

## Assignment-2

Assignment Date	15 September 2022
Student Name	S Catherine
Student Roll Number	913319104012
Maximum Marks	2 Marks

### Question:

- 1) Create a Flask App

### App.py

```
from flask import Flask,
url_for,render_template,request,config,session,make_response,abort,redirect,fla
sh;
from markupsafe import escape;
import ibm_db;
conn=ibm_db.connect("DATABASE=bludb;HOSTNAME=3883e7e4-18f5-4afe-be8c-
fa31c41761d2.bs2io90l08kqb1od8lcg.databases.appdomain.cloud;PORT=31498;SECURITY
=SSL;SSLServerCertificate=DigiCertGlobalRootCA.crt;UID=wcp83609;PWD=los9tJgWg1P
oScvy",'','')

app = Flask(__name__);
# app.config['SECRET_KEY'] = 'the secret key'
app.secret_key="SecretKey";

@app.route("/")
def index():
    return render_template("index.html");

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

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

@app.route("/about/")
def about():
    return render_template("about.html")
```

```

messages=[{'title':'Message One',
            'content':'Message one content' },
            {'title':'Message Two',
            'content':'Message Two content' },
            ]
@app.route("/chat")
def chat():
    return render_template("chat.html", messages=messages);

@app.route('/create/' , methods=('GET', 'POST'))
def create():
    if request.method=="POST":
        title = request.form['title']
        content = request.form['content']

        if not title:
            flash('Title is required!')
        elif not content:
            flash('Content is required!')
        else:
            messages.append({'title':title,'content':content})
            name = "Bala G"
            return redirect(url_for("chat", messages=name ))
    return render_template("create.html")

@app.route("/database")
def database():
    return render_template("database.html");

@app.route("/addstudent")
def new_student():
    return render_template("add_student.html");

@app.route("/addrec", methods=['GET','POST'])
def addrec():
    if request.method == 'POST':

        name=request.form['name'];
        addr=request.form['address'];
        city=request.form['city'];
        pin=request.form['pin'];

        sql="SELECT * FROM students WHERE name=?"
        stmt=ibm_db.prepare(conn,sql)
        ibm_db.bind_param(stmt,1,name)
        ibm_db.execute(stmt)
        account=ibm_db.fetch_assoc(stmt)

```

```

        print(account)
        #return "Success..." + name

    if account:
        return render_template("list.html", msg="You are already a
member")
    else:
        insert_sql="INSERT INTO students VALUES(?,?,?,?)"
        prep_stmt=ibm_db.prepare(conn,insert_sql)
        ibm_db.bind_param(prepare_stmt,1,name)
        ibm_db.bind_param(prepare_stmt,2,addr)
        ibm_db.bind_param(prepare_stmt,3,city)
        ibm_db.bind_param(prepare_stmt,4,pin)
        ibm_db.execute(prepare_stmt)
        return render_template("list.html",msg="Student data saved
successfully")

```

```

@app.route('/list')
def list():
    students = []
    sql = "SELECT * FROM Students"
    stmt = ibm_db.exec_immediate(conn, sql)
    dictionary = ibm_db.fetch_both(stmt)
    while dictionary != False:
        # print ("The Name is : ", dictionary)
        students.append(dictionary)
        dictionary = ibm_db.fetch_both(stmt)

    if students:
        return render_template("list.html", students = students)

```

```

@app.route('/delete/<name>')
def delete(name):
    sql = f"SELECT * FROM Students WHERE name='{escape(name)}'"
    print(sql)
    stmt = ibm_db.exec_immediate(conn, sql)
    student = ibm_db.fetch_row(stmt)
    print ("The Name is : ", student)
    if student:
        sql = f"DELETE FROM Students WHERE name='{escape(name)}'"
        print(sql)
        stmt = ibm_db.exec_immediate(conn, sql)

    students = []
    sql = "SELECT * FROM Students"

```

```

stmt = ibm_db.exec_immediate(conn, sql)
dictionary = ibm_db.fetch_both(stmt)
while dictionary != False:
    students.append(dictionary)
    dictionary = ibm_db.fetch_both(stmt)
if students:
    return render_template("list.html", students = students, msg="Delete
successfully")

return "success..."

