محمد توکلی

تمرین دوم

گام اول:

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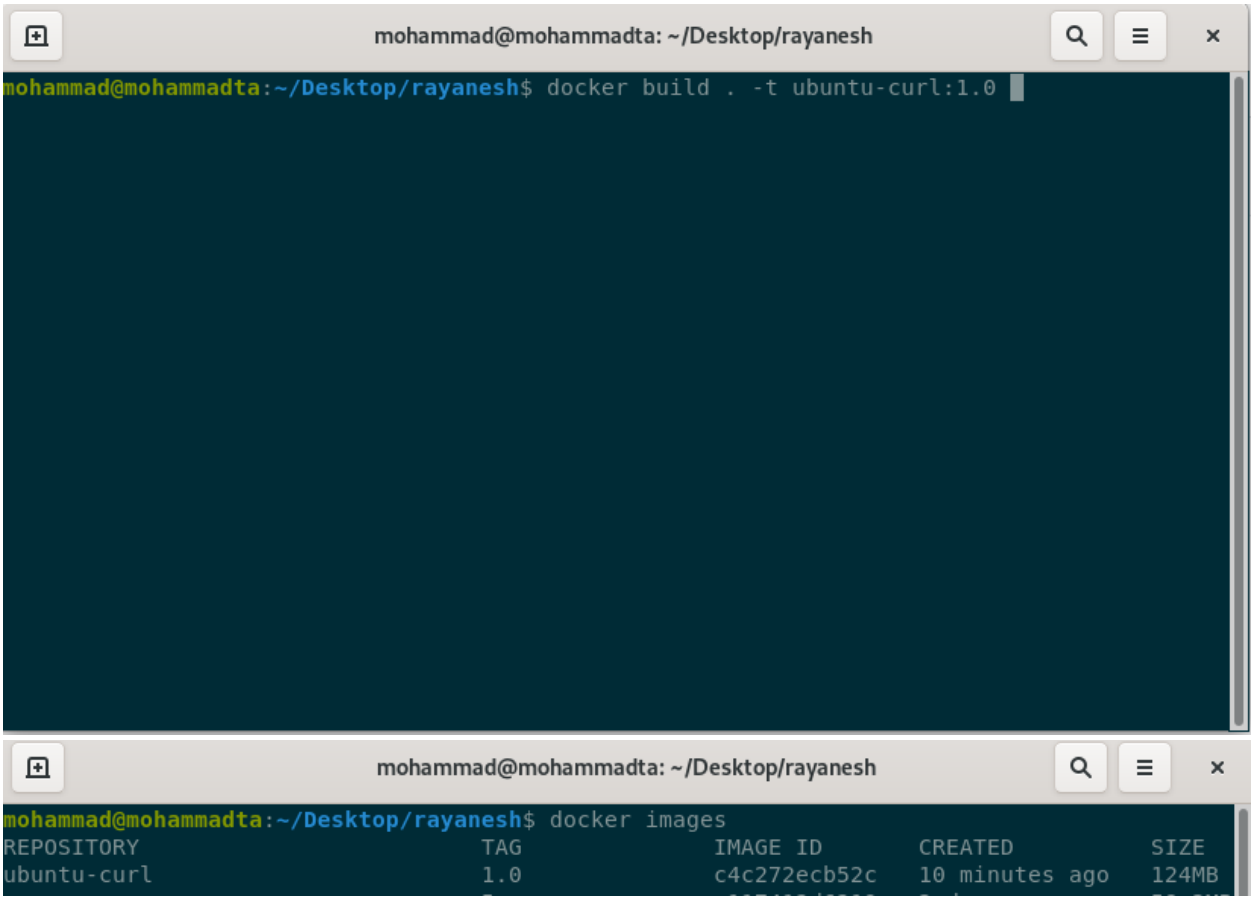

