

## Assignment -1

### Python Flask

Assignment Date	27 September 2022
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Maximum Marks	2 Marks

#### Question-1:

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

#### Solution:

The screenshot shows the IBM Db2 on Cloud web interface. The 'Tables' tab is selected, and the 'USERS' table is highlighted. The 'Table definition' panel on the right shows the table structure:

Name	Data type	Nullable	Length	Scale
USERNAME	CHAR	Y	50	0
EMAIL	CHAR	Y	50	0
PASSWORD	CHAR	Y	50	0
ROLLNO	CHAR	Y	50	0

The table has approximately 1 row (32.0 KB) and was updated on 2022-11-02 07:57:38. A 'View data' button is visible at the bottom of the table definition panel.

#### Question-2:

2. Perform UPDATE,DELETE Queries with user table?

#### Solution:

##### Update

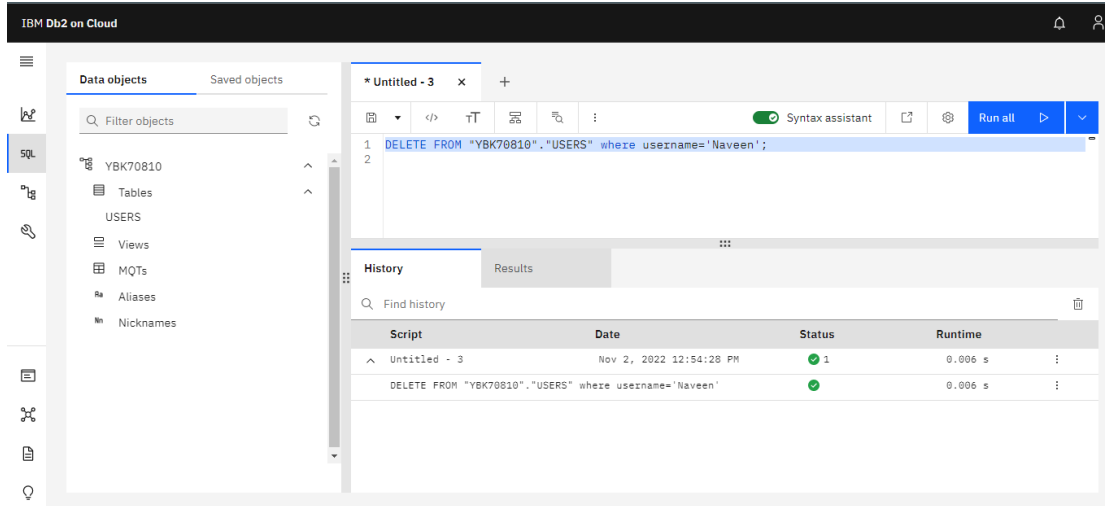
The screenshot shows the IBM Db2 on Cloud web interface with an SQL editor. The query entered is:

```
UPDATE "YBK70810"."USERS" set rollno='19cs101' where username='TLF3411';
```

The 'History' tab is selected, showing the execution of the query:

Script	Date	Status	Runtime
Untitled - 3	Nov 2, 2022 12:57:15 PM	1	0.005 s
UPDATE "YBK70810"."USERS" set rollno='19cs101' where username='...			0.005 s

## Delete



### Question-3:

3. Connect python code to db2?

### Solution:



### Question-4:

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

### Solution:

### Display.html

```

display.html X
templates > display.html > html
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8" />
5   <meta http-equiv="X-UA-Compatible" content="IE=edge" />
6   <meta name="viewport" content="width=device-width, initial-scale=1.0" />
7   <link rel="stylesheet" href="../../static/CSS/display.css" />
8   <title>Welcome Page</title>
9 </head>
10 <body style="background-color: #blanchedalmond;">
11
12   <div class="card">
13     <h1>Welcome</h1>
14     <h2>{{name}}</h2>
15     <p class="title">{{ msg }}</p>
16     <p></p>
17
18     <p><button>IBM</button></p>
19   </div>
20
21 </body>
22 </html>
23

