

3. Написание 1-го Dockerfile

```
mkdir ~/docker-python-app  
cd ~/docker-python-app
```

файл Dockerfile:

```
touch Dockerfile  
nano Dockerfile
```

В Dockerfile:

```
FROM python:3.9-slim  
WORKDIR /app  
ENV NAME World  
COPY . /app  
ENTRYPOINT ["python"]  
CMD ["hello.py"]
```

```
delakoka@DESKTOP-8FMQJBU:/mnt/d/courses/TMSds$ mkdir HW53/  
delakoka@DESKTOP-8FMQJBU:/mnt/d/courses/TMSds$ cd HW53/  
delakoka@DESKTOP-8FMQJBU:/mnt/d/courses/TMSds/HW53$ mkdir docker-python-app  
delakoka@DESKTOP-8FMQJBU:/mnt/d/courses/TMSds/HW53$ cd docker-python-app/  
delakoka@DESKTOP-8FMQJBU:/mnt/d/courses/TMSds/HW53/docker-python-app$ touch Dockerfile  
delakoka@DESKTOP-8FMQJBU:/mnt/d/courses/TMSds/HW53/docker-python-app$ nano Dockerfile  
delakoka@DESKTOP-8FMQJBU:/mnt/d/courses/TMSds/HW53/docker-python-app$ cat Dockerfile  
FROM python:3.9-slim WORKDIR /app ENV NAME World COPY ./app ENTRYPOINT ["python"] CMD ["hello.py"]
```

hello.py:

```
nano hello.py
```

Содержимое hello.py:

```
import os  
name = os.getenv('NAME', 'World')  
print(f"Hello, {name}!")
```

файл sum.py:

```
nano sum.py
```

Содержимое sum.py:

```
import sys  
  
if len(sys.argv) == 3:  
    try:  
        num1 = int(sys.argv[1])  
        num2 = int(sys.argv[2])  
        print(f"Sum: {num1 + num2}")  
    except ValueError:  
        print("Please provide two numbers.")  
else:  
    print("Usage: python sum.py <num1> <num2>")
```

```

delakoka@DESKTOP-8FMQJBU:/mnt/d/courses/TMSds/HW53/docker-python-app$ nano sum.py
delakoka@DESKTOP-8FMQJBU:/mnt/d/courses/TMSds/HW53/docker-python-app$ cat sum.py
import sys

if len(sys.argv) == 3:
    try:
        num1 = int(sys.argv[1])
        num2 = int(sys.argv[2])
        print(f"Sum: {num1 + num2}")
    except ValueError:
        print("Entry numbers")
else:
    print("Usage: python sum.py <num1> <num2>")

```

4. Написание 2-го Dockerfile

```

mkdir ~/docker-nginx-app
cd ~/docker-nginx-app

```

второй Dockerfile:

```

touch Dockerfile
nano Dockerfile

```

```

FROM nginx:latest
WORKDIR /usr/share/nginx/html/
COPY index.html /usr/share/nginx/html/

```

```

nano index.html

```

Содержимое:

```

<!DOCTYPE html>
<html>
<head>
    <title>Personal Info</title>
</head>
<body>
    <h1>Котова Ксения</h1>
    <p>Группа: TMS DS07-onl</p>
    <p>Дата: 10 октября 2024</p>
</body>
</html>

```

```

delakoka@DESKTOP-8FMQJBU:/mnt/d/courses/TMSds/HW53$ mkdir docker-nginx-app
delakoka@DESKTOP-8FMQJBU:/mnt/d/courses/TMSds/HW53$ cd docker-nginx-app/
delakoka@DESKTOP-8FMQJBU:/mnt/d/courses/TMSds/HW53/docker-nginx-app$ touch Dockerfile
delakoka@DESKTOP-8FMQJBU:/mnt/d/courses/TMSds/HW53/docker-nginx-app$ nano Dockerfile
delakoka@DESKTOP-8FMQJBU:/mnt/d/courses/TMSds/HW53/docker-nginx-app$ nano index.html
delakoka@DESKTOP-8FMQJBU:/mnt/d/courses/TMSds/HW53/docker-nginx-app$ cat index.html
<!DOCTYPE html>
<html>
    <head>
        <title>Student Info</title>
    </head>
    <body>
        <h1>Котова Ксения</h1>
        <p>Группа: TMS DS07-onl</p>
        <p>Дата: 10 октября 2024</p>
    </body>
</html>

