Weekend: Basic Flask App

Basic Application Structure

Inside the *Hello-Flask* application create a new file named *hello.py*.

Initialization

Add the following code in our *hello.py* file.

```
from flask import Flask
app = Flask(__name__)
```

All flask applications must create an application instance.

The web server passes all the requests it receives to this object for handling. This uses a protocol called `Web Server Gateway Interface`

from the flask module we import the `Flask` class. We then create an instance of that class called `app`, by passing in the `__name__` variable.

Flask uses the `__name__` variable to determine the root path for the application. Flask locates resources for the application relative to that path.

Routes and view functions

Browsers send requests to the web servers which in turn send the request to the application instance. The application instance needs to know what code to execute depending on the request received.

Defining a route.

```
.....
@app.route('/')
```

Routes in flask are defined using the `app.route()` decorator. Here we have defined the route for the index page.

```
.....
@app.route('/')
def index():
    return '<h1> Hello World </h1>'
```

The function `index` is a **View Function**. It is the handler for the route defined above. Any time a request is sent to the `index` or `/` route of our application the `index` function will be executed.

The return value for a view function is called a response, this is what a client or web browser will receive. Here we are returning a HTML `h1` element that has the string `Hello World`.

Setting up a server

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

Flask has an `run()` method that launches the flask development server. First we check if the script is run directly. During development it is advisable to have the debug mode set to True. This activates the **debugger** and **reloader**

Let us run the application in our terminal

```
(virtual)$ python3.6 hello.py

* Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
 * Restarting with stat
 * Debugger is active!
 * Debugger PIN: ******
```

Here we start up our web server and see our application is running on*http://127.0.0.1:5000/*. When we open this we are greeted by a large bold `Hello World` text.