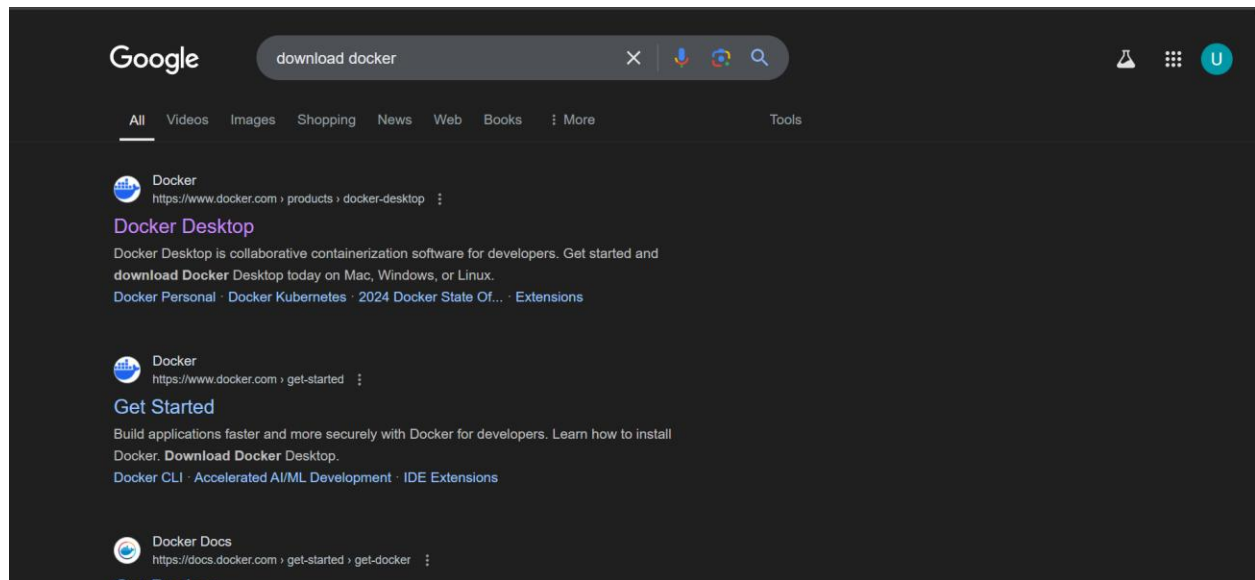


DOCKER INSTALLATION

Download the docker from the link as shown



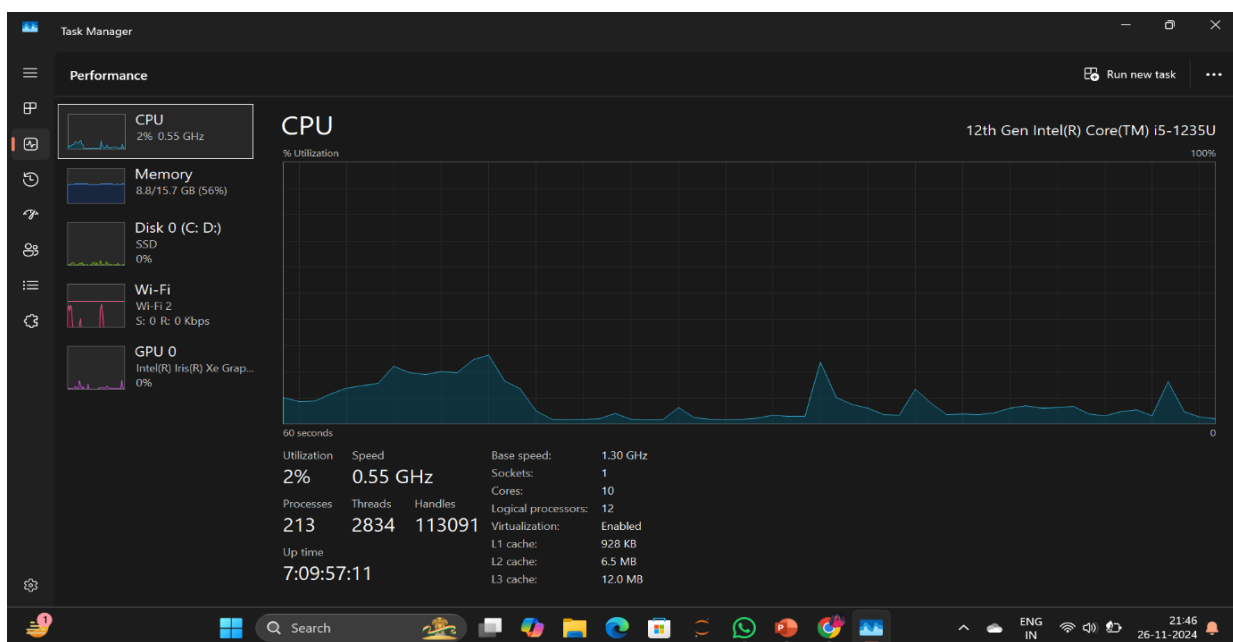
Click on the following link to download the executable file



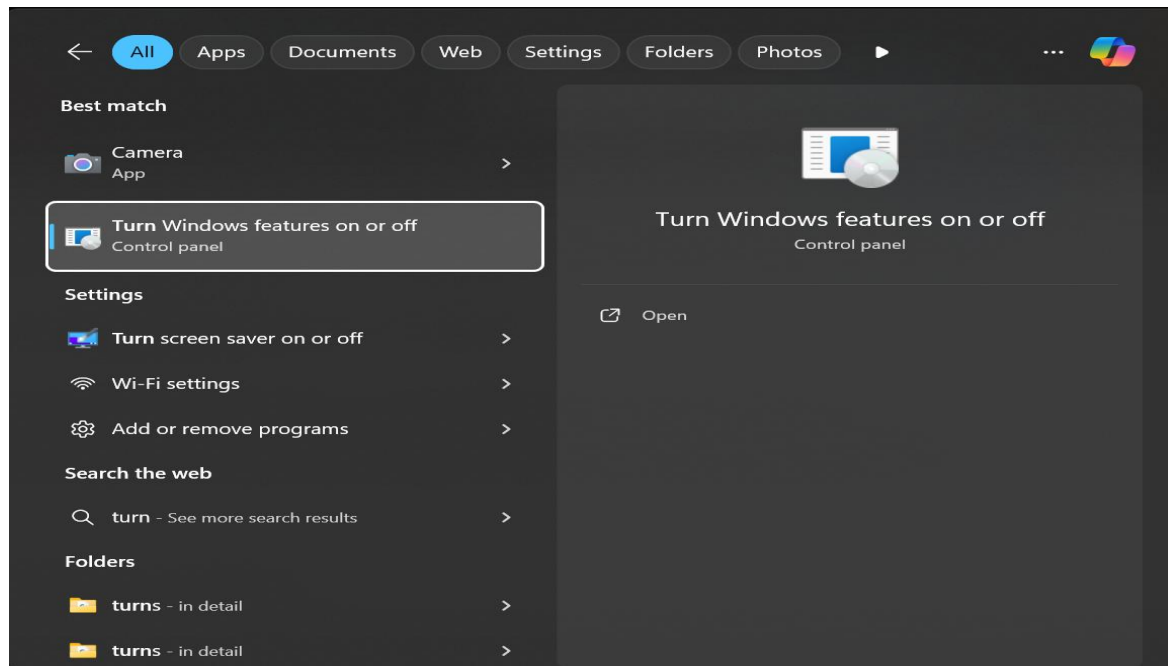
Type winver in Run to check the prerequisites - OS version-Windows 10 pro preferably



