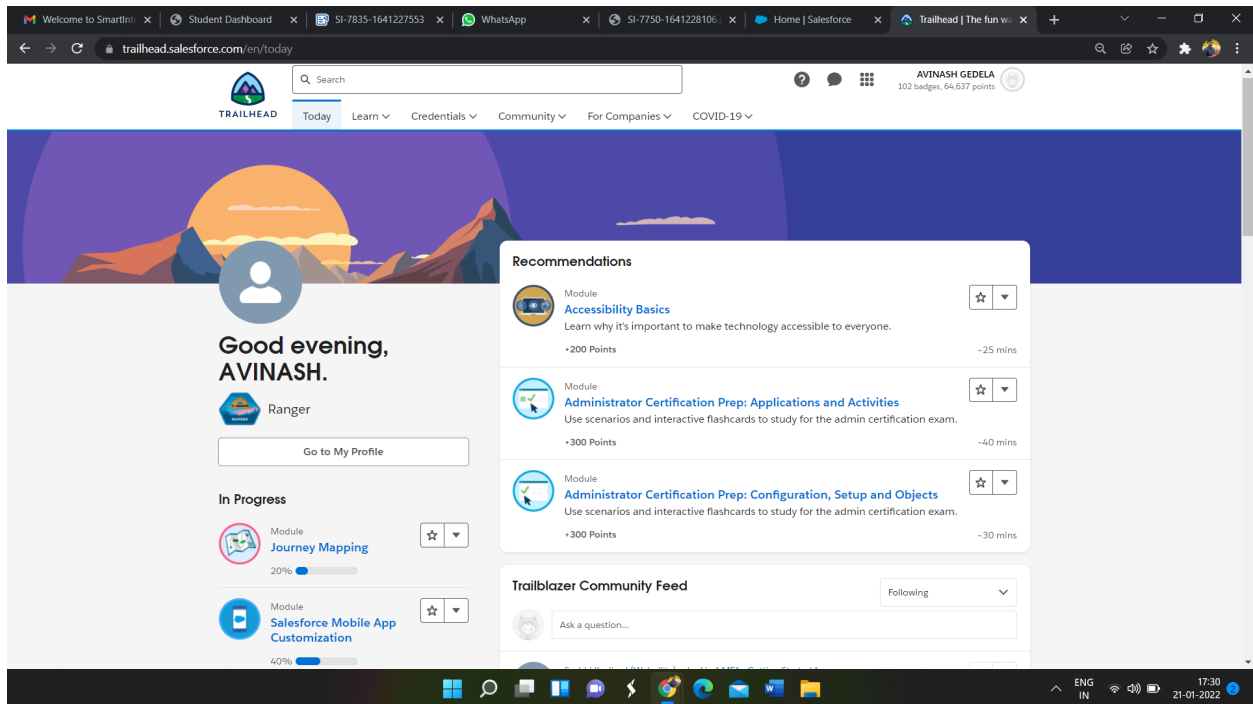


COLLEGE MANAGEMENT APPLICATION

Day1 Activities

1. Created my Salesforce Development org account
2. Activated my account
3. Logged into my account

Upload the Screenshot of Milestone:



Day2: Activities

Topic: Setting up First App, Custom Object and Fields Creation

Milestone: Custom Object Creation and Fields Creation

Detailed Description:

In this, Firstly Create an Application called College Management Application and then create the Objects which are required for the Application.

Create the Objects named

1. College

2. Application Form

3. Subjects

4. Students

1. Create the fields for College Object like Record Info, College Fees, Hostel Fees, College Name, EMail, Capacity of Students.

2. Create the fields for Application Form like Application Form ID, Address, College, College Fees, Hostel Fees, date of Birth, Email, Guardian Name, Looking For Hostel Stay, Ready To Join, Student Name.

3. Create the Fields for Student Object like Student Name, Address, Application Form, College Name, Date Of Birth, Guardian Name, Phone.

4. Create the Fields for Subject Object like Subject Id, Paper 1, Paper2, Student.

Upload the Screenshot of Milestone:

The screenshot shows the Salesforce Setup interface for the 'College' object. The 'Fields & Relationships' section is active, displaying a list of fields and their properties. The table below represents the data shown in the screenshot.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Capacity Of Students	Capacity_Of_Students__c	Picklist	College Name	
College Fees	College_Fees__c	Currency(7, 2)		
College Name	College_Name__c	Picklist		
Created By	CreatedById	Lookup(User)		
Email	Email__c	Picklist	College Name	
Hostel Fees	Hostel_Fees__c	Currency(7, 2)		
Last Modified By	LastModifiedById	Lookup(User)		
Name	Name	Text(80)		✓
Owner	OwnerId	Lookup(User,Group)		✓
Record Info	Record_Info__c	Text(50)		

Welcome to SmartIn x Student Dashboard x SI-7835-1641227553 x WhatsApp x SI-7750-1641228106 x Application Form | S x Trailhead | The fun w x

mvgr-c5-dev-ed.lightning.force.com/lightning/setup/ObjectManager/0115g000002Rz4H/FieldsAndRelationships/view

Search Setup

Setup Home Object Manager

Application Form

Details

Fields & Relationships

15 Items, Sorted by Field Label

Quick Find New Deleted Fields Field Dependencies Set History Tracking

Application Form ID	Application_Form_ID__c	Auto Number		
Application Form Name	Name	Text(80)	✓	
College	College__c	Master-Detail(College)	✓	
College Fees	College_Fees__c	Formula (Currency)		
Created By	CreatedById	Lookup(User)		
date of Birth	date_of_birth__c	Date		
Email	Email__c	Email (Unique)	✓	
Guardian Name	Guardian_Name__c	Text(30)		
Hostel Fees	Hostel_Fees__c	Formula (Currency)		
Last Modified By	LastModifiedById	Lookup(User)		
Looking For Hostel Stay	Looking_For_Hostel_Stay__c	Checkbox		
Phone	Phone__c	Phone		
Ready To Join	Ready_To_Join__c	Checkbox		
Student Name	Student_Name__c	Text(30)		

