

**Assignment -2**  
Flask Application And Database

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Maximum Marks	2 Marks

**Question**

1. Create Flask app
2. Add the Homepage , about page
3. Add the bootstrap
4. Add the sign in and add the Signup page with database connectivity
5. Use ibm-db2 as database

**Solution:**

**Flask Program**

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

conn = ibm_db.connect("DATABASE=bludb;HOSTNAME=3883e7e4-18f5-4afe-be8c-
fa31c41761d2.bs2io90l08kqb1od8lcg.databases.appdomain.cloud;PORT=31498;SECURITY=SSL;SSLServer
Certificate=DigiCertGlobalRootCA.crt;UID=vbb21282;PWD=fB7LhEEeJ3MYRHU7",";")
app = Flask(__name__)
app.secret_key = b'_5#y2L"F4Q8z\n\xec]/'

@app.route('/',methods=['GET', 'POST'])
def Register():
    session['msg']=''
    if request.method == 'POST':
        name = request.form['name']
        email = request.form['email']
        password = request.form['newpassword']

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

        if account:
            session['msg']= 'Account already exists'
            return redirect(url_for("login"))
        else:
```

```

insert_sql = "INSERT INTO Users VALUES (?, ?, ?)"
prep_stmt = ibm_db.prepare(conn, insert_sql)
ibm_db.bind_param(prepare_stmt, 1, name)
ibm_db.bind_param(prepare_stmt, 2, email)
ibm_db.bind_param(prepare_stmt, 3, password)
ibm_db.execute(prepare_stmt)
session['msg'] = 'New account created Login'
return redirect(url_for("login"))

```

```

return render_template('signup.html')

```

```

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

```

```

    if request.method == 'POST':
        email = request.form['email']
        password = request.form['newpassword']

```

```

        sql = "SELECT * FROM Users WHERE Email =?"
        stmt = ibm_db.prepare(conn, sql)
        ibm_db.bind_param(stmt, 1, email)
        ibm_db.execute(stmt)
        account = ibm_db.fetch_both(stmt)
        accounts = account

```

```

        if (account):
            if (password == accounts['PASSWORD'] ):
                return render_template('Welcome.html', name=account['NAME'])
            else :
                return render_template('signin.html', msg='wrong Password')
        else :
            return render_template('signin.html', msg='wrong credentials')

```

```

    else:
        return render_template('signin.html', msg=session['msg'])

```

```

@app.route('/about')

```

```
def about():
    return render_template('about.html')

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

## Templates/base.html

```
<!doctype html>

<html lang="en">
<head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">

    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.1/dist/css/bootstrap.min.css" rel="stylesheet"
    integrity="sha384-iYQeCzEYFbKjA/T2uDLTpkwGzCiq6soy8tYa11GyVh/UjpbCx/TYkiZhlZB6+fzT"
    crossorigin="anonymous">
    <!--    bootstrap 5-->
    {% block head %} {% endblock %}
</head>

<body>
    <nav class="navbar navbar-expand-lg navbar-light bg-light">
        <div class="container-fluid">
            <a class="navbar-brand" href="/home">Navigation</a>
            <button
                class="navbar-toggler"
                type="button"
                data-mdb-toggle="collapse"
                data-mdb-target="#navbarNav"
                aria-controls="navbarNav"
                aria-expanded="false"
                aria-label="Toggle navigation"
            >
                <i class="fas fa-bars">Menu</i>
            </button>
            <div class="collapse navbar-collapse" id="navbarNav">
                <ul class="navbar-nav">
                    <li class="nav-item">
                        <a class="nav-link active" href="{{url_for('home')}}">Home</a>
                    </li>
                    <li class="nav-item">
                        <a class="nav-link" href="{{url_for('Register')}}">Register</a>
                    </li>
                    <li class="nav-item">
                        <a class="nav-link" href="{{url_for('login')}}">Login</a>
                    </li>
                </ul>
            </div>
        </div>
    </nav>
```

```
        </li>
        <li class="nav-item">
            <a class="nav-link" href="{{url_for('about')}}">About</a>
        >
    </li>
</ul>
</div>
</div>
</nav>
{% block body %} {% endblock %}

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.1/dist/js/bootstrap.bundle.min.js"
integrity="sha384-u1OknCvxWvY5kfmNBILK2hRnQC3Pr17a+RTT6rIH7NnikvbZlHgTPOOmMi466C8"
crossorigin="anonymous"></script>
</body>
```

