Part 1

```
[slide 4]
Check the list of docker images:
$ docker images
REPOSITORY
                      TAG
                                           IMAGE ID
                                                                  CREATED
                                                                                        SIZE
Get our first docker image (syntax docker pull IMAGE):
$ docker pull python:alpine
Check the list of docker images:
$ docker images
REPOSITORY
                      TAG
                                           IMAGE ID
                                                                  CREATED
                                                                                        SIZE
                                                                  3 weeks ago
                                                                                        90.4MB
                                           8eb1c554687d
python
                      alpine
[slide 5]
Run the our first container:
$ docker run python:alpine
Nothing happened, since there's no pre-configured command to run.
Let's indicate a command then (syntax docker run IMAGE CMD):
$ docker run python:alpine python --version
Python 3.6.5
Hello world!
Python:
$ python -c 'print("hello world!")'
hello world!
Python in Docker:
$ docker run python:alpine python -c 'print("hello world!")'
hello world!
Alternative:
$ echo "hello world!"
hello world!
$ docker run python:alpine echo "hello world!"
hello world!
Listing containers running
Let's check the list of containers running:
$ docker ps
CONTAINER ID
                                           COMMAND
                                                                  CREATED
                                                                                        STATUS
                                                                                                             PORTS
                      IMAGE
Well, nothing as expected.
Let's run a container for some time then.
$ man sleep
$ docker run python:alpine sleep 10
In the next 10 seconds, run in another terminal:
$ docker ps
CONTAINER ID
                      IMAGE
                                            COMMAND
                                                                  CREATED
                                                                                             STATUS
                                                                                                                   PORTS
6e6be0c8f31c
                                            "sleep 10"
                                                                  Less than a second ago
                      python:alpine
                                                                                             Up 1 second
[slide 5]
```

1

Let's create simple container

```
Our first Dockerfile:
FROM python:alpine
CMD python -c 'print("hello world!")'
Let's now build the docker image with a repository and tag, as in python:alpine (syntax docker build -f FILE -t IMAGE
DIR):
$ docker build -f Dockerfile -t vitorenesduarte/tutorial:hello .
And check that the new image is in the list of images:
$ docker images
REPOSITORY
                             TAG
                                                   IMAGE ID
                                                                         CREATED
                                                                                                SIZE
vitorenesduarte/tutorial
                             hello
                                                   49aa76850e83
                                                                         About a minute ago
                                                                                                90.4MB
                                                   8eb1c554687d
                                                                                                90.4MB
                             alpine
                                                                         3 weeks ago
Let's run our app:
$ docker run vitorenesduarte/tutorial:hello
hello world!
But this is not how we write apps, right?
Let's then create a file named app.py with:
print("hello world!")
Verify it is okay:
$ python app.py
hello world!
And modify Dockerfile to:
FROM python:alpine
COPY app.py /
CMD python app.py
Let's build the image again:
$ docker build -t vitorenesduarte/tutorial:hello .
Notice we didn't indicate which file to use. Docker tries to find a file named Dockerfile in the directory passed as argument.
Verify app.py was indeed copied to the docker image:
$ docker run vitorenesduarte/tutorial:hello ls | grep app
app.py
Let's run it again:
docker run vitorenesduarte/tutorial:hello
hello world!
[slide 7]
[slide 8]
Create file docker-compose.yml with:
version: "3"
services:
  app:
    build: .
Now build and run with:
$ docker-compose up --build
```

```
Change docker-compose.yml to:

version: "3"
services:
app:
build: .
sleeper:
build: .
command: sleep 10
```

And again, in another terminal:

\$ docker ps