

Assignment -2

IBM CLOUD DB2

Assignment Date	29 September 2022
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Maximum Marks	2 Marks

Questions:

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

The first screenshot shows the IBM Db2 on Cloud console interface. The 'Tables' tab is selected, and a search for 'USERTABLE' in schema 'DTP46044' has been performed. The 'Table definition' panel on the right shows the structure of the 'USERTABLE' table:

Name	Data type	Nullable	Length	Scale
USERNAME	CHAR	Y	5	0
ROLLNUMBER	INTEGER	Y		0
EMAIL	CHAR	Y	5	0
PASSWORD	VARCHAR	Y	32	0

The second screenshot shows the 'View data' page for the table 'DTP46044.USERTABLE'. The table header is visible with columns: USERNAME, ROLLNUMBER, EMAIL, and PASSWORD. Below the header, there is a message: 'There is no data here yet' accompanied by an icon of a person with a question mark.

2. Perform UPDATE,DELETE Queries with user table.

UPDATE TABLE:-

The screenshot shows the IBM Db2 on Cloud SQL editor interface. On the left, the 'Data objects' pane shows a database named 'DTP46044'. The main editor area shows a script titled 'Untitled - 1' with the following SQL query:

```
1 INSERT INTO USERTABLE VALUES ('VK',21,'VK@gamil.com','1234')
```

The 'History' pane at the bottom shows the execution of the script:

Script	Date	Status	Runtime
Untitled - 1	Oct 10, 2022 12:51:13 PM	✓ 1	0.018 s
INSERT INTO USERTABLE VALUES ('VK',21,'VK@gamil.com','1234')		✓	0.018 s

The screenshot shows the IBM Db2 on Cloud SQL editor interface displaying the contents of the 'DTP46044.USERTABLE' table. The table has four columns: USERNAME, ROLLNO, EMAIL, and PASSWORD. The data is as follows:

USERNAME	ROLLNO	EMAIL	PASSWORD
VK	21	VK@gamil.com	1234

DELETE TABLE:-

The screenshot shows the IBM Db2 on Cloud web interface. The top navigation bar includes 'Load Data', 'Load History', 'Tables', 'Views', 'Indexes', 'Aliases', 'MQTs', 'Sequences', and 'Application objects'. The 'Tables' tab is selected, displaying a table named 'DTP46044.USERTABLE'. The table has four columns: 'USERNAME', 'ROLLNO', 'EMAIL', and 'PASSWORD'. The data rows are as follows:

USERNAME	ROLLNO	EMAIL	PASSWORD
PARAMESH	21	VK@gamil.com	1234
VK	23	VK@gamil.com	12034

Buttons for 'Back' and 'Export to CSV' are visible in the top right corner of the table view.

The screenshot shows the IBM Db2 on Cloud web interface with the SQL editor open. The script being executed is:

```
1 DELETE FROM USERTABLE WHERE ROLLNO = 23 ;
```

The 'History' tab is selected, showing a table of execution history:

Script	Date	Status	Runtime
Untitled - 1	Oct 10, 2022 1:02:49 PM	✓ 1	0.006 s
DELETE FROM USERTABLE WHERE ROLLNO = 23		✓	0.006 s
Untitled - 1	Oct 10, 2022 1:00:11 PM	✓ 1	0.007 s
INSERT INTO USERTABLE VALUES ('VK',23,'VK@gamil.com','12034')		✓	0.007 s
Untitled - 1	Oct 10, 2022 12:59:55 PM	✗ 1	0.044 s

The screenshot shows the IBM Db2 on Cloud console interface. The top navigation bar includes tabs for Load Data, Load History, Tables, Views, Indexes, Aliases, MQTs, Sequences, and Application objects. The 'Tables' tab is selected, displaying a table named 'DTP46044.USERTABLE'. The table has four columns: USERNAME, ROLLNO, EMAIL, and PASSWORD. A single record is visible with the values: PARAMESH, 21, VK@gamil.com, and 1234. The interface also includes a 'Back' button, an 'Export to CSV' button, and a search icon. The bottom status bar shows the time as 12:56 on 10-10-2022.