محمد توکلی

تمرین دوم

```
mohammad@mohammadta:~$ docker push mohammadta/ubuntu-curl:1.0
The push refers to repository [docker.io/mohammadta/ubuntu-curl]
987c08a9bddd: Pushed
867d0767a47c: Pushed
1.0: digest: sha256:5156e1298846bb8a7e191534c8d6a454d0ea57a878383e6958219e28e7a5fefb size: 741
mohammad@mohammadta:~$
```

```
mohammad@mohammadta:~/Desktop/rayanesh/server$ docker build . -t weather-app:1.0
Sending build context to Docker daemon  3.072kB
Step 1/6 : FROM python:3.9-alpine
 ---> 6c0d09aae8ea
Step 2/6 : WORKDIR /code
 ---> Using cache
 ---> 23b5d8ba0094
Step 3/6 : COPY requirements.txt .
 ---> 4586e0293396
Step 4/6 : RUN pip install -r requirements.txt
 ---> Running in 9100dd28d623
Collecting flask
  Downloading Flask-2.1.1-py3-none-any.whl (95 kB)
     ---------------------------------------- 95.2/95.2 KB 361.2 kB/s eta 0:00:00
Collecting requests
  Downloading requests-2.27.1-py2.py3-none-any.whl (63 kB)
     ---------------------------------------- 63.1/63.1 KB 57.5 kB/s eta 0:00:00
Collecting itsdangerous>=2.0
  Downloading itsdangerous-2.1.2-py3-none-any.whl (15 kB)
Collecting click>=8.0
  Downloading click-8.1.2-py3-none-any.whl (96 kB)
     ---------------------------------------- 96.6/96.6 KB 378.7 kB/s eta 0:00:00
Collecting Jinja2>=3.0
  Downloading Jinja2-3.1.1-py3-none-any.whl (132 kB)
     ---------------------------------------- 132.6/132.6 KB 420.7 kB/s eta 0:00:00
Collecting importlib-metadata>=3.6.0
  Downloading importlib_metadata-4.11.3-py3-none-any.whl (18 kB)
Collecting Werkzeug>=2.0
  Downloading Werkzeug-2.1.1-py3-none-any.whl (224 kB)
     ---------------------------------------- 224.7/224.7 KB 441.7 kB/s eta 0:00:00
Collecting urllib3<1.27,>=1.21.1
  Downloading urllib3-1.26.9-py2.py3-none-any.whl (138 kB)
     ---------------------------------------- 139.0/139.0 KB 443.5 kB/s eta 0:00:00
Collecting certifi>=2017.4.17
  Downloading certifi-2021.10.8-py2.py3-none-any.whl (149 kB)
     ---------------------------------------- 149.2/149.2 KB 371.7 kB/s eta 0:00:00
Collecting charset-normalizer~=2.0.0
  Downloading charset_normalizer-2.0.12-py3-none-any.whl (39 kB)
Collecting idna<4,>=2.5
  Downloading idna-3.3-py3-none-any.whl (61 kB)
     ---------------------------------------- 61.2/61.2 KB 161.6 kB/s eta 0:00:00
Collecting zipp>=0.5
  Downloading zipp-3.7.0-py3-none-any.whl (5.3 kB)
Collecting MarkupSafe>=2.0
  Downloading MarkupSafe-2.1.1-cp39-cp39-musllinux_1_1_x86_64.whl (29 kB)
Installing collected packages: certifi, zipp, Werkzeug, urllib3, MarkupSafe, itsdangerous, idna, click, charset-normalizer, requests, Jinja2, importlib-metadata, flask
Successfully installed Jinja2-3.1.1 MarkupSafe-2.1.1 Werkzeug-2.1.1 certifi-2021.10.8 charset-normalizer-2.0.12 click-8.1.2 flask-2.1.1 idna-3.3 importlib-metadata-4.11.3 itsdangerous-2.1.2 requests-2.27.1 urllib3-1.26.9 zipp-3.7.0
WARNING: Running pip as the 'root' user can result in broken permissions and conflicting behaviour with the system package manager. It is recommended to use a virtual environment instead: https://pip.pypa.io/warnings/venv
Removing intermediate container 9100dd28d623
 ---> 038aec02e72f
Step 5/6 : COPY . .
 ---> 0fbc1ecaa875
Step 6/6 : CMD ["python3", "server.py"]
 ---> Running in 2900afe95d03
```

