

Assignment -2

IBM CLOUD DB2

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Maximum Marks	2 Marks

Questions:

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

The screenshot displays the IBM Db2 on Cloud web 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 active, showing a list of tables in the 'FXW61107' schema. Two tables are listed: 'STUDENT' and 'STUDENTS'. The 'STUDENTS' table is selected, and its definition is shown in the right-hand pane. The table definition pane displays the following columns:

Name	Data type	Nullable	Length	Scale
USERNAME	CHAR	Y	5	0
ROLL NUMBER	INTEGER	Y		0
EMAIL ID	VARCHAR	Y	32	0
PASSWOED	VARCHAR	Y	32	0

Below the table definition, there is a 'View data' button. The bottom status bar shows the system temperature as 32°C Cloudy, the time as 07:22, and the date as 19-10-2022.

2. Perform UPDATE,DELETE Queries with user table.

UPDATE TABLE:-

The screenshot shows the IBM Db2 on Cloud console interface. On the left, the 'Data objects' tab is active, displaying a list of objects including 'FXW61107'. The main area shows a script editor with the following SQL query:

```
INSERT INTO STUDENT values ('sindu','9','sindhu@gmail.com','sneka');
```

The query has been executed successfully. The 'History' tab at the bottom shows the execution details:

Script	Date	Status	Runtime
Untitled - 1	Oct 19, 2022 7:22:07 PM	✓ 1	0.011 s
INSERT INTO STUDENT values ('sindu','9','sindhu@gmail.com','sne...		✓	0.011 s

The screenshot shows the IBM Db2 on Cloud console interface, specifically the 'Tables' tab. The table 'FXW61107.STUDENTS' is displayed. The table structure and data are as follows:

USERNAME	ROLL NUMBER	EMAIL ID	PASSWOED
kim	77	kimsa@gmail.com	krish
krish	77	krishnaveni@gmail.com	krish

DELETE TABLE:-

The screenshot displays the IBM Db2 on Cloud web interface. On the left, a sidebar contains navigation icons for Data objects, My script, and SQL. The main area is divided into two panes. The top pane, titled 'Data objects', shows a search bar and a list of objects, including 'FXW61107'. The bottom pane, titled 'My script', shows a list of scripts, including 'Untitled - 1'. The 'Untitled - 1' script is selected, and its content is displayed in the editor. The script contains three lines of SQL: 1. INSERT INTO STUDENTS values ('sindu','9','sindhu@gmail.com','sneka'); 2. INSERT INTO STUDENTS values ('lisa','9','lisa@gmail.com','sneka'); 3. DELETE FROM STUDENTS WHERE USERNAME='lisa'. Below the editor, a 'History' tab is active, showing a table of execution history. The table has four columns: Script, Date, Status, and Runtime. The first two rows show successful insertions. The third row shows a successful deletion. The fourth row shows a failed deletion with a warning icon and a message '1'.

Script	Date	Status	Runtime
Untitled - 1	Oct 19, 2022 7:25:25 PM	3	0.017 s
INSERT INTO STUDENTS values ('sindu','9','sindhu@gmail.com','sneka');		✓	0.006 s
INSERT INTO STUDENTS values ('lisa','9','lisa@gmail.com','sneka');		✓	0.005 s
DELETE FROM STUDENTS WHERE USERNAME='lisa'		✓	0.006 s
Untitled - 1	Oct 19, 2022 7:24:37 PM	2 ⚠ 1	0.020 s

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=Db2New;HOSTNAME=19af6446-6171-4641-8aba-9dcff8e1b6ff.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud;PORT=30699;USERNAM
E=kgb92696;PASSWORD=3IlWYGyU3bMIvwnX;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'^[a-zA-Z0-9]+@[a-zA-Z0-9]+\.[a-zA-Z0-9]+$', email):
            msg = 'Invalid email address !'
        elif not re.match(r'^[A-Za-z0-9]+$', 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="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="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 {
    color: #444444;
    background: linear-gradient(-45deg, #EE7752, #E73C7E, #23A6D5, #23D5AB);
    background-size: 400% 400%;
    position: relative;
    display: flex;
    flex-direction: column;

```