USERNAME	ROLLNO	EMAIL	PASSWORD
PARAMESH	21	VK@gamil.com	1234

3. Connect python code to db2.

NOTE:- Question 4 contains Question 3 answer

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

Answers

App.py

```
from flask import Flask, render_template, request, redirect, url_for, session
import ibm_db
import re

app = Flask(__name__)

app.secret_key = 'a'

conn = ibm_db.connect(
    "DATABASE=bludb;HOSTNAME=fbd88901-ebdb-4a4f-a32e-9822b9fb237b.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud;PORT=32731;USERNAM
E=dt46044;PASSWORD=95soX0sZGhb4ToUj;SECURITY=SSL;SSLSERVERCERTIFICATE=DigiCer
tGlobalRootCA.crt;", "", "")

@app.route("/", methods=['GET', 'POST'])
def register():
    msg = ''
    if request.method == 'POST':
        username = request.form['username']
```

```

email = request.form['email']
password = request.form['password']
sql = "SELECT * FROM users WHERE username =?"
stmt = ibm_db.prepare(conn, sql)
ibm_db.bind_param(stmt, 1, username)
ibm_db.execute(stmt)
account = ibm_db.fetch_assoc(stmt)
print(account)
if account:
    msg = 'Account already exists !'
elif not re.match(r'^@+@[^@]+\.[^@]+', email):
    msg = 'Invalid email address !'
elif not re.match(r'[A-Za-z0-9]+', username):
    msg = 'name must contain only characters and numbers !'
else:
    insert_sql = "INSERT INTO users VALUES (?, ?, ?)"
    prep_stmt = ibm_db.prepare(conn, insert_sql)
    ibm_db.bind_param(prepare_stmt, 1, username)
    ibm_db.bind_param(prepare_stmt, 2, email)
    ibm_db.bind_param(prepare_stmt, 3, password)
    ibm_db.execute(prepare_stmt)
    msg = 'You have successfully registered !'
elif request.method == 'POST':
    msg = 'Please fill out the form !'
return render_template('register.html', msg=msg)

```

```
@app.route('/login', methods=['GET', 'POST'])
```

```
def login():
```

```
    global userid
```

```
    msg = ''
```

```
    if request.method == 'POST':
```

```
        username = request.form['username']
```

```
        password = request.form['password']
```

```
        sql = "SELECT * FROM users WHERE username =? AND password=?"
```

```
        stmt = ibm_db.prepare(conn, sql)
```

```
        ibm_db.bind_param(stmt, 1, username)
```

```
        ibm_db.bind_param(stmt, 2, password)
```

```
        ibm_db.execute(stmt)
```

```
        account = ibm_db.fetch_assoc(stmt)
```

```
        print(account)
```

```
        if account:
```

```
            session['loggedin'] = True
```

```
            session['id'] = account['USERNAME']
```

```
            userid = account['USERNAME']
```

```
            session['username'] = account['USERNAME']
```

```
            msg = 'Logged in successfully !'
```

```

        msg = 'Logged in successfully !'
        return render_template('dashboard.html', msg=msg)
    else:
        msg = 'Incorrect username / password !'
        return render_template('login.html', msg=msg)

if __name__ == '__main__':
    app.run(host='0.0.0.0')
    # app.run(debug=True)

```

Register.html

```

<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Smart Fashion register</title>

    <!-- bootstrap css cdn -->
    <link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css"
"
        integrity="sha384-
JcKb8q3iqJ61gNV9KGb8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"
crossorigin="anonymous">
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.css">
    <!-- css stylesheet -->
    <link rel="stylesheet" href="/static/css/style.css">
    <!-- font styles cdn -->
    <link rel="preconnect" href="https://fonts.gstatic.com">
    <link
href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"
rel="stylesheet">
    <link
href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
</head>

<body>
    <!-- bootstrap navbar -->
    <!-- navbar ends -->
    <!-- Login form -->
    <div class="login text-center mt-5">

```

```

        <form action="/" method="post">
            <h2 class="form-text-h2"> Register Form </h2>
            <div class="msg">{{ msg }}</div>
            <input type="text" class="form-control" name="username"
placeholder="Enter Your Username" id="username"
                required>
            <input type="email" class="form-control" name="email"
placeholder="Enter Your Email ID" id="email" required>
            <input type="password" class="form-control" name="password"
placeholder="Enter Your Password" id="password"
                required>
            <button type="submit" id="button" class="btn btn-primary">
Register </button>
            <div class="note mt-3 text-center">
                <!--Register form -->
                <p> already have an account ? please login <a
href="/login">login! </a> </p>

            </div>
        </form>

    </div>

</body>

</html>

```

Login.html

```

<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Smart Fashion Login</title>
    <!-- favicon -->
    <!-- <link rel="shortcut icon" href="/assets/img/favicon.ico"
type="image/x-icon"> -->
    <!-- <link rel="icon" href="/assets/img/favicon.ico" type="image/x-icon">
-->
    <link rel="icon" type="image/png" sizes="16x16" href="/assets/img/favicon-
32x32.png">
    <!-- bootstrap css cdn -->
    <link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css
"

