1.1

```
root@D-DXCHST2-5490:/home/villeh# docker ps -a
CONTAINER ID   IMAGE          COMMAND                CREATED         STATUS                  PORTS     NAMES
01ff01614c26   ubuntu:16.04   "sh -c 'while true; …" 8 seconds ago   Up 7 seconds                      looper
c5482f529758   nginx          "/docker-entrypoint.…" 5 minutes ago   Exited (0) 4 minutes ago          recursing_faraday
3753e9b75ca9   hello-world    "/hello"               5 minutes ago   Exited (0) 5 minutes ago          interesting_tu
```

1.2

```
root@D-DXCHST2-5490:/home/villeh# docker container ls -a
CONTAINER ID   IMAGE          COMMAND                CREATED           STATUS                    PORTS     NAMES
01ff01614c26   ubuntu:16.04   "sh -c 'while true; …" About a minute ago Exited (137) 15 seconds ago        looper
c5482f529758   nginx          "/docker-entrypoint.…" 7 minutes ago     Exited (0) 5 minutes ago            recursing_faraday
3753e9b75ca9   hello-world    "/hello"               7 minutes ago     Exited (0) 7 minutes ago            interesting_tu
root@D-DXCHST2-5490:/home/villeh# docker rm 01 c5 37
01
c5
37
root@D-DXCHST2-5490:/home/villeh# docker ps -a
CONTAINER ID   IMAGE          COMMAND                CREATED           STATUS            PORTS          NAMES
root@D-DXCHST2-5490:/home/villeh#
```

En poistanut ihan kaikkia imageja koska tarvitsin näitä vielä.

```
root@D-DXCHST2-5490:/home/villeh# docker images
REPOSITORY                      TAG       IMAGE ID       CREATED        SIZE
fav_distro                      xenial    096efd74bb89   6 days ago     127MB
ubuntu                          16.04     096efd74bb89   6 days ago     127MB
ubuntu                          xenial    096efd74bb89   6 days ago     127MB
ubuntu                          latest    9140108b62dc   6 days ago     72.9MB
postgres                        latest    817f2d3d51ec   7 days ago     314MB
nginx                           latest    7e4d58f0e5f3   3 weeks ago    133MB
devopsdockeruh/exec_bash_exercise latest  c52ece77379e   4 months ago   942MB
hello-world                     latest    bf756fb1ae65   9 months ago   13.3kB
devopsdockeruh/pull_exercise    latest    d9854bc0e13a   19 months ago  75.3MB
root@D-DXCHST2-5490:/home/villeh# docker rmi 7e 91 bf
Untagged: nginx:latest
Untagged: nginx@sha256:c628b67d21744fce822d22fdcc0389f6bd763daac23a6b77147d0712ea7102d0
Deleted: sha256:7e4d58f0e5f3b60077e9a5d96b4be1b974b5a484f54f9393000a99f3b6816e3d
Deleted: sha256:eedfd37abc0b05520a719addf6675b372687fe9a2ed1746fa988335720d4376c
Deleted: sha256:4f052ddd517f6dc5b74d2f7d881838b8ec6a5e67ec7a1da8bbbe91e1e068ad3a
Deleted: sha256:5f78154d356577280e4ac0d9bf0d021d488828e57f953b011dcbadaecd539ce4
Deleted: sha256:db5783668220e16186080f3e9d69ad748aab8c72abb8e457f6fc45369461634b
Untagged: ubuntu:latest
Untagged: ubuntu@sha256:bc2f7250f69267c9c6b66d7b6a81a54d3878bb85f1ebb5f951c896d13e6ba537
Deleted: sha256:9140108b62dc87d9b278bb0d4fd6a3e44c2959646eb966b86531306faa81b09b
Deleted: sha256:69ea0ba6086b4837bc259353a9dec7e6f7bcc9b8297b0f722387a114697e5691
Deleted: sha256:923b52e8276c042a8602849149a284ae77cccf4c688cc4284bf01ec9669a6e6c
Deleted: sha256:d42a4fdf4b2ae8662ff2ca1b695eae571c652a62973c1beb81a296a4f4263d92
Untagged: hello-world:latest
Untagged: hello-world@sha256:4cf9c47f86df71d48364001ede3a4fcd85ae80ce02ebad74156906caff5378bc
Deleted: sha256:bf756fb1ae65adf866bd8c456593cd24beb6a0a061dedf42b26a993176745f6b
Deleted: sha256:9c27e219663c25e0f28493790cc0b88bc973ba3b1686355f221c38a36978ac63
root@D-DXCHST2-5490:/home/villeh# docker images
REPOSITORY                      TAG       IMAGE ID       CREATED        SIZE
fav_distro                      xenial    096efd74bb89   6 days ago     127MB
ubuntu                          16.04     096efd74bb89   6 days ago     127MB
ubuntu                          xenial    096efd74bb89   6 days ago     127MB
postgres                        latest    817f2d3d51ec   7 days ago     314MB
devopsdockeruh/exec_bash_exercise latest  c52ece77379e   4 months ago   942MB
devopsdockeruh/pull_exercise    latest    d9854bc0e13a   19 months ago  75.3MB
```

1.3

Vastaus oli "basics"

devopsdockeruh/pull_exercise ☆

By **devopsdockeruh** • Updated 2 years ago

This is the description of the image. This image outputs secret code with viable input.