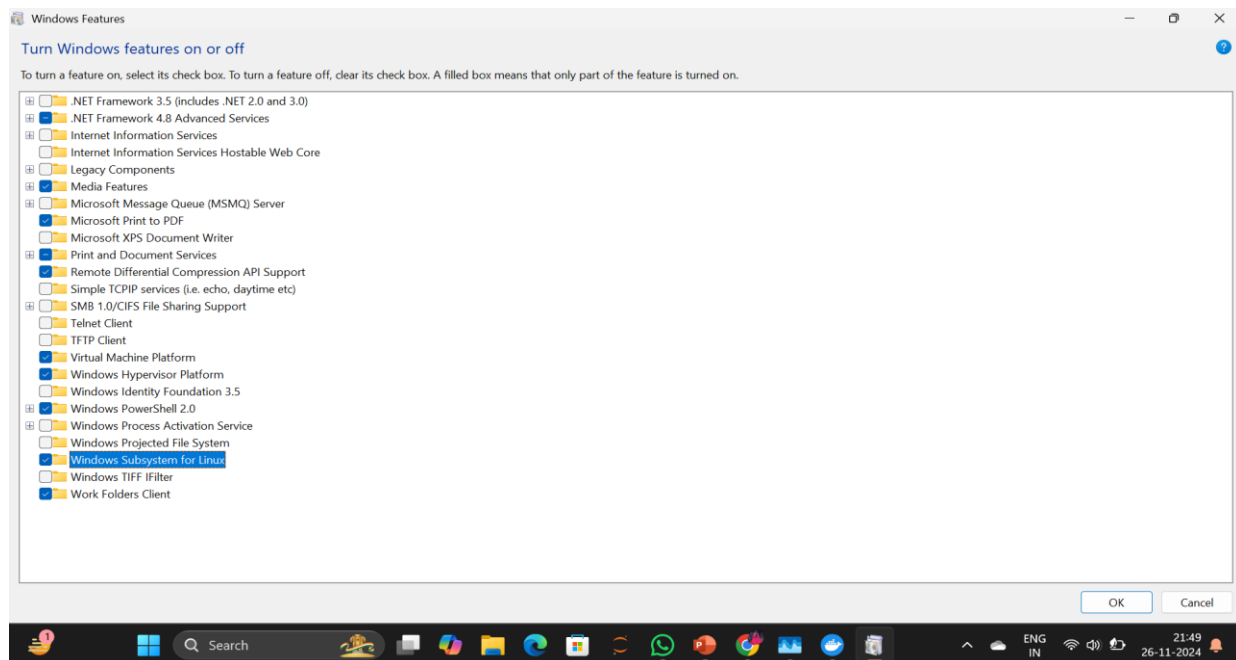
Make sure virtualization is turned on



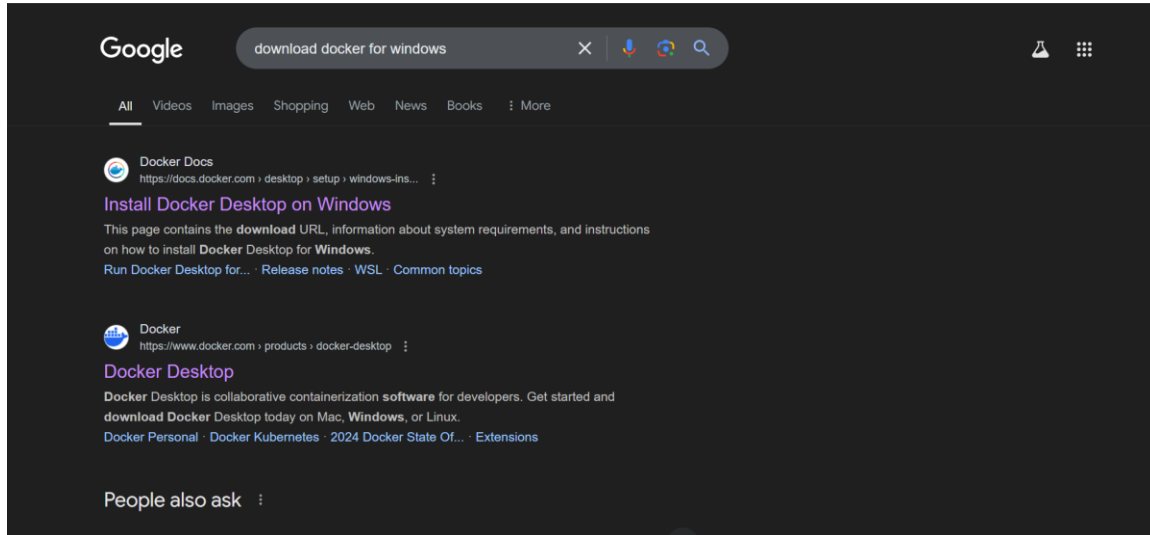
Click on turn windows features on or off in start



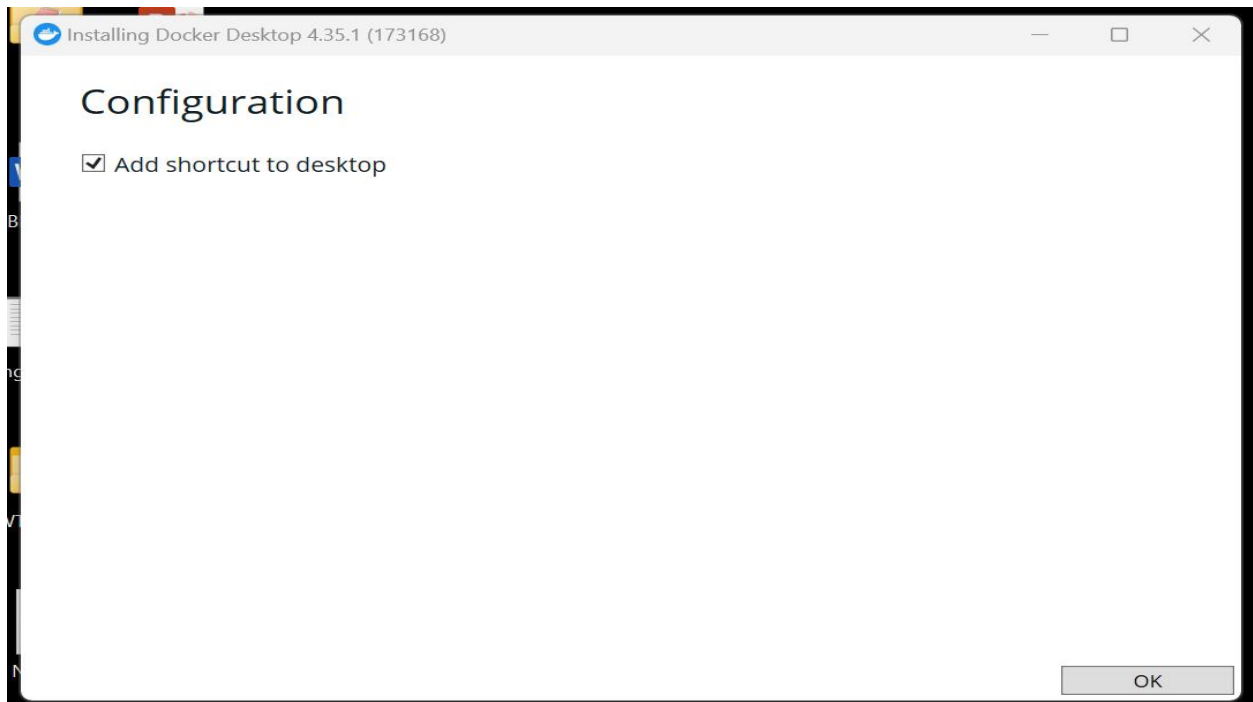
Make sure to check the Hyper-V, Virtual Machine Platform, Windows Hypervisor Platform and Windows subsystem for Linux checkboxes and click ok



