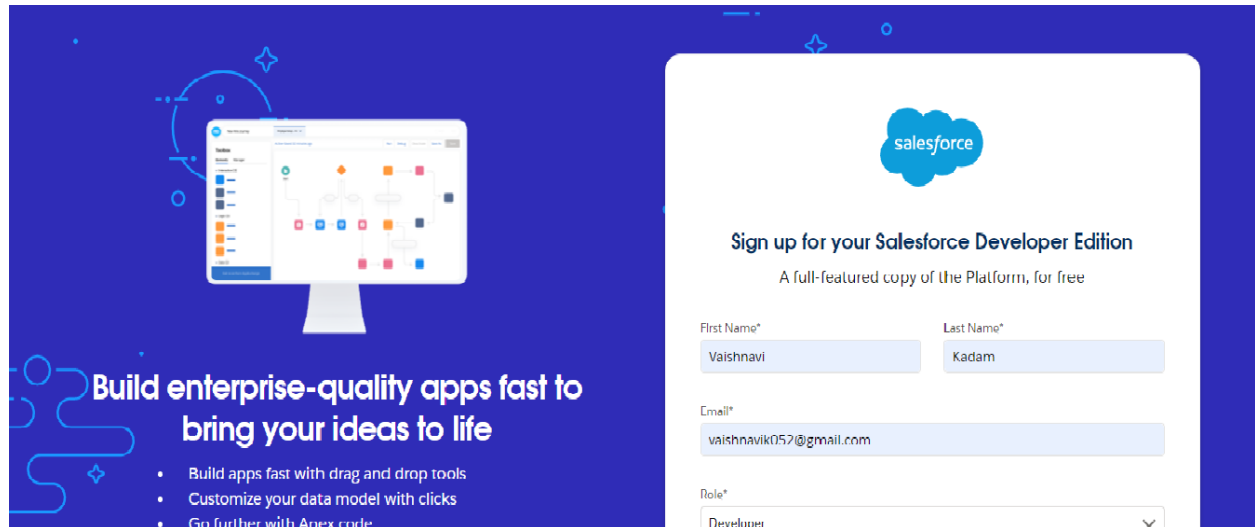


DAY1:

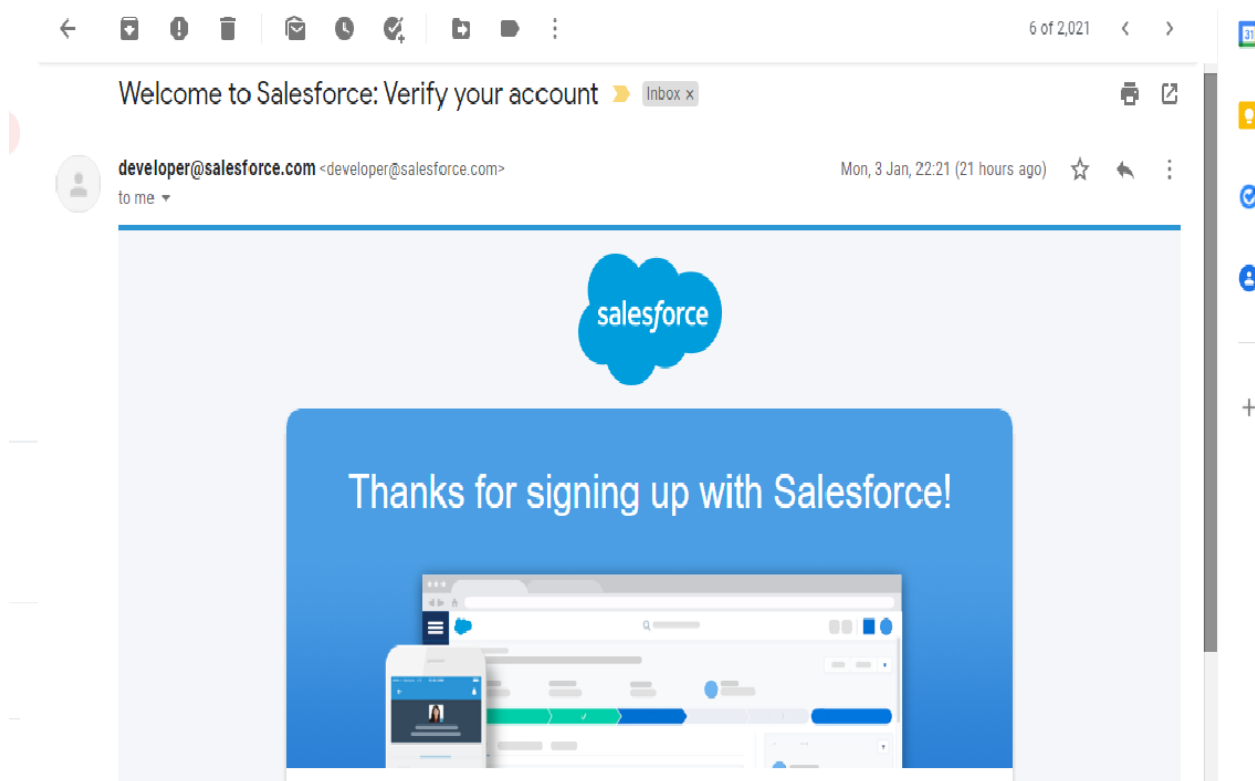
To create College Management Application Project

