

folosire testare unitate in diferite limbaje de programare Python

situatia initiala

```
python$ tree
.
├── Dockerfile
├── main.py
└── main_test.py

0 directories, 3 files
alex@alex-pc:~/Documents/2020-2021/an2zi/00. Curs/11.03/docker-unit-tests-main/p
python$
```

Dockerfile

```
FROM python:alpine

WORKDIR /app
COPY . .

CMD [ "python main.py" ]
```

main.py

```
def hello_world():
    return "Hello from Python!"

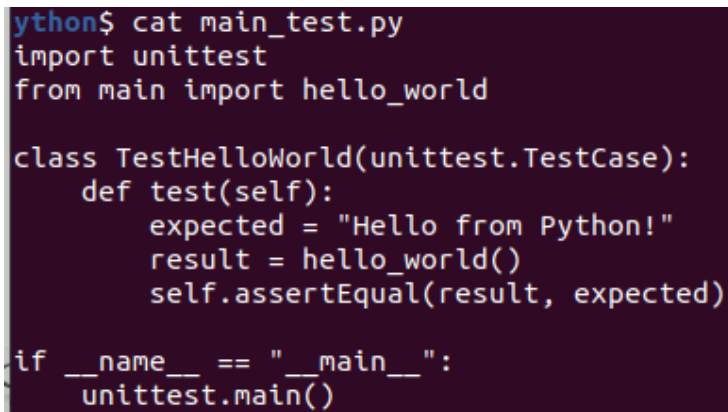
if __name__ == "__main__":
    print(hello_world())
```

main_test.py

```
import unittest
from main import hello_world

class TestHelloWorld(unittest.TestCase):
    def test(self):
        expected = "Hello from Python!"
        result = hello_world()
        self.assertEqual(result, expected)

if __name__ == "__main__":
    unittest.main()
```

A terminal window with a dark purple background. The prompt is 'python\$'. The user has entered 'cat main_test.py' and the contents of the file are displayed. The code is the same as in the previous block. The prompt is 'python\$' again.

```
python$ cat main_test.py
import unittest
from main import hello_world

class TestHelloWorld(unittest.TestCase):
    def test(self):
        expected = "Hello from Python!"
        result = hello_world()
        self.assertEqual(result, expected)

if __name__ == "__main__":
    unittest.main()
```

create image

`docker build . -t example`

```

python$ docker build . -t example
Sending build context to Docker daemon 4.096kB
Step 1/4 : FROM python:alpine
alpine: Pulling from library/python
ba3557a56b15: Pull complete
ffd49e023448: Pull complete
46ec0d464620: Pull complete
44e992cdfdac: Pull complete
7c71687af071: Pull complete
Digest: sha256:95217fdd1431fe6230e033513670673c81a50debdb0065e54cbda261f3d76528
Status: Downloaded newer image for python:alpine
--> c89f09476494
Step 2/4 : WORKDIR /app
--> Running in efc19d23510a
Removing intermediate container efc19d23510a
--> e9e8ea71644f
Step 3/4 : COPY . .
--> c85a0f1112b2
Step 4/4 : CMD [ "python main.py" ]
--> Running in ca742f8d7e0a
Removing intermediate container ca742f8d7e0a
--> f35966d803cd
Successfully built f35966d803cd
Successfully tagged example:latest

```

verificare

```

python$ docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED             NAMES
STATUS            PORTS
fedcb9dd7c02       portainer/portainer "/portainer"        5 months ago
Up 4 hours         0.0.0.0:7000->7000/tcp, 0.0.0.0:9000->9000/tcp portainer
alex@alex-pc:~/Documents/2020-2021/an2zi/00. Curs/11.03/docker-unit-tests-main/p
python$ docker images | grep ex
example             latest             f35966d803cd       3 minutes ago
44.7MB
alex@alex-pc:~/Documents/2020-2021/an2zi/00. Curs/11.03/docker-unit-tests-main/p

```

lansare container testare

`docker run example sh -c "python main_test.py"`

```

alex@alex-pc:~/Documents/2020-2021/an2zi/00. Curs/11.03/docker-unit-tests-main/p
python$ docker run example sh -c "python main_test.py"
.
-----
Ran 1 test in 0.000s

OK

```

ruleare container program main

`docker run example sh -c "python main.py"`

```
python$ docker run example sh -c "python main.py"
Hello from Python!
alex@alex-pc:~/Documents/2020-2021/an2zi/00. Curs/11
python$
```