

DevOps Assignment # 01

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TASK # 01

```
root@kali: ~  
# docker --version  
Docker version 26.1.5-dfsg1, build a72d7cd  
root@kali: ~  
#
```

```
root@kali: ~  
# docker info  
Client:  
Version: 26.1.5-dfsg1  
Context: default  
Debug Mode: false  
Plugins:  
buildx: Docker Builds (Docker Inc.)  
Version: 0.13.1-ds1  
Path: /usr/libexec/docker/cli-plugins/docker-buildx  
Server:  
Containers: 1  
Running: 0  
Paused: 0  
Stopped: 1  
Images: 2  
Server Version: 26.1.5-dfsg1  
Storage Driver: overlay2  
Backing Filesystem: extfs  
Supports d_type: true  
Using metacopy: false  
Native Overlay Diff: true  
userxattr: false  
Logging Driver: json-file  
Group Drivers: systemd  
Cgroup Version: 2  
Plugins:  
Volume: local  
Network: bridge host ipvlan macvlan null overlay  
Log: awslogs fluentd gcplogs gelf journald json-file local splunk syslog  
Swarm: inactive  
Runtimes: io.containerd.runc.v2 runc  
Default Runtime: runc  
Init Binary: docker-init  
containerd version: 1.7.2a-ds1-8  
runc version: 1.1.15-ds1-2-b4  
init version:  
Security Options:  
apparmor  
seccomp  
Profile: builtin  
cgroups  
Kernel Version: 6.11.2-amd64  
Operating System: Kali GNU/Linux Rolling  
OSType: linux
```

```
root@kali: ~  
# sudo systemctl status docker  
● docker.service - Docker Application Container Engine  
Loaded: loaded (/usr/lib/systemd/system/docker.service; enabled; preset: enabled)  
Active: active (running) since Wed 2025-10-08 12:26:16 EDT; 4min 29s ago  
Invocation: b21e0915b0e7e4911234d99960ecd7  
TriggeredBy: ● docker.socket  
Docs: https://docs.docker.com  
Main PID: 858 (dockerd)  
Tasks: 9  
Memory: 116M (peak: 119M)  
CPU: 5.28s  
CGroup: /system.slice/docker.service  
└─858 /usr/sbin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock  
  
Oct 08 12:26:07 kali (dockerd)[858]: docker.service: Referenced but unset environment variable evaluates to an empty string: DOCKER_OPTS  
Oct 08 12:26:09 kali dockerd[858]: time="2025-10-08T12:26:09.943627556-04:00" level=info msg="Starting up"  
Oct 08 12:26:11 kali dockerd[858]: time="2025-10-08T12:26:11.555280229-04:00" level=info msg="[graphdriver] using prior storage driver: overlay2"  
Oct 08 12:26:11 kali dockerd[858]: time="2025-10-08T12:26:11.855904704-04:00" level=info msg="Loading containers: start."  
Oct 08 12:26:14 kali dockerd[858]: time="2025-10-08T12:26:14.875381859-04:00" level=info msg="Default bridge (docker0) is assigned with an IP address 172.17.0.0/16. Daemon option --bip can be used to set a preferred IP address"  
Oct 08 12:26:15 kali dockerd[858]: time="2025-10-08T12:26:15.322876886-04:00" level=info msg="Loading containers: done."  
Oct 08 12:26:15 kali dockerd[858]: time="2025-10-08T12:26:15.728341334-04:00" level=info msg="Docker daemon" commit=41e817 containerd-snapshotter=false storage-driver=overlay2 version=26.1.5-dfsg1  
Oct 08 12:26:15 kali dockerd[858]: time="2025-10-08T12:26:15.722185438-04:00" level=info msg="Daemon has completed initialization"  
Oct 08 12:26:16 kali dockerd[858]: time="2025-10-08T12:26:16.469862110-04:00" level=info msg="API listen on /run/docker.sock"  
Oct 08 12:26:16 kali systemd[1]: Started docker.service - Docker Application Container Engine.  
root@kali: ~  
#
```

```
root@kali: ~  
# sudo systemctl enable docker  
Synchronizing state of docker.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.  
Executing: /usr/lib/systemd/systemd-sysv-install enable docker  
root@kali: ~  
#
```

```
(root@kali)-[~]
# sudo systemctl enable docker
Synchronizing state of docker.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable docker

(root@kali)-[~]
#
# systemctl is-enabled docker
enabled

(root@kali)-[~]
#
```

