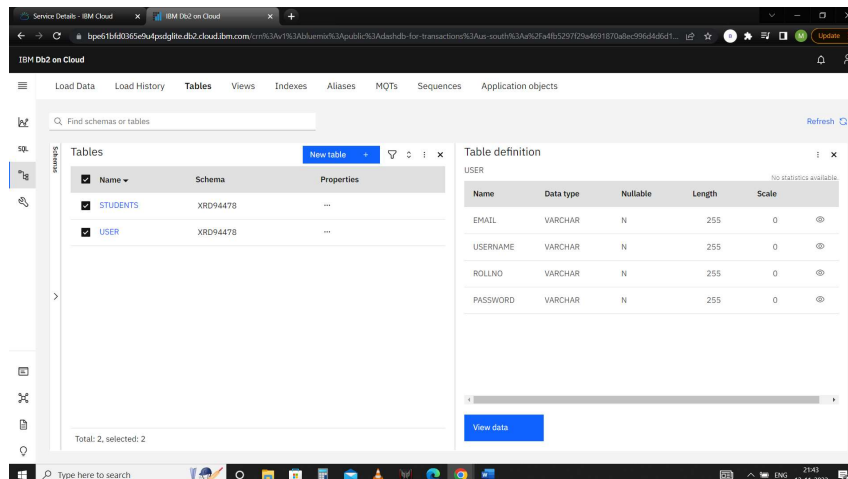
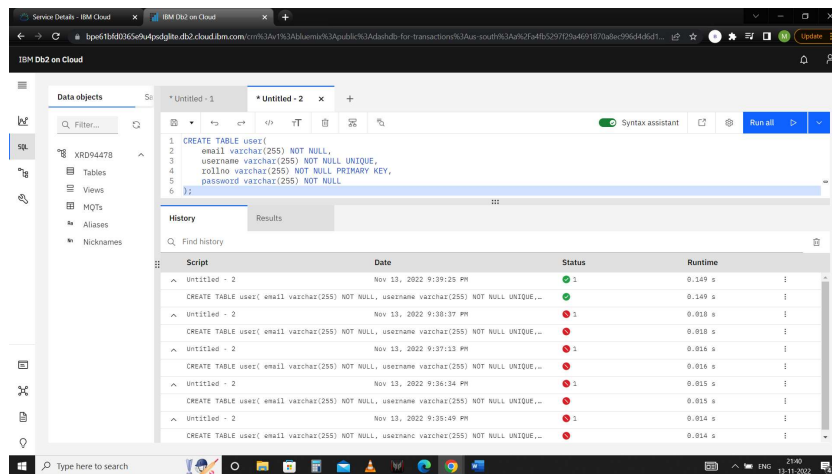


