

## Experiment No 4

**Aim:-**

### Step 1: Install and Verify Docker Installation

- `winget install docker.dockerDesktop` // Used to install docker
- `Docker --version` // To check the version of docker

```
Administrator: C:\Windows\system32\cmd.exe

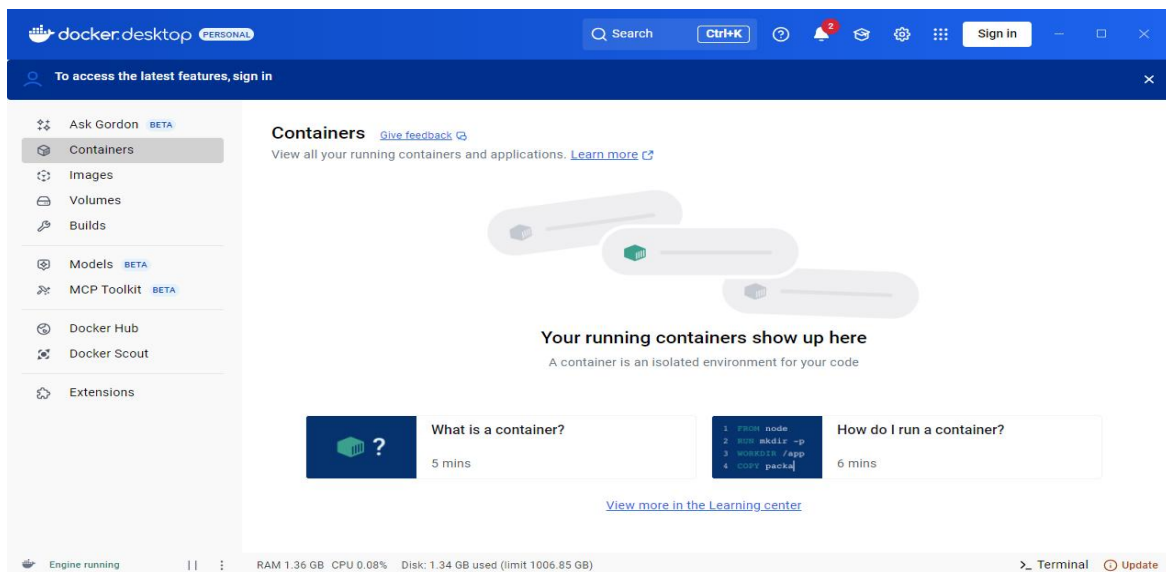
The `msstore` source requires that you view the following agreements before using.
Terms of Transaction: https://aka.ms/microsoft-store-terms-of-transaction
The source requires the current machine's 2-letter geographic region to be sent to the backend
service to function properly (ex. "US").

Do you agree to all the source agreements terms?
[Y] Yes  [N] No: y
Multiple packages found matching input criteria. Please refine the input.
Name          Id          Source
-----
Docker Desktop 9NVBZPBTk78W  msstore
Docker Desktop Docker.DockerDesktop winget

C:\Windows\system32>winget install docker.dockerdesktop
Found Docker Desktop [Docker.DockerDesktop] Version 4.43.2
This application is licensed to you by its owner.
Microsoft is not responsible for, nor does it grant any licenses to, third-party packages.
Downloading https://desktop.docker.com/win/main/amd64/199162/Docker%20Desktop%20Installer.exe
565 MB / 565 MB
Successfully verified installer hash
Starting package install...
Successfully installed

C:\Windows\system32>
```

### Step 2: Open Docker and login or sign up in ur docker account



### Step 3: Install an operating system (eg.: Ubuntu)

- docker pull ubuntu

```
Administrator: C:\Windows\system32\cmd.exe
Microsoft Windows [Version 10.0.19045.6093]
(c) Microsoft Corporation. All rights reserved.

C:\Windows\system32>docker pull ubuntu
Using default tag: latest
error during connect: this error may indicate that the docker daemon is not running: Post "http://%2F%2F.%2Fpipe%2Fdocker_engine/v1.51/images/create?fromImage=docker.io%2Flibrary%2Fubuntu&tag=latest": open //./pipe/docker_engine: The system cannot find the file specified.

C:\Windows\system32>docker --version
Docker version 28.3.2, build 578ccf6

C:\Windows\system32>docker pull ubuntu
Using default tag: latest
latest: Pulling from library/ubuntu
32f112e3802c: Pull complete
Digest: sha256:a08e551cb33850e4740772b38217fc1796a66da2506d312abe51acda354ff061
Status: Downloaded newer image for ubuntu:latest
docker.io/library/ubuntu:latest

C:\Windows\system32>
```

