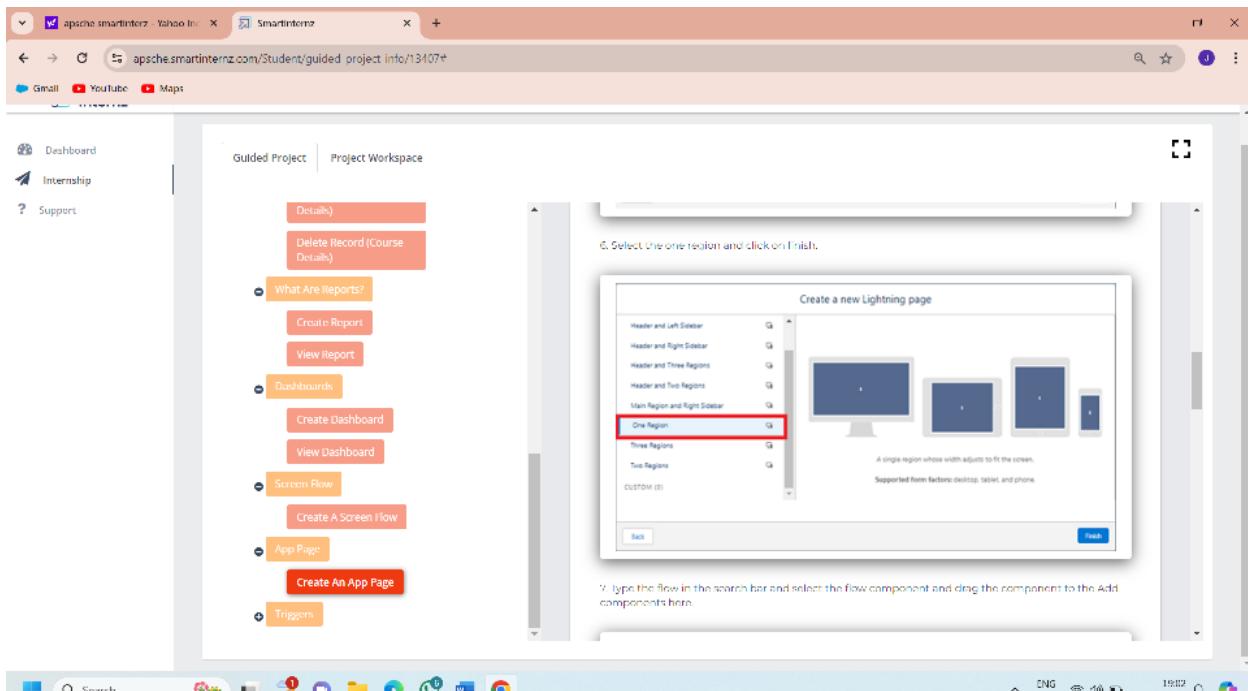


5. Give the label Name.

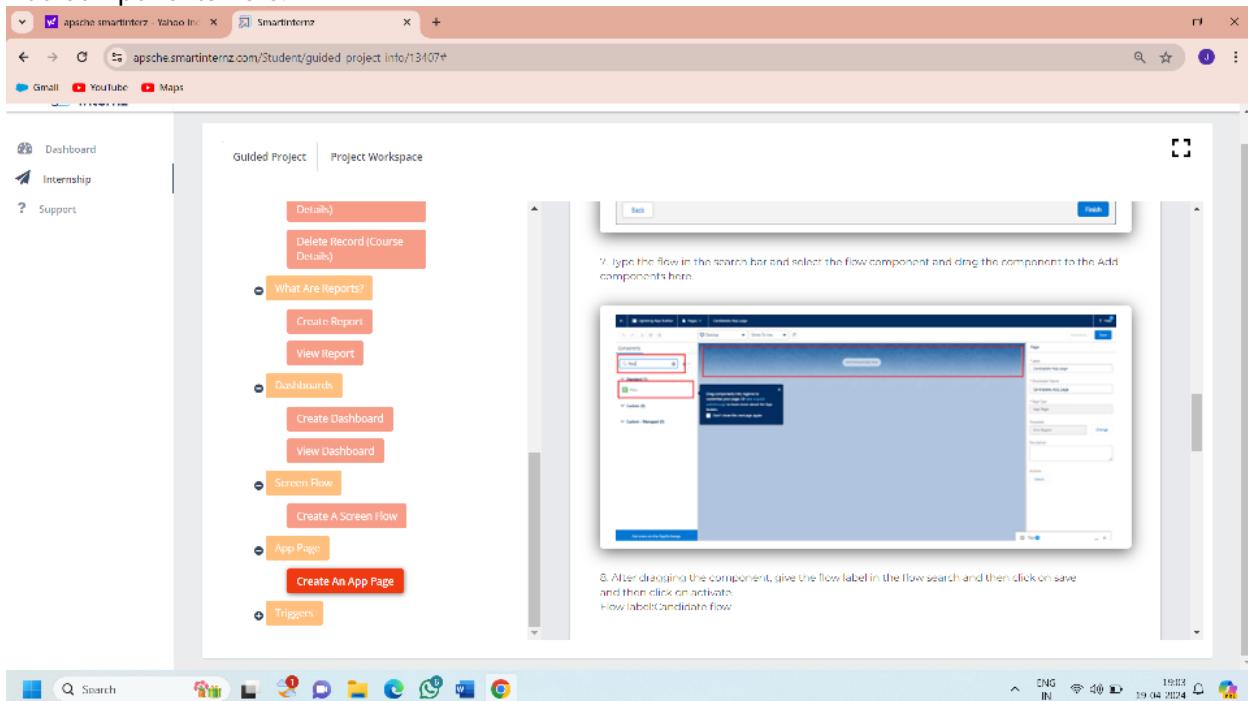
