

# **NPLAS System using Docker**

1. DOCKER INSTALLATION

2. WINDOWS SUBSYSTEM FOR LINUX (WSL) INSTALLATION

3. DOWNLOAD NPLAS SYSTEM FROM DOCKER

# **DOCKER INSTALLATION**

# 1. Download Docker

## ■ Window

<https://www.docker.com/products/docker-desktop>

System requirements

- Windows 10 64bit

Home, Pro (21H1>=), Enterprise, Education (20H2>=)

- Windows 11 64bit

Home, Pro (21H2>=), Enterprise, Education(21H2>=)

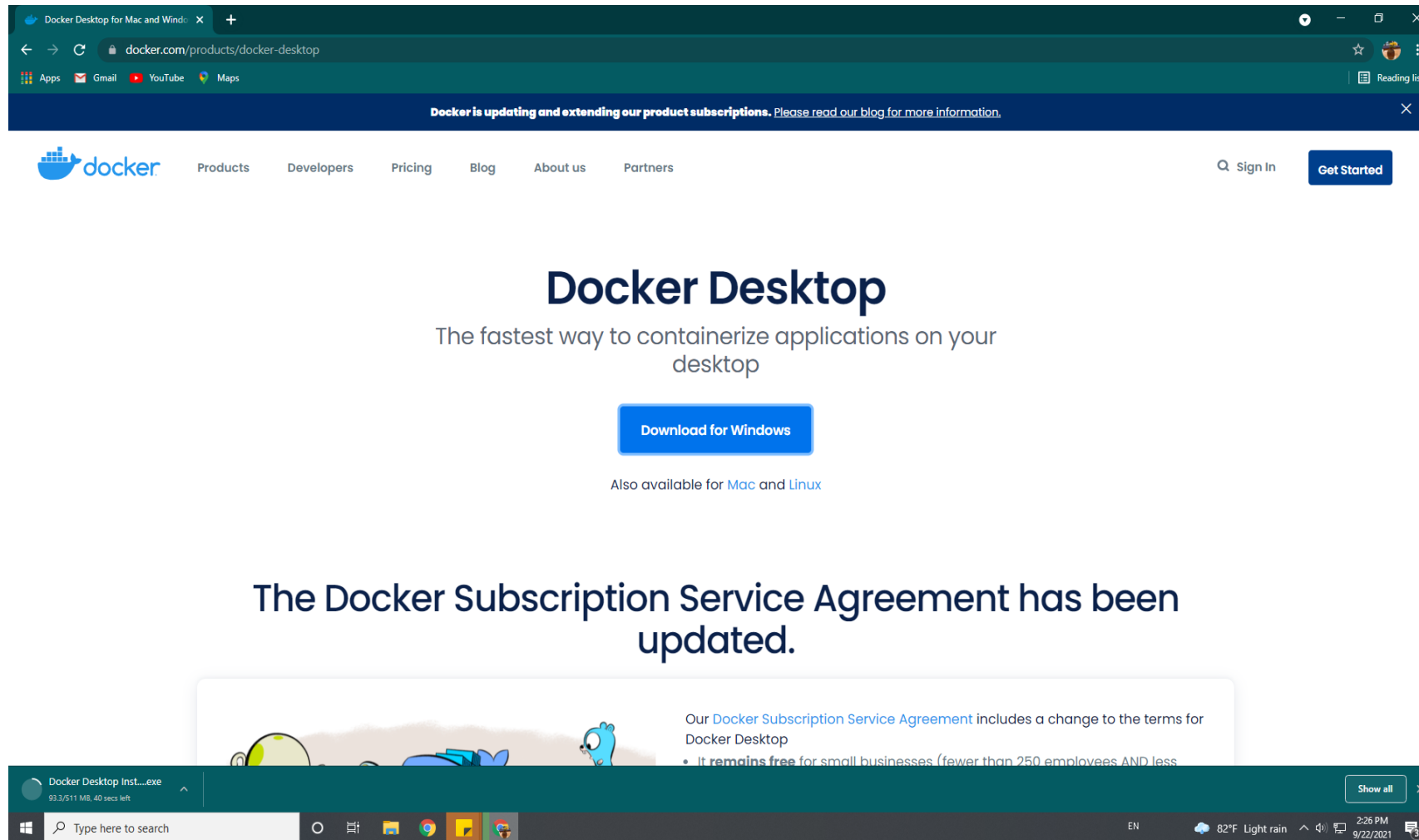
## ■ MAC

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

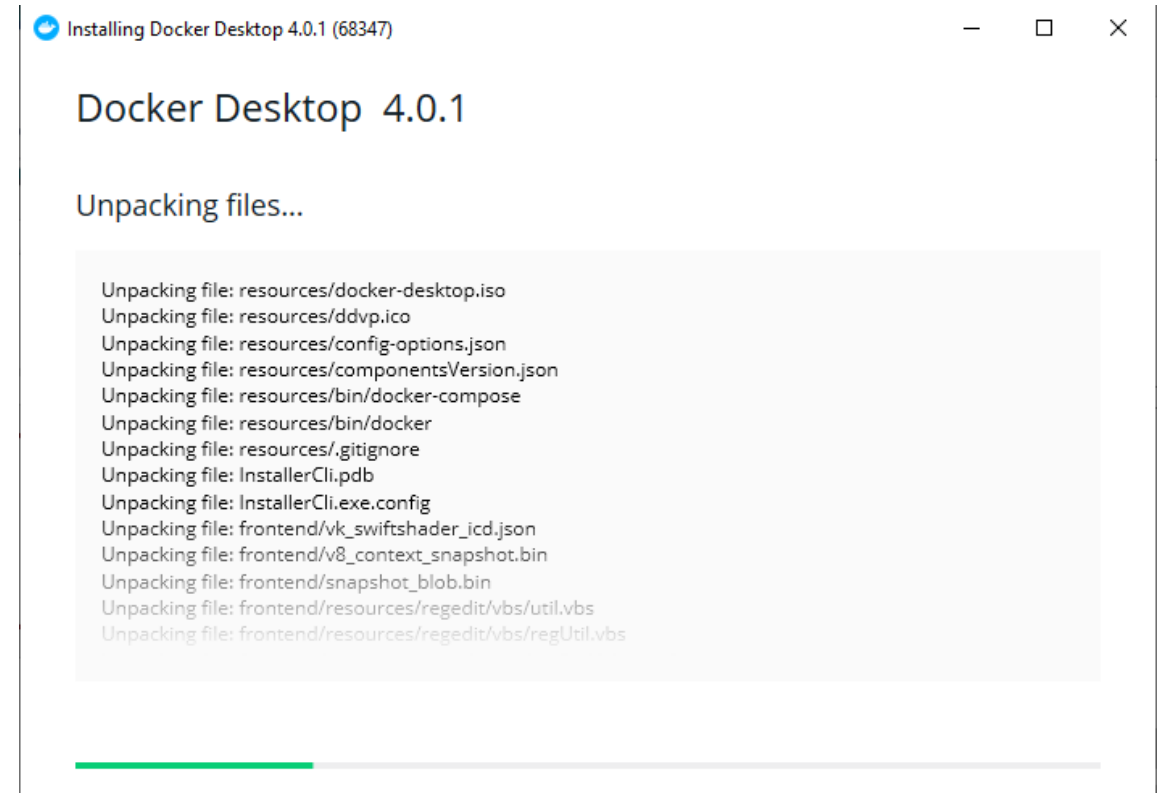
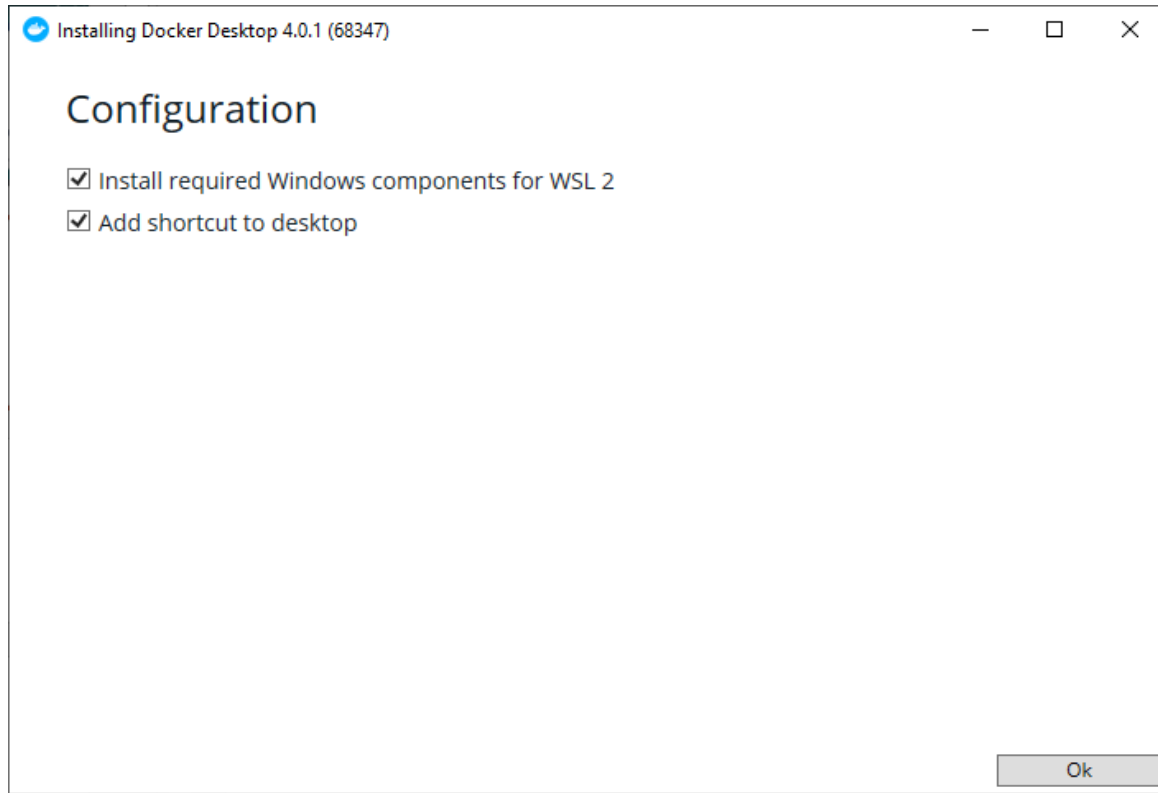
## ■ Linux

[https://hub.docker.com/search?offering=community&operating\\_system=linux&q=&type=edition](https://hub.docker.com/search?offering=community&operating_system=linux&q=&type=edition)

