

# DEVOPS - DOCKER

TP1



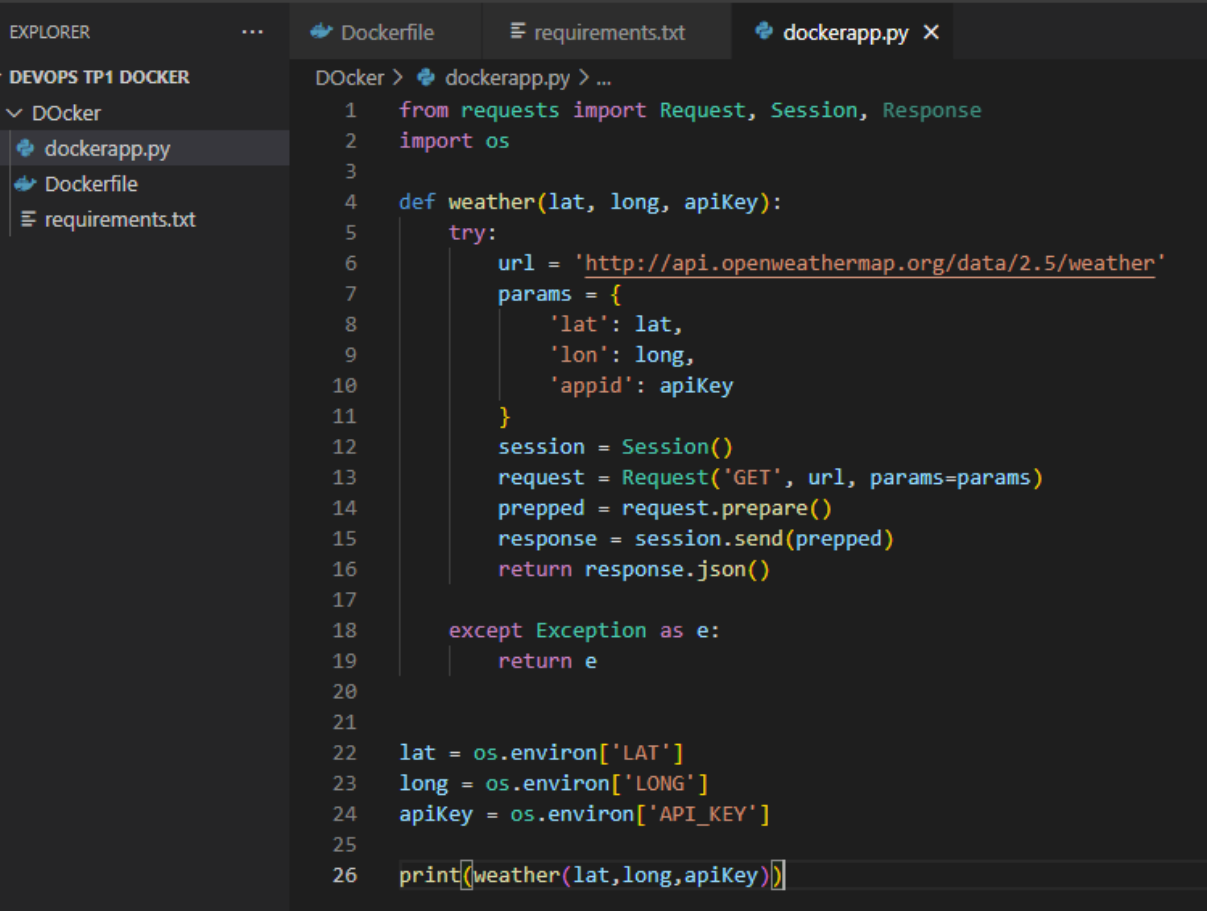
efrei

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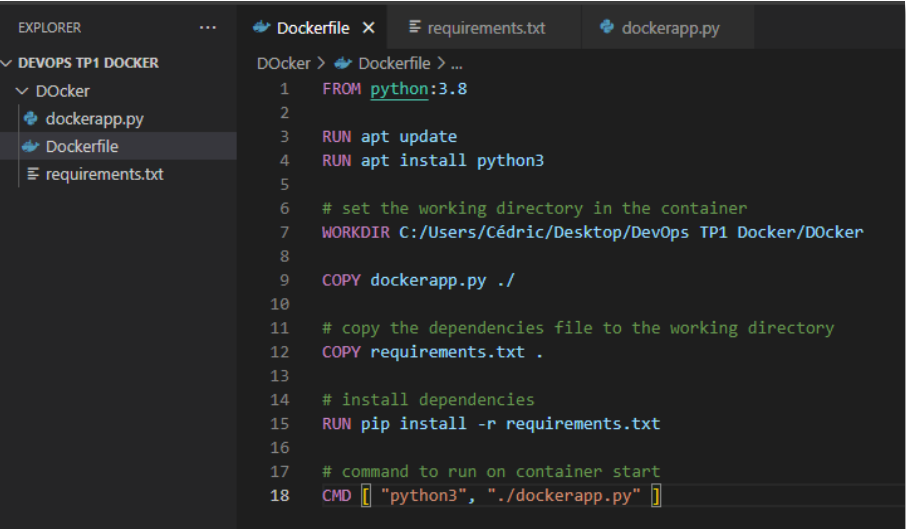
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Professeur : Vincent DOMINGUES