## ASSIGNMENT - 2

### FLASK APPLICATION INTEGRATION WITH DB2

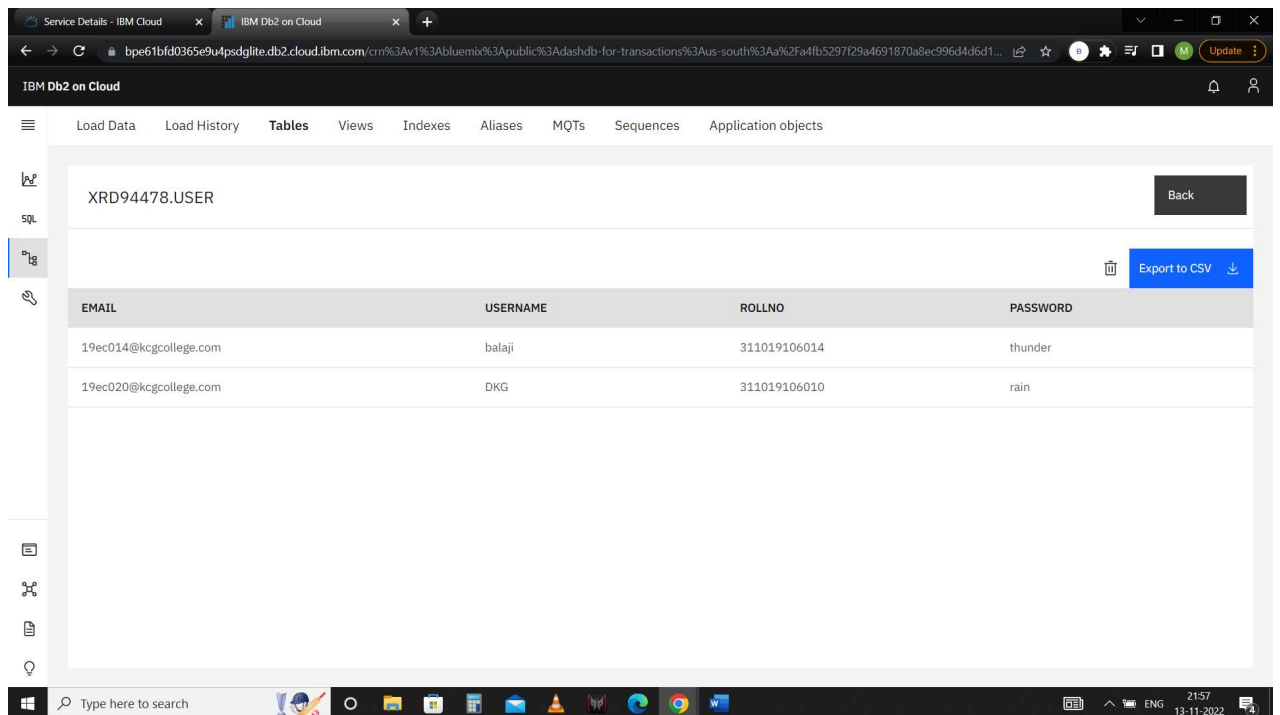
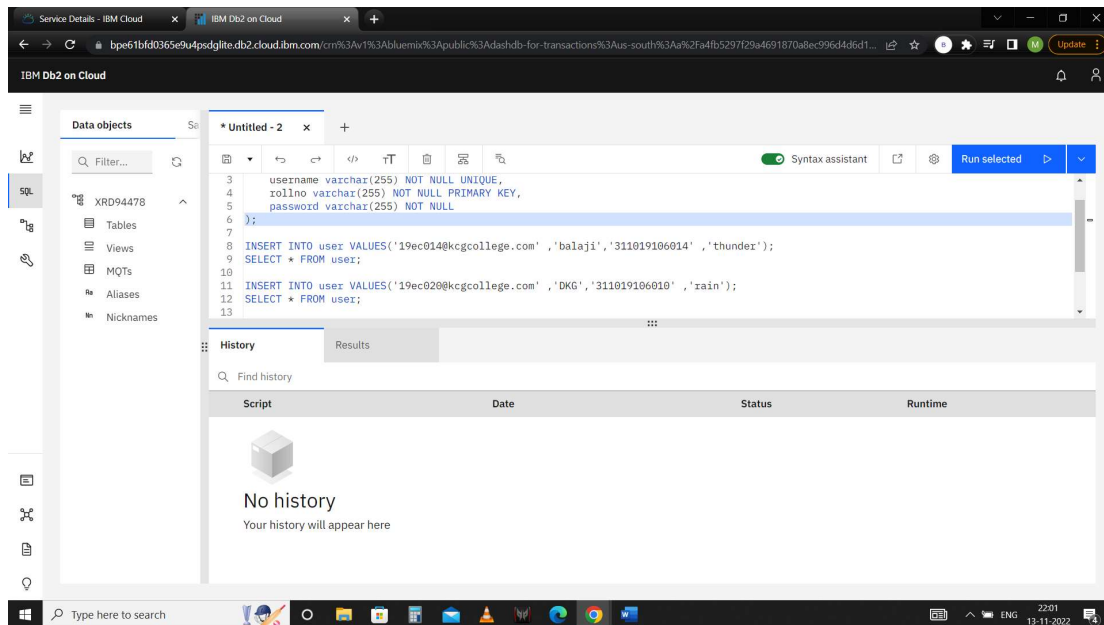
Student Name	Doreen belinta
Student Register Number	311019106020
Maximum Marks	2 Marks

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



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

### INSERT QUERY



# 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. The SQL editor contains the following script:

```
12 SELECT * FROM user1,  
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
```

The History tab shows the following table:

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 displaying the details of the XRD94478.USER table. The table has the following columns:

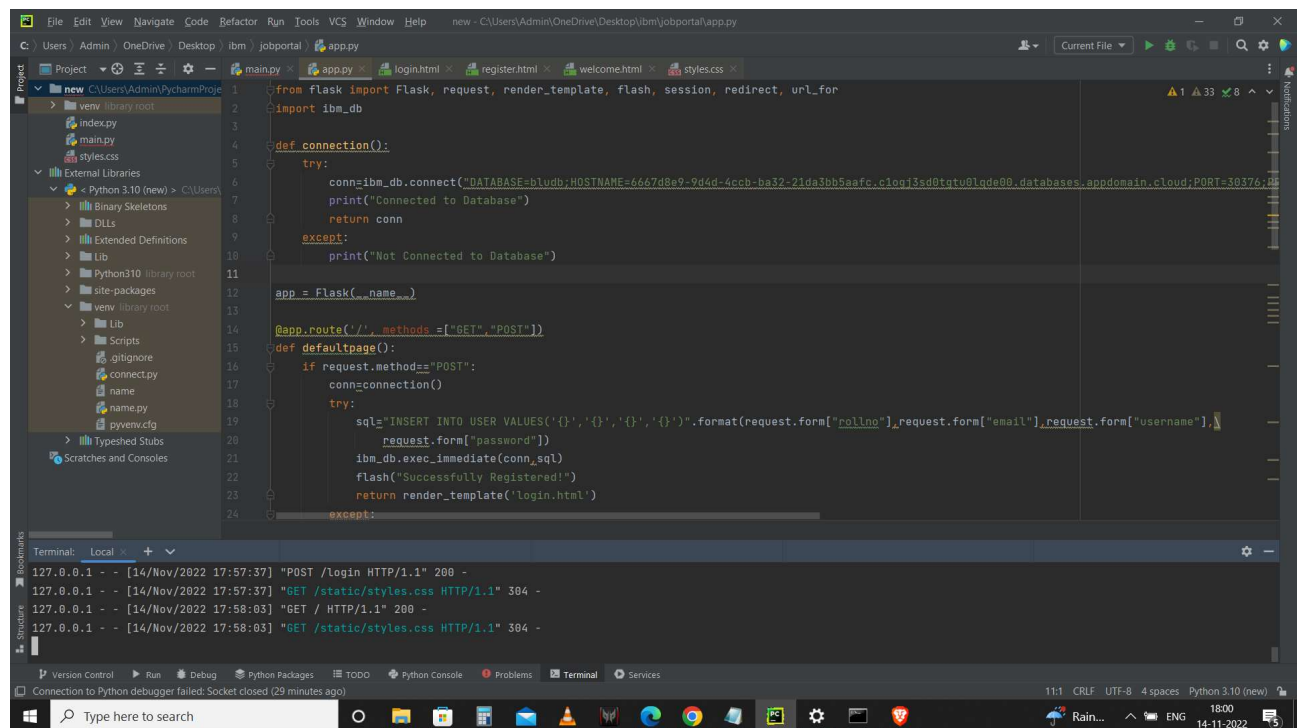
EMAIL	USERNAME	ROLLNO	PASSWORD
19ec020@kcgcollege.com	DKG	311019106010	DON

### 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

```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Registration</title>
<link rel="stylesheet" type="text/css" href=" ../static/styles.css" >
<script>
function loadLoginPage() {
window.location.assign("http://localhost:5000/login");
}
</script>
</head>
<body>
<div class="overallDiv">
<h2 class="heading">Registration Page</h2>
{% for message in get_flashed_messages() %}
<div class="message-flash">
<strong>{{message}}</strong>
</div>
{% endfor %}
<form action="http://localhost:5000/" method="post" id="studentform">
<div class="form-control">
<label for="rollno" class="labels">Roll Number</label><br>
<input type="text" id="rollno" name="rollno" maxlength="10" required><br><br>
</div>
</body>
</html>
```

Terminal: Local x +

```
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 -
```

