Assignment-2

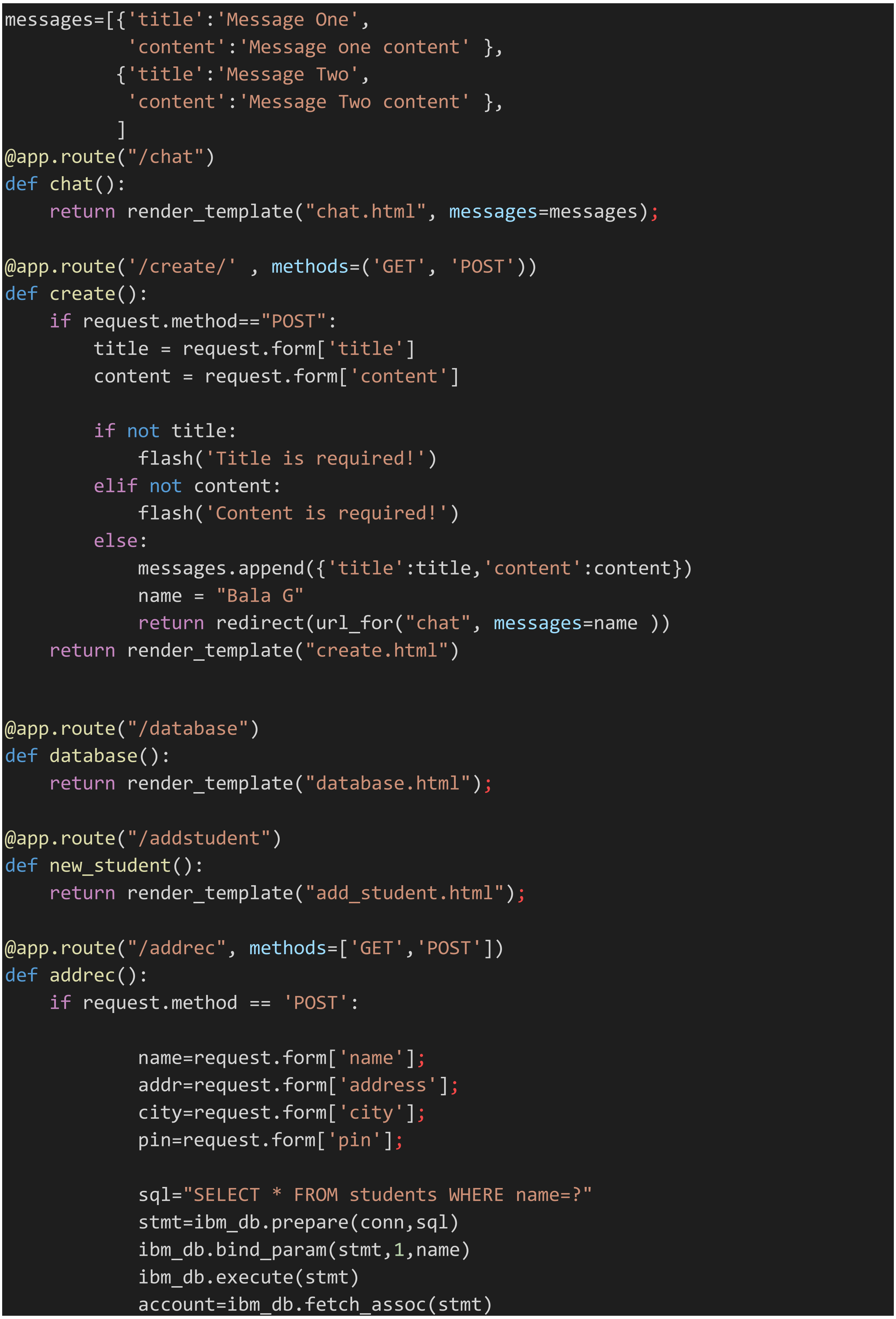
Assignment Date	15 September 2022
Student Name	Kumaragurumoorthy R
Student Roll Number	913319104029
Maximum Marks	2 Marks

Question:

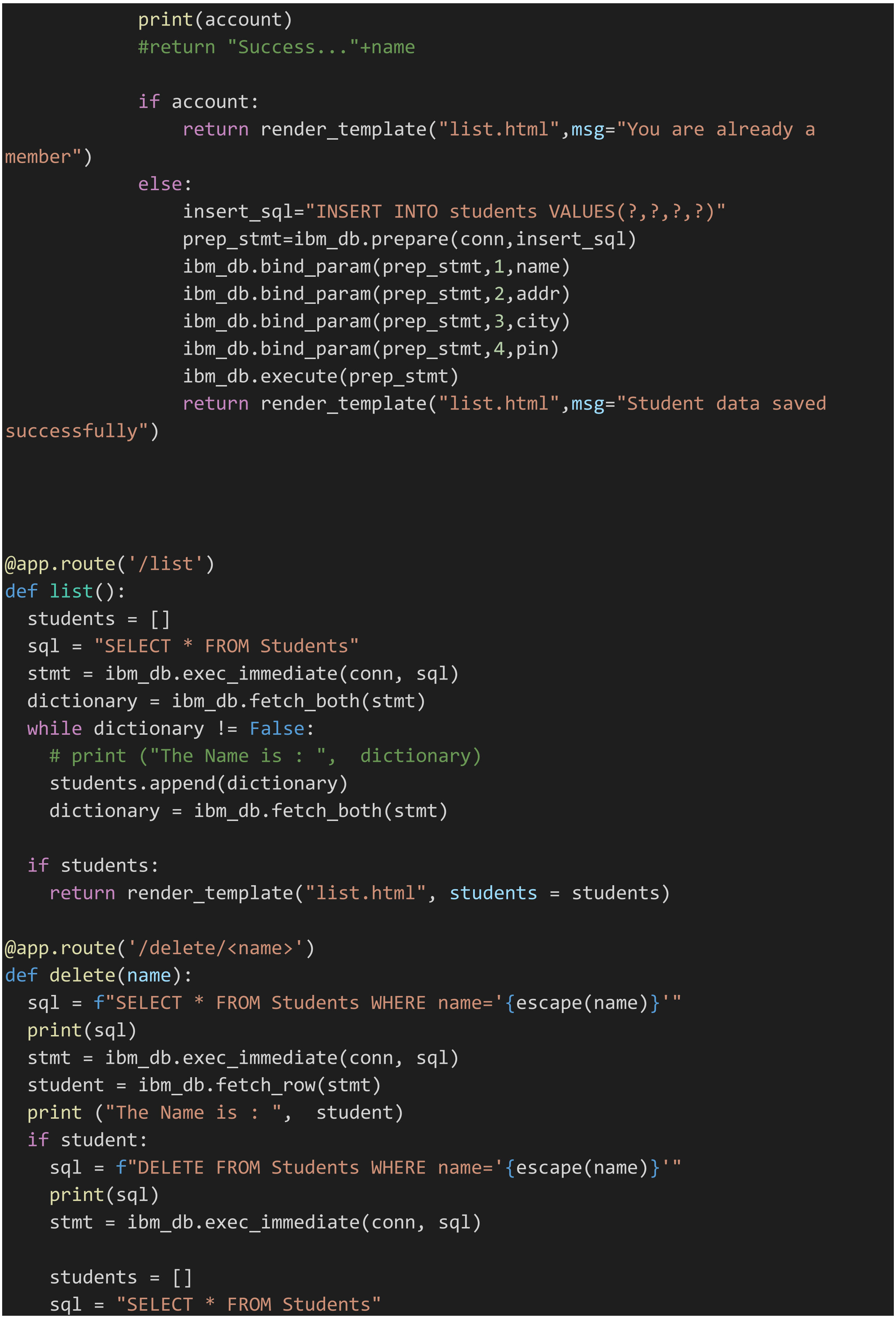
1) Create a Flask App

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=764264db-9824-4b7c-82df-
40d1b13897c2.bs2io90l08kqb1od8lcg.databases.appdomain.cloud;PORT=32536;SECURITY
=SSL;SSLServerCertificate=DigiCertGlobalRootCA.crt;UID=cfs78429;PWD=oCsdCFYuvrb
5Vxhs",'','')

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

@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")
```

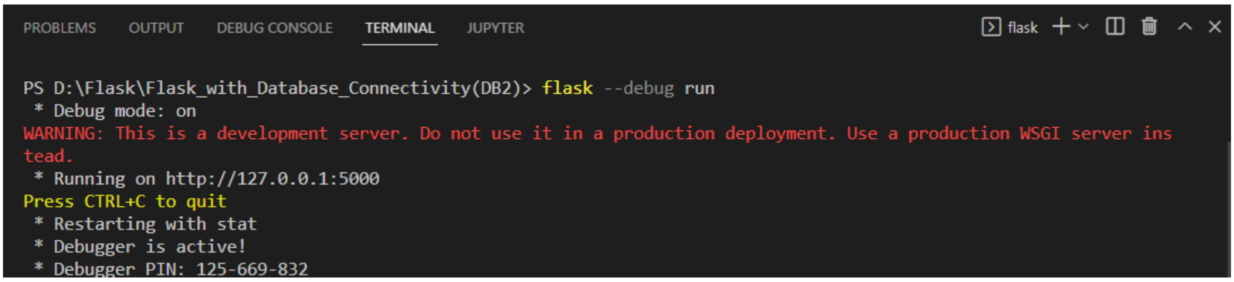


```
messages=[{'title':'Message One',
           'content':'Message one content' },
          {'title':'Message Two',
           'content':'Message Two content' },
          ]
@app.route("/chat")
def chat():
    return render_template("chat.html", messages=messages);

@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(prep_stmt,1,name)
                ibm_db.bind_param(prep_stmt,2,addr)
                ibm_db.bind_param(prep_stmt,3,city)
                ibm_db.bind_param(prep_stmt,4,pin)
                ibm_db.execute(prep_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:



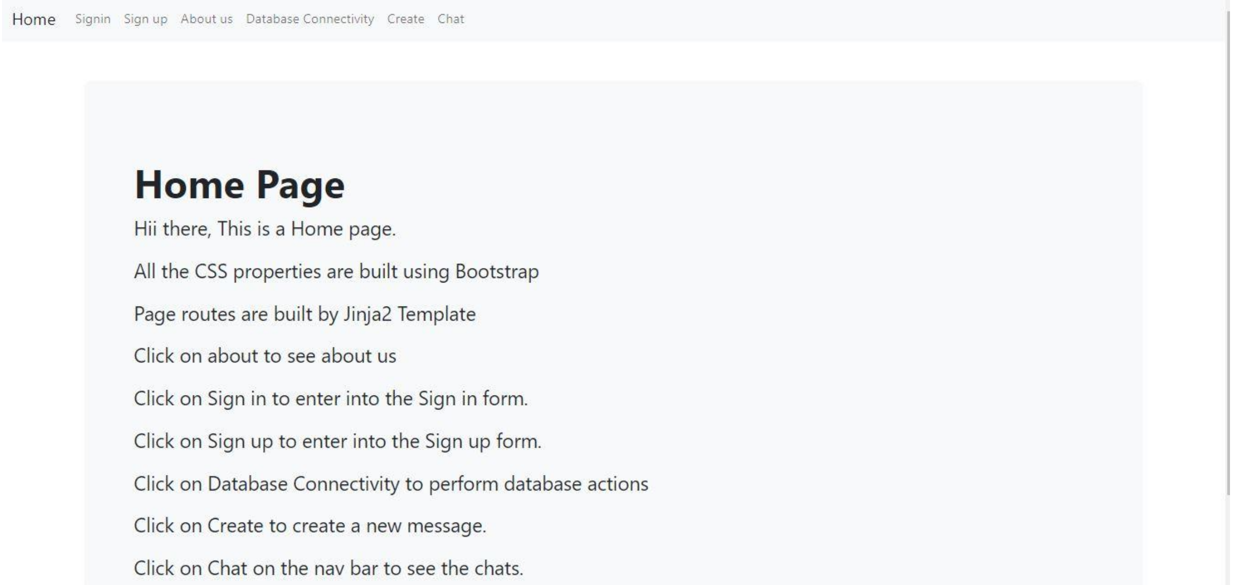
```
PS D:\Flask\Flask_with_Database_Connectivity(DB2)> flask --debug run
 * Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server ins
tead.
 * Running on http://127.0.0.1:5000
Press CTRL+C to quit
 * Restarting with stat
 * Debugger is active!
 * Debugger PIN: 125-669-832
```

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>
      <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:



Home Page

Hii there, This is a Home page.

All the CSS properties are built using Bootstrap

Page routes are built by Jinja2 Template

Click on about to see about us

Click on Sign in to enter into the Sign in form.

Click on Sign up to enter into the Sign up form.