```

## Login.html

```

login.html X
templates > login.html > html
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8" />
5   <meta http-equiv="X-UA-Compatible" content="IE=edge" />
6   <meta name="viewport" content="width=device-width, initial-scale=1.0" />
7   <title>Login Page</title>
8   <link rel="stylesheet" href="../../static/CSS/style.css" />
9 </head>
10 <body>
11   <div class="container">
12     <div class="login text-center mt-5">
13       <h1>Login Form</h1>
14       <hr>
15       <form action="/login" method="post">
16         <div class="msg">{{ msg }}</div>
17         <label for="username"><b>Username:</b></label>
18         <input type="text" name="username" placeholder="Enter Your Username" id="username" required />
19         <label for="password"><b>Password:</b></label>
20         <input type="password" name="password" placeholder="Enter Your Password" id="password" required />
21         <button type="submit" id="button" class="registerbtn">Login</button>
22       </form>
23     </div>
24     <div class="note mt-3 text-center">
25       <p>
26         Don't have an account yet? Click here to <a href="/">register! </a>
27       </p>
28     </div>
29   </div>
30 </body>
31 </html>

```

## Register.html

```

register.html X
templates > register.html > html
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
5    <link rel="stylesheet" href="../static/CSS/style.css" />
6    <title>Registration page</title>
7  </head>
8  <body>
9    <form action="http://localhost:3030/" method="post">
10     <div class="container">
11       <h1>Registration page</h1><hr />
12       <div class="msg">{{ msg }}</div>
13       <label for="username"><b>Username:</b></label>
14       <input type="text" placeholder="Enter your Username" name="username" id="username" required />
15       <label for="email"><b>Email:</b></label>
16       <input type="text" placeholder="Enter your Email" name="email" id="email" required />
17       <label for="rollno"><b>Roll number:</b></label>
18       <input type="text" id="rollno" name="rollno" placeholder="Enter your Rollno" />
19       <label for="password"><b>Password:</b></label>
20       <input type="password" id="password" name="password" placeholder="Enter your password" />
21       <button type="submit" class="registerbtn">Register</button>
22       <div class="note mt-3 text-center">
23         <p>already have an account ? please login <a href="/login">login! </a> </p>
24       </div>
25     </div>
26   </form>
27 </body>
28 </html>

```

## Display.css

```

register.html # display.css X
static > CSS > # display.css > .card
1  .card {
2    box-shadow: 0 4px 8px 0 rgba(0, 0, 0, 0.2);
3    max-width: 300px;
4    margin: auto;
5    text-align: center;
6    font-family: arial;
7    padding-top: 10px;
8    margin-top: 50px;
9    background-color: white;
10 }
11 .title {
12   color: grey;
13   font-size: 18px;
14 }
15 button {
16   border: none;
17   outline: 0;
18   display: inline-block;
19   padding: 8px;
20   color: white;
21   background-color: #000;
22   text-align: center;
23   cursor: pointer;
24   width: 100%;
25   font-size: 18px;
26 }
27 a {
28   text-decoration: none;
29   font-size: 22px;
30   color: black;
31 }
32 button:hover, a:hover {
33   opacity: 0.7;
34 }

```

## Style.css

```
# style.css X
static > CSS > # style.css > .registerbtn: hover
1  body {
2      font-family: Arial, Helvetica, sans-serif;
3      background-color: #white
4  }
5  * {
6      box-sizing: border-box;
7  }
8  .container {
9      padding: 100px;
10     background-color: #white;
11     margin: 10px;
12 }
13 }
14 h1{
15     text-align: center;
16 }
17 a{
18     text-decoration: none;
19     color: #blue;
20 }
21 input {
22     width: 100%;
23     padding: 15px;
24     margin: 5px 0 22px 0;
25     display: inline-block;
26     border: none;
27     background: #f1f1f1;
28 }
29 .registerbtn {
30     background-color: #blue;
31     color: #white;
32     padding: 16px 20px;
33     margin: 8px 0;
34     border: none;
35     cursor: pointer;
36     opacity: 0.9;
37 }
38 .registerbtn: hover {
39     opacity: 1;
40 }
```

