

# Part 1

[slide 5]

Check the list of docker images:

```
$ docker images
```

REPOSITORY	TAG	IMAGE ID	CREATED
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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
python	alpine	8eb1c554687d	3 weeks ago

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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	IMAGE	COMMAND	CREATED
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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
6e6be0c8f31c	python:alpine	"sleep 10"	Less than a second

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## 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
vitorenesduarte/tutorial	hello	49aa76850e83	About a minu
python	alpine	8eb1c554687d	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!
```

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[slide 9]

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
```