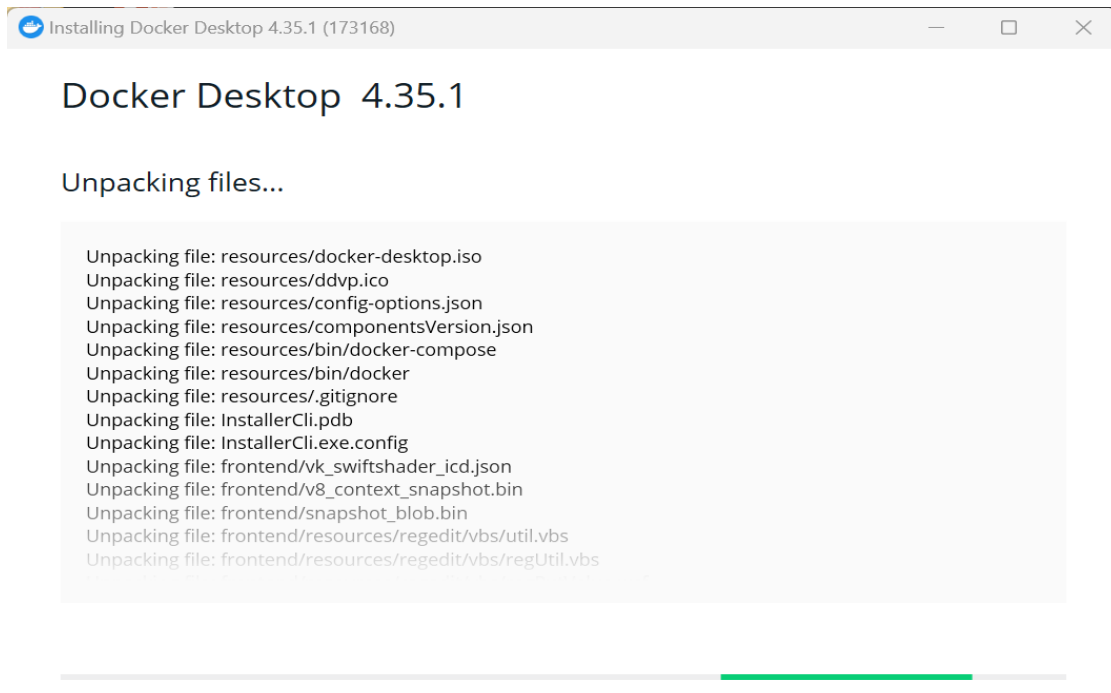
Download Docker for Windows



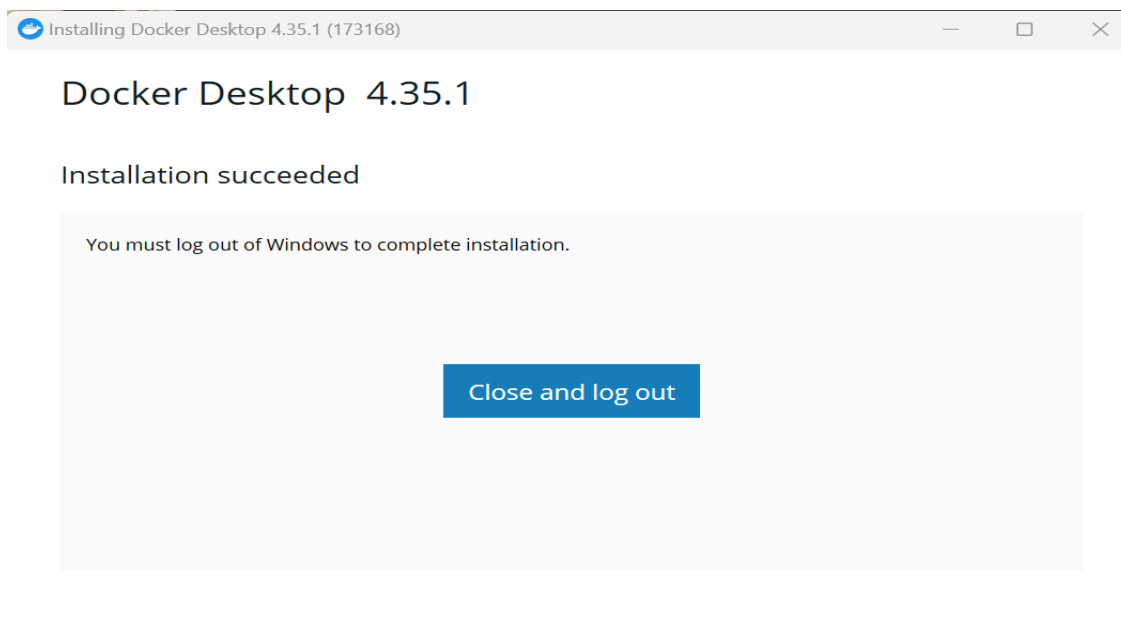
Double click the executable file and click ok as shown, make sure the following check boxes are selected