## App.py

```
app.py > ...
1  from flask import Flask, render_template, request, redirect, url_for, session
2  import ibm_db
3  import re
4
5  app = Flask(__name__)
6  app.secret_key = 'a'
7  conn = ibm_db.connect("DATABASE=bludb;HOSTNAME=9938aec0-8105-433e-8bf9-0fbb7e483086.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud;PORT=32459;SECURITY=SSL;SSLServerCertificate=D
8
9  @app.route('/', methods=['GET', 'POST'])
10 def register():
11     msg = ''
12     if request.method == 'POST':
13         username = request.form['username']
14         email = request.form['email']
15         rollno = request.form['rollno']
16         password = request.form['password']
17         sql = "SELECT * FROM users WHERE username=?"
18         stmt = ibm_db.prepare(conn, sql)
19         ibm_db.bind_param(stmt, 1, username)
20         ibm_db.execute(stmt)
21         account = ibm_db.fetch_assoc(stmt)
22         print(account)
23         if account:
24             msg = 'Account already exists !'
25         elif not re.match(r'[^@]+\.[^@]+\.[^@]+', email):
26             msg = 'Invalid email address !'
27         elif not re.match(r'[A-Za-z0-9]+', username):
28             msg = 'name must contain only characters and numbers !'
29         else:
30             insert_sql = "INSERT INTO users VALUES (?, ?, ?, ?)"
31             prep_stmt = ibm_db.prepare(conn, insert_sql)
32             ibm_db.bind_param(prepare_stmt, 1, username)
33             ibm_db.bind_param(prepare_stmt, 2, email)
34             ibm_db.bind_param(prepare_stmt, 3, password)
35             ibm_db.bind_param(prepare_stmt, 4, rollno)
36             ibm_db.execute(prepare_stmt)
37             msg = 'You have successfully registered !'
38         elif request.method == 'POST':
39             msg = 'Please fill out the form !'
40     return render_template('register.html', msg = msg)
```

```

app.py X
app.py > ...
35         ibm_db.bind_param(prepare_stmt, 4, rollno)
36         ibm_db.execute(prepare_stmt)
37         msg = 'You have successfully registered !'
38     elif request.method == 'POST':
39         msg = 'Please fill out the form !'
40     return render_template('register.html', msg = msg)
41
42 @app.route('/login', methods = ['GET', 'POST'])
43 def login():
44     global userid
45     msg = ''
46
47     if request.method == 'POST' :
48         username = request.form['username']
49         password = request.form['password']
50         sql = "SELECT * FROM Users WHERE username=? AND password=?"
51         stmt = ibm_db.prepare(conn, sql)
52         ibm_db.bind_param(stmt,1,username)
53         ibm_db.bind_param(stmt,2,password)
54         ibm_db.execute(stmt)
55         account = ibm_db.fetch_assoc(stmt)
56         print (account)
57         if account:
58             session['loggedin'] = True
59             session['id'] = account['USERNAME']
60             userid= account['USERNAME']
61             session['username'] = account['USERNAME']
62             msg = 'Logged in successfully !'
63             return render_template('display.html', msg = msg, name = account['USERNAME'])
64         else:
65             msg = 'Incorrect username / password !'
66     return render_template('login.html', msg = msg)
67
68 if __name__ == '__main__':
69     app.run(host="localhost", port=3030, debug=True)

```

## Registration Page

←

→

↻

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🔍 localhost:3030

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☆

⚙️

🖱️

🟡 Screener

🟡 News

🟡 Broking

🟡 IBM

🟡 Some

🟡 FutureSkills Prime

🔴 DuckDuckGo — Pri...

## Registration page

Username:

Enter your Username

Email:

Enter your Email

Roll number:

Enter your Rollno

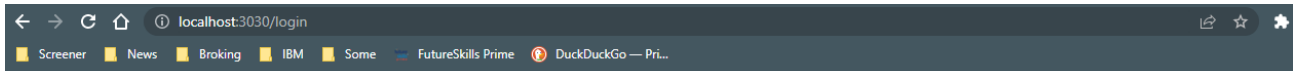
Password:

Enter your password

Register

already have an account ? please login [login!](#)

## Login Page



### Login Form

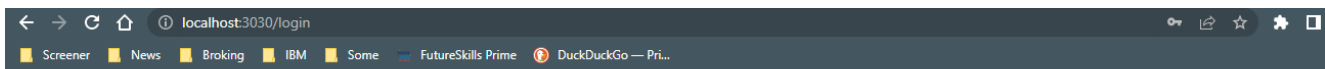
**Username:**

**Password:**

Login

Don't have an account yet? Click here to [register!](#)

## Welcome Page



**Welcome**

**TLF3411**

Logged in successfully !

IBM