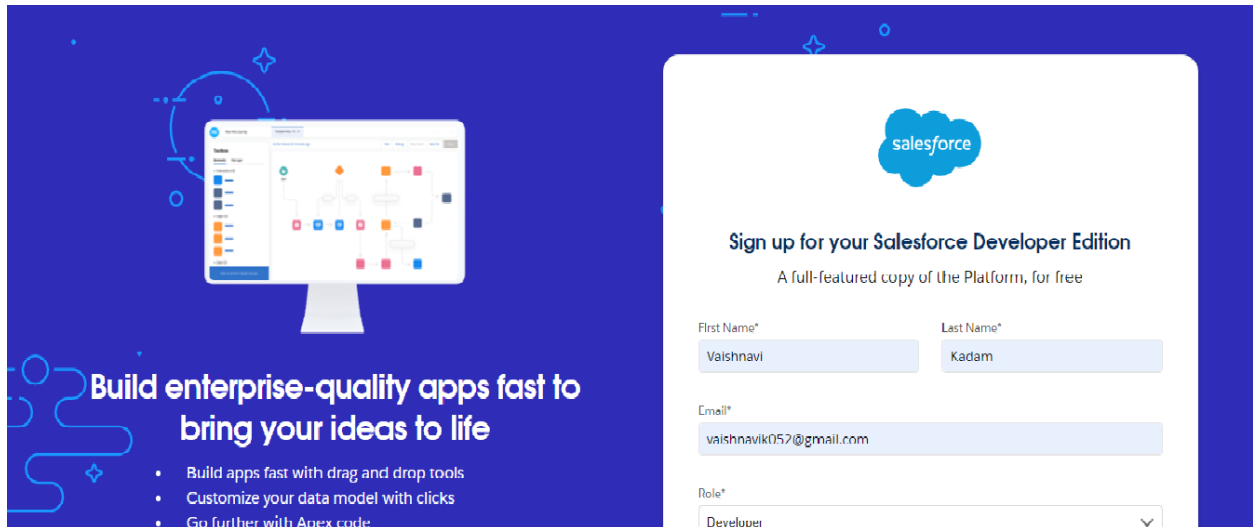


## DAY1:

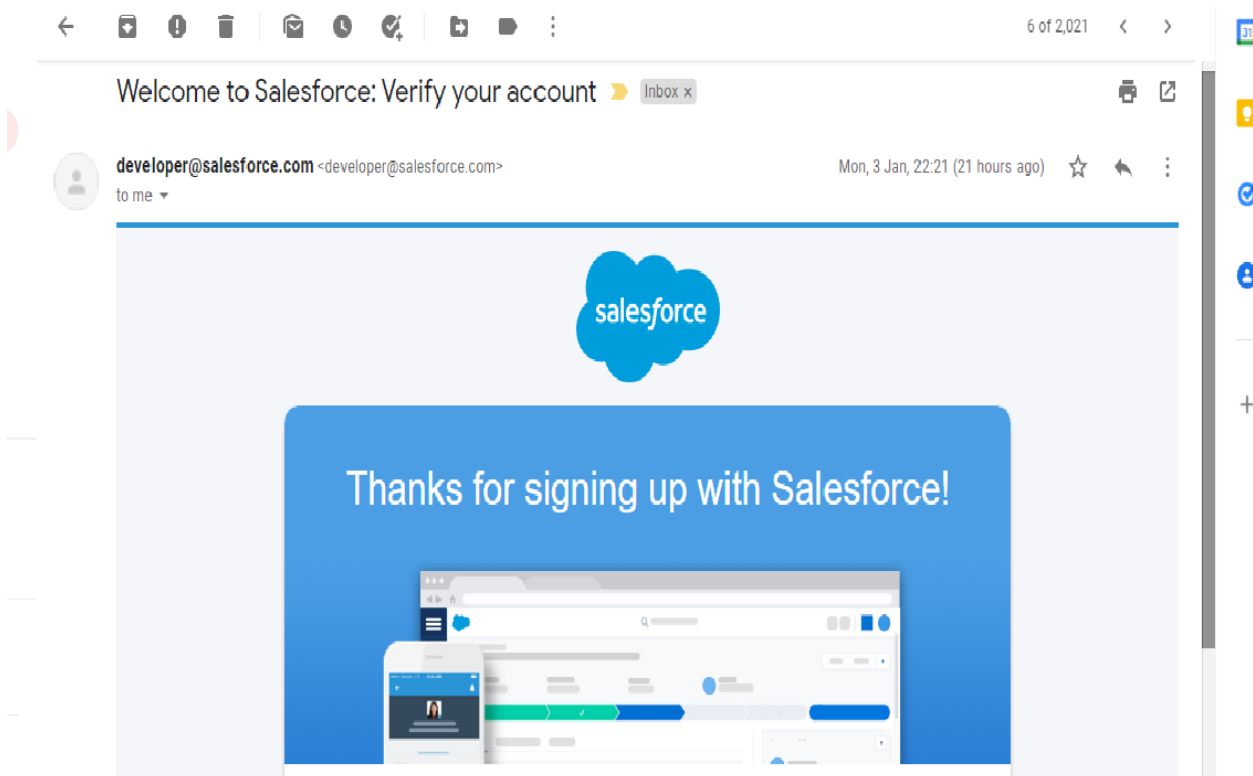
To create College Management Application Project

