

Name: Abdurrahman Qureshi

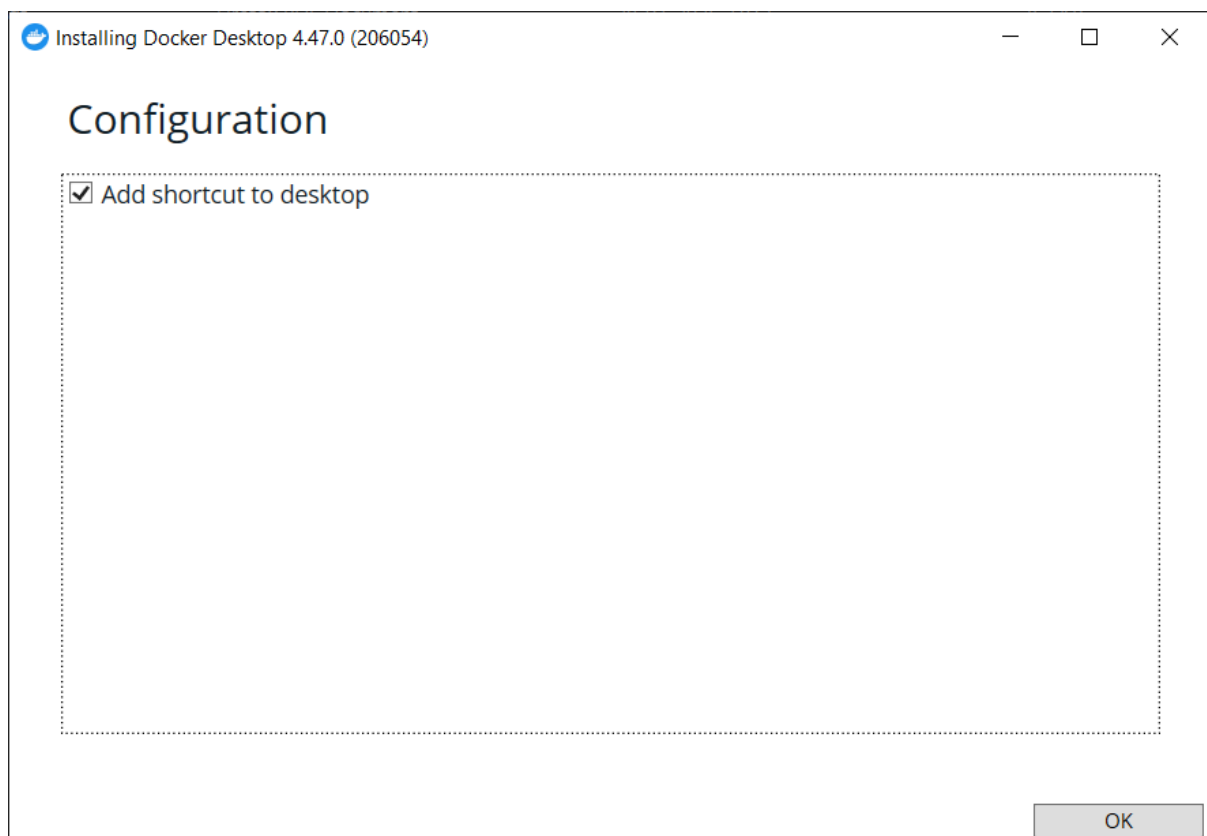
Roll No: 242466

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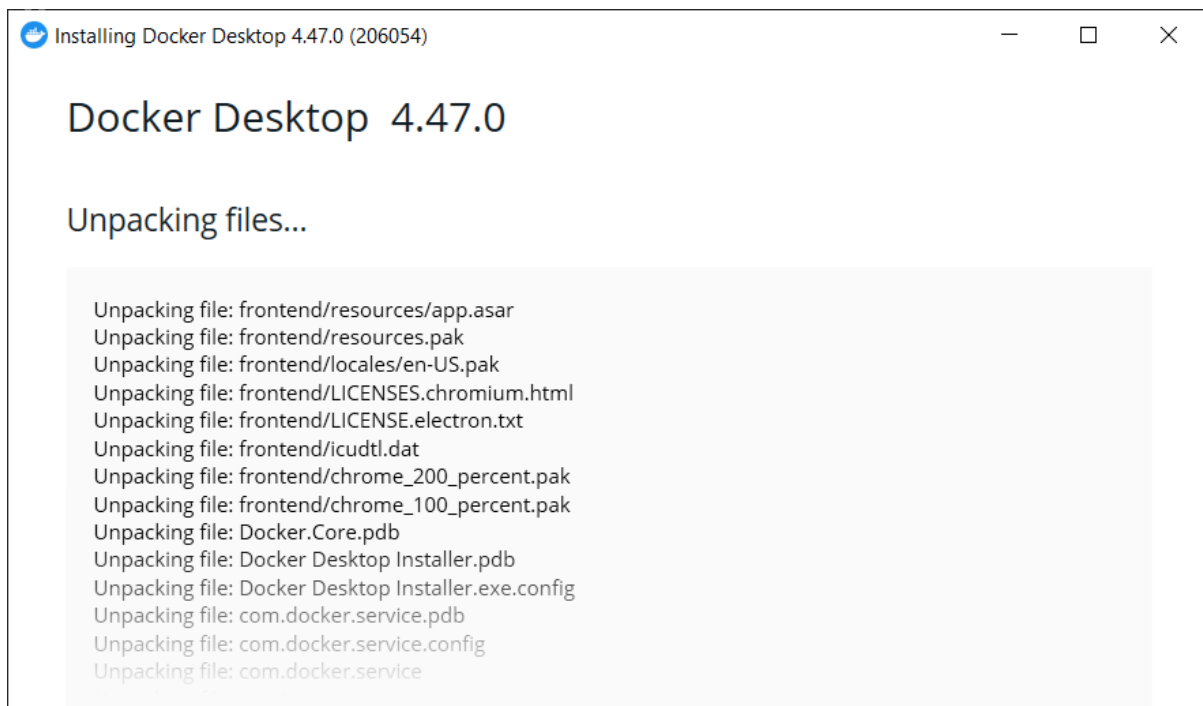
Practical No: 8

Date Of Performance: 26/09/2025