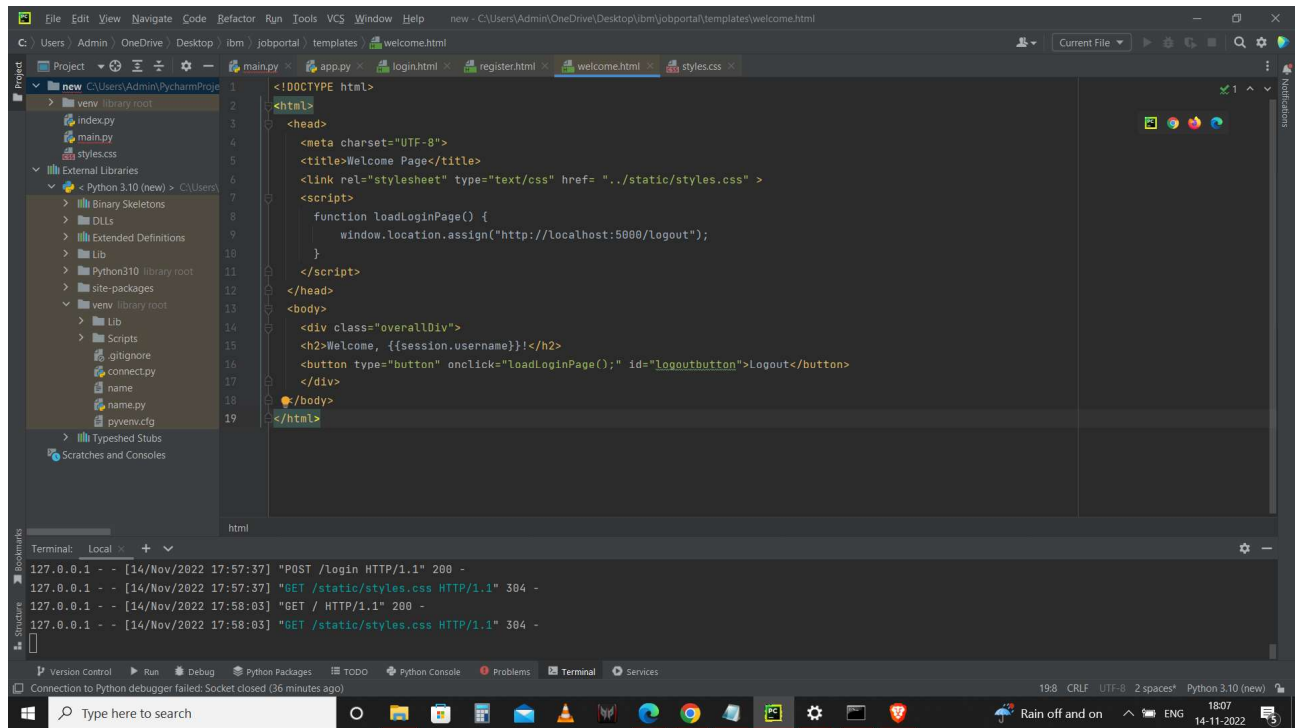
## Login.html

```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Login Page</title>
<link rel="stylesheet" type="text/css" href=" ../static/styles.css" >
<script>
function loadRegisterPage() {
window.location.assign("http://localhost:5000/");
}
</script>
</head>
<body>
<div class="overallDiv">
<h2 class="heading">Login</h2>
{% for message in get_flashed_messages() %}
<div class="message-flash">
<strong>{{message}}</strong>
</div>
{% endfor %}
<form action="http://localhost:5000/login" method="post" id="studentform">
</form>
</body>
</html>
```