Created Salesforce Developer Org to get started

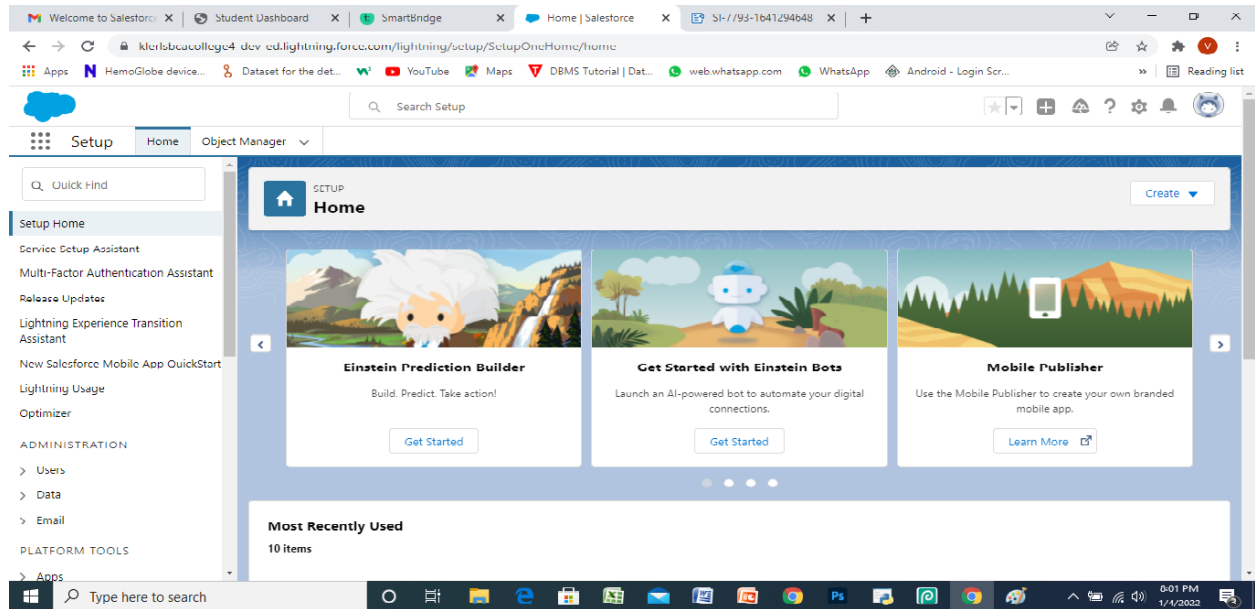
> Created developer Account



> Account activation



> Login to salesforce account



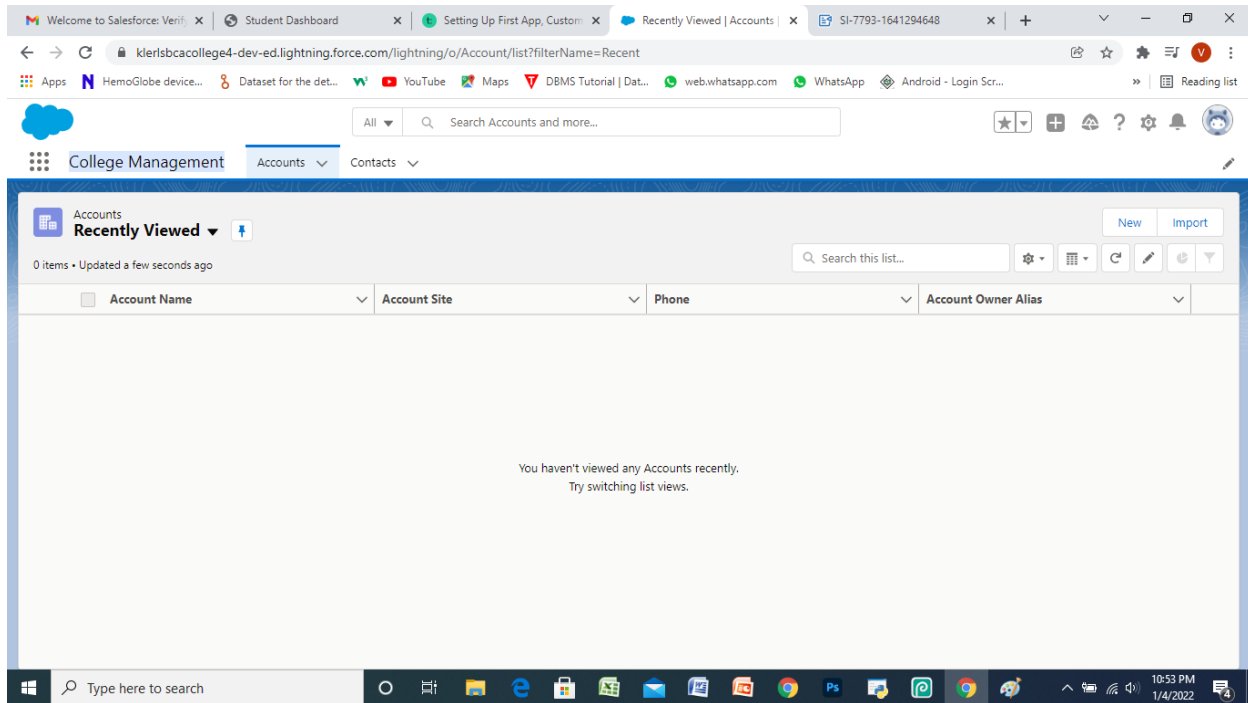
Additional things learned in 1st session

- > Sandbox
- > 4 Types of sandbox
 - developer sandbox
 - developer pro sandbox
 - partial copy sand box
 - full copy sandbox
- > objects
- > environment
- > relationship
- > fields

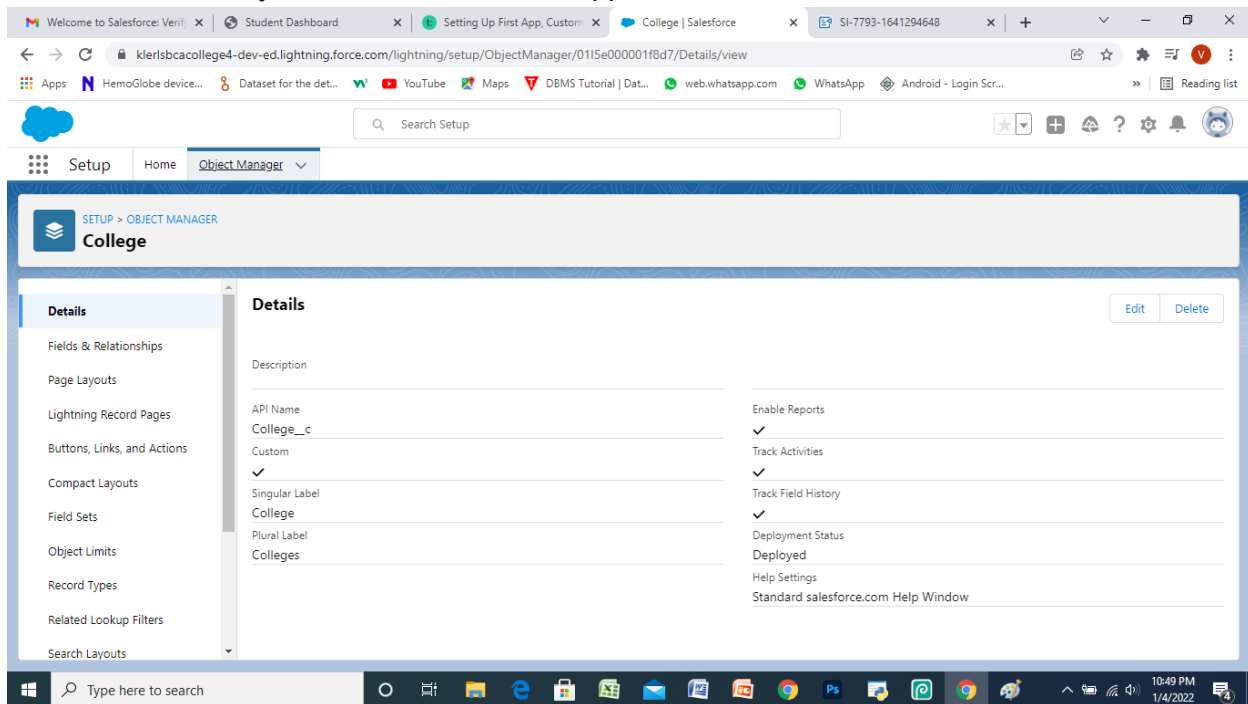
DAY 2:

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) - vaishna... x Student Dashboard x SI-7793-1641294648 x Profiles, Recordtypes, x F-000002 | Salesforce x Application Form | Sai x

klersbcacollege4-dev-ed.lightning.force.com/lightning/r/Application_Form__c/a045e0000CA7jFAAD/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	Student Name
F-000002	vaishnavi k
Address	College Fees
belgaum	\$140,000.00
College	Hostel Fees
MIT-CCU	\$13,000.00
Date of birth	Guardian Name
1/1/2022	jeevan
Email	
vaish@ggg.com	
Looking For Hostel Stay	
<input type="checkbox"/>	
Ready To Join	
<input type="checkbox"/>	
Phone	
435789566	
Created By	Last Modified By
Vaishnavi Kadam, 1/9/2022, 7:04 AM	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



Search Setup

Setup

Home

Object Manager

Star

Plus

Help

Question

Settings

Notifications

Profile

SETUP > OBJECT MANAGER

Student

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

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(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

Setup

Home

Object Manager

Search Setup

Star

Plus

Refresh

Help

Settings

Notifications

Avatar

SETUP > OBJECT MANAGER

Subject

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

7 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)		✓
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

Application Forms

Students

Subjects

Search Colleges and more...

Star

Plus

Refresh

Help

Settings

Notifications

Avatar

Colleges

Recently Viewed

New

Import

Change Owner

5 items • Updated a few seconds ago

Search this list...

