Docker Basics: A Detailed Report.
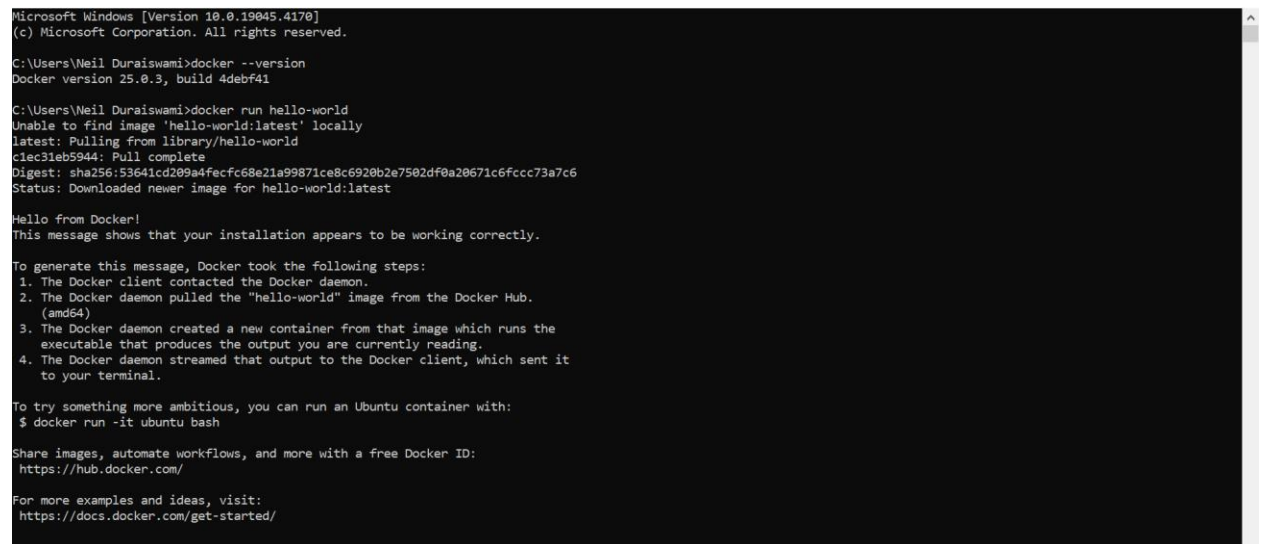
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Contents

Introduction

In this report, I will document the steps performed during the Docker assignment, which involved getting started with Docker, working with Docker images, running containers, and managing containers.

Task 1: Getting Started with Docker

1. Execution of 'hello-world' Docker Image

Ran the following command in the terminal:

docker run hello-world

Provided a screenshot showing the successful execution of the 'hello-world' Docker container.

2. Checking Docker Version

Executed the command:
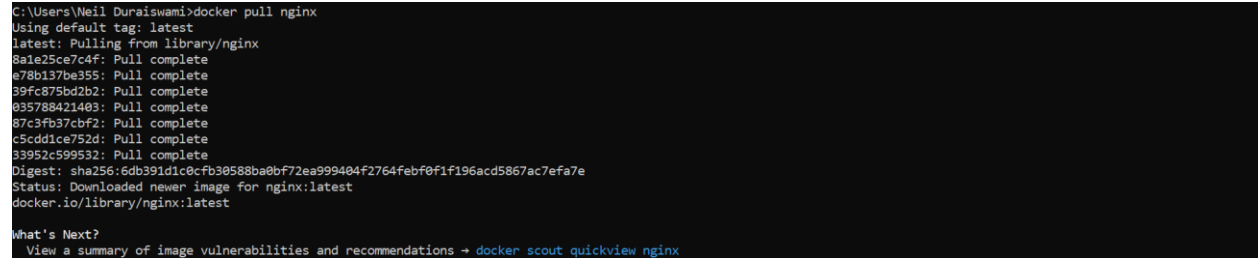
docker –version

Provided a screenshot displaying the installed version of Docker.

