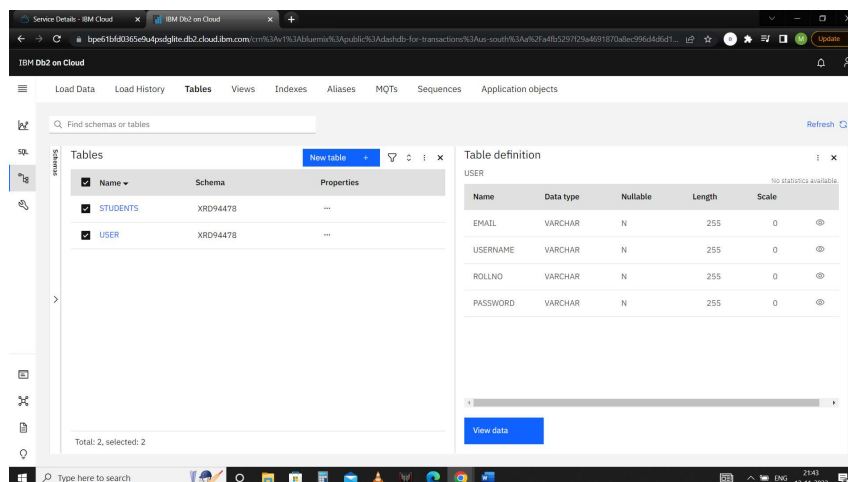
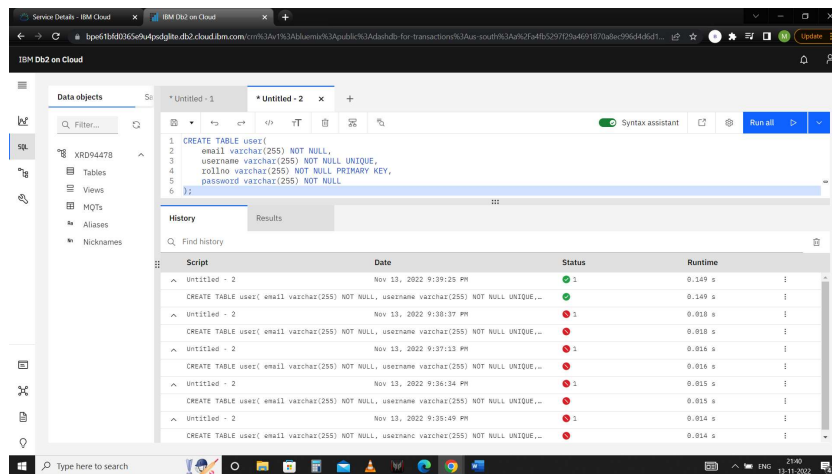


ASSIGNMENT - 2

FLASK APPLICATION INTEGRATION WITH DB2

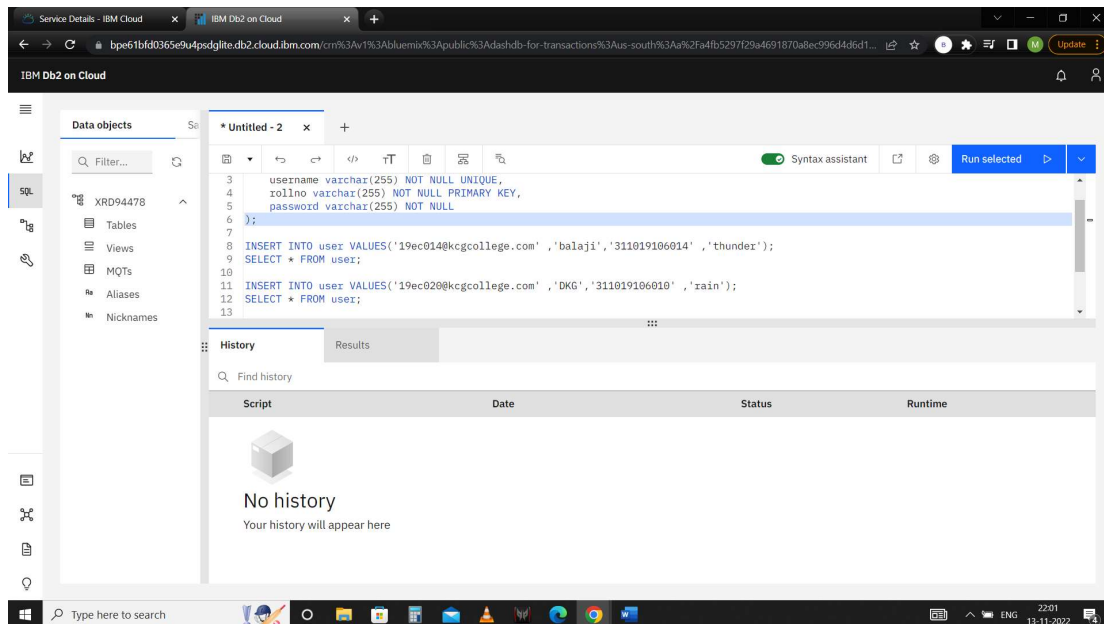
Student Name	Kavipriya
Student Register Number	311019106028
Maximum Marks	2 Marks