### Step 4: Run the Docker Container and running a few commands

1. Docker run -it ubuntu
2. Ls
3. Pwd
4. echo "Hello form Docker Container"
5. exit

```
Administrator: C:\Windows\system32\cmd.exe
C:\Windows\system32>docker pull ubuntu
Using default tag: latest
error during connect: this error may indicate that the docker daemon is not running: Post "http://%2F%2F.%2Fpipe%2Fdocker_engine/v1.51/images/create?fromImage=docker.io%2Flibrary%2Fubuntu&tag=latest": open //./pipe/docker_engine: The system cannot find the file specified.

C:\Windows\system32>docker --version
Docker version 28.3.2, build 578ccf6

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Using default tag: latest
latest: Pulling from library/ubuntu
32f112e3802c: Pull complete
Digest: sha256:a08e551cb33850e4740772b38217fc1796a66da2506d312abe51acda354ff061
Status: Downloaded newer image for ubuntu:latest
docker.io/library/ubuntu:latest

C:\Windows\system32>docker run -it ubuntu
root@e18238f63249:/#
root@e18238f63249:/# ls
bin boot dev etc home lib lib64 media mnt opt proc root run sbin srv sys tmp usr var
root@e18238f63249:/# pwd
/
root@e18238f63249:/# echo "Hello from Docker Container"
Hello from Docker Container
root@e18238f63249:/# exit
exit

C:\Windows\system32>
```

## Step 5: List Downloaded Images

- docker images

```
C:\Windows\system32\cmd.exe

C:\Users\Student>docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
ubuntu        latest    a08e551cb338   3 weeks ago    117MB

C:\Users\Student>
```

## Step 6: Run a webserver container

running a simple NGINX web server:

```
docker run -d -p 8080:80 nginx
```

Then open your browser and visit: <http://localhost:8080>

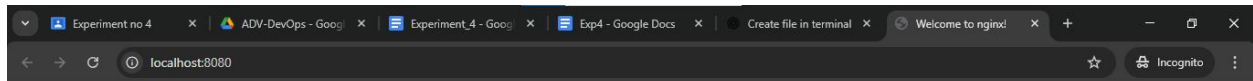
You'll see the NGINX welcome page.

```
C:\Windows\system32\cmd.exe

Microsoft Windows [Version 10.0.19045.6093]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Student>docker run -d -p 8080:80 nginx
Unable to find image 'nginx:latest' locally
latest: Pulling from library/nginx
f30ffbee4c54: Pull complete
140da4f89dcb: Pull complete
1d9f51194194: Pull complete
4b1e45a9989f: Pull complete
59e22667830b: Pull complete
96e47e70491e: Pull complete
2ef442a3816e: Pull complete
Digest: sha256:84ec966e61a8c7846f509da7eb081c55c1d56817448728924a87ab32f12a72fb
Status: Downloaded newer image for nginx:latest
1ffb83cd484a43bc198fe3da55087d3752f8767667822c40e527b0e4968e51de

C:\Users\Student>
```



## Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to [nginx.org](https://nginx.org).  
Commercial support is available at [nginx.com](https://nginx.com).

*Thank you for using nginx.*

### Step 7: Stop & Remove the Container

`docker ps` # List running containers

`docker stop <container_id>`

`docker rm <container_id>`

```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 10.0.19045.6093]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Student>docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS          NAMES
511496f162d3   ubuntu    "/bin/bash"             13 seconds ago Up 12 seconds          vibrant_snyder

C:\Users\Student>docker stop 511496f162d3
511496f162d3

C:\Users\Student>docker rm 511496f162d3
511496f162d3
```

### Conclusion:

Successfully pulled Docker images and launched containers for Ubuntu and NGINX. Understood how to start, interact with, and stop containers.