ENG IN 17:34 21-01-2022

Welcome to SmartIn x Student Dashboard x SI-7835-1641227553 x WhatsApp x SI-7750-1641228106 x Subject | Salesforce x Trailhead | The fun w x

mvgr-c5-dev-ed.lightning.force.com/lightning/setup/ObjectManager/0115g000002Rz4H/FieldsAndRelationships/view

Search Setup

Setup Home Object Manager

Subject

Details

Fields & Relationships

8 Items, Sorted by Field Label

Quick Find New Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Paper 1	Paper_1__c	Picklist		
Paper 2	Paper_2__c	Picklist		
Student	Student__c	Lookup(Student)		✓
Subject ID	Subject_ID__c	Auto Number		
Subject Name	Name	Text(80)		✓

ENG IN 17:35 21-01-2022

Screenshot 1: Salesforce Setup - Fields & Relationships

Setup > OBJECT MANAGER > Student

Fields & Relationships: 11 Items, Sorted by Field Label

Field Label	Field Name	Field Type	Required
Application Form	Application_Form__c	Lookup(Application Form)	Yes
College Name	College_Name__c	Formula (Text)	No
Created By	CreatedById	Lookup(User)	No
Date Of Birth	Date_Of_Birth__c	Date	No
Guardian Name	Guardian_Name__c	Text(30)	No
Last Modified By	LastModifiedById	Lookup(User)	No
Owner	OwnerId	Lookup(User/Group)	Yes
Phone	Phone__c	Phone	No
Student Name	Student_Name__c	Text(20)	No
Subject Name	Name	Text(80)	Yes

Screenshot 2: Salesforce Lightning - Colleges List View

Colleges: All

6 Items • Sorted by Name • Filtered by All colleges • Updated a few seconds ago

Name	College Fees	College Name	Hostel Fees
MIT-BLR	\$200.00	MIT-BLR	\$200.00
MIT-CCU	\$600.00	MIT-CCU	\$600.00
MIT-DEL	\$500.00	MIT-DEL	\$500.00
MIT-HYD	\$100.00	MIT-HYD	\$100.00
MIT-MAA	\$400.00	MIT-MAA	\$400.00
MIT-MUM	\$300.00	MIT-MUM	\$300.00

Day 3:Activities

Topic: Adding Bussiness Logic to Application

MileStone: Creating Global Picklist Values, Field Dependencies, Validation Rules, Process Automation and Student Record using Flow.

Detailed Description: Firstly, Create the Global Picklist Values for the Application

a.) College:-

Picklist Value Name:- College

Values:- MIT-HYD

MIT-BLR

MIT-MUM

MIT-MAA

MIT-DEL

MIT-CCU

b.) Paper 1:- Picklist

Value Name:- Paper1

Values:- APEX

JAVA

C

C++

c.) Paper 2:- Picklist

Value Name:- Paper2

Values:- MATHEMATICS

ENGLISH

STATISTICS

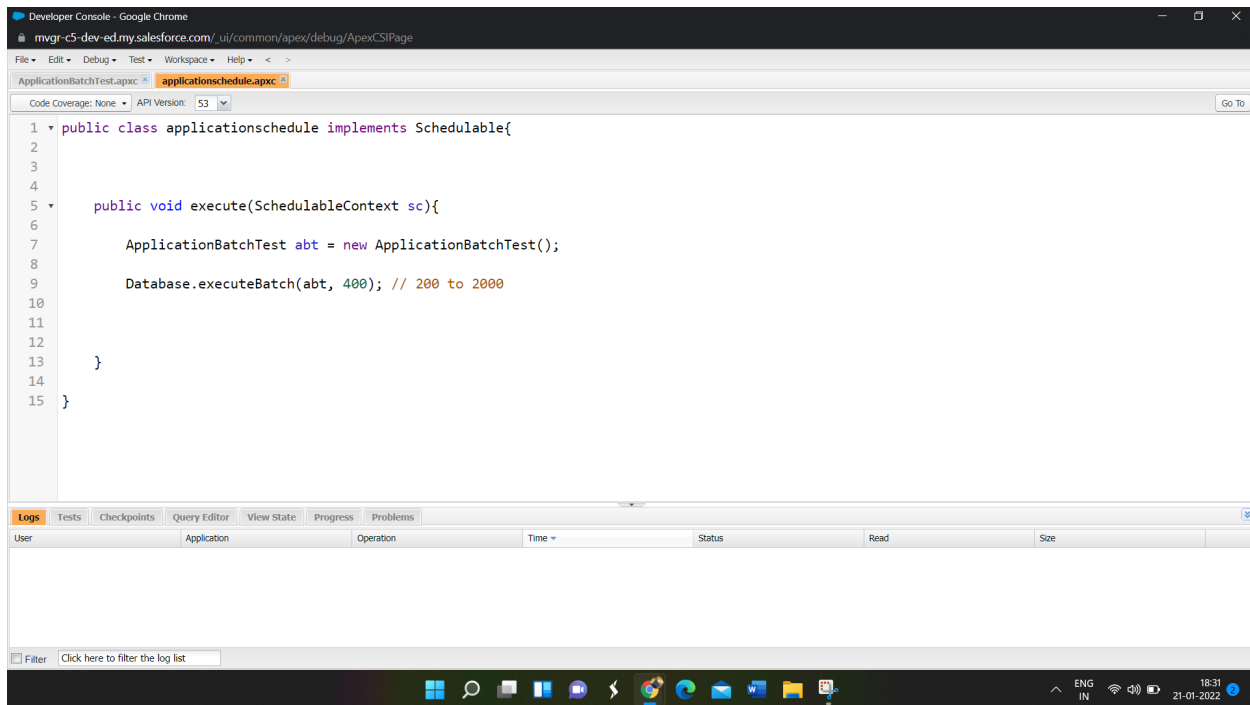
Now, Create the Field Dependencies.

1.) Create Field Dependency for College Object where Controlling Field is college Name and Dependent Field is E-Mail. Select E-Mail Ids according to Colleges.