```

## Output:



```

PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL
Try the new cross-platform PowerShell https://aka.ms/pscore6
PS D:\flask1\Flask_with_Database_Connectivity(DB2)> flask --app app --debug run
* Serving Flask app 'app'
* Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on http://127.0.0.1:5000
Press CTRL+C to quit
* Restarting with stat
* Debugger is active!
* Debugger PIN: 122-452-745

```

## 2. Add the Home page, About Page

### Index.html:

```

{% extends 'base.html' %}
{% block head %}
    <title>Home page</title>
{% endblock %}
{% block body %}
<div class="p-5 mb-4 bg-light rounded-3">
    <div class="container-fluid py-5">
        <h1 class="display-5 fw-bold">Home Page</h1>
        <p class="col-md-8 fs-4">Hii there, This is a Home page.</p>
        <p class="col-md-8 fs-4">All the CSS properties are built using
Bootstrap</p>
        <p class="col-md-8 fs-4">Page routes are built by Jinja2 Template</p>
        <p class="col-md-8 fs-4">Click on about to see about us</p>
        <p class="col-md-8 fs-4">Click on Sign in to enter into the Sign in
form.</p>
        <p class="col-md-8 fs-4">Click on Sign up to enter into the Sign up
form.</p>
    </div>
</div>

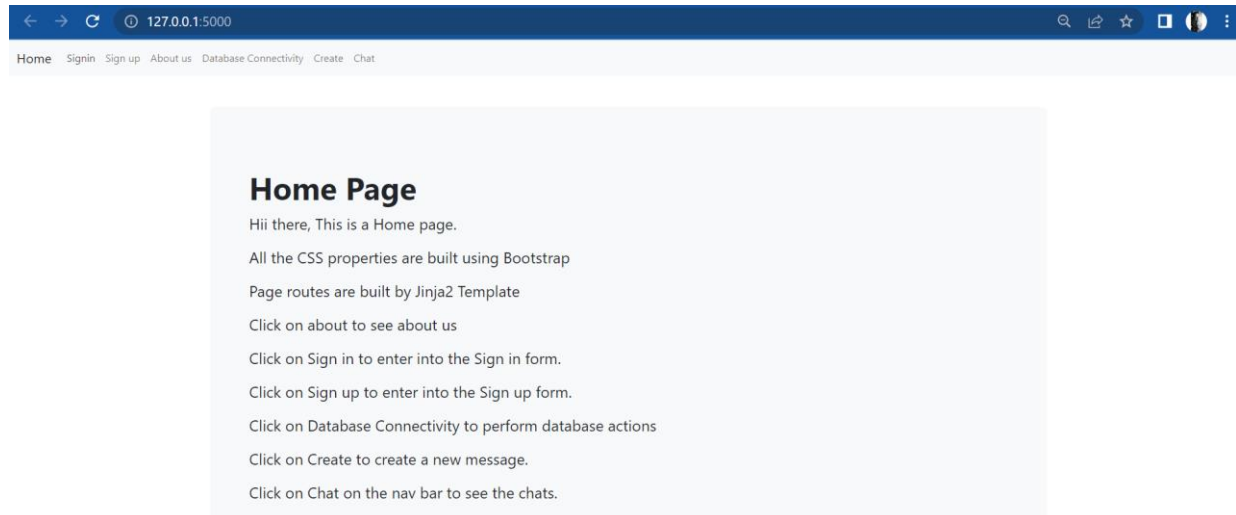
```

```

        <p class="col-md-8 fs-4">Click on Database Connectivity to perform
database actions</p>
        <p class="col-md-8 fs-4">Click on Create to create a new message.</p>
        <p class="col-md-8 fs-4">Click on Chat on the nav bar to see the
chats.</p>
    </div>
</div>
{% endblock %}

```

## Output:



## About.html

```

{% extends "base.html" %}
{% block title %}Aboutpage{% endblock %}
{% block body %}
<div class="about-section">
<h1>About Us Page</h1>
<p>Smart Fashion Recommender Application</p>
<p>Balamurugan G(lead)</p>
</div>
<h2 style="text-align:center">Our Team</h2>
<div class="row">
<div class="column">
<div class="card">
<div class="container">
<h2>Catherine S</h2>
<p class="title">designer</p>
<p>teammember1.</p>
<p>catherine@gmail.com</p>
<p><button class="button">Contact</button></p>
</div>
</div>
</div>
<div class="column">