1. Create a user table with email, username, password and roll number.



2. Perform UPDATE, and DELETE queries with the User table.

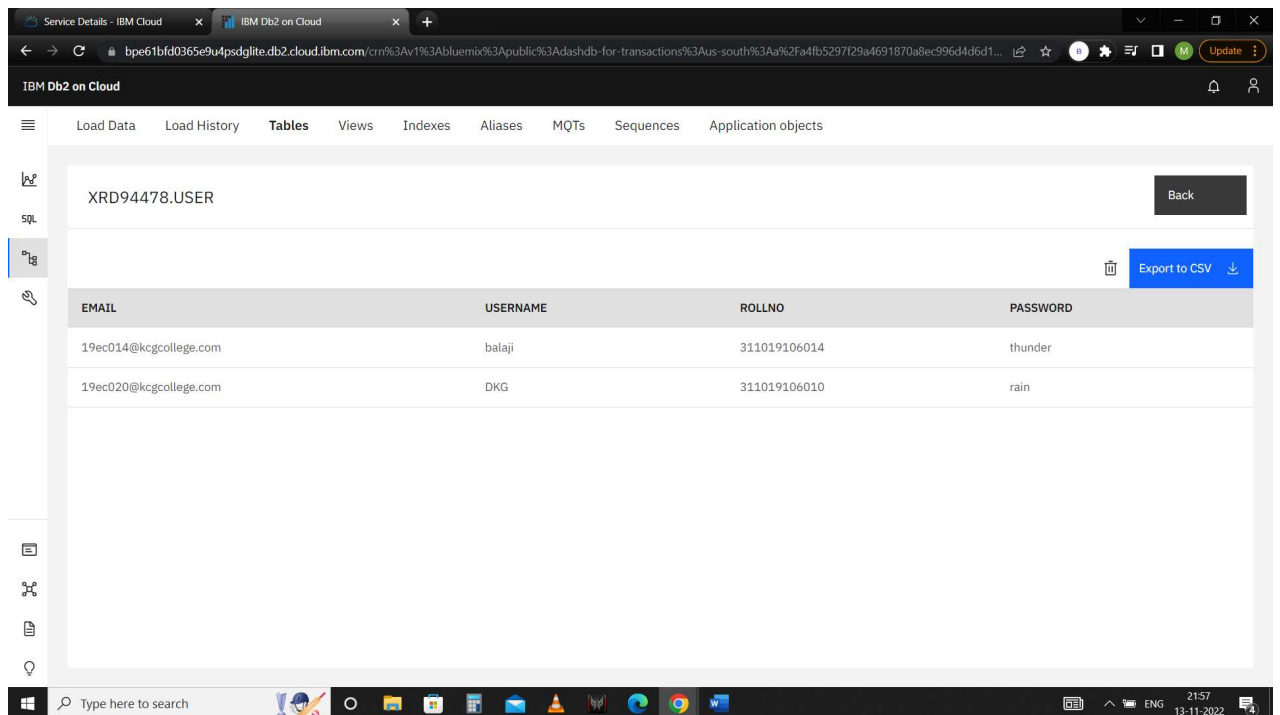
INSERT QUERY



The screenshot shows the IBM Db2 on Cloud SQL editor interface. The left sidebar displays the 'Data objects' tree with 'XRD94478' selected. The main editor area shows a SQL script with the following content:

```
3 username varchar(255) NOT NULL UNIQUE,  
4 rollno varchar(255) NOT NULL PRIMARY KEY,  
5 password varchar(255) NOT NULL  
6 );  
7  
8 INSERT INTO user VALUES('19ec014@kcgcollege.com', 'balaji', '311019106014', 'thunder');  
9 SELECT * FROM user;  
10  
11 INSERT INTO user VALUES('19ec020@kcgcollege.com', 'DKG', '311019106010', 'rain');  
12 SELECT * FROM user;  
13
```

The 'History' tab is active, showing a table with columns: Script, Date, Status, and Runtime. The table is empty, displaying 'No history' and 'Your history will appear here'.



The screenshot shows the IBM Db2 on Cloud SQL editor interface after executing the INSERT query. The left sidebar displays the 'Data objects' tree with 'XRD94478.USER' selected. The main editor area shows the results of the query in a table format. The table has columns: EMAIL, USERNAME, ROLLNO, and PASSWORD. The results are as follows:

EMAIL	USERNAME	ROLLNO	PASSWORD
19ec014@kcgcollege.com	balaji	311019106014	thunder
19ec020@kcgcollege.com	DKG	311019106010	rain

The 'Export to CSV' button is visible in the top right corner of the results area.