Created Salesforce Developer Org to get started

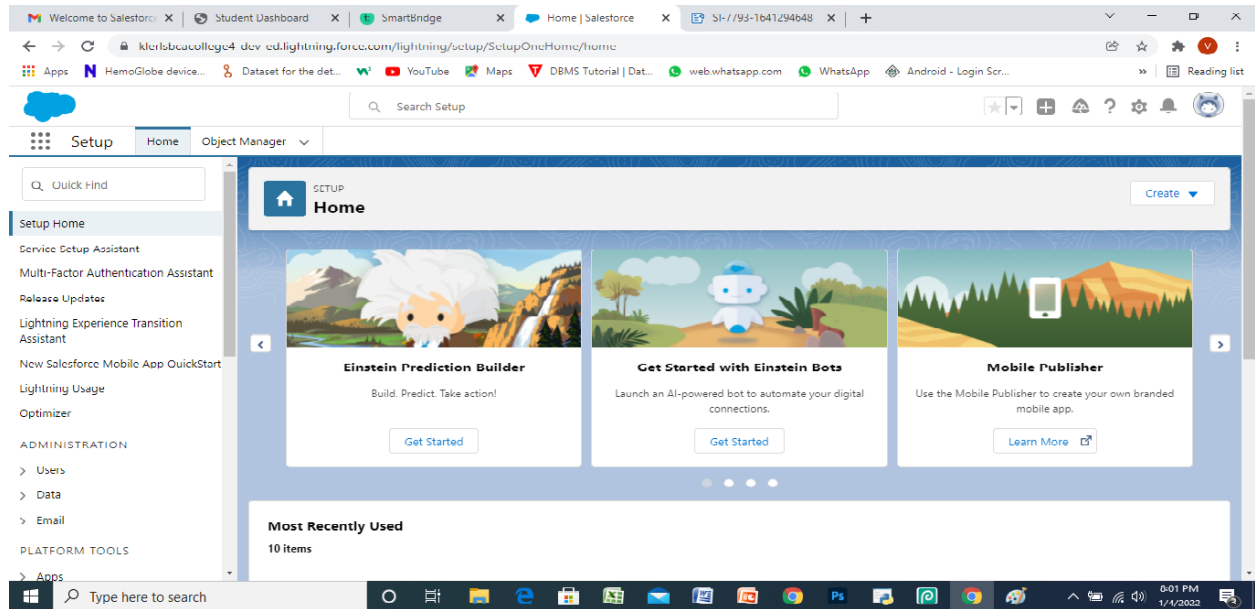
> Created developer Account



> Account activation



> Login to salesforce account



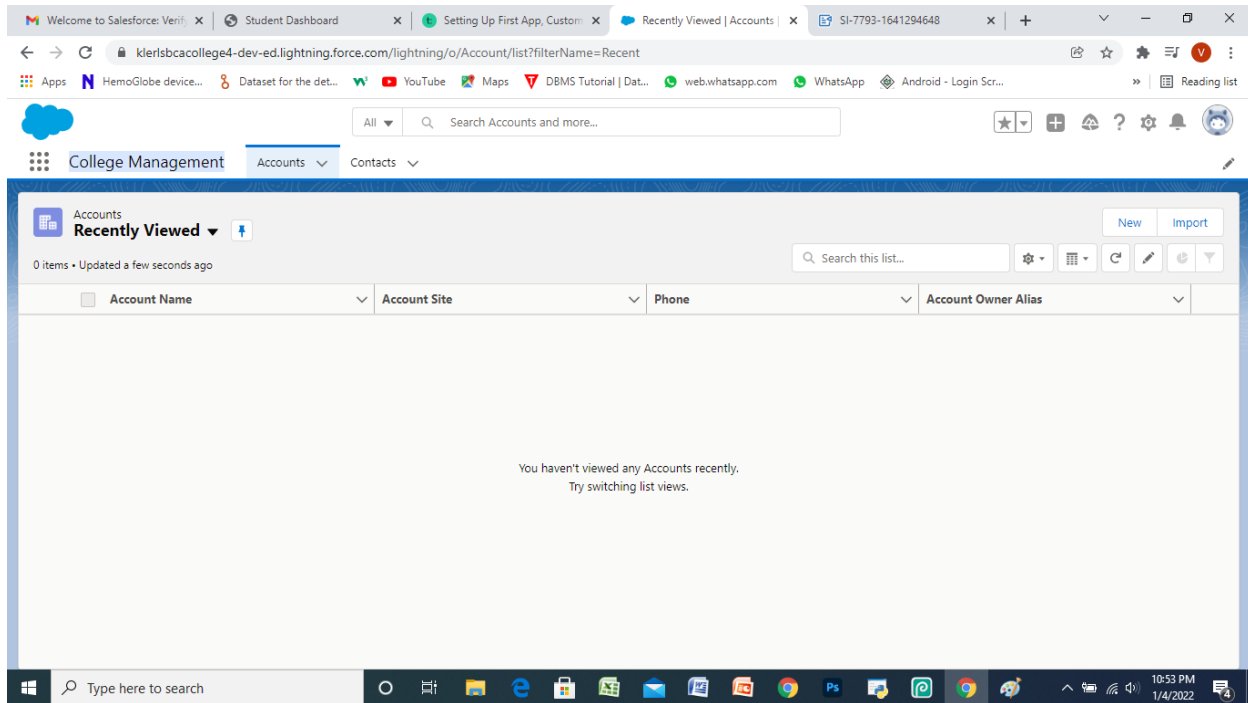
## Additional things learned in 1st session

- > Sandbox
  - developer sandbox
  - developer pro sandbox
  - partial copy sand box
  - full copy sandbox
- > objects
- > environment
- > relationship
- > fields

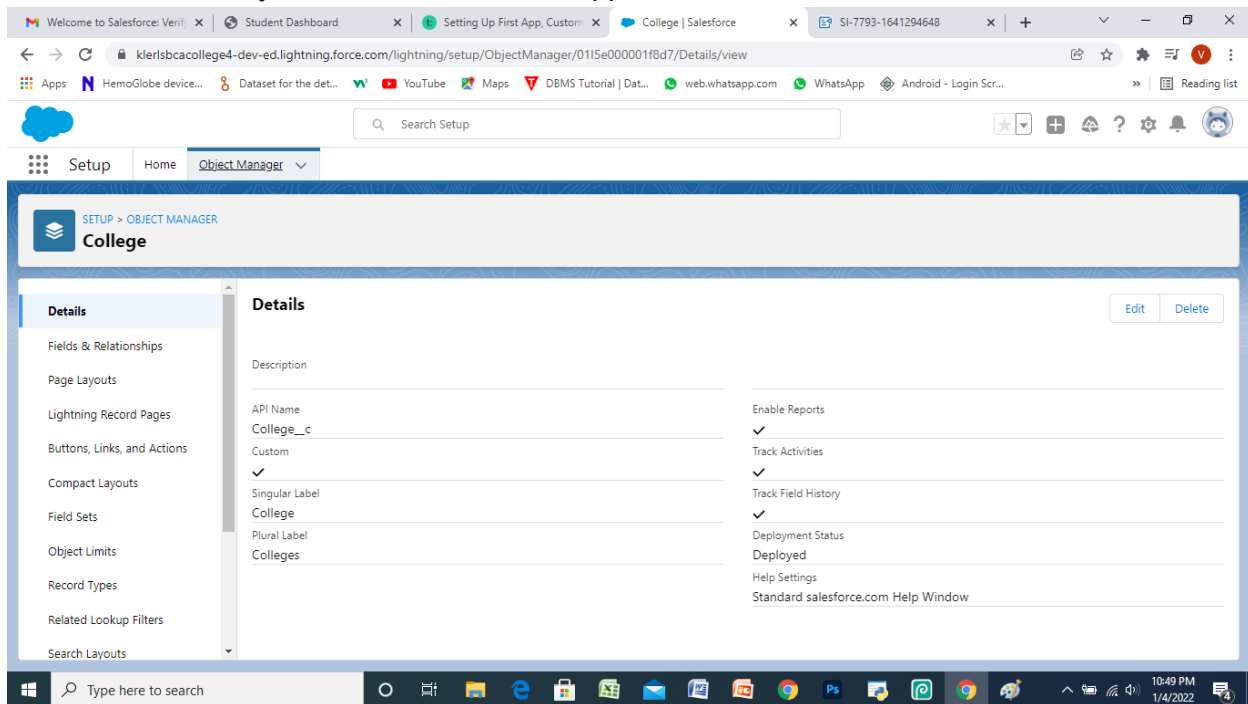
## DAY 2:

Custom object creation

Create application called **COLLEGE MANAGEMENT APPLICATION**



## > Create custom object called COLLEGE for application



## > Create fields for **COLLEGE** custom object

Record info

College Fees

Hostel Fees

College Name  
Email  
Capacity of students

Cloud icon Search Setup

Setup Home Object Manager

SETUP > OBJECT MANAGER  
College

Details

**Fields & Relationships**  
10 Items, Sorted by Field Label

Quick Find New Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Capacity of Students	Capacity_of_Students__c	Picklist		
College Fees	College_Fees__c	Currency(7, 2)		
College Name	College_Name__c	Picklist		
College Name	Name	Text(80)		✓
Created By	CreatedById	Lookup(User)		
Email	Email__c	Picklist		
Hostel Fees	Hostel_Fees__c	Currency(6, 2)		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Record info	Record_info__c	Text(10)		

> Create Fields on **Application Form** object

Address  
College  
College Fees  
Hostel Fees  
Date of birth  
Email  
Guardian Name  
Looking for hostel stay  
Ready to join  
Student name  
Phone

Setup Setup Home Object Manager

Search Setup

SETUP > OBJECT MANAGER

### Application Form

Details

Fields & Relationships

14 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(255)		
Application Form	Name	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)		✓
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)		

## 1 Application record created

(no subject) - vaishnavi Student Dashboard SI-7793-1641294648 Profiles, Recordtypes F-000002 | Salesforce Application Form | Sai

klerlsbca college4-dev-ed.lightning.force.com/lightning/r/Application\_Form\_\_c/a045e00000CA7jFAAD/view

Apps HemoGlobe device... Dataset for the det... YouTube Maps DBMS Tutorial | Dat... web.whatsapp.com WhatsApp Android - Login Scr... Reading list

College Management Colleges Application Forms Students Subjects

Application Form F-000002 New Contact Edit New Case

Related Details

Application Form F-000002	Student Name vaishnavi k
Address belgaum	College Fees \$140,000.00
College MIT-CCU	Hostel Fees \$13,000.00
Date of birth 1/1/2022	Guardian Name jeevan
Email vaish@ggg.com	
Looking For Hostel Stay	
Ready To Join	
Phone 435789566	
Created By Vaishnavi Kadam, 1/9/2022, 7:04 AM	Last Modified By Vaishnavi Kadam, 1/9/2022, 7:04 AM

Type here to search

5:12 PM 1/10/2022

DAY 3:

## > Create fields of **Student**

Address

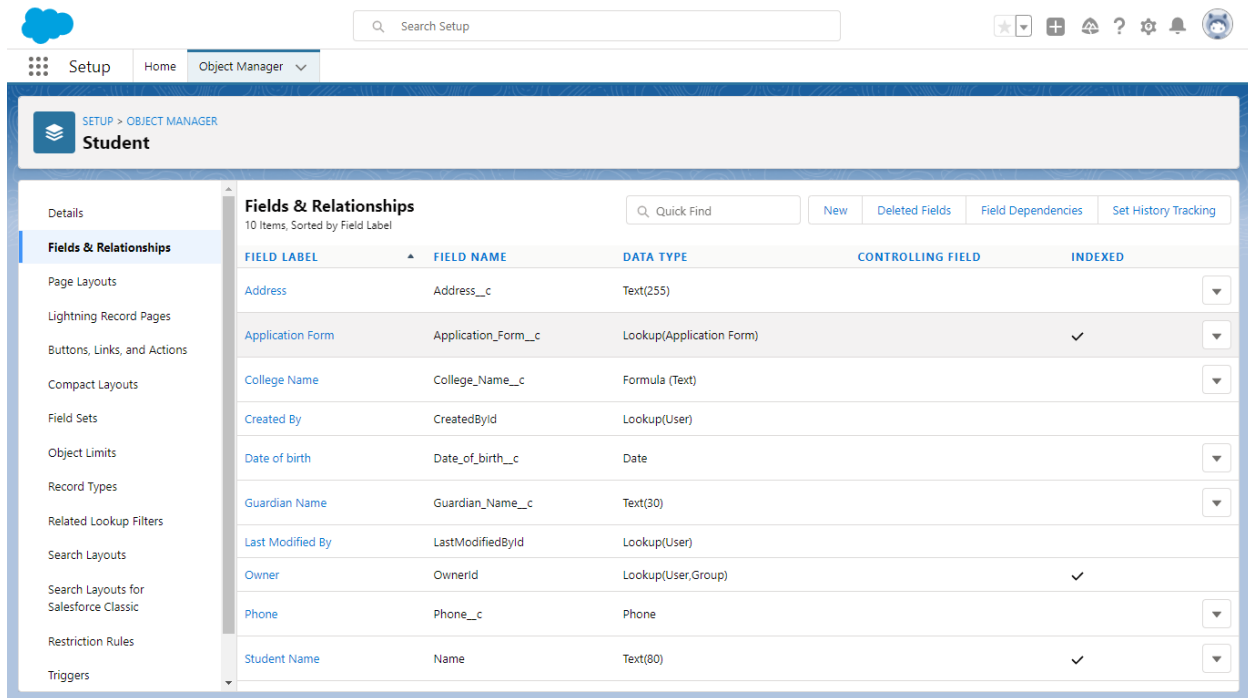
Application Form

College name

Date of birth

Guardian name

Phone



The screenshot shows the Salesforce Setup interface for the 'Student' object. The 'Fields & Relationships' section is active, displaying a list of 10 fields. The left sidebar contains navigation options: 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, Restriction Rules, and Triggers.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Address	Address__c	Text(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)		✓