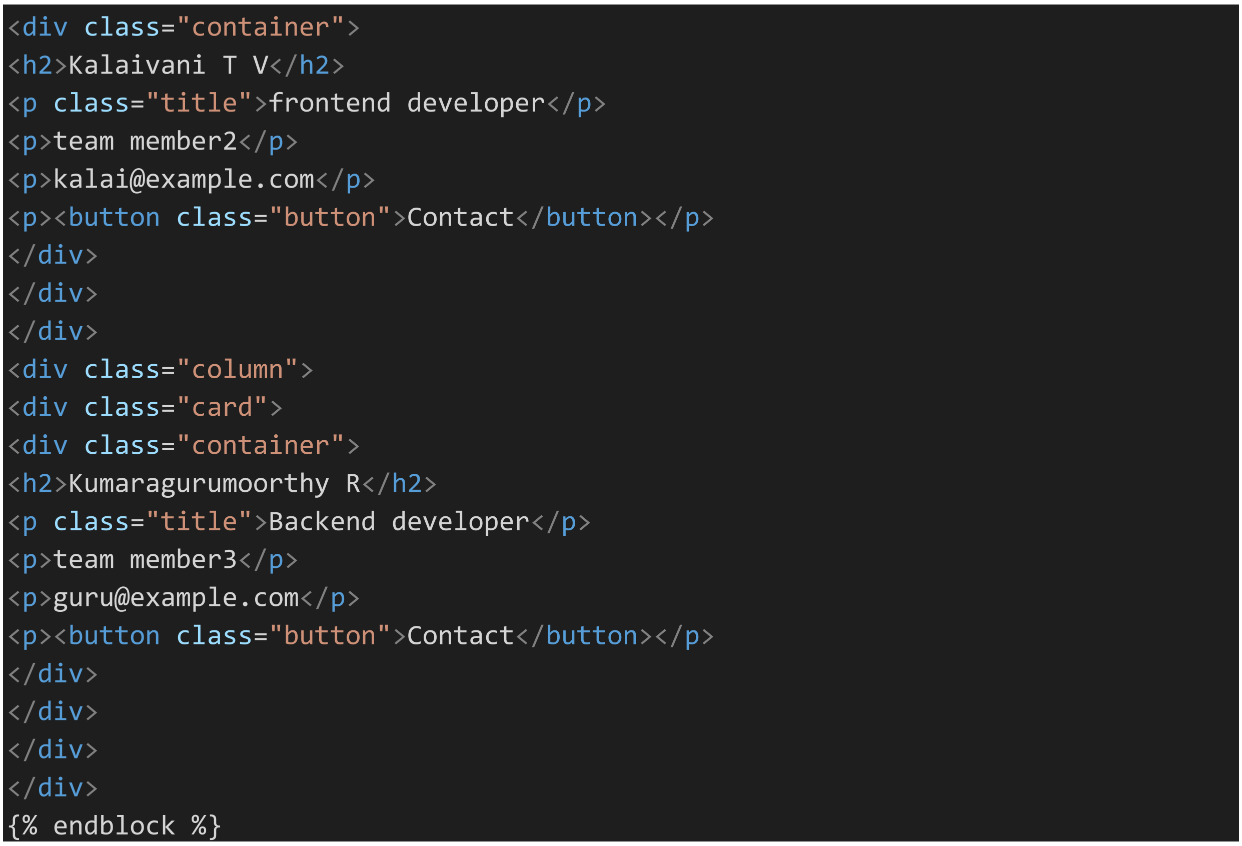
Click on Database Connectivity to perform database actions

Click on Create to create a new message.

Click on Chat on the nav bar to see the chats.

