

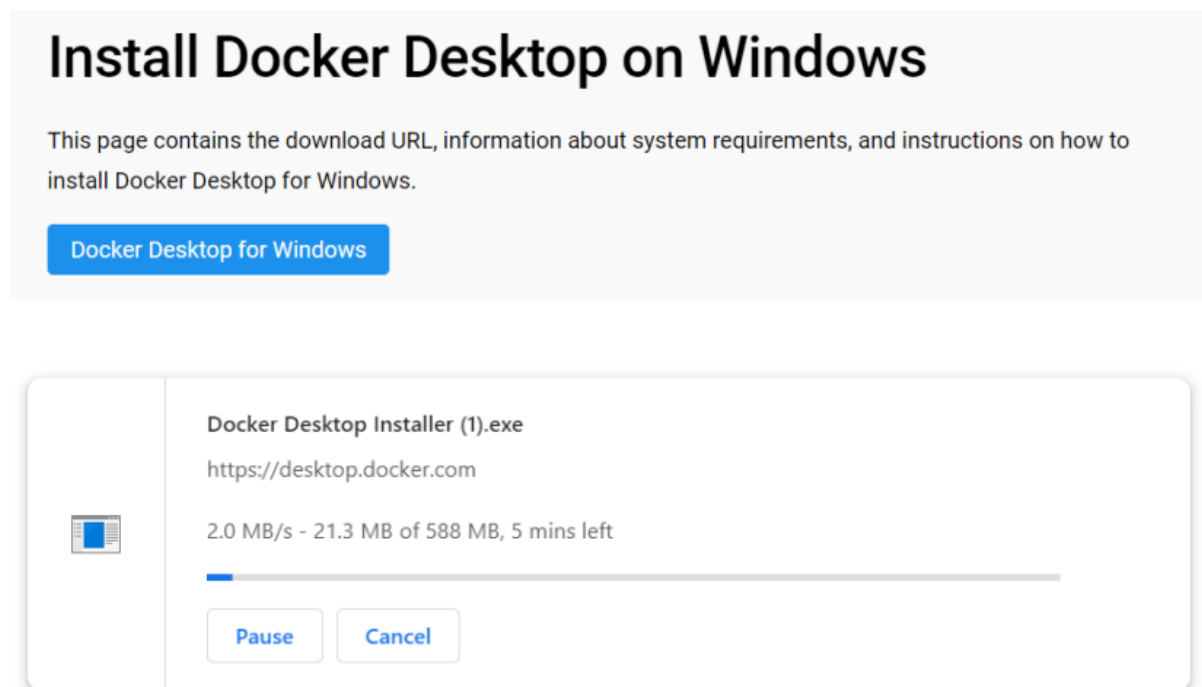
Practical - 4

AIM : Introduction of Docker set-up and study of basic docker commands.

Setting up Docker on a Linux system and learning some basic Docker commands is a valuable skill for containerization and managing software applications. Perform the following tasks:

Task 1: Install the Docker Command Line Interface Tool from:

<https://docs.docker.com/desktop/>



Task 2: Hands-on on docker commands:

- Execute the different docker commands to work pull the image from the docker hub and run the image in your local system.

```
C:\Users\Tirth>docker pull nginx:latest
latest: Pulling from library/nginx
1f7ce2fa46ab: Pull complete
9b16c94bb686: Pull complete
9a59d19f9c5b: Pull complete
9ea27b074f71: Pull complete
c6edf33e2524: Pull complete
84b1ff10387b: Pull complete
517357831967: Pull complete
Digest: sha256:10d1f5b58f74683ad34eb29287e07dab1e90f10af243f151bb50aa5dbb4d62ee
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:latest
```

- Commands to run the container with the name of your choice

```
C:\Users\Tirth>docker run --name my_nginx_container nginx:latest
/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
/docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh
10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d/default.conf
10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf
/docker-entrypoint.sh: Sourcing /docker-entrypoint.d/15-local-resolvers.envsh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
/docker-entrypoint.sh: Configuration complete; ready for start up
2023/11/30 10:56:32 [notice] 1#1: using the "epoll" event method
2023/11/30 10:56:32 [notice] 1#1: nginx/1.25.3
2023/11/30 10:56:32 [notice] 1#1: built by gcc 12.2.0 (Debian 12.2.0-14)
2023/11/30 10:56:32 [notice] 1#1: OS: Linux 5.10.102.1-microsoft-standard-WSL2
2023/11/30 10:56:32 [notice] 1#1: getrlimit(RLIMIT_NOFILE): 1048576:1048576
2023/11/30 10:56:32 [notice] 1#1: start worker processes
2023/11/30 10:56:32 [notice] 1#1: start worker process 30
2023/11/30 10:56:32 [notice] 1#1: start worker process 31
2023/11/30 10:56:32 [notice] 1#1: start worker process 32
2023/11/30 10:56:32 [notice] 1#1: start worker process 33
2023/11/30 10:56:32 [notice] 1#1: start worker process 34
```

- Command to detach and attach the container
 - To run a container in the background (detach):

```
C:\Users\Tirth>docker run -d --name detached nginx:latest
dc695fb6ca2324fd3304beb63b68cedad4e0daf761eebf414699777c2eb5f46c
```

- To reattach to a detached container:


```
$ docker attach detached_container
```

- Command to list all the images and containers

- list all the images

```
C:\Users\Tirth>docker images
```

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
nginx	latest	a6bd71f48f68	9 days ago	187MB
ubuntu	latest	e4c58958181a	8 weeks ago	77.8MB
hello-world	latest	9c7a54a9a43c	6 months ago	13.3kB

- list all the containers

```
C:\Users\Tirth>docker ps -a
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAME
S						
dc695fb6ca23	nginx:latest	"/docker-entrypoint..."	2 minutes ago	Up About a minute	80/tcp	deta
93868be03b51	nginx:latest	"/docker-entrypoint..."	5 minutes ago	Exited (0) 4 minutes ago		my_n
56009631ad8b	ubuntu	"bash"	16 minutes ago	Up 16 minutes		sere
ne_murdock						
1c1e537b54a4	hello-world	"/hello"	17 minutes ago	Exited (0) 17 minutes ago		inte
lligent_keller						
257a8e5c6d65	hello-world	"/hello"	21 minutes ago	Exited (0) 21 minutes ago		admi
ring_poincare						
c86ab783eb61	hello-world	"/hello"	3 months ago	Exited (0) 3 months ago		ador
ing_rosalind						
0db0b5844101	hello-world:latest	"/hello"	3 months ago	Exited (0) 3 months ago		comp
etent_mendeleev						

- Command to delete the specified image and containers

```
C:\Users\Tirth>docker stop my_nginx_container
my_nginx_container

C:\Users\Tirth>docker rm my_nginx_container
my_nginx_container
```

- Delete all the containers

```
C:\Users\Tirth>docker container prune
WARNING! This will remove all stopped containers.
Are you sure you want to continue? [y/N] y
Deleted Containers:
1c1e537b54a4282b97f0d27a62c10017cf879bc70823f3769adcaa6b66bc784b
257a8e5c6d65583b6fc7750a8ca4391f717078c333b6e3ac6a85c181ab960b63
c86ab783eb6143f0ba81ae334fb58292573d5a5c652b32d8adb550d633ff597a
0db0b58441019aea36a454f252b073e1fe9bbbdca2102bc17fe95087e2dc00e5

Total reclaimed space: 0B
```