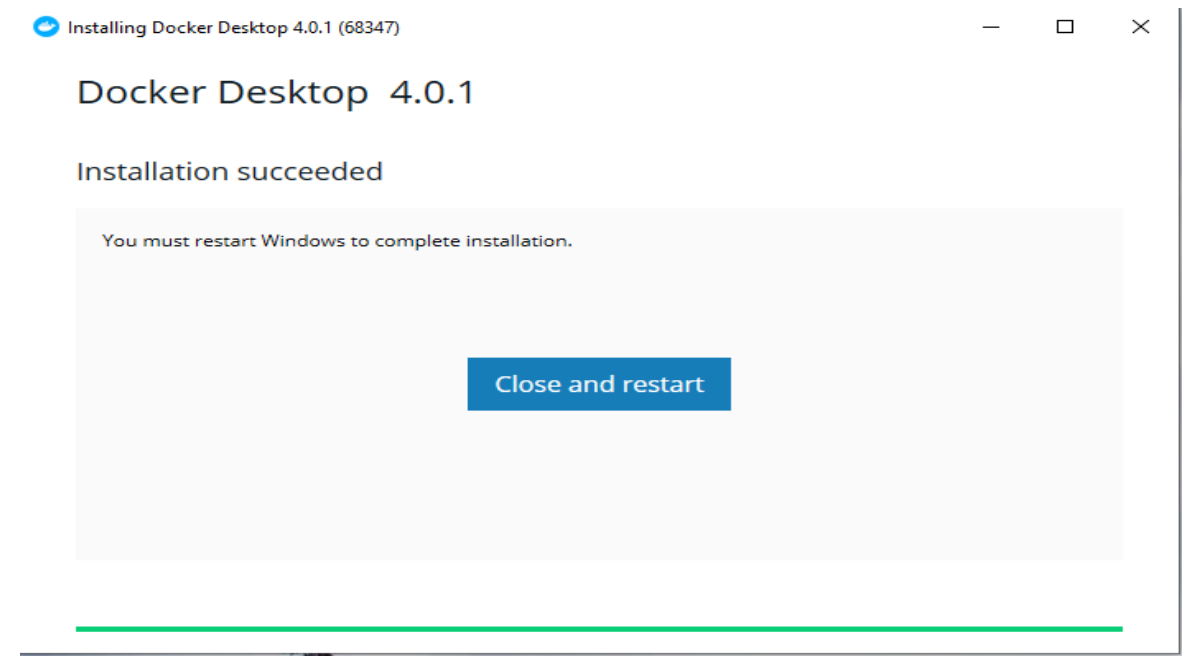
1. This manual file will show **Window installation procedure**.
2. After downloaded, double-click **InstallDocker.msi** to run the installer.



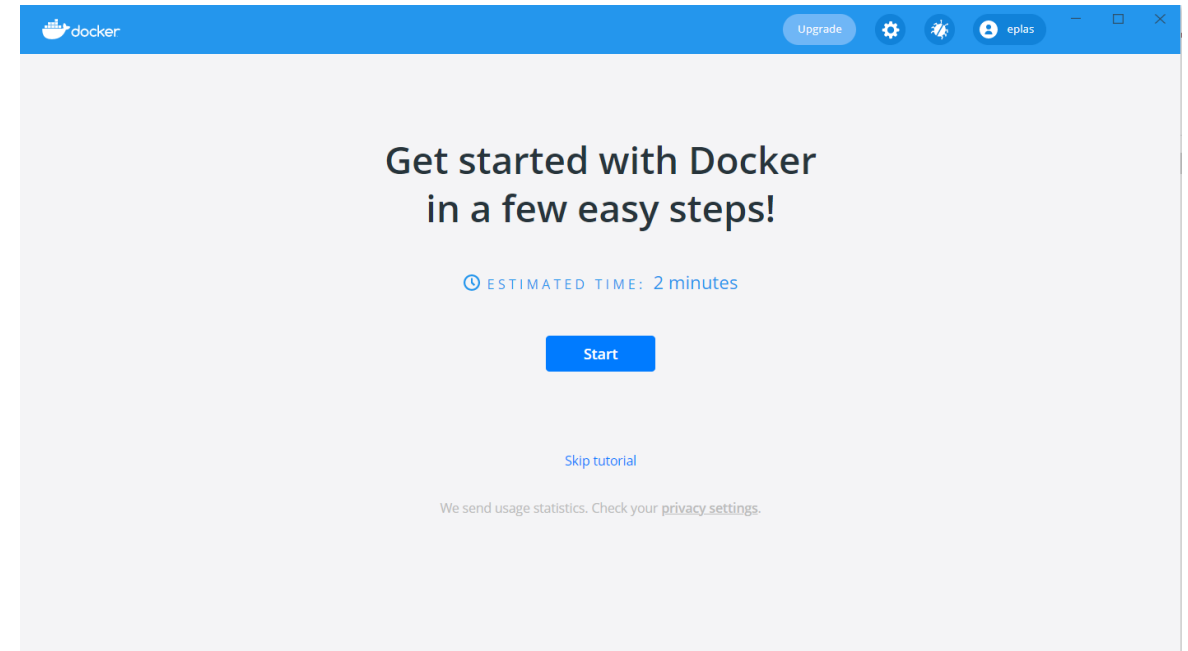
### 3. Follow the Install Wizard to proceed the installation.