Container

Overview   Tags   Dockerfile   Builds

This is the readme, use input "basics" to complete this exercise.

1.4

Vastaus "Docker is easy"

```
root@D-DXCHST2-5490:/home/villeh# docker container ls
CONTAINER ID        IMAGE                           COMMAND
ATED                STATUS              PORTS                   NAMES
4829de86a98b        devopsdockeruh/exec_bash_exercise    "docker-entrypoint.s…"
econds ago          Up 8 seconds                            relaxed_mayer
root@D-DXCHST2-5490:/home/villeh# docker exec -it 4829de86a98b bash
root@4829de86a98b:/usr/app# tail -f ./logs.txt
Secret message is:
"Docker is easy"
Fri, 02 Oct 2020 11:52:12 GMT
Fri, 02 Oct 2020 11:52:15 GMT
Fri, 02 Oct 2020 11:52:18 GMT
Fri, 02 Oct 2020 11:52:21 GMT
Secret message is:
"Docker is easy"
Fri, 02 Oct 2020 11:52:28 GMT
Fri, 02 Oct 2020 11:52:31 GMT
Fri, 02 Oct 2020 11:52:34 GMT
Fri, 02 Oct 2020 11:52:37 GMT
Secret message is:
"Docker is easy"
```

1.5

Tällä komennolla sain kontin pyörimään:

root@D-DXCHST2-5490:/home/villeh# docker start -it 096efd74bb89

Asensin Curlin:

root@15f147a7efca:/# apt-get update; apt-get install curl

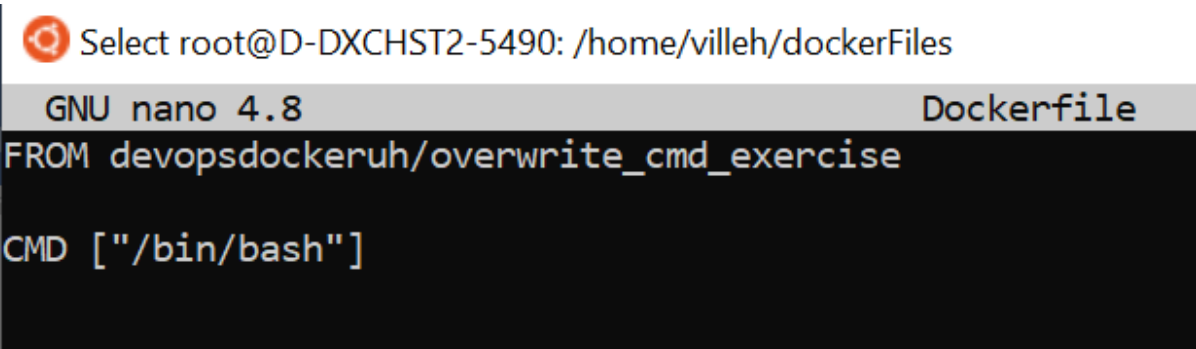**Suoritin komennon:**

root@15f147a7efca:/# sh -c 'echo "Input website:"; read website; echo "Searching.."; sleep 1; curl http://$website;'

```
root@15f147a7efca:/# sh -c 'echo "Input website:"; read website; echo "Searching.."; sleep 1
; curl http://$website;'
Input website:
helsinki.fi
Searching..
<!DOCTYPE HTML PUBLIC "-//IETF//DTD HTML 2.0//EN">
<html><head>
<title>301 Moved Permanently</title>
</head><body>
<h1>Moved Permanently</h1>
<p>The document has moved <a href="http://www.helsinki.fi/">here</a>.</p>
</body></html>
```

1.6

Sisältö:

```
Select root@D-DXCHST2-5490: /home/villeh/dockerFiles

  GNU nano 4.8                                    Dockerfile
FROM devopsdockeruh/overwrite_cmd_exercise

CMD ["/bin/bash"]
```

Buildaus:

root@D-DXCHST2-5490:/home/villeh/dockerFiles# docker build -t docker-clock .