- Création du wrapper utilisant l'API openweather dans le langage python. Il retourne la météo d'un lieu en fonction de sa latitude et de sa longitude (passées en variable d'environnement)



```
1 from requests import Request, Session, Response
2 import os
3
4 def weather(lat, long, apiKey):
5     try:
6         url = 'http://api.openweathermap.org/data/2.5/weather'
7         params = {
8             'lat': lat,
9             'lon': long,
10            'appid': apiKey
11        }
12        session = Session()
13        request = Request('GET', url, params=params)
14        prepped = request.prepare()
15        response = session.send(prepped)
16        return response.json()
17
18    except Exception as e:
19        return e
20
21
22 lat = os.environ['LAT']
23 long = os.environ['LONG']
24 apiKey = os.environ['API_KEY']
25
26 print(weather(lat, long, apiKey))
```

- Création du Dockerfile



```
1 FROM python:3.8
2
3 RUN apt update
4 RUN apt install python3
5
6 # set the working directory in the container
7 WORKDIR C:/Users/Cédric/Desktop/DevOps TP1 Docker/Docker
8
9 COPY dockerapp.py ./
10
11 # copy the dependencies file to the working directory
12 COPY requirements.txt .
13
14 # install dependencies
15 RUN pip install -r requirements.txt
16
17 # command to run on container start
18 CMD ["python3", "./dockerapp.py"]
```

- Création de l'image docker

```
PS C:\Users\Cédric\Desktop\DevOps TP1 Docker\DOcker> docker build -t dockertp .
[+] Building 24.7s (13/13) FINISHED
#> [internal] load build definition from Dockerfile
#> transferring dockerfile: 4.00B
#> [internal] load .dockerignore
#> transferring context: 2B
#> [internal] load metadata for docker.io/library/python:3.8
#> [auth] library/python:pull token for registry-1.docker.io
#> [3/7] FROM docker.io/library/python:3.8sha256:1fbd8171eddd8d88b1b1b05889453a36c95aed10d0150bac8011a27ca15
#> resolve docker.io/library/python:3.8sha256:1fbd8171eddd8d88b1b1b05889453a36c95aed10d0150bac8011a27ca15
#> sha256:1fbd8171eddd8d88b1b1b05889453a36c95aed10d0150bac8011a27ca15 1.00kB / 1.00kB
#> sha256:b56b8443e26e26746c3e205447c82246f071dfedf15d0246b9d76e90021c017 0.00kB / 0.00kB
#> sha256:e796f3fddda37baa16205b0f75d170b7532b10e80be7659004fca2118220c 55.01MB / 55.01MB
#> sha256:9234a1f89559ac43558dd4eab61d4a480f11a35556c9c689c08a9587f4f 2.23kB / 2.23kB
#> sha256:bf168a6740997eb97b4dc80234b7ff7d0bc90764308ae9901310b97146b272 5.10MB / 5.10MB
#> sha256:e00421835ccf02d097107b5a58ca73e8500cadbb1a30282ca1943e07f5671f 10.00MB / 10.00MB
#> sha256:6d8c01c4d86ddc3100ab3a781e9ae830d005a380de7d4d4f3706dd05523 54.50MB / 54.50MB
#> sha256:2cc8d88f42c28a7080ee33a4c00f2cfeff9ea2440722706b3500c56eba3e 196.74MB / 196.74MB
#> sha256:2767dbfeeb07f9bd53089a475707724cae223dd3d9eb0b7e008a06c24071009 0.20kB / 0.20kB
#> extracting sha256:e796f3fddda37baa16205b0f75d170b7532b10e80be7659004fca2118220c 1.00kB
#> sha256:e5a307f746e4205e10390c3ba24c0bc7373263271d4709ba3020c59e8ca4c60 17.50MB / 17.50MB
#> sha256:54b770703d3a0c44c4a9f3e88931eade28543d0806703a853bee171f00d0 233B / 233B
#> sha256:d02006ff47d03da08525fc71d7f0f01f9e4d010f05477950d44c690d1000 2.07MB / 2.07MB
#> extracting sha256:bf168a6740997eb97b4dc80234b7ff7d0bc90764308ae9901310b97146b272 0.10kB
#> extracting sha256:e00421835ccf02d097107b5a58ca73e8500cadbb1a30282ca1943e07f5671f 0.20kB
#> extracting sha256:6d8c01c4d86ddc3100ab3a781e9ae830d005a380de7d4d4f3706dd05523 1.90kB
#> extracting sha256:2cc8d88f42c28a7080ee33a4c00f2cfeff9ea2440722706b3500c56eba3e 5.40kB
#> extracting sha256:2767dbfeeb07f9bd53089a475707724cae223dd3d9eb0b7e008a06c24071009 0.20kB
#> extracting sha256:e5a307f746e4205e10390c3ba24c0bc7373263271d4709ba3020c59e8ca4c60 0.50kB
#> extracting sha256:54b770703d3a0c44c4a9f3e88931eade28543d0806703a853bee171f00d0 0.00kB
#> extracting sha256:d02006ff47d03da08525fc71d7f0f01f9e4d010f05477950d44c690d1000 0.20kB
#> [internal] load build context
#> transferring context: 745B
#> [3/7] RUN apt update
#> [3/7] RUN apt install python3
#> [4/7] WORKDIR C:\Users\Cédric\Desktop\DevOps TP1 Docker\DOcker
#> [5/7] COPY app.py ./
#> [6/7] COPY requirements.txt
#> [7/7] RUN pip install -r requirements.txt
#> exporting to image
#> exporting layers
#> writing image sha256:7144017daa70096d359e8b21f1443c3080606122bd9750e400c50002d73455
#> naming to docker.io/library/dockertp
#> [7/7] COMMIT docker.io/library/dockertp
```