4. Click Finish to launch Docker.



5. Docker starts automatically and loads a “Welcome” window giving you tips and access to the Docker documentation.

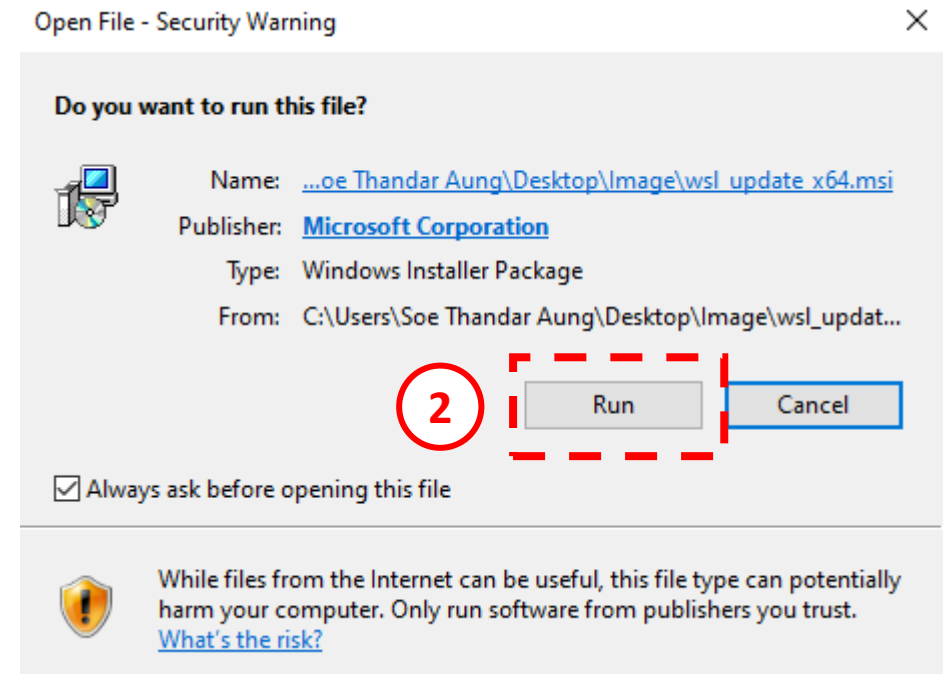
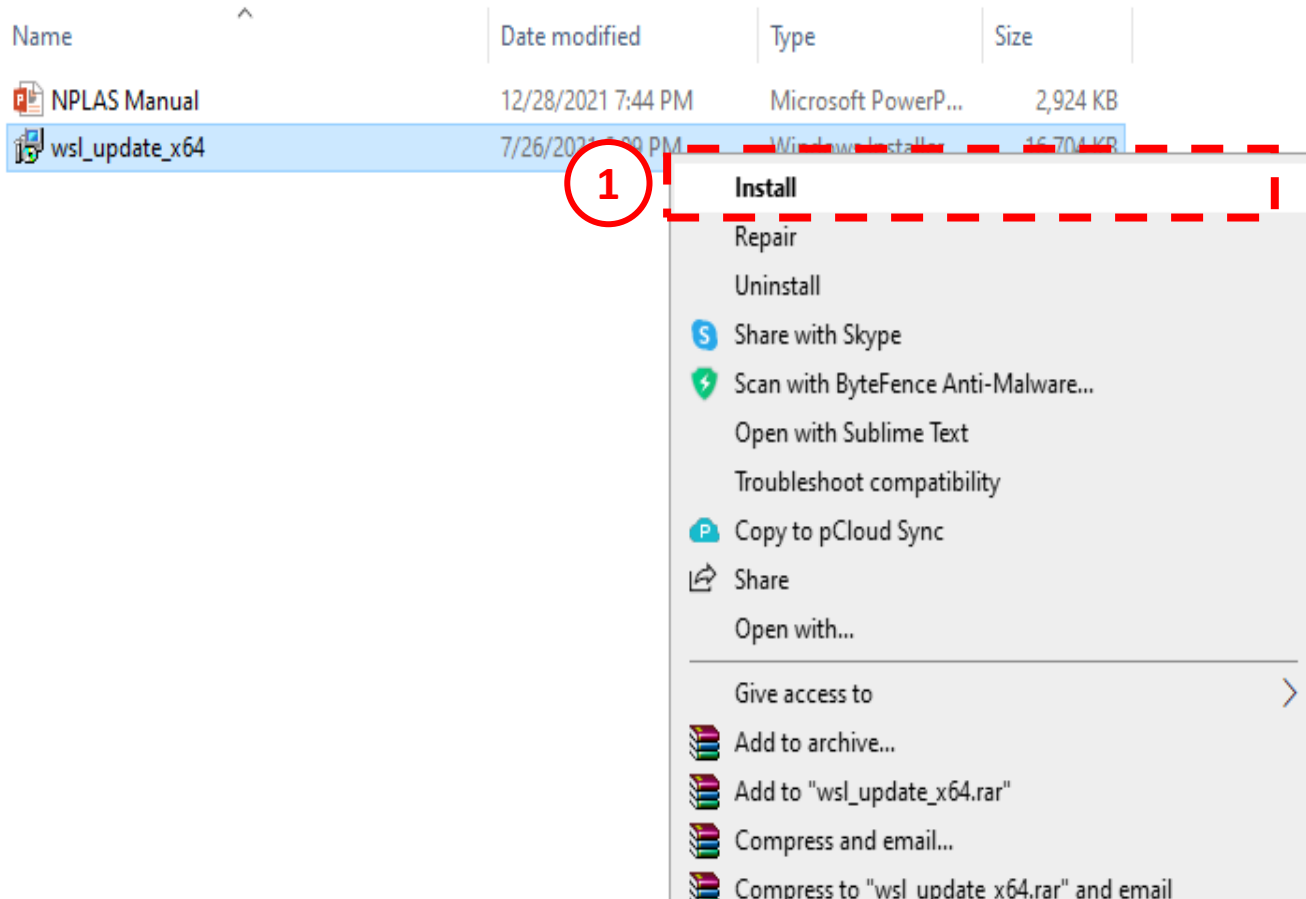


# **WINDOWS SUBSYSTEM FOR LINUX (WSL) INSTALLATION**

Only **Window OS** user needs to do this process.