## > Create fields on **Subject** object

Paper1

Paper2

Student

**Object Manager** | **Subject**

**Fields & Relationships**  
7 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 Name	Name	Auto Number		✓

## > college management application display

**College Management** | **Colleges**

**Colleges**  
Recently Viewed

5 Items • Updated a few seconds ago

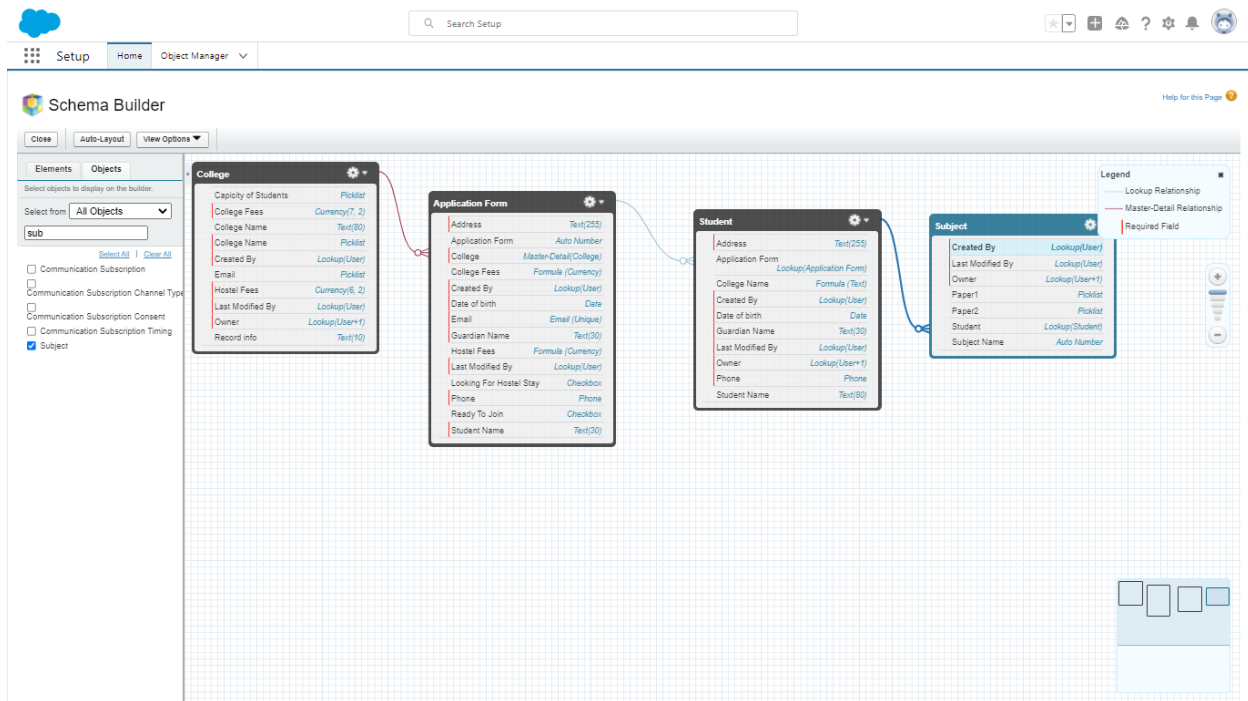
College Name
1 MIT-CCU
2 MIT-MAA
3 MIT-MUM
4 MIT-HYD
5 MIT-BLR

here the tabs are in lookup relationship

**COLLEGE >> APPLICATION FORM >> STUDENT >> SUBJECT**

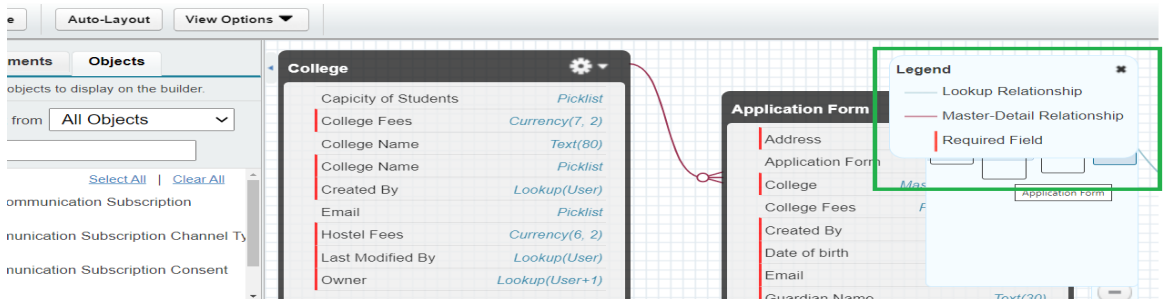
## > Schema Builder

It is Pictorial representation schema diagram



> **Legend** it shows symbolic representation ,which symbol represents what.

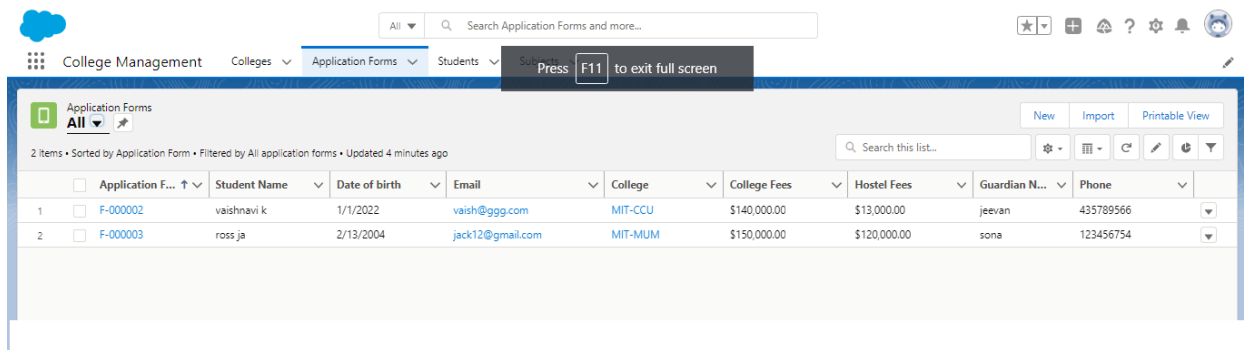
## Schema Builder



> How to display list view fields

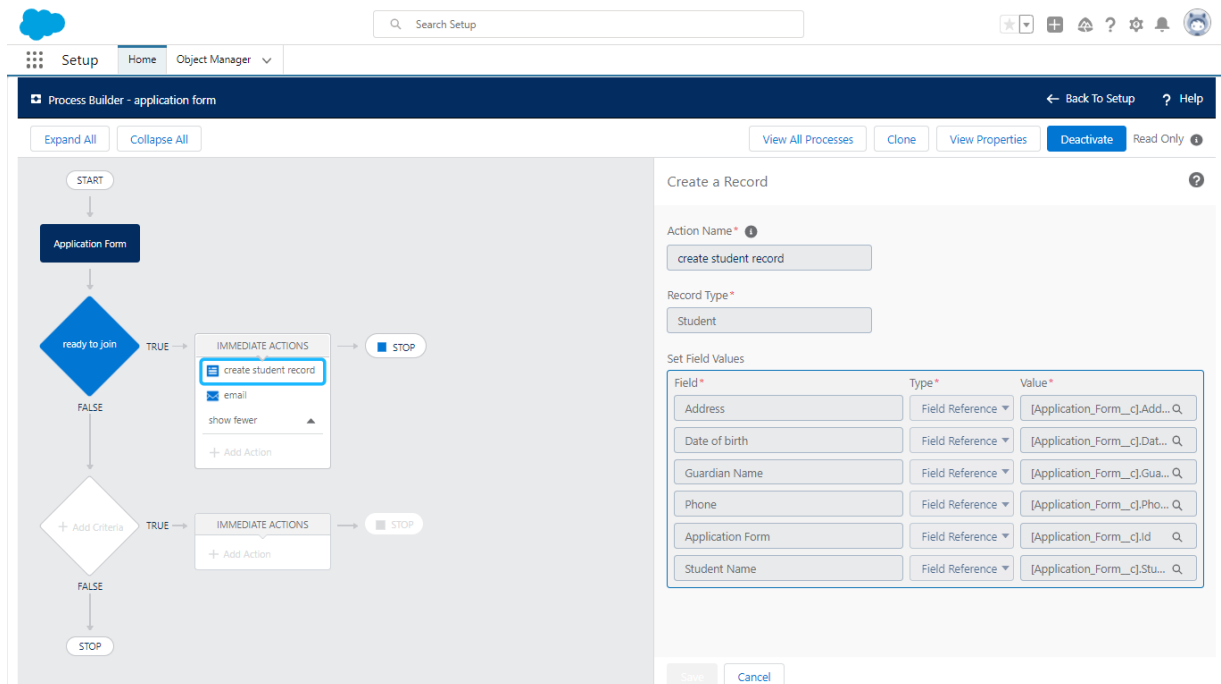
1. Go to list view ,select all
2. Click list view control
3. Select fields to display
4. Select the fields that you want to display.