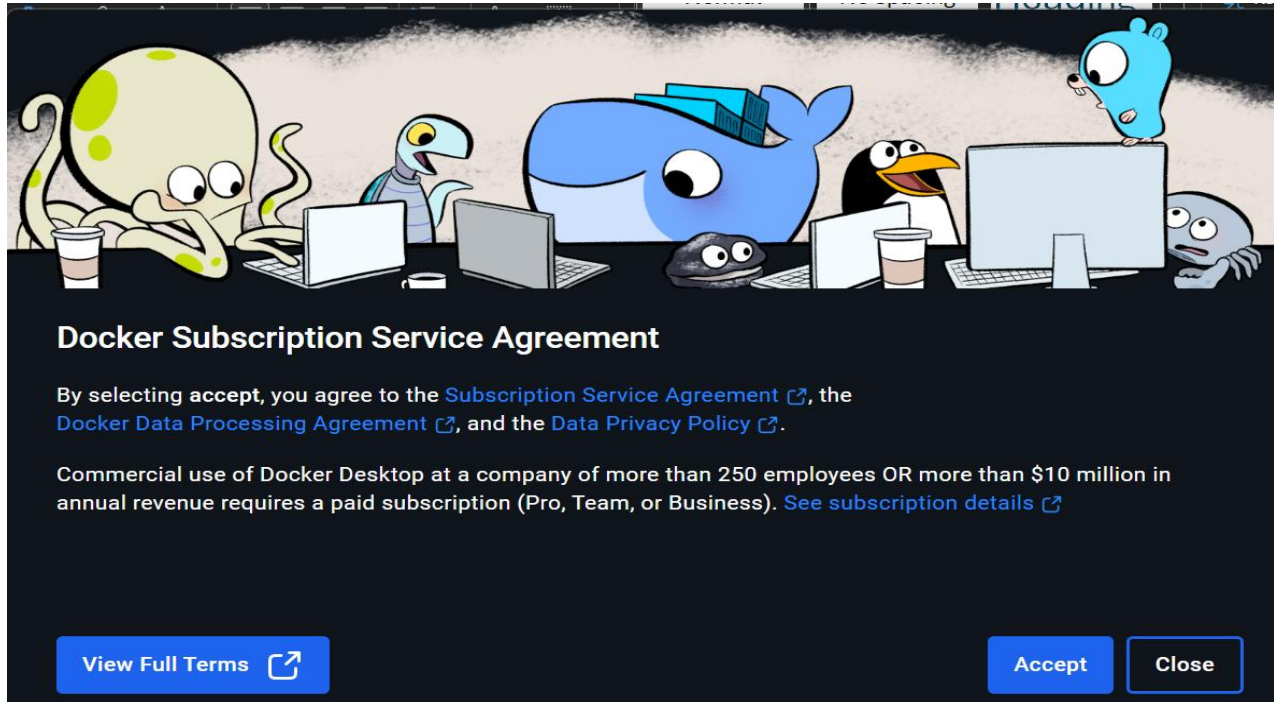
The download has started



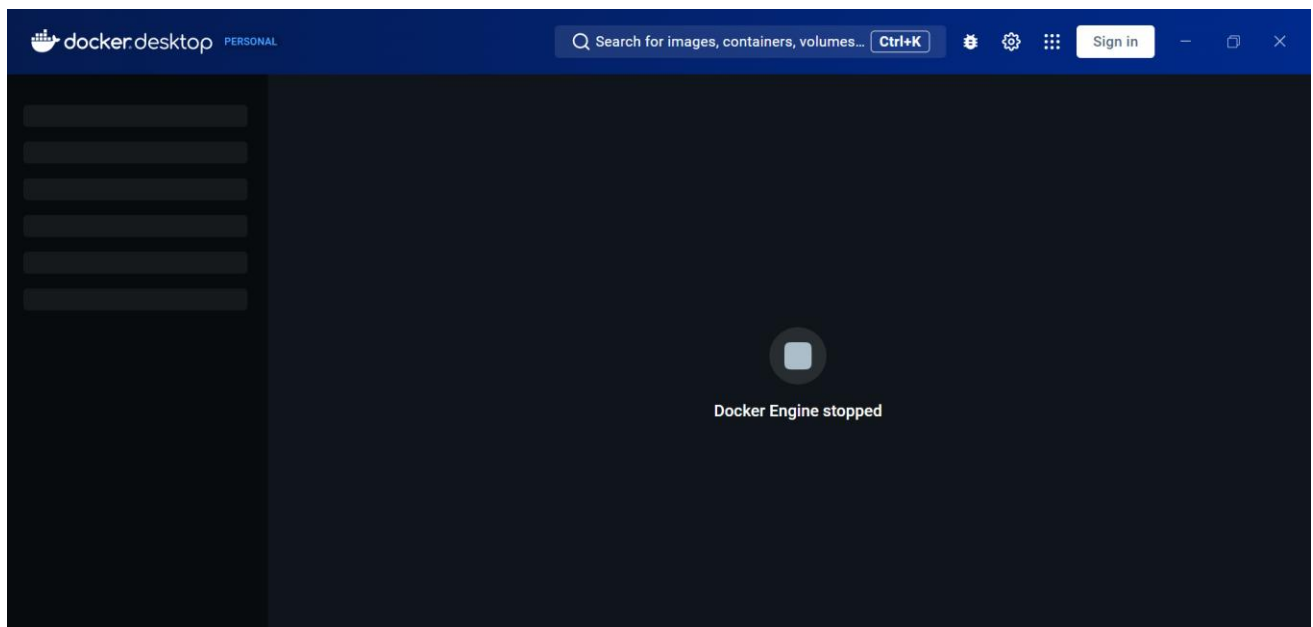
Click on close and log out



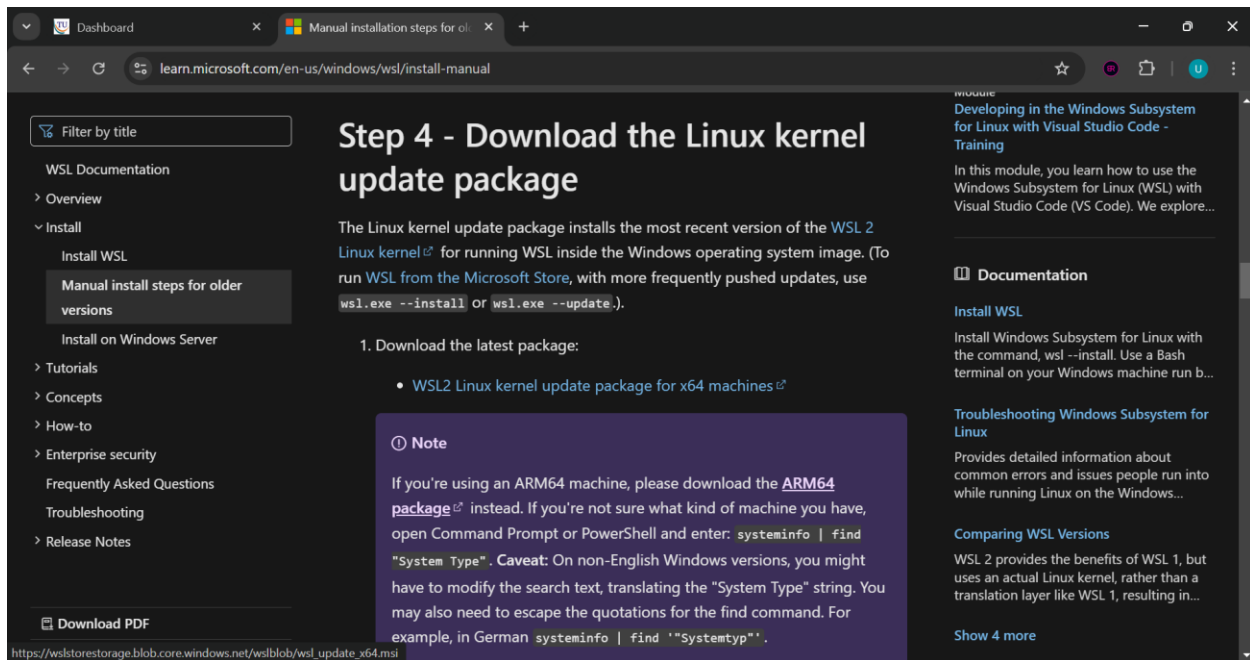
Accept the license -> click Accept