Label Name: Candidate App page.



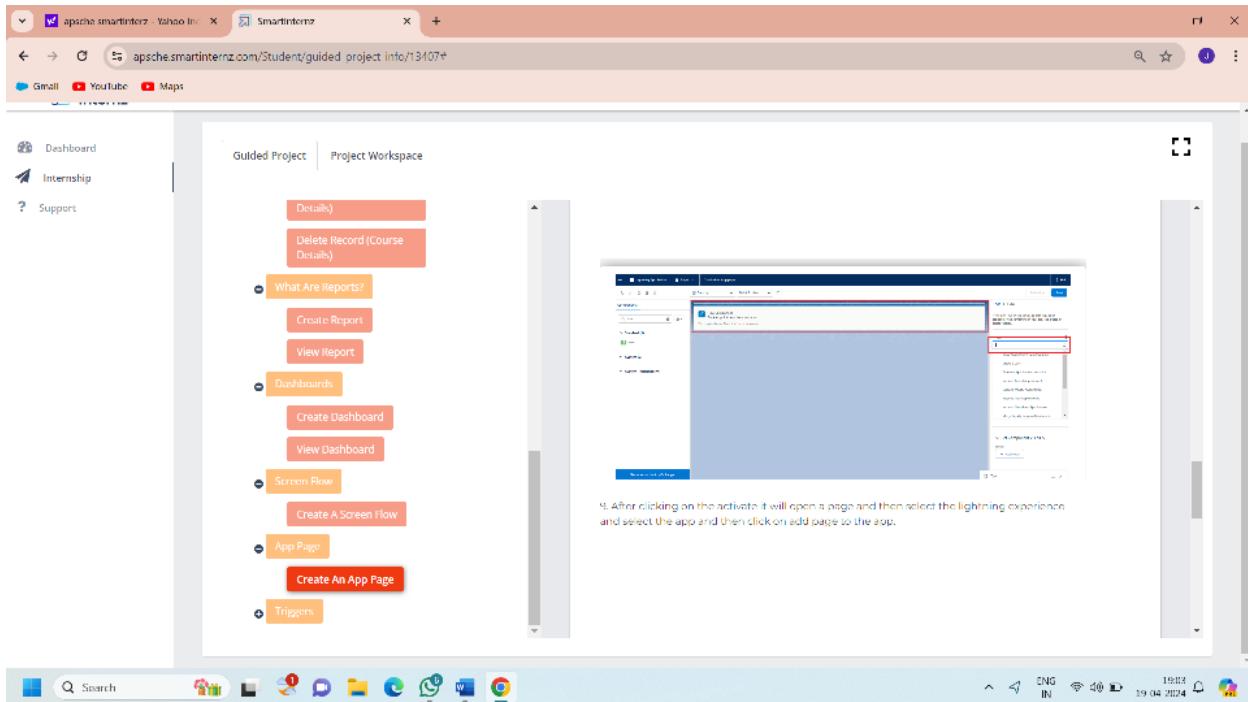
6. Select the one region and click on finish.