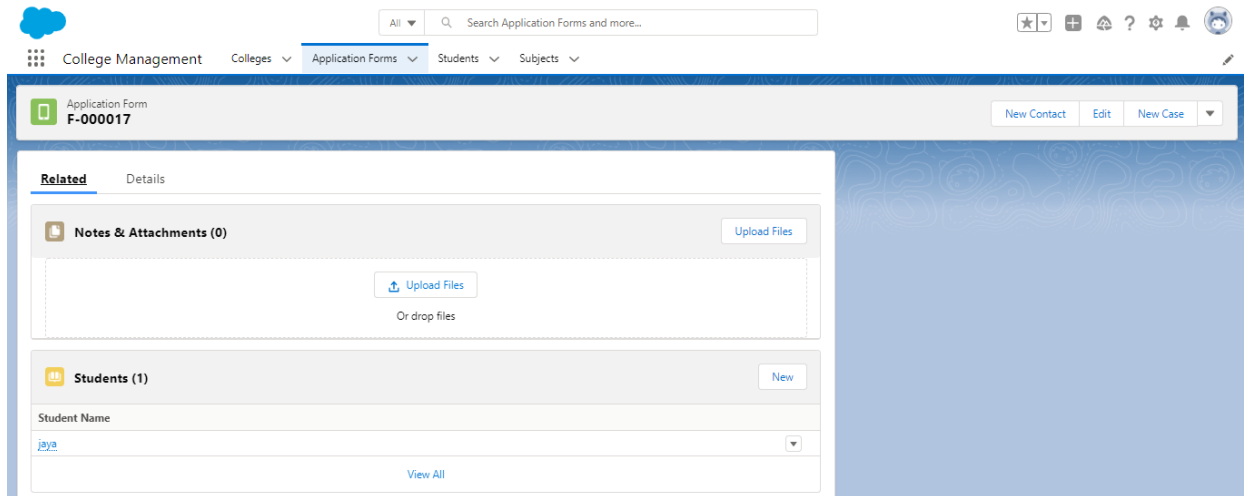


	Application F...	Student Name	Date of birth	Email	College	College Fees	Hostel Fees	Guardian N...	Phone
1	F-000002	vaishnavi k	1/1/2022	vaish@ggg.com	MIT-CCU	\$140,000.00	\$13,000.00	jeevan	435789566
2	F-000003	ross ja	2/13/2004	jack12@gmail.com	MIT-MUM	\$150,000.00	\$120,000.00	sona	123456754

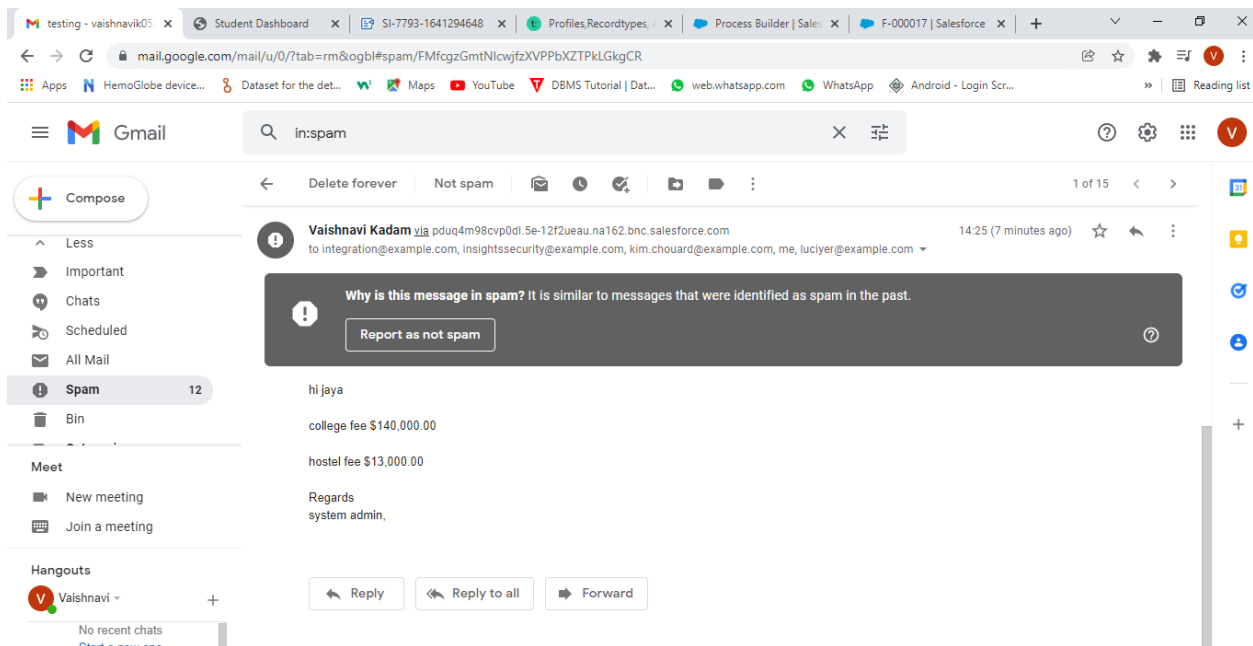
## > Process Automation



New record created

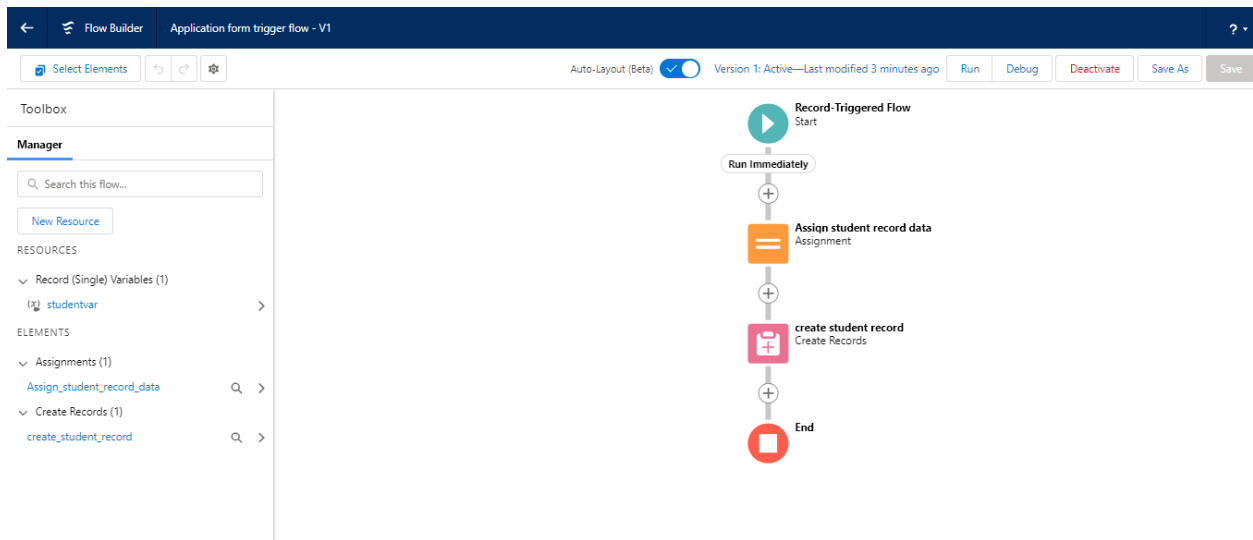


## email for record creation



## DAY 4:

> Create student record using flow



## assign student record data

Flow Builder: Application form trigger flow - V1

Debug Deactivate Save As Save

Toolbox

Manager

Search this flow...

New Resource

RESOURCES

- Record (Single) Variables (1)
  - studentvar

ELEMENTS

- Assignments (1)
  - Assign\_student\_record\_data
- Create Records (1)
  - create\_student\_record

Edit Assignment

Assign student record data (Assign\_student\_record\_data)

Set Variable Values

Each variable is modified by the operator and value combination.