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```
mohammad@mohammadta:~$ docker run -it --rm --name ubuntu-curl-container mohammadta/ubuntu-curl:1.0
root@5a335e7e3a4c:/# curl google.com
<HTML><HEAD><meta http-equiv="content-type" content="text/html;charset=utf-8">
<TITLE>301 Moved</TITLE></HEAD><BODY>
<H1>301 Moved</H1>
The document has moved
<A HREF="http://www.google.com/">here</A>.
</BODY></HTML>
root@5a335e7e3a4c:/#
```

گام دوم:

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```
mohammad@mohammadta:~/Desktop/rayanesh/server$ docker build . -t weather-app:1.0
Sending build context to Docker daemon  4.608kB
Step 1/7 : FROM python:3.9-alpine
 ---> 6c0d09aae0ea
Step 2/7 : WORKDIR /code
 ---> Using cache
 ---> 23b5d8ba0094
Step 3/7 : COPY requirements.txt .
 ---> Using cache
 ---> 4586e0293396
Step 4/7 : RUN pip install -r requirements.txt
 ---> Using cache
 ---> 038aec02e72f
Step 5/7 : COPY . /code
 ---> Using cache
 ---> 1d46a2b8220c
Step 6/7 : EXPOSE 8080
 ---> Using cache
 ---> 587beb967534
Step 7/7 : CMD ["python", "server.py"]
 ---> Using cache
 ---> 65c50f8b05e4
Successfully built 65c50f8b05e4
Successfully tagged weather-app:1.0
```

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```
mohammad@mohammadta:~/Desktop/rayanesh/server$ docker tag weather-app:1.0 mohammadta/weather-app:1.0
mohammad@mohammadta:~/Desktop/rayanesh/server$ docker image push mohammadta/weather-app:1.0
The push refers to repository [docker.io/mohammadta/weather-app]
c83721ee895f: Pushed
05feda7cb5ff: Pushed
f3ea378cf2d9: Pushed
3bbe21113d41: Pushed
c8f3dddfda3b: Mounted from library/python
4d50b5331b16: Mounted from library/python
16a38fb49c5e: Mounted from library/python
c2b3a6e662b5: Mounted from library/python
a1c01e366b99: Mounted from library/python
1.0: digest: sha256:9ec85c50e835a60e155cb24de5a9510cf654632f8f34edbbeb312c4fa3ec0ff6 size: 2200
```

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```
mohammad@mohammadta:~/Desktop/rayanesh/server$ docker run -it --rm --name weather-app-cotainer -p 8080:8080 -e hostname='mohammadta' -e serverport='8080' weather-app:1.0
 * Serving Flask app 'server' (lazy loading)
 * Environment: production
   WARNING: This is a development server. Do not use it in a production deployment.
   Use a production WSGI server instead.
 * Debug mode: off
 * Running on all addresses (0.0.0.0)
   WARNING: This is a development server. Do not use it in a production deployment.
 * Running on http://127.0.0.1:8080
 * Running on http://172.25.1.1:8080 (Press CTRL+C to quit)
{'hostname': '5b938a0a8b9e', 'weather_descriptions': 'Partly cloudy', 'temperature': 17, 'wind_speed': 7, 'humidity': 23, 'feelslike': 17}
172.25.1.5 - - [01/Apr/2022 21:11:23] "GET / HTTP/1.1" 200 -
```

گام سوم:

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```
mohammad@mohammadta:~/Desktop/rayanesh/server$ kubectl get pods -o wide
NAME                                  READY   STATUS    RESTARTS   AGE   IP           NODE       NOMINATED NODE   READINESS GATES
weather-app-deployment-89c8f988-p9qw8   1/1     Running   0          41m   172.17.0.3   minikube   <none>           <none>
weather-app-deployment-89c8f988-qncnx   1/1     Running   0          41m   172.17.0.4   minikube   <none>           <none>
mohammad@mohammadta:~/Desktop/rayanesh/server$ kubectl get deployment -o wide
NAME                   READY   UP-TO-DATE   AVAILABLE   AGE   CONTAINERS    IMAGES                          SELECTOR
weather-app-deployment   2/2     2            2           42m   weather-app   mohammadta/weather-app:1.0   app=weather-app-deployment
mohammad@mohammadta:~/Desktop/rayanesh/server$ kubectl get service -o wide
NAME                 TYPE        CLUSTER-IP      EXTERNAL-IP   PORT(S)    AGE    SELECTOR
kubernetes           ClusterIP   10.96.0.1       <none>        443/TCP    3d4h   <none>
weather-app-service   ClusterIP   10.100.65.246   <none>        8000/TCP   42m    app=weather-app-deployment
mohammad@mohammadta:~/Desktop/rayanesh/server$ kubectl get endpoints -o wide
NAME                 ENDPOINTS                         AGE
kubernetes           192.168.49.2:8443                 3d4h
weather-app-service   172.17.0.3:8080,172.17.0.4:8080   42m
mohammad@mohammadta:~/Desktop/rayanesh/server$ kubectl get configmap -o wide
NAME               DATA   AGE
config-map         1      43m
kube-root-ca.crt   1      3d4h
```

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```
mohammad@mohammadta:~/Desktop/rayanesh/server$ kubectl get pods -o wide
NAME                                  READY   STATUS    RESTARTS   AGE   IP           NODE       NOMINATED NODE   READINESS GATES
weather-app-deployment-89c8f988-p9qw8   1/1     Running   0          43m   172.17.0.3   minikube   <none>           <none>
weather-app-deployment-89c8f988-qncnx   1/1     Running   0          43m   172.17.0.4   minikube   <none>           <none>
```