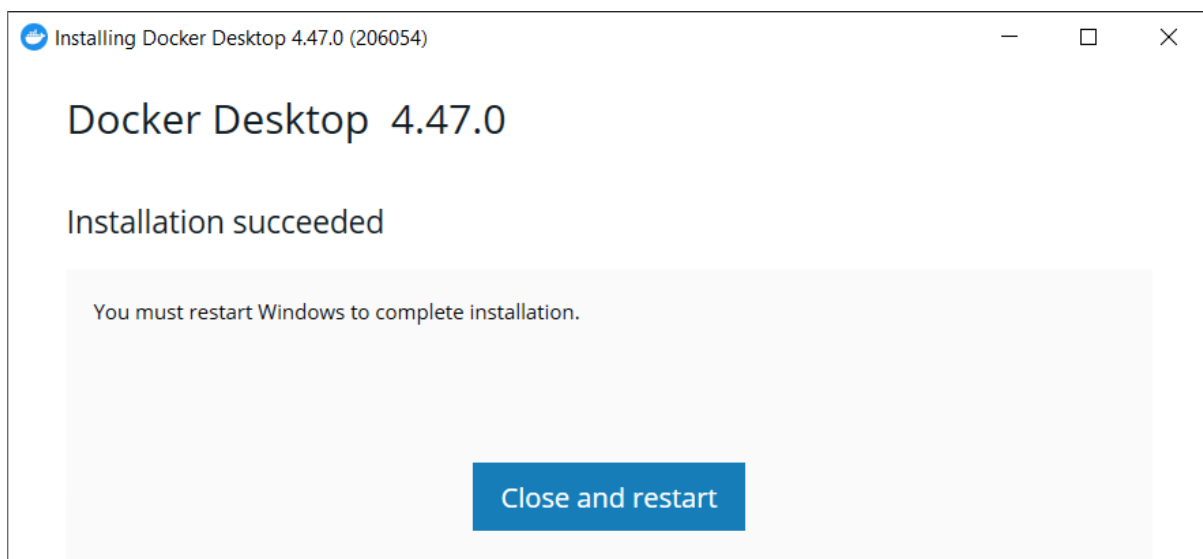
Aim: Understand Docker Architecture and Container life cycle, install Docker Commands and execute docker commands to Manage Image and Interact with Container.