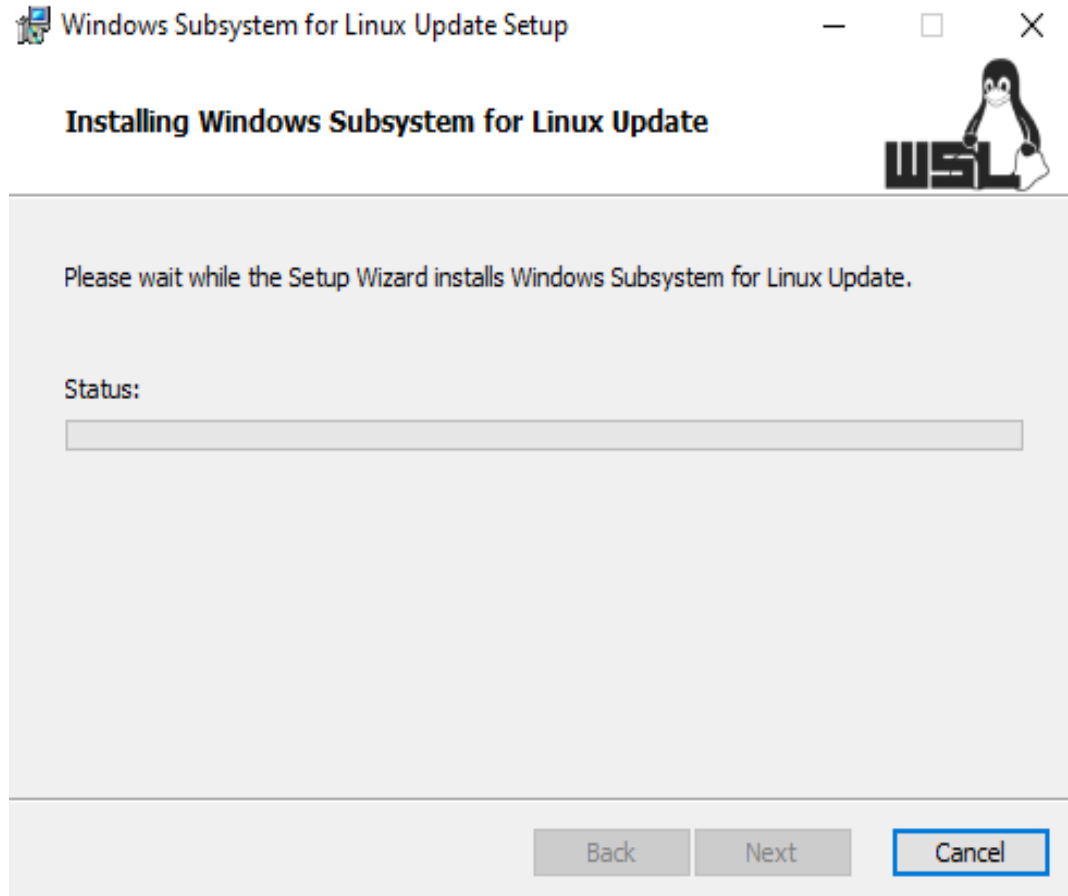
# 1. Install WSL from this link ->

[https://wslstorestorage.blob.core.windows.net/wslblob/wsl\\_update\\_x64.msi](https://wslstorestorage.blob.core.windows.net/wslblob/wsl_update_x64.msi)

