

Assignment-2

| | |
|---------------------|------------------------|
| Assignment Date | 29 September 2022 |
| Name | S. TAMILSELVAN |
| Project Name | CUSTOMER CARE REGISTRY |
| Maximum mark | 2 Mark |

Questions: 1.

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

The screenshot displays the IBM Db2 on Cloud console interface. The top navigation bar includes tabs for various services and a search bar. The main content area is titled 'IBM Db2 on Cloud' and features a sidebar with navigation options: 'Load Data', 'Load History', 'Tables', 'Views', 'Indexes', 'Aliases', 'MQTs', 'Sequences', and 'Application objects'. The 'Tables' section is active, showing a list of tables. A table named 'USERTABLE' is selected, and its definition is displayed on the right. The table definition shows columns: USERNAME (CHAR, nullable), ROLLNUMBER (INTEGER, nullable), EMAIL (CHAR, nullable), and PASSWORD (CHAR, nullable). The console also shows a sidebar with navigation options like 'Load Data', 'Load History', 'Views', 'Indexes', 'Aliases', 'MQTs', 'Sequences', and 'Application objects'.

Table definition

| Name | Data type | Nullable | Length | Scale |
|------------|-----------|----------|--------|-------|
| USERNAME | CHAR | Y | 5 | 0 |
| ROLLNUMBER | INTEGER | Y | | 0 |
| EMAIL | CHAR | Y | 5 | 0 |
| PASSWORD | CHAR | Y | | |

[View data](#)

IBM Db2 on Cloud

Load Data Load History **Tables** Views Indexes Aliases MQTs Sequences Application objects

QNB92291.USERTABLE Back

| USERNAME | ROLL NUMBER | EMAIL | PASSWORD |
|---------------------------|-------------|-------|----------|
| There is no data here yet | | | |

29°C Cloudy 09:57 AM 21-10-2022

2. Perform UPDATE,DELETE Queries with user table.

IBM Db2 on Cloud

Data objects My script

Filter objects

QNB92291

*Untitled - 1

```
1 INSERT INTO USERTABLE VALUES('ARI',4005,'@mail','0987654')
```

History

| Script | Date | Status | Runtime |
|--|--------------------------|--------|---------|
| Untitled - 1 | Oct 21, 2022 10:12:00 AM | 1 | 0.008 s |
| INSERT INTO USERTABLE VALUES('ARI',4005,'@mail','0987654') | | | 0.008 s |

29°C Cloudy 10:12 AM 21-10-2022

IBM Db2 on Cloud

Load Data Load History **Tables** Views Indexes Aliases MQTs Sequences Application objects

QNB92291.USERTABLE

Back

Export to CSV

| USERNAME | ROLL NUMBER | EMAIL | PASSWORD |
|----------|-------------|-------|----------|
| ARI | 4005 | .com | 0987654 |
| ARI | 4005 | @mail | 0987654 |

29°C Cloudy 10:13 AM 21-10-2022

DELETE TABLE:

IBM Db2 on Cloud

Data objects My script

Filter objects

QNB92291

*Untitled - 1

Beta Classic

Syntax assistant Run all

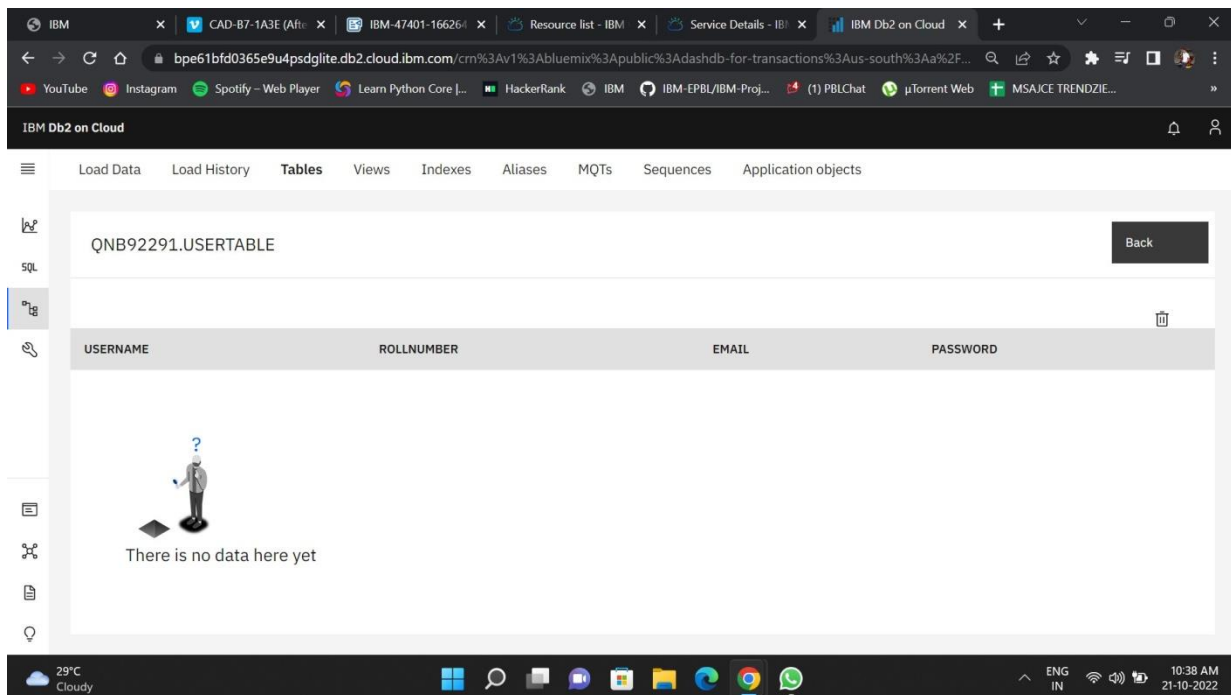
```
1 DELETE FROM USERTABLE WHERE ROLLNUMBER = 4005;
```

