

ASSIGNMENT-2

IBM CLOUD DB2

Assignment Date	29 September 2022
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Student Roll Number	613019106058
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 search bar and a 'New table' button. Below the search bar, a table lists the existing tables: 'STUDENT' under the 'TLZ88908' schema. The 'Table definition' panel on the right shows the structure of the 'STUDENT' table, which includes columns: 'USERNAME' (CHAR, 5, nullable), 'ROLL NUMBER' (INTEGER, nullable), 'EMAIL ID' (VARCHAR, 32, nullable), and 'PASSWORD' (VARCHAR, 32, nullable). The bottom status bar indicates the system is at 33°C, mostly sunny, on 27-10-2022 at 13:36.

Name	Schema	Properties
STUDENT	TLZ88908	...

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

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' panel displays a table named 'TLZ88908'. The main area shows a script editor with the following SQL query:

```
1 INSERT INTO STUDENT values('sha','58','sharmi@gmail.com','sha@');
```

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

Script	Date	Status	Runtime
Untitled - 1	Oct 27, 2022 1:36:45 PM	✓ 1	0.005 s
INSERT INTO STUDENT values('sha','58','sharmi@gmail.com','sha@')		✓	0.005 s

The screenshot shows the IBM Db2 on Cloud console interface displaying the data in the 'TLZ88908.STUDENT' table. The table has the following columns: USERNAME, ROLL NUMBER, EMAIL ID, and PASSWORD. The data is as follows:

USERNAME	ROLL NUMBER	EMAIL ID	PASSWORD
sha	58	sharmi@gmail.com	sha@

DELETE TABLE:-

The screenshot shows the IBM Db2 on Cloud console interface. The top navigation bar includes 'Service Details - IBM Cloud' and 'IBM Db2 on Cloud'. The main area is divided into 'Data objects' and 'My script'. The 'My script' tab is active, showing a SQL script in a text editor. The script contains three lines: 1. `INSERT INTO STUDENT values('sha','58','sharmi@gmail.com','sha@');`, 2. `INSERT INTO STUDENT values('sow','60','sowmi@gmail.com','sow@');`, and 3. `DELETE FROM STUDENT WHERE USERNAME = 'sha';`. The script is titled '*Untitled - 1'. Below the script editor, there is a 'History' section showing a table of script execution history.

Script	Date	Status	Runtime
Untitled - 1	Oct 27, 2022 1:41:06 PM	3	0.017 s
INSERT INTO STUDENT values('sha','58','sharmi@gmail.com','sha@')			0.006 s
INSERT INTO STUDENT values('sow','60','sowmi@gmail.com','sow@')			0.005 s
DELETE FROM STUDENT WHERE USERNAME = 'sha'			0.006 s
Untitled - 1	Oct 27, 2022 1:36:45 PM	1	0.005 s

The screenshot shows the IBM Db2 on Cloud console interface, specifically the 'Tables' tab. The table 'TLZ88908.STUDENT' is selected. The table structure is displayed, showing columns: USERNAME, ROLL NUMBER, EMAIL ID, and PASSWORD. The data is as follows:

USERNAME	ROLL NUMBER	EMAIL ID	PASSWORD
sow	60	sowmi@gmail.com	sow@

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=k9b92696;PASSWORD=3WYGYU3bM1vwnX;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['logged_in'] = 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>News Tracker Application 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>News Tracker Application 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="styleless.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:- REGISTRATION PAGE:-