2.) Create Field Dependency for College Object where Controlling Field is college Name and Dependent Field is Capacity of Students. Select values according to your wish.

Now, Create Validation Rules.

1.) Create a validation rule on the college object such that the college name and record information



should have the same name.

2.) Create a Validation Rule on the Application Form object to stop any modification on the application form once a student record is created.

Now, Process Automation

1.) Create an automation process such that when the "ready to join" field is checked on the application form obj we need to create the student record automatically with the info specified in the application form record.

2.) Go to Setup-> select "Process Builder" from quick find. Create a Process Builder on the "Application Form" object with a condition as "When a record change". And select "When a record is selected or edited"

a.) In the diamond shape box, select the criteria which trigger the process builder to fire. In our example, it is "When Ready to Join field is checked."

b.) Once the node is setup, click on the adjacent box called "Immediate Action". And select create a record on the student object.

Now, Student Record Using Flow

One. First deactivate the process builder which we created earlier.

2. Now search for flos and select new flow->record triggered flow.

3. For object select application form, in configure trigger select when the record is updated for entry criteria select as ready to join equals to true.
4. Now create a variable named student in the resource section.
5. Now add the assignment.
6. Now add Create Records.

The screenshot shows the Salesforce Lightning Setup interface for 'Picklist Value Sets'. The left sidebar contains navigation links for 'Data', 'Picklist Settings', 'State and Country/Territory', 'Picklists', 'Objects and Fields', and 'Picklist Value Sets'. The main content area is titled 'Picklist Value Sets' and includes a description, a table of active values, and sections for inactive values and fields where used.

Picklist Value Sets

Description: Active and inactive picklist values 6 (1,000 max)

Values

Action	Values	API Name	Default	Chart Colors	Modified By
Edit Del Deactivate	MIT-HYD	MIT-HYD	<input type="checkbox"/>	Assigned dynamically	AVINASH GEDELA, 1/8/2022, 1:46 AM
Edit Del Deactivate	MIT-BLR	MIT-BLR	<input type="checkbox"/>	Assigned dynamically	AVINASH GEDELA, 1/8/2022, 1:46 AM
Edit Del Deactivate	MIT-MUM	MIT-MUM	<input type="checkbox"/>	Assigned dynamically	AVINASH GEDELA, 1/8/2022, 1:46 AM
Edit Del Deactivate	MIT-MAA	MIT-MAA	<input type="checkbox"/>	Assigned dynamically	AVINASH GEDELA, 1/8/2022, 1:46 AM
Edit Del Deactivate	MIT-DEL	MIT-DEL	<input type="checkbox"/>	Assigned dynamically	AVINASH GEDELA, 1/8/2022, 1:46 AM
Edit Del Deactivate	MIT-CCU	MIT-CCU	<input type="checkbox"/>	Assigned dynamically	AVINASH GEDELA, 1/8/2022, 1:46 AM

Inactive Values

No Inactive Values values defined.

Fields Where Used

No records to display

Always show me [more records per related list](#)

Browser tabs: Welcome to Smu, Student Dashboi, SI-7835-1641227, WhatsApp, SI-7750-1641228, All | Colleges | Smu, College | Salesforce, Trailhead | The fu.

Address bar: mvgr-c5-dev-ed.lightning.force.com/lightning/setup/ObjectManager/0115g000002Rz47/ValidationRules/03d5g0000009pk0AAA/view

Search Setup

Setup Home Object Manager

College

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

Search Layouts for Salesforce Classic

Restriction Rules

College Validation Rule

[Back to College](#) [Help for this Page](#)

Validation Rule Detail [Edit](#) [Clone](#)

Rule Name	College_Name_similar	Active	✓
Error Condition Formula	TEXT(College_Name__c) <> Name		
Error Message	please give the college name in name	Error Location	Top of Page
Description			
Created By	AVINASH GEDELA 1/8/2022, 8:06 AM	Modified By	AVINASH GEDELA 1/8/2022, 8:06 AM

[Edit](#) [Clone](#)

Browser tabs: Welcome to Smu, Student Dashboi, SI-7835-1641227, WhatsApp, SI-7750-1641228, All | Colleges | Smu, Application Form, Trailhead | The fu.

Address bar: mvgr-c5-dev-ed.lightning.force.com/lightning/setup/ObjectManager/0115g000002Rz4H/ValidationRules/03d5g0000009h3qAAA/view

Search Setup

Setup Home Object Manager

Application Form

Details

Fields & Relationships

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Compact Layouts

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Object Limits

Record Types

Related Lookup Filters

Search Layouts

Search Layouts for Salesforce Classic

Restriction Rules

Application Form Validation Rule

[Back to Application Form](#) [Help for this Page](#)

Validation Rule Detail [Edit](#) [Clone](#)

Rule Name	Stop_Modifications	Active	✓
Error Condition Formula	AND(Ready_To_Join__c == true, OR(ISCHANGED(Address__c), ISCHANGED(College__c), ISCHANGED(date_of_Birth__c), ISCHANGED(Email__c), ISCHANGED(Guardian_Name__c), ISCHANGED(Phone__c)))		
Error Message	Modifications are not allowed	Error Location	Top of Page
Description			
Created By	AVINASH GEDELA 1/18/2022, 10:16 AM	Modified By	AVINASH GEDELA 1/18/2022, 10:16 AM

[Edit](#) [Clone](#)

Process Builder - Application form process

Expand All Collapse All View All Processes Clone View Properties Activate Read Only

Application Form

Ready to join field is checked

TRUE → IMMEDIATE ACTIONS → STOP

FALSE → + Add Criteria → IMMEDIATE ACTIONS → STOP

FALSE → STOP

Process Builder - Application form process

Expand All Collapse All View All Processes Clone View Properties Activate Read Only

