# КИИИ Лаб 2

## Class Assignment / Homework

- Go through Chapter 3 and Chapter 4 in the Docker Book, and do the exercises one by one.
  - You can skip the following sections:
    - Docker log drivers (page 60);
    - Automated Builds (page 129);
    - Running your own Docker registry (page 134);
    - Alternative Indexes (page 137);

## PROOF OF LAB

```
PS C:\Users\berat> docker info
Client:
 Version:    25.0.3
 Context:    default
 Debug Mode: false
 Plugins:
  buildx: Docker Buildx (Docker Inc.)
    Version:  v0.12.1-desktop.4
    Path:     C:\Program Files\Docker\cli-plugins\docker-buildx.exe
  compose: Docker Compose (Docker Inc.)
    Version:  v2.24.5-desktop.1
    Path:     C:\Program Files\Docker\cli-plugins\docker-compose.exe
  debug: Get a shell into any image or container. (Docker Inc.)
    Version:  0.0.24
    Path:     C:\Program Files\Docker\cli-plugins\docker-debug.exe
  dev: Docker Dev Environments (Docker Inc.)
    Version:  v0.1.0
```

```
Run 'docker COMMAND --help' for more information on a command.

For more help on how to use Docker, head to https://docs.docker.com/go/guides/
PS C:\Users\berat> docker run -i -t ubuntu /bin/bash
Unable to find image 'ubuntu:latest' locally
latest: Pulling from library/ubuntu
bccd10f490ab: Pull complete
Digest: sha256:77906da86b60585ce12215807090eb327e7386c8fafb5402369e421f44eff17e
Status: Downloaded newer image for ubuntu:latest
root@a212958d06b2:/# 
```

```
root@a212958d06b2:/# ps
  PID TTY          TIME CMD
    1 pts/0    00:00:00 bash
   11 pts/0    00:00:00 ps
root@a212958d06b2:/# ls
bin   dev   home  lib32  libx32  mnt   proc  run   srv   tmp   var
boot  etc   lib   lib64  media   opt   root  sbin  sys   usr
root@a212958d06b2:/# hostname -I
172.17.0.2
root@a212958d06b2:/# ps -aux
USER        PID %CPU %MEM    VSZ    RSS TTY       STAT  START   TIME COMMAND
root          1  0.0  0.0   4628   3768 pts/0     Ss    13:34   0:00 /bin/bash
root         14  0.0  0.0   7064   1544 pts/0     R+    13:41   0:00 ps -aux
root@a212958d06b2:/# 
```

```
PS C:\Users\berat> docker ps -a
CONTAINER ID   IMAGE     COMMAND        CREATED          STATUS                     PORTS
NAMES
a212958d06b2   ubuntu    "/bin/bash"    13 minutes ago   Exited (0) 5 minutes ago
hopeful_pasteur
PS C:\Users\berat> docker run --name shubuntu -i -t ubuntu /bin/bash
root@623fb6eeb031:/# exit
exit
PS C:\Users\berat> 
```