## Home.html

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

{% block head %}
<title>Home</title>
{% endblock %}

{% block body %}
<div class='container'>
<h1>HOMEPAGE</h1>
<p>Welcome to Flask app!</p>
</div>
{% endblock %}
```

Navigation Home Register Login About

## HOMEPAGE

Welcome to Flask app!

## Signin.html

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

```
{% block head %}  
<title>Login</title>  
{% endblock %}
```

```
{% block body %}  
  <div class='container'>  
    <div class="registration-form" >  
      <h1>Login</h1>  
      <h2>{{msg}}</h2>  
      <form name="form_login" action="/login" method="POST">  
        <div><label for="input_registration_email" class="form-label">Email</label>  
        <input type="text" name="email" class="form-control" id="input_registration_email"  
maxlength="50" placeholder="@"></div>  
        <div><label for="input_registration_newpassword" class="form-label">Password</label>  
        <input type="password" name="newpassword" class="form-control"  
id="input_registration_newpassword" maxlength="30" >  
        </div>  
        <button type="submit" class="btn_general btn_blue mt-2" id="button_registration_submit">Sign  
In</button>  
  
      </form>  
    </div>  
  </div>  
{% endblock %}
```

Navigation   Home   Register   Login   About

## Login

Email

@

Password

Sign In

```

{% extends 'base.html' %}

{% block head %}
<title>Registration</title>
{% endblock %}

{% block body %}
<div class='container'>
<div class="registration-form" >
<h1>Registration Form</h1>
<form name="form_login" action="/" method="post">
<div><label for="input_registration_name" class="form-label">Name</label>
<input type="text" name="name" class="form-control" id="input_registration_name"
maxlength="50"></div>
<div><label for="input_registration_email" class="form-label">Email</label>
<input type="email" name="email" class="form-control" id="input_registration_email"
maxlength="50" placeholder="@"></div>
<div><label for="input_registration_newpassword" class="form-label">New Password</label>
<input type="password" name="newpassword" class="form-control"
id="input_registration_newpassword" maxlength="30" placeholder="*****">
</div>
<button type="submit" class="btn btn-primary" id="button_registration_susbmit">Sign up</button>

</form>
</div>
</div>
{% endblock %}

```

Navigation
Home
Register
Login
About

## Registration Form

Name

Email

New Password

Sign up

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

{% block body %}
<h1 class="display-1">Welcome to the portal {{name}} You have logged in</h1>
{% endblock %}
```

## About.html

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

{% block head %}
<title>About</title>
{% endblock %}

{% block body %}
<div class='container'>
<h1>About</h1>
<p>This is the second assingment for Cloud application Development</p>
</div>
{% endblock %}
```

---

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## About

This is the second assingment for Cloud application Development

Working

1. When name, email, password are filled in registration page, the credentials are stored in IBM DB2 and redirected to the login page

[Navigation](#) [Home](#) [Register](#) [Login](#) [About](#)

## Registration Form

Name

Email

New Password

Sign up

2. Enter Details in Login page if details are correct welcome message is shown

[Navigation](#) [Home](#) [Register](#) [Login](#) [About](#)

## Login

Email

Password

Sign In

The Welcome page that is shown



# Welcome to the portal Example You have logged in

If the entered Credentials are wrong , the following message will be shown

## Login

wrong credentials

Email

@

Password

Sign In