

Project Title : College Management Application

Day 1 : 3/01/2022

Topic : Created Salesforce Developer Org To Get Started

Milestone / Activities :

a)Created Developer Account

b)Account Activation

c)Login To Your Salesforce Account

Detailed Description:

a)Created a developer org in salesforce.

Go to developers.salesforce.com Click on sign up

On the sign up form, enter the following details :

- First name & Last name : Durga Prasad Avula
- Email : durgaprasad24a@gmail.com
- Role : Developer
- Company : VVIT
- County : India
- Postal Code : 522034
- Username : prasad24@vvit.com

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First Name*

Durga Prasad

Last Name*

Avula

Email*

durgaprasad24a@gmail.com

Role*

Developer

Company*

VVIT

Country*

India

Postal Code*

522034

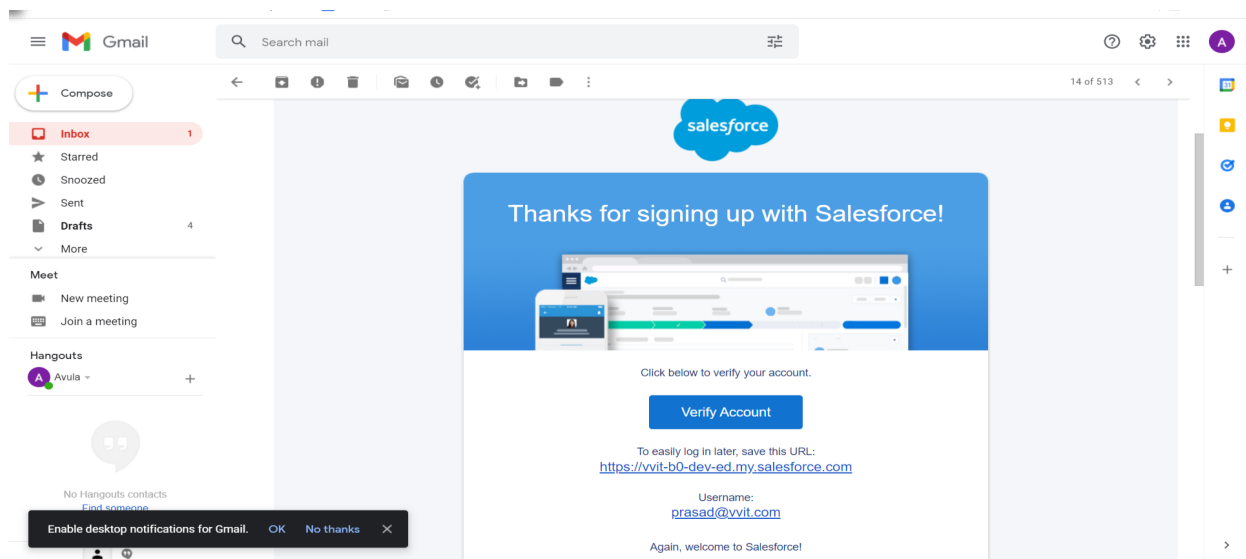
Username*

prasad24@vvit.com

By registering, you confirm you have read and agree to the [Terms of Use](#) and the [Master Subscription Agreement](#) and to the storing and processing of

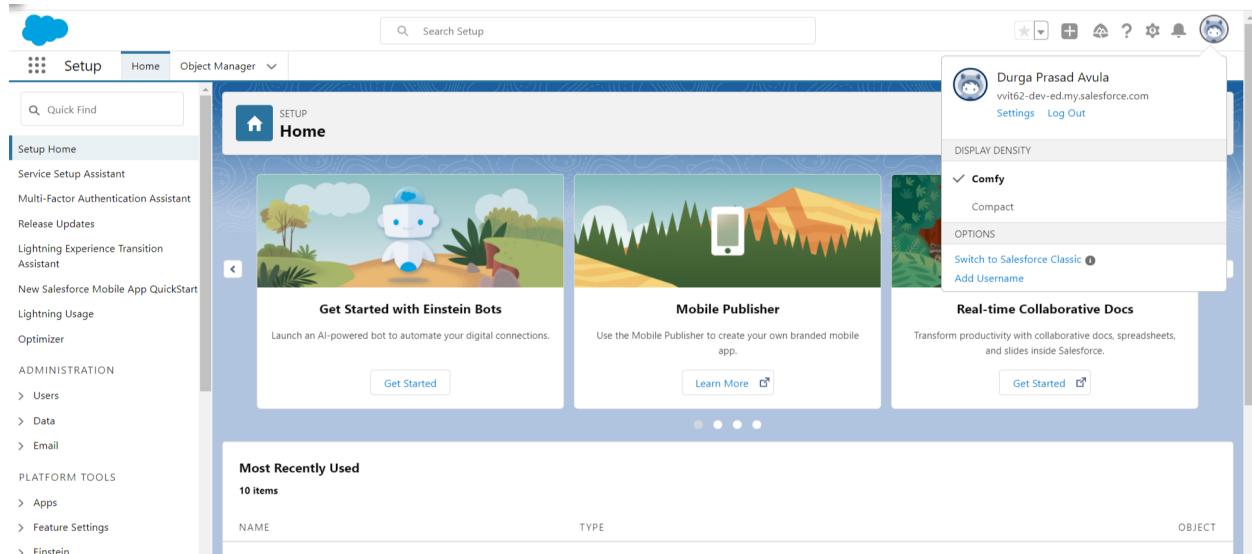
b) Account Activation:

Go to the inbox of the email that we used while signing up. Click on the verify account to activate our account.



c)Login To Your Salesforce Account

- Go to salesforce.com and click on login.
- Enter the username and password that we just created



Day 2 : 4/01/2022

Topic : Custom Object Creation

Milestone / Activities:

- a) Create The Custom Objects For The Application
- b) Create Fields On College Object
- c) Create Fields On Application Form Object

Detailed Description:

- Created The Custom Objects For The Application
Created the following Custom Objects For the Application.
 - 1. College
 - 2. Application Form
 - 3. Students.
 - 4. Subjects.
- Created Fields On College Object

Created the following fields on the college object.