TASK # 02

```
root@kali: ~/mydockerapp

[root@kali]-[~]
#
[root@kali]-[~]
# sudo systemctl is-enabled docker
enabled
[root@kali]-[~]
# mkdir mydockerapp
[root@kali]-[~]
# cd mydockerapp
[root@kali]-[~/mydockerapp]
# echo "ch1>Your Name - Roll No: 12345/h1" > index.html
[root@kali]-[~/mydockerapp]
# nano Dockerfile
[root@kali]-[~/mydockerapp]
# docker build -t mynginx:1.0 .

[+] Building 196.4s (8/8) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 320B
=> [internal] load metadata for docker.io/library/ubuntu:20.04
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [1/3] FROM docker.io/library/ubuntu:20.04@sha256:8feb4d8ca5354def3d8fce243717141ce31e2c428701f6682bd2fafe15388214
=> resolve docker.io/library/ubuntu:20.04@sha256:8feb4d8ca5354def3d8fce243717141ce31e2c428701f6682bd2fafe15388214
=> sha256:87bab6f4bba6c771e5728bfccf3b93f60946a558330986126e5af6d713 2.38kB / 2.38kB
=> sha256:13b7e930469f6d3575a328709035c6acf6f5485a76abc03d1b92a6ac09c2476 27.51MB / 27.51MB
=> sha256:8feb4d8ca5354def3d8fce243717141ce31e2c428701f6682bd2fafe15388214 6.69kB / 6.69kB
=> sha256:c6d4f8f66e05a3860ba34b09b130f8714e21a809c71f658c4ba650a179d5aa 424B / 424B
=> extracting sha256:13b7e930469f6d3575a328709035c6acf6f5485a76abc03d1b92a6ac09c2476
=> [internal] load build context
=> => transferring context: 73B
=> [2/3] RUN apt-get update && apt-get install -y nginx
=> [3/3] COPY index.html /var/www/html/
=> exporting to image
=> exporting layers
=> writing image sha256:33df23e8bce59345791e54bde1e8ee04139e658c3ab62521cb4148dd0055fa5c
=> naming to docker.io/library/mynginx:1.0

docker:default
0.1s
0.6s
6.2s
0.1s
0.6s
36.7s
0.1s
0.6s
32.7s
0.8s
0.6s
3.5s
0.1s
0.6s
151.5s
0.2s
1.2s
1.2s
0.8s
0.6s
```

```
root@kali: ~/mydockerapp

[root@kali]-[~]
# mkdir mydockerapp
[root@kali]-[~]
# cd mydockerapp
[root@kali]-[~/mydockerapp]
# echo "ch1>Your Name - Roll No: 12345/h1" > index.html
[root@kali]-[~/mydockerapp]
# nano Dockerfile
[root@kali]-[~/mydockerapp]
# docker build -t mynginx:1.0 .

[+] Building 196.4s (8/8) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 320B
=> [internal] load metadata for docker.io/library/ubuntu:20.04
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [1/3] FROM docker.io/library/ubuntu:20.04@sha256:8feb4d8ca5354def3d8fce243717141ce31e2c428701f6682bd2fafe15388214
=> resolve docker.io/library/ubuntu:20.04@sha256:8feb4d8ca5354def3d8fce243717141ce31e2c428701f6682bd2fafe15388214
=> sha256:87bab6f4bba6c771e5728bfccf3b93f60946a558330986126e5af6d713 2.38kB / 2.38kB
=> sha256:13b7e930469f6d3575a328709035c6acf6f5485a76abc03d1b92a6ac09c2476 27.51MB / 27.51MB
=> sha256:8feb4d8ca5354def3d8fce243717141ce31e2c428701f6682bd2fafe15388214 6.69kB / 6.69kB
=> sha256:c6d4f8f66e05a3860ba34b09b130f8714e21a809c71f658c4ba650a179d5aa 424B / 424B
=> extracting sha256:13b7e930469f6d3575a328709035c6acf6f5485a76abc03d1b92a6ac09c2476
=> [internal] load build context
=> => transferring context: 73B
=> [2/3] RUN apt-get update && apt-get install -y nginx
=> [3/3] COPY index.html /var/www/html/
=> exporting to image
=> exporting layers
=> writing image sha256:33df23e8bce59345791e54bde1e8ee04139e658c3ab62521cb4148dd0055fa5c
=> naming to docker.io/library/mynginx:1.0

[root@kali]-[~/mydockerapp]
# docker image ls

REPOSITORY          TAG         IMAGE ID      CREATED       SIZE
mynginx              1.0         33df23e8bce5  41 seconds ago 190MB
glitchatbot-frontend v1          7fe46db3398  13 days ago   913MB
glitchatbotcr2533.azurecr.io/glitchatbot-frontend v1          7fe46db3398  13 days ago   913MB
hello-world          latest      1b44b53e06a   2 months ago  10.1kB

[root@kali]-[~/mydockerapp]
#
```

```
File Actions Edit View Help

mynginx                               1.0      33df23e8bce5  41 seconds ago  190MB
gitchatbot-frontend                  v1      f7e46db3398   13 days ago    913MB
gitchatbotacr253.azurecr.io/gitchatbot-frontend  v1      f7e46db3398   13 days ago    913MB
hello-world                           latest   1b44b5a3e06a   2 months ago   10.1kB

[root@kali]~/mydockerapp
# docker run -d -p 8080:80 mynginx:1.0
76fae6f2d3dbfc61e3a143ef0e0d72f5b0e2ef9fae63da7df4003b741522634

[root@kali]~/mydockerapp
# cd mydockerapp

cd: no such file or directory: mydockerapp

[root@kali]~/mydockerapp
# nano index.html

[root@kali]~/mydockerapp
# docker build -t mynginx:1.1

[+] Building 4.6s (8/8) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring Dockerfile: 320B
=> [internal] load metadata for docker.io/library/ubuntu:20.04
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [internal] load build context
=> => transferring context: 84B
=> [1/3] FROM docker.io/library/ubuntu:20.04@sha256:8feb48ca5354def3d8fce243717141ce31e2c428701f6682b2d2f4fe15388214
=> CACHED [2/3] RUN apt-get update && apt-get install -y nginx
=> [3/3] COPY index.html /var/www/html/
=> exporting to image
=> exporting layers
=> writing image sha256:d1c382a5ba89edd34c1e7c817cdda008086a95c2324ff9969238a6cb762d9b2b
=> naming to docker.io/library/mynginx:1.1

[root@kali]~/mydockerapp
# docker image ls

REPOSITORY          TAG         IMAGE ID      CREATED        SIZE
mynginx              1.1         d1c382a5ba09  20 seconds ago  190MB
mynginx              1.0         33df23e8bce5  5 minutes ago  190MB
gitchatbot-frontend v1          f7e46db3398   13 days ago    913MB
gitchatbotacr253.azurecr.io/gitchatbot-frontend v1          f7e46db3398   13 days ago    913MB
hello-world          latest      1b44b5a3e06a   2 months ago   10.1kB

[root@kali]~/mydockerapp
```