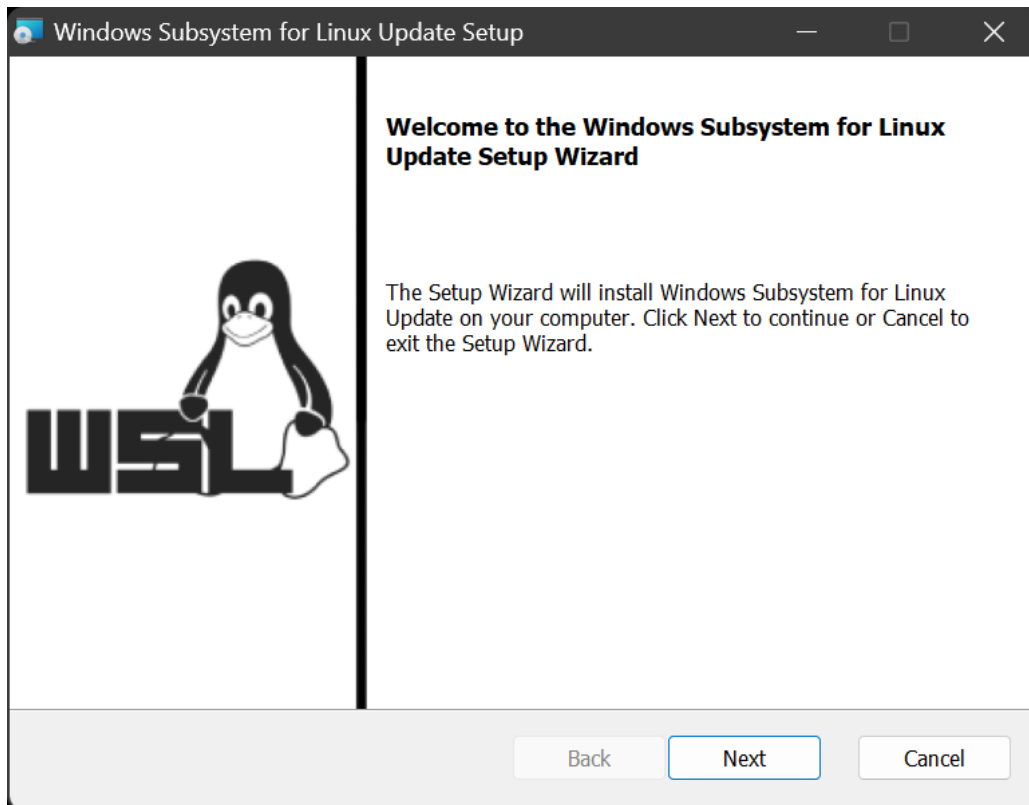
The local Docker Hub is created



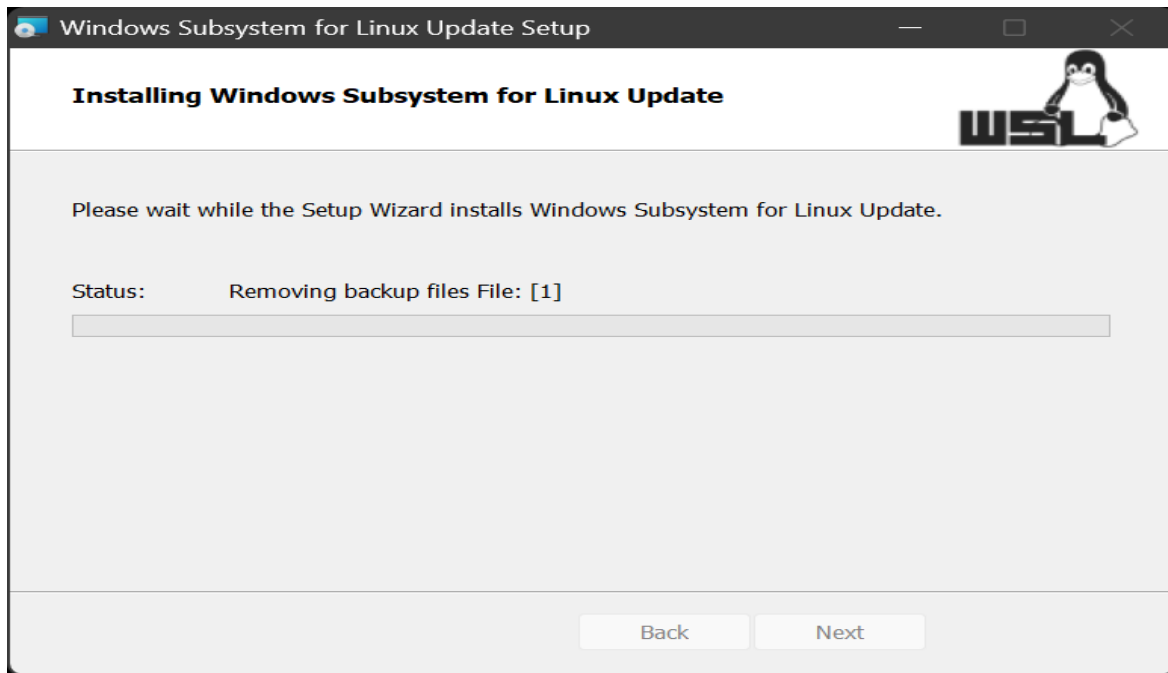
Download WSL2 as shown



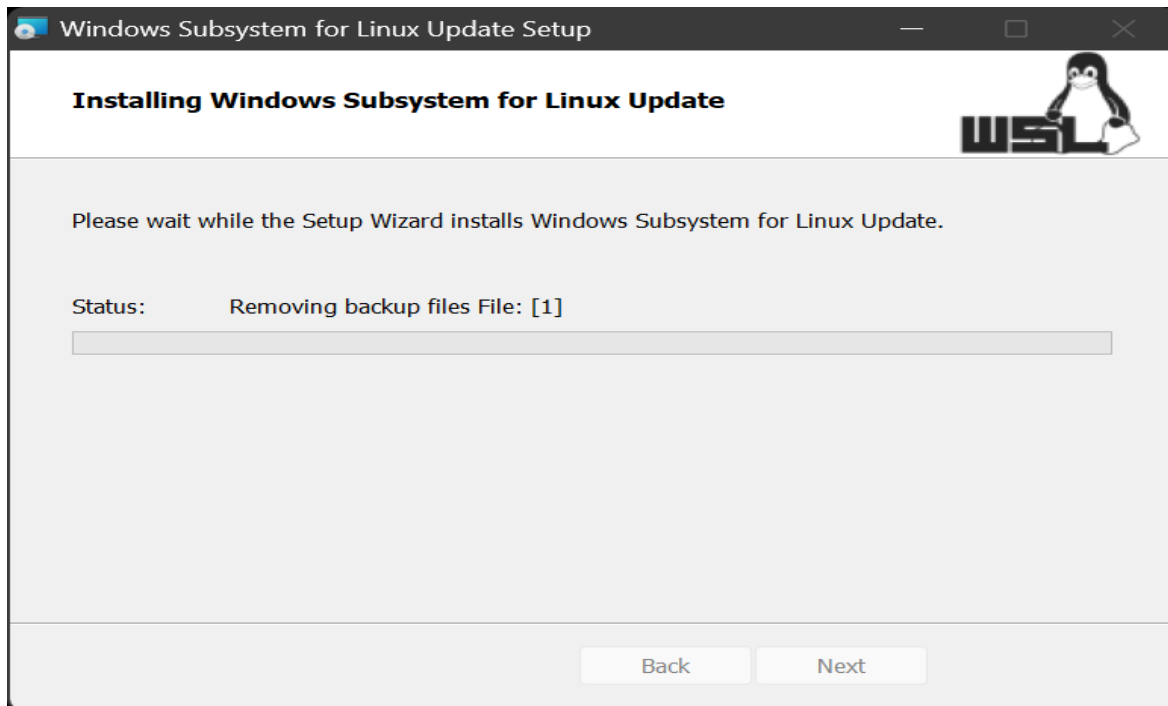
Double click the executable file and click next as shown



