



Flask Part 1

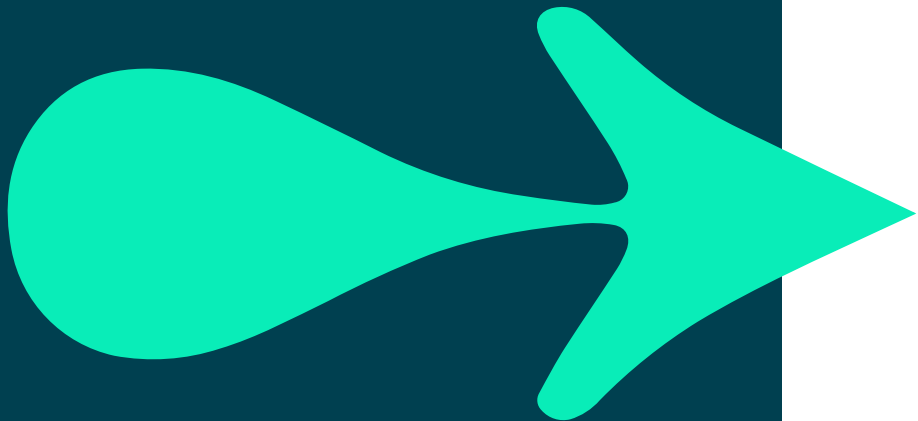
Module 20



MODULE OVERVIEW

Contents

- What is Flask?
- HTTP Methods
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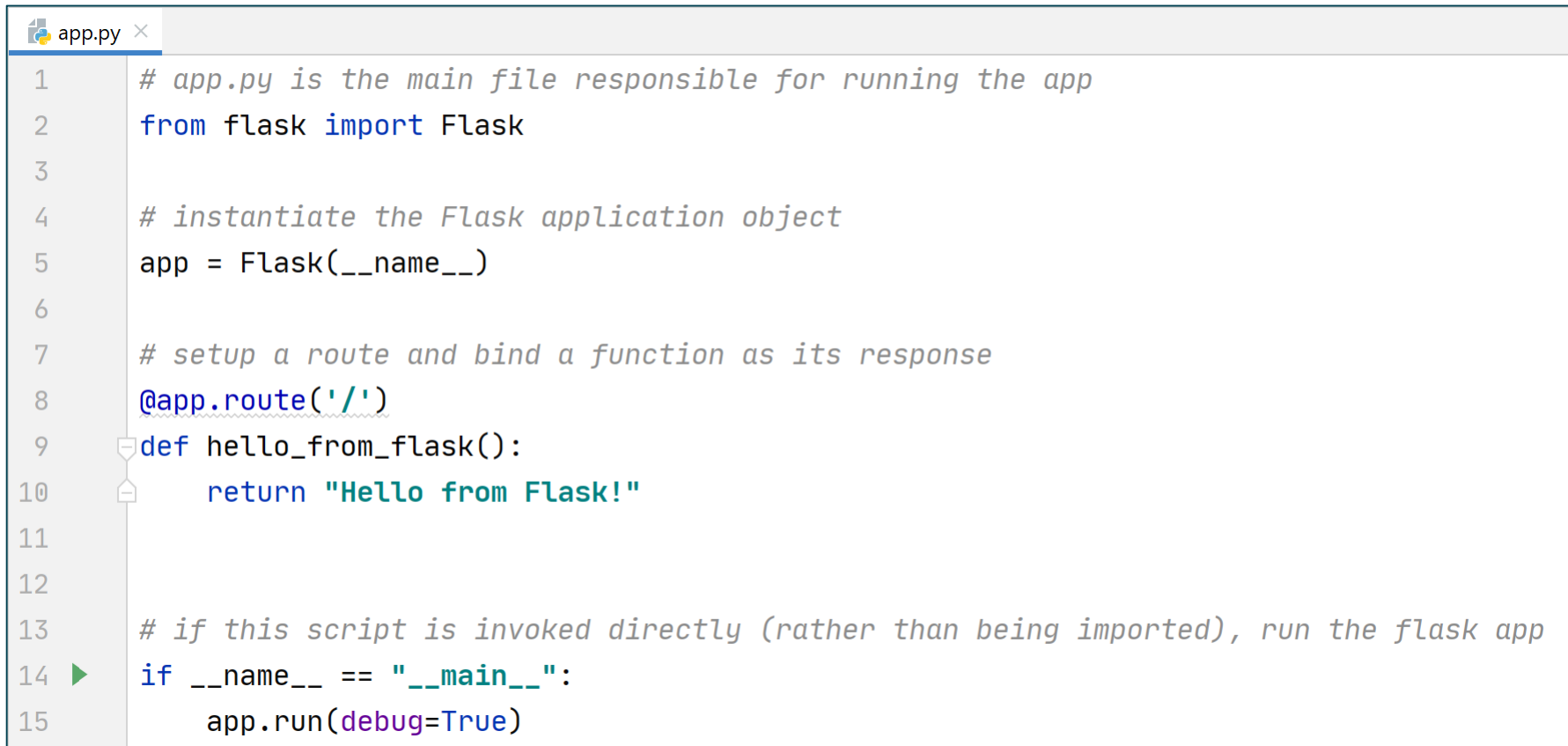