College Name

MIT-CCU

MIT-MAA

MIT-MUM

MIT-HYD

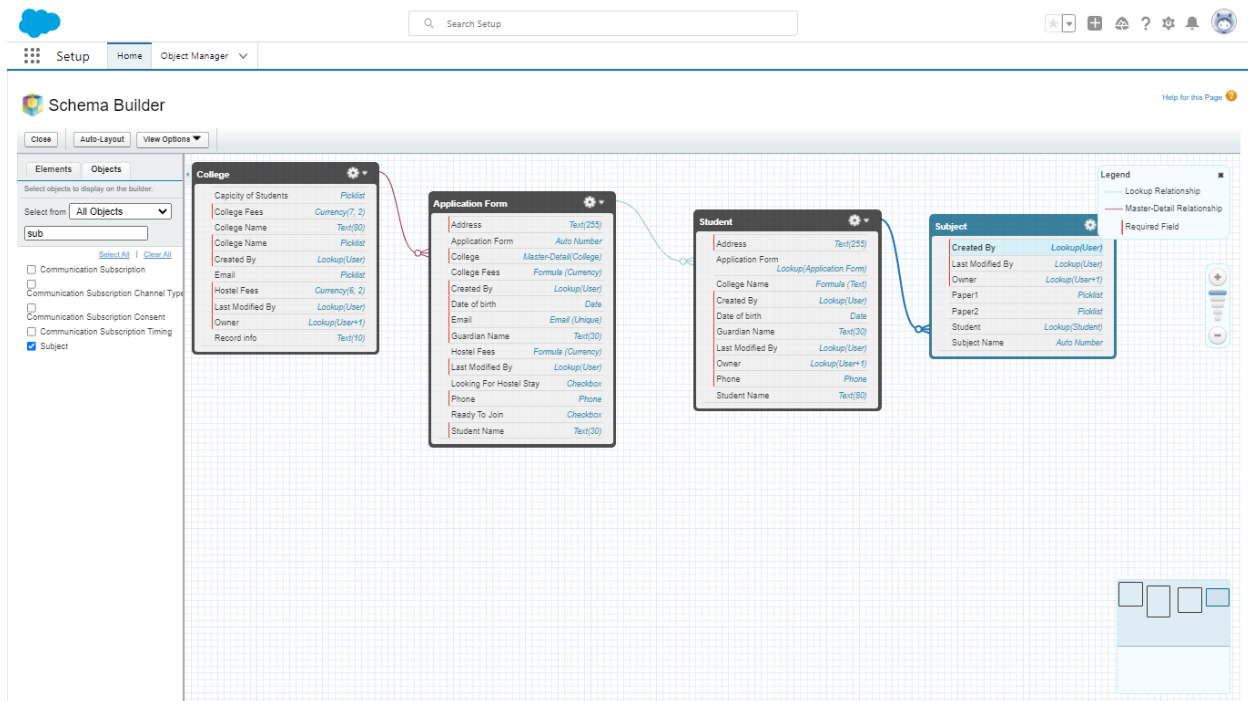
MIT-BLR

here the tabs are in lookup relationship

COLLEGE >> APPLICATION FORM >> STUDENT >> SUBJECT

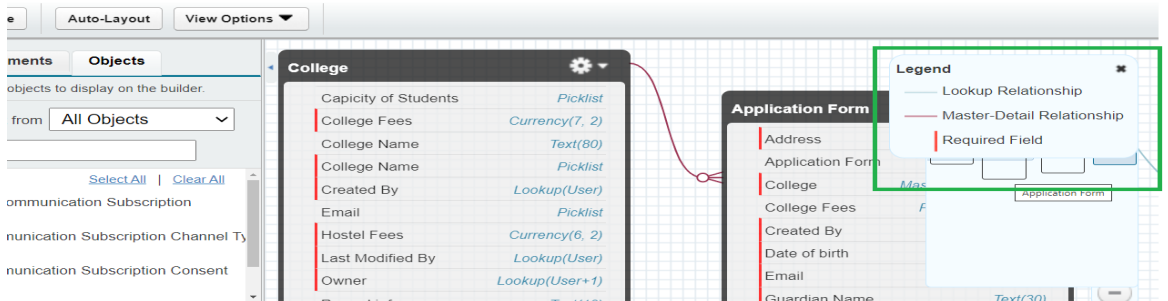
> Schema Builder

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.

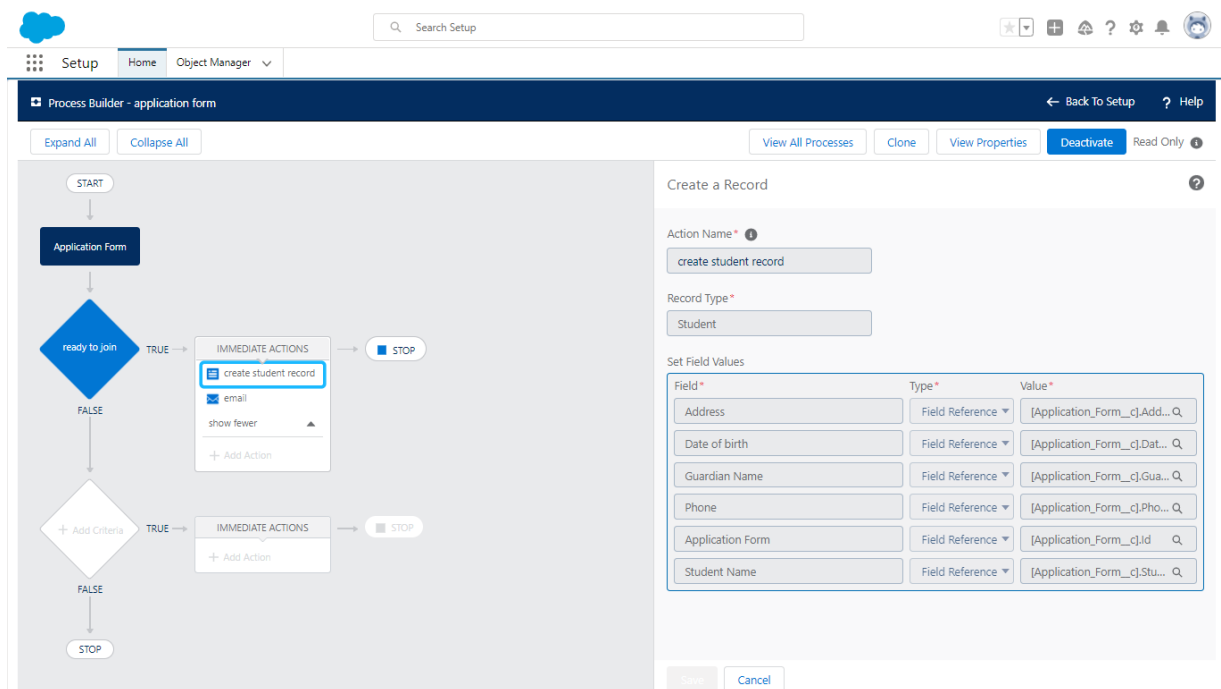
College Management | Colleges | Application Forms | Students | Press F11 to exit full screen

Application Forms | All | Search Application Forms and more... | New | Import | Printable View

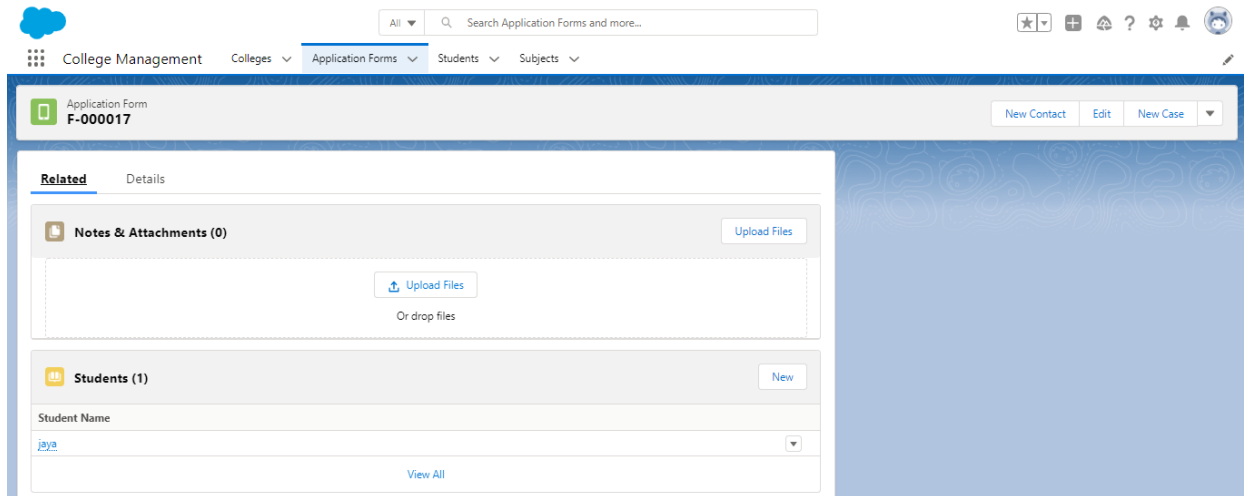
2 Items • Sorted by Application Form • Filtered by All application forms • Updated 4 minutes ago | Search this list...