- Test pour voir si elle marche

```
PS C:\Users\Cédric\Desktop\DevOps TP1 Docker\DOcker> docker run --env LAT="5.902785" --env LONG="102.754175" --env API_KEY="240aa650f4db4e154a07d0459c30a347" dockertp
{'coord': {'lon': 102.7542, 'lat': 5.9028}, 'weather': [{'id': 802, 'main': 'Clouds', 'description': 'scattered clouds', 'icon': '03n'}], 'base': 'stations', 'main': {'temp': 300.6, 'feels_like': 303.11, 'temp_min': 300.6, 'temp_max': 300.6, 'pressure': 1009, 'humidity': 73, 'sea_level': 1009, 'grnd_level': 982}, 'visibility': 10000, 'wind': {'speed': 4.41, 'deg': 128, 'gust': 4.82}, 'clouds': {'all': 29}, 'dt': 1654438209, 'sys': {'country': 'MY', 'sunrise': 1654383247, 'sunset': 1654428060}, 'timezone': 28800, 'id': 1736405, 'name': 'Jertih', 'cod': 200}
```

Nous obtenons bien les infos météo, le test est donc concluant.

- Mise à disposition de l'image sur DockerHub :  
<https://hub.docker.com/repository/docker/cedricsamboun/dockertp/general>

```

PS C:\Users\Cédric\Desktop\DevOps TP1 Docker\Docker> docker tag 7c44927daa76 cedricsamboun/dockertp:dockertp
PS C:\Users\Cédric\Desktop\DevOps TP1 Docker\Docker> docker push 7c44927daa76 cedricsamboun/dockertp:dockertp
"docker push" requires exactly 1 argument.
See 'docker push --help'.

Usage:  docker push [OPTIONS] NAME[:TAG]

Push an image or a repository to a registry
PS C:\Users\Cédric\Desktop\DevOps TP1 Docker\Docker> docker push cedricsamboun/dockertp:dockertp
The push refers to repository [docker.io/cedricsamboun/dockertp]
1b943b928cf4: Pushed
ddb49477d86: Pushed
f0a76c0bf681: Pushed
d3e81658bd4d: Pushed
5b39347b919e: Pushed
e90060b10c18: Pushed
be869761d95b: Mounted from library/python
a019d1de6299: Mounted from library/python
fecf15812fff: Mounted from library/python
13b045a1dfd2: Mounted from library/python
2fbabeba902e: Mounted from library/python
ee509ed6e976: Mounted from library/python
9177197c67d0: Mounted from library/python
7dbadf2b9bd8: Mounted from library/python
e7597c345c2e: Mounted from library/python
dockertp: digest: sha256:53eacdc80a1545596d1d1f2d22155d6b7267e9c3d25fcd2ff70f85dd83a666f8 size: 3470
PS C:\Users\Cédric\Desktop\DevOps TP1 Docker\Docker> docker run --env LAT="5.902785" --env LONG="102.754175" --env API_K
EY="240aa650f4db4e154a07d0459c30a347" dockertp
{'coord': {'lon': 102.7542, 'lat': 5.9028}, 'weather': [{'id': 802, 'main': 'Clouds', 'description': 'scattered clouds',
'icon': '03n'}], 'base': 'stations', 'main': {'temp': 300.6, 'feels_like': 303.11, 'temp_min': 300.6, 'temp_max': 300.6
, 'pressure': 1009, 'humidity': 73, 'sea_level': 1009, 'grnd_level': 982}, 'visibility': 10000, 'wind': {'speed': 4.41,
'deg': 128, 'gust': 4.82}, 'clouds': {'all': 29}, 'dt': 1654438209, 'sys': {'country': 'MY', 'sunrise': 1654383247, 'sun
set': 1654428060}, 'timezone': 28800, 'id': 1736405, 'name': 'Jertih', 'cod': 200}

```

- Mise à disposition du code dans un repository Github :  
[https://github.com/CedricSamboun/TP1\\_Docker.git](https://github.com/CedricSamboun/TP1_Docker.git)