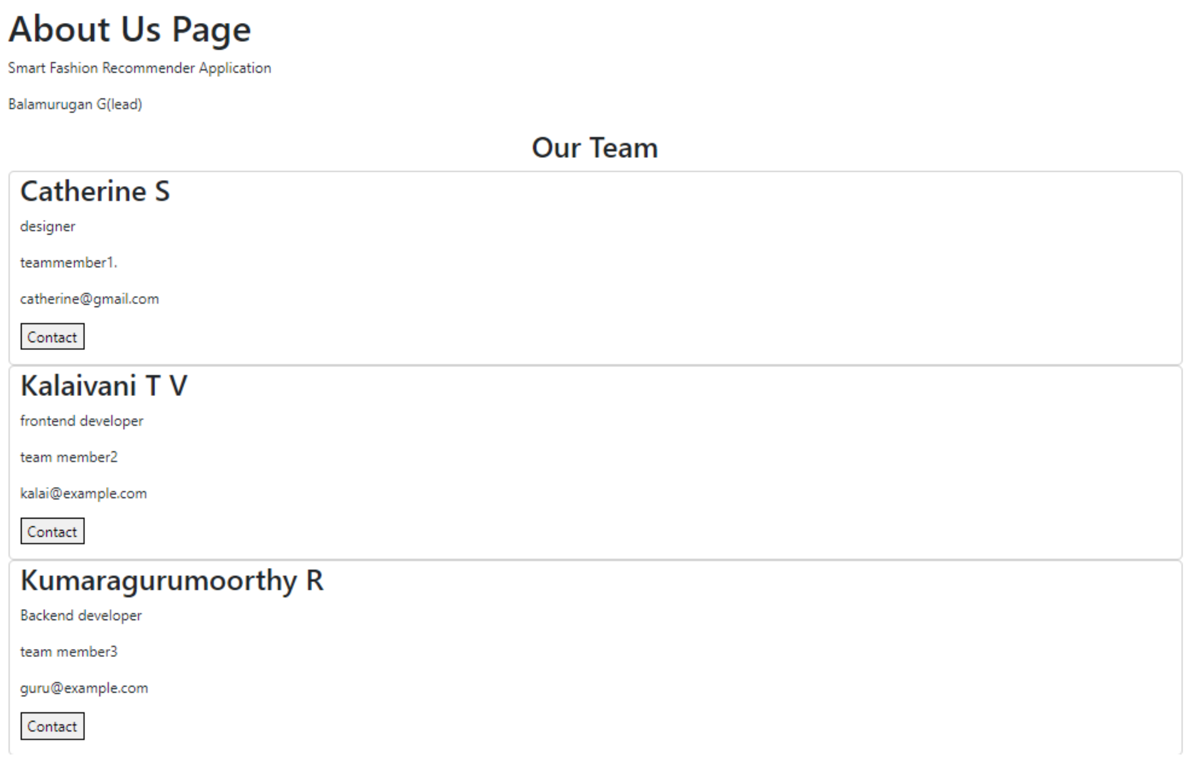
About.html

```
{% 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

Kalaivani T V

frontend developer

team member2

kalai@example.com

Kumaragurumoorthy R

Backend developer

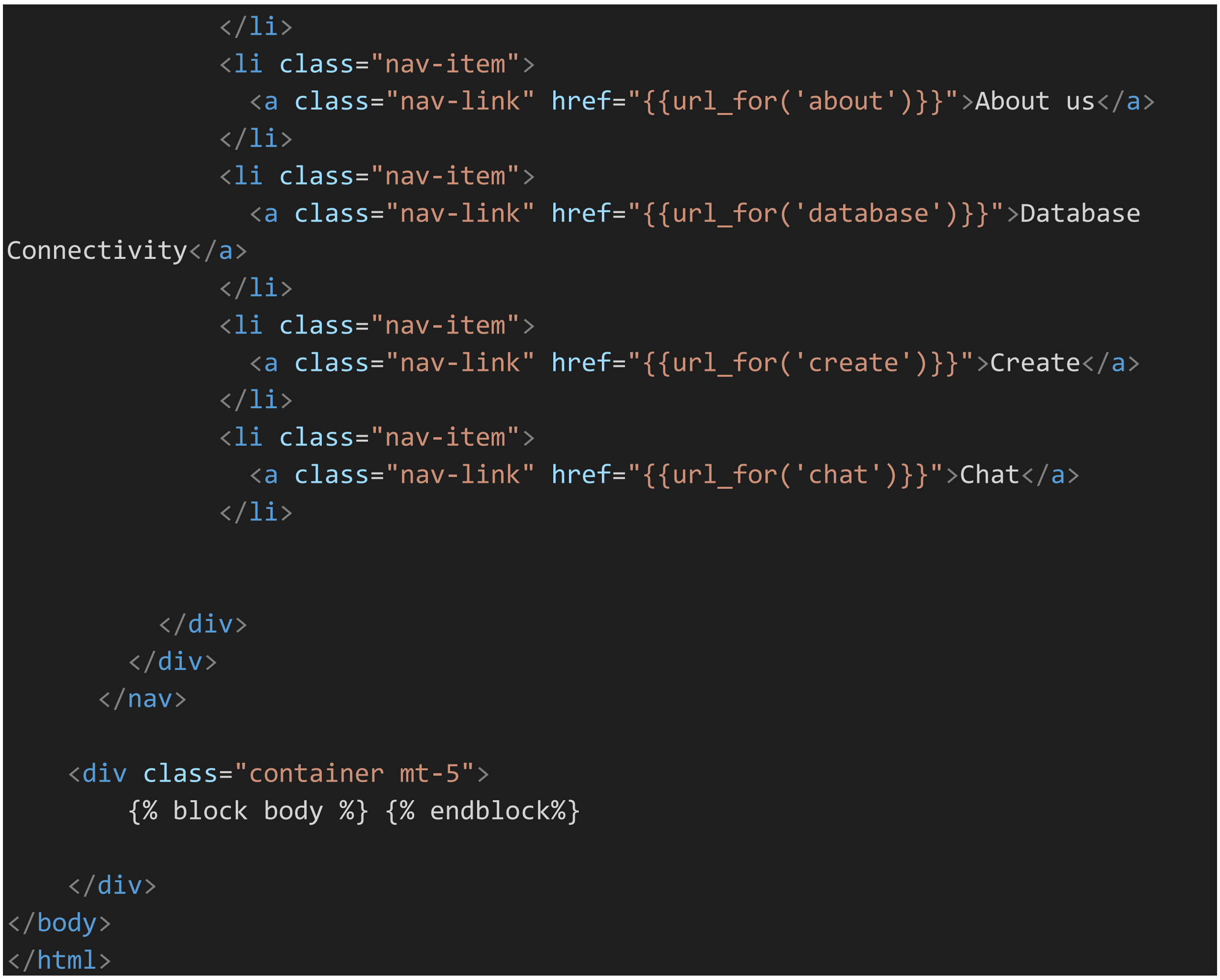
team member3

guru@example.com

3. Add the Bootstrap

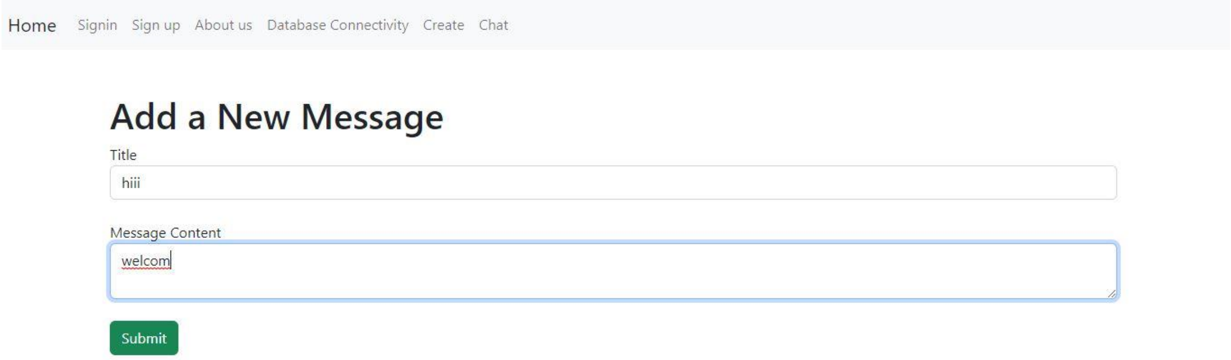
base.html

```
<!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-
u1OknCvxWvY5kfmNBILK2hRnQC3Pr17a+RTT6rIHI7NnikvbZlHgTPOOmMi466C8"
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:



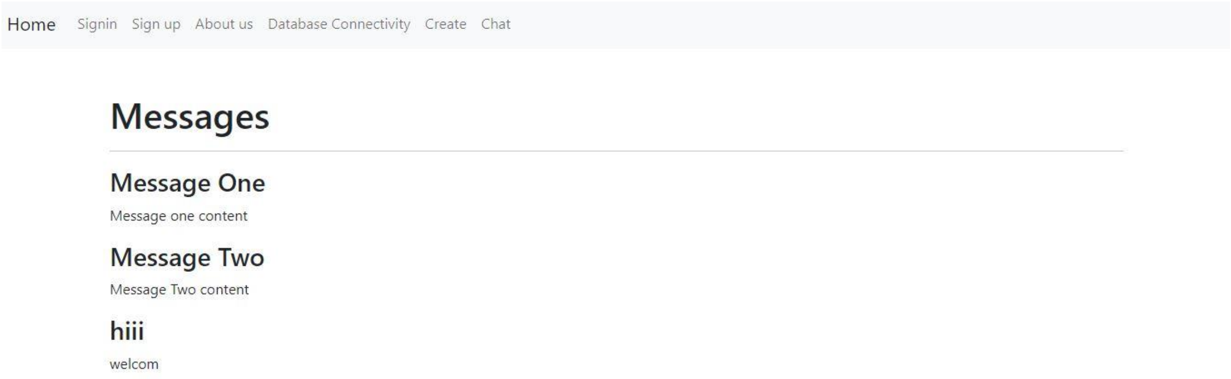
Add a New Message

Title

hiii

Message Content

welcom



Messages

Message One

Message one content

Message Two

Message Two content

hiii

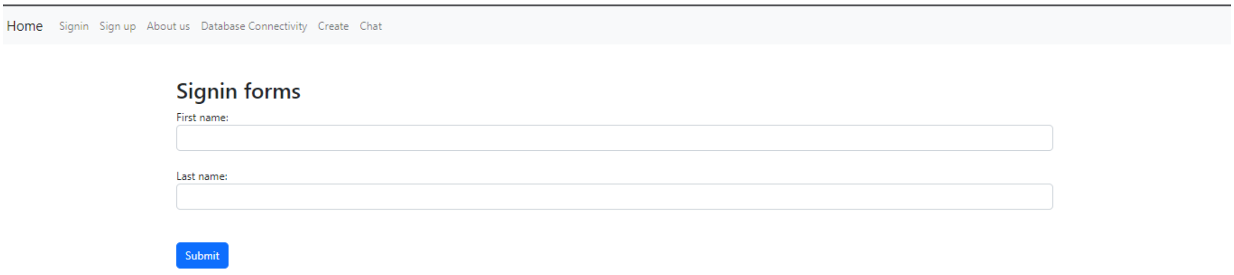
welcom

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">



{% endblock %}
```

Output:

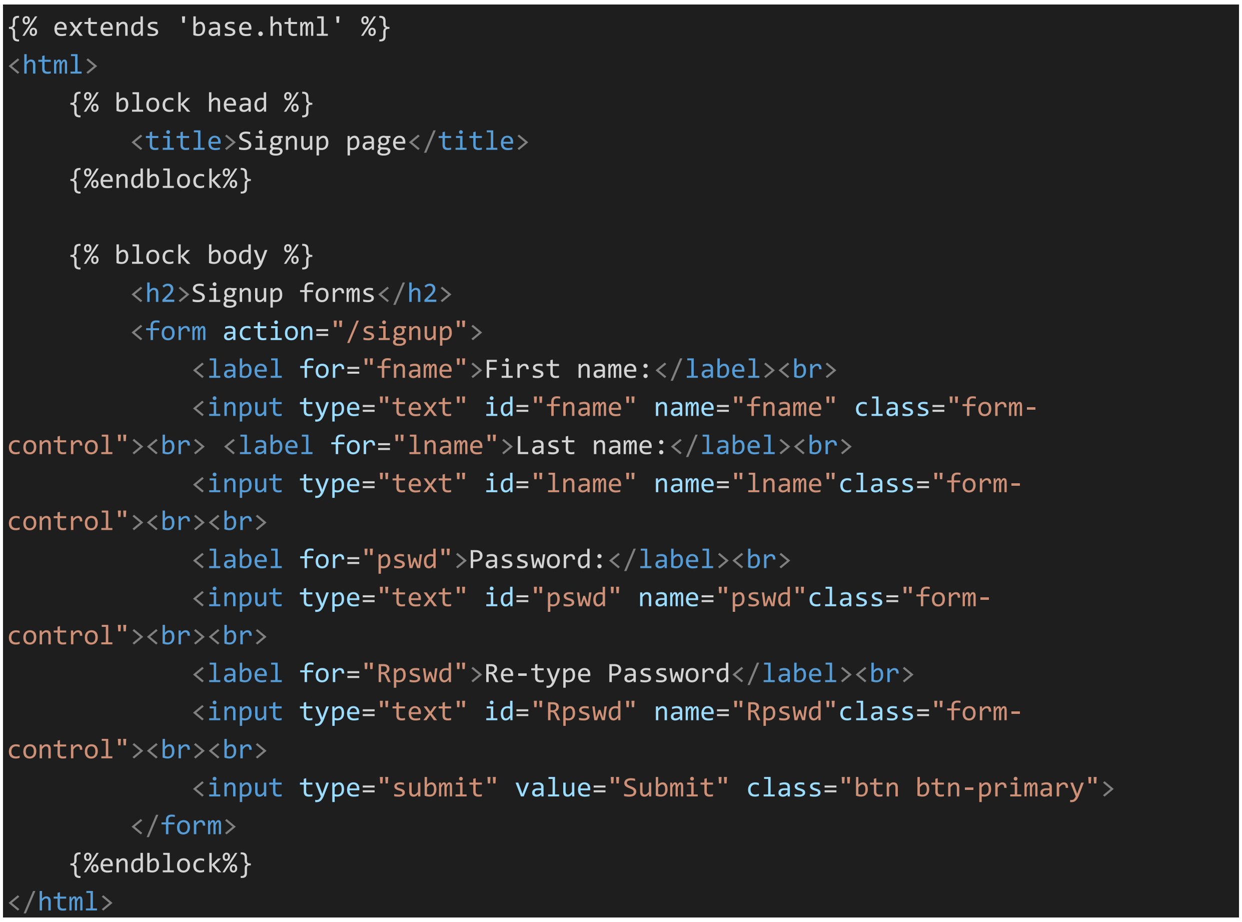


Signin forms

First name:

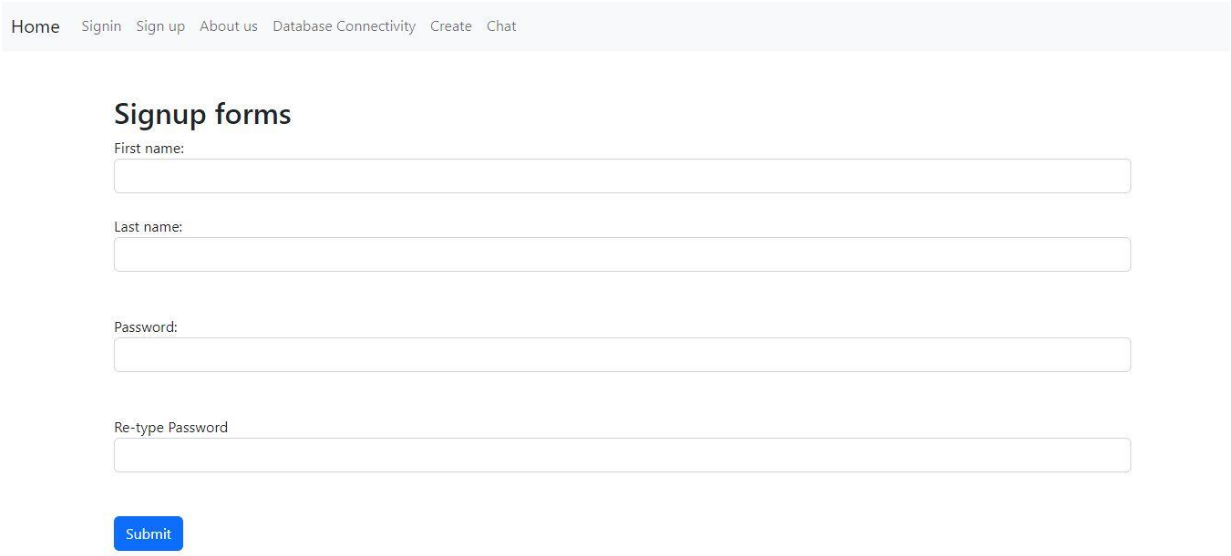
Last name:

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:



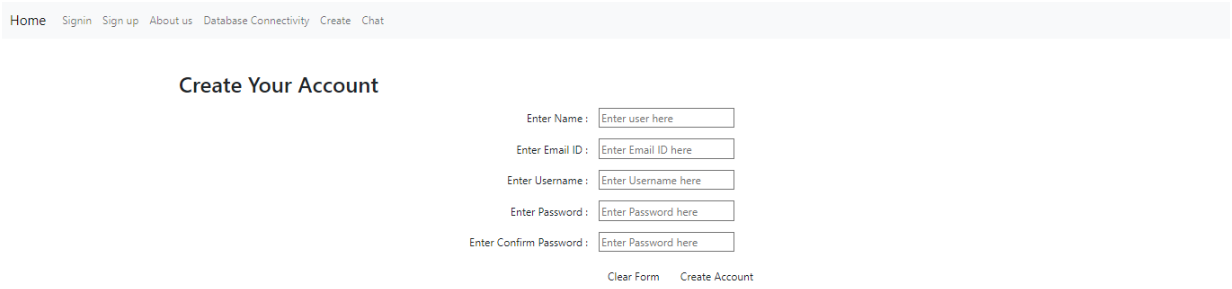
Signup forms

First name:

Last name:

Password:

Re-type Password



Create Your Account

Enter Name : Enter user here

Enter Email ID : Enter Email ID here

Enter Username : Enter Username here

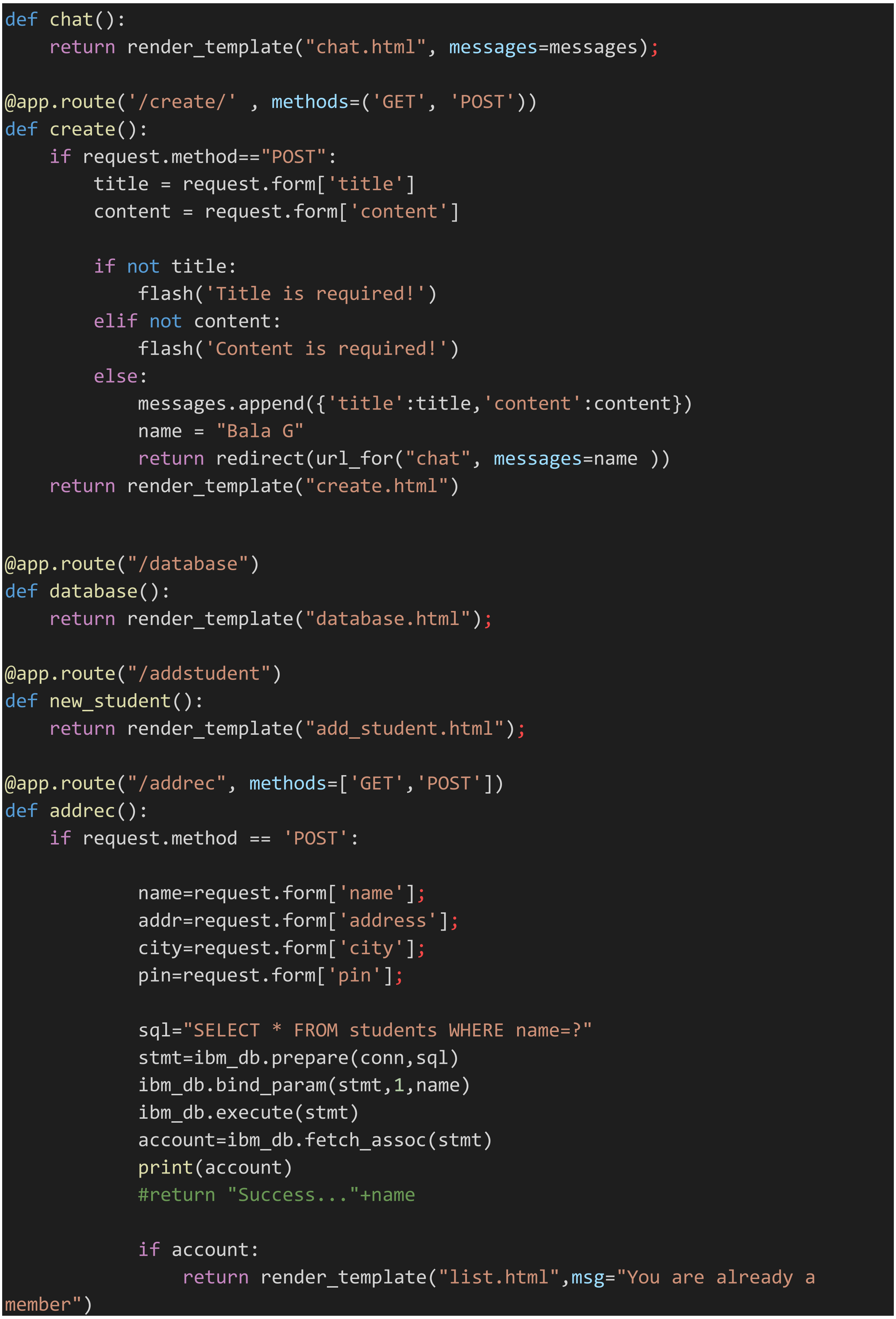
Enter Password : Enter Password here

Enter Confirm Password : Enter Password here

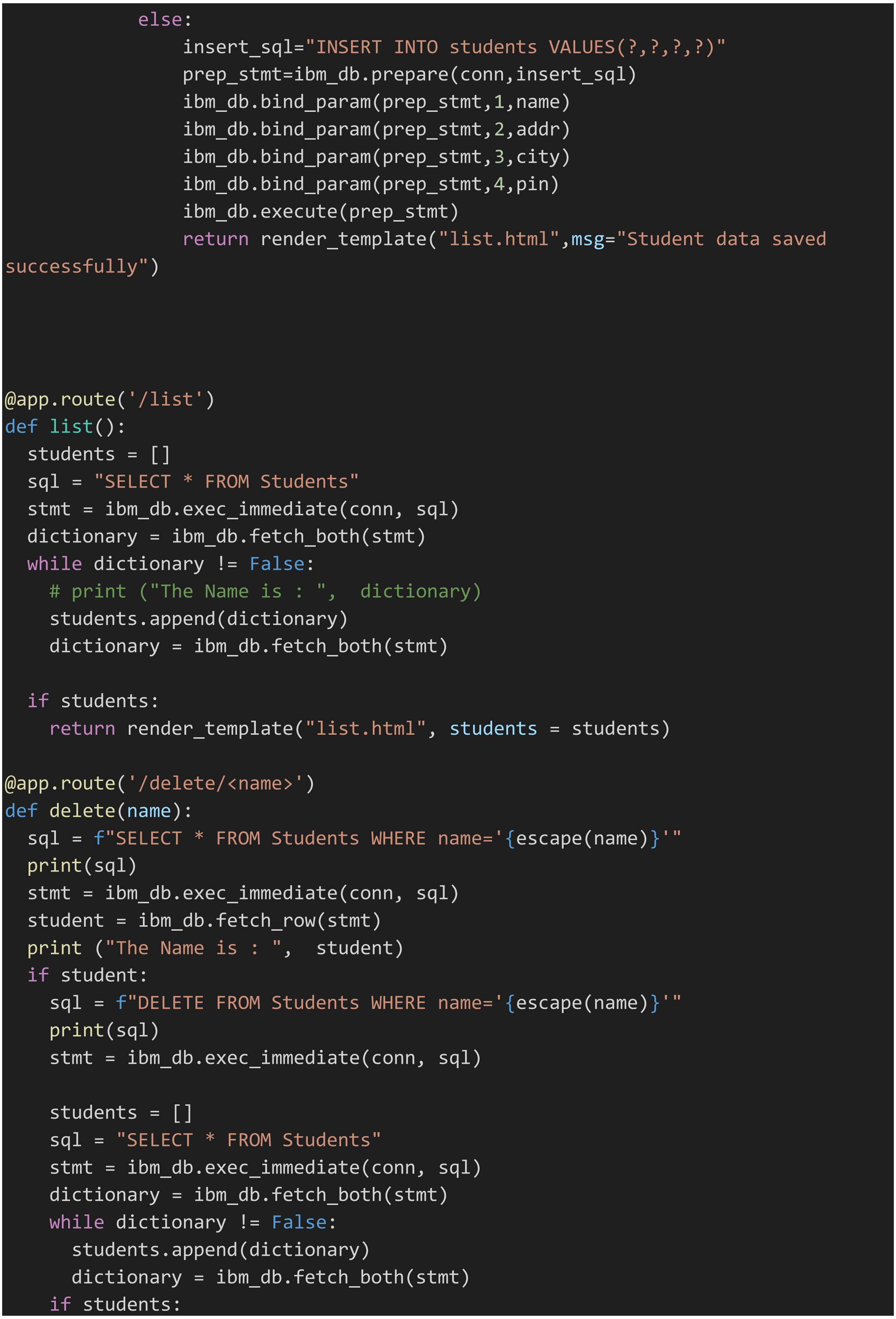
Database connectivity:

App.py(Database part)