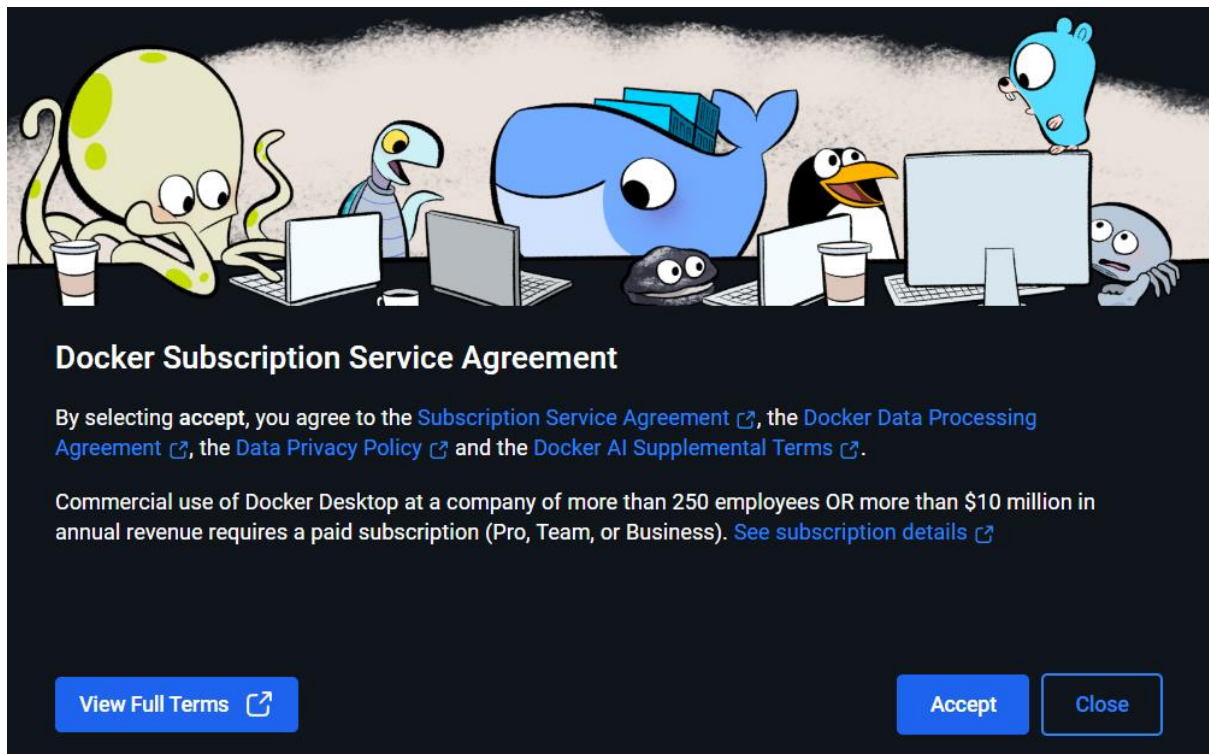
Configuring Docker Desktop



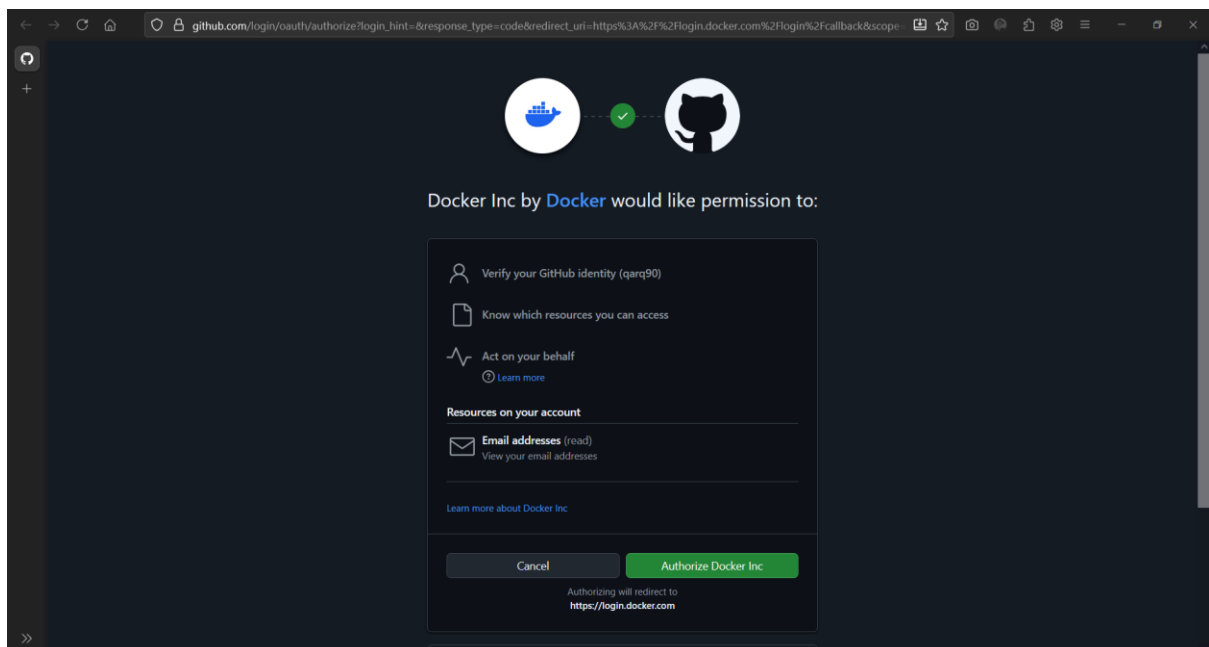