UPDATE QUERY

The screenshot shows the IBM Db2 on Cloud SQL editor interface. The left sidebar displays the 'Data objects' tree with 'XRD94478' selected. The main editor area shows a script with the following SQL statements:

```
9 SELECT * FROM userz;  
10  
11 INSERT INTO user VALUES('19ec020@kcgcollege.com', 'DKG', '311019106010', 'rain');  
12 SELECT * FROM userz;  
13  
14 UPDATE user SET PASSWORD= 'DON' WHERE USERNAME='DKG';  
15 SELECT * FROM userz;  
16  
17  
18
```

The 'History' tab is active, showing a table of executed scripts:

Script	Date	Status	Runtime
Untitled - 2	Nov 13, 2022 10:07:06 PM	1	0.005 s
SELECT * FROM userz			0.005 s
Untitled - 2	Nov 13, 2022 10:06:39 PM	1	0.022 s
UPDATE userz SET PASSWORD= 'DON' WHERE USERNAME='DKG'			0.007 s
SELECT * FROM userz			0.015 s
Untitled - 2	Nov 13, 2022 10:04:58 PM	2	0.034 s
UPDATE userz SET PASSWORD= 'book' WHERE USERNAME='DKG'			0.016 s

The screenshot shows the IBM Db2 on Cloud interface displaying the details of the 'XRD94478.USER' table. The table structure is as follows:

EMAIL	USERNAME	ROLLNO	PASSWORD
19ec014@kcgcollege.com	balaji	311019106014	thunder
19ec020@kcgcollege.com	DKG	311019106010	DON

DELETE QUERY

The screenshot shows the IBM Db2 on Cloud console interface. The left sidebar displays the 'Data objects' tree with 'XRD94478' selected. The main area shows a SQL script editor with the following code:

```
12 SELECT * FROM user;  
13  
14 UPDATE user SET PASSWORD= 'DON' WHERE USERNAME='DKG';  
15 SELECT * FROM user;  
16  
17 DELETE FROM user WHERE rollno = '311019106010';  
18 SELECT * FROM user;  
19  
20  
21  
22
```

Below the script editor, the 'History' tab is active, showing a table of executed queries:

Script	Date	Status	Runtime
Untitled - 2	Nov 13, 2022 10:16:37 PM	2	0.005 s
DELETE FROM user WHERE rollno = '311019106010';			0.004 s
SELECT * FROM user;			0.001 s
Untitled - 2	Nov 13, 2022 10:16:09 PM	1	0.012 s
DELETE FROM user WHERE EMAIL = '19ec020@kcgcollege.com';			0.007 s
SELECT * FROM user;			0.005 s
Untitled - 2	Nov 13, 2022 10:13:14 PM	1	0.013 s

The screenshot shows the IBM Db2 on Cloud console interface. The left sidebar displays the 'Data objects' tree with 'XRD94478.USER' selected. The main area shows the 'Tables' tab with a table named 'XRD94478.USER'. The table has the following columns: EMAIL, USERNAME, ROLLNO, and PASSWORD. The table contains one row of data:

EMAIL	USERNAME	ROLLNO	PASSWORD
19ec020@kcgcollege.com	DKG	311019106010	DON

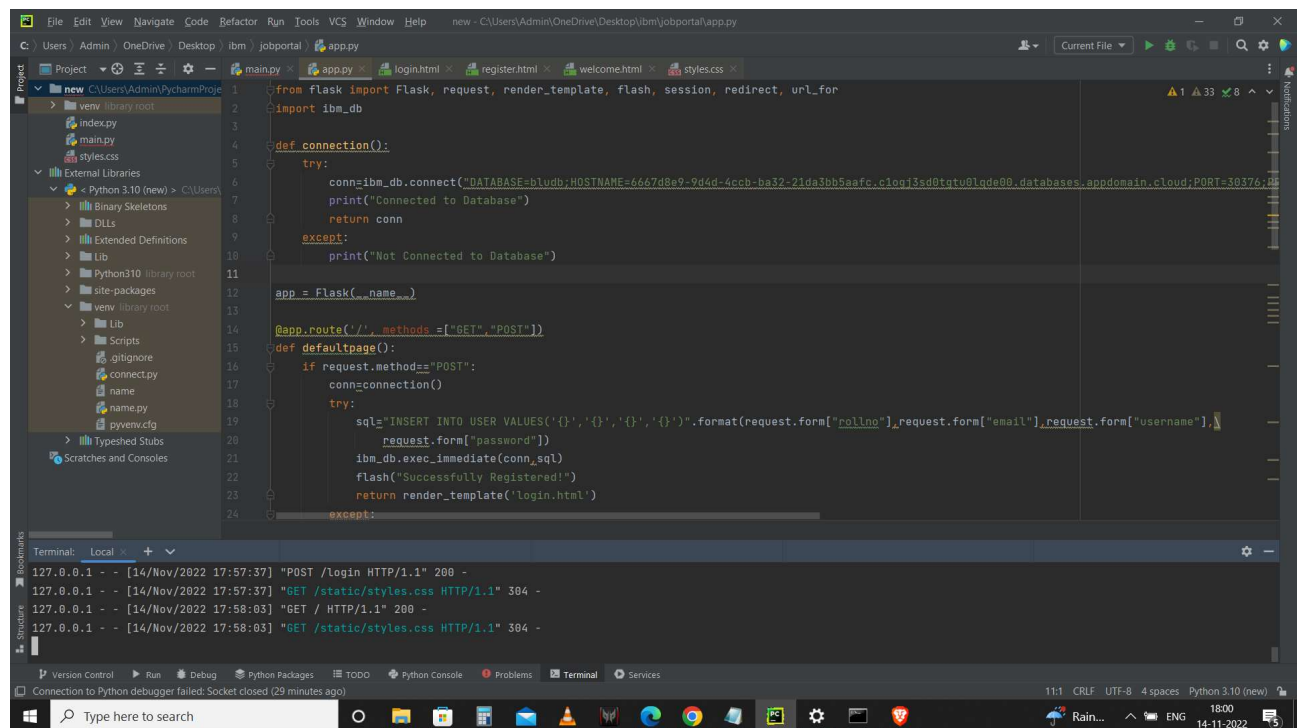
The 'Export to CSV' button is visible in the top right corner of the table view.