```

```

<div class="card">
<div class="container">
<h2>Kalaivani T V</h2>
<p class="title">frontend developer</p>
<p>team member2</p>
<p>kalai@example.com</p>
<p><button class="button">Contact</button></p>
</div>
</div>
</div>
<div class="column">
<div class="card">
<div class="container">
<h2>Kumaragurumoorthy R</h2>
<p class="title">Backend developer</p>
<p>team member3</p>
<p>guru@example.com</p>
<p><button class="button">Contact</button></p>
</div>
</div>
</div>
</div>
{% endblock %}

```

## Output:

### About Us Page

Smart Fashion Recommender Application

Balamurugan G(lead)

### Our Team

#### Catherine S

designer

teammember1.

catherine@gmail.com

Contact

#### Kalaivani T V

frontend developer

team member2

kalai@example.com

Contact

#### Kumaragurumoorthy R

Backend developer

team member3

guru@example.com

Contact

### 3. Add the Bootstrap

#### base.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>Document</title>
  <!-- CSS only -->
  <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.1/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
iYQeCzEYFbKjA/T2uDLTPkwGzCiq6soy8tYaI1GyVh/UjpbCx/TYkiZhlZB6+fzT"
crossorigin="anonymous">
  <!-- JavaScript Bundle with Popper -->
  <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.1/dist/js/bootstrap.bundle.min.
js" integrity="sha384-
u10knCvxWvY5kfmNBILK2hRnQC3Pr17a+RTT6rIHI7NnikvbZlHgTP00mMi466C8"
crossorigin="anonymous"></script>
  {% block head %} {% endblock %}
</head>
<body>
  <nav class="navbar navbar-expand-lg bg-light">
    <div class="container-fluid">
      <a class="navbar-brand" href="{{url_for('index')}}">Home</a>
      <button class="navbar-toggler" type="button" data-bs-
toggle="collapse" data-bs-target="#navbarSupportedContent" aria-
controls="navbarSupportedContent" aria-expanded="false" aria-label="Toggle
navigation">
        <span class="navbar-toggler-icon"></span>
      </button>
      <div class="collapse navbar-collapse" id="navbarSupportedContent">
        <ul class="navbar-nav me-auto mb-2 mb-lg-0">
          <li class="nav-item">
            <a class="nav-link" href="{{url_for('signin')}}">Signin</a>
          </li>
          <li class="nav-item">
            <a class="nav-link" href="{{url_for('signup')}}">Sign up</a>
```

```

        </li>
        <li class="nav-item">
            <a class="nav-link" href="{{url_for('about')}}">About us</a>
        </li>
        <li class="nav-item">
            <a class="nav-link" href="{{url_for('database')}}">Database
Connectivity</a>
        </li>
        <li class="nav-item">
            <a class="nav-link" href="{{url_for('create')}}">Create</a>
        </li>
        <li class="nav-item">
            <a class="nav-link" href="{{url_for('chat')}}">Chat</a>
        </li>
    </div>
</div>
</nav>

<div class="container mt-5">
    {% block body %} {% endblock%}

</div>
</body>
</html>

```

## Output:

-

The first screenshot shows a web browser at the URL `127.0.0.1:5000/create/`. The page has a navigation bar with links: Home, Signin, Sign up, About us, Database Connectivity, Create, and Chat. The main content area is titled "Add a New Message" and contains two input fields: "Title" with the value "Greetings" and "Message Content" with the value "Good Morning Everyone". A green "Submit" button is located below the input fields.

The second screenshot shows the same web browser at the URL `127.0.0.1:5000/chat`. The page has the same navigation bar. The main content area is titled "Messages" and displays a list of messages:

- Message One**  
Message one content
- Message Two**  
Message Two content
- Greetings**  
Good Morning Everyone



#### 4. Add the Sign in page and Add the Signup Page + database connectivity

##### Signin.html

```
{% extends 'base.html' %}
{% block head %}
    <title>Signin page</title>
{% endblock %}