## Unpacking Docker Desktop Files



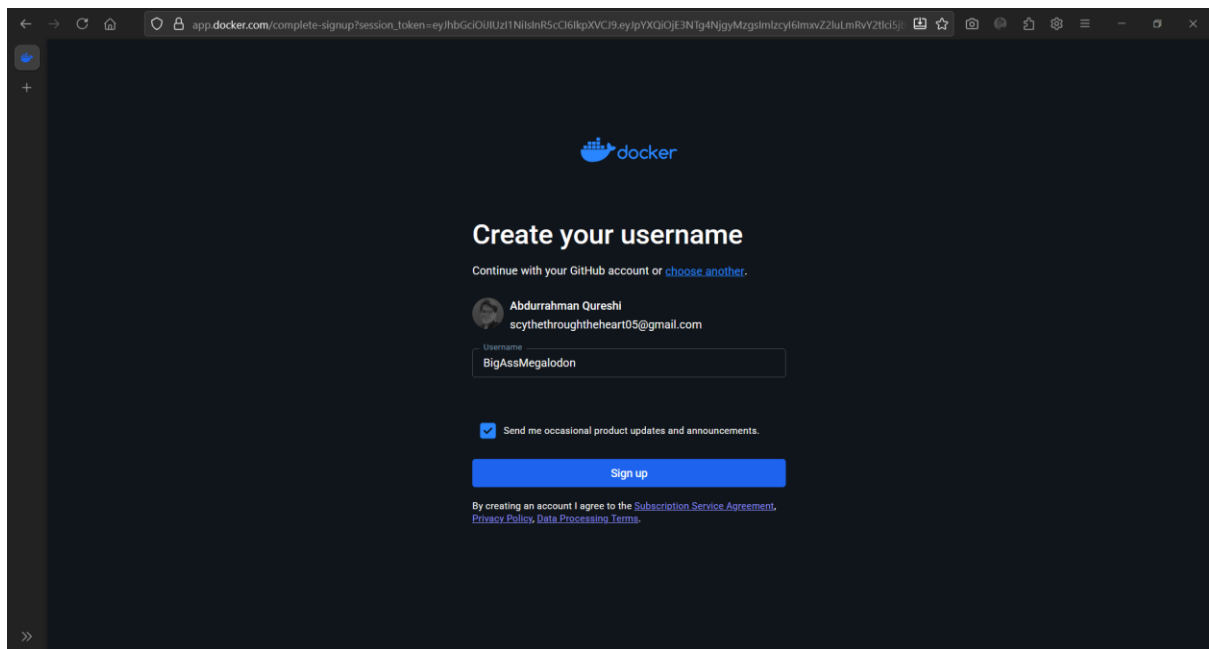
## Docker Desktop Installation Successful



