Python for DevOps

Module 5. Practice

Interacting with OS

OS module

https://docs.python.org/3/library/os.html

OS

getcwd()	
chdir()	
mkdir	
makedirs()	
rmdir()	
removedirs()	
rename()	
stat()	
walk()	
environ.get90	
environ.setdefault()	
path.join()	
path.split()	
path.basename()	

Files

Read from and write to a file

```python
import os

# Create dir, create empty file
os.mkdir('new_dir')
os.chdir('new_dir')
open('new_file.txt', 'a').close()

# Write to file
with open('new_file.txt', 'w') as file:
    for i in range(5):
        file.write(f"Hello World! {i} \n")

# Read from file
with open('new_file.txt', 'r') as file:
    for line in file.readlines():
        print(line)
```

Requests

Let's get weather information

https://openweathermap.org/current

```
import requests

api = 'API HERE'
city = 'Moscow'

r = requests.get(f"https://api.openweathermap.org/data/2.5/weather?q={city},ru&appid={api}")
if r.status_code == 200:
    wdata = r.json()
    print(f"The weather outside is {wdata['weather'][0]['main']}")

else:
    print("Houston, we have a problem")
```

Json (JavaScript Object Notation)

```
{
  "coord": {
    "lon": 37.6156,
    "lat": 55.7522
  },
  "weather": [
    {
      "id": 804,
      "main": "Clouds",              ← ['weather'][0]['main']
      "description": "overcast clouds",
      "icon": "04d"
    }
  ],
"timezone": 10800,
  "id": 524901,
  "name": "Moscow",
  "cod": 200
}
```

Flask

https://palletsprojects.com/p/flask/

```
from flask import Flask

app = Flask(__name__)


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