Field Name	Data Type	Required	Values
Record Info	Text		
College Fees	Currency(7,2)	Yes	
Hostel Fees	Currency(6,2)	Yes	
College Name	Picklist(Refer Business Logic In Milestones)	Yes	
Email	Picklist		mit@maa.com mit@ccu.com mit@mum.com mit@del.com mit@blr.com mit@hyd.com
Capacity Of Students	Picklist		500-1500,1500-3000,3000-5000,5000-8000,8000-12000

Setup > OBJECT MANAGER
College

Details

Fields & Relationships
9 Items, Sorted by Field Label


Q Quick Find New Deleted Fields Field Dependencies Set History Tracking








FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
College Email	College_Email__c	Picklist	College Name	
College Fee	College_Fee__c	Currency(7, 2)		
College Name	College_Name__c	Picklist		
Created By	CreatedById	Lookup(User)		
Hostel Fee	Hostel_Fee__c	Currency(6, 2)		
Last Modified By	LastModifiedById	Lookup(User)		
No Of Seats	No_Of_Seats__c	Picklist	College Name	
Owner	OwnerId	Lookup(User, Group)		✓
Record Info	Name	Text(80)		✓




► Create Fields On Application Form Object


Create the following fields on the application form object.

Field Name	Data Type	Required	Values
Application Form ID	Auto number		F-{000000} Starting Number=1
Address	Text(255)	Yes	
College	Master-Detail(College)	Yes	
College Fees	Formula(Currency)		
Hostel Fees	Formula(Currency)		
date of Birth	Date	Yes	
Email	Email(Unique)	Yes	
Guardian Name	Text(30)	Yes	
Looking For Hostel Stay	Checkbox(default=Uncheck)		
Ready To Join	Checkbox(default=Uncheck)		
Student Name	Text(30)	Yes	
Phone	Phone	Yes	



 Setup
  Home
  Object Manager


 SETUP > OBJECT MANAGER
Application Form

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
 Triggers

Fields & Relationships
 15 Items, Sorted by Field Label

[New](#)
[Deleted Fields](#)
[Field Dependencies](#)
[Set History Tracking](#)

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Address	Address__c	Text(255)		
Application Form ID	Application_Form_ID__c	Auto Number		
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)		
Form Number	Name	Auto Number		
Guardian Name	Guardian_Name__c	Text(30)		
Hostel Fees	Hostel_Fees__c	Formula (Currency)		

Day 3 :

Topic : Custom Object Creation, Adding Business Logic To Application

Milestone / Activities:

- a) Create Fields On Student Object
- b) Create Fields On Subject Object
- c) Creating Global Picklist Value Sets
- d) Creating Field Dependencies
- e) Creating Validation Rules

Detailed Description:

- Created Fields On Student Object
Create the following fields On the Subject object.

Field Name	Data Type	Required	Values
Subject ID	AutoNumber		S-{000000} Starting Number=1
Paper 1	Picklist(Refer Business Logic Milestone)		
Paper2	Picklist(Refer Business logic Milestone)		
Student	Lookup(Student)		

SETUP > OBJECT MANAGER
Student

Details

Fields & Relationships
10 Items, Sorted by Field Label

Q, Quick Find New Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Address	Address__c	Text Area(255)		
Application Form	Application_Form__c	Lookup(Application Form)		✓
College Name	College_Name__c	Formula (Text)		
Created By	CreatedById	Lookup(User)		
Date Of Birth	Date_Of_Birth__c	Date		
Guardian Name	Guardian_Name__c	Text(30)		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Phone	Phone__c	Phone		
Student Name	Name	Text(80)		✓

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
Triggers

➤ Create Fields On Subject Object

Created the following fields On the Subject object.

Field Name	Data Type	Required	Values
Subject ID	AutoNumber		S-{000000} Starting Number=1
Paper 1	Picklist(Refer Business Logic Milestone)		
Paper2	Picklist(Refer Business logic Milestone)		
Student	Lookup(Student)		

Fields & Relationships
8 Items, Sorted by Field Label

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)		✓
Paper1	Paper1__c	Picklist		
Paper2	Paper2__c	Picklist		
Student	Student__c	Lookup(Student)		✓
Subject ID	Subject_ID__c	Auto Number		
Subject Name	Name	Text(80)		✓

► Creating Global Picklist Value Sets

1. Create the following global picklist value sets for the application.
a) College

Picklist Value Name	Values
College	MIT-HYD MIT-BLR MIT-MUM MIT-MAA MIT-DEL MIT-CCU

Setup

Home

Object Manager

Data

Picklist Settings

State and Country/Territory

Picklists

Feature Settings

Topics

Topic Assignment Triggers

Topic Triggers

Topics for Objects

Objects and Fields

Picklist Value Sets

Didn't find what you're looking for?
Try using Global Search.

Picklist Value Sets

Global Value Set

[Back to List](#)

[Values \(6\)](#)
[Inactive Values \(0\)](#)
[Fields Where Used \(1\)](#)

Global Value Set Detail

Edit Delete

Information

Label	College Name
Name	College_Name
Description	

Picklist Values Used

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

Edit Delete

Values

[New](#)
[Reorder](#)
[Replace](#)
[Printable View](#)
[Chart Colors](#)