TASK # 03

```
File Actions Edit View Help

[root@kali]~/mydockerapp
# docker run -d -p 8080:80 --name webapp mynginx:1.0
349f37a3d8ec7a5db1e7b9cb92ee789604b3be115392ece8046ac24b86db2410

[root@kali]~/mydockerapp
# docker ps

CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS                               NAMES
349f37a3d8ec   mynginx:1.0  "nginx -g 'daemon of..."  19 seconds ago  Up 17 seconds  0.0.0.0:8080->80/tcp, :::8080->80/tcp  webapp

[root@kali]~/mydockerapp
# docker pause webapp

webapp

[root@kali]~/mydockerapp
# docker ps

CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS              PORTS                               NAMES
349f37a3d8ec   mynginx:1.0  "nginx -g 'daemon of..."  2 minutes ago   Up 2 minutes (Paused)  0.0.0.0:8080->80/tcp, :::8080->80/tcp  webapp

[root@kali]~/mydockerapp
# docker unpause webapp

webapp

[root@kali]~/mydockerapp
# docker restart webapp

webapp


[root@kali]~/mydockerapp
# docker stop webapp


webapp

[root@kali]~/mydockerapp
# docker ps -a

CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS              PORTS                               NAMES
349f37a3d8ec   mynginx:1.0  "nginx -g 'daemon of..."  3 minutes ago   Exited (0) 14 seconds ago  webapp
db3088eca999   mynginx:1.1  "nginx -g 'daemon of..."  12 minutes ago  Created              modest_banzai
3b5032b69c1d   mynginx:1.1  "nginx -g 'daemon of..."  12 minutes ago  Created              interesting_keller
d1ff296ffaca   hello-world  "/hello"                  13 days ago    Exited (0) 13 days ago    laughing_chaum

[root@kali]~/mydockerapp
```


 docker

 marsad1
Docker Personal

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Copy access token

Use this token as a password when you sign in from the Docker CLI client. [Learn more](#)

Make sure you copy your personal access token now. Your personal access token is only displayed once. It isn't stored and can't be retrieved later.