Application Form

Ready to join field is checked

TRUE → IMMEDIATE ACTIONS → STOP

FALSE → + Add Criteria → IMMEDIATE ACTIONS → STOP

FALSE → STOP

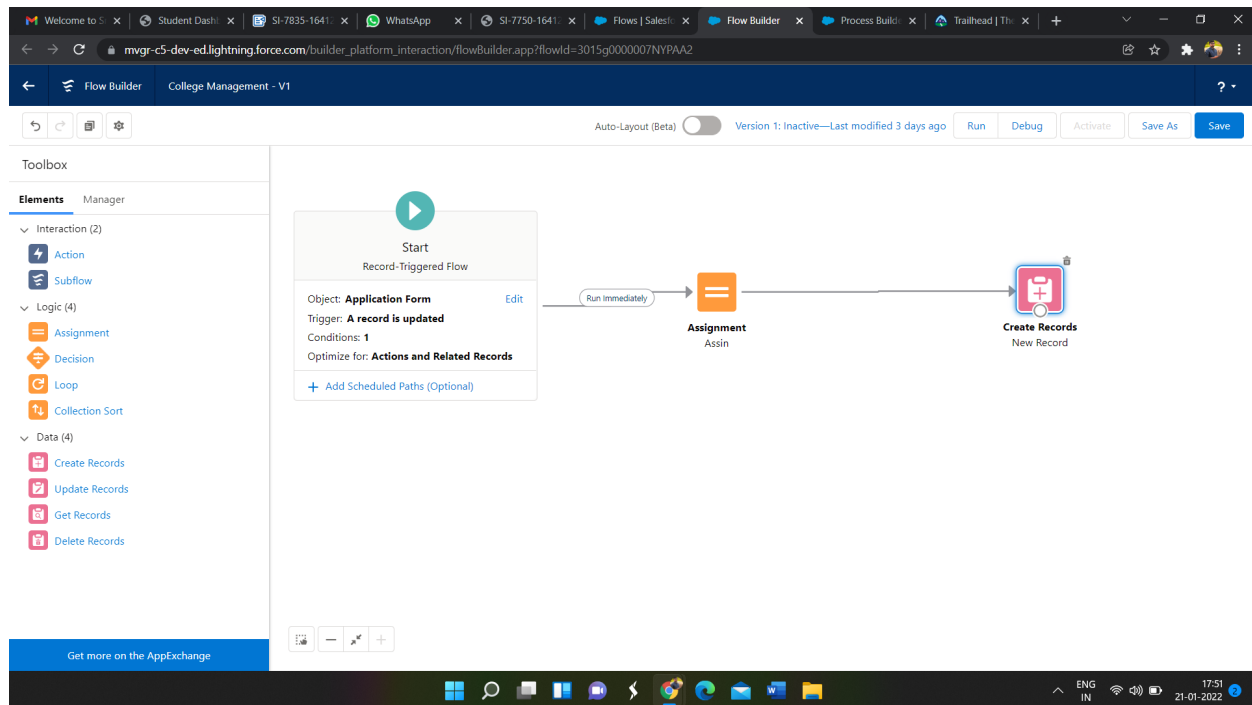
Create a Record

Action Name* Create Student records

Record Type* Student

Set Field Values

Field*	Type*	Value*
Address	Field Reference	[Application_Form_c].A...Q
Date Of Birth	Field Reference	[Application_Form_c].d...Q
Guardian Name	Field Reference	[Application_Form_c].G...Q
Phone	Field Reference	[Application_Form_c].P...Q
Application Form	Field Reference	[Application_Form_c].Id Q
Student Name	Field Reference	[Application_Form_c].S...Q



Day 4:Activities

Topic: Batch Apex Milestone: Create a Batchapex for Application Form

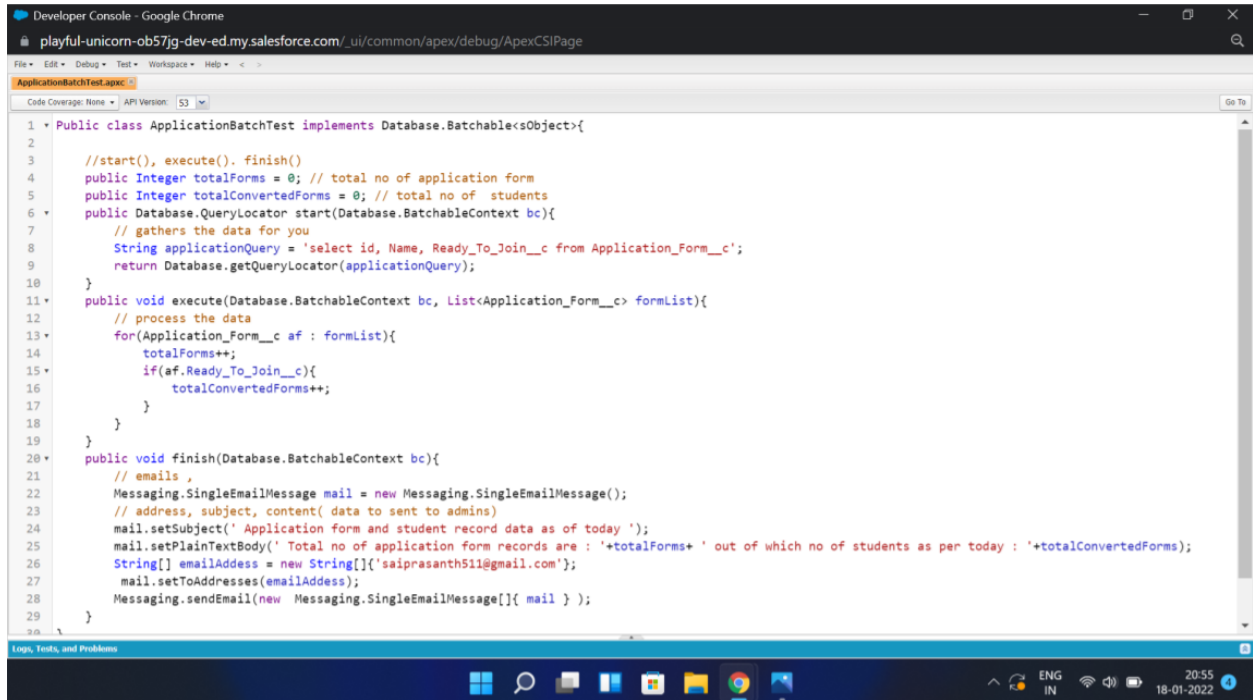
Detailed Description:

Firstly, Create a new Apex Class in Developer Console and enter the following code:

Now, change the Application Form API name to the name which we got while we have created the Application Form Object in College Management Application.