Action	Values	API Name	Default	Chart Colors	Modified By
Edit Del Deactivate	MIT-BLR	MIT-BLR	<input type="checkbox"/>	Assigned dynamically	Durga Prasad Avula 1/4/2022, 11:14 PM
Edit Del Deactivate	MIT-MAA	MIT-MAA	<input type="checkbox"/>	Assigned dynamically	Durga Prasad Avula 1/4/2022, 11:14 PM
Edit Del Deactivate	MIT-HYD	MIT-HYD	<input type="checkbox"/>	Assigned dynamically	Durga Prasad Avula 1/4/2022, 11:14 PM
Edit Del Deactivate	MIT-DEL	MIT-DEL	<input type="checkbox"/>	Assigned dynamically	Durga Prasad Avula 1/4/2022, 11:14 PM
Edit Del Deactivate	MIT-MUM	MIT-MUM	<input type="checkbox"/>	Assigned dynamically	Durga Prasad Avula 1/4/2022, 11:14 PM
Edit Del Deactivate	MIT-CCU	MIT-CCU	<input type="checkbox"/>	Assigned dynamically	Durga Prasad Avula 1/4/2022, 11:14 PM

b)Paper1

Picklist Value Name	Values
Paper 1	APEX JAVA C C++

Setup

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Object Manager

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Picklist Settings

State and Country/Territory Picklists

Feature Settings

Topics

Topic Assignment Triggers

Topic Triggers

Topics for Objects

Objects and Fields

Picklist Value Sets

Didn't find what you're looking for?
 Try using Global Search.

Picklist Value Sets

Global Value Set

[Back to List](#)

Values (4) | Inactive Values (0) | Fields Where Used (1)

Global Value Set Detail

EditDelete

Information

Label

Paper1

Name

Paper1

Description

Picklist Values Used

Active and inactive picklist values
 4 (1,000 max)

EditDelete

Values

NewReorderReplacePrintable ViewChart Colors

Action	Values	API Name	Default	Chart Colors	Modified By
Edit Del Deactivate	Apex	Apex	<input type="checkbox"/>	Assigned dynamically	Durga Prasad Avula 1/5/2022, 10:53 PM
Edit Del Deactivate	Java	Java	<input type="checkbox"/>	Assigned dynamically	Durga Prasad Avula 1/5/2022, 10:53 PM
Edit Del Deactivate	C	C	<input type="checkbox"/>	Assigned dynamically	Durga Prasad Avula 1/5/2022, 10:53 PM
Edit Del Deactivate	C++	C++	<input type="checkbox"/>	Assigned dynamically	Durga Prasad Avula 1/5/2022, 10:53 PM

Inactive Values

c)Paper2

Picklist Value Name	Values
Paper2	MATHEMATICS ENGLISH STATISTICS

Setup

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Object Manager

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Picklist Settings

State and Country/Territory Picklists

Feature Settings

Topics

Topic Assignment Triggers

Topic Triggers

Topics for Objects

Objects and Fields

Picklist Value Sets

Didn't find what you're looking for?
 Try using Global Search.

Picklist Value Sets

Global Value Set

[Back to List](#)

Values (3) | Inactive Values (0) | Fields Where Used (1)

Global Value Set Detail

EditDelete

Information

Label

Paper2

Name

Paper2

Description

Picklist Values Used

Active and inactive picklist values
 3 (1,000 max)

EditDelete

Values

NewReorderReplacePrintable ViewChart Colors

Action	Values	API Name	Default	Chart Colors	Modified By
Edit Del Deactivate	MATHEMATICS	MATHEMATICS	<input type="checkbox"/>	Assigned dynamically	Durga Prasad Avula 1/6/2022, 3:57 AM
Edit Del Deactivate	STATISTICS	STATISTICS	<input type="checkbox"/>	Assigned dynamically	Durga Prasad Avula 1/6/2022, 3:58 AM
Edit Del Deactivate	ENGLISH	ENGLISH	<input type="checkbox"/>	Assigned dynamically	Durga Prasad Avula 1/6/2022, 3:58 AM

Inactive Values

https://vit62-dev-ed.my.salesforce.com/one/app/#/alohaRedirect/0N15J000000CkX3?isdt=p1

► Creating Field Dependencies

1. Created field dependency between college Name and Email, where the controlling field is college Name and dependent field is Email. Select the email ids according to the college names.

2. Create field dependency between college Name and capacity of students, where the controlling field is college Name and dependent field is Capacity of Students. Select the values according to your wish.

The screenshot shows the Salesforce Setup interface. The left sidebar contains a navigation menu with options like Details, Fields & Relationships (selected), 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, and Restriction Rules. The main content area is titled 'College Field Dependencies' and includes a 'Back to Custom Object: College' link. Below the title, a message states: 'This page allows you to define dependencies between fields (e.g., dependent picklists)'. A table titled 'Field Dependencies' with a 'New' button contains two entries:

Action	Controlling Field	Dependent Field	Modified By
Edit Del	College Name	College Email	Durga Prasad Avula, 1/6/2022, 7:12 PM
Edit Del	College Name	No Of Seats	Durga Prasad Avula, 1/5/2022, 4:17 AM

The URL at the bottom of the page is: <https://vvt62-dev-ed.lightning.force.com/lightning/setup/ObjectManager/0115j000000DNpT/FieldsAndRelationships/viewDependencyList>

Top Screenshot: Edit Field Dependency (Email)

Controlling Field: College Name
Dependent Field: Email

Instructions:

- Double click on a cell to toggle its visibility for the Controlling Field value shown in the column heading.
- To change multiple cells at once, select multiple cells and then click the Include Values or Exclude Values button to change the visibility of all selected cells at once.
- Use Shift + click to select a range of adjacent cells. Use CTRL + click to select multiple cells that are not adjacent.
- Use the Preview button to test the results.

Click button to include or exclude selected values from the dependent picklist

College Name:	MIT-BLR	MIT-HYD	MIT-MUM	MIT-MAA	MIT-CCU	MIT-DEL
Email:	blr@mit.co.in	hyd@mit.co.in	mum@mit.co.in	maa@mit.co.in	ccu@mit.co.in	del@mit.co.in

Bottom Screenshot: Edit Field Dependency (Capacity Of Students)

Controlling Field: College Name
Dependent Field: Capacity Of Students

Instructions:

- Double click on a cell to toggle its visibility for the Controlling Field value shown in the column heading.
- To change multiple cells at once, select multiple cells and then click the Include Values or Exclude Values button to change the visibility of all selected cells at once.
- Use Shift + click to select a range of adjacent cells. Use CTRL + click to select multiple cells that are not adjacent.
- Use the Preview button to test the results.