گام چهارم:

```
mohammad@mohammadta:~/Desktop/rayanesh/server$ kubectl run ubuntu-curl --image=mohammadta/ubuntu-curl:1.0 -it
If you don't see a command prompt, try pressing enter.
root@ubuntu-curl:/# curl weather-app-service:8000
{"feelslike":17,"hostname":"weather-app-deployment-89c8f988-p9qw8","humidity":27,"temperature":17,"weather_descriptions":"Clear","wind_speed":7}
root@ubuntu-curl:/# curl weather-app-service:8000
{"feelslike":17,"hostname":"weather-app-deployment-89c8f988-qncnx","humidity":27,"temperature":17,"weather_descriptions":"Clear","wind_speed":7}
root@ubuntu-curl:/# curl weather-app-service:8000
{"feelslike":17,"hostname":"weather-app-deployment-89c8f988-p9qw8","humidity":27,"temperature":17,"weather_descriptions":"Clear","wind_speed":7}
root@ubuntu-curl:/# curl weather-app-service:8000
{"feelslike":17,"hostname":"weather-app-deployment-89c8f988-p9qw8","humidity":27,"temperature":17,"weather_descriptions":"Clear","wind_speed":7}
root@ubuntu-curl:/# curl weather-app-service:8000
{"feelslike":17,"hostname":"weather-app-deployment-89c8f988-p9qw8","humidity":27,"temperature":17,"weather_descriptions":"Clear","wind_speed":7}
root@ubuntu-curl:/# curl weather-app-service:8000
{"feelslike":17,"hostname":"weather-app-deployment-89c8f988-qncnx","humidity":27,"temperature":17,"weather_descriptions":"Clear","wind_speed":7}
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root@ubuntu-curl:/# curl weather-app-service:8000
{"feelslike":17,"hostname":"weather-app-deployment-89c8f988-p9qw8","humidity":27,"temperature":17,"weather_descriptions":"Clear","wind_speed":7}
root@ubuntu-curl:/# curl weather-app-service:8000
{"feelslike":17,"hostname":"weather-app-deployment-89c8f988-p9qw8","humidity":27,"temperature":17,"weather_descriptions":"Clear","wind_speed":7}
root@ubuntu-curl:/# curl weather-app-service:8000
{"feelslike":17,"hostname":"weather-app-deployment-89c8f988-p9qw8","humidity":27,"temperature":17,"weather_descriptions":"Clear","wind_speed":7}
root@ubuntu-curl:/# curl weather-app-service:8000
{"feelslike":17,"hostname":"weather-app-deployment-89c8f988-p9qw8","humidity":27,"temperature":17,"weather_descriptions":"Clear","wind_speed":7}
root@ubuntu-curl:/# curl weather-app-service:8000
{"feelslike":17,"hostname":"weather-app-deployment-89c8f988-qncnx","humidity":27,"temperature":17,"weather_descriptions":"Clear","wind_speed":7}
root@ubuntu-curl:/# curl weather-app-service:8000
{"feelslike":17,"hostname":"weather-app-deployment-89c8f988-p9qw8","humidity":27,"temperature":17,"weather_descriptions":"Clear","wind_speed":7}
root@ubuntu-curl:/# curl weather-app-service:8000
{"feelslike":17,"hostname":"weather-app-deployment-89c8f988-qncnx","humidity":27,"temperature":17,"weather_descriptions":"Clear","wind_speed":7}
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{"feelslike":17,"hostname":"weather-app-deployment-89c8f988-qncnx","humidity":27,"temperature":17,"weather_descriptions":"Clear","wind_speed":7}
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root@ubuntu-curl:/# curl weather-app-service:8000
{"feelslike":17,"hostname":"weather-app-deployment-89c8f988-p9qw8","humidity":27,"temperature":17,"weather_descriptions":"Clear","wind_speed":7}
root@ubuntu-curl:/#
```