What is Flask?

Flask is a micro-framework for creating Python web applications and APIs

Flask is written in python and uses python libraries

A simple Flask Application:



```
app.py x
1  # app.py is the main file responsible for running the app
2  from flask import Flask
3
4  # instantiate the Flask application object
5  app = Flask(__name__)
6
7  # setup a route and bind a function as its response
8  @app.route('/')
9  def hello_from_flask():
10     return "Hello from Flask!"
11
12
13 # if this script is invoked directly (rather than being imported), run the flask app
14 if __name__ == "__main__":
15     app.run(debug=True)
```

HTTP Methods

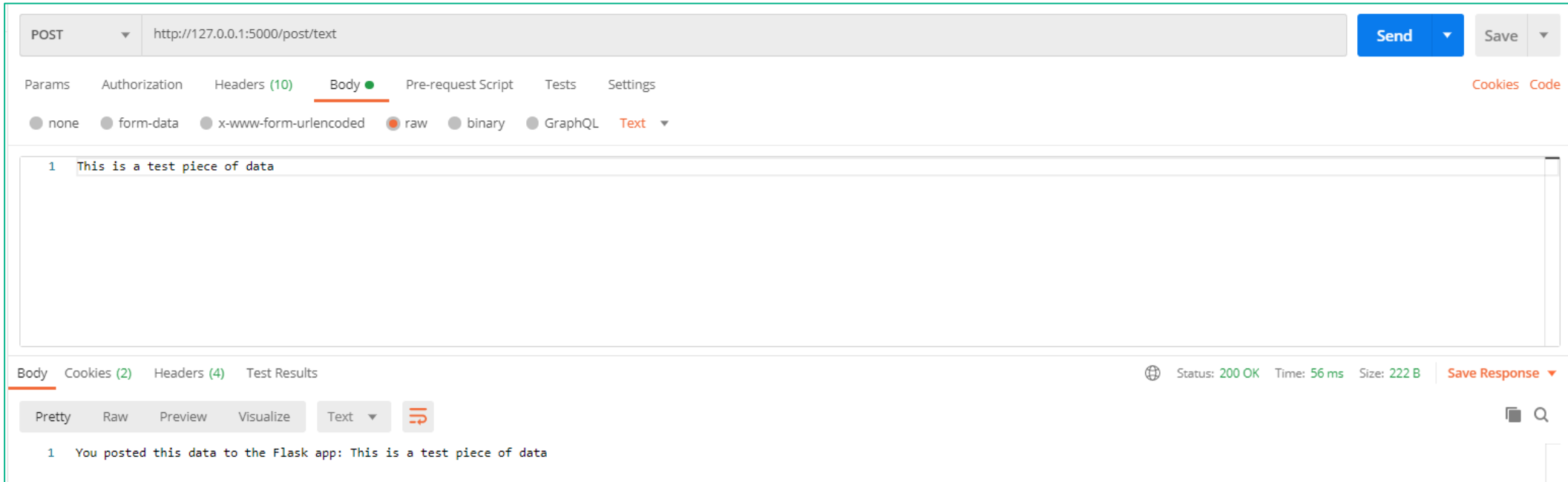
The common HTTP request methods and their meaning:

HTTP Method	Action
GET	SELECT / READ
POST	INSERT / ADD
PUT	UPDATE / MODIFY
DELETE	DELETE

Route Examples:

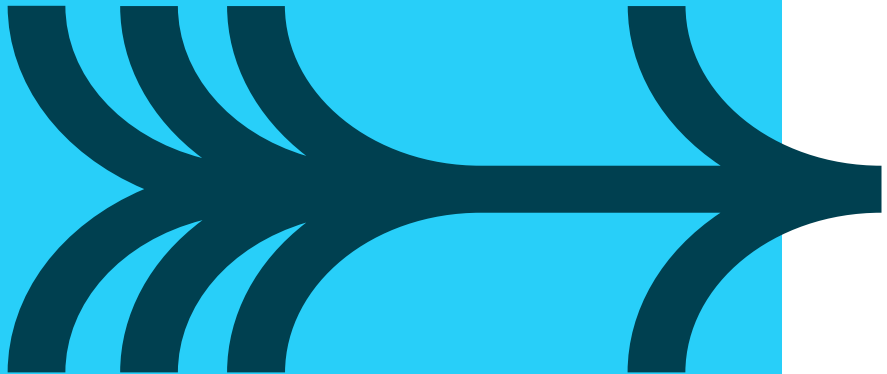
```
8  @app.route('/')
9  def hello_from_flask():
10     return "Hello from Flask!"
11
12  @app.route('/get/text')
13  def get_text():
14     return Response("Hello from Flask using an explicit Response object", mimetype='text/plain')
15
16
17  @app.route('/post/text', methods=['POST'])
18  def post_text():
19     data_sent = request.data.decode('utf-8')
20     return Response("You posted this data to the Flask app: " + data_sent, mimetype='text/plain')
21
22  # if this script is invoked directly (rather than being imported), run the flask app
23  if __name__ == "__main__":
24     app.run(debug=True)
25
```

Testing with Postman



INSTRUCTOR WALKTHROUGH

Create a simple flask application
Test it with Postman



Dynamic routes

```
# the route variable word is a string by default
# equivalent to @app.route('/dynamic/<string:word>')
@app.route('/dynamic/<word>')
def home(word):
    return word

# this route variable is an int type called number
@app.route('/square/<int:number>')
def square(number):
    squared = number ** 2
    line = "Your number squared is" + " " + str(squared)
    return line
```

GET

http://127.0.0.1:5000/dynamic/hello

Body

Cookies (2)

Headers (4)

Test Results

Pretty

Raw

Preview

Visualize

HTML



1 hello

GET

http://127.0.0.1:5000/square/9

Body

Cookies (2)

Headers (4)