	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

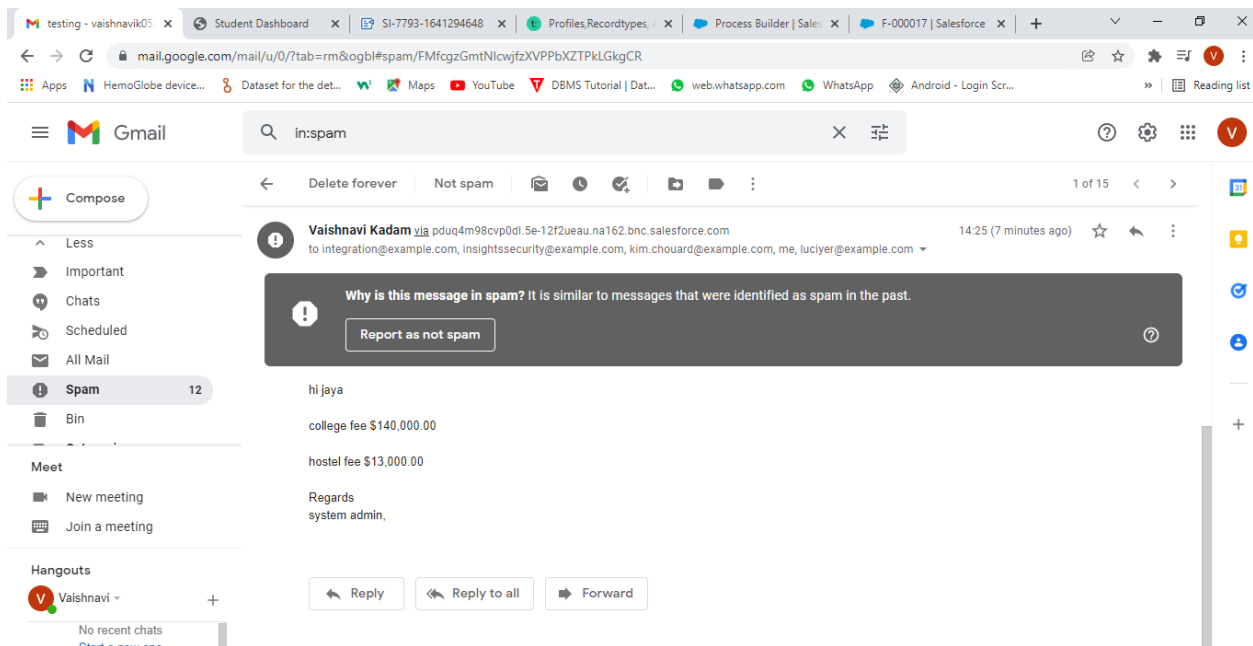
> Process Automation



New record created

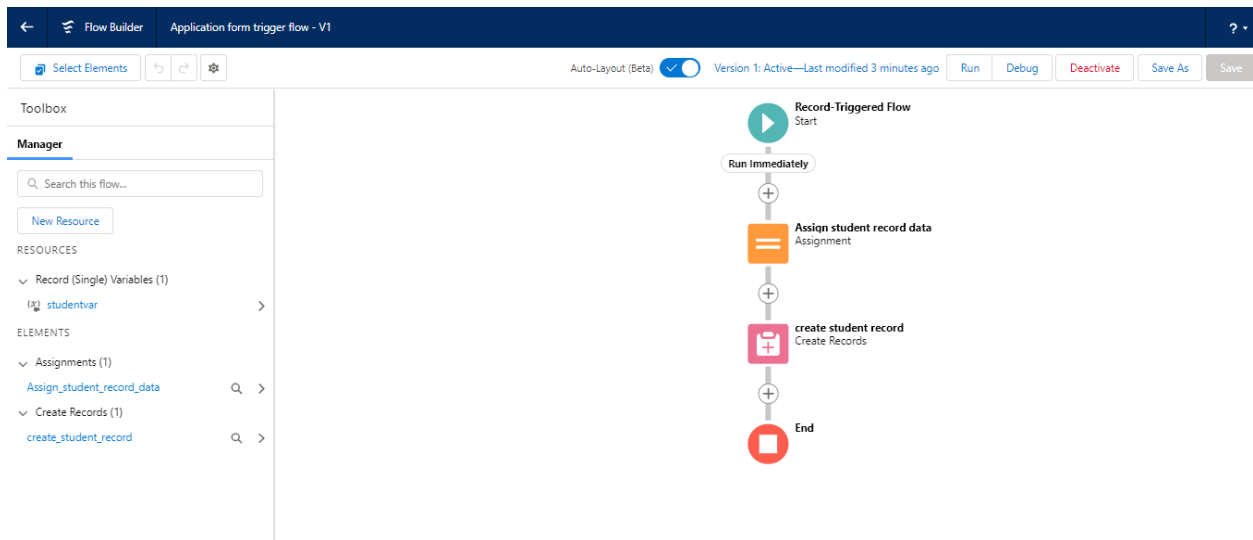


email for record creation



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

The screenshot shows the 'Details' tab of an 'Application Form' record with ID 'F-000018'. The page has a top navigation bar with 'College Management', 'Colleges', 'Application Forms', 'Students', and 'Subjects'. A search bar and utility icons are on the right. The main content area is divided into two columns of fields, each with an edit icon.

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

> Related data

The screenshot shows the 'Related' tab of the same 'Application Form' record. It displays two related sections: 'Notes & Attachments (0)' and 'Students (1)'. The 'Notes & Attachments' section has an 'Upload Files' button and a drop zone. The 'Students' section shows a list of related student records.

Related	Details
Notes & Attachments (0) Upload Files	
<div>Upload Files</div> <div>Or drop files</div>	
Students (1) New	
Student Name	
ganesh	
View All	

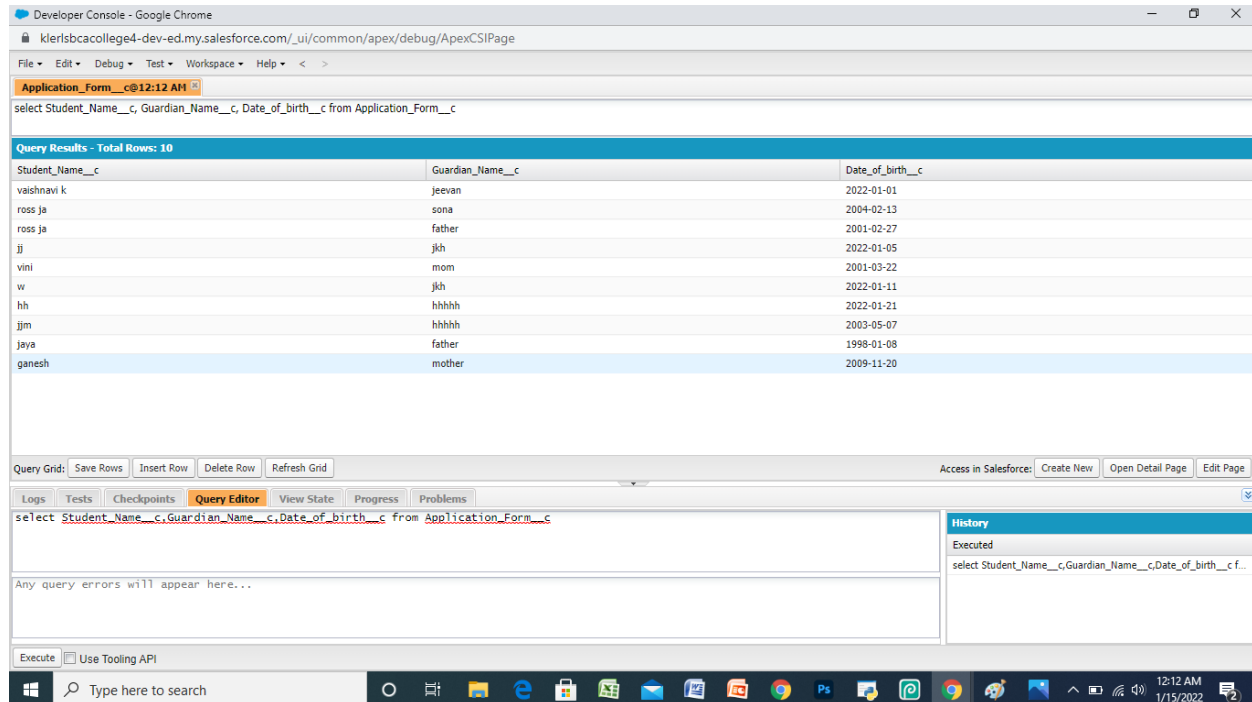
- > learned about developer console
- > salesforce primitive datatypes : boolean ,string,date,time,id, integer ,double
- > collection: list,map,set