History

Find history

| Script | Date | Status | Runtime |
|---|--------------------------|--------|---------|
| Untitled - 1 | Oct 21, 2022 10:24:14 AM | 1 | 0.010 s |
| DELETE FROM USERTABLE WHERE ROLLNUMBER = 4005 | | | |
| Untitled - 1 | Oct 21, 2022 10:24:03 AM | 1 | 0.012 s |
| DELETE FROM USERTABLE WHERE ROLLNO = 4005 | | | |
| Untitled - 1 | Oct 21, 2022 10:22:07 AM | 1 | 0.009 s |

29°C Cloudy 10:24 AM 21-10-2022



3. Connect python code to db2

```

1 from flask import Flask, render_template, request, redirect,
  url_for, session
2 import ibm_db
3 import re
4 app = Flask(__name__)
5 app.secret_key = 'a'
6 conn =
  ibm_db.connect("DATABASE=User;HOSTNAME=bpe61bfd0365e9u4psdglite
  logj3sd0tgtu0lqde00.databases.appdomain.cloud;PORT=5671;USERNAME=
  Ari9767;PASSWORD=89gjhayugytueygg;SECURITY=SSL;
7 tGlobalRootCA.crt;", "", "")
8 @app.route("/", methods=['GET', 'POST'])
9 def register():
10 msg = ''
11 if request.method == 'POST':
12 username = request.form['username']
13 email = request.form['email']
14 password = request.form['password']
15 sql = "SELECT * FROM users WHERE username =?"
16 stmt = ibm_db.prepare(conn, sql)
17 ibm_db.bind_param(stmt, 1, username)

```

```
18 ibm_db.execute(stmt)
19 account = ibm_db.fetch_assoc(stmt)
20 print(account)
21 if account:
22 msg = 'Account already exists !'
23 elif not re.match(r'^@[^@]+\.[^@]+', email):
24 msg = 'Invalid email address !'
25 elif not re.match(r'[A-Za-z0-9]+', username):
26 msg = 'name must contain only characters and numbers !'
27 else:
28 insert_sql = "INSERT INTO users VALUES (?, ?, ?)"
29 prep_stmt = ibm_db.prepare(conn, insert_sql)
30 ibm_db.bind_param(prepare_stmt, 1, username)
31 ibm_db.bind_param(prepare_stmt, 2, email)
32 ibm_db.bind_param(prepare_stmt, 3, password)
33 ibm_db.execute(prepare_stmt)
34 msg = 'You have successfully registered !'
35 elif request.method == 'POST':
36 msg = 'Please fill out the form !'
37 return render_template('register.html', msg=msg)
38 @app.route('/login', methods=['GET', 'POST'])
39 def login():
40 global userid
41 msg = ''
42 if request.method == 'POST':
43 username = request.form['username']
44 password = request.form['password']
45 sql = "SELECT * FROM users WHERE username =? AND password=?"
46 stmt = ibm_db.prepare(conn, sql)
47 ibm_db.bind_param(stmt, 1, username)
48 ibm_db.bind_param(stmt, 2, password)
49 ibm_db.execute(stmt)
50 account = ibm_db.fetch_assoc(stmt)
51 print(account)
52 if account:
53 session['loggedin'] = True
54 session['id'] = account['USERNAME']
55 userid = account['USERNAME']
56 session['username'] = account['USERNAME']
57 msg = 'Logged in successfully !'
```

```

58 msg = 'Logged in successfully !'
59 return render_template('dashboard.html', msg=msg)
60 else:
61 msg = 'Incorrect username / password !'
62 return render_template('login.html', msg=msg)
63 if __name__ == '__main__':
64 app.run(host='0.0.0.0')
65 # app.run(debug=True)