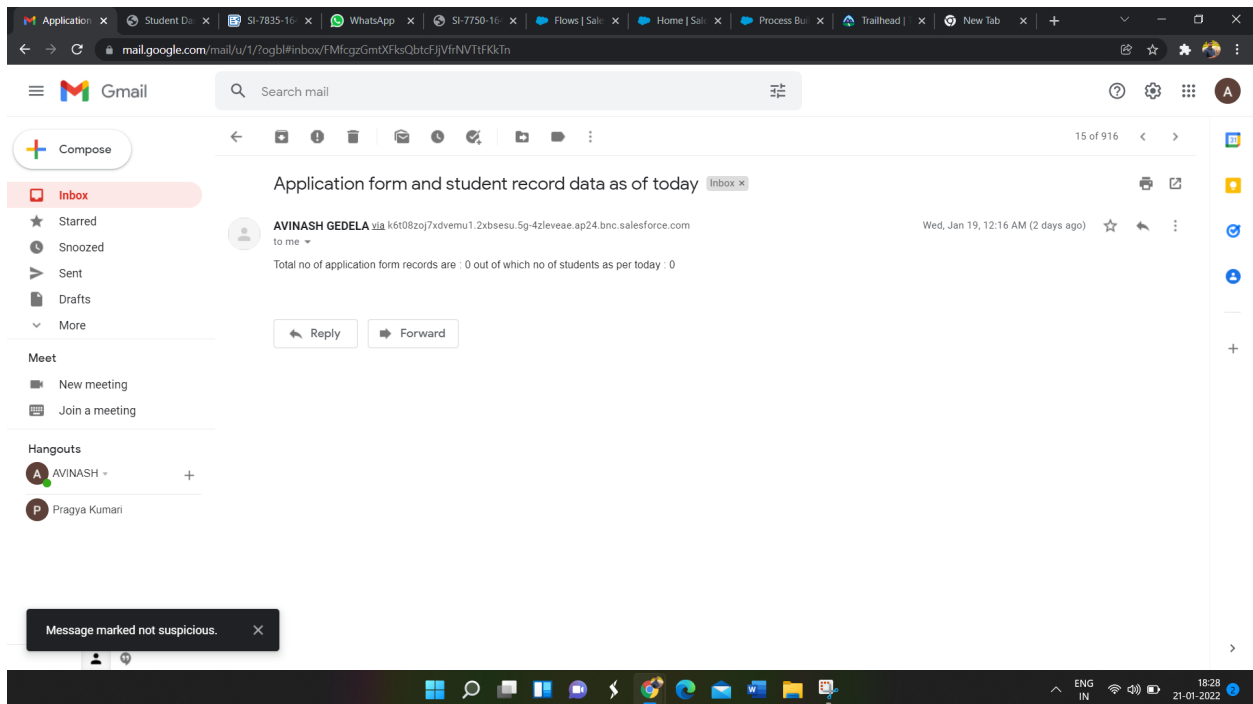
Save the File Name as ApplicationBatchTest and press Ctrl+E. Then we get a Console. In it enter the Apex Code and execute it. Now, remove "your E-Mail Address" text and put your personal Mail ID.

Press Execute. Then we get a Mail regarding the number of records which we have created in Application Form Object till date.



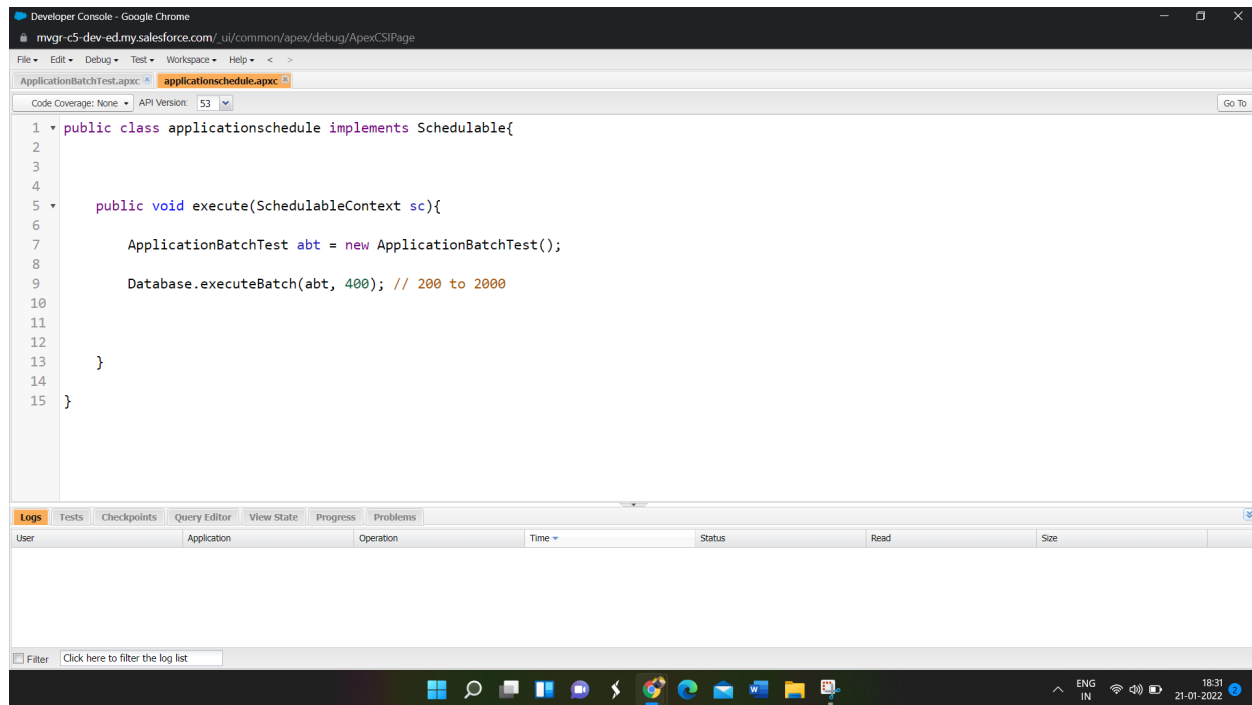
The screenshot shows the Salesforce Developer Console with the Apex class `ApplicationBatchTest` open. The class implements the `Database.Batchable<sObject>` interface. It includes methods for `start`, `execute`, and `finish`. The `execute` method iterates through a list of `Application_Form__c` records, incrementing `totalForms` and `totalConvertedForms` based on the `Ready_To_Join__c` field. The `finish` method sends an email summary to `saiprasanth511@gmail.com`.

```
1 public class ApplicationBatchTest implements Database.Batchable<sObject>{
2
3     //start(), execute(). finish()
4     public Integer totalForms = 0; // total no of application form
5     public Integer totalConvertedForms = 0; // total no of students
6     public Database.QueryLocator start(Database.BatchableContext bc){
7         // gathers the data for you
8         String applicationQuery = 'select id, Name, Ready_To_Join__c from Application_Form__c';
9         return Database.getQueryLocator(applicationQuery);
10    }
11    public void execute(Database.BatchableContext bc, List<Application_Form__c> formList){
12        // process the data
13        for(Application_Form__c af : formList){
14            totalForms++;
15            if(af.Ready_To_Join__c){
16                totalConvertedForms++;
17            }
18        }
19    }
20    public void finish(Database.BatchableContext bc){
21        // emails
22        Messaging.SingleEmailMessage mail = new Messaging.SingleEmailMessage();
23        // address, subject, content( data to sent to admins)
24        mail.setSubject(' Application form and student record data as of today ');
25        mail.setPlainTextBody(' Total no of application form records are : '+totalForms+ ' out of which no of students as per today : '+totalConvertedForms);
26        String[] emailAddress = new String[]{'saiprasanth511@gmail.com'};
27        mail.setToAddresses(emailAddress);
28        Messaging.sendEmail(new Messaging.SingleEmailMessage[] { mail } );
29    }
30 }
```



