

Assignment -2

Python Programming

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Question-1:

1. Create a User table with Username, email, roll number, password.
2. Perform UPDATE and DELETE queries.
3. Connect python code to database.
4. Create Flask app for a User registration and User login.

Solution:

App.py

```
from flask import Flask, render_template, request, redirect
import sqlite3 as sql
import models as dbHandler

app = Flask(__name__)
app.secret_key = 'fasdgsdfgdfg'

@app.route('/')
def home():
    return render_template('home.html')

@app.route('/adduser')
def new_user():
    return render_template('add_user.html')

@app.route('/addrec', methods = ['POST', 'GET'])
def addrec():
    if request.method == 'POST':
        try:
            email = request.form['email']
            username = request.form['username']
            rollnumber = request.form['rollnumber']
            pin = request.form['pin']
```

```

        with sql.connect("User_database.db") as
            con:cur =con.cursor()
            cur.execute("INSERT INTO users
(email,username,rollnumber,pin)VALUES(?,?,?,?)", (email,un,rn,pin))
            con.commit()
            msg = "Record successfully
added!"except:
            con.rollback()
            msg="errorinininsertoperation"

        finally:
            return render_template("list.html",msg =
msg)con.close()

```

```

@app.route('/list')
def list():
    con =
    sql.connect("User_database.db")con.row_factory=sq
l.Row

    cur =
    con.cursor()cur.execute("select
*fromusers")

```

```

    users=cur.fetchall()
    return render_template("list.html", users=users)

```

```

ifname_____== 'main
_____':app.run(debu
g = True)

```

```

@app.route("/delete")
def delete():
    returnrender_template("delete.html")

```

```

@app.route('/deleterecord',methods =
["POST"])def deleterecord():
    un=request.form['username']
    with sql.connect("User_database.db") as
        con:try:
            cur =con.cursor()
            cur.execute("DELETE FROM users WHERE username =
?", [un])con.commit()
            msg = "Record successfully
deleted"except:
            msg = "can't be
deleted"finally:
            return render_template("home1.html",msg =msg)

```

```

ifname_____== 'main
_____':app.run(debu
g = True)

```

```

@app.route('/deldb', methods =
["POST"])def deldb():

```

```

con =
sql.connect('User_database.db')cur=co
n.cursor()cur.execute('DELETEFROM
users;')con.commit()
con.close()
msg='Allthe data has been deleted'
return render_template("home1.html",msg =msg)
@app.route("/log")
def log():
    returnrender_template("login.html")

@app.route('/login', methods =['GET',
'POST'])def login():
    un =
    request.form['username']ifreq
    uest.method=='POST':
        users =
        dbHandler.retrieveUsers()msg
        ='Logged in successfully!'
        return render_template('welcome.html', users=un,
msg=msg)else:
        msg = 'You are not registered, would you like to be
        registered'returnrender_template('home1.html',msg=msg)

ifname_____== 'main
_____':app.run(debug=False,host
='0.0.0.0')

```

Models.py

```

import sqlite3 as sql

defretrieveUsers():
    con =
    sql.connect("User_database.db")cur
    =con.cursor()
    cur.execute("SELECT username, pin FROM
    users")users =cur.fetchone()
    con.close()ret
    urnusers

```

sqlite db setup.py

```

import sqlite3

conn = sqlite3.connect('User_database.db')print("Opened database
successfully")

conn.execute('CREATE TABLE users (email TEXT, username TEXT,
rollnumberINTEGER,pinINTEGER)')
print("Table created

```

```
successfully")conn.close()
```

Home.html

```
<h1>Welcome to User DB APP</h1><br><br>
<a href="/">HOME</a><br><br>
<a href="/adduser">UserRegistration</a><br><br>
<a href="/list">ListUser</a><br><br>
<a href="/log">Log in</a><br><br>
<a href="/delete">Remove aUser</a>
```

Add user.html

```
<form action = "{{ url_for('addrec') }}" method = "POST">

<h3>User
Information</h3>E-
mail<br>
<input type="email" name="email"/></br>

Username<br>
<input type="text" name="username"/></br>

Rollnumber<br>
<input type="text" name="rollnumber"/><br>

PIN<br>
<input type="password" name="pin" min="4" max="8" /><br><br>
<input type="submit" value="submit"/><p>
<input type="reset"/>
</form>
```

list.html

```
<!doctype html>

<html>
<body>

<a href="/">HOME</a><br><br>
<a href="/adduser">Add NewStudent</a><br><br>
<a href="/list">ListStudent</a><br><br>
<br><hr>

{{ msg }}

<table border =1>
  <thead>
    <td> Email </td>
    <td>Username</td>
    <td>RollNumber</td>
    <td> Pin </td>
  </thead>

  {% for row in users %}
    <tr>
```

```
        <td>{{row["email"]}}</td>
        <td>{{row["username"]}}</td>
        <td>{{row["rollnumber"]}}</td>
        <td>{{row['pin']}}</td>
    </tr>
    {%endfor %}
</table>

</body>
</html>
```