DAY 5:

> Query

SQL :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 address bar, the console title is "Application_Form__c@12:12 AM". The main area shows the 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" table is displayed. The table has three columns: `Student_Name__c`, `Guardian_Name__c`, and `Date_of_birth__c`. The data rows are as follows:

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	jkj	2022-01-05
vini	mom	2001-03-22
w	jkj	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, the "Query Editor" tab is active, showing 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" panel showing the executed query: `select Student_Name__c,Guardian_Name__c,Date_of_birth__c f...`. At the bottom, there is a "Execute" button and a "Use Tooling API" checkbox. The Windows taskbar is visible at the bottom of the screen.

> 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        // emails
22        Messaging.SingleEmailMessage mail = new Messaging.SingleEmailMessage();
23        // address, subject, content( data 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[] emailAddresses = new String[]{'vaishnavik952@gmail.com'};
27        mail.setToAddresses(emailAddresses);
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	4.91 KB
Vaishnavi Kadam	Unknown	SerialBatchApexRangeChunkHandler	1/14/2022, 11:45:59 PM	Success	Unread	8.58 KB
Vaishnavi Kadam	Unknown	/services/data/v53.0/tooling/executeAnonymous	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	SerialBatchApexRangeChunkHandler	1/14/2022, 11:45:58 PM	Success	Unread	2.44 KB