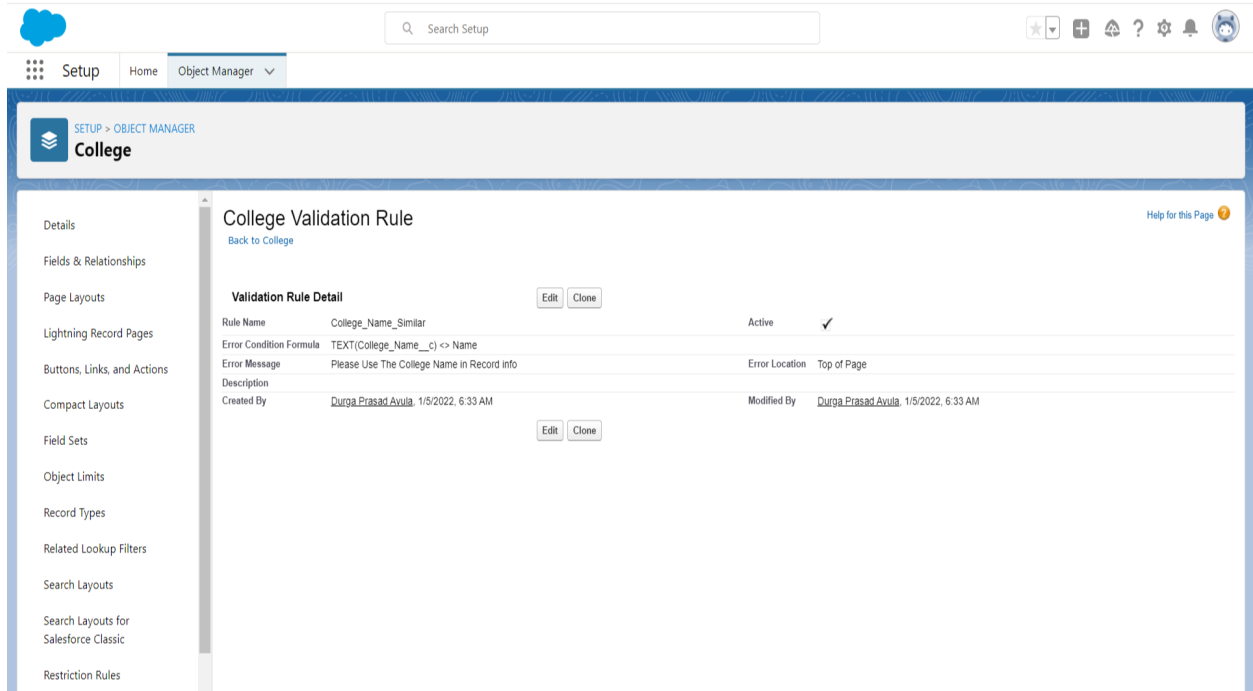
Click button to include or exclude selected values from the dependent picklist

College Name:	MIT-BLR	MIT-HYD	MIT-MUM	MIT-MAA	MIT-CCU	MIT-DEL
Capacity Of Students:	500-1000	500-1000	500-1000	500-1000	500-1000	500-1000
	1000-2500	1000-2500	1000-2500	1000-2500	1000-2500	1000-2500
	2500-6000	2500-6000	2500-6000	2500-6000	2500-6000	2500-6000
	6000-10000	6000-10000	6000-10000	6000-10000	6000-10000	6000-10000

► Creating Validation Rules

1. Create a validation rule on the college object such that the college name and record info should have the same name.

► `TEXT(College_Name__c) <> Name.`

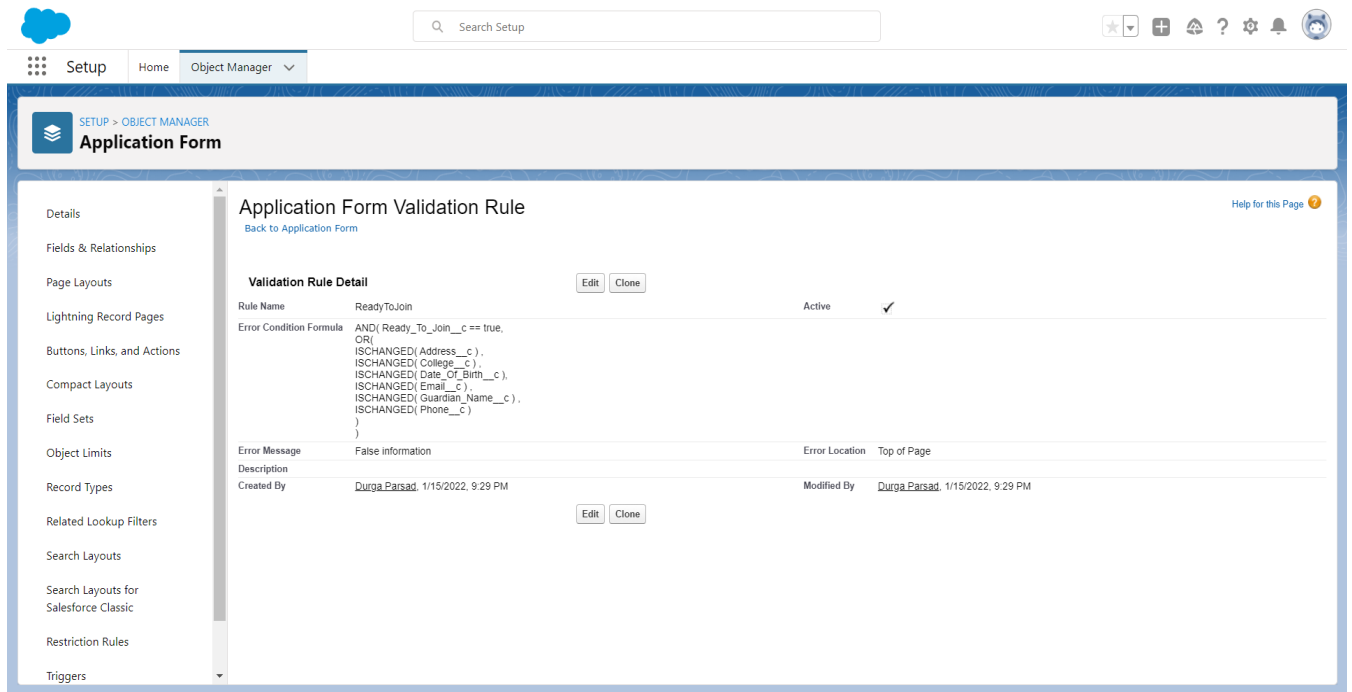


2. Create a validation rule on the application form object to stop any modification on the application form once a student record is created.

```

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 )
)
)