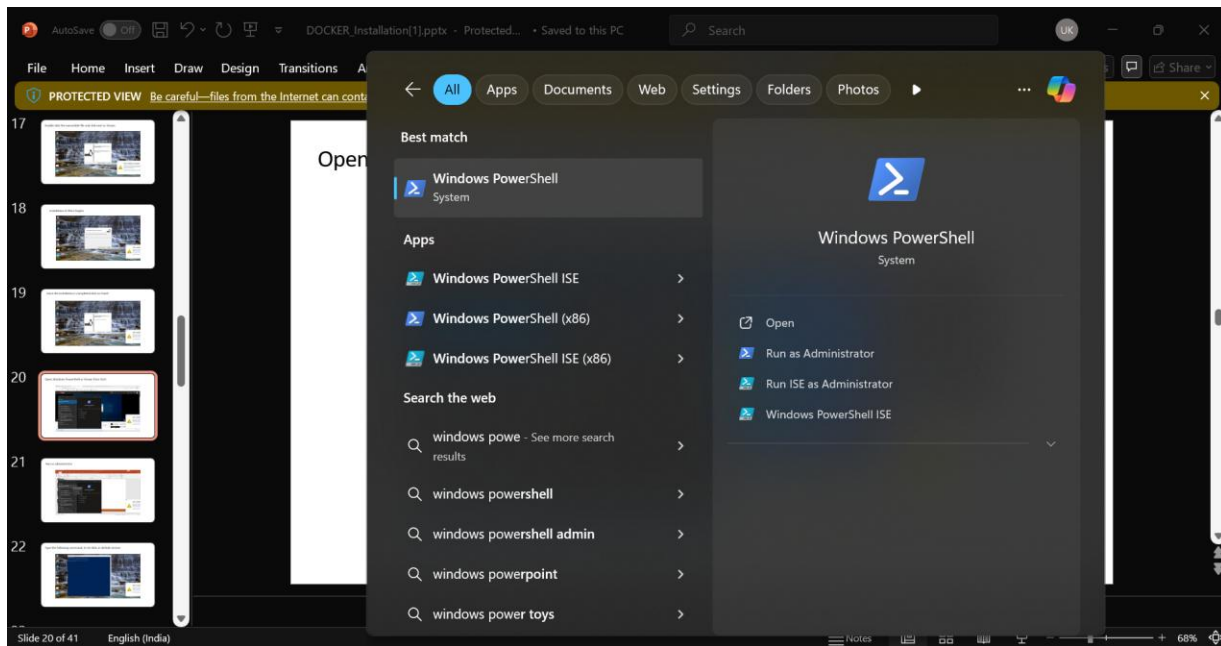
Installation of WSL2 begins



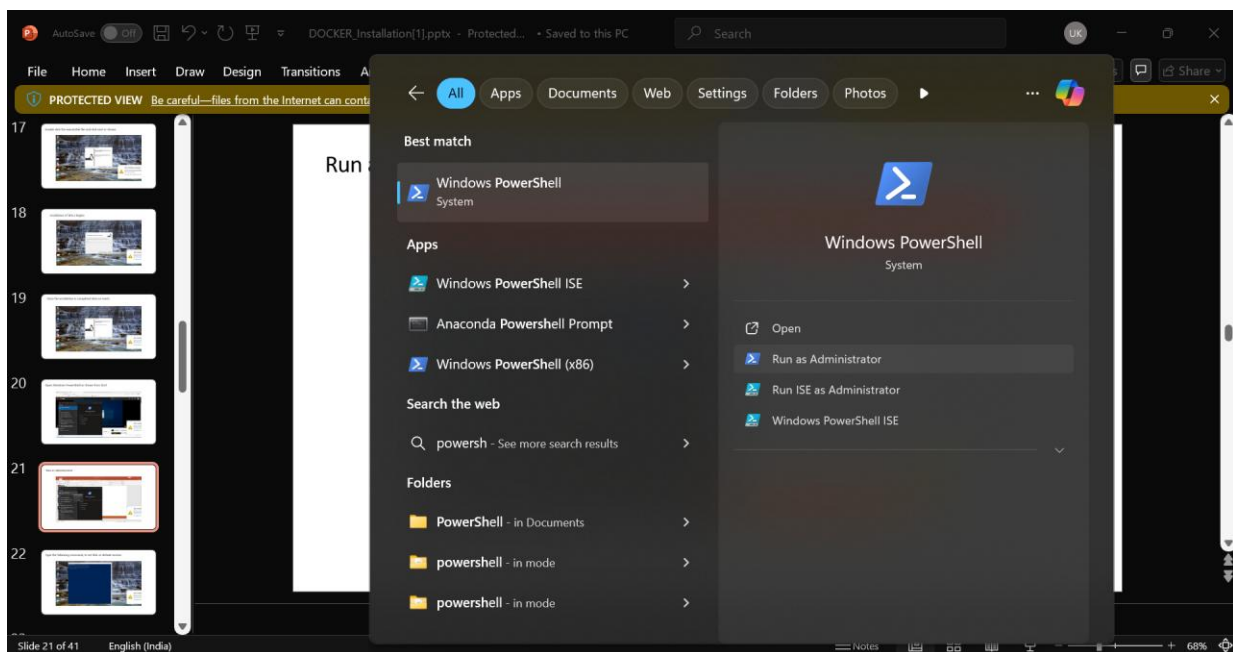
Once the installation is completed click on Finish



Open Windows PowerShell as shown from Start



Run as administrator



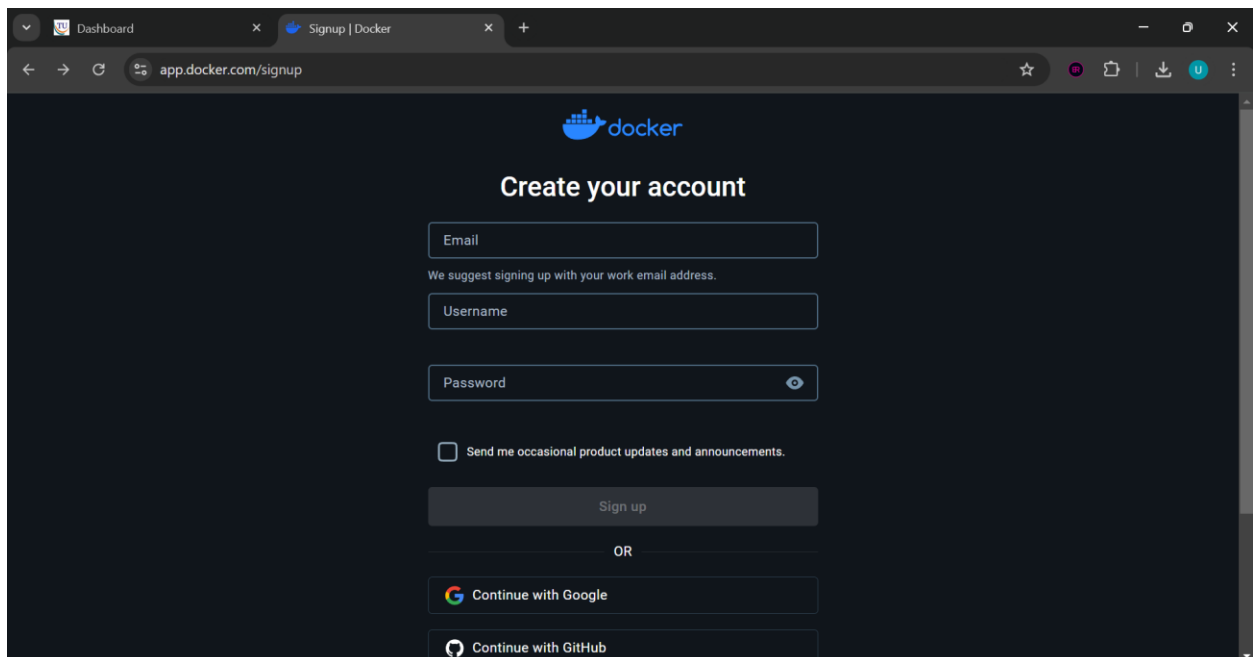
Type the following command, to set WSL as default version