Milestone: Create a Scheduler Class

Detailed Description: From the Developer Console create a new Apex Class :



Day5:Activities

Topic: Lightning web components Here we are going to create the college data table, for this we need to create an apex class, from which we are going to retrieve the data and Html, javascript files for UI .

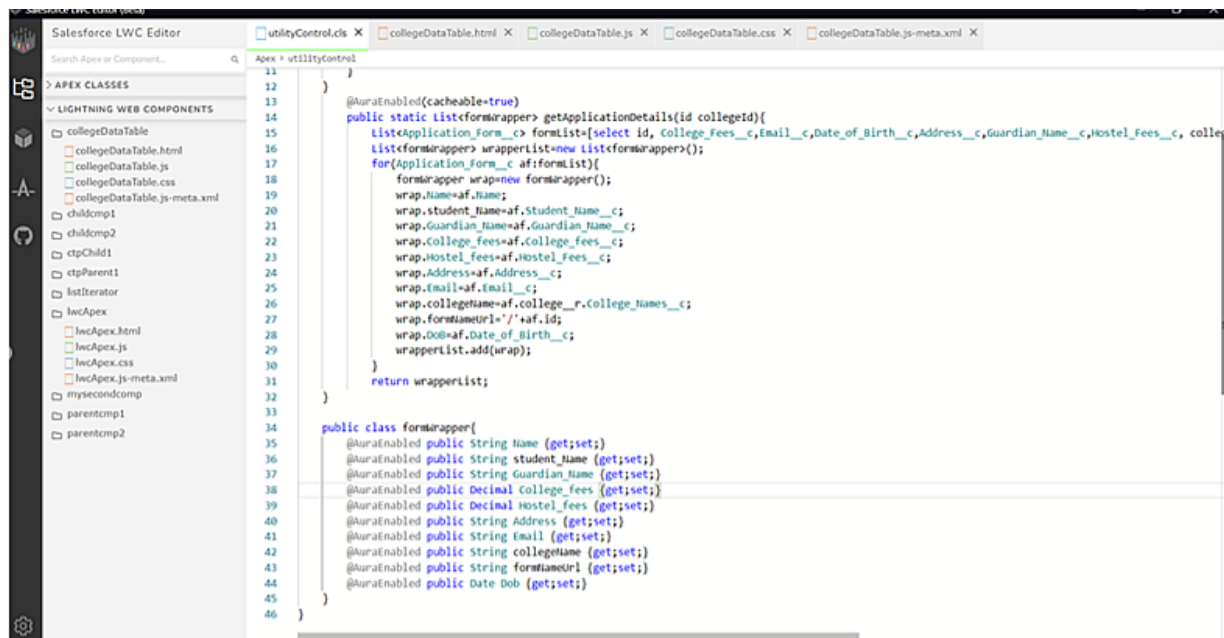
Task1: Create college data table component(APEX CLASS) Create an Apex Class With The Required Functionality

```

public class GetapplicationDetails
{
    @AuraEnabled(cacheable=true)
    public static List oversimplification(id CollegeId)
    {
        List formlist = [SELECT ID, College_Fees__c, Name, Date_Of_Birth__c, Email__c, Hostel_Fees__c,
        Student_Name__c FROM ApplicationForm__c WHERE College__c =:CollegeId];

        return formlist;
    }
}

```



Topic: Create college data table component(HTML CLASS)

HTML:

<h1> College and Application form list table</h1>

<template if:true={recordList}>

<lightning-datatable

key-field="id"

data={recordList}

show-row-number-column

hide-checkbox-column

columns={columnsList}

>

</lightning-datatable>

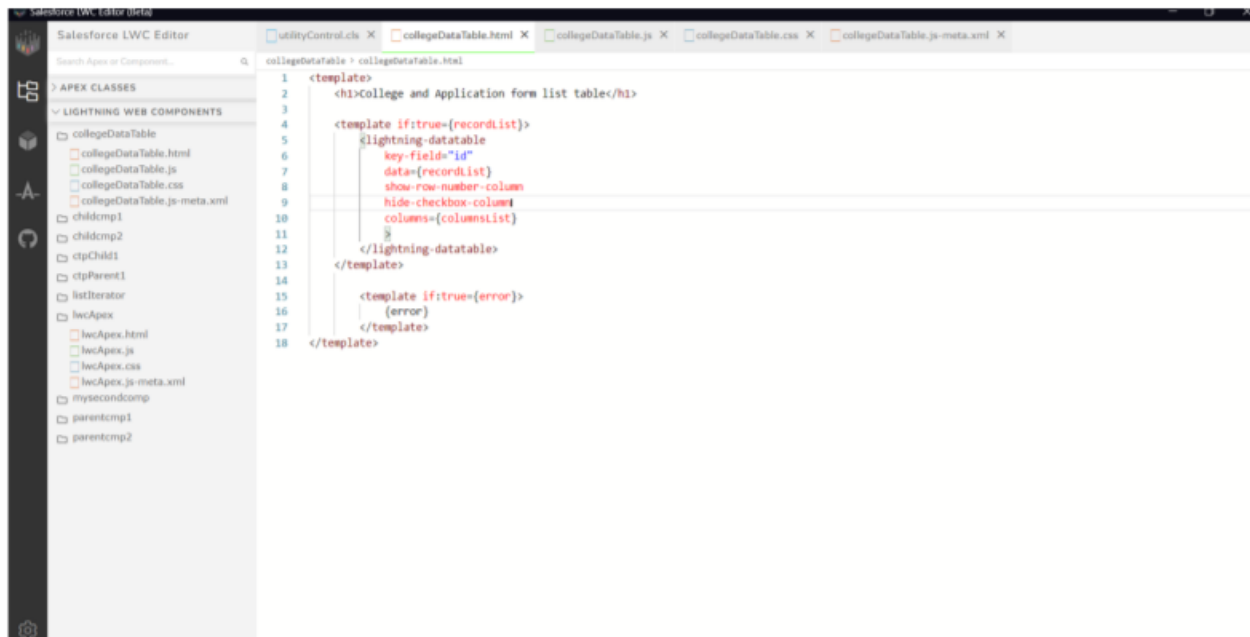
</template>

<template if:true={error}>

{error}

</template>

</template>



Topic: Create college data table component(SCRIPT CLASS)

After the creation of the Html file create the following js file

import { LightningElement, api, wire } from 'lwc';

import getapplicationvalues

from '@salesforce/apex/GetapplicationDetails.getapplicationvalues';

export default class CollegeDataTable extends LightningElement {

columnsList = [

{label : 'Application Form' , fieldName : 'Name' , type:'text' },

{label : 'College Fees' , fieldName : 'College_Fees__c' , type:'currency' },

{label : 'Date Of Birth' , fieldName : 'Date_Of_Birth__c' , type:'date' },

{label : 'Email' , fieldName : 'Email__c' , type:'email' },

{label : 'Hostel Fees' , fieldName : 'Hostel_Fees__c' , type:'Currency' },

{label : 'StudentName' , fieldName : 'Student_Name__c' , type:'text' }

];

@api recordId;

recordList;

error;

@wire(getapplicationvalues, {CollegelId : '\$recordId'})