```python
from flask import Flask, url_for,render_template,request,config,session,make_response,abort,redirect,flash;
from markupsafe import escape;
import ibm_db;
conn=ibm_db.connect("DATABASE=bludb;HOSTNAME=764264db-9824-4b7c-82df-40d1b13897c2.bs2io90l08kqb1od8lcg.databases.appdomain.cloud;PORT=32536;SECURITY=SSL;SSLServerCertificate=DigiCertGlobalRootCA.crt;UID=cfs78429;PWD=oCsdCFYuvrb5Vxhs",'','')

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

@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(prep_stmt,1,name)
                ibm_db.bind_param(prep_stmt,2,addr)
                ibm_db.bind_param(prep_stmt,3,city)
                ibm_db.bind_param(prep_stmt,4,pin)
                ibm_db.execute(prep_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

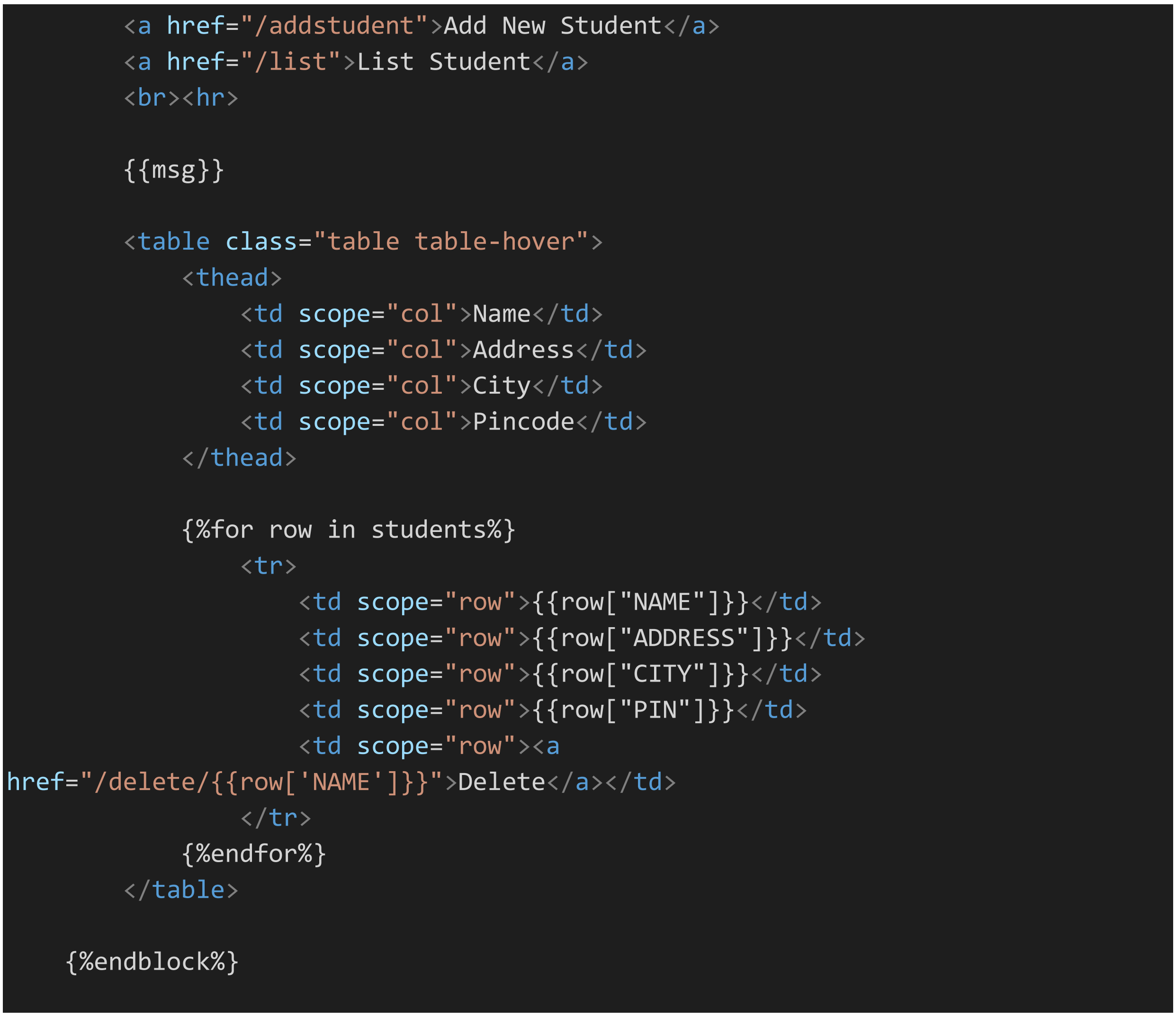
```
{% extends 'base.html' %}
{%block body%}
    <h1>Welcome to Student DB</h1>
    <a href="/addstudent">Add New Student</a>
    <a href="/list">List Student</a>
{%endblock%}
</body>
</html>
```