```



Day 4 :

Topic : Adding Business Logic To Application

Milestone / Activities:

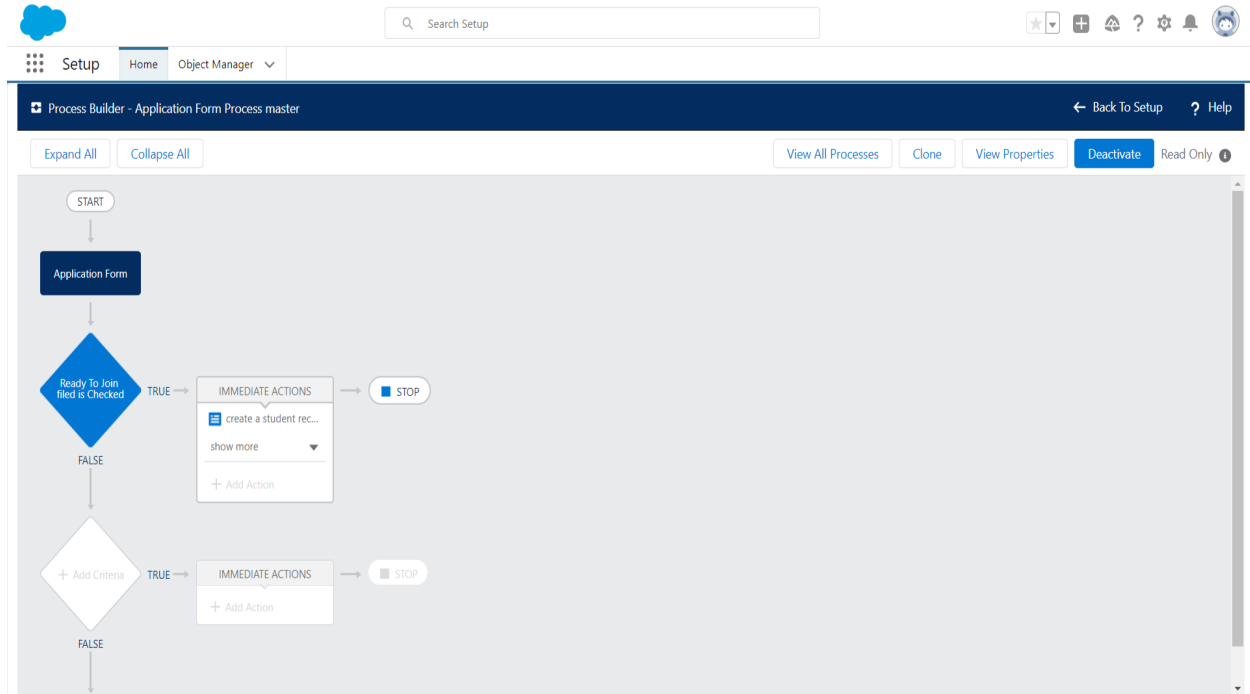
- a) Process Automation
- b) Create The Student Record Using Flow

Detailed Description:

➤ Process Automation

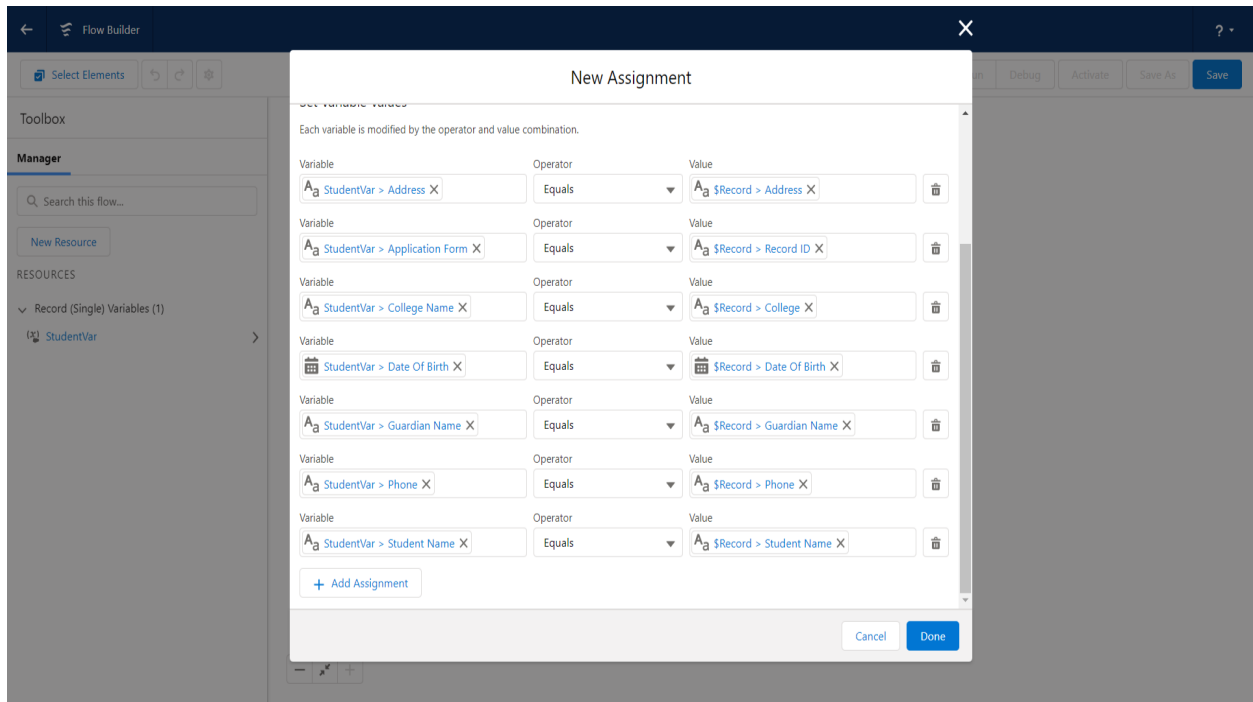
1. Created an automation process such that when the "ready to join" field is checked on the application form object we need to create the student record automatically with the information specified in the application form record.
2. Go to Setup -> select "Process Builder" from quick find. Create a Process Builder on the "Application Form" object with a condition as "When a record change". And select "When a record is created or edited".
 - a. In the diamond shape box(called nodes), 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. Please follow the below screenshot.