Variable	Operator	Value
studentvar > Address	Equals	\$Record > Address
studentvar > Guardian Name	Equals	\$Record > Guardian Name
studentvar > Phone	Equals	\$Record > Phone
studentvar > Application Form	Equals	\$Record > Record ID
studentvar > College Name	Equals	\$Record > College
studentvar > Date of birth	Equals	\$Record > Date of birth
studentvar > Student Name	Equals	\$Record > Student Name

+ Add Assignment

Cancel Done

> record created using flow

Application Form  
F-000018

New Contact Edit New Case

Related	Details
Student Name	ganesh
Address	pune
College	MIT-BLR
Email	ganesh@gane.com
Looking For Hostel Stay	<input type="checkbox"/>
Ready To Join	<input checked="" type="checkbox"/>
Created By	Vaishnavi Kadam, 1/14/2022, 5:46 AM
College Fees	\$140,000.00
Hostel Fees	\$10,000.00
Guardian Name	mother
Date of birth	11/20/2009
Phone	658755754
Application Form	F-000016
Last Modified By	Vaishnavi Kadam, 1/14/2022, 5:46 AM

## > Related data

Application Form  
F-000018

New Contact Edit New Case

Related Details

Notes & Attachments (0) Upload Files

Upload Files

Or drop files

Students (1) New

Student Name

ganesh

View All

- > learned about developer console
- > salesforce primitive datatypes : boolean ,string,date,time,id, integer ,double
- > collection: list,map,set

## DAY 5:

> Query

SOQL :Salesforce object query object

## Query example for Application form

The screenshot shows the Salesforce Developer Console interface. At the top, the browser address bar displays the URL: `klerlsbcacollege4-dev-ed.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. Below the browser window, the console has a menu bar with options: File, Edit, Debug, Test, Workspace, and Help. The main area is titled "Application\_Form\_\_c@12:12 AM" and contains the following SOQL query:

```
select Student_Name__c, Guardian_Name__c, Date_of_birth__c from Application_Form__c
```

Below the query, the "Query Results - Total Rows: 10" section displays a table with three columns: Student\_Name\_\_c, Guardian\_Name\_\_c, and Date\_of\_birth\_\_c. The table contains 10 rows of data:

Student_Name__c	Guardian_Name__c	Date_of_birth__c
vaishnavi k	jeevan	2022-01-01
ross ja	sona	2004-02-13
ross ja	father	2001-02-27
jj	jkh	2022-01-05
vini	mom	2001-03-22
w	jkh	2022-01-11
hh	hhhhh	2022-01-21
jjm	hhhhh	2003-05-07
jaya	father	1998-01-08
ganesh	mother	2009-11-20

Below the table, there are buttons for "Query Grid", "Save Rows", "Insert Row", "Delete Row", and "Refresh Grid". To the right, there are links for "Access in Salesforce", "Create New", "Open Detail Page", and "Edit Page". Below the table, there is a "Query Editor" tab with the same query: `select Student_Name__c,Guardian_Name__c,Date_of_birth__c from Application_Form__c`. Below the query editor, there is a "History" tab showing the executed query: `select Student_Name__c,Guardian_Name__c,Date_of_birth__c f...`. At the bottom, there is a status bar with the text "Any query errors will appear here..." and a "Use Tooling API" checkbox.

> SOSL: salesforce object search language

> collection

> apex

two types of apex classes

1. sync
2. async

types of async apex:

1. future method
2. batch class
3. queue able class
4. scheduler class

## DAY 6:

> Create a batch apex for application form

Developer Console - Google Chrome

klerlsbcacollege4-dev-ed.my.salesforce.com/\_ui/common/apex/debug/ApexCSIPage

ApplicationBatchTest.apxc applicationschedule.apxc

Code Coverage: None API Version: 53

```

1 public class ApplicationBatchTest implements Database.Batchable<Object>, Database.Stateful {
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        // email
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[]{'vaishnavik052@gmail.com'};
27        mail.setToAddresses(emailAddress);
28        Messaging.sendEmail(new Messaging.SingleEmailMessage[] { mail });
29    }
30 }

```

User	Application	Operation	Time	Status	Read	Size
Vaishnavi Kadam	Unknown	Batch Apex	1/14/2022, 11:45:59 PM	Success	Unread	1.91 KB
Vaishnavi Kadam	Unknown	SerialBatchApexRangeChunkHan...	1/14/2022, 11:45:59 PM	Success	Unread	1.58 KB
Vaishnavi Kadam	Unknown	/services/data/v53.0/tooling/exec...	1/14/2022, 11:45:58 PM	Success	Unread	3.32 KB
Vaishnavi Kadam	Unknown	Batch Apex	1/14/2022, 11:45:58 PM	Success	Unread	3.81 KB
Vaishnavi Kadam	Unknown	SerialBatchApexRangeChunkHan...	1/14/2022, 11:45:58 PM	Success	Unread	1.44 KB

Filter Click here to filter the log list

Type here to search

12:04 AM 1/15/2022

## > Create a scheduler class

Developer Console - Google Chrome

klerlsbcacollege4-dev-ed.my.salesforce.com/\_ui/common/apex/debug/ApexCSIPage

ApplicationBatchTest.apxc applicationschedule.apxc

Code Coverage: None API Version: 53

```

1 public class applicationschedule implements Schedulable{
2
3
4     public void execute(SchedulableContext sc){
5
6         ApplicationBatchTest abt = new ApplicationBatchTest();
7
8         Database.executeBatch(abt ,400);
9
10    }
11
12 }
13
14 }
15
16

```

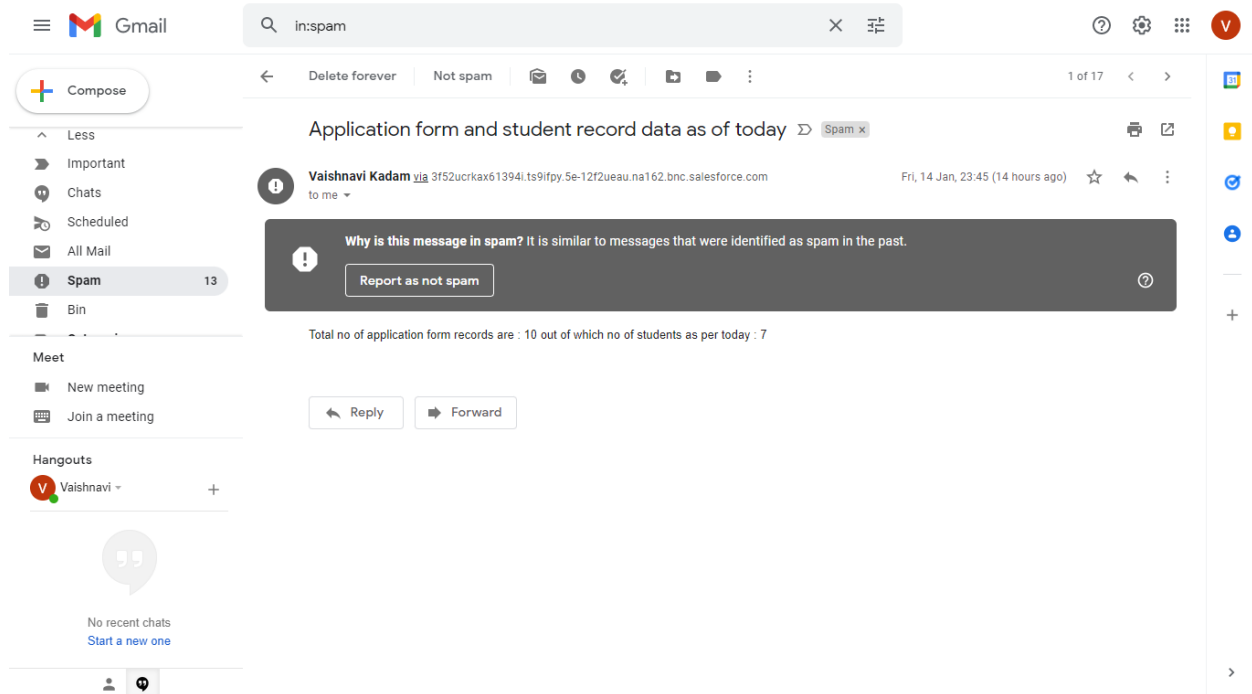
User	Application	Operation	Time	Status	Read	Size
Vaishnavi Kadam	Unknown	Batch Apex	1/14/2022, 11:45:59 PM	Success	Unread	4.91 KB
Vaishnavi Kadam	Unknown	SerialBatchApexRangeChunkHan...	1/14/2022, 11:45:59 PM	Success	Unread	8.58 KB
Vaishnavi Kadam	Unknown	/services/data/v53.0/tooling/exec...	1/14/2022, 11:45:58 PM	Success	Unread	3.32 KB
Vaishnavi Kadam	Unknown	Batch Apex	1/14/2022, 11:45:58 PM	Success	Unread	3.84 KB
Vaishnavi Kadam	Unknown	SerialBatchApexRangeChunkHan...	1/14/2022, 11:45:58 PM	Success	Unread	2.44 KB

Filter Click here to filter the log list

Type here to search

12:04 AM 1/15/2022

## > email I received



## DAY 7:

### 1. Apex Trigger

- > Two types of triggers
  - Before trigger and After trigger
- > Operations performed :- insert ,update ,delete ,undelete

### 2. Trigger context variables

- > trigger.new, trigger.old ,trigger.new map ,trigger.old map.