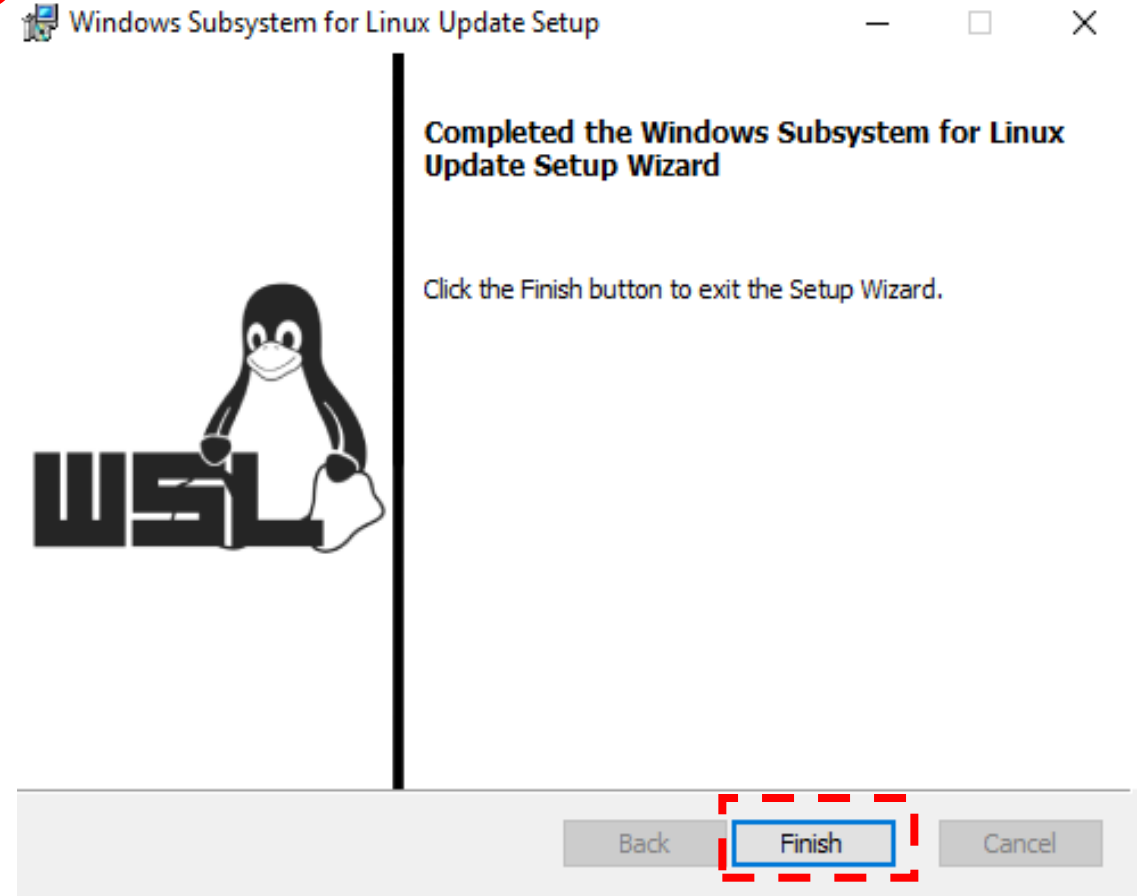




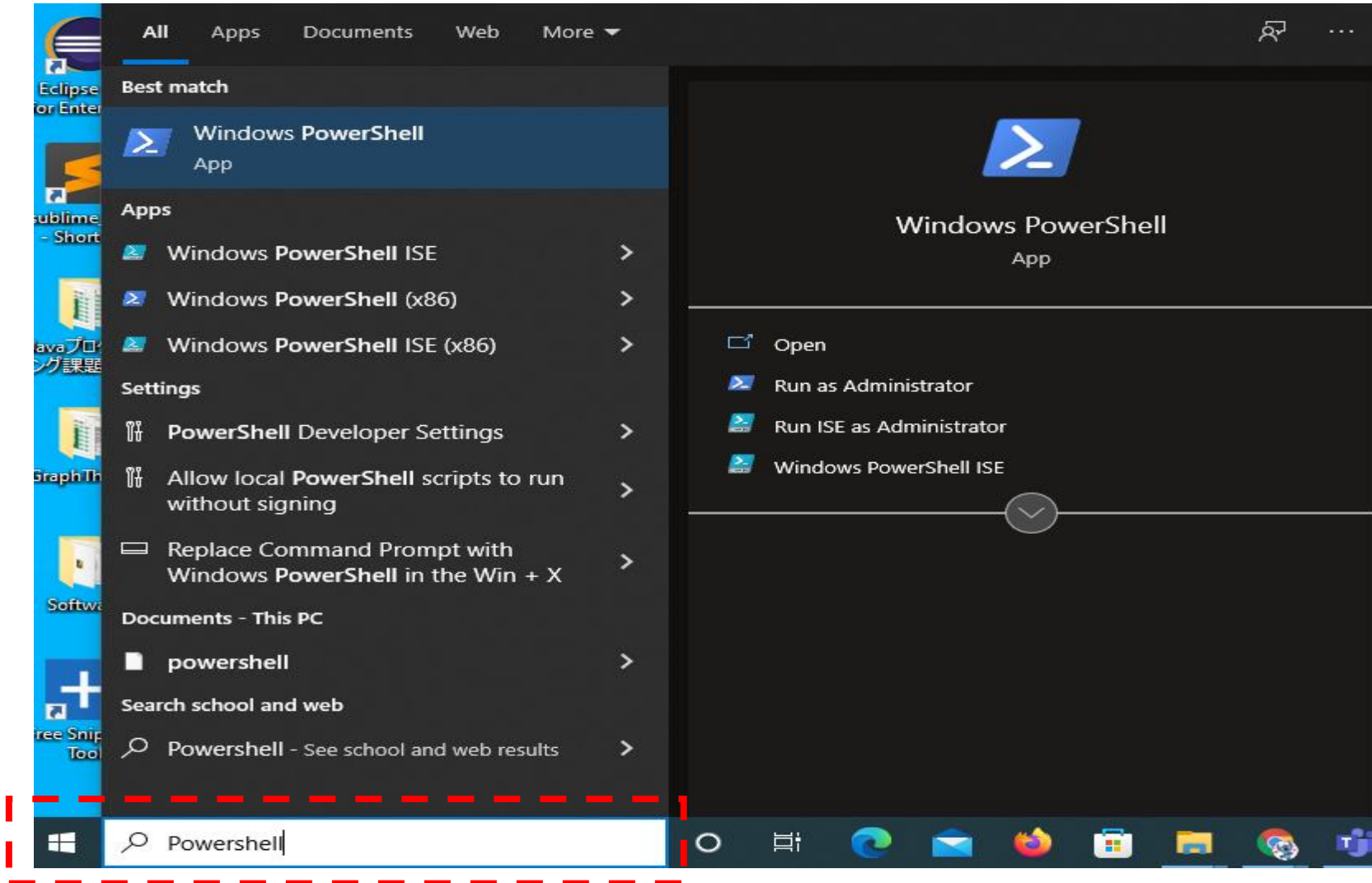
3



4

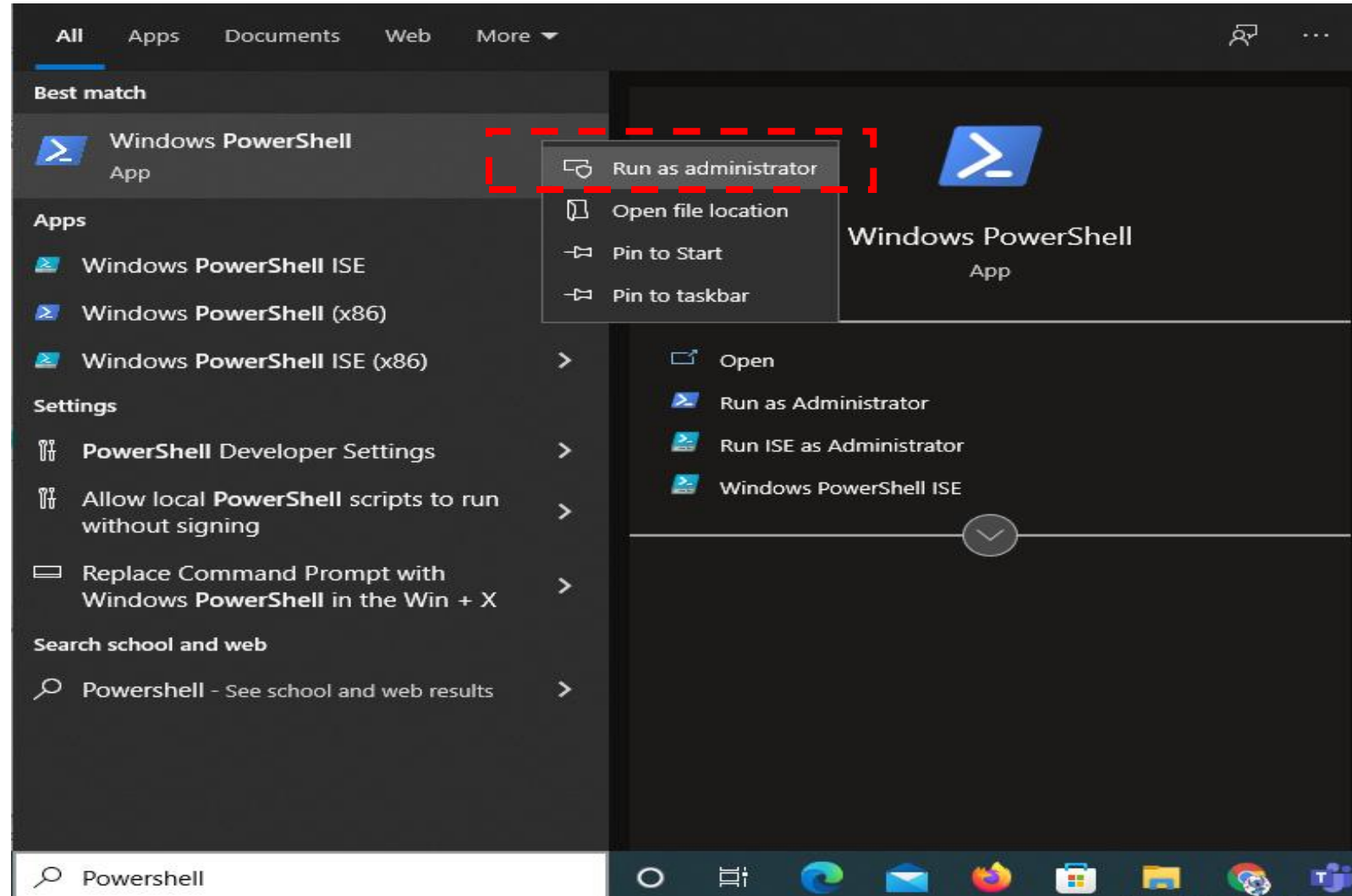