➤ Create The Student Record Using Flow

1. First deactivate the process builder which we created earlier.
2. Now search for flows 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 as follows.



Day 5

Topic: Create a batch apex form

Milestone \ Activity: Created

Description:

1.From the Developer console created a new apex class and enter the following code

Syntax Of BatchApex

Public class ApplicationBatchTest implements Database.Batchable<sObject>{

 //start(), execute(). finish()

 public Integer totalForms = 0; // total no of application form

 public Integer totalConvertedForms = 0; // total no of students

 public Database.QueryLocator start(Database.BatchableContext bc){

 // gathers the data for you

 String applicationQuery = 'select id, Name, Ready_To_Join__c from ApplicationForm__c';

 return Database.getQueryLocator(applicationQuery);

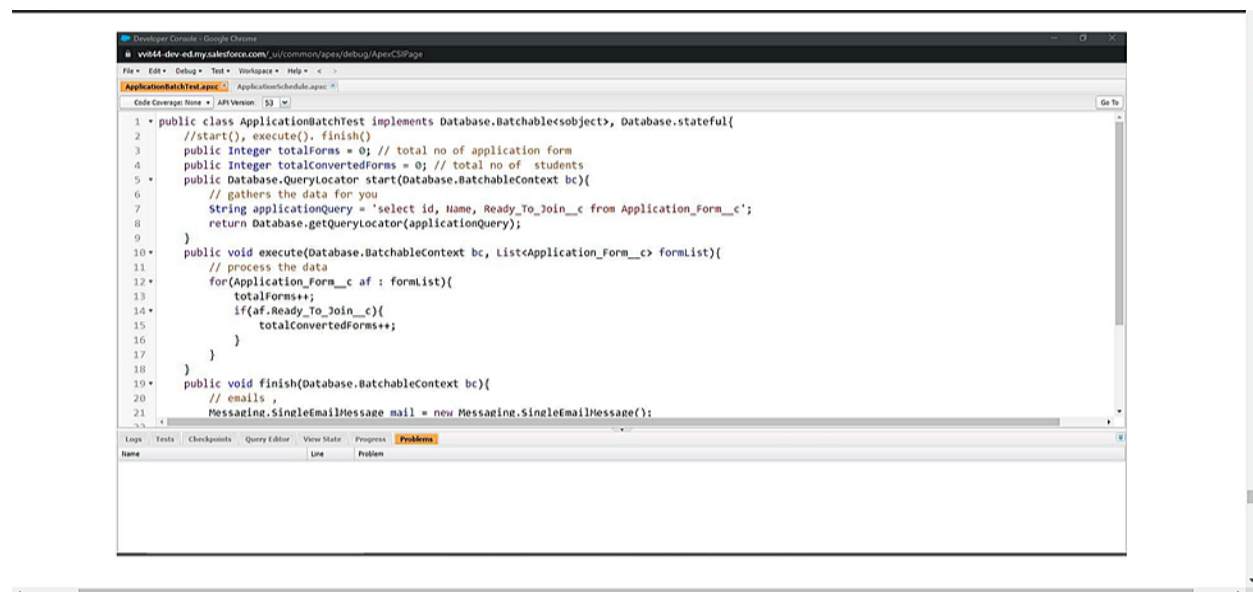
 }


```

    public void execute(Database.BatchableContext bc, List<ApplicationForm__c>
formList){        // process the data
        for(ApplicationForm__c af : formList){
            totalForms++;
            if(af.Ready_To_Join__c){
                totalConvertedForms++;
            }
        }
    }
}

public void finish(Database.BatchableContext bc){
    // emails ,
    Messaging.SingleEmailMessage mail = new Messaging.SingleEmailMessage();
    // address, subject, content( data to sent to admins)
    mail.setSubject(' Application form and student record data as of today ');
    mail.setPlainTextBody(' Total no of application form records are : '+totalForms+
' out of which no of students as per today : '+totalConvertedForms);
    String[] emailAddress = new String[
]{'harshavardhanakaredla2001@gmail.com'};
    mail.setToAddresses(emailAddress);
    Messaging.sendEmail(new Messaging.SingleEmailMessage[]{ mail } );
}
}

