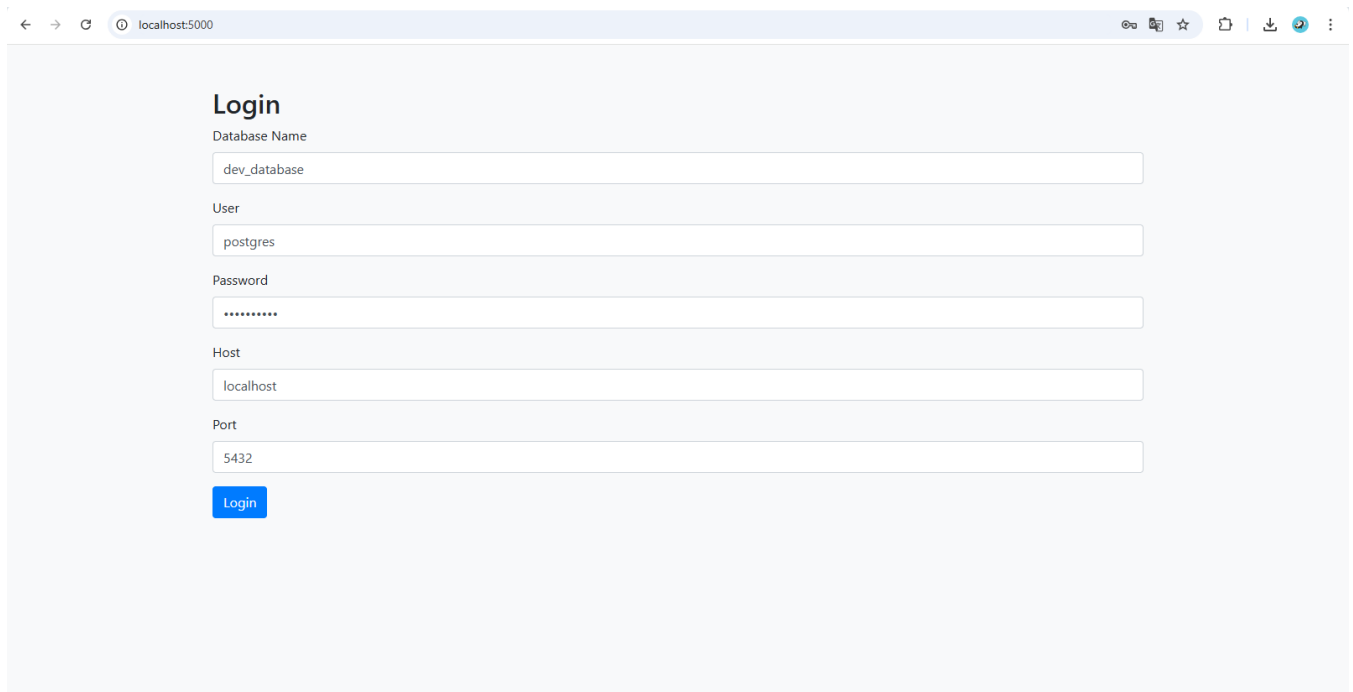


Bài tập 2 : Kết nối Web

MSSV : 2274802010004 – Nguyễn Hoàng An

1 Giao diện Web

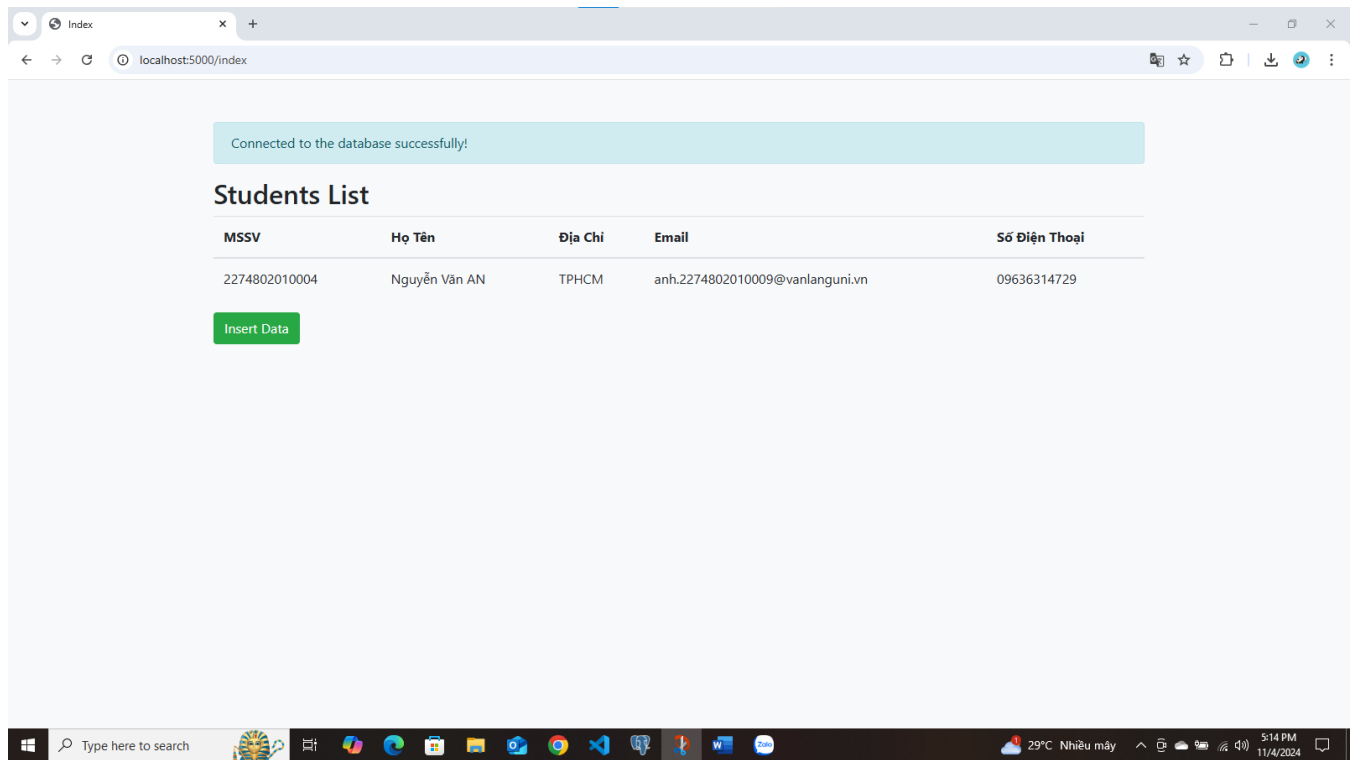
Giao diện đăng nhập



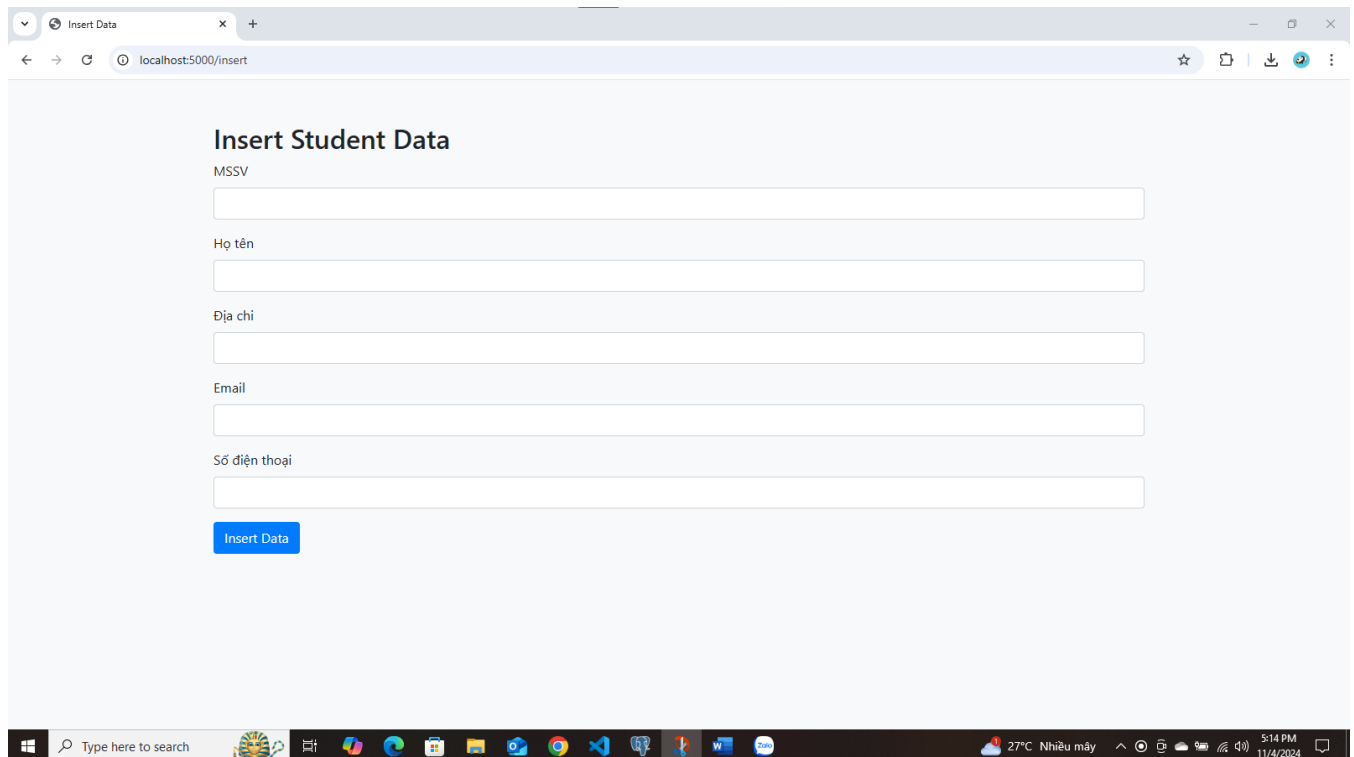
The screenshot shows a web browser window with the address bar displaying "localhost:5000". The page content is a login form titled "Login". The form contains five input fields and a button:

- Database Name:** Input field containing "dev_database".
- User:** Input field containing "postgres".
- Password:** Input field containing "*****".
- Host:** Input field containing "localhost".
- Port:** Input field containing "5432".
- Login:** A blue button with the text "Login".

Giao diện sau khi đăng nhập thành công



Giao diện thêm thông tin sinh viên



2 .Chức năng của Web

- Cho phép người dùng thêm thông tin sinh viên mới
- Sau khi người dùng nhấn Insert Data thì dữ liệu sẽ được lưu vào cơ sở dữ liệu của trang web

