

Assignment -2

Python DB2

Student Name	Abishek PS
Student Roll Number	1901002
Maximum Marks	2 Marks

Question-1:

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

Solution:

```
CREATE TABLE register (  
Name VARCHAR (32) NOT NULL,  
RollNo VARCHAR (32) NOT NULL,  
Email VARCHAR (32) NOT NULL,  
Password VARCHAR (32) NOT NULL )
```

The screenshot shows a code editor with a toolbar at the top containing icons for undo, redo, toggle code view, toggle terminal, delete, insert, and search. A 'Syntax assistant' toggle is also present. A 'Run all' button with a play icon is on the right. The code area contains the SQL query from the solution, with line numbers 1 through 6 on the left. Below the code area is a 'History' section with a search bar labeled 'Find history'. Below that is a table showing the execution history of the script.

Script	Date	Status	Runtime
^ CreateTable	Nov 12, 2022 8:13:35 AM	✓ 1	0.075 s
CREATE TABLE register (Name VARCHAR(32) NOT NULL, RollNo VARCHAR(32) NOT NU...		✓	0.075 s

Question-2:

Perform UPDATE, DELETE Queries with user table.

Solution:

```
INSERT INTO register VALUES ('Abishek PS','1901002','abishek@gmail.com','Abi@001');  
INSERT INTO register VALUES ('Aditya Kushwaha','1901004','aditya@gmail.com','Adi@002');  
INSERT INTO register VALUES ('Arjun','1901016','arjun@gmail.com','Arj@003');  
INSERT INTO register VALUES ('Ashwin','1901023','ashwin@gmail.com','Ash@004');  
UPDATE register SET Name='Ashwin Balaji PL' WHERE RollNo='1901023';  
DELETE FROM register WHERE RollNo='1901004';
```

* CreateTable

* Insert

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Syntax assistant

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Run all

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```

1 INSERT INTO register VALUES('Abishek PS','1901002','abishek@gmail.com','Abi@001');
2 INSERT INTO register VALUES('Aditya Kushwaha','1901004','aditya@gmail.com','Adi@002');
3 INSERT INTO register VALUES('Arjun','1901016','arjun@gmail.com','Arj@003');
4 INSERT INTO register VALUES('Ashwin','1901023','ashwin@gmail.com','Ash@004');

```

⋮

History

🔍 Find history

🗑️

Script	Date	Status	Runtime
Insert	Nov 12, 2022 8:15:11 AM	✓ 4	0.091 s
INSERT INTO register VALUES('Abishek PS','1901002','abishek@gmail.com','Abi@...		✓	0.011 s
INSERT INTO register VALUES('Aditya Kushwaha','1901004','aditya@gmail.com','...		✓	0.008 s
INSERT INTO register VALUES('Arjun','1901016','arjun@gmail.com','Arj@003')		✓	0.039 s
INSERT INTO register VALUES('Ashwin','1901023','ashwin@gmail.com','Ash@004')		✓	0.033 s

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Run all

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```

1 UPDATE register SET Name='Ashwin Balaji PL' WHERE RollNo='1901023';
2 DELETE FROM register WHERE RollNo='1901004';

```

⋮

History

🔍 Find history

🗑️

Question-3:

Connect python code to db2.

Solution:

```

import ibm_db
dsn_hostname = "HOSTNAME"
dsn_uid = "UID"
dsn_pwd = "PASSWORD"
dsn_driver = "{IBM DB2 ODBC DRIVER}"
dsn_database = "DATABASE"
dsn_port = "PORTNUMBER"
dsn_protocol = "TCPIP"
dsn_security = "SSL"
dsn = (
"DRIVER={0};""DATABASE={1};""HOSTNAME={2};""PORT={3};""PROTOCOL={4};""UID={5};""PWD={6};
""SECURITY={7};").format(dsn_driver,dsn_database,dsn_hostname,dsn_port,dsn_protocol,dsn_uid,d
sn_pwd,dsn_security,)
print(dsn)
try:

```

```

conn = ibm_db.connect(dsn, "", "")
print ("Connected to database: ", dsn_database, "as user: ", dsn_uid, "on host: ",
dsn_hostname)
except:
    print ("Unable to connect: ", ibm_db.conn_errormsg() )

```

```

PS C:\Users\Abby\Desktop\NaalayaThiran\Assignment_II> & C:/Users/Abby/AppData/Local/Programs/Python/Python310/python.exe c:/Users/Abby/Desktop/NaalayaThiran/Assignment_II/db2.py
DRIVER={IBM DB2 ODBC DRIVER};DATABASE=bludb;HOSTNAME=55fbc997-9266-4331-afd3-888b05e734c0.bs2io90l08kqb1od8lcg.databases.appdomain.cloud;PORT=31929;PROTOCOL=TCPIP;UID=gtm67329;PWD=gPvWP7KvRh6tNBWF;SECURITY=SSL;
Connected to database: bludb as user: gtm67329 on host: 55fbc997-9266-4331-afd3-888b05e734c0.bs2io90l08kqb1od8lcg.databases.appdomain.cloud
PS C:\Users\Abby\Desktop\NaalayaThiran\Assignment_II>

```

Question-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:

Main.py

```

import ibm_db
from flask import Flask, render_template, redirect, request, session

app = Flask(__name__)
app.secret_key='a'
dsn_hostname = "*****"
dsn_uid = "*****"
dsn_pwd = "*****"
dsn_driver = "{IBM DB2 ODBC DRIVER}"
dsn_database = "*****"
dsn_port = "*****"
dsn_protocol = "TCPIP"
dsn_security = "SSL"
dsn =
("DRIVER={0};""DATABASE={1};""HOSTNAME={2};""PORT={3};""PROTOCOL={4};""UID={5};""
PWD={6};""SECURITY={7};").format(dsn_driver,dsn_database,dsn_hostname,dsn_port,dsn_p
rotocol,dsn_uid,dsn_pwd,dsn_security,)
try:
    conn = ibm_db.connect(dsn, "", "")
    print ("Connected to database: ", dsn_database, "as user: ", dsn_uid, "on host: ",
dsn_hostname)
    @app.route("/",methods=['GET','POST'])
    @app.route("/register",methods=['GET','POST'])
    def register():
        msg = None
        if request.method == 'POST':
            name=request.form['name']
            rollno=request.form['rollno']

```

```

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

select_sql = "Select * from User where email=?"
stmt = ibm_db.prepare(conn,select_sql)
ibm_db.bind_param(stmt,1,email)
ibm_db.execute(stmt)
user = ibm_db.fetch_assoc(stmt)
if user:
    msg = "User with this email already exists!"
    return render_template("register.html",msg = msg)
else:
    insert_sql = "Insert into User Values (?, ?, ?, ?)"
    stmt = ibm_db.prepare(conn,insert_sql)
    ibm_db.bind_param(stmt,1,name)
    ibm_db.bind_param(stmt,2,rollno)
    ibm_db.bind_param(stmt,3,email)
    ibm_db.bind_param(stmt,4,password)
    ibm_db.execute(stmt)
    return redirect("/login")
return render_template("register.html")

@app.route("/login",methods=['GET','POST'])
def login():
    msg = None
    if request.method == 'POST':
        email=request.form['email']
        password=request.form['password']

        select_sql = "Select * from User where email=?"
        stmt = ibm_db.prepare(conn,select_sql)
        ibm_db.bind_param(stmt,1,email)
        ibm_db.execute(stmt)
        user = ibm_db.fetch_assoc(stmt)
        if not user:
            msg = "User with this email does not exist!"
            return render_template("login.html",msg = msg)
        elif user['PASSWORD'] != password:
            msg = "Incorrect Passowrd!"
            return render_template("login.html",msg = msg)
        else:
            session['loggedin'] = True
            session['id'] = user['EMAIL']
            session['username'] = user['NAME']
            return redirect('/welcome')
    return render_template("login.html")

@app.route("/logout")

```

```

def logout():
    session['loggedin'] = False
    session['id'] = ""
    session['username'] = ""
    return render_template("login.html",msg="Logged out successfully!")

@app.route("/welcome")
def welcome():
    return render_template("welcome.html",)

except:
    print ("Unable to connect: ", ibm_db.conn_errormsg() )

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

```

Login.html

```

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link rel="stylesheet" href="{{url_for('static', filename='css/style.css')}}">
    <title>Login Form</title>
</head>
<body>
    <div class="center">
        <h1>Login Form</h1>
        {% if msg %}
            <span>{{msg}}</span>
        {% endif %}

        <form action="/login" method="POST">
            <div class="inputbox">
                <label for="email">Email</label>
                <input type="text" name="email" required>
            </div>
            <div class="inputbox">
                <label for="password">Password:</label>
                <input type="password" name="password" required>
            </div>
            <button type="submit">Submit</button>
            <button type="reset">Cancel</button>
        </form>
        <span>Don't have an account? <a href="/register">Sign Up</a></span>
    </div>
</body>
</html>

```

Register.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <link rel="stylesheet" href="{{url_for('static', filename='css/style.css')}}">
  <title>Registration Form</title>
</head>
<body>
  <div class="center">
    <h1>SignIn Form</h1>
    {% if msg %}
      <span>{{msg}}</span>
    {% endif %}
    <form action="/register" method="POST">
      <div class="inputbox">
        <label for="email">Name</label>
        <input type="text" name="name" required>
      </div>
      <div class="inputbox">
        <label for="rollno">Roll No</label>
        <input type="text" name="rollno" required>
      </div>
      <div class="inputbox">
        <label for="email">Email</label>
        <input type="email" name="email" required>
      </div>
      <div class="inputbox">
        <label for="password">Password</label>
        <input type="password" name="password" required>
      </div>
      <button type="submit">Submit</button>
      <button type="reset">Cancel</button>
    </form>
    <span>Already have an account? <a href="/login">Login</a></span>
  </div>
</body>
</html>
```

Welcome.html

```
<!DOCTYPE html>
<html>
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Welcome Page</title>
</head>
```

```

<body>
  <h1>Welcome {{session['username']}}!</h1>
  <br>
  <a href="/logout">Logout</a>
</body>
</html>

```

REGISTRATION FORM

Sign In Form

Name

Roll No

Email

Password

Submit
Cancel

Already have an account? [Login](#)

Sign In Form

Name
Abishek PS

Roll No
19010022

Email
abishek292001@gmail.com

Password

Submit
Cancel

Already have an account? [Login](#)

DB

NAME	ROLLNO	EMAIL	PASSWORD
Abishek PS	1901002	abishek@gmail.com	Abi@001
Abishek PS	19010022	abishek292001@gmail.com	Password
Arjun	1901016	arjun@gmail.com	Arj@003
Ashwin Balaji PL	1901023	ashwin@gmail.com	Ash@004

LOGIN

Login Form

Email

Password:

Submit
Cancel

Don't have an account? [Sign Up](#)

Login Form

Email
abishek292001@gmail.com

Password:

Submit
Cancel

Don't have an account? [Sign Up](#)

VALID USER

Welcome Abishek PS!

[Logout](#)

INVALID USER DETAILS

Login Form

User with this email does not exist!

Email

Password:

Submit

Cancel

Don't have an account? [Sign Up](#)

Login Form

Incorrect Passowrd!

Email

Password:

Submit

Cancel

Don't have an account? [Sign Up](#)