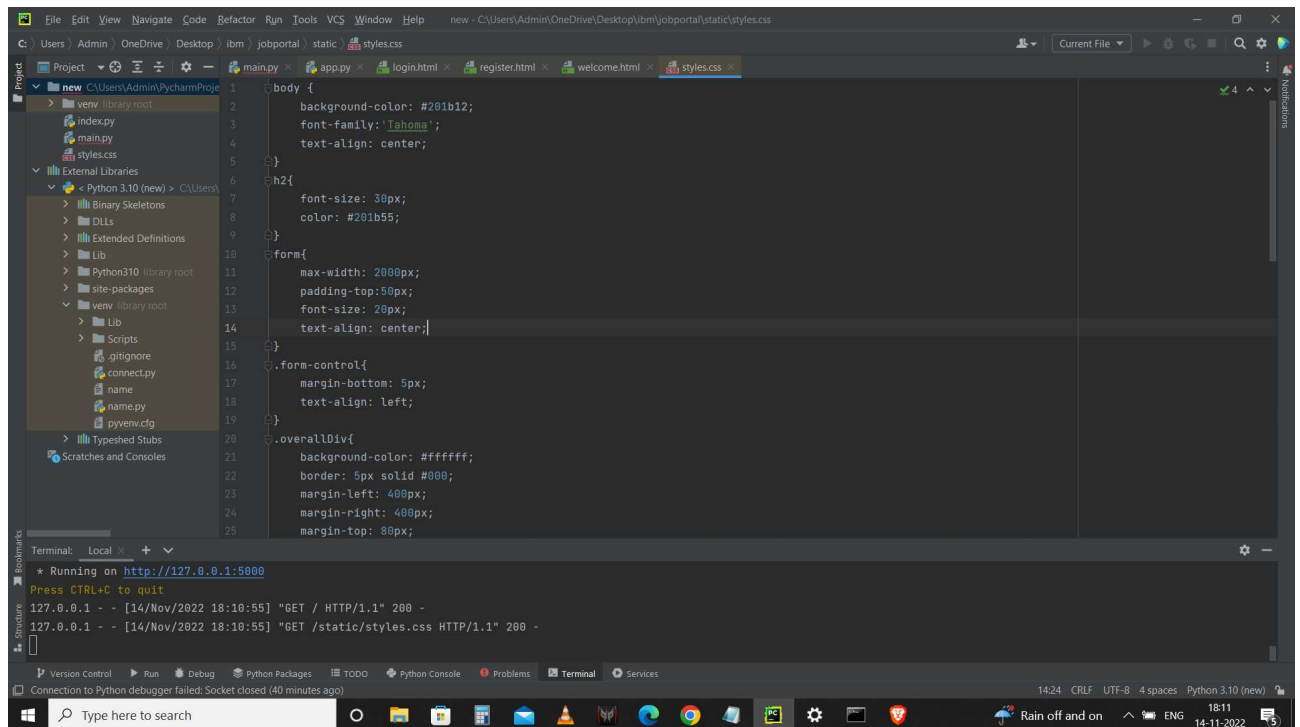
Terminal: Local x +

```
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 -
```

