

Homework 5

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1 entrypoint.sh

```
1 #!/bin/bash
2
3 if [ $# = 0 ]
4 then
5     /usr/games/fortune | /usr/games/cowthink
6 else
7     /usr/games/cowthink $@
8 fi
```

The entrypoint.sh script checks the number of the parameters. If the number is 0 then we run two applications: *Fortune* and *Cowthink*; otherwise we run only *Cowthink* passing as argument all the parameters used to launch the container.

2 dockerfile

The dockerfile is:

```
1 FROM ubuntu:latest
2 MAINTAINER Elena Bucchianeri bucchianerie@gmail.com
3 RUN apt-get update
4 RUN apt-get install -y fortune cowsay
5 COPY "entrypoint.sh" /usr/bin/
6 ENTRYPOINT ["/usr/bin/entrypoint.sh"]
```

The FROM sets the Ubuntu base image. The two RUN allow to install *Fortune* and *Cowsay* applications. Then the script file is copied into the image in the folder */usr/bin/* by the COPY line. The script file is set as the entrypoint using the *exec* form, in order to transmit arguments to it. No CMD is defined so the entrypoint has no default parameters. New parameters can be passed by command line, when we run the Docker image.

3 test

```
elena@elena-HP-Pavilion-dv6-Notebook-PC:~/Documenti$ docker build -t cowthink .
Sending build context to Docker daemon 99.68MB
Step 1/6 : FROM ubuntu:latest
--> 20c44cd7596f
Step 2/6 : MAINTAINER Elena Bucchianeri bucchianerie@gmail.com
--> Using cache
--> 74b77e62cfda
Step 3/6 : RUN apt-get update
--> Using cache
--> b408f01cf244
Step 4/6 : RUN apt-get install -y fortune cowsay
--> Using cache
--> 7eab1372d108
Step 5/6 : COPY "entrypoint.sh" /usr/bin/
--> Using cache
--> 1a7002dfd9a0
Step 6/6 : ENTRYPOINT /usr/bin/entrypoint.sh
--> Using cache
--> b59fa0cbe820
Successfully built b59fa0cbe820
Successfully tagged cowthink:latest
```

Figure 1: Command used to build the image.

```
elena@elena-HP-Pavilion-dv6-Notebook-PC:~/Documenti$ docker run cowthink:latest
( You attempt things that you do not even )
( plan because of your extreme stupidity. )
-----
      o   ^   ^
      o (oo)\_____
          (__) \    )\\
                ||----w |
                ||     ||
```

Figure 2: Example of a case 1. Container is invoked with no parameters. The cow thinks a random sentence.

```
elena@elena-HP-Pavilion-dv6-Notebook-PC:~/Documenti$ docker run cowthink:latest
ciao ciao ciao
( ciao ciao ciao )
-----
      o   ^   ^
      o (oo)\_____
          (__) \    )\\
                ||----w |
                ||     ||
```

Figure 3: Example of a case 2. Container is invoked with 3 parameters. The cow repeats these 3 input parameters.