Register Form

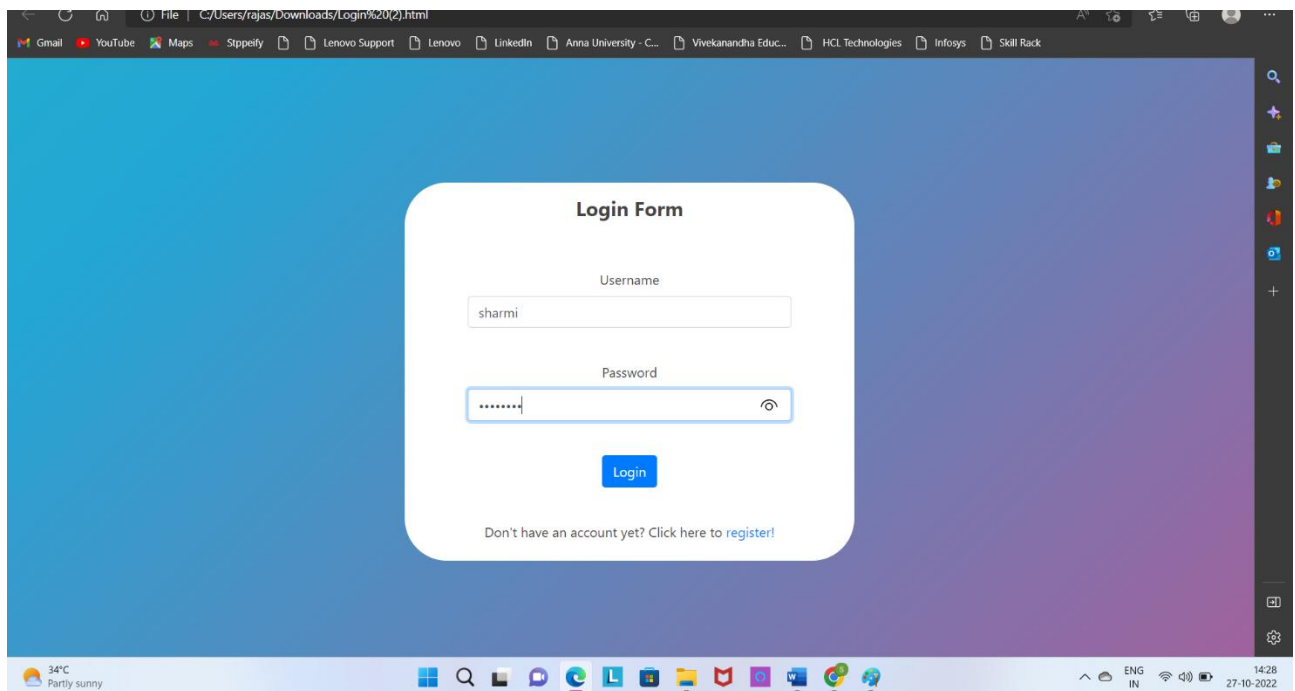
sharmi

sharmi@gmail.com

Register

Already have an account ? Please login login!

LOGIN PAGE:-



The screenshot shows a web browser window with the address bar displaying "file:///C:/Users/rajas/Downloads/Login%20(2).html". The browser's tab bar shows several open tabs: Gmail, YouTube, Maps, Stippelfy, Lenovo Support, Lenovo, LinkedIn, Anna University - C..., Vivekanandha Educ..., HCL Technologies, Infosys, and Skill Rack. The main content area features a "Login Form" with a white background and rounded corners. It contains two input fields: "Username" with the text "sharmi" and "Password" with masked characters ".....". A blue "Login" button is positioned below the password field. At the bottom of the form, there is a link: "Don't have an account yet? Click here to [register!](#)". The browser's taskbar at the bottom shows the system tray with a weather widget (34°C, Partly sunny), the Windows Start button, and various application icons. The system clock indicates the time is 14:28 on 27-10-2022.

file:///C:/Users/rajas/Downloads/Login%20(2).html

Gmail YouTube Maps Stippelfy Lenovo Support Lenovo LinkedIn Anna University - C... Vivekanandha Educ... HCL Technologies Infosys Skill Rack

Login Form

Username

sharmi

Password

.....

Login

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

34°C Partly sunny

14:28 27-10-2022

WELCOME PAGE:-