```

```

        integrity="sha384-
JcKb8q3iqJ61gNV9KgB8thSsNjpSL0n8PARn9HuZOnIxN0hoP+VmmDGMN5t9UJ0Z"
crossorigin="anonymous">
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.css">
    <!-- css stylesheet -->
    <link rel="stylesheet" href="/static/css/style2.css">
    <!-- font styles cdn -->
    <link rel="preconnect" href="https://fonts.gstatic.com">
    <link
href="https://fonts.googleapis.com/css2?family=Alegreya&display=swap"
rel="stylesheet">
    <link
href="https://fonts.googleapis.com/css2?family=Alegreya:wght@600&display=swap"
rel="stylesheet">
</head>

<body>

    <div class="login text-center mt-5">

        <form action="/login" method="post">
            <h2 class="form-text-h2"> Login Form </h2>
            <div class="msg">{{ msg }}</div>
            <div class="form-group mb-3">
                <label class="label" for="username">Username</label>
                <input type="text" class="form-control" placeholder="Username"
name="username" required>
            </div>
            <div class="form-group mb-3">
                <label class="label" for="password">Password</label>
                <input type="password" class="form-control"
placeholder="Password" name="password" required>
            </div>

            <button type="submit" id="button" class="btn btn-primary"> Login
</button>

            <div class="note mt-3 text-center">
                <!--Register form -->
                <p> Don't have an account yet? Click here to <a
href="/">register! </a> </p>
            </div>
        </form>
    </div>

</body>

</html>

```


Style.css

```
* {
  margin: 0;
  padding: 0;
}

body {
  background-color: aqua !important;
  display: flex;
  flex-direction: column;
  align-items: center;
  justify-content: center;
}

form {
  display: flex;
  flex-direction: column;
  align-items: center;
  justify-content: center;
  background-color: white;
  width: 40%;
  height: 450px;
  border-radius: 50px;
  margin: 100px;
  gap: 25px;
}

h2 {
  font-size: large;
  font-weight: bolder;
}

input {
  width: 80% !important;
}

div {
  display: flex;
  align-items: center;
  justify-content: center;
  flex-direction: column;
  width: 90%;
}

.form-text-vk {
  font-size: small;
  padding-bottom: 10px;
}
```

```
}  
  
.form-text-h2 {  
  font-size: x-large;  
  padding-top: 10px;  
}
```

Output:-

registration page:-

Register Form

Parameshwaran

parameshvk3232@gmail.com

Enter Your Password

Register

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

Login Page:-

Login Form

Username

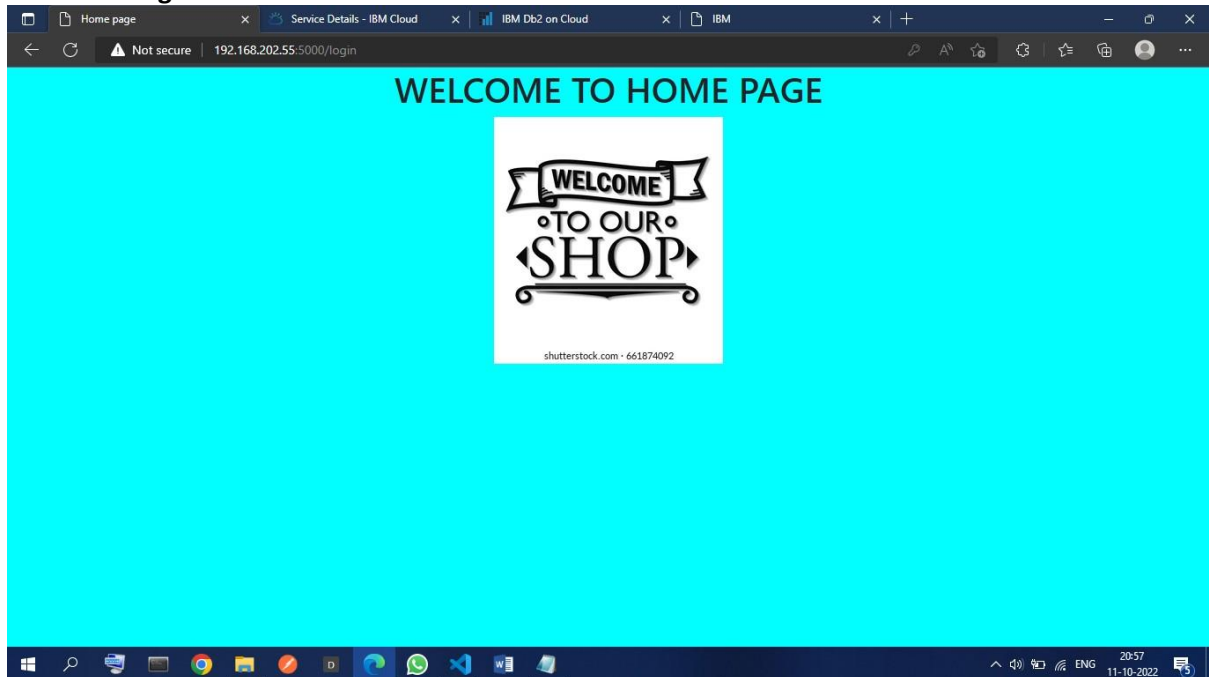
Parameshwaran

Password

Login

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

Welcome Page:-



Data Base Table :-