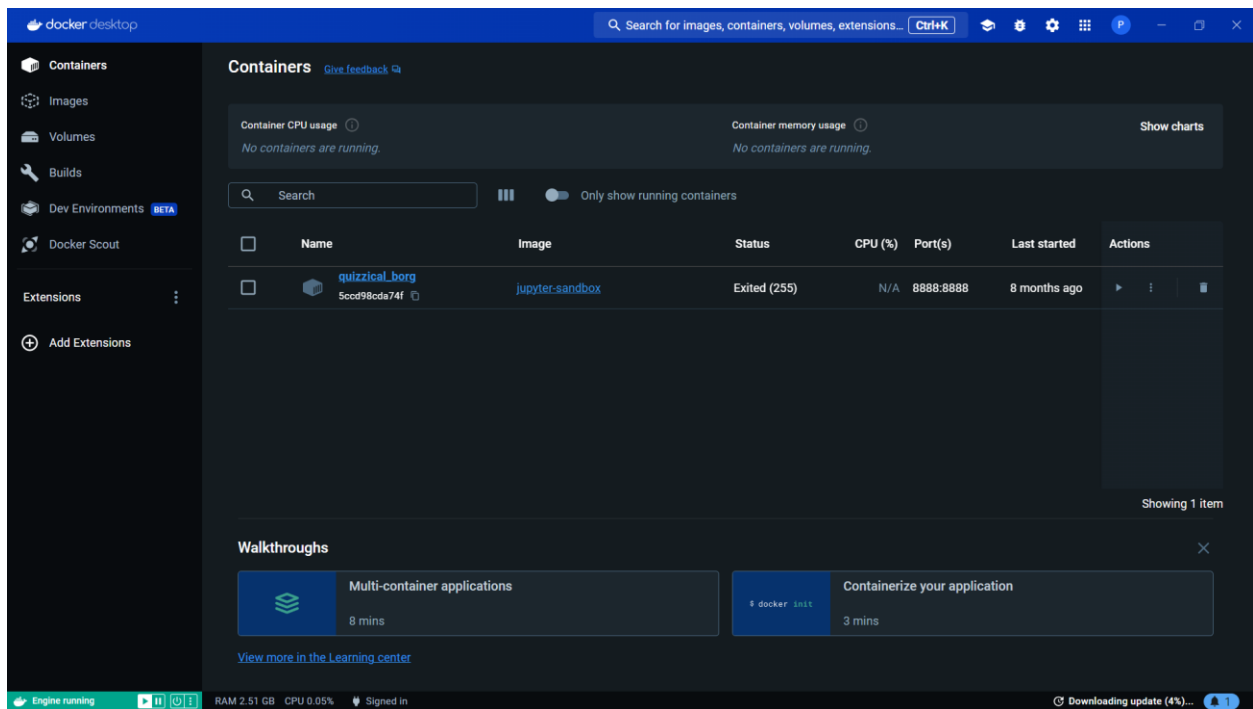
```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

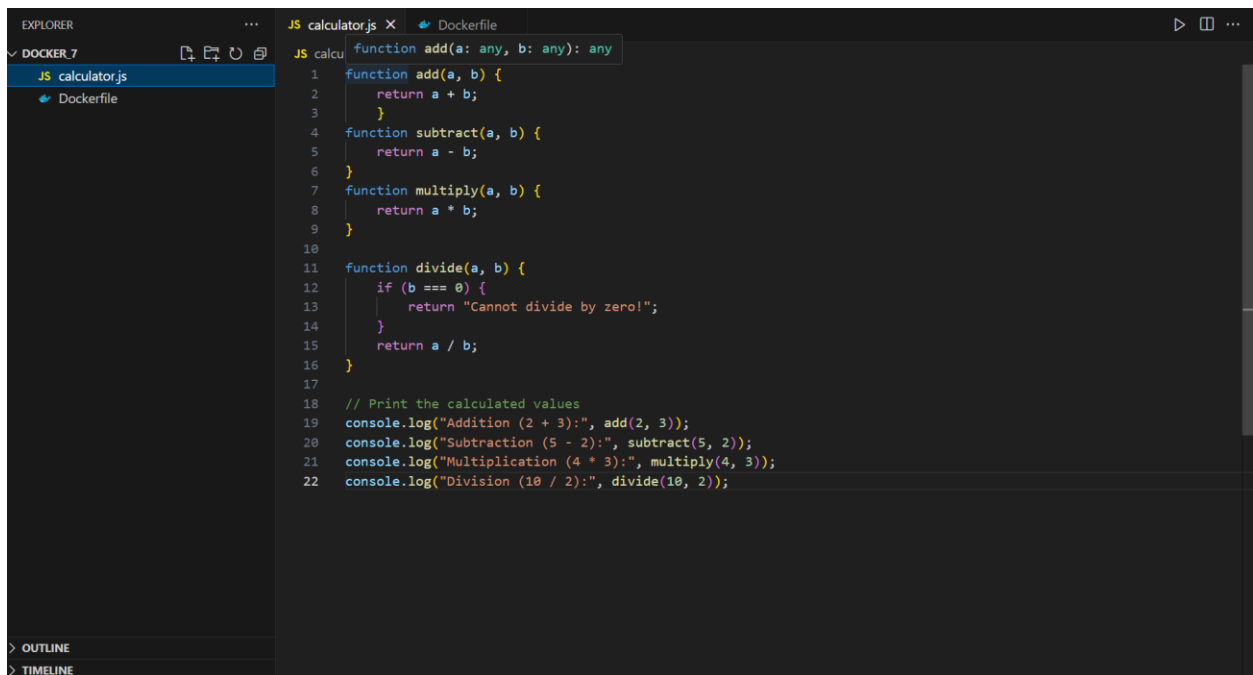
PS C:\WINDOWS\system32> wsl --set-default-version 2
For information on key differences with WSL 2 please visit https://aka.ms/wsl2
The operation completed successfully.
PS C:\WINDOWS\system32>
```