- Learned about how to delete trigger and use of custom label in trigger.
- Performed real time scenario : which do not allow to delete application form record as it has student record associated with it.
- **Custom label** : Where we store some static data/text.

### 3. Best practices for Apex and Test classes

- > Bulkification :whatever code we write should be capable of handling everything.
- > Should have collection variable whenever we write class,trigger.
- > Never write DML statements inside for loop
- > If you want to add DML statements than use list, map it will not hit any governor limits.

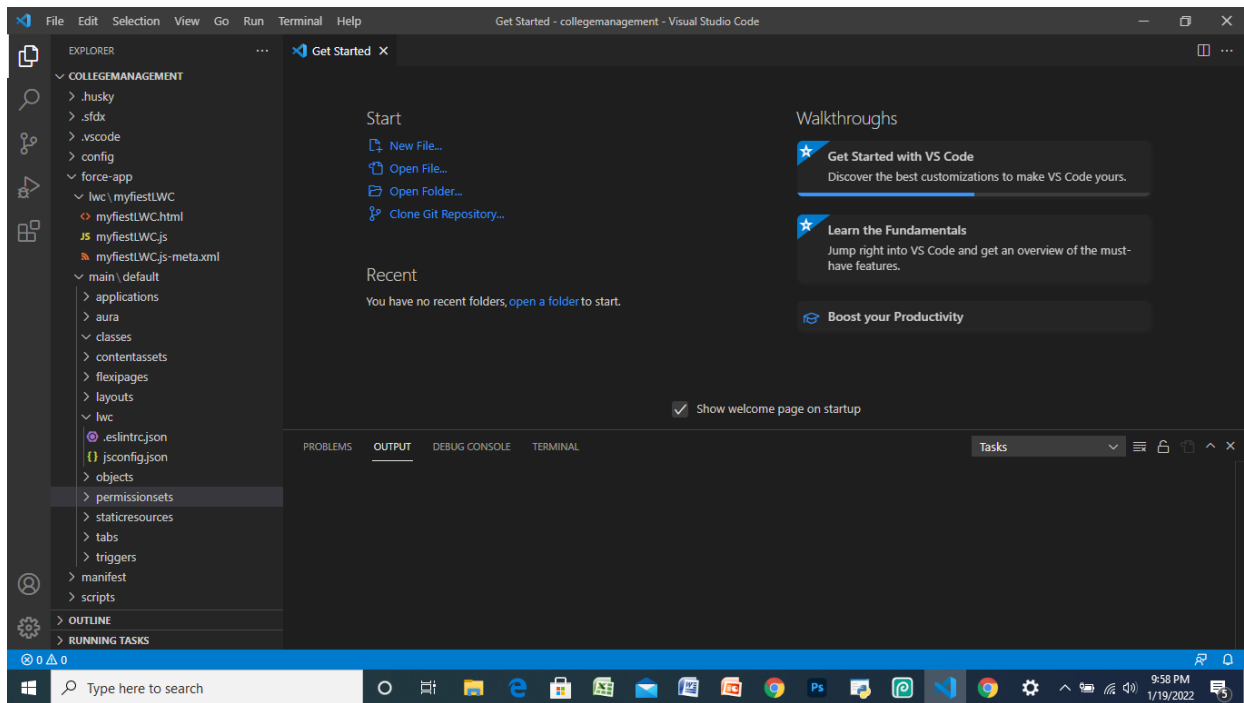
- > Can use Multiple for() loop but cannot use nested for loop
- 4. Test class: it is automate script for a developer to test his/her logic
  - trigger minimal coverage =0%/1%
  - apex minimal coverage should be more than 75%
- 5. - @istest
  - @testup
  - @test.start test();
  - @test.stop test();
- 6. System assertEquals(actual,expected);

## **DAY 8:**

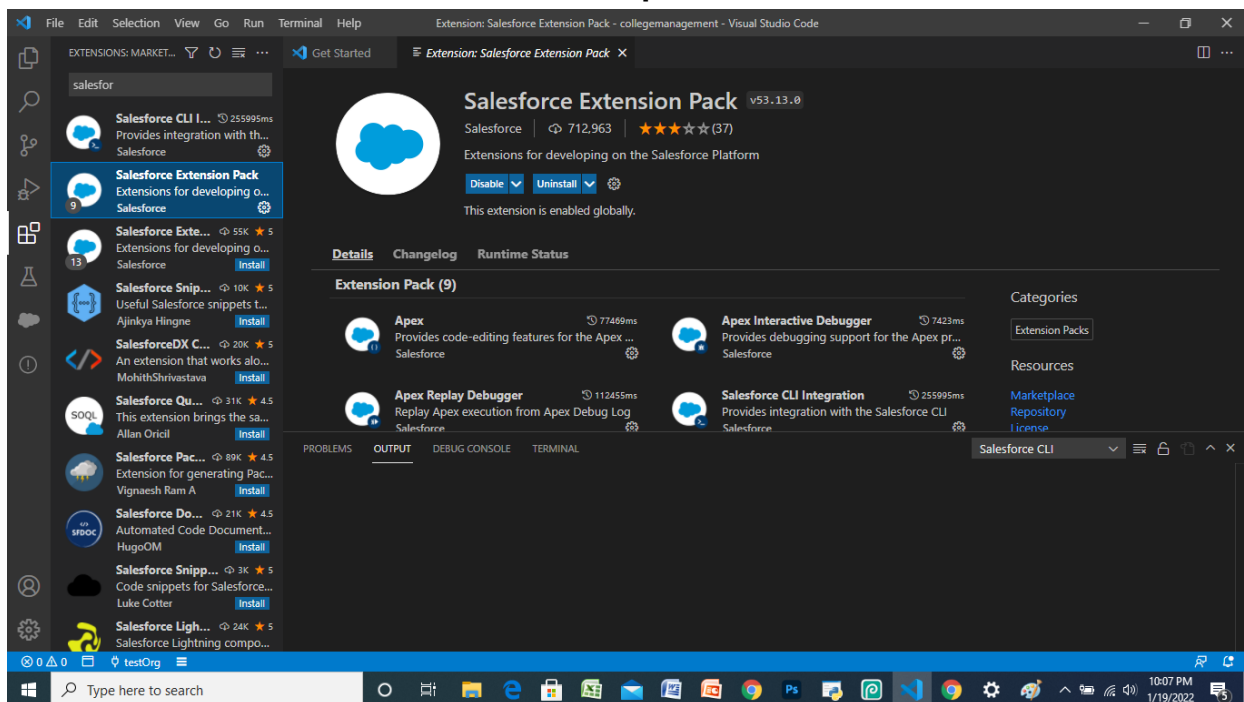
### Introduction to LWC (lightning web component)

- > What is LWC:It is programming model to develop salesforce lightning components.
- > Why LWC
- > Benefits of LWC
- > Web stack transformation
- > LWC file contains main 3 files
  - html ,javascript(js),meta-xml and one out of the box css file.
- > Introduction to javascript
  - js functions
- > Installation of **vs.code**