3 Mã nguồn của app

Mã nguồn chính để chạy web

```
1  from flask import Flask, render_template, redirect, url_for, request, flash, session
2  from db import get_db_connection
3  from forms import LoginForm, InsertForm
4
5  app = Flask(__name__)
6  app.secret_key = '12345678'
7
8  Codeium: Refactor | Explain | Generate Docstring | X
9  @app.route('/', methods=['GET', 'POST'])
10 def login():
11     form = LoginForm()
12     if form.validate_on_submit():
13         try:
14             # Lưu thông tin kết nối vào session
15             session['db_name'] = form.db_name.data
16             session['user'] = form.user.data
17             session['password'] = form.password.data
18             session['host'] = form.host.data
19             session['port'] = form.port.data
20
21             conn = get_db_connection(
22                 db_name=session['db_name'],
23                 user=session['user'],
24                 password=session['password'],
25                 host=session['host'],
26                 port=session['port']
27             )
28             flash('Connected to the database successfully!', 'success')
29             return redirect(url_for('index'))
30         except Exception as e:
31             flash(f'Error connecting to the database: {e}', 'danger')
32     return render_template('login.html', form=form)
33
34 Codeium: Refactor | Explain | Generate Docstring | X
35 @app.route('/index', methods=['GET', 'POST'])
36 def index():
37     try:
38         conn = get_db_connection(
39             db_name=session['db_name']
```

```

35 def index():
36     conn = get_db_connection(
37         db_name=session['db_name'],
38         user=session['user'],
39         password=session['password'],
40         host=session['host'],
41         port=session['port']
42     )
43     cursor = conn.cursor()
44     cursor.execute('SELECT * FROM dev_table') # Lấy dữ liệu từ bảng 'list'
45     rows = cursor.fetchall()
46     return render_template('index.html', rows=rows)
47 except Exception as e:
48     flash(f'Error accessing the database: {e}', 'danger')
49     return redirect(url_for('login'))
50
51
52 Codeium: Refactor | Explain | Generate Docstring | X
53 @app.route('/insert', methods=['GET', 'POST'])
54 def insert():
55     form = InsertForm()
56     if form.validate_on_submit():
57         conn = get_db_connection(
58             db_name=session['db_name'],
59             user=session['user'],
60             password=session['password'],
61             host=session['host'],
62             port=session['port']
63         )
64         cursor = conn.cursor()
65         cursor.execute(
66             "INSERT INTO dev_table (mssv, hoten, diachi, email, sodienthoai) VALUES (%s, %s, %s, %s, %s)",
67             (form.mssv.data, form.hoten.data, form.diachi.data, form.email.data, form.sodienthoai.data)
68         )
69         conn.commit()
70         flash('Data inserted successfully!', 'success')
71         return redirect(url_for('index')) # Kiểm tra xem tên hàm này có chính xác không
72     return render_template('insert.html', form=form)

```

```

if __name__ == '__main__':
    app.run(debug=True)
    app.run(port=5000)

```

Mã nguồn dùng để kết nối với database

```

DACK > db.py > ...
1 import psycopg2
   Codeium: Refactor | Explain | Generate Docstring | X
2 def get_db_connection(db_name, user, password, host='localhost', port='5432'):
3     # Kết nối đến cơ sở dữ liệu và trả về kết nối
4     conn = psycopg2.connect(
5         dbname=db_name,
6         user=user,
7         password=password,
8         host=host,
9         port=port
10    )
11    return conn
12

```

Mã nguồn form để điền thông tin

```
BACK > forms.py > ...
1  from flask_wtf import FlaskForm
2  from wtforms import StringField, PasswordField, SubmitField
3  from wtforms.validators import DataRequired
4
5  Codeium: Refactor | Explain
6  class LoginForm(FlaskForm):
7      db_name = StringField('Database Name', validators=[DataRequired()], default='dev_database')
8      user = StringField('User', validators=[DataRequired()], default='postgres')
9      password = PasswordField('Password', validators=[DataRequired()], default='0963631472')
10     host = StringField('Host', validators=[DataRequired()], default='localhost')
11     port = StringField('Port', validators=[DataRequired()], default='5432')
12     submit = SubmitField('Login')
13
14  Codeium: Refactor | Explain
15  class InsertForm(FlaskForm):
16     mssv = StringField('MSSV', validators=[DataRequired()])
17     hoten = StringField('Họ tên', validators=[DataRequired()])
18     diachi = StringField('Địa chỉ', validators=[DataRequired()])
19     email = StringField('Email', validators=[DataRequired()])
20     sodienthoai = StringField('Số điện thoại', validators=[DataRequired()])
21     submit = SubmitField('Insert Data')
```