```

5. Сборка образов

Для Python:

```
cd ~/docker-python-app
```

```
docker build -t kotova-python:lesson53 .
```

```
delakoka@DESKTOP-8FMQJBU:/mnt/d/courses/TMSds/HW53/docker-python-app$ docker build -t kotova-python:lesson53 .
[+] Building 6.6s (9/9) FINISHED                                docker:default
=> [internal] load build definition from Dockerfile              0.0s
=> => transferring dockerfile: 138B                             0.0s
=> [internal] load metadata for docker.io/library/python:3.9-slim 2.4s
=> [auth] library/python:pull token for registry-1.docker.io    0.0s
=> [internal] load .dockerignore                                0.0s
=> => transferring context: 2B                                    0.0s
=> [1/3] FROM docker.io/library/python:3.9-slim@sha256:49f94609e5a997dc16086a66ac966459185403 3.6s
=> => resolve docker.io/library/python:3.9-slim@sha256:49f94609e5a997dc16086a66ac966459185403 0.0s
=> => sha256:62a08b8dd4f53ad5493dabf2af00ccde91abb3771fb2187040bcf2fe94a7ced7 248B / 248B 0.3s
=> => sha256:fdeec85abbad3878f2008f9445f15a19a5a224d1b7e7715ac6b923072333e 14.74MB / 14.74MB 3.2s
=> => sha256:4c0965d3919510b506d8856ebc050a96e996c7dae96e4fb420882dbe7e037e67 3.51MB / 3.51MB 2.5s
=> => extracting sha256:4c0965d3919510b506d8856ebc050a96e996c7dae96e4fb420882dbe7e037e67 0.1s
=> => extracting sha256:fdeec85abbad3878f2008f9445f15a19a5a224d1b7e7715ac6b923072333e57 0.4s
=> => extracting sha256:62a08b8dd4f53ad5493dabf2af00ccde91abb3771fb2187040bcf2fe94a7ced7 0.0s
=> [internal] load build context                                0.0s
=> => transferring context: 502B                                  0.0s
=> [2/3] WORKDIR /app                                          0.3s
=> [3/3] COPY . /app                                          0.0s
=> exporting to image                                          0.2s
=> => exporting layers                                          0.1s
=> => exporting manifest sha256:637c68cc9f095b42a0b5b536bbd3686df1f68bc8d51e94779ebbe17269403 0.0s
=> => exporting config sha256:c4dacaeddd1ff23af67efb2d41b77671f0a6f6b5c0960a52226853fc565b166 0.0s
=> => exporting attestation manifest sha256:fb77950e2f76597d0c68aacc89cc08824c6031160d3f61990 0.0s
=> => exporting manifest list sha256:581647f92cb2662ad7e62831da6deee0afacc9d9ed18bac69edb4572 0.0s
=> => naming to docker.io/library/kotova-python:lesson53      0.0s
=> => unpacking to docker.io/library/kotova-python:lesson53   0.0s
```

Для Nginx:

```
cd ~/docker-nginx-app
```

```
docker build -t kotova-nginx:lesson53 .
```

```
delakoka@DESKTOP-8FMQJBU:/mnt/d/courses/TMSds/HW53/docker-nginx-app$ docker build -t kotova-nginx:lesson53 .
[+] Building 15.4s (9/9) FINISHED                                docker:default
=> [internal] load build definition from Dockerfile              0.0s
=> => transferring dockerfile: 125B                             0.0s
=> [internal] load metadata for docker.io/library/nginx:latest 2.0s
=> [auth] library/nginx:pull token for registry-1.docker.io    0.0s
=> [internal] load .dockerignore                                0.0s
=> => transferring context: 2B                                    0.0s
=> [1/3] FROM docker.io/library/nginx:latest@sha256:d2ab56950b084efe34f966a2b02efb1a1a2ea53e7e93b94cdf45a27cf3cd47fc0 12.0s
=> => resolve docker.io/library/nginx:latest@sha256:d2ab56950b084efe34f966a2b02efb1a1a2ea53e7e93b94cdf45a27cf3cd47fc0 0.0s
=> => sha256:85177a2c6f397d88853fd101eb2b44e555af6db139940c5cbd5b9490965bbeab 1.40kB / 1.40kB 0.7s
=> => sha256:5b8e768fb22d1a6d6e59f6bac9fcdcd48383152042f871eda135cc01c40c926 1.21kB / 1.21kB 0.5s
=> => sha256:55af3c8feb727f6a703a6da54cfbbb03d820e465405e07b51a46b2d2037d095 405B / 405B 0.5s
=> => sha256:4b563e5e980a5ff3593c1905a352f37700c22dd26a7ada796cce18da644f981d 956B / 956B 0.5s
=> => sha256:9ab66c386a9c79bfb8e6a32c9219f43530d7a76c634f37df9eb8277b5eb0a84 627B / 627B 0.2s
=> => sha256:d07412f52e9d30431a46789ebb0f7e8173940edf307095dae1deacaf71869bd4 43.80MB / 43.80MB 10.6s
=> => sha256:382a3ee498053a7b5332ac79a8efabac16e900289fclcd1c754ce8fa047fcab 29.13MB / 29.13MB 5.5s
=> => extracting sha256:382a3ee498053a7b5332ac79a8efabac16e900289fclcd1c754ce8fa047fcab 0.7s
=> => extracting sha256:d07412f52e9d30431a46789ebb0f7e8173940edf307095dae1deacaf71869bd4 0.7s
=> => extracting sha256:9ab66c386a9c79bfb8e6a32c9219f43530d7a76c634f37df9eb8277b5eb0a84 0.0s
=> => extracting sha256:4b563e5e980a5ff3593c1905a352f37700c22dd26a7ada796cce18da644f981d 0.0s
=> => extracting sha256:55af3c8feb727f6a703a6da54cfbbb03d820e465405e07b51a46b2d2037d095 0.0s
=> => extracting sha256:5b8e768fb22d1a6d6e59f6bac9fcdcd48383152042f871eda135cc01c40c926 0.0s
=> => extracting sha256:85177a2c6f397d88853fd101eb2b44e555af6db139940c5cbd5b9490965bbeab 0.0s
=> [internal] load build context                                0.0s
=> => transferring context: 249B                                  0.0s
=> [2/3] WORKDIR /usr/share/nginx/html/                        0.2s
=> [3/3] COPY index.html /usr/share/nginx/html/                0.0s
=> exporting to image                                          0.2s
=> => exporting layers                                          0.2s
=> => exporting manifest sha256:c651d2a27784756ea9ea6bde017c1681645106f3f6da1ae33982532355a14403 0.0s
=> => exporting config sha256:7faa344f442926ae92db00ec4c2fbc08b758e71c370771638554f1a28d1fb5ef 0.0s
=> => exporting attestation manifest sha256:f276e733494ae0144de2b706dfcaa1eb24174e419852a6f07ccfd8c3d58a0b686 0.0s
=> => exporting manifest list sha256:1389ae46336cbe5ba6fe21035d4e00b8cc1b87c68310c109727dd6f62981b7 0.0s
=> => naming to docker.io/library/kotova-nginx:lesson53      0.0s
=> => unpacking to docker.io/library/kotova-nginx:lesson53   0.0s
```