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>
```

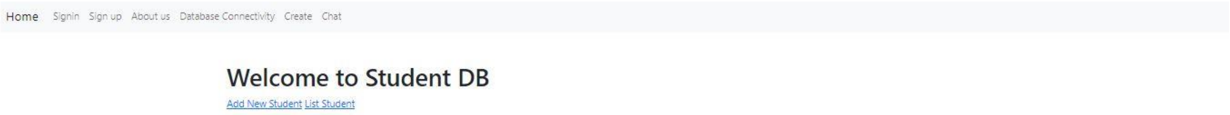
list.html

```
{% extends 'base.html' %}
    {%block body%}
        <a href="/">Home</a>
```



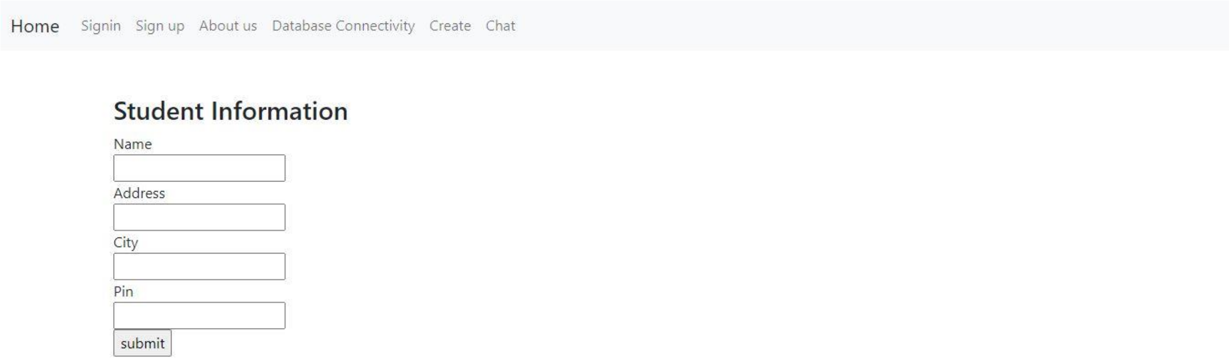
```
        <a href="/addstudent">Add New Student</a>
        <a href="/list">List Student</a>
        <br><hr>

        {{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:



Welcome to Student DB

Add New Student List Student



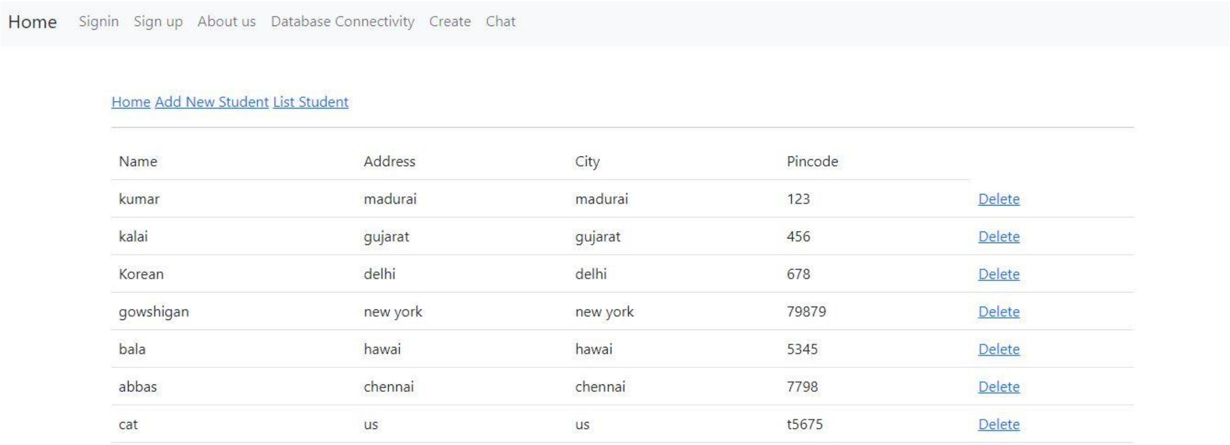
Student Information

Name

Address

City

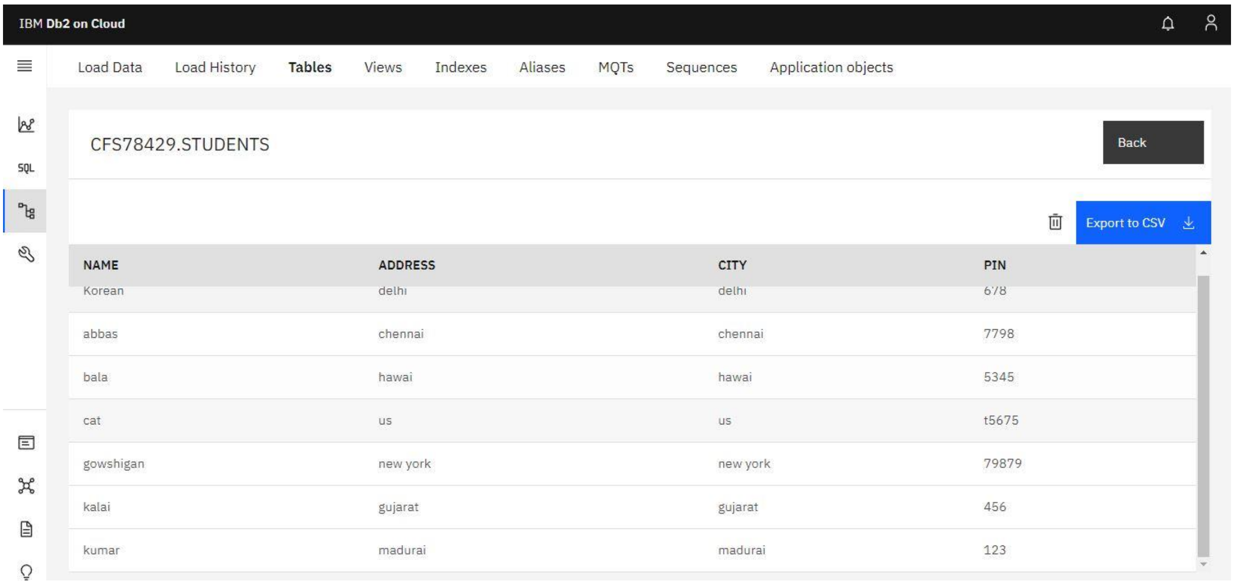
Pin



Home Add New Student List Student

Name	Address	City	Pincode	
kumar	madurai	madurai	123	Delete
kalai	gujarat	gujarat	456	Delete
Korean	delhi	delhi	678	Delete
gowshigan	new york	new york	79879	Delete
bala	hawai	hawai	5345	Delete
abbas	chennai	chennai	7798	Delete
cat	us	us	t5675	Delete

Records in IBM DB2:



CFS78429.STUDENTS

NAME	ADDRESS	CITY	PIN
Korean	delhi	delhi	678
abbas	chennai	chennai	7798
bala	hawai	hawai	5345
cat	us	us	t5675
gowshigan	new york	new york	79879
kalai	gujarat	gujarat	456
kumar	madurai	madurai	123