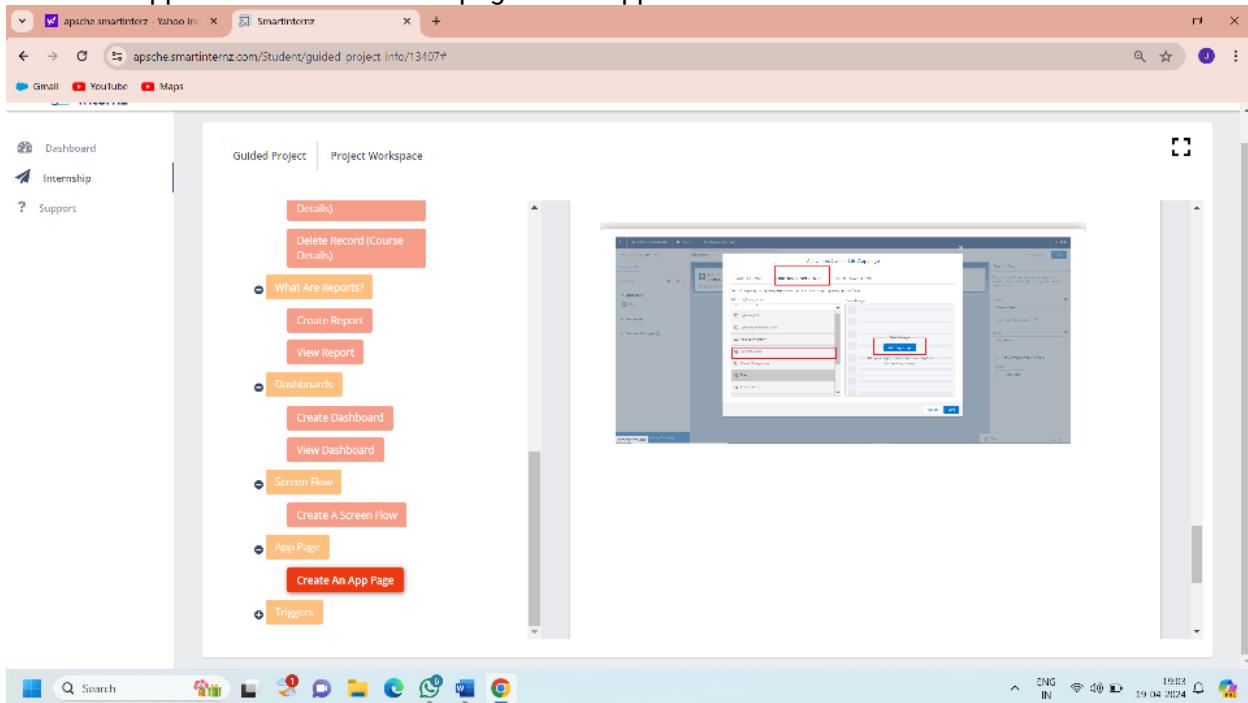
7. Type the flow in the search bar and select the flow component and drag the component to the Add components here.



8. After dragging the component, give the flow label in the flow search and then click on save and then click on activate. Flow label: Candidate flow



9. After clicking on the activate it will open a page and then select the lightning experience and select the app and then click on add page to the app.