6. Запуск Python-образа

```
docker run kotova-python:lesson53
```

```
docker run -e NAME=Docker kotova-python:lesson53
```

```
delakoka@DESKTOP-8FMQJBU:/mnt/d/courses/TMSds/Hw53/docker-python-app$ docker run kotova-python:lesson53
Hello, World!
delakoka@DESKTOP-8FMQJBU:/mnt/d/courses/TMSds/Hw53/docker-python-app$ docker run -e NAME=Docker kotova-python:lesson53
Hello, World!
```

```
docker run kotova-python:lesson53 sum.py
docker run kotova-python:lesson53 sum.py 5 7
```

```
delakoka@DESKTOP-8FMQJBU:/mnt/d/courses/TMSds/Hw53/docker-python-app$ docker run kotova-python:lesson53 sum.py
Usage: python sum.py <num1> <num2>
delakoka@DESKTOP-8FMQJBU:/mnt/d/courses/TMSds/Hw53/docker-python-app$ docker run kotova-python:lesson53 sum.py 5 7
Sum: 12
```

7. Запуск Nginx-образа

```
docker run -p 8080:80 kotova-nginx:lesson53
```

<http://localhost:8080>

РЪPsC,PsPIP° РЪCГРμPSPëCЦ

P°CБCГPPIP°: TMS DS07-onl

P°P°C,P°: 10 PsPeC,CЦP±CБCЦ 2024

```
delakoka@DESKTOP-8FMQJBU:/mnt/d/courses/TMSds/Hw53$ cd docker-nginx-app/
delakoka@DESKTOP-8FMQJBU:/mnt/d/courses/TMSds/Hw53/docker-nginx-app$ docker run -p 8080:80 kotova-nginx:lesson53
/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
/docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh
10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d/default.conf
10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf
/docker-entrypoint.sh: Sourcing /docker-entrypoint.d/15-local-resolvers.envsh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
/docker-entrypoint.sh: Configuration complete; ready for start up
2024/10/10 19:07:09 [notice] 1#1: using the "epoll" event method
2024/10/10 19:07:09 [notice] 1#1: nginx/1.27.2
2024/10/10 19:07:09 [notice] 1#1: built by gcc 12.2.0 (Debian 12.2.0-14)
2024/10/10 19:07:09 [notice] 1#1: OS: Linux 5.15.153.1-microsoft-standard-WSL2
2024/10/10 19:07:09 [notice] 1#1: getrlimit(RLIMIT_NOFILE): 1048576:1048576
2024/10/10 19:07:09 [notice] 1#1: start worker processes
2024/10/10 19:07:09 [notice] 1#1: start worker process 29
2024/10/10 19:07:09 [notice] 1#1: start worker process 30
2024/10/10 19:07:09 [notice] 1#1: start worker process 31
```