

## Assignment -1

### Python Flask

Assignment Date	27 September 2022
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Student Roll Number	711319CS068
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 console. On the left, a sidebar contains navigation icons. The main area is titled 'Tables' and shows a table named 'USERS' under the schema 'YBK70810'. To the right, the 'Table definition' panel for 'USERS' is displayed, showing the following columns:

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

Below the table definition, there is a 'View data' button. The top of the console shows the 'Tables' tab selected in the navigation bar.

#### Question-2:

2. Perform UPDATE,DELETE Queries with user table?

#### Solution:

##### Update

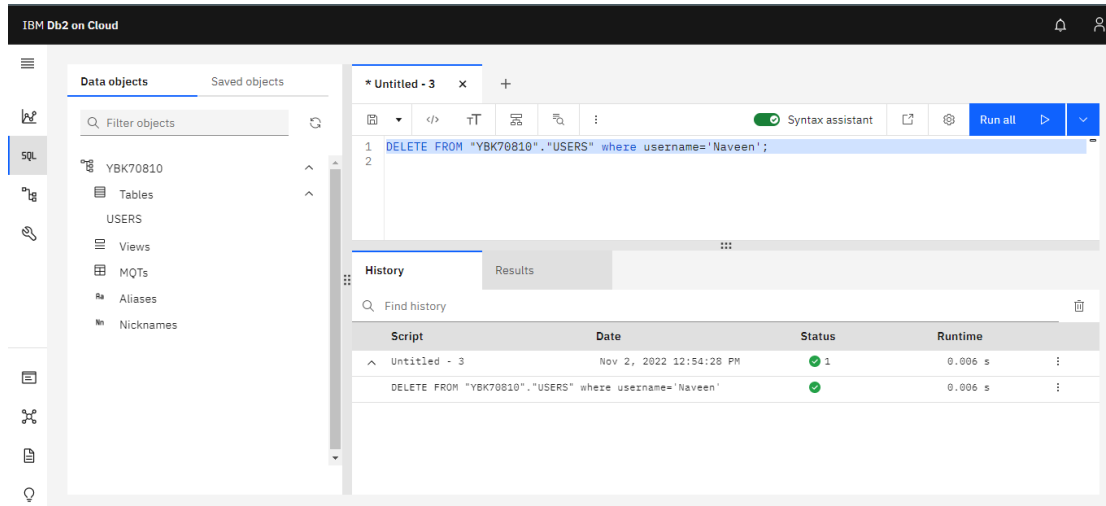
The screenshot shows the IBM Db2 on Cloud console with the 'SQL' tab selected. The main area displays an SQL editor with the following query:

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

Below the editor, the 'History' tab is active, showing a list of executed queries. The first query is the update query shown above, which was executed successfully on Nov 2, 2022 at 12:57:15 PM, with a runtime of 0.005 s.

Script	Date	Status	Runtime
UPDATE "YBK70810"."USERS" set rollno='19cs101' where username='TLF3411';	Nov 2, 2022 12:57:15 PM	✓ 1	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

Screener

News

Broking

IBM

Some

FutureSkills Prime

DuckDuckGo — Pri...

## Registration page

Username:

Enter your Username

Email:

Enter your Email

Roll number:

Enter your Rollno

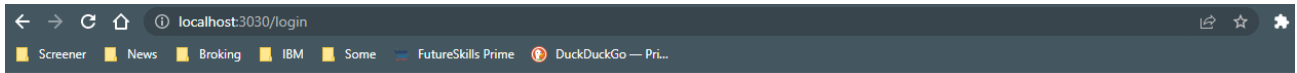
Password:

Enter your password

Register

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

## Login Page



### Login Form

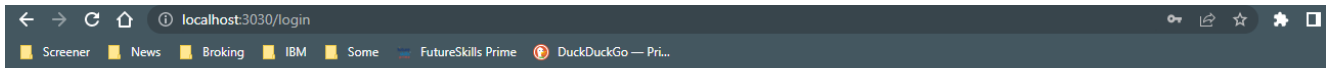
**Username:**

**Password:**

Login

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

## Welcome Page



**Welcome**

**TLF3411**

Logged in successfully !

IBM