2. Click **Start** and type **Powershell**.



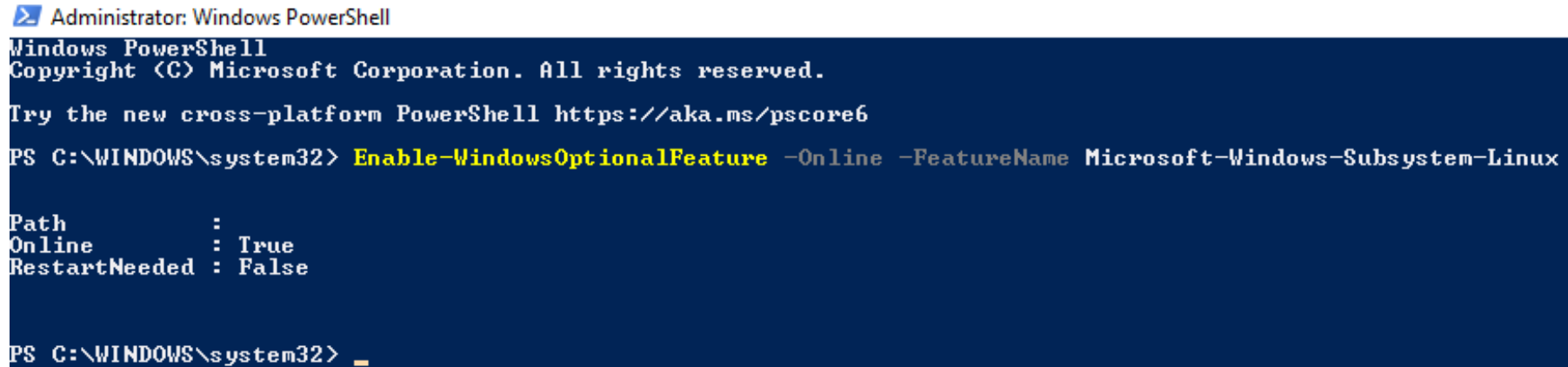
3. Right-click and select the **Run as administrator** option.