```

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

App.py

```

1  from flask import Flask, render_template, request, redirect,
    url_for, session
2  import ibm_db
3  import re
4  app = Flask(__name__)
5  app.secret_key = 'a'
6  conn =
    ibm_db.connect("DATABASE=User;HOSTNAME=bpe61bfd0365e9u4psdglite.c
    logj3sd0tgtu0lqde00.databases.appdomain.cloud;PORT=5671;USERNAME=
    Ari9767;PASSWORD=89gjhayugytueygg;SECURITY=SSL;
7  tGlobalRootCA.crt;", "", "")
8  @app.route("/", methods=['GET', 'POST'])
9  def register():
10 msg = ''
11 if request.method == 'POST':
12 username = request.form['username']
13 email = request.form['email']
14 password = request.form['password']
15 sql = "SELECT * FROM users WHERE username =?"
16 stmt = ibm_db.prepare(conn, sql)
17 ibm_db.bind_param(stmt, 1, username)
18 ibm_db.execute(stmt)
19 account = ibm_db.fetch_assoc(stmt)

```

```
20 print(account)
21 if account:
22 msg = 'Account already exists !'
23 elif not re.match(r'^@+@[^@]+\.[^@]+', email):
24 msg = 'Invalid email address !'
25 elif not re.match(r'[A-Za-z0-9]+', username):
26 msg = 'name must contain only characters and numbers !'
27 else:
28 insert_sql = "INSERT INTO users VALUES (?, ?, ?)"
29 prep_stmt = ibm_db.prepare(conn, insert_sql)
30 ibm_db.bind_param(prepare_stmt, 1, username)
31 ibm_db.bind_param(prepare_stmt, 2, email)
32 ibm_db.bind_param(prepare_stmt, 3, password)
33 ibm_db.execute(prepare_stmt)
34 msg = 'You have successfully registered !'
35 elif request.method == 'POST':
36 msg = 'Please fill out the form !'
37 return render_template('register.html', msg=msg)
38 @app.route('/login', methods=['GET', 'POST'])
39 def login():
40 global userid
41 msg = ''
42 if request.method == 'POST':
43 username = request.form['username']
44 password = request.form['password']
45 sql = "SELECT * FROM users WHERE username =? AND password=?"
46 stmt = ibm_db.prepare(conn, sql)
47 ibm_db.bind_param(stmt, 1, username)
48 ibm_db.bind_param(stmt, 2, password)
49 ibm_db.execute(stmt)
50 account = ibm_db.fetch_assoc(stmt)
51 print(account)
52 if account:
53 session['loggedin'] = True
54 session['id'] = account['USERNAME']
55 userid = account['USERNAME']
56 session['username'] = account['USERNAME']
57 msg = 'Logged in successfully !'
58 msg = 'Logged in successfully !'
59 return render_template('dashboard.html', msg=msg)
```

```
60 else:
61 msg = 'Incorrect username / password !'
62 return render_template('login.html', msg=msg)
63 if __name__ == '__main__':
64 app.run(host='0.0.0.0')
65 # app.run(debug=True)
```

Login:

```
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>Customer Care Login</title>
8 <!-- favicon -->
9 <!-- <link rel="shortcut icon" href="/assets/img/favicon.ico"
10 type="image/x-icon"> -->
11 <!-- <link rel="icon" href="/assets/img/favicon.ico"
    type="image/x-icon">
12 -->
13 <link rel="icon" type="image/png" sizes="16x16"
    href="/assets/img/favicon32x32.png">
14 <!-- bootstrap css cdn -->
15 <link rel="stylesheet"
16 href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/boot
  strap.min.css
17 "
18 integrity="sha384-
19 JcKb8q3iqJ61gNV9KGb8thSsNjpsL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"
20 crossorigin="anonymous">
21 <link rel="stylesheet"
    href="https://cdn.jsdelivr.net/npm/font-awesome/4.7.0/cs
    s/font-awesome.css">
22 <!-- css stylesheet -->
23 <link rel="stylesheet" href="/static/css/style2.css">
24 <!-- font styles cdn -->
```



```
25 <link rel="preconnect" href="https://fonts.gstatic.com">
26 <link
27 href="https://fonts.googleapis.com/css2?family=Alegreya&display=s
  wap"
28 rel="stylesheet">
29 <link
30 href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&
  display=swap"
31 rel="stylesheet">
32 </head>
33 <body>
34 <div class="login text-center mt-5">
35 <form action="/login" method="post">
36 <h2 class="form-text-h2"> Login Form </h2>
37 <div class="msg">{{ msg }}</div>
38 <div class="form-group mb-3">
39 <label class="label" for="username">Username</label>
40 <input type="text" class="form-control" placeholder="Username"
41 name="username" required>
42 </div>
43 <div class="form-group mb-3">
44 <label class="label" for="password">Password</label>
45 <input type="password" class="form-control"
46 placeholder="Password" name="password" required>
47 </div>
48 <button type="submit" id="button" class="btn btn-primary"> Login
49 </button>
50 <div class="note mt-3 text-center">
51 <!--Register form -->
52 <p> Don't have an account yet? Click here to <a
53 href="/">register </a> </p>
54 </div>
55 </form>
56 </div>
57 </body>
58 </html>
```