Filter Click here to filter the log list

Type here to search

12:02 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

```

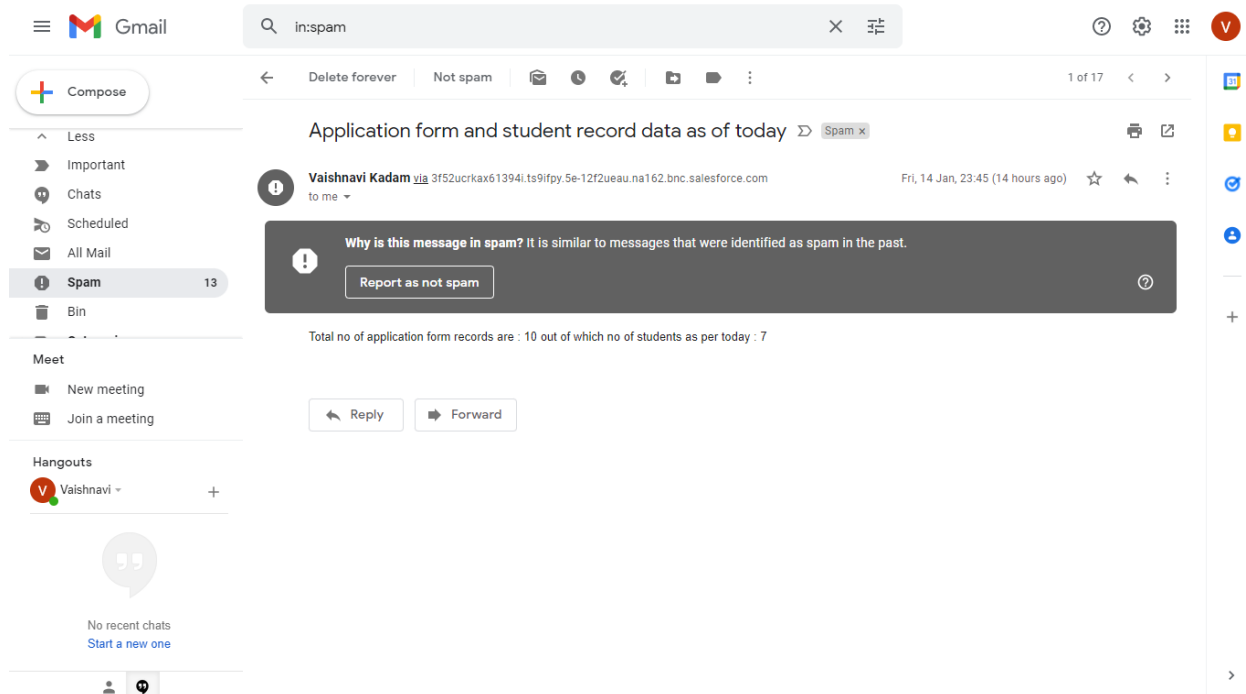
User	Application	Operation	Time	Status	Read	Size
Vaishnavi Kadam	Unknown	Batch Apex	1/14/2022, 11:45:59 PM	Success	Unread	4.91 KB
Vaishnavi Kadam	Unknown	SerialBatchApexRangeChunkHan...	1/14/2022, 11:45:59 PM	Success	Unread	8.58 KB
Vaishnavi Kadam	Unknown	/services/data/v53.0/tooling/exec...	1/14/2022,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

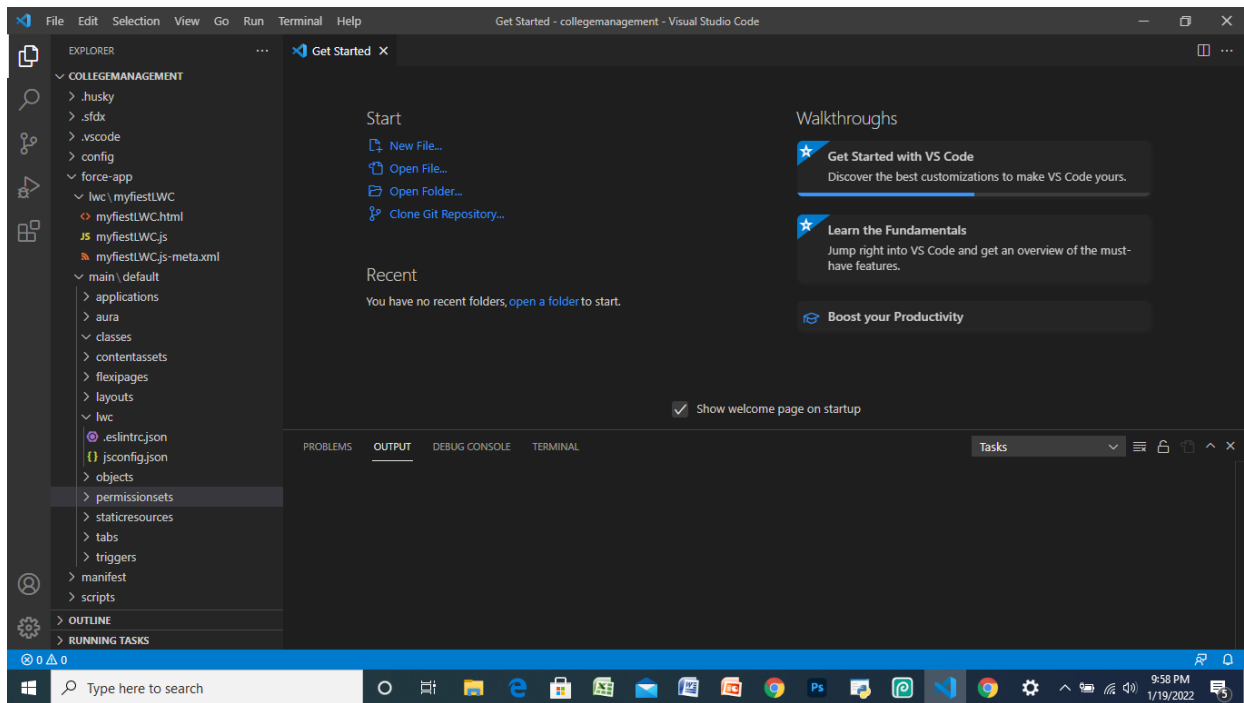
- > Bulkification :whatever code we write should be capable of handling everything.
- > Should have collection variable whenever we write class,trigger.
- > Never write DML statements inside for loop