```

        align-items: center;
        justify-content: center;
        animation: anime 10s ease-in-out infinite;
    }
    @keyframes anime{
        0%{
            background-position: 0 50%;
        }
        50%{
            background-position: 100% 50%;
        }
        100%{
            background-position: 0 50%;
        }
    }
}

```

```

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;
}

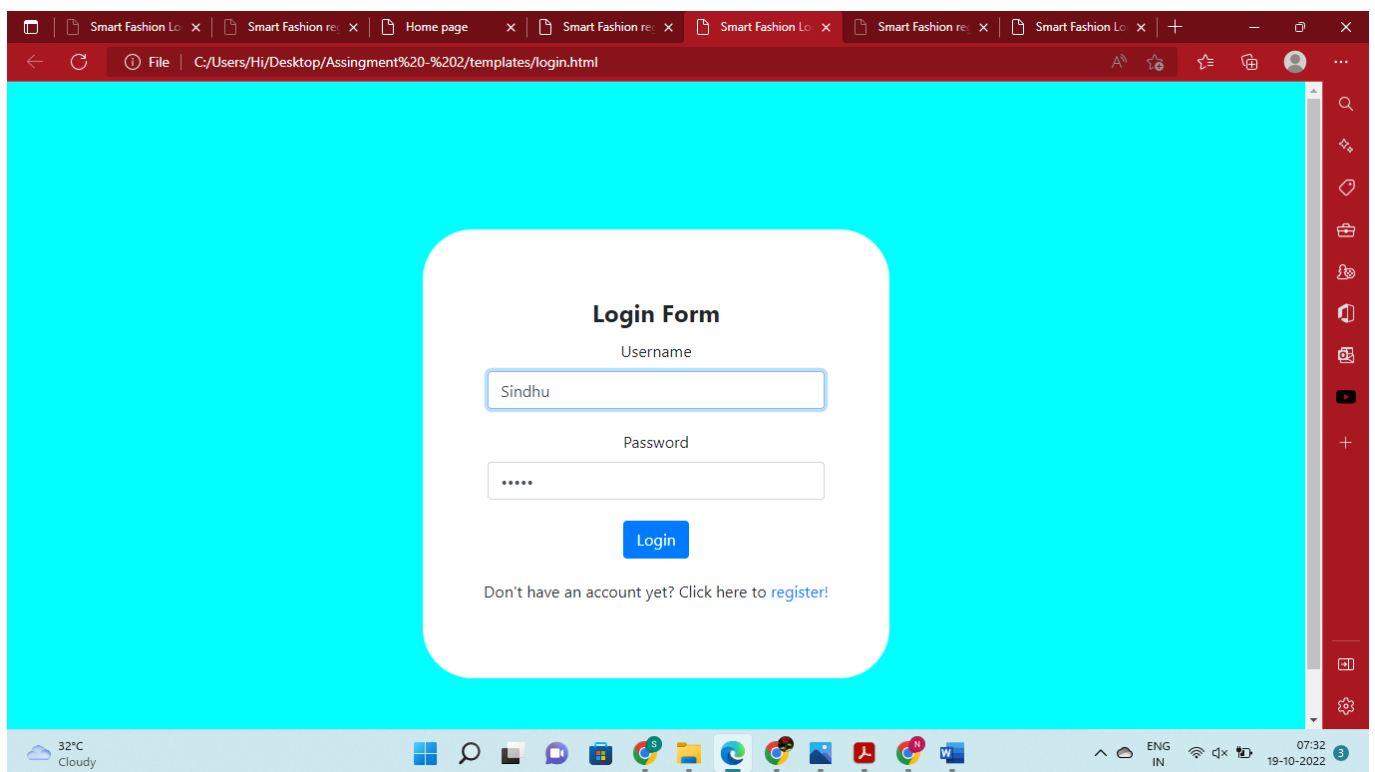
```

```
padding-bottom: 10px;
}

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

OUTPUT:-

LOGIN PAGE:-



REGISTER FORM:-

Register Form

{{ msg }}

sindhu

sindhu002p@gamil.com

Register

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

WELCOME PAGE:-

