

Flask App routing

App routing is used to map the specific URL with the associated function that is intended to perform some task. It is used to access some particular page like Flask Tutorial in the web application.

In our first application, the URL ('/home') is associated with the home function that returns a particular string displayed on the web page.

In other words, we can say that if we visit the particular URL mapped to some particular function, the output of that function is rendered on the browser's screen.

```
from flask import Flask

app = Flask(__name__)

@app.route('/home')
def home():
    return 'Our first Flask website'

@app.route('/products')
def products():

    return 'Our first Flask website - products Page'
@app.route('/contact')
def contact():
    return 'Our first Flask website - Contact us Page'

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

Run the application
Use a production WSGI server instead.
* Debug mode: on
* Running on <http://127.0.0.1:5000/> (Press CTRL+C to quit)

On the browser access the following links

<http://127.0.0.1:5000/home>
<http://127.0.0.1:5000/products>
<http://127.0.0.1:5000/contact>

Flask facilitates us to add the variable part to the URL, We can reuse the variable by adding that as a parameter into the view function. Consider the following example.

add this route in your code

```
@app.route('/login/<name>')
def login(name):
    return 'Our first Flask website - Login Page: User is' + name
```

Run the application

On the browser access the following links

<http://127.0.0.1:5000/login/Anita>

Flask URL Building

The `url_for()` function is used to build a URL to the specific function dynamically. The first argument is the name of the specified function, and then we can pass any number of keyword argument corresponding to the variable part of the URL.

Flask Templates

In the previous examples, we have returned the simple string as the response from the view function. Although, flask facilitates us to return the response in the form of HTML templates. In this section of the tutorial, we will go through the ways using which we can return the HTML response from the web applications.

Example

The following flask script contains a view function, i.e., the `message()` which is associated with the URL `/`. Instead of returning a simple plain string as a message, it returns a message with `<h1>` tag attached to it using HTML.

Lets get back to our home route and edit by returning html code

```
@app.route('/home')
def home():
    return '<html><body><h1>Hi, welcome to the website</h1></body></html>'
```

Run the application
<http://127.0.0.1:5000/home>

Rendering external HTML files

Flask facilitates us to render the external HTML file instead of hardcoding the HTML in the view function. Here, we can take advantage of the jinja2 template engine on which the flask is based.

Flask provides us the `render_template()` function which can be used to render the external HTML file to be returned as the response from the view function.

Consider the following example.

Example

To render an HTML file from the view function, let's first create an HTML file named as `home.html`.

First right click on the project – *New – directory*. Name this directory ‘`templates`’

Inside templates folder create a *New – HTML File* named ‘[home.html](#)’

In home.html add this content

```
<!doctype html>

<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport"
        content="width=device-width, user-scalable=no, initial-scale=1.0, maximum-
scale=1.0, minimum-scale=1.0">
    <meta http-equiv="X-UA-Compatible" content="ie=edge">
    <title>Document</title>
</head>
<body>
    <h1>Hello World</h1>
</body>
</html>
```

Then back to our app.py and add this line

```
from flask import render_template
```

Then your /home route return the template

```
@app.route('/home')
def home():
    #return '<html><body><h1>Hi, welcome to the website</h1></body></html>'
    return render_template('home.html')
```

Your final code should look link below

```
from flask import Flask
from flask import render_template
app = Flask(__name__)
@app.route('/home')
def home():
    #return '<html><body><h1>Hi, welcome to the website</h1></body></html>'
    return render_template('home.html')

@app.route('/products')
def products():
    return 'Our first Flask website - products Page'

@app.route('/contact')
def contact():
    return 'Our first Flask website - Contact us Page'

@app.route('/login/<name>')
def login(name):
    return 'Our first Flask website - Contact us Page: ' + name

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

Run the app and access

<http://127.0.0.1:5000/home>