- > If you want to add DML statements than use list, map it will not hit any governor limits.
- > Can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

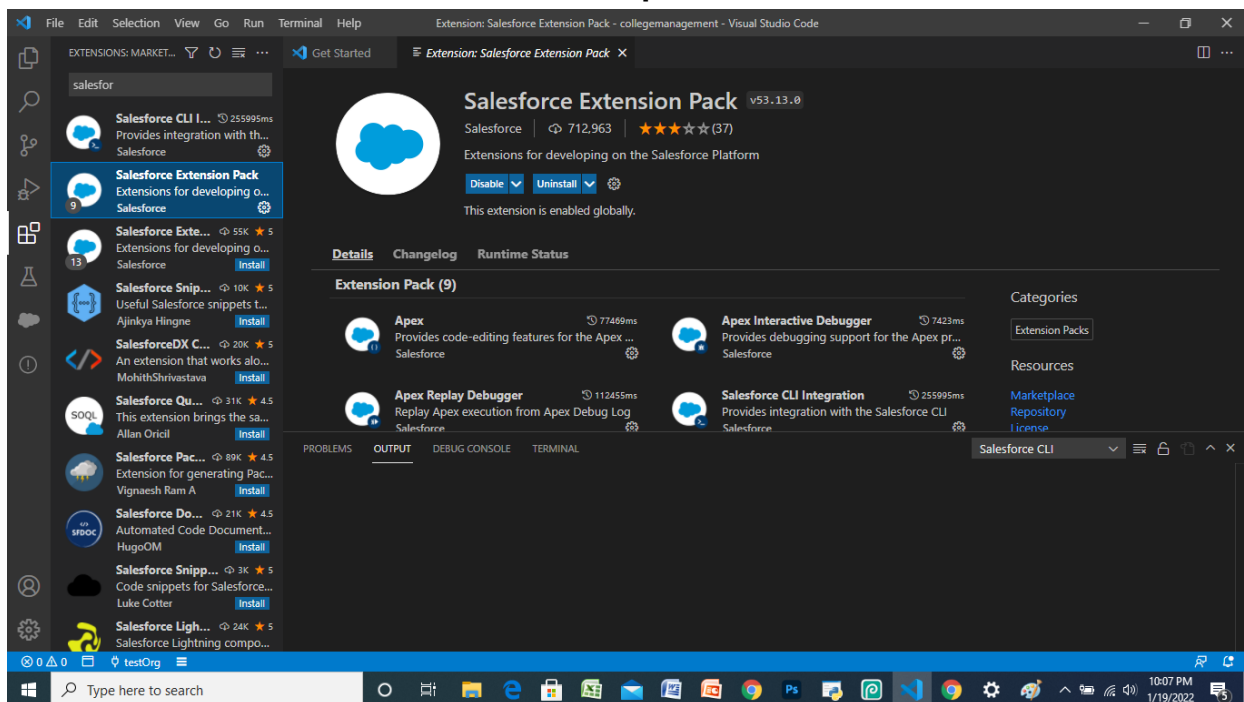
DAY 8:

Introduction to LWC (lightning web component)

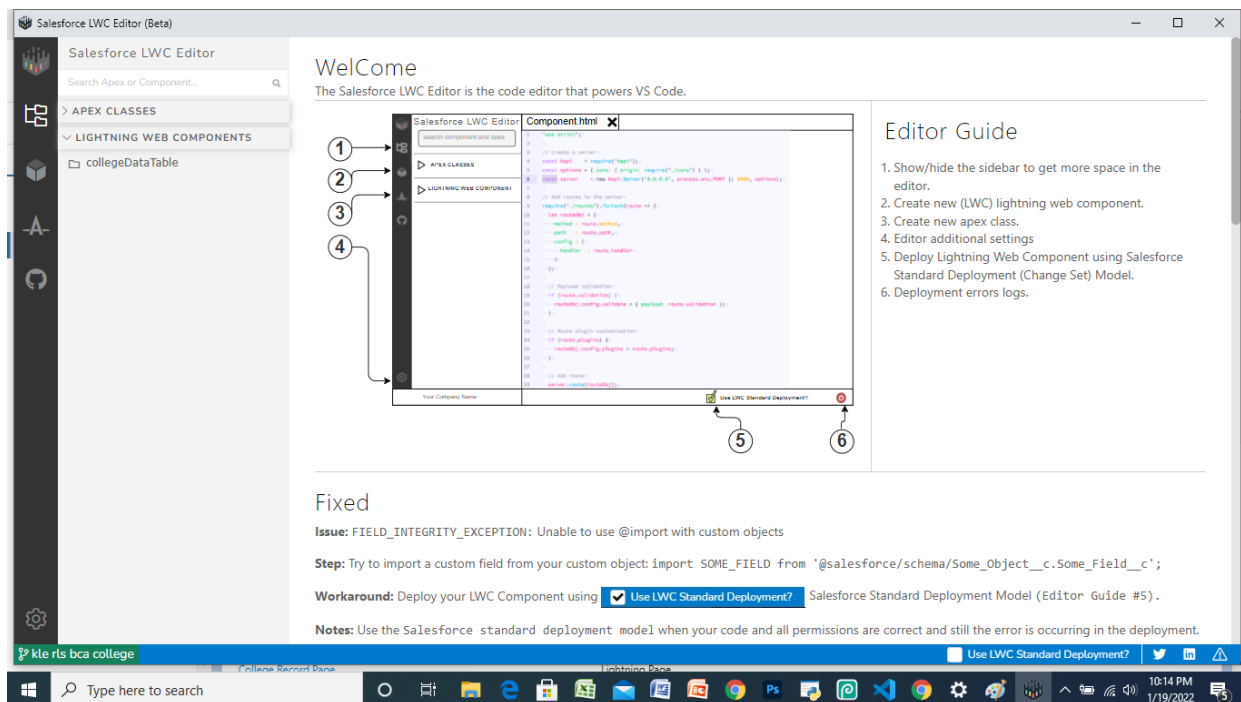
- > What is LWC:It is programming model to develop salesforce lightning components.
- > Why LWC
- > Benefits of LWC
- > Web stack transformation
- > LWC file contains main 3 files
 - html ,javascript(js),meta-xml and one out of the box css file.
- > Introduction to javascript
 - js functions
- > Installation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



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



> Installation of **Salesforce LWC editor**



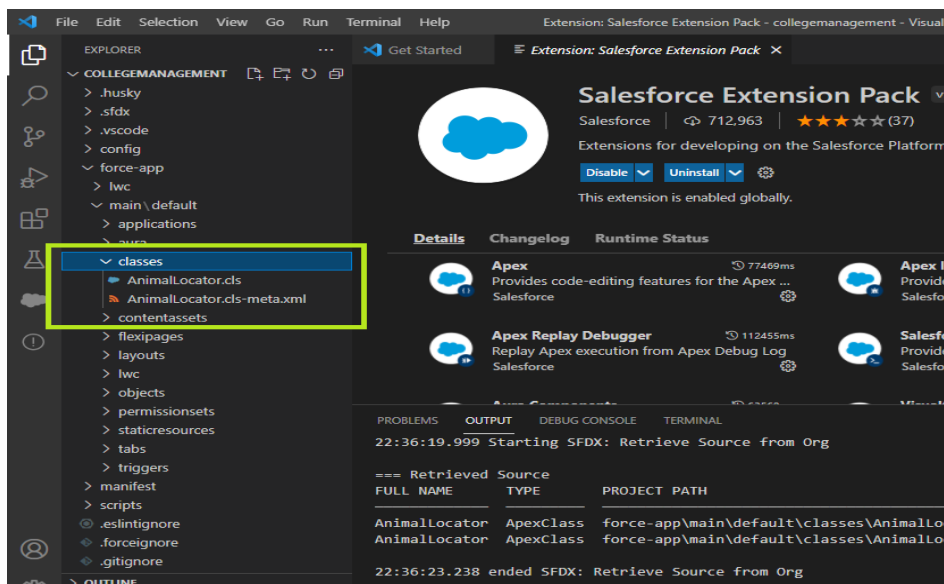