**Docker start shubuntu**
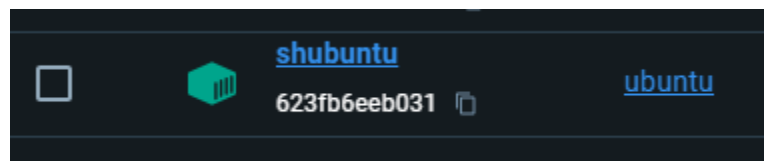


```
PS C:\Users\berat> docker run --name daemon_dave -d ubuntu /bin/bash -c "while true; do echo
hello world; sleep 1; done"
54d7f1abc66df5775799898c7a0e60a6012abf360071adb460d5b375faf7d748
PS C:\Users\berat> docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED          STATUS         PORTS
NAMES
54d7f1abc66d   ubuntu    "/bin/bash -c 'while…"   15 seconds ago   Up 15 seconds
daemon_dave
PS C:\Users\berat> 
```

```
Fetch the logs of a container
PS C:\Users\berat> docker logs daemon_dave
hello world
hello world
hello world
hello world
hello world
hello world
hello world
hello world
hello world
hello world
hello world
hello world
hello world
hello world
hello world
hello world
hello world
```

```
PS C:\Users\berat> docker start daemon_dave
daemon_dave
PS C:\Users\berat> docker top daemon_dave
UID                 PID                 PPID                C                   STIME
      TTY                    TIME                CMD
root                2781                2760                0                   14:06
      ?                      00:00:00            /bin/bash -c while true; do echo hello world;
sleep 1; done
root                2806                2781                0                   14:06
      ?                      00:00:00            sleep 1
PS C:\Users\berat>
```

```
      ?                       00:00:00                   sleep 1
PS C:\Users\berat> docker stop daemon_dave
daemon_dave
PS C:\Users\berat> docker ps
CONTAINER ID    IMAGE       COMMAND     CREATED     STATUS      PORTS       NAMES
PS C:\Users\berat>
```

```
PS C:\Users\berat> docker images
REPOSITORY      TAG          IMAGE ID        CREATED         SIZE
ubuntu          latest       ca2b0f26964c    9 days ago      77.9MB
PS C:\Users\berat>
```

```
PS C:\Users\berat> docker pull fedora:20
20: Pulling from library/fedora
4abd98c7489c: Pull complete
Digest: sha256:5d5a02b873d298da9bca4b84440c5cd698b0832560c850d92cf389cef58bc549
Status: Downloaded newer image for fedora:20
docker.io/library/fedora:20

What's Next?
  View a summary of image vulnerabilities and recommendations → docker scout quickview fedora
:20
PS C:\Users\berat>
```

```
emove one or more images
$ C:\Users\berat> docker image rm fedora:20
ntagged: fedora:20
ntagged: fedora@sha256:5d5a02b873d298da9bca4b84440c5cd698b0832560c850d92cf389cef58bc549
eleted: sha256:ba74bddb630e4dc18b3c97241f7e7fc5fb4babfd0d79e10b73f5d85b52db46ae
eleted: sha256:aca8e3909c1e86667827a2bb101be6fdb3c14ee450ab3bdcfc5efdbd9c277890
$ C:\Users\berat>
```

```
PS C:\Users\berat> docker login
Authenticating with existing credentials...
Login Succeeded
PS C:\Users\berat>
```

```
PS C:\Users\berat\onedrive\documents\github> ls


    Directory: C:\Users\berat\onedrive\documents\github


Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
d-----         2/12/2024   2:24 PM                3D Reconstruction OKO Bridge
d-----         2/12/2024  12:59 PM                BeratAhmetaj.github.io
d-----          3/8/2024   4:33 PM                FINKI
d-----          3/1/2024  11:42 AM                KIIILab1
d-----         2/12/2024   1:38 PM                MoneyTree
d-----         2/12/2024   2:17 PM                MuseumApp
d-----         2/13/2024   4:09 PM                SoundBite


PS C:\Users\berat\onedrive\documents\github> cd KIIILab1
PS C:\Users\berat\onedrive\documents\github\KIIILab1> mkdir cicdtest


    Directory: C:\Users\berat\onedrive\documents\github\KIIILab1


Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
d-----          3/8/2024   4:34 PM                cicdtest


PS C:\Users\berat\onedrive\documents\github\KIIILab1> cd cicdtest
```

```
Enabling site 000-default.
invoke-rc.d: could not determine current runlevel
invoke-rc.d: policy-rc.d denied execution of start.
Processing triggers for libc-bin (2.35-0ubuntu3.6) ...
Processing triggers for ca-certificates (20230311ubuntu0.22.04.1) ...
Updating certificates in /etc/ssl/certs...
0 added, 0 removed; done.
Running hooks in /etc/ca-certificates/update.d...
done.
root@5289cf42bab7:/# ls
bin   dev   home  lib32  libx32  mnt   proc  run   srv   tmp   var
boot  etc   lib   lib64  media   opt   root  sbin  sys   usr
root@5289cf42bab7:/# mkdir webtest
root@5289cf42bab7:/# cd webtest
root@5289cf42bab7:/webtest# touch Dockerfile
root@5289cf42bab7:/webtest# docker build
bash: docker: command not found
root@5289cf42bab7:/webtest# docker build -t="BeratAhmetaj/webtest"
bash: docker: command not found
root@5289cf42bab7:/webtest#
```

```
Start a build
PS C:\Users\berat\onedrive\documents\github\KIIILab1\cicdtest> docker build -t="BeratAhmetaj/
webtest" .
[+] Building 60.8s (8/8) FINISHED                                        docker:default
 => [internal] load build definition from Dockerfile                            0.0s
 => => transferring dockerfile: 237B                                            0.0s
 => [internal] load metadata for docker.io/library/ubuntu:18.04                 2.3s
 => [auth] library/ubuntu:pull token for registry-1.docker.io                   0.0s
 => [internal] load .dockerignore                                              0.0s
 => => transferring context: 2B                                                0.0s
 => [1/3] FROM docker.io/library/ubuntu:18.04@sha256:152dc042452c496007f07ca9127571cb9   5.9s
 => => resolve docker.io/library/ubuntu:18.04@sha256:152dc042452c496007f07ca9127571cb9   0.0s
 => => sha256:7c457f213c7634afb95a0fb2410a74b7b5bc0ba527033362c240c7 25.69MB / 25.69MB   4.4s
 => => sha256:152dc042452c496007f07ca9127571cb9c29697f42acbfad72324b2b 1.33kB / 1.33kB   0.0s
 => => sha256:dca176c9663a7ba4c1f0e710986f5a25e672842963d95b960191e2d9f718 424B / 424B   0.0s
 => => sha256:f9a80a55f492e823bf5d51f1bd5f87ea3eed1cb31788686aa99a2fb6 2.30kB / 2.30kB   0.0s
 => => extracting sha256:7c457f213c7634afb95a0fb2410a74b7b5bc0ba527033362c240c7a11bef4   1.3s
 => [2/3] RUN apt-get update; apt-get install -y nginx                         51.7s
 => [3/3] RUN echo 'Hi, I am in your container' >/var/www/html/index.html      0.3s
 => exporting to image                                                          0.5s
 => => exporting layers                                                         0.5s
 => => writing image sha256:2deedf18ea5281bbc560bb0925082534263de36eb30acbf7c6b764a09c   0.0s
 => => naming to BeratAhmetaj/webtest                                          0.0s

View build details: docker-desktop://dashboard/build/default/default/my8v53az3v1d1le0def3inl6
6


What's Next?
```

```
PS C:\Users\berat\onedrive\documents\github\KIIILab1\cicdtest> docker images
REPOSITORY            TAG        IMAGE ID        CREATED             SIZE
BeratAhmetaj/webtest  latest     2deedf18ea52    About a minute ago  169MB
ubuntu                latest     ca2b0f26964c    9 days ago          77.9MB
PS C:\Users\berat\onedrive\documents\github\KIIILab1\cicdtest>
```

```
   View a summary of image vulnerabilities and recommendations → docker scout quickview
PS C:\Users\berat\onedrive\documents\github\KIIILab1\cicdtest> docker images
REPOSITORY              TAG        IMAGE ID        CREATED             SIZE
BeratAhmetaj/webtest    latest     2deedf18ea52    About a minute ago  169MB
ubuntu                  latest     ca2b0f26964c    9 days ago          77.9MB
PS C:\Users\berat\onedrive\documents\github\KIIILab1\cicdtest>
```