Task 2: Working with Docker Images

1. Pulling the 'nginx' Image

Ran the command:

docker pull nginx

```
C:\Users\Neil Duraiswami>docker pull nginx
Using default tag: latest
latest: Pulling from library/nginx
8a1e25ce7c4f: Pull complete
e78b137be355: Pull complete
39fc875bd2b2: Pull complete
035788421403: Pull complete
87c3fb37cbf2: Pull complete
c5cdd1ce752d: Pull complete
33952c599532: Pull complete
Digest: sha256:6db391d1c0cfb30588ba0bf72ea999404f2764febf0f1f196acd5867ac7efa7e
Status: Downloaded newer image for nginx:latest
docker.io/library/nginx:latest

What's Next?
  View a summary of image vulnerabilities and recommendations → docker scout quickview nginx
```

Provided a screenshot showing the successful pulling of the 'nginx' image from Docker Hub.

2. Listing Docker Images

Executed the command:

docker images

```
C:\Users\Neil Duraiswami>docker images
REPOSITORY               TAG      IMAGE ID       CREATED        SIZE
nginx                    latest   92b11f67642b   5 weeks ago    187MB
docker/welcome-to-docker latest   c1f619b6477e   4 months ago   18.6MB
hello-world              latest   d2c94e258dcb   10 months ago  13.3kB
```

Provided a screenshot listing all Docker images currently available on the system.

Task 3: Running Containers

1. Running the 'nginx' Container

Ran the command:

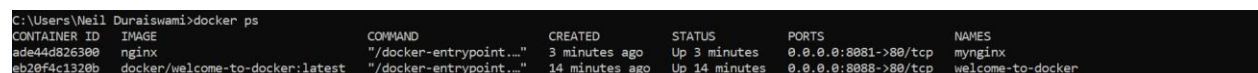*docker run --name mynginx -d -p 8081:80 nginx*

```
C:\Users\Neil Duraiswami>docker run --name mynginx -d -p 8081:80 nginx
ade44d82630018ea3a75d673b75b694929edf6c0a5f49229dd801b2709373a05
```

Provided a screenshot showing the successful execution of the 'nginx' container.

2. Listing Running Containers

Executed the command:

docker ps

```
C:\Users\Neil Duraiswami>docker ps
CONTAINER ID   IMAGE                            COMMAND                  CREATED         STATUS         PORTS                  NAMES
ade44d826300   nginx                            "/docker-entrypoint.…"   3 minutes ago   Up 3 minutes   0.0.0.0:8081->80/tcp   mynginx
eb20f4c1320b   docker/welcome-to-docker:latest  "/docker-entrypoint.…"   14 minutes ago  Up 14 minutes  0.0.0.0:8088->80/tcp   welcome-to-docker
```
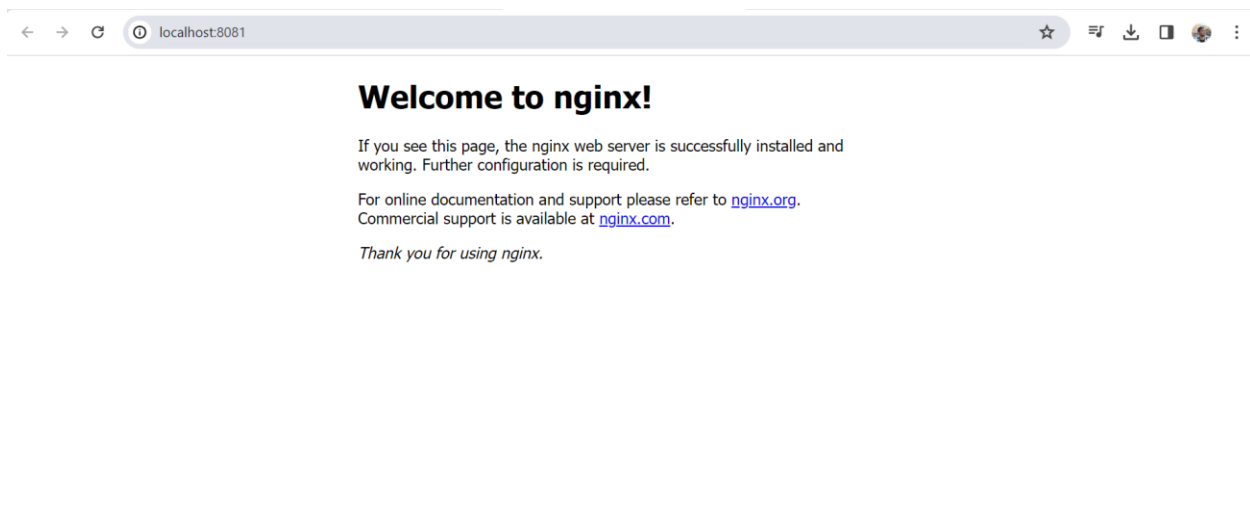
Provided a screenshot listing all currently running Docker containers.