```



Topic: Create a scheduler class

Milestone \ Activity: Created

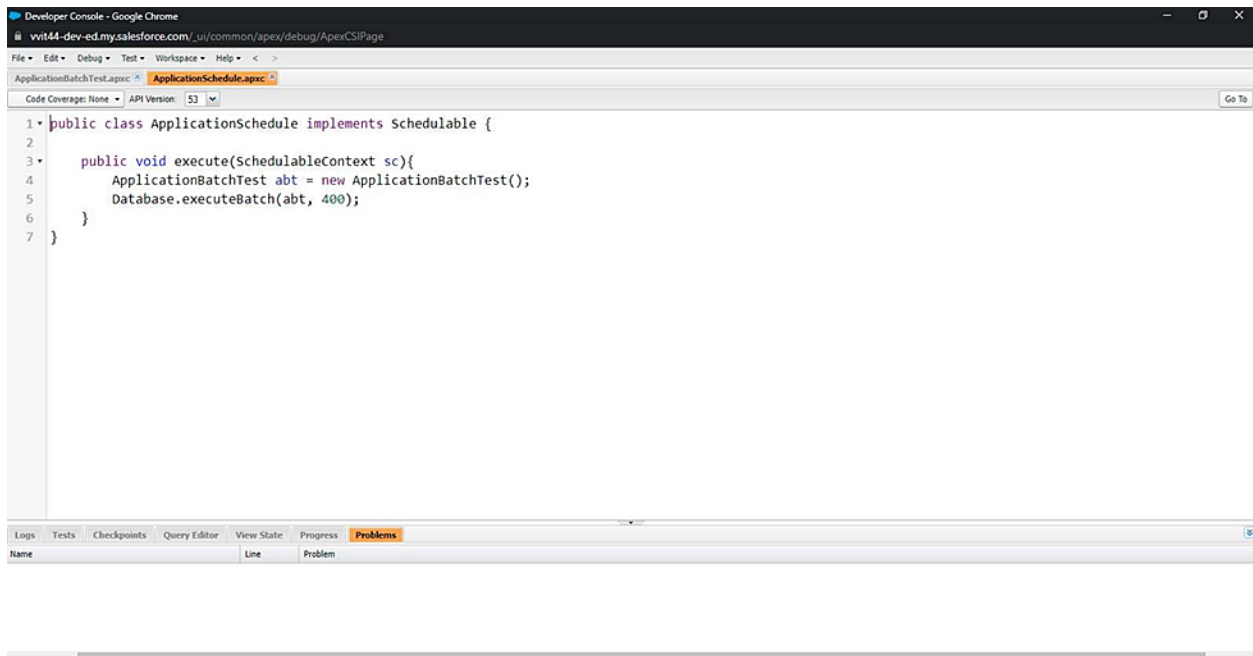
Description:

1. From the developer console create a new apex class and enter the following code.

```
public class application schedule implements Schedulable{

    public void execute(SchedulableContext sc){
        ApplicationBatchTest abt = new ApplicationBatchTest();
        Database.executeBatch(abt, 400); // 200 to 2000
    }
}
```

From setup search for apex class and click on schedule jobs and fill the details as per your requirements.



Day 6 : Lightening Web Component

Topic : Creat College Data Table Component

Milestone \ Activity : Created

Description :

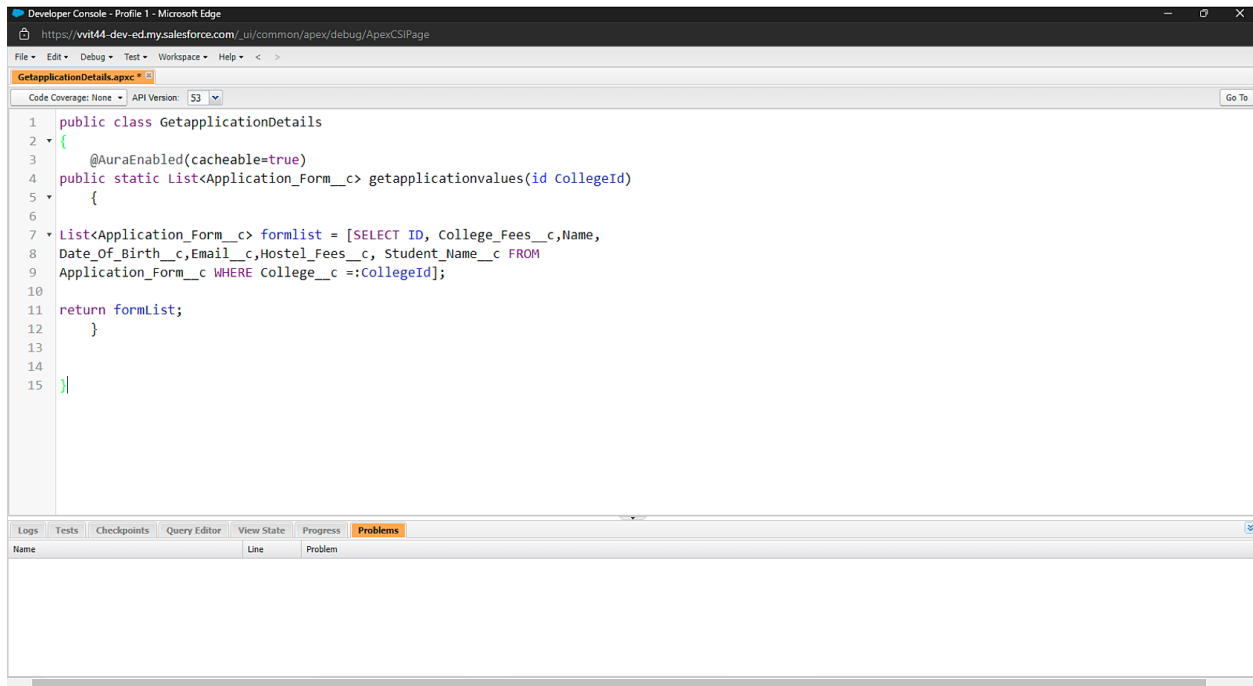
Here we are going to create the college data table, for this we need to create an apex class, from which we are going to retrieve the data and Html, javascript files for UI .