3. python code to DB2 &

4. Create a flask app with a registration page, login page and welcome page. By default, load the registration page once the user enters all the fields store the data in the database and navigate to the login page to authenticate the user with a username and password. If the user is valid show the welcome page.

CODE

app.py



```
1 from flask import Flask, request, render_template, flash, session, redirect, url_for
2 import ibm_db
3
4 def connection():
5     try:
6         conn=ibm_db.connect("DATABASE=ibmdb;HOSTNAME=6667d8e9-9d4d-4ccb-ba32-21da3bb5aafc.c1og13sd0tqtu0lqde00.databases.appdomain.cloud;PORT=30376;PL
7         print("Connected to Database")
8         return conn
9     except:
10        print("Not Connected to Database")
11
12 app = Flask(__name__)
13
14 @app.route('/', methods =["GET", "POST"])
15 def defaultpage():
16     if request.method=="POST":
17         conn=connection()
18         try:
19             sql="INSERT INTO USER VALUES('{},{},{},{},{})'.format(request.form["rollno"],request.form["email"],request.form["username"],
20                 request.form["password"])
21             ibm_db.exec_immediate(conn,sql)
22             flash("Successfully Registered!")
23             return render_template('login.html')
24         except:
```

Terminal: Local x + v

```
127.0.0.1 - - [14/Nov/2022 17:57:37] "POST /login HTTP/1.1" 200 -
127.0.0.1 - - [14/Nov/2022 17:57:37] "GET /static/styles.css HTTP/1.1" 304 -
127.0.0.1 - - [14/Nov/2022 17:58:03] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [14/Nov/2022 17:58:03] "GET /static/styles.css HTTP/1.1" 304 -
```

Version Control Run Debug Python Packages TODO Python Console Problems Terminal Services

Connection to Python debugger failed: Socket closed (29 minutes ago)

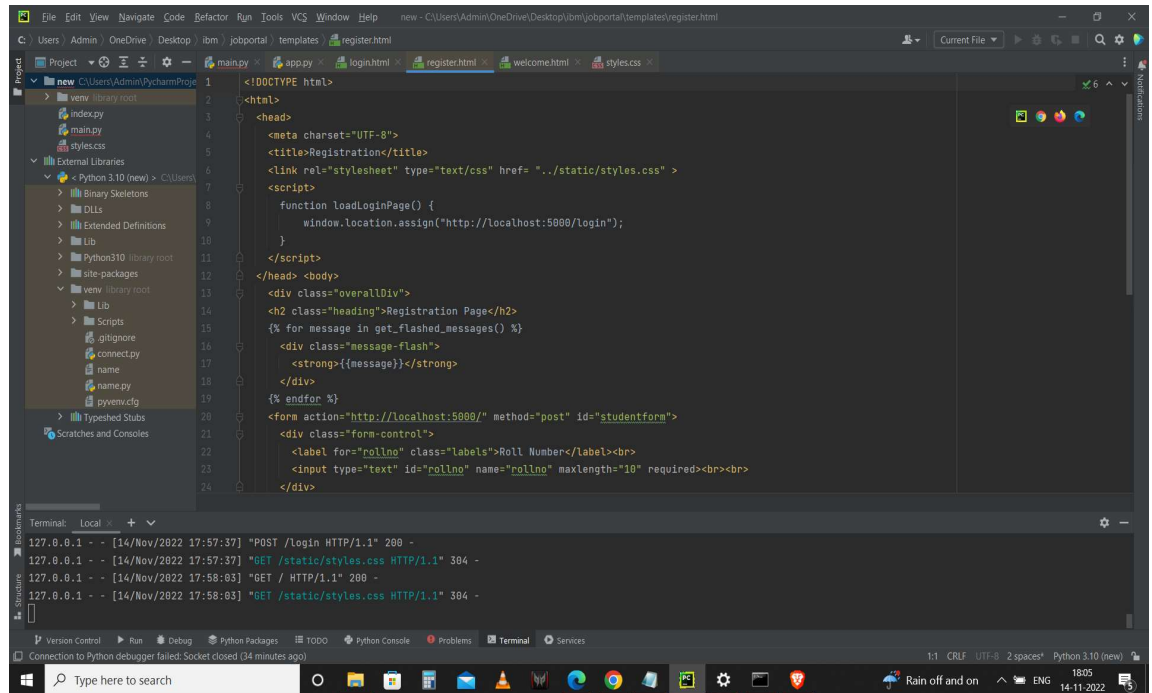
11:1 CRLF UTF-8 4 spaces Python 3.10 (new)