Click on hub.docker.com and signup as shown

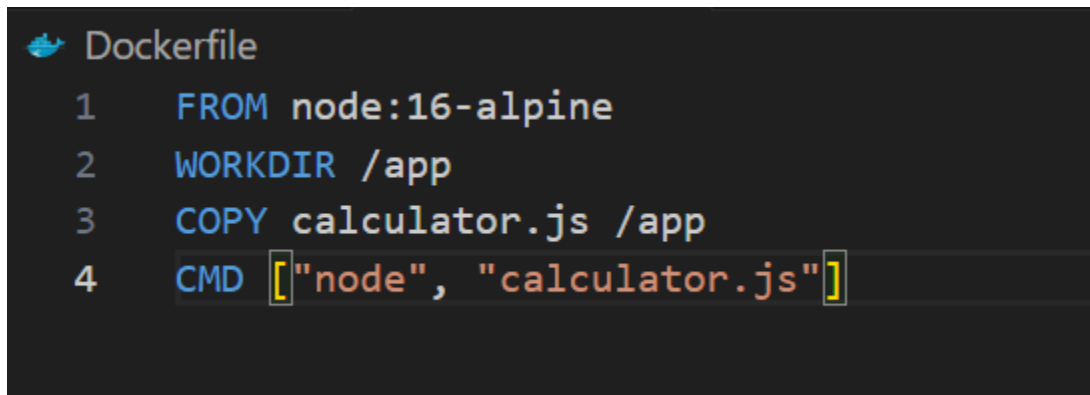




Step 1: Create the JavaScript File



Step 2: Create a Dockerfile



Step 3: Build the Docker Image

```
PS C:\Users\narra\Downloads\DOCKER-7> docker build -t simple-calculator .
[+] Building 16.2s (8/8) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 129B
=> [internal] load metadata for docker.io/library/node:16-alpine
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [internal] load build context
=> => transferring context: 35B
=> [1/3] FROM docker.io/library/node:16-alpine@sha256:a1f9d027912b58a7c75be7716c97cfbc6d3099f3a97ed84aa490be9de 14.6s
=> => resolve docker.io/library/node:16-alpine@sha256:a1f9d027912b58a7c75be7716c97cfbc6d3099f3a97ed84aa490be9de 0.0s
=> => sha256:a1f9d027912b58a7c75be7716c97cfbc6d3099f3a97ed84aa490be9de20e787 1.43kB / 1.43kB 0.0s
=> => sha256:72e89a86b58c922ed7b1475e56f151537676470695dd106521738b060e139d 1.16kB / 1.16kB 0.0s
=> => sha256:25731171e0124bb95d14d128728a52a97bb917ef45d7c4fa8cfe76bc44aa78b73 6.73kB / 6.73kB 0.0s
=> => sha256:7264ad8b6415046d36d16ba98b79778e18accee6ffa17850405994cffa9be7de 3.40MB / 3.40MB 3.6s
=> => sha256:eee371b9ce3ffdbb8aa703b9a14d318801ddc3468f096bb6cfeabbeb715147f9 36.63MB / 36.63MB 13.4s
=> => sha256:93b3025fe10392717d06ec0d012a9ffa2039d766a322aac899c6831dd93382c2 2.34MB / 2.34MB 1.6s
=> => sha256:d9059661ce70092af66d277366584fc8addcb78a2be63f720022f4875577ea9 452B / 452B 2.7s
=> => extracting sha256:7264ad8b6415046d36d16ba98b79778e18accee6ffa17850405994cffa9be7de 0.1s
=> => extracting sha256:eee371b9ce3ffdbb8aa703b9a14d318801ddc3468f096bb6cfeabbeb715147f9 1.0s
=> => extracting sha256:93b3025fe10392717d06ec0d012a9ffa2039d766a322aac899c6831dd93382c2 0.0s
=> => extracting sha256:d9059661ce70092af66d277366584fc8addcb78a2be63f720022f4875577ea9 0.0s
=> [2/3] WORKDIR /app
=> [3/3] COPY calculator.js /app
=> exporting to image
=> => exporting layers
=> => writing image sha256:67cbcd8e42f82ae4dc948524e0a004c9eaf173ac5da2ca6318c9983283a6f8
=> => naming to docker.io/library/simple-calculator 0.0s

View build details: docker-desktop://dashboard/build/default/default/15tluo2dcx9ovatmx1514ay4

What's Next?
View a summary of image vulnerabilities and recommendations → docker scout quickview
PS C:\Users\narra\Downloads\DOCKER-7>
```

Step 4: Run the Docker Container

```
PS C:\Users\narra\Downloads\DOCKER_7> docker run simple-calculator
Addition (2 + 3): 5
Subtraction (5 - 2): 3
Multiplication (4 * 3): 12
Division (10 / 2): 5
PS C:\Users\narra\Downloads\DOCKER_7>
```

Step 6: Push the Image to Docker Hub

Docker login :

```
DIVISION (10 / 2): 5
PS C:\Users\narra\Downloads\DOCKER_7> docker login
Authenticating with existing credentials...
Login Succeeded
PS C:\Users\narra\Downloads\DOCKER_7>
```

Tag the Image for Docker Hub:

Push the Image to Docker Hub:

```
PS C:\Users\narra\Downloads\DOCKER_7> docker tag simple-calculator puneeth5354/simple-calculator
PS C:\Users\narra\Downloads\DOCKER_7> docker push puneeth5354/simple-calculator
Using default tag: latest
The push refers to repository [docker.io/puneeth5354/simple-calculator]
fb9802e01875: Pushed
63c7c7189269: Pushed
365ccd918307: Mounted from library/node
1bba629c69e9: Mounted from library/node
139c1270acf1: Mounted from library/node
4693057ce236: Mounted from library/node
latest: digest: sha256:0aac43344cc65500032488e5780f5864ecc0a91033aaba0d7207413444bab820 size: 1571
PS C:\Users\narra\Downloads\DOCKER_7>
```

remove the existing image and container:

```
PS C:\Users\narra\Downloads\DOCKER_7> docker ps -a
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS              PORTS          NAMES
43d7a4e1db1a   simple-calculator "docker-entrypoint.s..." 3 minutes ago   Exited (0) 3 minutes ago           hungry_sutherland
5ccd98cda74f   jupyter-sandbox "jupyter --start-no..." 8 months ago   Exited (255) 6 months ago         quizzical_borg
PS C:\Users\narra\Downloads\DOCKER_7> docker rm 43d7a4e1db1a
43d7a4e1db1a
PS C:\Users\narra\Downloads\DOCKER_7> docker rmi puneeth5354/simple-calculator
Untagged: puneeth5354/simple-calculator:latest
Untagged: puneeth5354/simple-calculator@sha256:0aac43344cc65500032488e5780f5864ecc0a91033aaba0d7207413444bab820
PS C:\Users\narra\Downloads\DOCKER_7>
```

Step 8: Run the Pulled Image

pull the image from Docker Hub:

Run the container from the pulled image:

```
Untagged: puneeth5354/simple-calculator@sha256:0aac43344cc65500032488e5780f5864ecc0a91033aaba0d7207413444bab820
PS C:\Users\narra\Downloads\DOCKER_7> docker pull puneeth5354/simple-calculator
Using default tag: latest
latest: Pulling from puneeth5354/simple-calculator
Digest: sha256:0aac43344cc65500032488e5780f5864ecc0a91033aaba0d7207413444bab820
Status: Downloaded newer image for puneeth5354/simple-calculator:latest
docker.io/puneeth5354/simple-calculator:latest

What's Next?
View a summary of image vulnerabilities and recommendations → docker scout quickview puneeth5354/simple-calculator
PS C:\Users\narra\Downloads\DOCKER_7> docker run puneeth5354/simple-calculator
Addition (2 + 3): 5
Subtraction (5 - 2): 3
Multiplication (4 * 3): 12
Division (10 / 2): 5
PS C:\Users\narra\Downloads\DOCKER_7>
```