Create an Apex Class With The Required Functionality

```
public class GetapplicationDetails
{
    @AuraEnabled(cacheable=true)
    public static List<ApplicationForm__c> getapplicationvalues(id CollegeId)
    {

        List<ApplicationForm__c> 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 DataTable Component (HTML FILE)

Milestone \ Activity : Created

Description :

HTML:

<template>

<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}

>

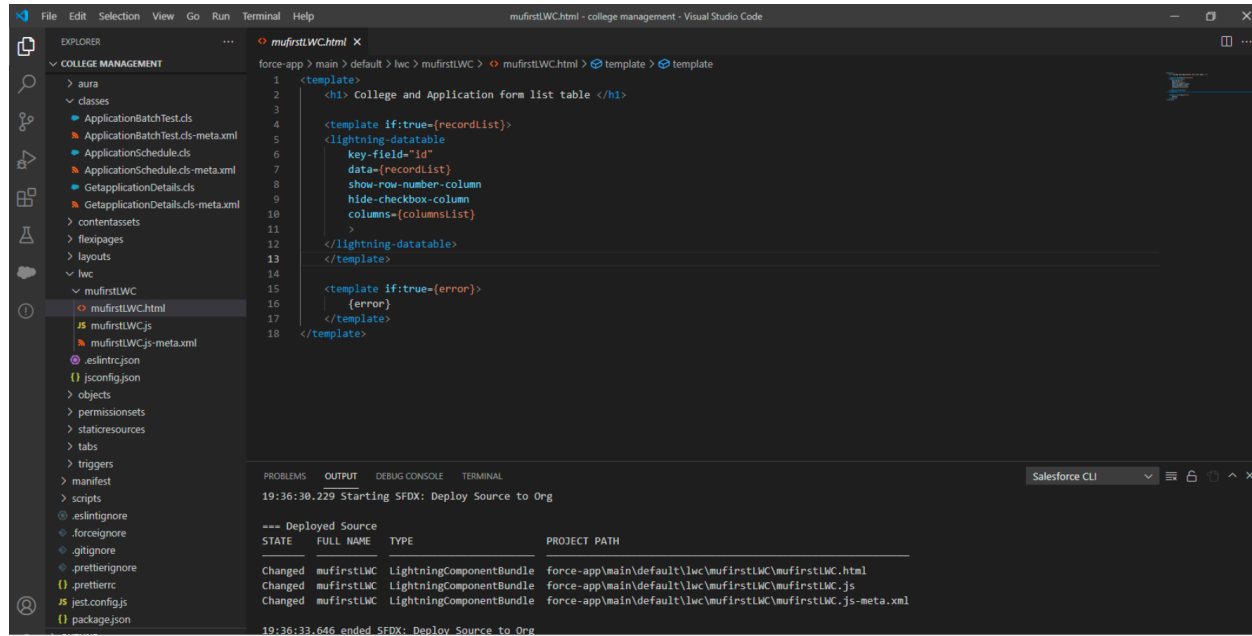
</lightning-datatable>

</template>

```

<template if:true={error}>
  {error}
</template>
</template>

```



Topic :Create College DataTable Component(JAVA SCRIPT FILE)

Milestone \ Activity : Created

Description :

```

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' }
  ];

```

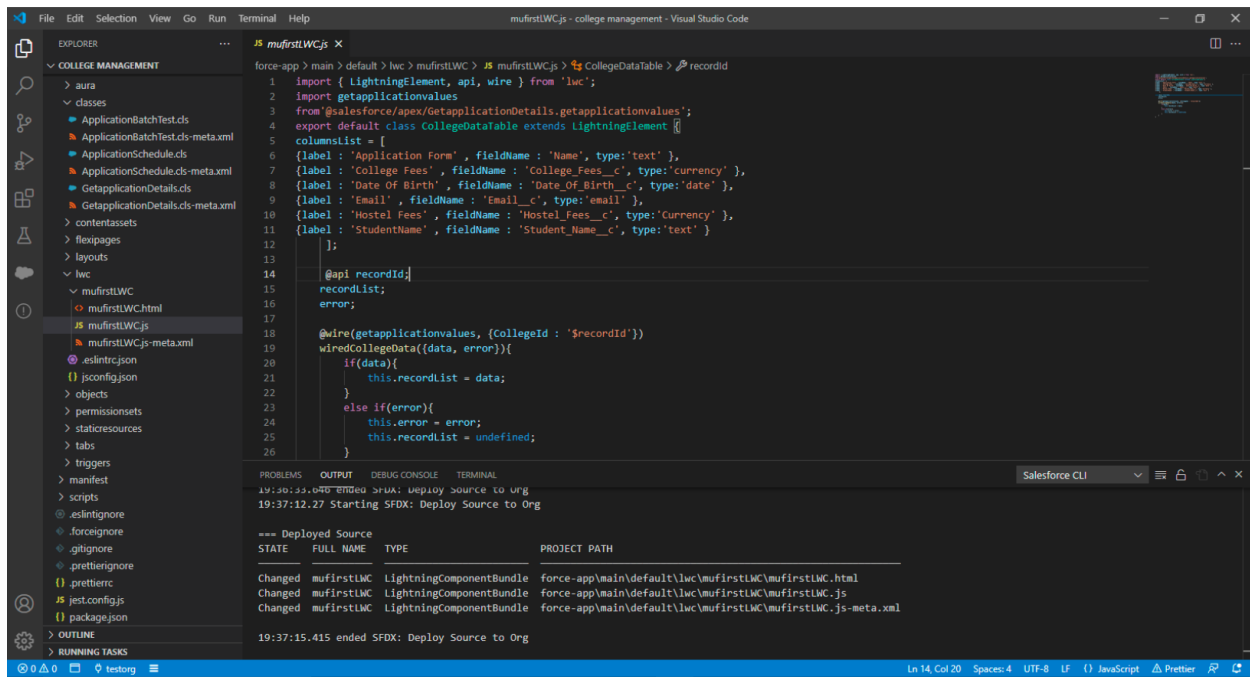
```

@api recordId;

```

```
recordList;  
error;
```

```
@wire(getapplicationvalues, {CollegeId : '$recordId'})  
wiredCollegeData({data, error}){  
  if(data){  
    this.recordList = data;  
  }  
  else if(error){  
    this.error = error;  
    this.recordList = undefined;  
  }  
}
```



Milestone \ Activity : Created

Description :

```
<?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>

```