Type here to search

Rain... 1800 14-11-2022

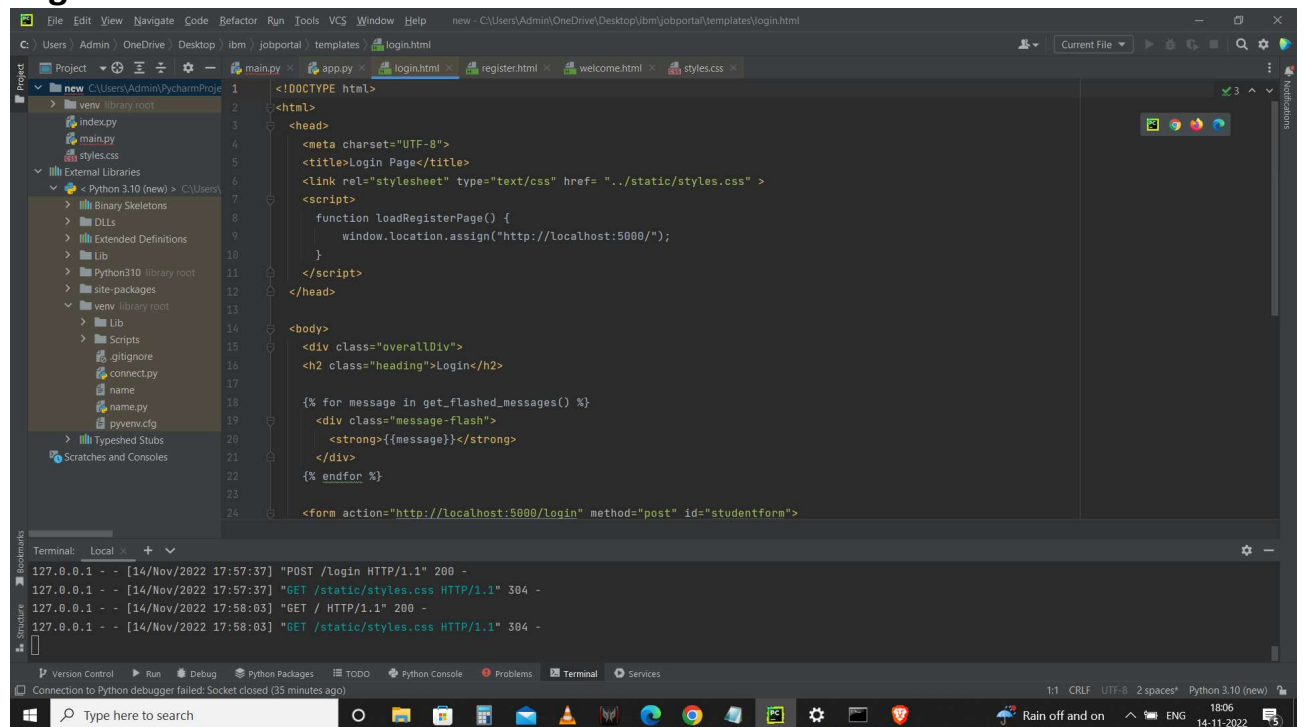
Templates

Register.html



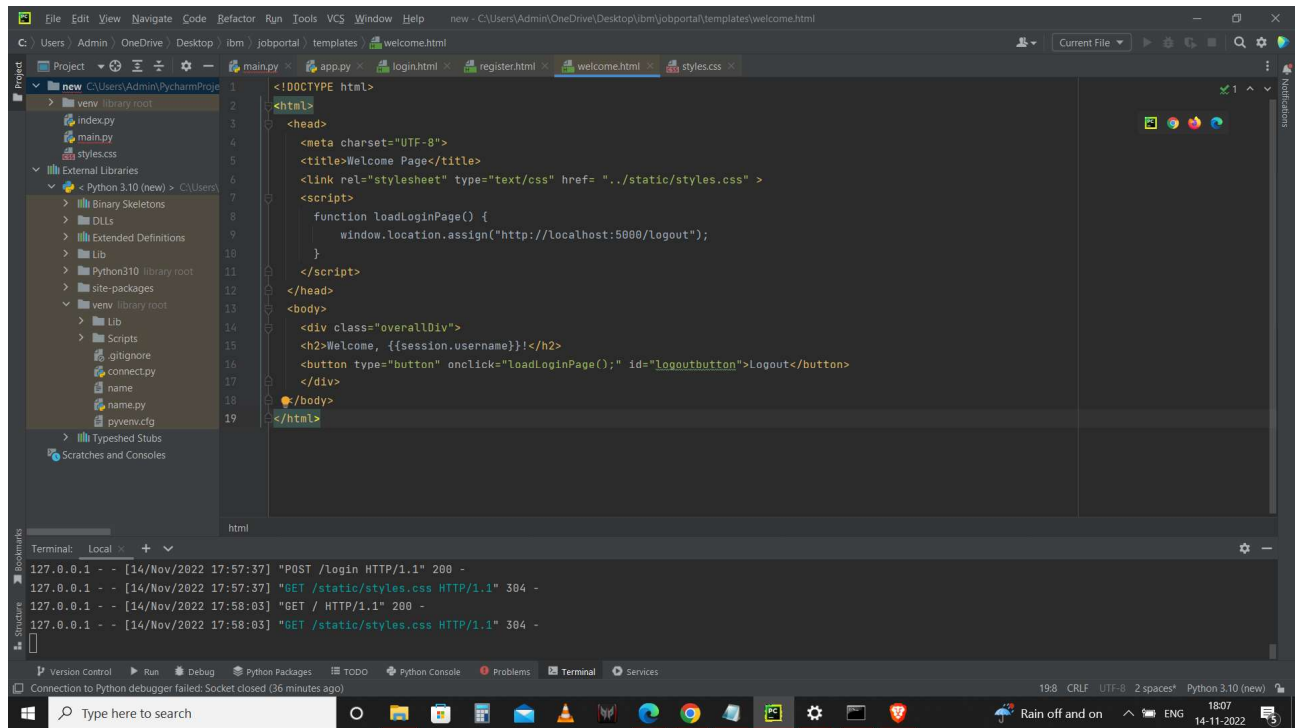
```
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="UTF-8">
5 <title>Registration</title>
6 <link rel="stylesheet" type="text/css" href=" ../static/styles.css" >
7 <script>
8     function loadLoginPage() {
9         window.location.assign("http://localhost:5000/login");
10    }
11 </script>
12 </head> <body>
13 <div class="overallDiv">
14 <h2 class="heading">Registration Page</h2>
15 {% for message in get_flashed_messages() %}
16 <div class="message-flash">
17 <strong>{{message}}</strong>
18 </div>
19 {% endfor %}
20 <form action="http://localhost:5000/" method="post" id="studentform">
21 <div class="form-control">