5-6 komandi imase problemi i davase error
(ENV/RUN/HEALTHCHECK…)

```
Upload an image to a registry
PS C:\Users\berat\onedrive\documents\github\KIIILab1\cicdtest> docker push BeratAhmetaj/webte
st
Using default tag: latest
```

```
Upload an image to a registry
PS C:\Users\berat\onedrive\documents\github\KIIILab1\cicdtest> docker push BeratAhmetaj/webte
st
Using default tag: latest
The push refers to repository [BeratAhmetaj/webtest]
Get "https://BeratAhmetaj/v2/": dialing BeratAhmetaj:443 container via direct connection beca
use  has no HTTPS proxy: resolving host BeratAhmetaj: lookup BeratAhmetaj: no such host
PS C:\Users\berat\onedrive\documents\github\KIIILab1\cicdtest>
```

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                                                                             3/8/2024

```
List images
PS C:\Users\berat\onedrive\documents\github\KIIILab1\cicdtest> docker images
REPOSITORY              TAG        IMAGE ID        CREATED         SIZE
BeratAhmetaj/webtest    latest     2deedf18ea52    20 minutes ago  169MB
ubuntu                  latest     ca2b0f26964c    9 days ago      77.9MB
PS C:\Users\berat\onedrive\documents\github\KIIILab1\cicdtest> docker image remove BeratAhmet
aj/webtest
Untagged: BeratAhmetaj/webtest:latest
Deleted: sha256:2deedf18ea5281bbc560bb0925082534263de36eb30acbf7c6b764a09cc4d4f1
PS C:\Users\berat\onedrive\documents\github\KIIILab1\cicdtest> docker images
REPOSITORY      TAG        IMAGE ID        CREATED         SIZE
ubuntu          latest     ca2b0f26964c    9 days ago      77.9MB
PS C:\Users\berat\onedrive\documents\github\KIIILab1\cicdtest>
```

| | Name | Image | Status | CPU (%) | Por | Actions |
|---|---|---|---|---|---|---|
| ☐ | shubuntu 623fb6eeb031 | ubuntu | Exited (137) | N/A | | ▶ ⋮ 🗑 |
| ☐ | naughty_merkle 5289cf42bab7 | ubuntu | Exited (127) | N/A | | ▶ ⋮ 🗑 |

🔍 Search        ⫿⫿⫿    ⬤ Only show running containers