{% block body %}
    <h2>Signin forms</h2>
    <form action="/signup">
        <label for="fname">First name:</label><br>
        <input type="text" id="fname" name="fname" class="form-control"><br>
        <label for="lname">Last name:</label><br>
        <input type="text" id="lname" name="lname" class="form-control"><br><br>
        <input type="submit" value="Submit" class="btn btn-primary">
    </form>
{% endblock %}
```

##### Output:

[Home](#) [Signin](#) [Sign up](#) [About us](#) [Database Connectivity](#) [Create](#) [Chat](#)

##### Signin forms

First name:

Last name:

Submit

##### Signup.html

```
{% extends 'base.html' %}
<html>
    {% block head %}
        <title>Signup page</title>
    {% endblock %}


    {% block body %}
        <h2>Signup forms</h2>
        <form action="/signup">
            <label for="fname">First name:</label><br>
            <input type="text" id="fname" name="fname" class="form-control"><br>
            <label for="lname">Last name:</label><br>
```

```

        <input type="text" id="lname" name="lname" class="form-
control"><br><br>
        <label for="pswd">Password:</label><br>
        <input type="text" id="pswd" name="pswd" class="form-
control"><br><br>
        <label for="Rpswd">Re-type Password</label><br>
        <input type="text" id="Rpswd" name="Rpswd" class="form-
control"><br><br>
        <input type="submit" value="Submit" class="btn btn-primary">
    </form>
    {%endblock%}
</html>

```

## Output:



Home Signin Sign up About us Database Connectivity Create Chat

### Signup forms

First name:

Last name:

Password:

Re-type Password

Submit

Home Signin Sign up About us Database Connectivity Create Chat

### Create Your Account

Enter Name : Enter user here

Enter Email ID : Enter Email ID here

Enter Username : Enter Username here

Enter Password : Enter Password here

Enter Confirm Password : Enter Password here

Clear Form Create Account

## Database connectivity:

### App.py(Database part)

```

from flask import Flask,
url_for,render_template,request,config,session,make_response,abort,redirect,fla
sh;
from markupsafe import escape;
import ibm_db;
conn=ibm_db.connect("DATABASE=bludb;HOSTNAME=2d46b6b4-cbf6-40eb-bbce-
6251e6ba0300.bs2io90l08kqb1od8lcg.databases.appdomain.cloud;PORT=32328;SECURITY
=SSL;SSLServerCertificate=DigiCertGlobalRootCA.crt;UID=bkj82229;PWD=KCwhio0Cb0X
QmB5H",'','')

```

```

app = Flask(__name__);
app.secret_key="SecretKey";

@app.route("/database")
def database():
    return render_template("database.html");

@app.route("/addstudent")
def new_student():
    return render_template("add_student.html");

@app.route("/addrec", methods=['GET','POST'])
def addrec():
    if request.method == 'POST':

        name=request.form['name'];
        addr=request.form['address'];
        city=request.form['city'];
        pin=request.form['pin'];

        sql="SELECT * FROM students WHERE name=?"
        stmt=ibm_db.prepare(conn,sql)
        ibm_db.bind_param(stmt,1,name)
        ibm_db.execute(stmt)
        account=ibm_db.fetch_assoc(stmt)
        print(account)
        #return "Success..." + name

        if account:
            return render_template("list.html",msg="You are already a
member")
        else:
            insert_sql="INSERT INTO students VALUES(?,?,?,?)"
            prep_stmt=ibm_db.prepare(conn,insert_sql)
            ibm_db.bind_param(prepare_stmt,1,name)
            ibm_db.bind_param(prepare_stmt,2,addr)
            ibm_db.bind_param(prepare_stmt,3,city)
            ibm_db.bind_param(prepare_stmt,4,pin)
            ibm_db.execute(prepare_stmt)
            return render_template("list.html",msg="Student data saved
successfully")

@app.route('/list')

```

```

def list():
    students = []
    sql = "SELECT * FROM Students"
    stmt = ibm_db.exec_immediate(conn, sql)
    dictionary = ibm_db.fetch_both(stmt)
    while dictionary != False:
        # print ("The Name is : ", dictionary)
        students.append(dictionary)
        dictionary = ibm_db.fetch_both(stmt)

    if students:
        return render_template("list.html", students = students)