22 <label for="rollno" class="labels">Roll Number</label><br>
23 <input type="text" id="rollno" name="rollno" maxlength="10" required><br><br>
24 </div>
```

Login.html

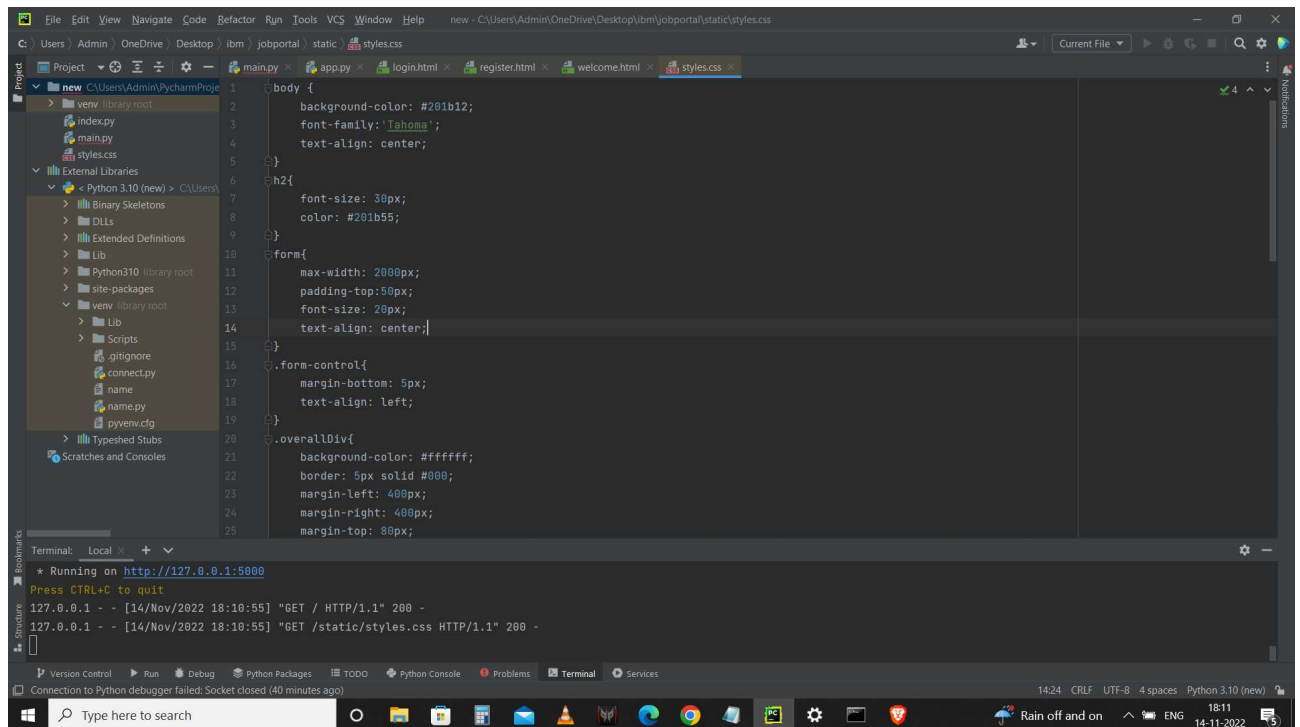


```
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="UTF-8">
5 <title>Login Page</title>
6 <link rel="stylesheet" type="text/css" href=" ../static/styles.css" >
7 <script>
8     function loadRegisterPage() {
9         window.location.assign("http://localhost:5000/");
10    }
11 </script>
12 </head>
13 <body>
14 <div class="overallDiv">
15 <h2 class="heading">Login</h2>
16
17 {% for message in get_flashed_messages() %}
18 <div class="message-flash">
19 <strong>{{message}}</strong>
20 </div>
21 {% endfor %}
22
23 <form action="http://localhost:5000/login" method="post" id="studentform">
```

