Python training - lab 21

Flask

```
Python web framework
pip install flask

from flask import Flask
app = Flask('My First webapp')

@app.route('/')
def hello_world():
    return 'Hello, World!'

if __name__ == '__main__':
    app.run()
```

Flask - routes

```python
from flask import Flask
app = Flask('My First webapp')

# multiple route goes to the same page
@app.route('/')
@app.route('/home')
def home():
    return 'This is the home page'

@app.route('/students')
def show_students():
    return '<h1>This will show all students</h1>'

if __name__ == '__main__':
    # run in debug mode; no need to restart on changes
    app.run(debug=True)
```

Flask - templates

```python
from flask import Flask,\
    render_template
app = Flask('My First webapp')

@app.route('/')
@app.route('/home')
def home():
    # templates/home.html
    return render_template(
        'home.html')
```
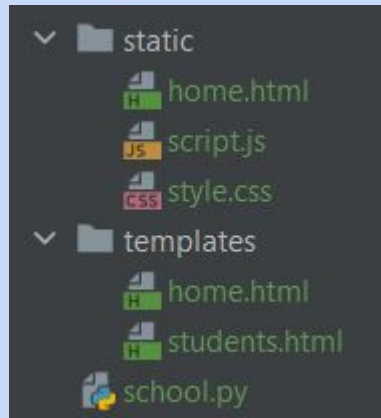
```html
<!-- templates/home.html -->
<html>
<head>
  <style>
    div {
      color: green;
      font-size: 18px;
    }
  </style>
</head>
<body>
  <div class='title'>
    This is our school homepage
    </div>
  <a href="/students">Students</a>
</body>
</html>
```

Flask - include css or javascript

```
<html>
<head>
    <link rel="stylesheet"
        href="{{ url_for('static', filename='style.css') }}">
    <script
        src="{{ url_for('static', filename='script.js') }}">
    </script>
</head>
<body>
    <div class='title'>This is our school homepage</div>
    <a href="students">Students</a>
</body>
</html>
```

static
    home.html
    script.js
    style.css
templates
    home.html
    students.html
school.py

```
/* static/script.js */
console.log('Hey!')
```

```
/* static/style.css */
div.title {
    color: green;
    font-size: 18px;
}
```

Flask - layouts

```html
<!-- layout.html: layout file common for all html files -->
<html>
<head>
    <link
      rel="stylesheet"
      href="{{ url_for('static', filename='style.css') }}">
    <script
      src="{{ url_for('static', filename='script.js') }}">
    </script>
</head>
<body>
  <div class="title">FasttrackIT school</div>
  <hr/>
  {% block content %}{% endblock %}
</body>
</html>
```

```html
<!-- home.html -->
{% extends "layout.html" %}
{% block content %}
  <div>List of our students</div>
  <a href="students">Students</a>
{% endblock content %}
```

```html
<!-- students.html -->
{% extends "layout.html" %}
{% block content %}
  <div>This will contain the students</div>
  <a href="/">Main page</a>
{% endblock content %}
```

Flask - jinja code

```python
# school.py
...
@app.route('/students')
def show_students():
    return
render_template('students.html'
, title='Our great students')
...
```

```html
<!-- layout.html -->
...
<head>
...
    {% if title %}
        <title>{{ title }}</title>
    {% else %}
        <title>Fasttrack IT</title>
    {% endif %}
</head>
...
```

Flask - jinja for loop

```python
# school.py
...
@app.route('/students')
def show_students():
    st = [
      'Dana Popescu',
      'Ion Pop',
      'Gelu Ionescu']

    return render_template(
      'students.html',
        students=st,
        title='Our great students')
...
```

```html
<!-- students.html -->
{% extends "layout.html" %}
{% block content %}
  <div>This are our students:</div>

    {% for student in students %}
      <h1>{{student}}</h1>
    {% endfor %}

  <a href="/">Main page</a>
{% endblock content %}
...
```