3. Accessing the Web Server

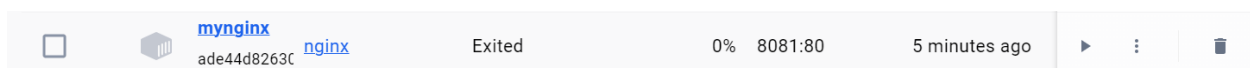**Accessed the nginx welcome page in the web browser at http://localhost:8080.**

Provided a screenshot of the nginx welcome page.

Task 4: Container Management

1. Stopping the 'mynginx' Container

Executed the command:
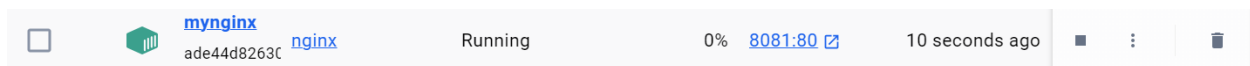
docker stop mynginx

Provided a screenshot showing the successful stopping of the container.

2. Starting the 'mynginx' Container Again

Executed the command:

docker start mynginx

Provided a screenshot showing the successful starting of the container.

3. Removing the 'mynginx' Container

Executed the command:

docker rm mynginx

	Name	Image	Status	CPU (%)	Port(s)	Last started	Actions
☐	**welcome-to** eb20f4c1320l	docker/welcome-to	Running	0%	8088:80 ↗	19 minutes ago	■ ⋮	🗑
☐	**optimistic_** dbfcb5f255e5	hello-world	Exited	0%		10 minutes ago	▶ ⋮	🗑

Provided a screenshot showing the successful removal of the container.

4. Removing the 'nginx' Image

Executed the command:

docker rmi nginx

```
C:\Users\Neil Duraiswami>docker rmi nginx
Untagged: nginx:latest
Untagged: nginx@sha256:6db391d1c0cfb30588ba0bf72ea999404f2764febf0f1f196acd5867ac7efa7e
Deleted: sha256:92b11f67642b62bbb98e7e49169c346b30e20cd3c1c034d31087e46924b9312e
Deleted: sha256:d9e826dbb4b3c5770fe92638baa8c6614f210d782a5d021a123fe9fa1f92c23d
Deleted: sha256:2a75285e888884bed4d630896c86ecd71739c6e82669e21ad7a050f33c9ac48d
Deleted: sha256:32bfe3f040358ab8f9872a63d4ddefdc68f35d991ca10a812cbac5912ae9f97b
Deleted: sha256:1330486eb62ea7e96f384961b77b0fc85f5d4422e761114ef3a72e7cb89751a4
Deleted: sha256:a375372209a0f2b2c697a52cce46bc41b495bf86184ae83dd5146e20c22078eb
Deleted: sha256:450787ca55caa59d0288de9cf36fc6b77d1b208a77eb837ec3d25b385f99cafb
Deleted: sha256:a483da8ab3e941547542718cacd3258c6c705a63e94183c837c9bc44eb608999
```

Provided a screenshot showing the successful removal of the 'nginx' image from the system.

Conclusion

In conclusion, this report documents the successful completion of all tasks in the Docker assignment. The tasks involved various operations such as running containers, managing Docker images, and accessing Docker containers via web browsers.