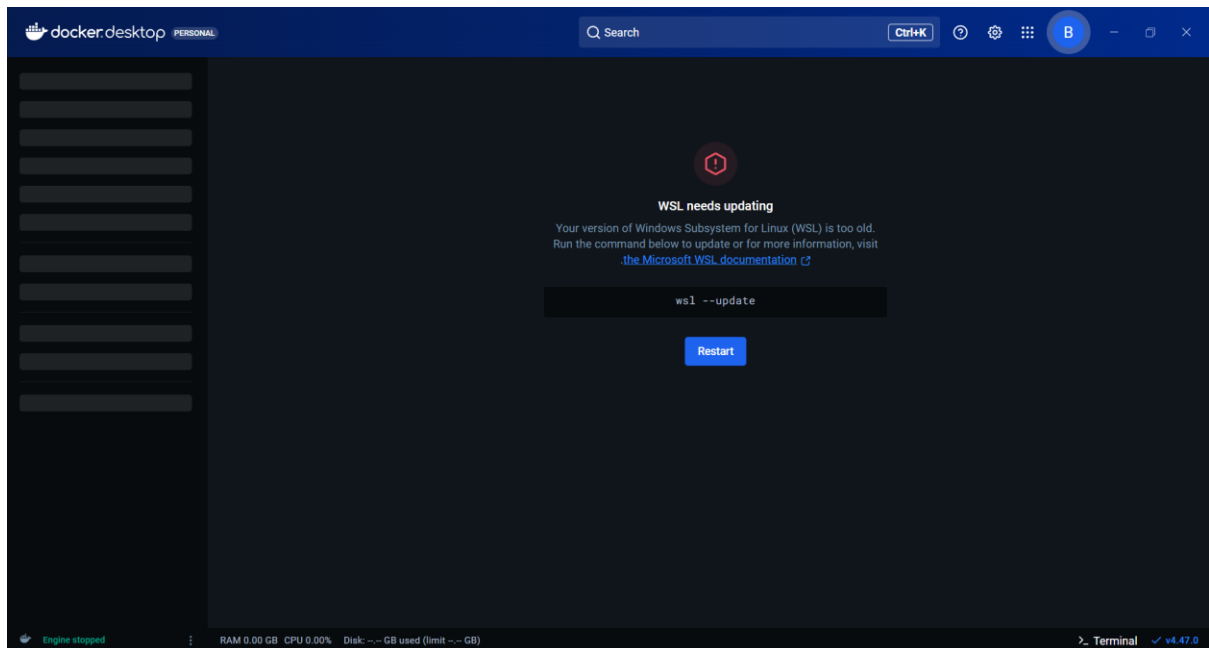
## Accepting Docker Terms of Service



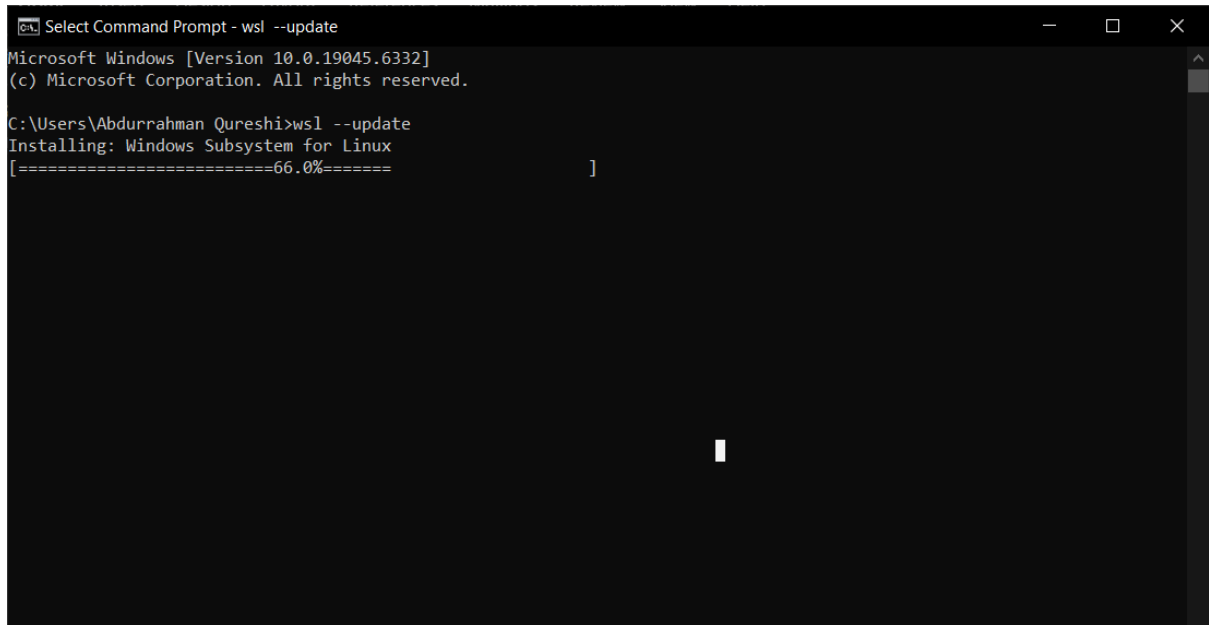
## Logging via Github



Creating new username



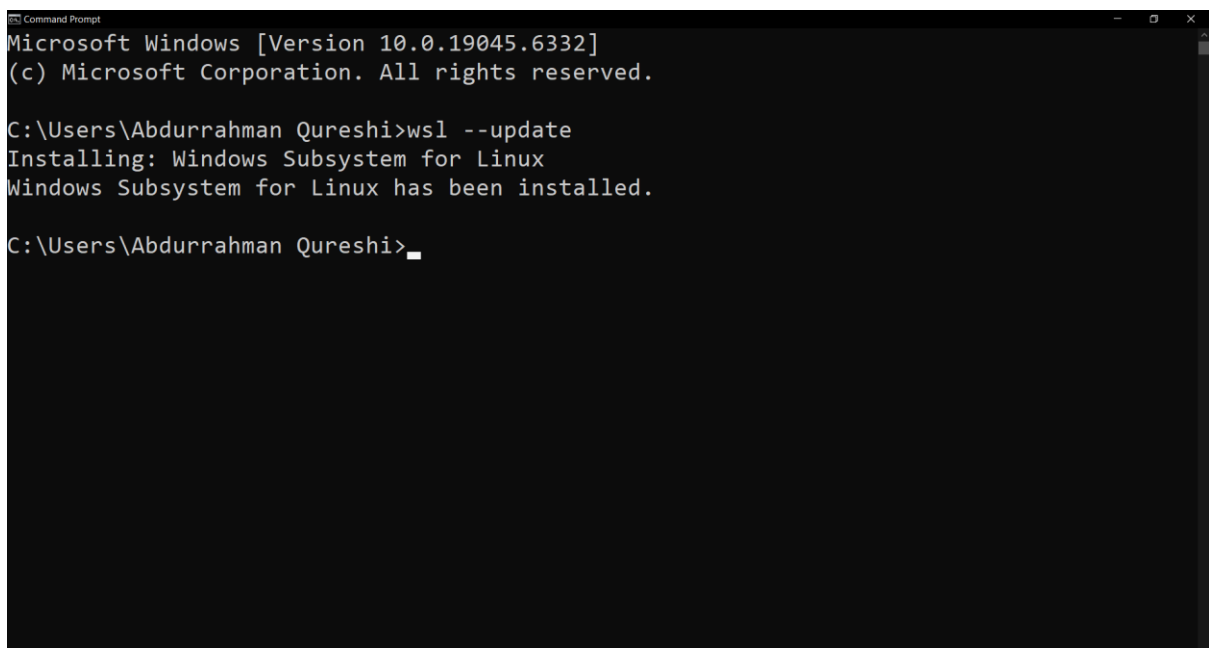
WSL update needed



```
Microsoft Windows [Version 10.0.19045.6332]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Abdurrahman Qureshi>wsl --update
Installing: Windows Subsystem for Linux
[=====66.0%=====]
```