> Worked with date time and javascript.

DAY 9:

> Installed **Salesforce CLI**

> Create Lightning web component

> learned how to deploy and retrieve sources in salesforce org



> Map and set in javascript

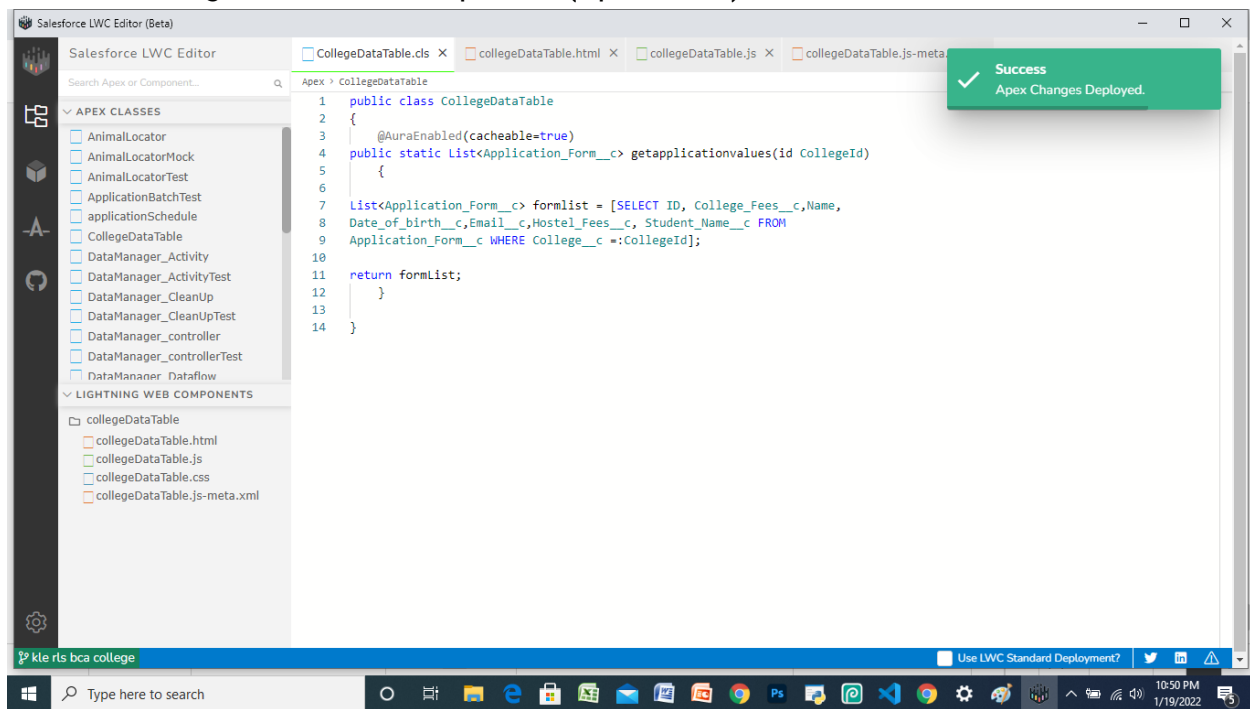
> Map : it stores data in terms of key and value.

- > 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.

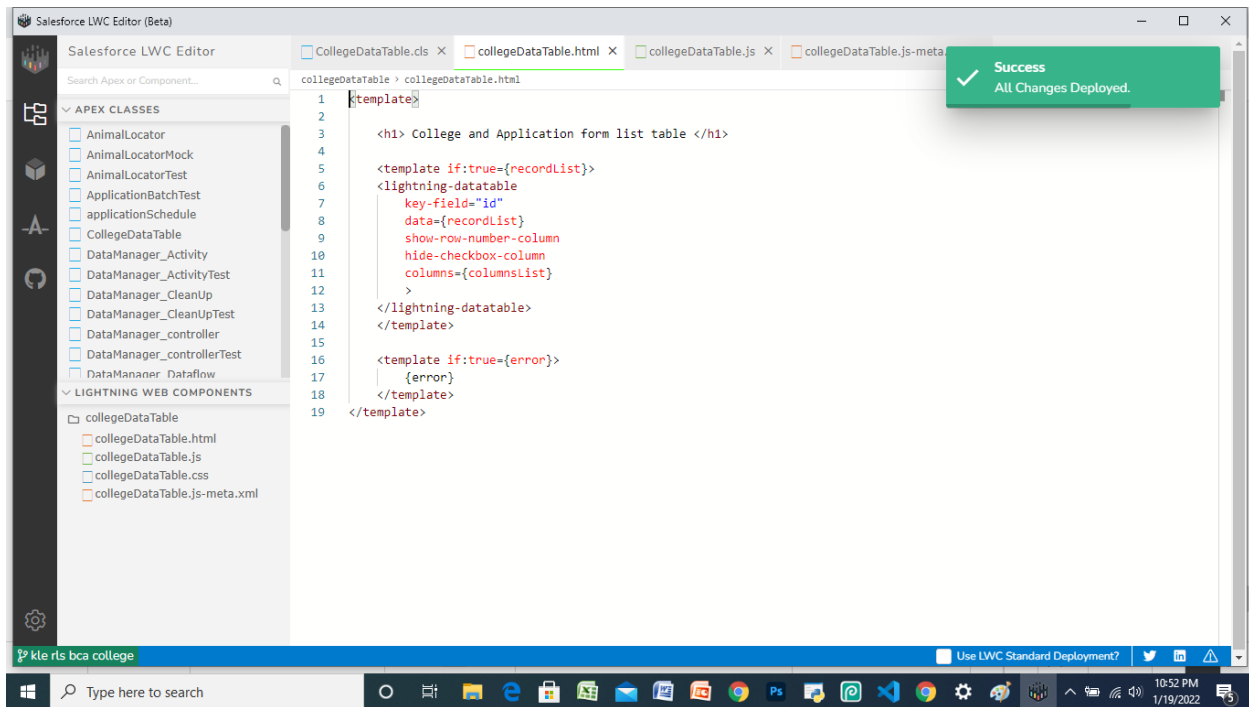
DAY 10:

Lightning web component

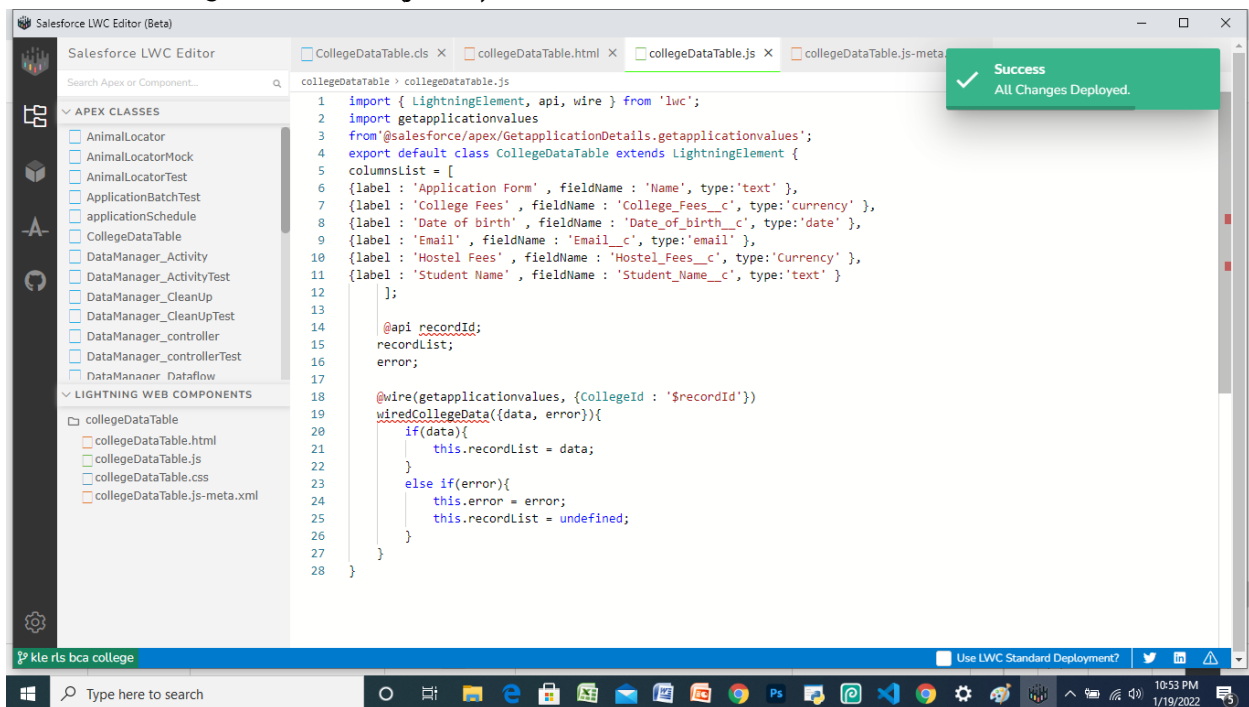
- > Create College data table component (Apex class)



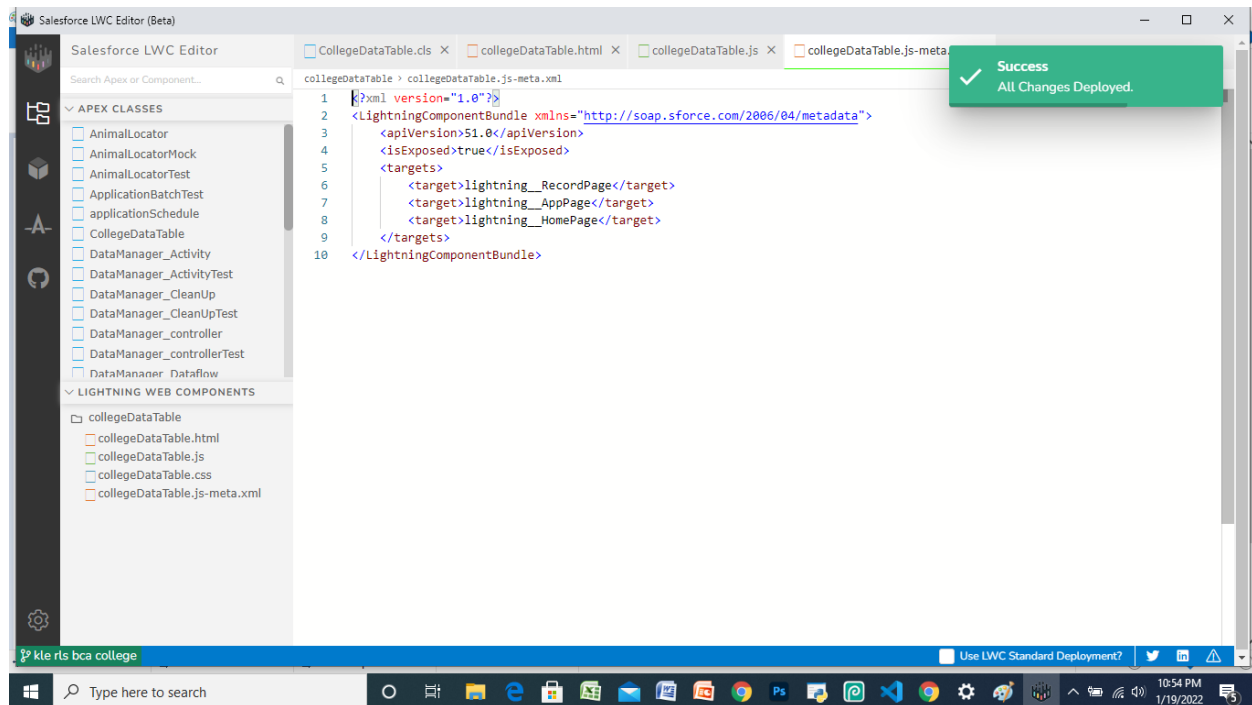
- > Create College data table (html file)



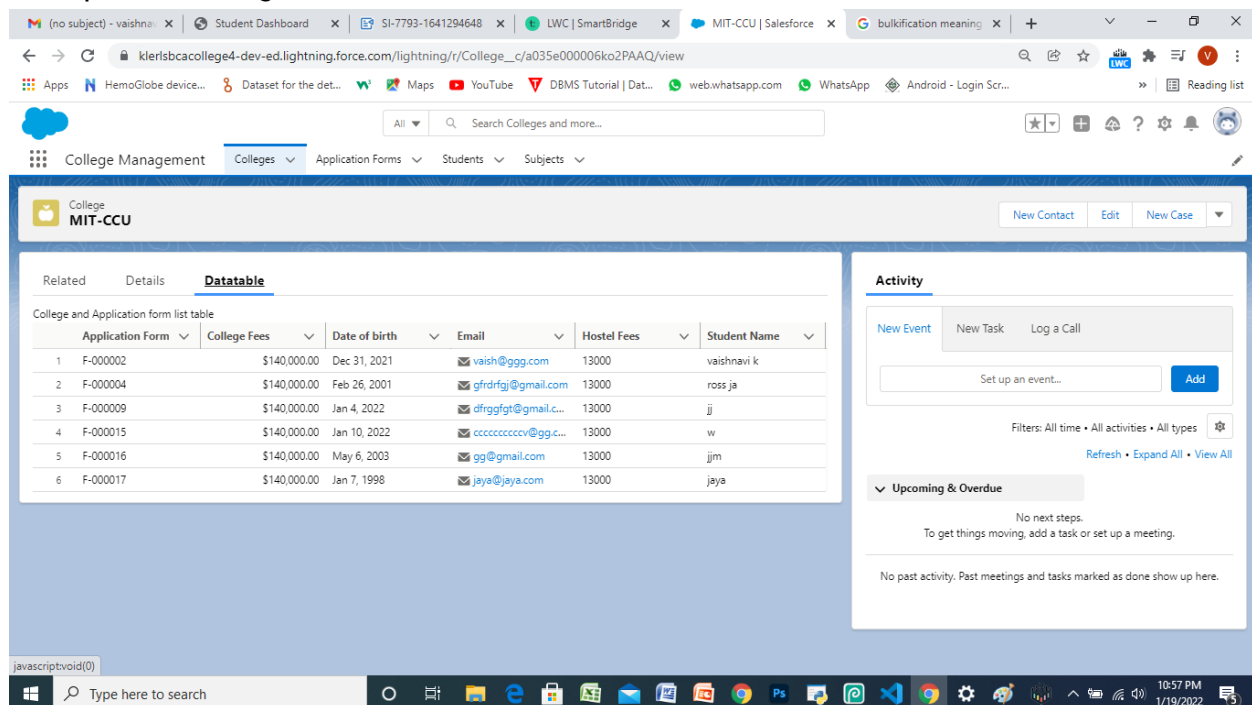
> Create College data table (js file)



> 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