Käynnistyskomento:

root@D-DXCHST2-5490:/home/villeh/dockerFiles# docker run docker-clock -c

1.7

Dockerfile:

```
  GNU nano 4.8
FROM ubuntu:16.04

WORKDIR /mydir
RUN apt-get update && apt-get install -y curl
COPY script.txt .
CMD ["/bin/bash"]
```

script.txt file (locally)

```
  GNU nano 4.8                                                      script.txt
echo "Input website:"; read website; echo "Searching.."; sleep 1; curl http://$website;
```

Buildaus:

root@D-DXCHST2-5490:/home/villeh/dockerFiles/t1.7#docker build -t curler .

Käynnistys:

root@D-DXCHST2-5490:/home/villeh/dockerFiles/t1.7# docker run -it curler

Onnistuu:

```
Successfully built 736f291f25b0
Successfully tagged curler:latest
root@D-DXCHST2-5490:/home/villeh/dockerFiles/t1.7# docker run -it curler
root@c46b5439a87d:/mydir# bash script.txt
Input website:
helsinki.fi
Searching..
<!DOCTYPE HTML PUBLIC "-//IETF//DTD HTML 2.0//EN">
<html><head>
<title>301 Moved Permanently</title>
</head><body>
<h1>Moved Permanently</h1>
<p>The document has moved <a href="http://www.helsinki.fi/">here</a>.</p>
</body></html>
root@c46b5439a87d:/mydir#
```

1.8

docker pull devopsdockeruh/pull_exercise

touch logs.txt

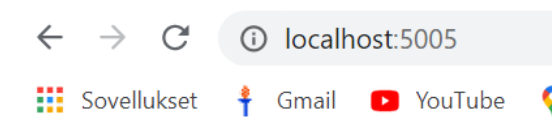docker run -v $(pwd)/logs.txt:/usr/app/logs.txt devopsdockeruh/first_volume_exercise

Lopputulos:

1.9

docker pull devopsdockeruh/ports_exercise

docker run -p 5005:80 devopsdockeruh/ports_exercise

Ports configured correctly!!

1.10

start.sh file:

#!/bin/bash

cd frontend-example-docker

npm start

Dockerfile:

FROM ubuntu:16.04

WORKDIR /mydir

COPY start.sh .

RUN chmod +x start.sh

RUN apt-get update && apt-get upgrade -y curl bash

RUN curl -sL https://deb.nodesource.com/setup_10.x | bash

RUN apt install -y nodejs

RUN apt-get install git -y

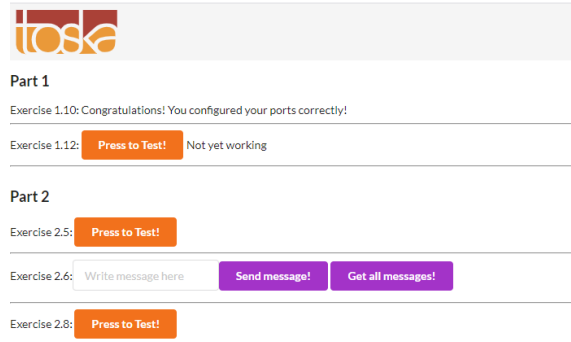RUN git clone https://github.com/docker-hy/frontend-example-docker.git

RUN cd frontend-example-docker/ && npm install

RUN cd frontend-example-docker/ && npm install -g serve

CMD ["./start.sh"]

Komento:

docker run -p 5005:5000 nettisivu7

1.11

Docker file:

FROM ubuntu:16.04

WORKDIR /mydir

COPY start.sh .

RUN chmod +x start.sh

RUN apt-get update && apt-get upgrade -y curl bash

RUN curl -sL https://deb.nodesource.com/setup_10.x | bash

RUN apt install -y nodejs

RUN apt-get install git -y

RUN git clone https://github.com/docker-hy/backend-example-docker.git

RUN cd backend-example-docker/ && npm install

RUN cd backend-example-docker/ && npm install -g serve

CMD ["./start.sh"]

start.sh file:

#!/bin/bash

cd backend-example-docker

npm start

Tehtiin tyhjä logs.txt file kansioon, josta käynnistettiin ohjelma komennolla (porttien volumen asettaminen):

docker run -p 8000:8000 -v $(pwd)/logs.txt:/mydir/backend-example-docker/logs.txt backend

Toimii:

Port configured correctly, generated message in logs.txt

```
root@D-DXCHST2-5490:/home/villeh/dockerFiles/t1.11# cat logs.txt
10/12/2020, 12:13:53 PM: Connection received in root
10/12/2020, 12:13:55 PM: Connection received in root
10/12/2020, 12:13:57 PM: Connection received in root
10/12/2020, 12:13:58 PM: Connection received in root
```

1.12

FRONT

Dockerfile:

FROM ubuntu:16.04

WORKDIR /mydir

COPY start.sh .

