

Assignment - 2 Personal Expense Tracker

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Creation of Table:

The screenshot shows the IBM Db2 on Cloud interface. The 'Tables' tab is selected, displaying a list of tables in the 'NLG66799' schema: 'USER' and 'USERS'. The 'Table definition' panel on the right shows the structure of the 'USER' table:

Name	Data type	Nullable	Length	Scale
EMAIL	VARCHAR	Y	32	0
USERNAME	VARCHAR	Y	32	0
roll number	VARCHAR	Y	32	0
PASSWORD	VARCHAR	Y	32	0

A 'View data' button is visible below the table definition.

Insertion into USER Table:

The screenshot shows the IBM Db2 on Cloud interface with the SQL editor open. The script contains four insert statements for the 'USER' table:

```
1 insert into USER values('user1@gmail.com', 'user1', '0001', 'pwd1');
2 insert into USER values('user2@gmail.com', 'user2', '0002', 'pwd2');
3 insert into USER values('user3@gmail.com', 'user3', '0003', 'pwd3');
4 insert into USER values('user4@gmail.com', 'user4', '0004', 'pwd4');
```

The 'Run all' button is visible in the top right corner of the editor.

IBM Db2 on Cloud

Connecting to IBM DB2 From Python:

```
conn = ibm_db.connect(
    "DATABASE=bludb;\
    HOSTNAME=54a2f15b-5c0f-46df-8954-7e38e612c2bd.c1ogj3sd0tgtu0lqd
e00.databases.appdomain.cloud;\
    PORT=30699;\
    Security=SSL;\
    SSLServerCertificate=DigiCertGlobalRootCA.crt;\
    UID=nlg66799;\
    PWD=CXtQLAGZ06fD0fhC;", "", "")
```

Source Code

App.py

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

import ibm_db

app=Flask(__name__, template_folder='templates')

app.secret_key='a'

conn = ibm_db.connect(
    "DATABASE=bludb;\
```

```
HOSTNAME=54a2f15b-5c0f-46df-8954-7e38e612c2bd.clogj3sd0tgtu0lqde00.da  
tabases.appdomain.cloud;\n    PORT=30699;\n    Security=SSL;\n    SSLServerCertificate=DigiCertGlobalRootCA.crt;\n    UID=nlg66799;\n    PWD=CXtQLAGZ06fD0fhC;","","")
```

```
@app.route('/', methods=['GET','POST'])  
def register():  
    msg=" "  
    if request.method=='POST':  
        username=request.form['username']  
        password=request.form['password']  
        email=request.form['email']  
        rollno=request.form['rollno']  
        sql="INSERT INTO user VALUES(?,?,?,?)"  
        stmt=ibm_db.prepare(conn,sql)  
        ibm_db.bind_param(stmt,1,email)  
        ibm_db.bind_param(stmt,2,username)  
        ibm_db.bind_param(stmt,3,rollno)  
        ibm_db.bind_param(stmt,4,password)  
        ibm_db.execute(stmt)  
        msg='Succesfully registered!'  
        return redirect(url_for('login'))  
    elif request.method=='GET':  
        msg='Please fill 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 user 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'
        return
render_template("welcome.html",msg=msg,username=userid)
    else:
        msg='Incorrect username/password'
        return render_template('login.html', msg=msg)
    elif request.method=='GET':
        return render_template('login.html')

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

```

register.html

```

<html>
<body>
<h2 style="color:blue">{{msg}}</h2>
<form action="/" method="POST">
<fieldset>
    <legend>User Information</legend>
<h2>Username:<h2> <input type="text" name="username"
placeholder="Enter username
"><br/><br/>
<h2>Password:<h2> <input type="password" name="password"><br/><br/>
<h2>Email:<h2> <input type="email" name="email" placeholder="Enter
email"><br/><br/>
<h2>Roll number:<h2> <input type="text" name="rollno"
placeholder="Enter roll
number"><br/><br/>
<input type="submit" value="Register">
</fieldset>
</form>
</body>
</html>

```

login.html

```

<html>
<body>
<h2 style="color:blue">{{msg}}</h2>

```

```

<form action="/login" method="POST">
  <fieldset>
    <legend>User Login:</legend>
    <h2>Username:</h2> <input type="text" name="username"
placeholder="Enter
username"><br/><br/>
    <h2>Password:</h2> <input type="password" name="password"
placeholder="*****"><br/><br/>
    <input type="submit" value="Login">
  </fieldset>
</form>
</body>
</html>

```

welcome.html

```

<h1 style="color:blue">Welcome {{username}}!</h1>
<h2>{{msg}}</h2>

```

Output:

register.html

Please fill the form

User Information

Username:

Password:

Email:

Roll number:

login.html (correct login)

Login

User Login:

Username:

Password:

Login

welcome.html

Welcome usernew !

Logged in successfully

IBM Db2 on Cloud

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

NLG66799.USER

Back

Export to CSV

EMAIL	USERNAME	roll number	PASSWORD
user2@gmail.com	user2	0002	pwd2
user3@gmail.com	user3	0003	pwd3
user4@gmail.com	user4	0004	pwd4
usernew@gmail.com	usernew11	usernew	usernew

login.html (incorrect login)

Login

User Login:

Username:

Password:

Login

Incorrect username/password

User Login:

Username:

Enter username

Password:

Login