Access token description

for linux webapp22

Expires on

Nov 07, 2025 at 23:59:59

Access permissions

Read, Write, Delete


To use the access token from your Docker CLI client:

1. Run

```
(root@kali) - [~/mydockerapp]
# docker push marsad1/mynginx:1.0

The push refers to repository [docker.io/marsad1/mynginx]
957aa797ac20: Pushed
a4a235f00740: Pushed
470b66ea5123: Pushed
1.0: digest: sha256:44097d10d19a9acff130839440c7ee316183e23d20dc23b2c9bfff6c3c8edcb98 size: 948

(root@kali) - [~/mydockerapp]
#
```


 **marsad1/mynginx** Manage Repository

By [marsad1](#) · Updated 3 minutes ago

IMAGE

☆ 0 ↓ 0

Overview Tags



No overview available

This repository doesn't have an overview

Tag summary


Recent tags

1.0

Content type

Image

Digest

sha256:44097d10d... 

Size

948 MB


```
(root@kali) ~/mydockerapp
# docker rmi marsad1/mynginx:1.0

Untagged: marsad1/mynginx:1.0
Untagged: marsad1/mynginx@sha256:44097d10d19a9acff130839440c7ee316183e23d20dc23b2c9bff6c3c8edcb98

(root@kali) ~/mydockerapp
# docker pull marsad1/mynginx:1.0

1.0: Pulling from marsad1/mynginx
Digest: sha256:44097d10d19a9acff130839440c7ee316183e23d20dc23b2c9bff6c3c8edcb98
Status: Downloaded newer image for marsad1/mynginx:1.0
docker.io/marsad1/mynginx:1.0

(root@kali) ~/mydockerapp
#
```

```
(root@kali) ~/mydockerapp
# docker rmi marsad1/mynginx:1.0

Untagged: marsad1/mynginx:1.0
Untagged: marsad1/mynginx@sha256:44097d10d19a9acff130839440c7ee316183e23d20dc23b2c9bff6c3c8edcb98

(root@kali) ~/mydockerapp
# docker pull marsad1/mynginx:1.0

1.0: Pulling from marsad1/mynginx
Digest: sha256:44097d10d19a9acff130839440c7ee316183e23d20dc23b2c9bff6c3c8edcb98
Status: Downloaded newer image for marsad1/mynginx:1.0
docker.io/marsad1/mynginx:1.0
```

```
(root@kali) ~/mydockerapp
# docker run -d -p 8080:80 --name webapp marsad1/mynginx:1.0
8b83203c6a5d0c40635a1f0ef3d833fa297201512abdcf0797cb7ccf1e4a9863

(root@kali) ~/mydockerapp
# docker ps

CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS                               NAMES
8b83203c6a5d   marsad1/mynginx:1.0   "nginx -g 'daemon of..."   21 seconds ago   Up 19 seconds   0.0.0.0:8080→80/tcp, :::8080→80/tcp   webapp

(root@kali) ~/mydockerapp
#
```

localhost:8080

localhost:8080

Kali LinuxKali ToolsKali DocsKali ForensicsKali NetHunterExploit-DBGoogle Hacking DBOffice

Marsad Rasheed - Roll No:FA22-BSE-032

```
(root@kali)~/mydockerapp]
# docker stop webapp
webapp

(root@kali)~/mydockerapp]
# docker rm webapp
webapp

(root@kali)~/mydockerapp]
# docker rmi marsad1/mynginx:1.0
Untagged: marsad1/mynginx:1.0
Untagged: marsad1/mynginx@sha256:44097d10d19a9acff130839440c7ee316183e23d20dc23b2c9bfff6c3c8edcb98

(root@kali)~/mydockerapp]
```