RUN chmod +x start.sh

RUN apt-get update && apt-get upgrade -y curl bash

RUN curl -sL https://deb.nodesource.com/setup_10.x | bash

RUN apt install -y nodejs

RUN apt-get install git -y

RUN git clone https://github.com/docker-hy/frontend-example-docker.git

RUN cd frontend-example-docker/ && npm install

RUN cd frontend-example-docker/ && npm install -g serve

CMD ["./start.sh"]

start.sh file:

#!/bin/bash

cd frontend-example-docker

API_URL=http://localhost:8000 npm start <mark>// määritellään mihin bäkkäri osoitteeseen kutsu lähetetään</mark>

Käynnistetään frontti:

docker run -p 5005:5000 frontend

BACK END:

Dockerfile:

FROM ubuntu:16.04

WORKDIR /mydir

COPY start.sh .

RUN chmod +x start.sh

RUN apt-get update && apt-get upgrade -y curl bash

RUN curl -sL https://deb.nodesource.com/setup_10.x | bash

RUN apt install -y nodejs

RUN apt-get install git -y

RUN git clone https://github.com/docker-hy/backend-example-docker.git

RUN cd backend-example-docker/ && npm install

RUN cd backend-example-docker/ && npm install -g serve

CMD ["./start.sh"]

start.sh file:

#!/bin/bash

cd backend-example-docker

FRONT_URL=http://localhost:5005 npm start <mark>// määritellään sallittu cross origin osoite. Eli mistä front osoitteesta kutsu saa tulla.</mark>

Käynnistetää bäkkäri:

docker run -p 8000:8000 -v $(pwd)/logs.txt:/mydir/backend-example-docker/logs.txt backend4

Part 1

Exercise 1.10: Congratulations! You configured your ports correctly!

Exercise 1.12:   **Press to Test!**   Working!

1.13

Latasin ensin spring-example-projectin githubista local kansioon, jossa myös seuraavat tiedostot

Dockerfile:

FROM openjdk:8

WORKDIR /mydir

COPY spring-example-project .

RUN ./mvnw package

COPY start.sh .

RUN chmod +x start.sh

CMD ["./start.sh"]

Huom. Olisi voitu ladata myös gitistä suoraan dockerfilessä. (RUN git clone https://github...) Tehtiin nyt COPY:lla

start.sh:

#!/bin/bash

java -jar ./target/docker-example-1.1.3.jar

Buildaus komento:

docker build -t my-java-app .

Käynnistyi komennolla:

docker run -p 8000:8080 -it my-java-app

Toimii:

Press here

Success

1.14

Dockerfile:

FROM ruby:2.6.0

RUN gem install bundler
RUN apt update && apt -y install nodejs

WORKDIR /usr/src/app
COPY rails-example-project/

RUN bundle install
RUN rails db:migrate

CMD ["rails", "s"]

Huom. Olisi voitu ladata myös gitistä suoraan dockerfilessä. (RUN git clone https://github...) Tehtiin nyt COPY:lla

Komennot:

docker build -t my-ruby-app .

docker run -p 8000:3000 -it my-ruby-app

Toimii:

New Press

Total presses: 3

[Press]

List presses

3 presses

2020-10-14 15:08:44 UTC   Destroy
2020-10-14 15:08:43 UTC   Destroy
2020-10-14 15:08:42 UTC   Destroy

Press more

1.15

WHO ARE YOU:

FROM ubuntu:16.04

WORKDIR /mydir

RUN apt-get update && apt-get upgrade -y bash

RUN touch own-app.sh

RUN echo '#!/usr/bin/env bash\necho "Who are you?" \nread name\necho "Hello, $name."' > own-app.sh

RUN chmod +x own-app.sh

CMD ["./own-app.sh"]

README:

An app that first asks you name and then says hello <yourname>

Pull the image first and then run with the following command: docker run -it who-are-you-app

Docker hub osoite:

https://hub.docker.com/repository/docker/kuikkakoponen/who-are-you-app

1.17

Dockerfile:

FROM ubuntu:18.04

RUN apt-get update && apt-get upgrade -y curl bash wget vim

RUN apt install -y nodejs

RUN apt install -y npm

RUN npm install -g npx

RUN npm install -g -y create-react-app

Käynnistys:

docker run -p 3000:3000 -it react-environment

Tehdään esimerkkiprojekti:

mkdir test

cd test

npx create-react-app testApp

cd testApp

npm start

Avaa selaimella http://localhost:3000/ ja katso toimiiko

Docker hub osoite:

https://hub.docker.com/repository/docker/kuikkakoponen/react-environment