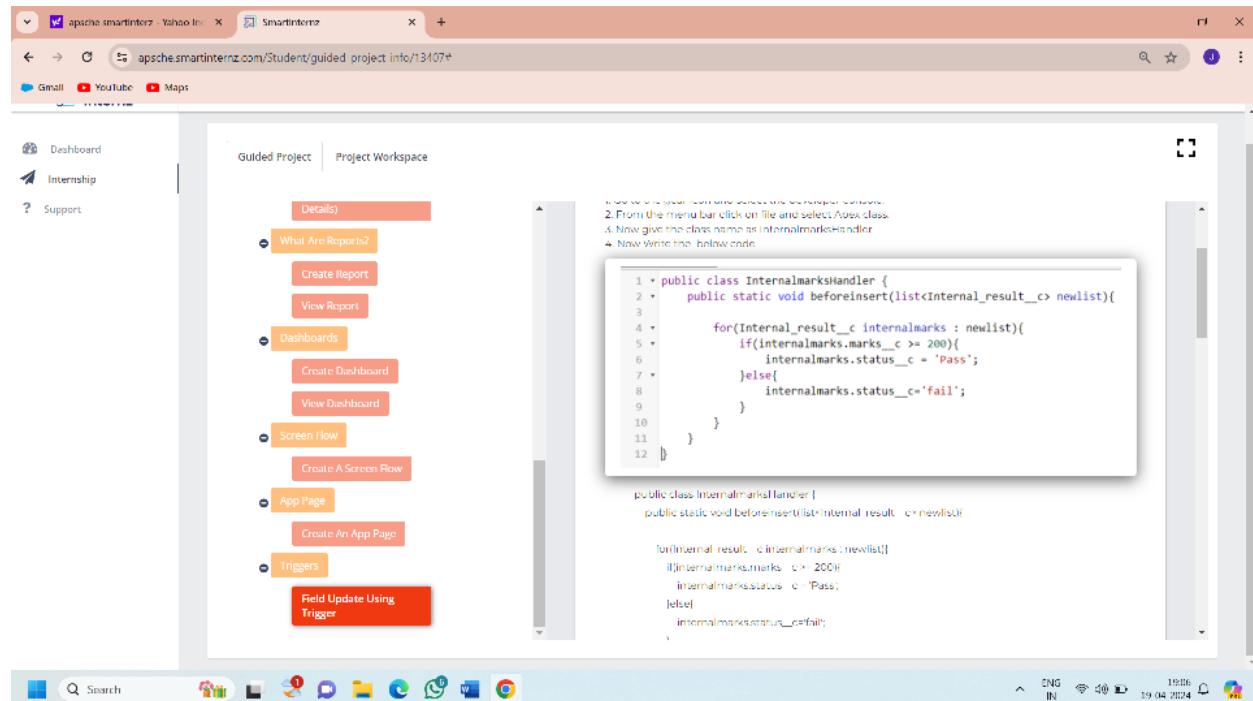
Milestone-10: Trigger

A trigger refers to an Apex code that is automatically executed before or after certain events occur in the Salesforce platform, such as when a record is inserted, updated, deleted, or undeleted. Triggers are used to automate business processes, enforce data integrity, and perform custom logic on data.

Field Update Using Trigger

Whenever a internal Marks is inserted if the marks is greater than or equal to 200 it must update the status field to Pass or else it must update to fail

1. Go to the gear icon and select the developer console.
2. From the menu bar click on file and select Apex class.
3. Now give the class name as InternalmarksHandler
4. Now Write the below code



```
public class InternalmarksHandler {  
  
    public static void beforeinsert(list<Internal_result__c> newlist){  
  
        for(Internal_result__c internalmarks : newlist){  
            if(internalmarks.marks__c >= 200){  
                internalmarks.status__c = 'Pass';  
            }else{  
                internalmarks.status__c='fail';  
            }  
  
        }  
  
    }  
}
```

5. From the menu bar click on file and select Apex trigger.
6. Now give the trigger name as Internalmarks
7. Now write the below code

5. From the menu bar click on file and select Apex trigger.
6. Now give the trigger name as Internalmarks
7. Now write the below code

```

1 trigger Internalmarks on Internal_result__c (before insert) {
2     If(trigger.isInsert)
3     {
4         If(trigger.isBefore)
5         {
6             InternalmarksHandler.beforeinsert(Trigger.new);
7         }
8     }
9 }
10 
```

trigger Internalmarks on Internal_result__c(before insert,after update) {
 If(trigger.isInsert)
 {
 If(trigger.isBefore)
 {
 InternalmarksHandler.beforeinsert(Trigger.new);
 }
 }
}

trigger Internalmarks on Internal_result__c(before insert,after update) {

```

If(trigger.isInsert)
{
    If(trigger.isBefore)
    {
        InternalmarksHandler.beforeinsert(Trigger.new);
    }
}
} 
```

8. Trigger Working as follows:

In the following record Marks field is given as 300, Now trigger triggers and status changes to Pass