Test Results

Pretty

Raw

Preview

Visualize

HTML



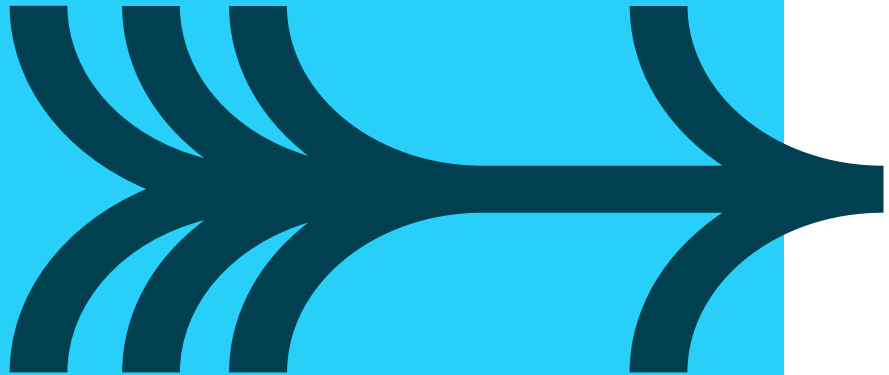
1 Your number squared is 81



Activity:

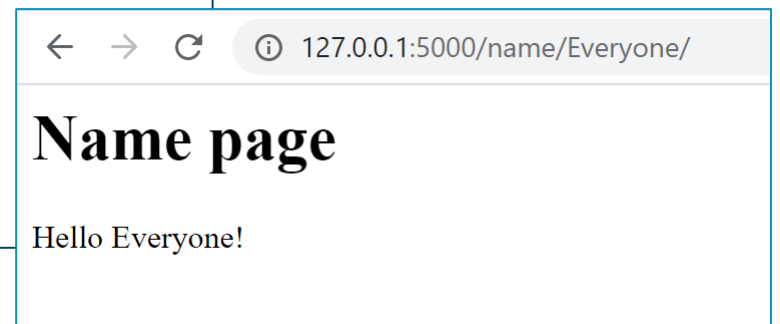
Add a dynamic route to your Flask application to include a **name** variable that returns the response “**Hello “ + name**

INSTRUCTOR WALKTHROUGH



Create a route to return an HTML page to display a hello message

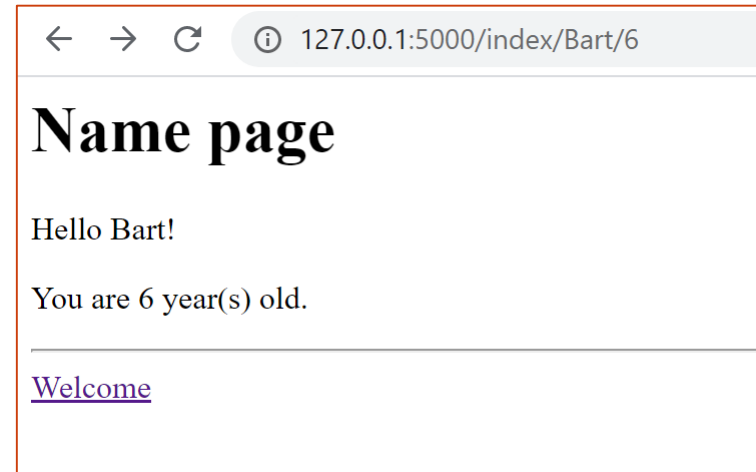
```
def say_hello_page(name):  
    return """  
    <html>  
    <head>  
        <title>Sample - Flask routes</title>  
    </head>  
    <body>  
        <h1>Name page</h1>  
        <p>Hello {}!</p>  
    </body>  
    </html>  
    """.format(name)
```



url_for() method

```
@app.route('/get/text')
def get_text():
    return Response("Hello from Flask using an explicit Response object", mimetype='text/plain')
```

```
@app.route("/index/<name>/<int:age>")
def index(name, age):
    url = url_for('get_text')
    return """
<html>
<head>
    <title>Sample - Flask routes</title>
</head>
<body>
    <h1>Name page</h1>
    <p>Hello {}!</p>
    <p>You are {} year(s) old.</p>
    <hr>
    <a href="{}">Welcome</a>
</body>
</html>
""".format(name, age, url)
```





Activity:

Add a route to your Flask application for an About Page and include a link to another route within the html of the page

Any questions?