Register:

```
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> Customer care Registry</title>
8 <!-- bootstrap css cdn -->
9 <link rel="stylesheet"
10 href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstr
  ap.min.css
11 "
12 integrity="sha384-
13 JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"
14 crossorigin="anonymous">
15 <link rel="stylesheet"
  href="https://cdnjs.cloudflare.com/ajax/libs/fontawesome/4.7.0/css/f
  ont-awesome.css">
16 <!-- css stylesheet -->
17 <link rel="stylesheet" href="/static/css/style.css">
18 <!-- font styles cdn -->
19 <link rel="preconnect" href="https://fonts.gstatic.com">
20 <link
21 href="https://fonts.googleapis.com/css2?family=Alegreya&display=swa
  p"
22 rel="stylesheet">
23 <link
24 href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&dis
  play=swap"
25 rel="stylesheet">
26 </head>
27 <body>
28 <!-- bootstrap navbar -->
```

```

29 <!-- navbar ends -->
30 <!-- Login form -->
31 <div class="login text-center mt-5">
32 <form action="/" method="post">
33 <h2 class="form-text-h2"> Register Form </h2>
34 <div class="msg">{{ msg }}</div>
35 <input type="text" class="form-control" name="username"
36 placeholder="Enter Your Username" id="username"
37 required>
38 <input type="email" class="form-control" name="email"
39 placeholder="Enter Your Email ID" id="email" required>
40 <input type="password" class="form-control" name="password"
41 placeholder="Enter Your Password" id="password"
42 required>
43 <button type="submit" id="button" class="btn btn-primary">
44 Register </button>
45 <div class="note mt-3 text-center">
46 <!--Register form -->
47 <p> already have an account ? please login <a
48 href="/login">login.. </a> </p>
49 </div>
50 </form>
51 </div>
52 </body>
53 </html>

```

Style.css

```

1 * {
2     margin: 0;
3     padding: 0;
4 }
5 body {
6     background-color: aqua !important;

```

```
7     display: flex;
8     flex-direction: column;
9     align-items: center;
10    justify-content: center;
11    }
12    form {
13        display: flex;
14        flex-direction: column;
15        align-items: center;
16        justify-content: center;
17        background-color: white;
18        width: 40%;
19        height: 450px;
20        border-radius: 50px;
21        margin: 100px;
22        gap: 25px;
23    }
24    h2 {
25        font-size: large;
26        font-weight: bolder;
27    }
28    input {
29        width: 80% !important;
30    }
31    div {
32        display: flex;
33        align-items: center;
34        justify-content: center;
35        flex-direction: column;
36        width: 90%;
37    }
38    .form-text-vk {
39        font-size: small;
40        padding-bottom: 10px;
41    }
42    .form-text-h2 {
43        font-size: x-large;
44        padding-top: 10px;
45    }
```

The DataBase is created:

The screenshot shows the IBM Db2 on Cloud web interface. The browser tabs include 'IBM', 'Catalog - IBM Cloud', 'Service Details - IBM Cloud', and 'IBM Db2 on Cloud'. The address bar shows a URL from 'bpe61bfd0365e9u4psdglite.db2.cloud.ibm.com'. The page title is 'IBM Db2 on Cloud'. The navigation bar includes 'Load Data', 'Load History', 'Tables', 'Views', 'Indexes', 'Aliases', 'MQTs', 'Sequences', and 'Application objects'. The 'Tables' tab is selected, showing a table named 'QNB92291.USER'. The table has three columns: 'USERNAME', 'EMAIL', and 'PASSWORD'. The first row of data shows 'Ari' for USERNAME, 'tariharn6@gmail.com' for EMAIL, and '12345' for PASSWORD. There is a 'Back' button in the top right corner of the table view and an 'Export to CSV' button. The left sidebar contains icons for 'SQL' and 'Data Explorer'. The bottom status bar shows '32°C Cloudy', system icons, and the time '11:32 AM 21-10-2022'.

| USERNAME | EMAIL | PASSWORD |
|----------|---------------------|----------|
| Ari | tariharn6@gmail.com | 12345 |