# Welcome.html

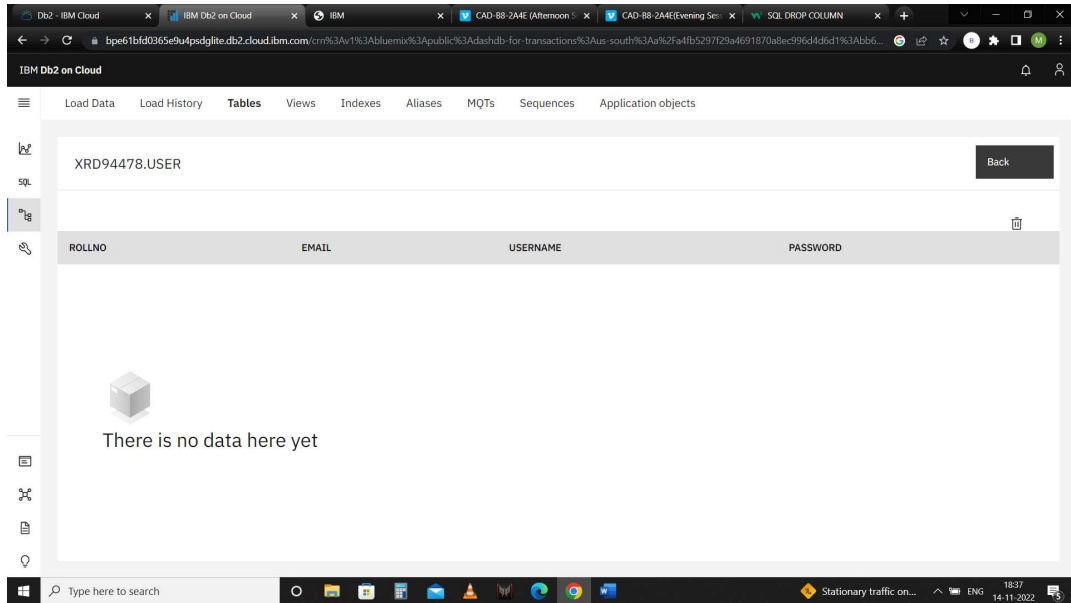


# Static.css

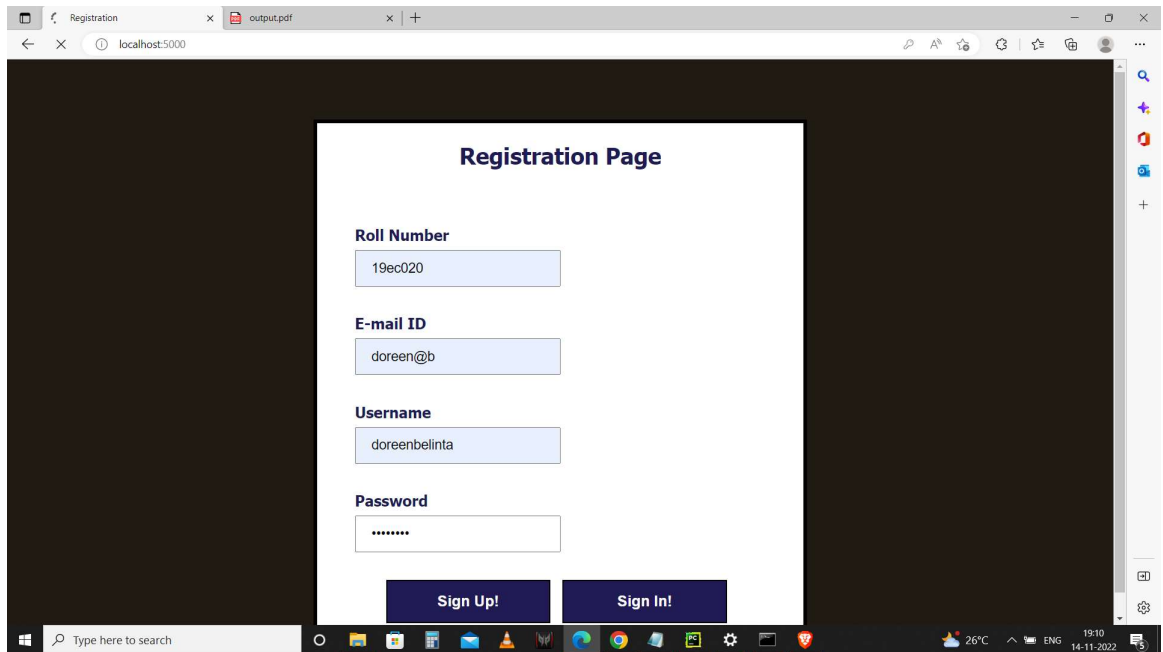


# OUTPUT

## Empty table

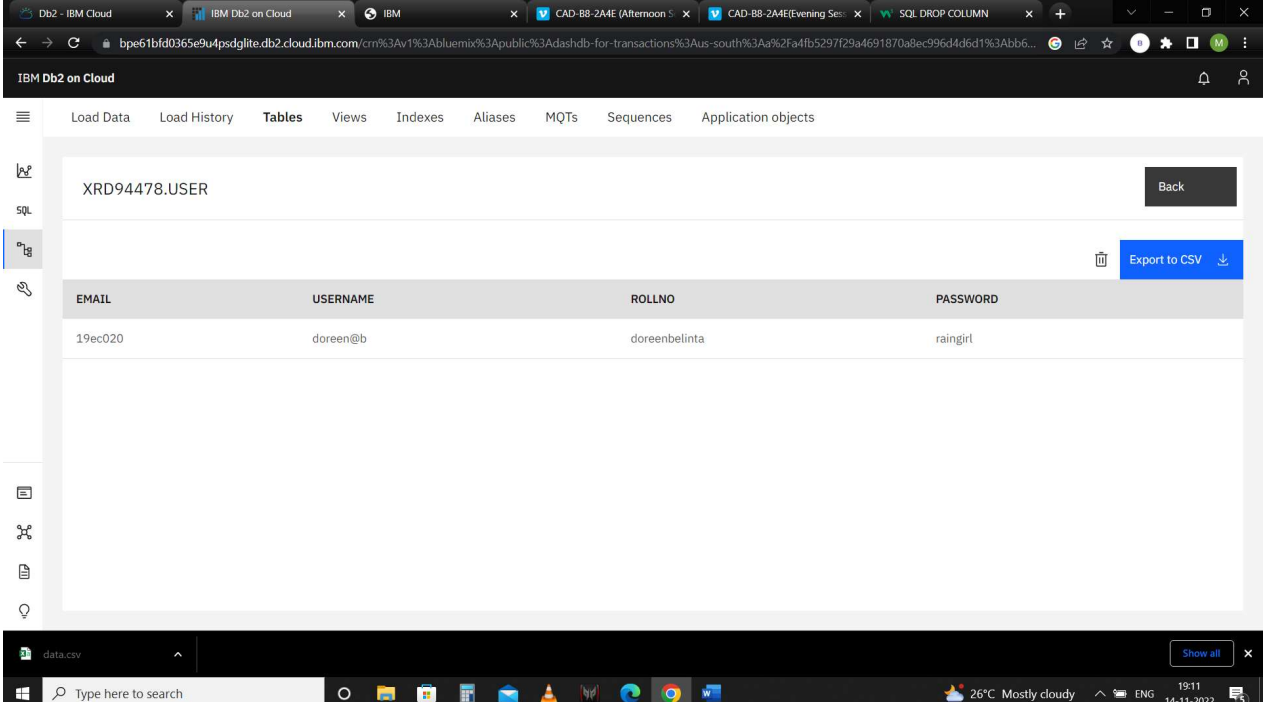


## Registration page



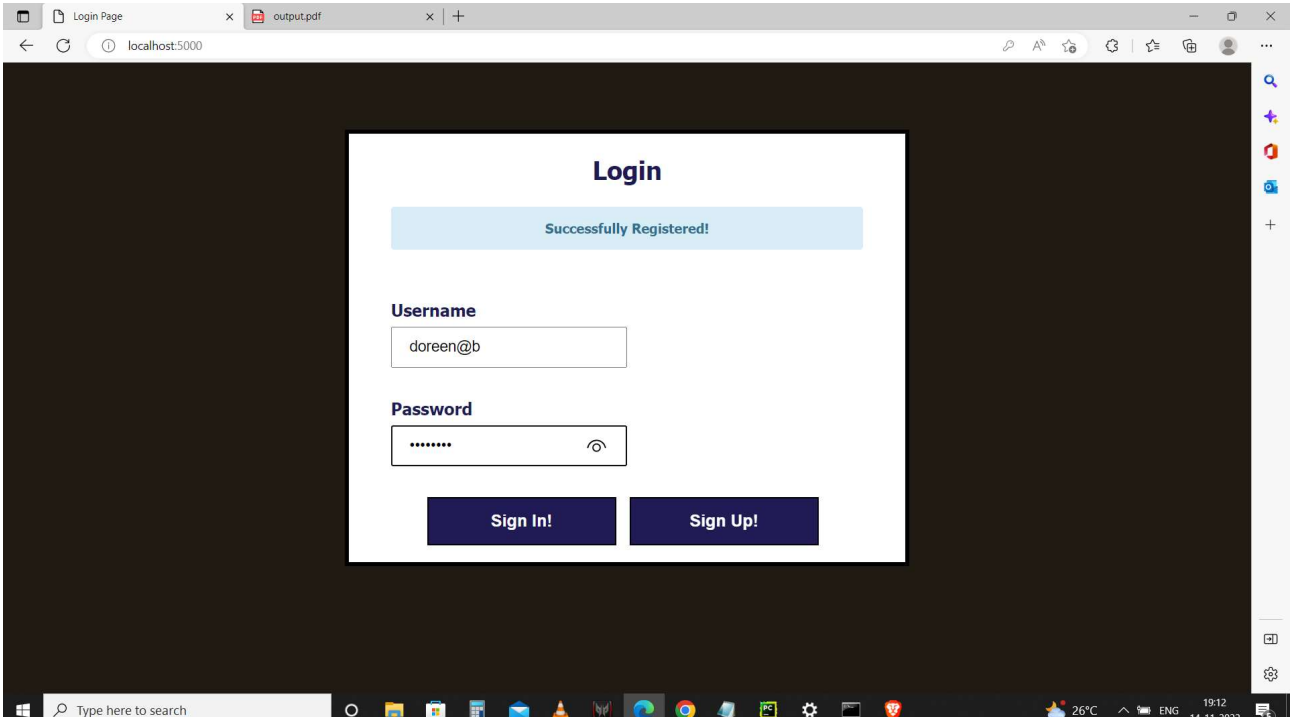


## Database updated upon registration



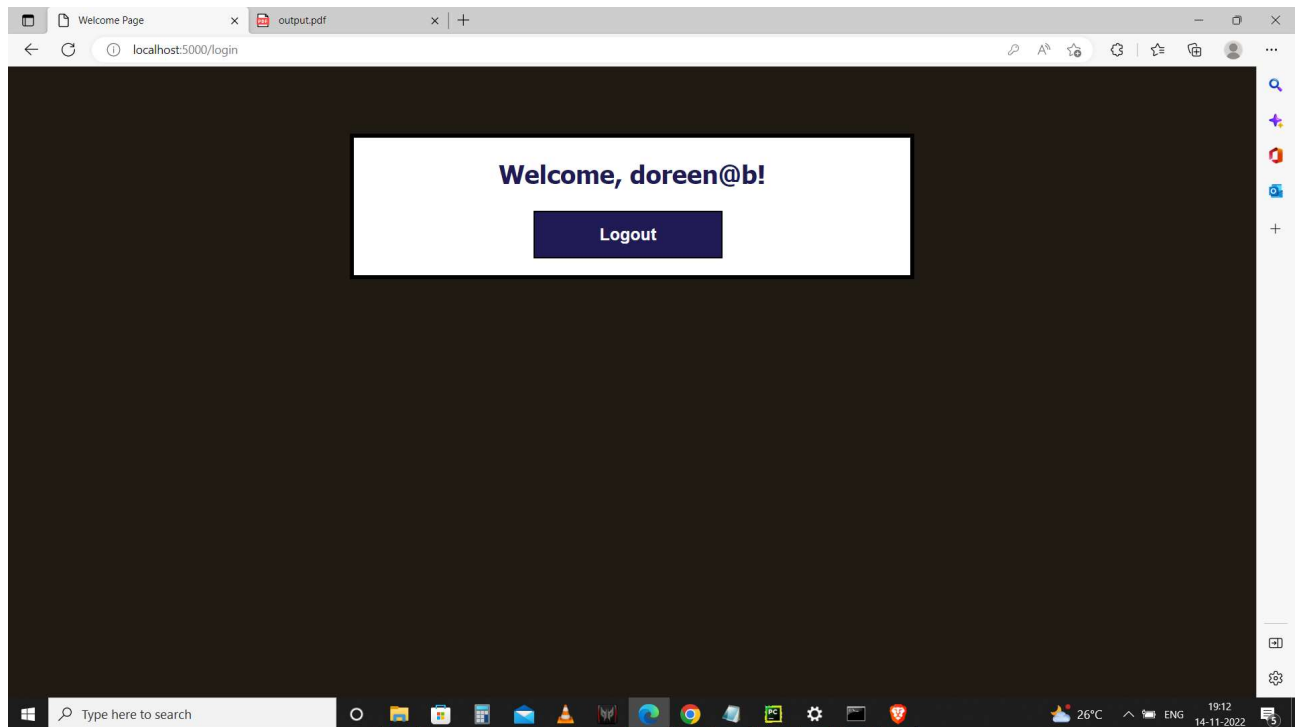
The screenshot shows the IBM Db2 on Cloud console interface. The browser address bar displays the URL: `bpe61bfd0365e9u4psdglite.db2.cloud.ibm.com/cm%3Av1%3Abluemix%3Apublic%3Adashdb-for-transactions%3Aus-south%3Av%2Fa4b5297f29a4691870a8ec996d4d6d1%3Abb6...