Welcome.html

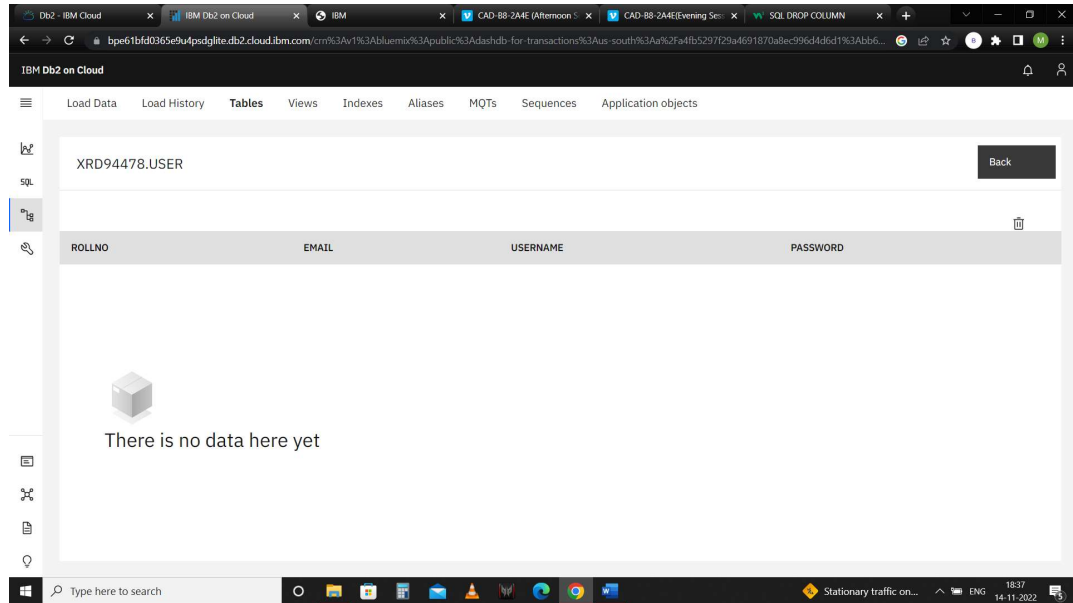


Static.css

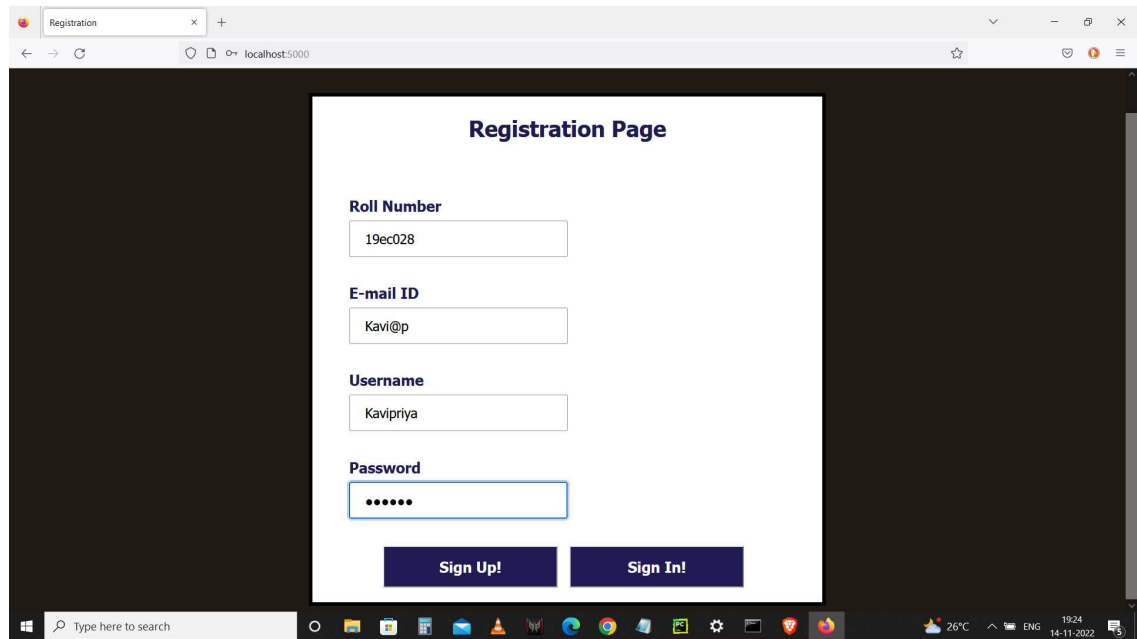


OUTPUT

Empty table



Registration page



Database updated upon registration

The screenshot shows the IBM Db2 on Cloud web interface. The browser tab is titled 'IBM Db2 on Cloud'. The URL is bpe61bfd0365e9u4psdglite.db2.cloud.ibm.com/crn%3Av1%3Abluemix%3Apublic%3Adashdb-for-transactions%3Aus-south%3Aa%2Fa4fb5297f29a4691870a8ec996d4d6d1%3Abb6.... The interface includes a navigation bar with options like 'Load Data', 'Load History', 'Tables', 'Views', 'Indexes', 'Aliases', 'MQTs', 'Sequences', and 'Application objects'. The 'Tables' section is active, showing a table named 'XRD94478.USER'. The table has four columns: 'EMAIL', 'USERNAME', 'ROLLNO', and 'PASSWORD'. The data row shows: '19ec028', 'Kavi@p', 'Kavipriya', and 'byebye'. There