WSL updating

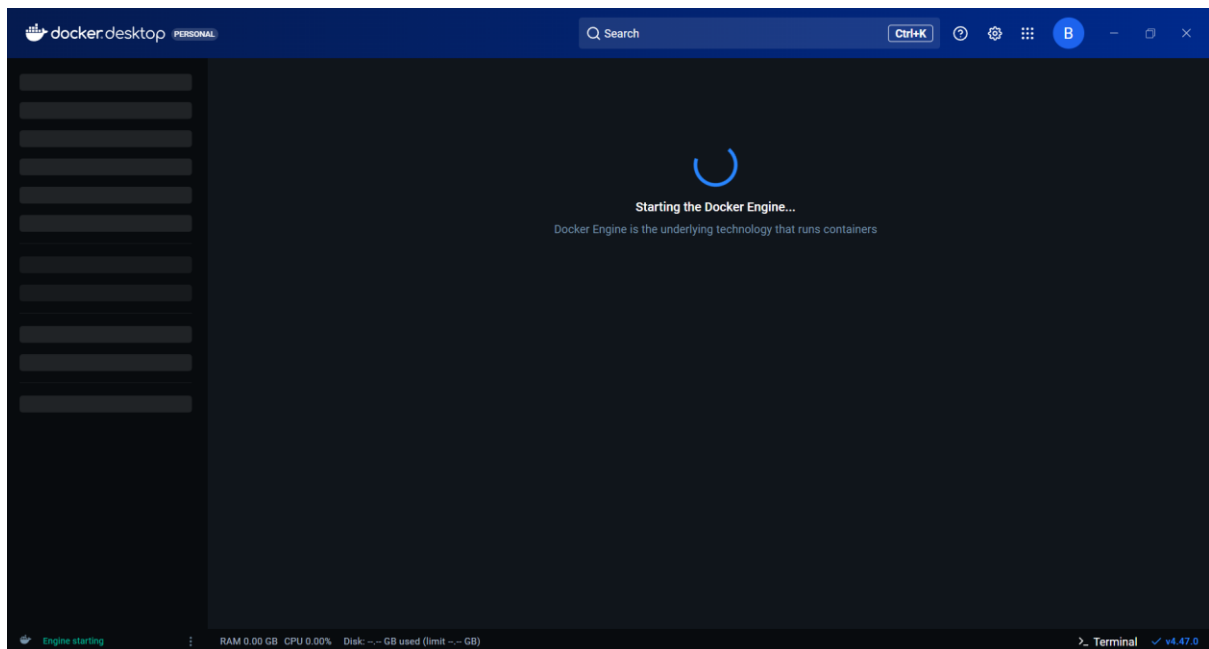


```
Microsoft Windows [Version 10.0.19045.6332]
(c) Microsoft Corporation. All rights reserved.

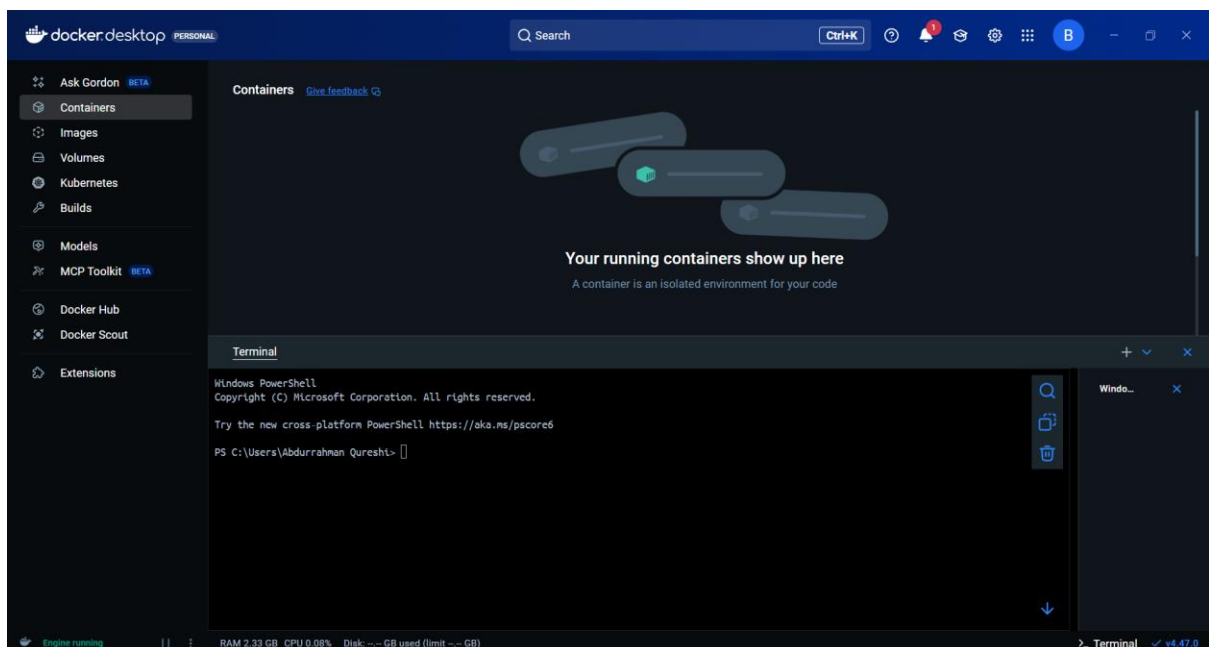
C:\Users\Abdurrahman Qureshi>wsl --update
Installing: Windows Subsystem for Linux
Windows Subsystem for Linux has been installed.

C:\Users\Abdurrahman Qureshi>
```