`. The console header includes tabs for Load Data, Load History, Tables, Views, Indexes, Aliases, MQTs, Sequences, and Application objects. The left sidebar contains icons for SQL, Tables, Views, Indexes, Aliases, MQTs, Sequences, and Application objects. The main content area displays a table named `XRD94478.USER`. The table has four columns: EMAIL, USERNAME, ROLLNO, and PASSWORD. The data row shows: EMAIL: 19ec020, USERNAME: doreen@b, ROLLNO: doreenbelinta, and PASSWORD: raingirl. A blue button labeled "Export to CSV" is visible in the top right corner of the table view. Below the table, a file named `data.csv` is shown with a "Show all" button. The Windows taskbar at the bottom indicates the system time as 19:11 on 14-11-2022.

EMAIL	USERNAME	ROLLNO	PASSWORD
19ec020	doreen@b	doreenbelinta	raingirl



The screenshot shows a web application interface for a login page. The browser address bar displays the URL: `localhost:5000`. The page has a dark background with a white login form. The form contains a "Login" title, a "Successfully Registered!" message, and fields for "Username" and "Password". The "Username" field contains the text `doreen@b`. The "Password" field is masked with asterisks. Below the fields are two buttons: "Sign In!" and "Sign Up!". The Windows taskbar at the bottom indicates the system time as 19:12 on 14-11-2022.

# Welcome Page Rendered on Successful Login



## Terminal