is an 'Export to CSV' button and a 'Back' button. The bottom of the screen shows a Windows taskbar with a search bar and various application icons.

EMAIL	USERNAME	ROLLNO	PASSWORD
19ec028	Kavi@p	Kavipriya	byebye

The screenshot shows a web application login page. The browser tab is titled 'Login Page'. The URL is localhost:5000. The page has a dark background with a white login form. The form has a title 'Login' and a message 'Successfully Registered!'. Below the message, there are two input fields: 'Username' with the value 'Kavi@p' and 'Password' with masked characters. At the bottom of the form, there are two buttons: 'Sign In!' and 'Sign Up!'.

Login

Successfully Registered!

Username

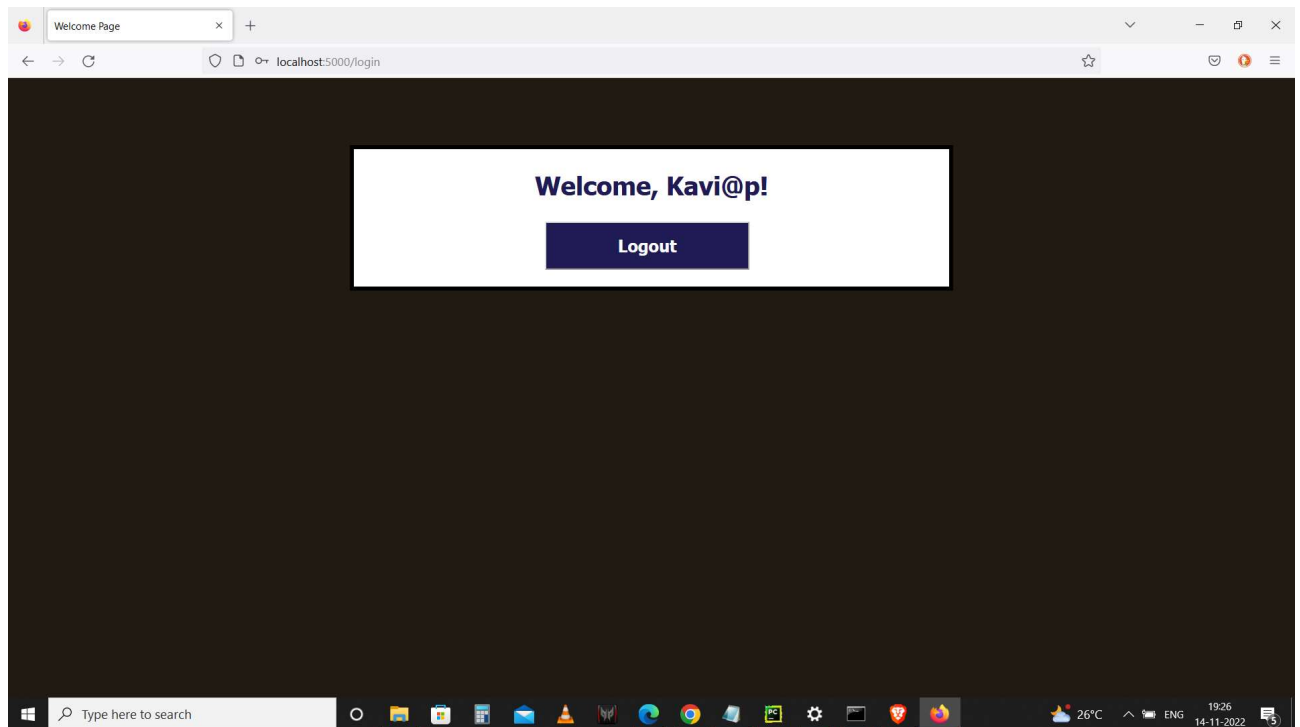
Kavi@p

Password

.....

Sign In! **Sign Up!**

Welcome Page Rendered on Successful Login



Terminal