WSL updated successfully



## Restarting Docker Desktop



## Home Page

## 1) Pull an image from Docker Hub:

```
docker pull [image_name]:[tag]
```

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 ~  
$ docker pull node  
Using default tag: latest  
latest: Pulling from library/node  
7d5073558d5a: Downloading [=====>] 22.02MB/64.4MB  
ccbbb2080a06: Download complete  
8fb375ec14f3: Downloading [=====>] 5.243MB/48.48MB  
02638075ca33: Download complete  
98fcfa3f438b: Downloading [=====>] 16.78MB/60.54MB  
92aec2d688ae: Download complete  
15512841bb76: Download complete  
c611f5bb386b: Downloading [==>] 10.49MB/211.4MB  
█
```

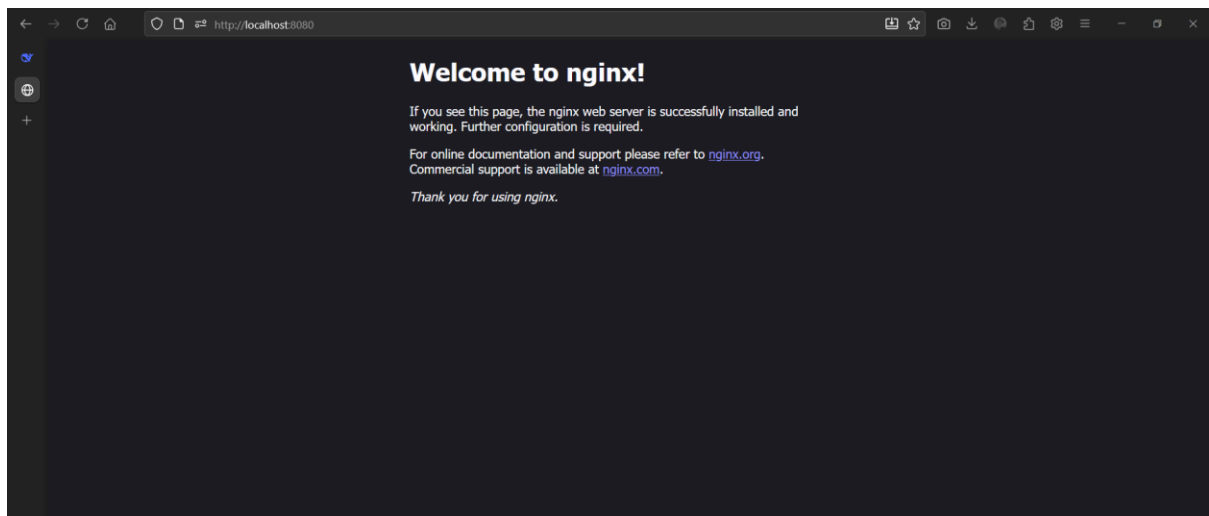
```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 ~  
$ docker pull ubuntu:latest  
latest: Pulling from library/ubuntu  
953cdd413371: Pull complete  
Digest: sha256:353675e2a41babd526e2b837d7ec780c2a05bca0164f7ea5dbbd433d21d166fc  
Status: Downloaded newer image for ubuntu:latest  
docker.io/library/ubuntu:latest
```

## 2) Run a container:

```
docker run [options] [image_name]
```

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 ~  
$ docker run -d -p 8080:80 --name my-container nginx  
Unable to find image 'nginx:latest' locally  
latest: Pulling from library/nginx  
6c50e4e0c439: Pull complete  
d107e437f729: Pull complete  
cb497a329a81: Pull complete  
f1c4d397f477: Pull complete  
899c83fc198b: Pull complete  
a785b80f5a67: Pull complete  
f72106e86507: Pull complete  
Digest: sha256:d5f28ef21aabddd098f3dbc21fe5b7a7d7a184720bc07da0b6c9b9820e97f25e  
Status: Downloaded newer image for nginx:latest  
059f5ad7c6a8eab355a852bc5d7c298f4a4617df903d092fd61504847790966a
```

Output of nginx image:



3) List running containers:

```
docker ps || docker ps -a
```

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 ~
$ docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS                               NAMES
059f5ad7c6a8   nginx    "/docker-entrypoint..." 2 minutes ago  Up 2 minutes  0.0.0.0:8080->80/tcp, [::]:8080->80/tcp  my-container
```

4) Stop a running container:

```
docker stop [container_name_or_id]
```

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 ~
$ docker stop my-container
my-container

Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 ~
$ docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS                               NAMES
```

5) Start a container:

```
docker start [container_name_or_id]
```

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 ~
$ docker start my-container
my-container

Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 ~
$ docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS                               NAMES
059f5ad7c6a8   nginx    "/docker-entrypoint..." 5 minutes ago  Up 3 seconds  0.0.0.0:8080->80/tcp, [::]:8080->80/tcp  my-container
```



## 6) Remove a container:

```
docker rm [container_name_or_id]
```

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 ~
$ docker rm my-container
my-container

Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 ~
$ docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS        NAMES
```

## 7) List images:

```
docker images || docker images -a
```

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 ~
$ docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
node          latest   82a1d74c5988   2 weeks ago   1.63GB
ubuntu       latest   353675e2a41b   2 weeks ago   117MB
nginx        latest   d5f28ef21aab   6 weeks ago   279MB
```

## 8) View container logs:

```
docker logs [container_name_or_id]
```

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 ~
$ docker logs my-container
/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
2025/09/26 07:11:44 [notice] 1#1: OS: Linux 6.6.87.2-microsoft-standard-WSL2
2025/09/26 07:11:44 [notice] 1#1: getrlimit(RLIMIT_NOFILE): 1048576:1048576
2025/09/26 07:11:44 [notice] 1#1: start worker processes
2025/09/26 07:11:44 [notice] 1#1: start worker process 29
2025/09/26 07:11:44 [notice] 1#1: start worker process 30
2025/09/26 07:11:44 [notice] 1#1: start worker process 31
2025/09/26 07:11:44 [notice] 1#1: start worker process 32
2025/09/26 07:11:44 [notice] 1#1: start worker process 33
2025/09/26 07:11:44 [notice] 1#1: start worker process 34
2025/09/26 07:11:44 [notice] 1#1: start worker process 35
```

9) Execute command in running container:

```
docker exec [options] [container_name] [command]
```

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 ~  
$ docker exec -it my-container bash  
root@0c41dbf81a33:/# echo nigga  
nigga  
root@0c41dbf81a33:/#
```

10) Show information:

```
docker info
```

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 ~  
$ docker info  
Client:  
Version: 28.4.0  
Context: desktop-linux  
Debug Mode: false  
Plugins:  
ai: Docker AI Agent - Ask Gordon (Docker Inc.)  
Version: v1.9.11  
Path: C:\Program Files\Docker\cli-plugins\docker-ai.exe  
buildx: Docker Buildx (Docker Inc.)  
Version: v0.20.2, built 12/01/2023
```

11) Show Version:

```
docker version
```

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 ~  
$ docker version  
Client:  
Version: 28.4.0  
API version: 1.51  
Go version: go1.24.7  
Git commit: d8eb465  
Built: Wed Sep 3 20:59:40 2025  
OS/Arch: windows/amd64  
Context: desktop-linux  
  
Server: Docker Desktop 4.47.0 (206054)  
Engine:  
Version: 28.4.0  
API version: 1.51 (minimum version 1.24)  
Go version: go1.24.7  
Git commit: 249d679  
Built: Wed Sep 3 20:57:37 2025  
OS/Arch: linux/amd64  
Experimental: false  
containerd:
```