Mã nguồn giao diện login

```
< templates > login.html
{% extends 'base.html' %}

{% block title %}Login{% endblock %}

{% block content %}
<h2>Login</h2>
<form method="post">
    {{ form.hidden_tag() }}
    <div class="form-group">
        {{ form.db_name.label(class="form-label") }}
        {{ form.db_name(class="form-control") }}
    </div>
    <div class="form-group">
        {{ form.user.label(class="form-label") }}
        {{ form.user(class="form-control") }}
    </div>
    <div class="form-group">
        {{ form.password.label(class="form-label") }}
        {{ form.password(class="form-control") }}
    </div>
    <div class="form-group">
        {{ form.host.label(class="form-label") }}
        {{ form.host(class="form-control") }}
    </div>
    <div class="form-group">
        {{ form.port.label(class="form-label") }}
        {{ form.port(class="form-control") }}
    </div>
    <button type="submit" class="btn btn-primary">Login</button>
</form>
{% endblock %}
```

Mã nguồn giao diện insert

```
DACK > templates > <> insert.html
1  {% extends 'base.html' %}
2
3  {% block title %}Insert Data{% endblock %}
4
5  {% block content %}
6      <h2>Insert Student Data</h2>
7      <form method="post">
8          {{ form.hidden_tag() }}
9          <div class="form-group">
10             {{ form.mssv.label(class="form-label") }}
11             {{ form.mssv(class="form-control") }}
12          </div>
13          <div class="form-group">
14             {{ form.hoten.label(class="form-label") }}
15             {{ form.hoten(class="form-control") }}
16          </div>
17          <div class="form-group">
18             {{ form.diachi.label(class="form-label") }}
19             {{ form.diachi(class="form-control") }}
20          </div>
21          <div class="form-group">
22             {{ form.email.label(class="form-label") }}
23             {{ form.email(class="form-control") }}
24          </div>
25          <div class="form-group">
26             {{ form.sodienthoai.label(class="form-label") }}
27             {{ form.sodienthoai(class="form-control") }}
28          </div>
29          <button type="submit" class="btn btn-primary">Insert Data</button>
30      </form>
31  {% endblock %}
32
```

Mã nguồn giao diện index

```
DACK > templates > <> index.html
1  {% extends 'base.html' %}
2
3  {% block title %}Index{% endblock %}
4
5  {% block content %}
6      <h2>Students List</h2>
7      <table class="table">
8          <thead>
9              <tr>
10                 <th>MSSV</th>
11                 <th>Họ Tên</th>
12                 <th>Địa Chỉ</th>
13                 <th>Email</th>
14                 <th>Số Điện Thoại</th>
15             </tr>
16          </thead>
17          <tbody>
18              {% for row in rows %}
19                  <tr>
20                     <td>{{ row[0] }}</td>
21                     <td>{{ row[1] }}</td>
22                     <td>{{ row[2] }}</td>
23                     <td>{{ row[3] }}</td>
24                     <td>{{ row[4] }}</td>
25                  </tr>
26              {% endfor %}
27          </tbody>
28      </table>
29      <a href="{{ url_for('insert') }}" class="btn btn-success">Insert Data</a>
30  {% endblock %}
31
```

Ctrl+I Codeium Command

AI Edit (⌘E) | Add to Chat (⌘C)

Mã nguồn Bootstrap và CSS

```
DAK > templates > base.html
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <title>{% block title %}My App{% endblock %}</title>
7   <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css">
8   <style>
9     body {
10       background-color: #f8f9fa;
11     }
12     .container {
13       margin-top: 50px;
14     }
15   </style>
16 </head>
17 <body>
18   <div class="container">
19     {% with messages = get_flashed_messages() %}
20     {% if messages %}
21       <div class="alert alert-info">
22         {% for message in messages %}
23           {{ message }}<br>
24         {% endfor %}
25       </div>
26     {% endif %}
27   {% endwith %}
28   {% block content %}{% endblock %}
29 </div>
30
31 <script src="https://code.jquery.com/jquery-3.5.1.slim.min.js"></script>
32 <script src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.9.2/dist/umd/popper.min.js"></script>
33 <script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"></script>
34
35 </body>
36 </html>
```

4. GitHub :

Link GitHub : <https://github.com/NguyenHoang-An/BaiTap/tree/main/BaiTap3>