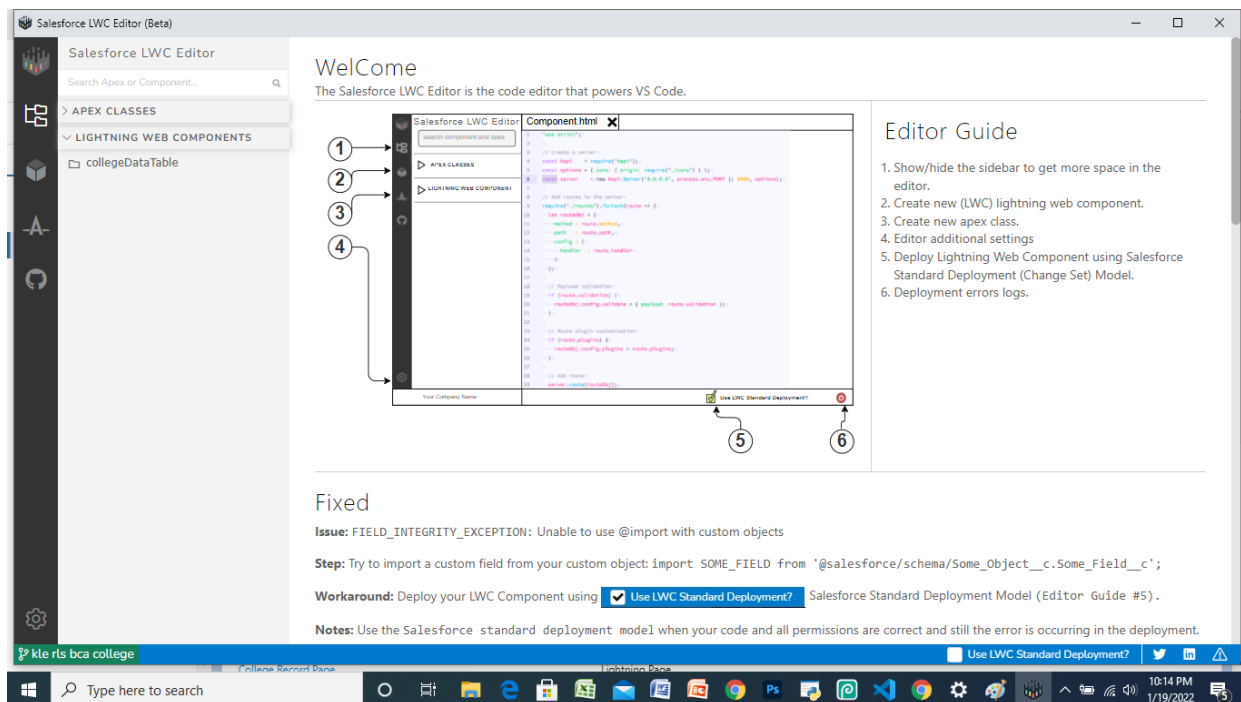




> In vs.code download **Salesforce extension pack**



> Installation of **Salesforce LWC editor**



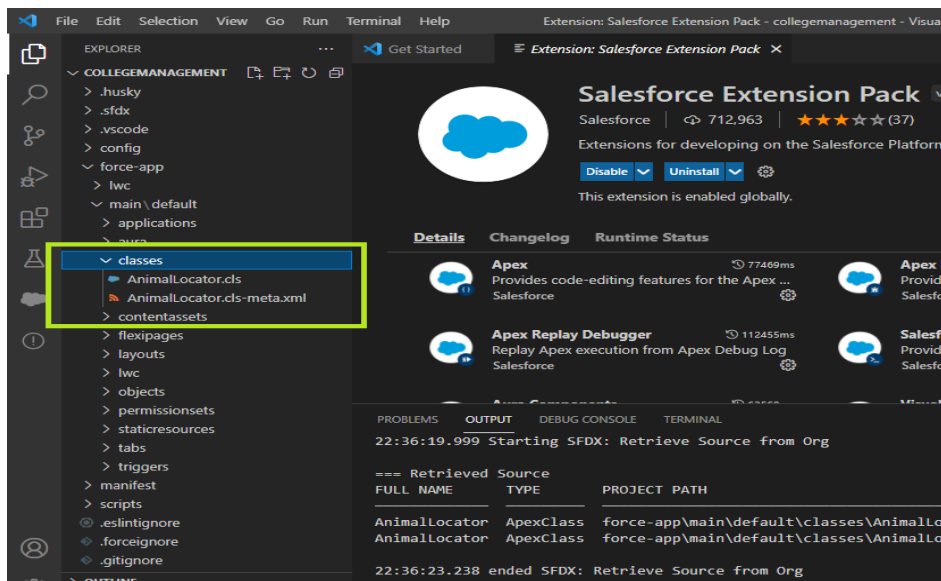
> Worked with date time and javascript.

## DAY 9:

> Installed **Salesforce CLI**

> Create Lightning web component

> learned how to deploy and retrieve sources in salesforce org



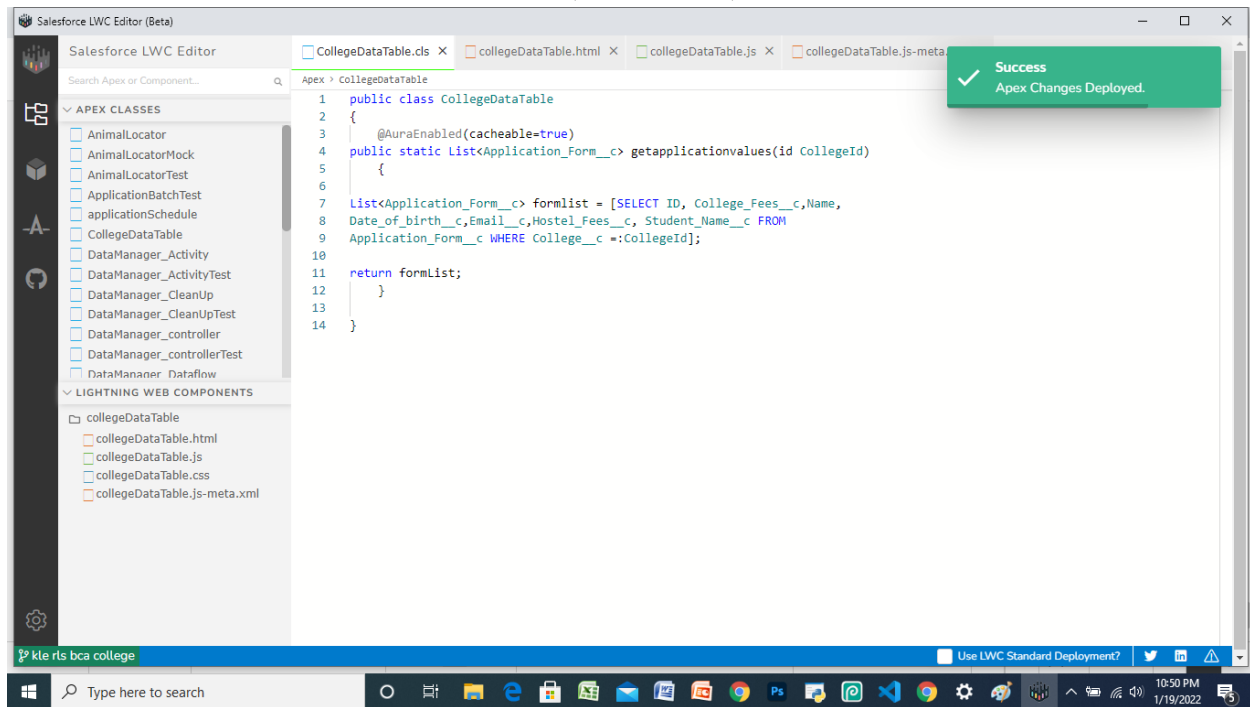
> Map and set in javascript

- > Map :it stores data in terms of key and value.
- > set : set of values without key and it only contains unique values.
- > map and set functions.
- > Operators in js
- > Difference between ==and ===
- > Strings in javascript
- > Objects in javascript
- > Functions in javascript
- > Arrow function ,console statements.
- > Example on LWC component.

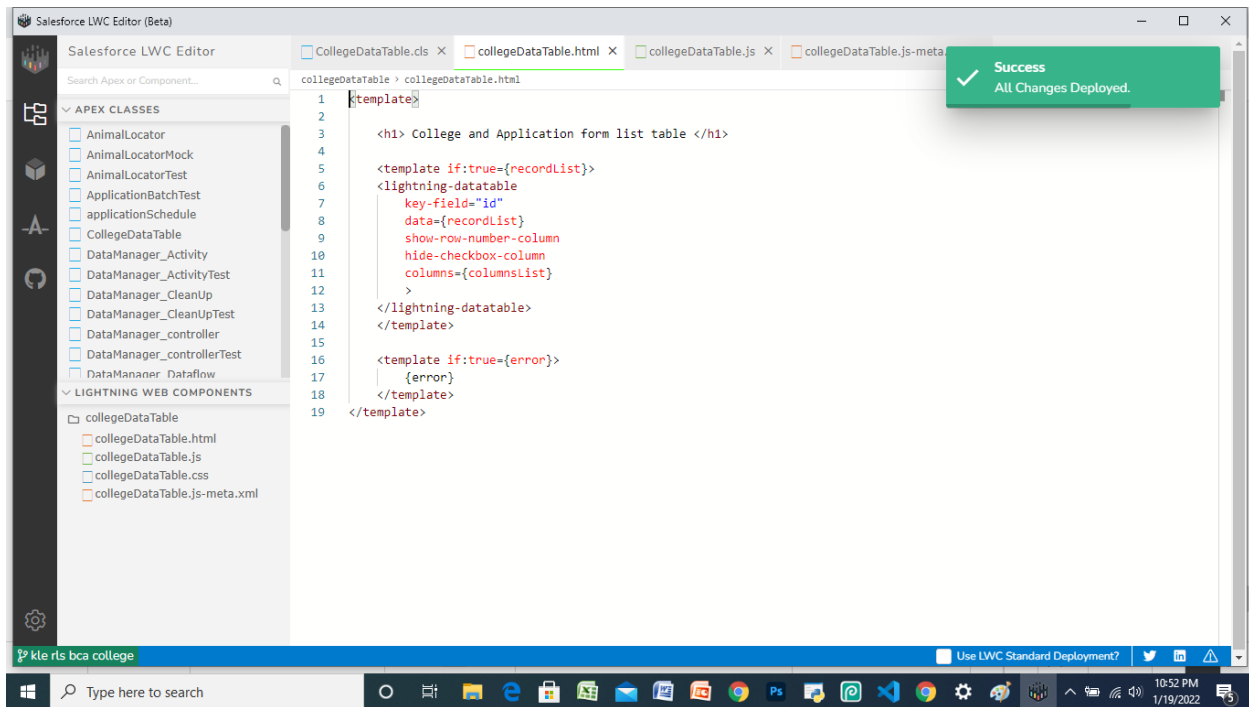
## DAY 10:

### Lightning web component

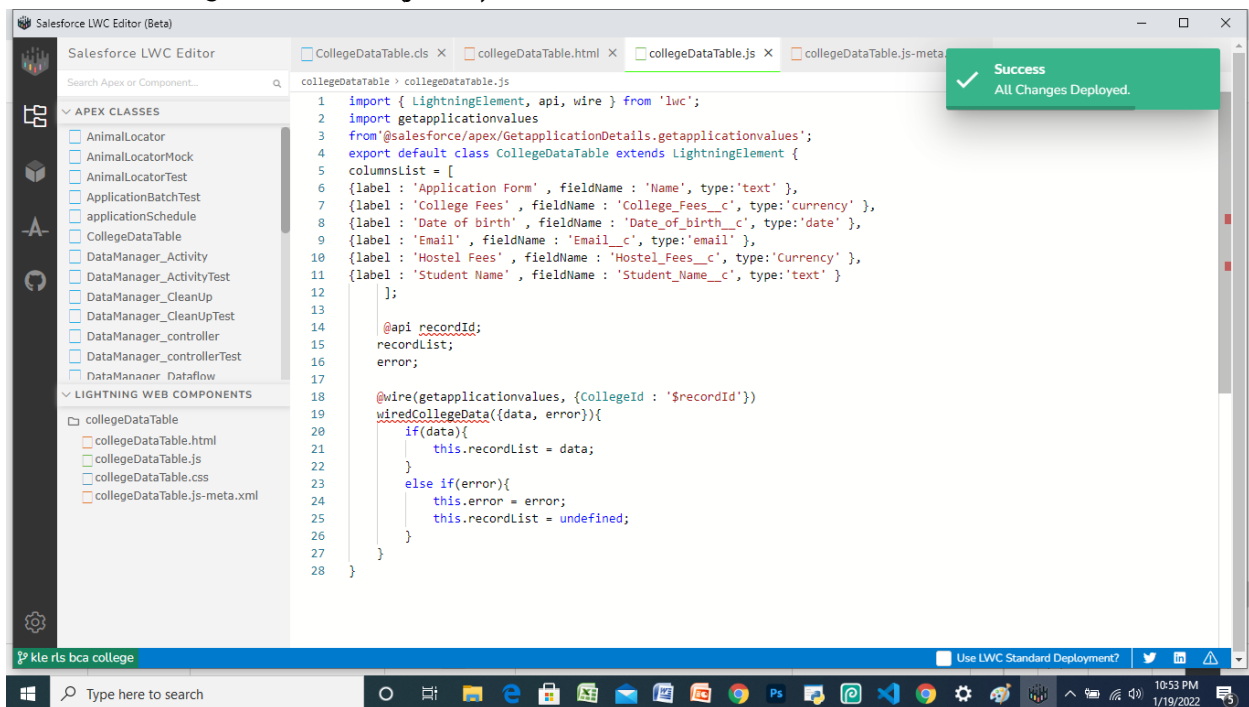
- > Create College data table component (Apex class)



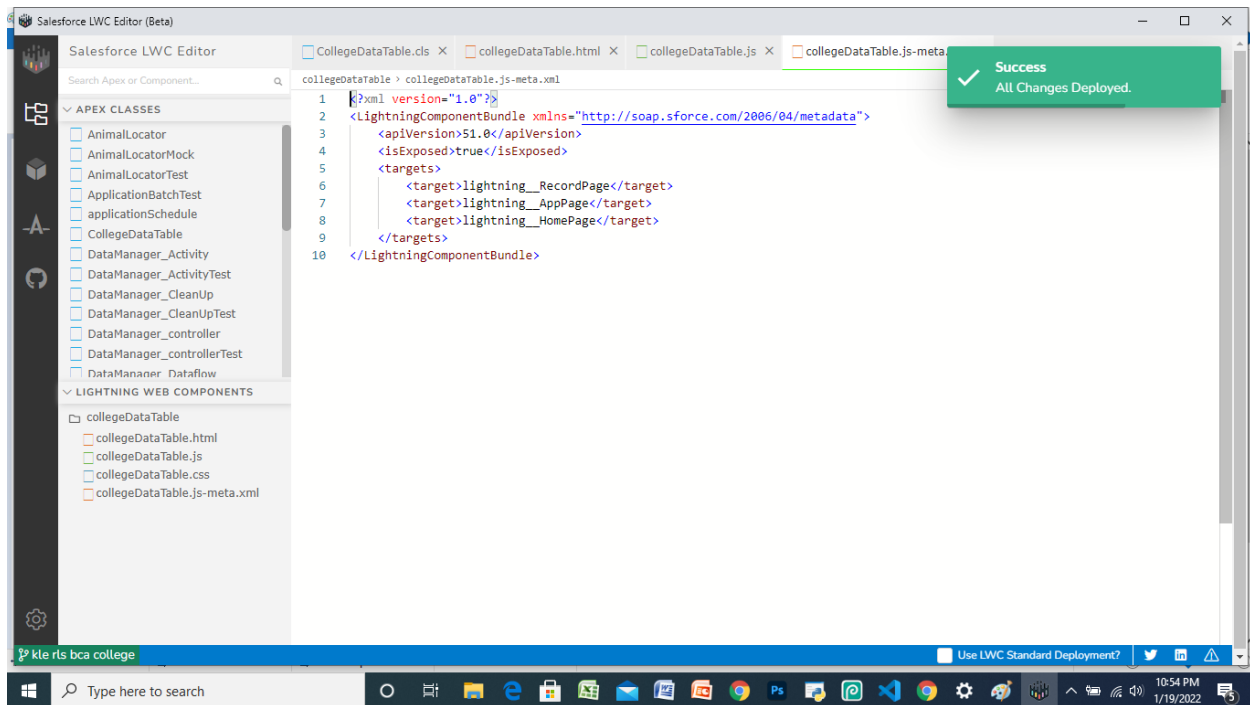
- > Create College data table (html file)



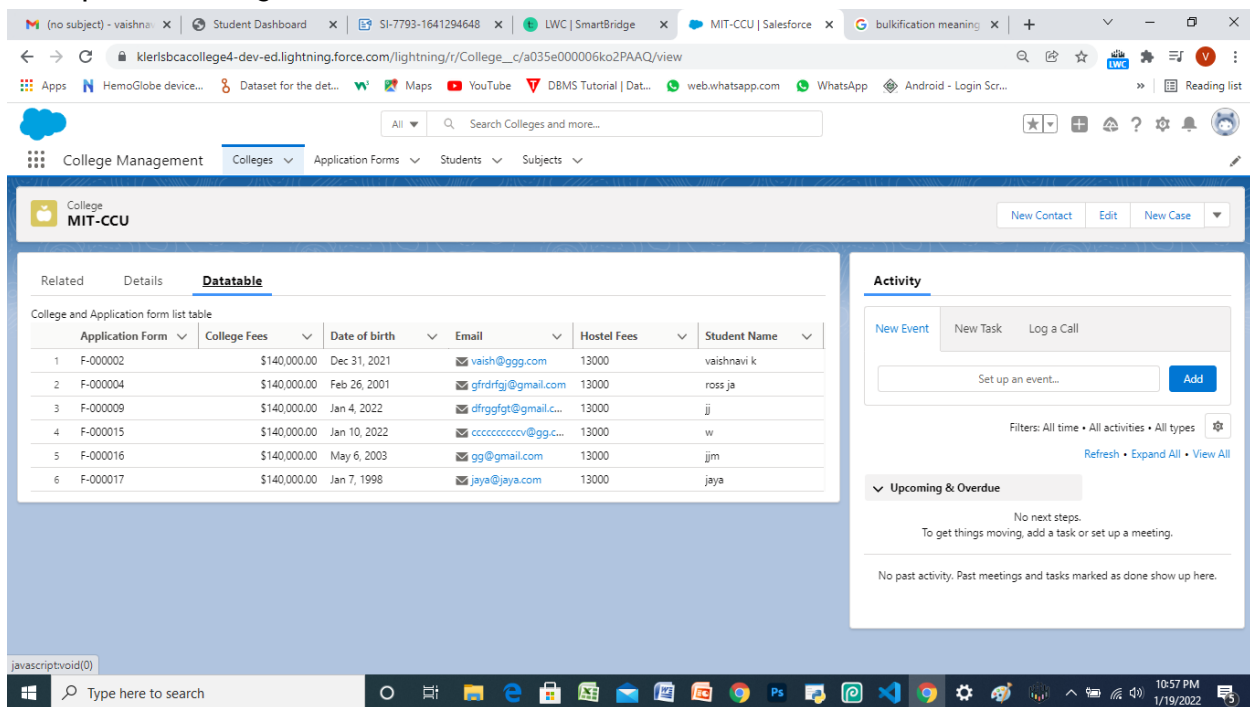
## > Create College data table (js file)



## > Create College data table (meta-xml file)



## > Output for College data table



## > Communication between parent to child and child to parent

## **DAY 11:**

### Life Cycle Hooks in LWC

- > Constructor(), Connectedcallback(),
  - constructor: fires when component instance is created.
  - flows from parents to child component.
  - structure of constructor().
- > render(), rendercallback()
- > disconnectedcallback(), errorCallback()
  
- > Toast messages
  - Indicates/inform user that they are writing something wrong
- > Four types of Toast messages
  - Success (in green colour)
  - Warning (in orange/yellow colour)
  - info (in grey colour)
  - error (in red colour)
- > sample examples on toast messages
  
- > Doubt clearing session