wiredCollegeData({data, error}){

if(data){

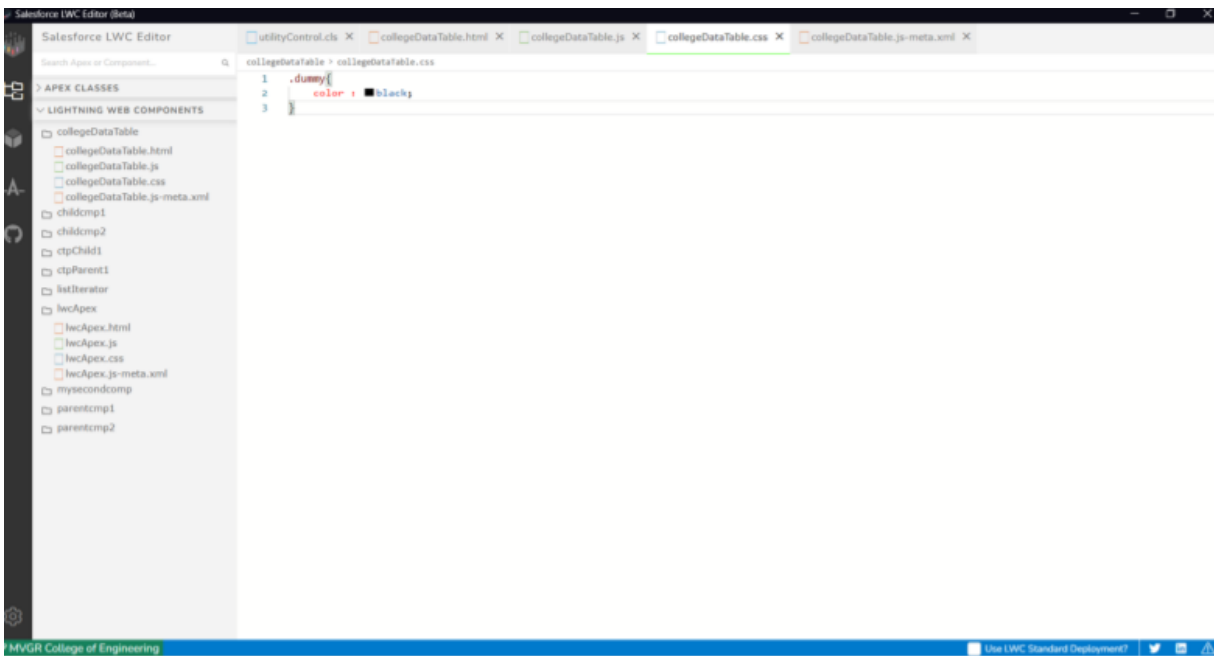
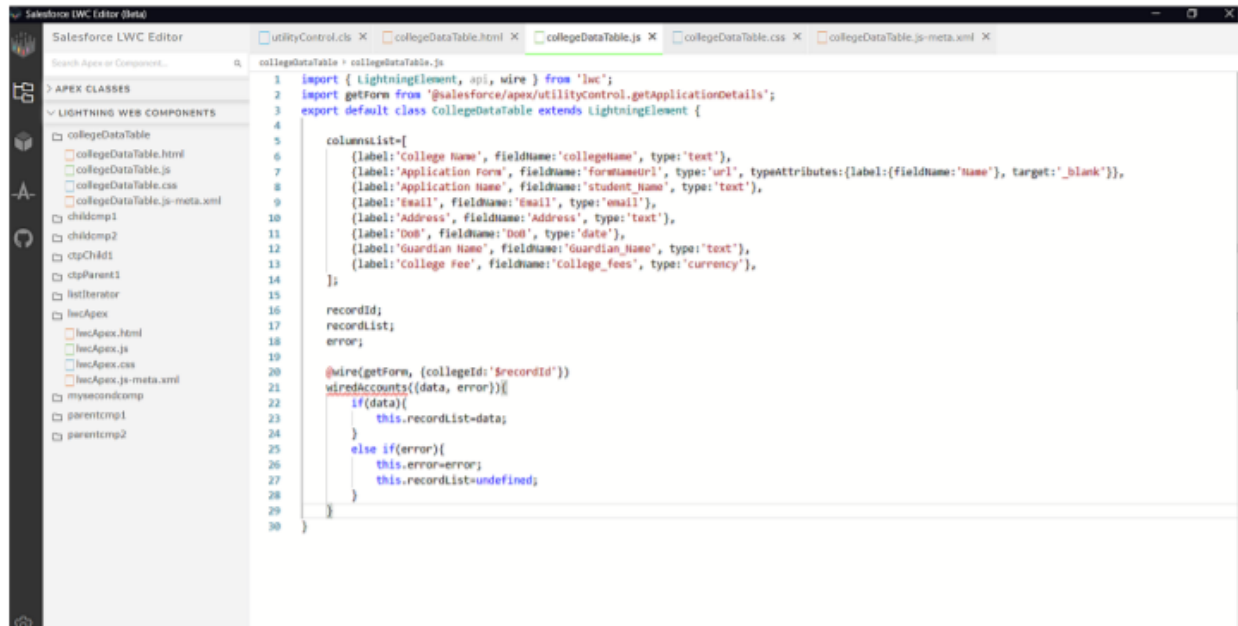
this.recordList = data;

}

```

else if(error){
this.error = error;
this.recordList = undefined;
}
}
}

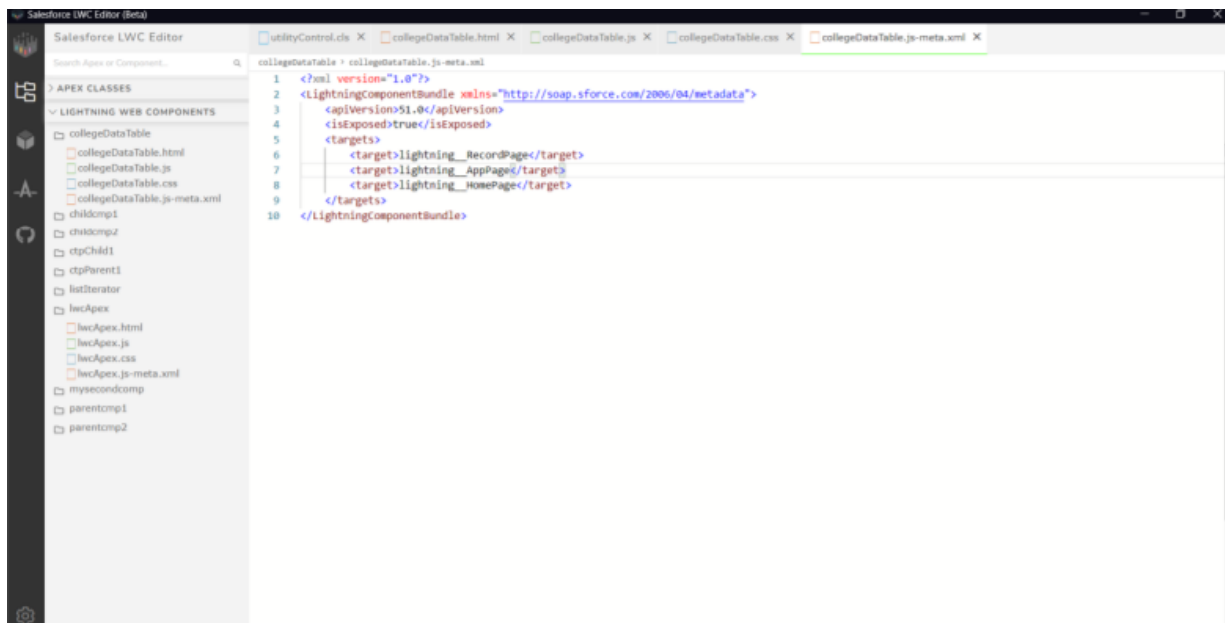
```



Topic: Create college data table component(META CLASS)

Change the Meta File as follows:

```
<?xml version="1.0"?>
<LightningComponentBundle
xmlns="http://soap.sforce.com/2006/04/metadata">
<apiVersion>51.0</apiVersion>
<isExposed>true</isExposed>
<targets>
<target>lightning__RecordPage</target>
<target>lightning__AppPage</target>
<target>lightning__HomePage</target>
</targets>
</LightningComponentBundle>
```



CONCLUSION:

In this project we have learned the various steps of a college management application development with the help of milestones like creating object creating fields for the objects, defining the dependencies between the fields, creating validation rules, Custom object creation, adding business logic to the application, creating apex class the lightning web components.