@app.route('/delete/<name>')
def delete(name):
    sql = f"SELECT * FROM Students WHERE name='{escape(name)}'"
    print(sql)
    stmt = ibm_db.exec_immediate(conn, sql)
    student = ibm_db.fetch_row(stmt)
    print ("The Name is : ", student)
    if student:
        sql = f"DELETE FROM Students WHERE name='{escape(name)}'"
        print(sql)
        stmt = ibm_db.exec_immediate(conn, sql)

        students = []
        sql = "SELECT * FROM Students"
        stmt = ibm_db.exec_immediate(conn, sql)
        dictionary = ibm_db.fetch_both(stmt)
        while dictionary != False:
            students.append(dictionary)
            dictionary = ibm_db.fetch_both(stmt)
        if students:
            return render_template("list.html", students = students, msg="Delete
successfully")

    return "success..."

```

## database.html

```

{% extends 'base.html' %}
{%block body%}
    <h1>Welcome to Student DB</h1>
    <a href="/addstudent">Add New Student</a>
    <a href="/list">List Student</a>
{%endblock%}
</body>
</html>

```

## addstudent.html

```
{% extends 'base.html' %}

<a href="/">Home</a>
<a href="/addstudent">Add New Student</a>
<a href="/list">List Student</a>
<a href="/signup">List Student</a>
<hr>

{%block body%}
    <form action="{{url_for('addrec')}}" method="POST">
        <h3>Student Information</h3>
        Name<br>
        <input type="text" name="name"/><br>

        Address<br>
        <input type="textarea" name="address"/><br>

        City<br>
        <input type="text" name="city"/><br>

        Pin<br>
        <input type="text" name="pin"/><br>
        <input type="submit" value="submit"/><br>
    </form>
{%endblock%}
</html>
```

## list.html

```
{% extends 'base.html' %}
{%block body%}
    <a href="/">Home</a>
    <a href="/addstudent">Add New Student</a>
    <a href="/list">List Student</a>
    <br><hr>

    {{msg}}

    <table class="table table-hover">
        <thead>
            <td scope="col">Name</td>
            <td scope="col">Address</td>
            <td scope="col">City</td>
            <td scope="col">Pincode</td>
        </thead>

        {%for row in students%}
```

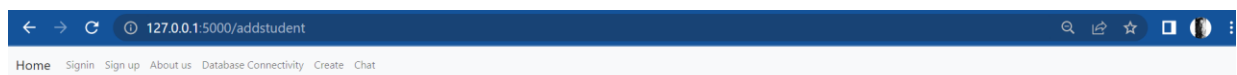
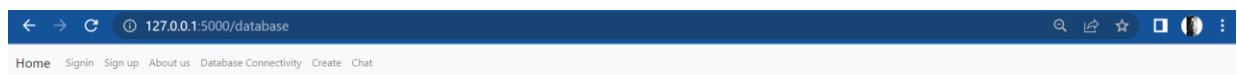
```

        <tr>
            <td scope="row">{{row["NAME"]}}</td>
            <td scope="row">{{row["ADDRESS"]}}</td>
            <td scope="row">{{row["CITY"]}}</td>
            <td scope="row">{{row["PIN"]}}</td>
            <td scope="row"><a
href="/delete/{{row['NAME']}}">Delete</a></td>
        </tr>
    {%endfor%}
</table>

{%endblock%}

```

## Output:



[Home](#) [Add New Student](#) [List Student](#)

Name	Address	City	Pincode	
Santhosh M	1/7 Ranga Colony	Banarkatta	79	<a href="#">Delete</a>
Rathish	Cambridge University	london	13	<a href="#">Delete</a>
Joshua	Trichy	Gandhi Nagar	48	<a href="#">Delete</a>
Akshaya	Madurai	Melur	06	<a href="#">Delete</a>
Karthick	Coimbatore	Coimbatore	78	<a href="#">Delete</a>
Catherine S	Madurai	Madurai	06	<a href="#">Delete</a>

## Records in IBM DB2:

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



SQL



WCP83609.STUDENTS

Back



Export to CSV 📄

NAME	ADDRESS	CITY	PIN
Akshaya	Madurai	Melur	06
Catherine S	Madurai	Madurai	06
Joshua	Trichy	Gandhi Nagar	48
Karthick	Coimbatore	Coimbatore	78
Rathish	Cambridge University	london	13
Santhosh M	1/7 Ranga Colony	Banarkatta	79