4. Choose “**Yes**” and then you will see the **Powershell** command prompt.



5. To enable the Linux subsystem, type the following command and press Enter.

**Enable-WindowsOptionalFeature -Online -FeatureName Microsoft-Windows-Subsystem-Linux**



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

Try the new cross-platform PowerShell https://aka.ms/pscore6

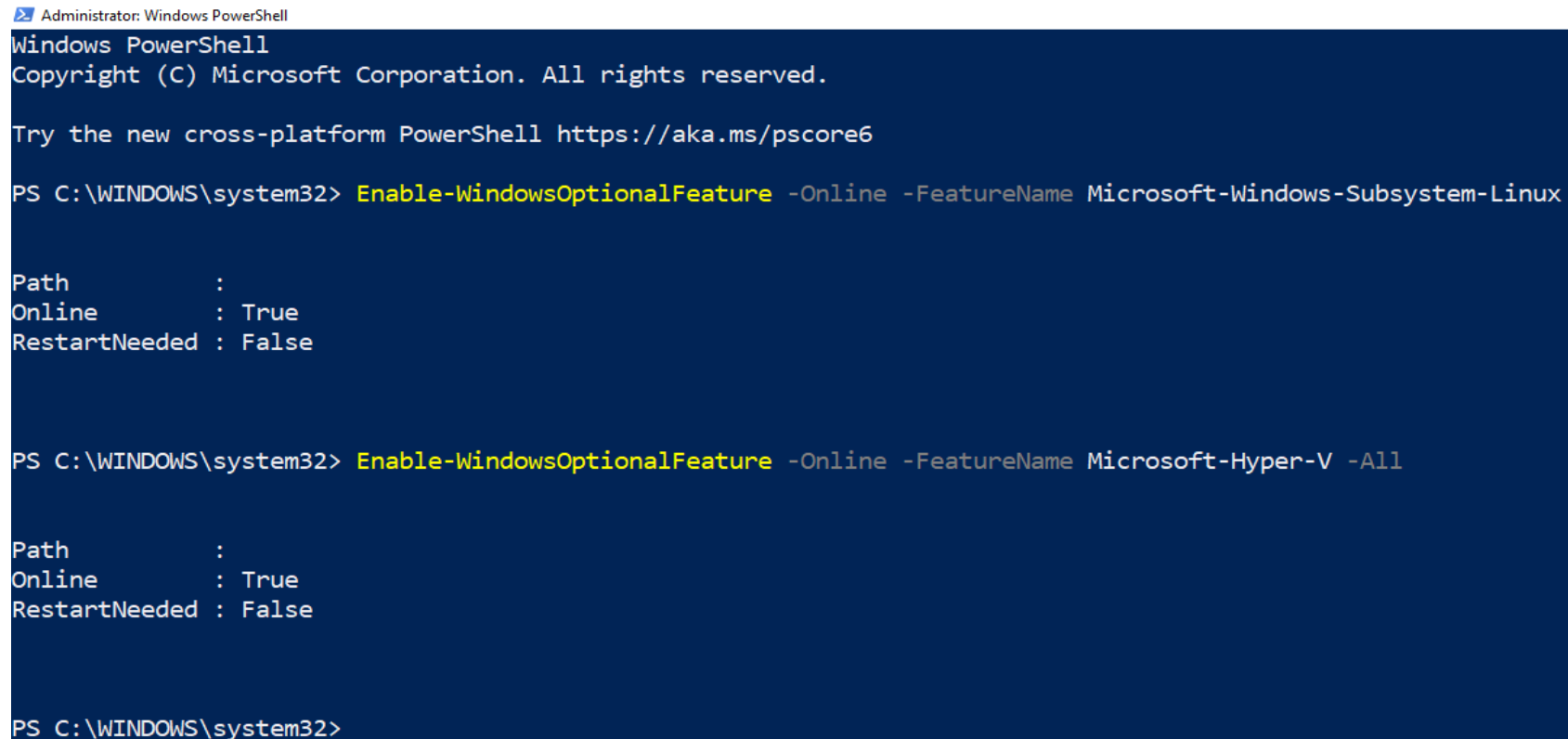
PS C:\WINDOWS\system32> Enable-WindowsOptionalFeature -Online -FeatureName Microsoft-Windows-Subsystem-Linux

Path          :
Online        : True
RestartNeeded : False

PS C:\WINDOWS\system32> _
```

6. To enable Hyper-V for switching to WSL 2 based engine, type the following command and press Enter.

**Enable-WindowsOptionalFeature -Online -FeatureName Microsoft-Hyper-V -All**



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

Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\WINDOWS\system32> Enable-WindowsOptionalFeature -Online -FeatureName Microsoft-Windows-Subsystem-Linux

Path          :
Online        : True
RestartNeeded : False

PS C:\WINDOWS\system32> Enable-WindowsOptionalFeature -Online -FeatureName Microsoft-Hyper-V -All

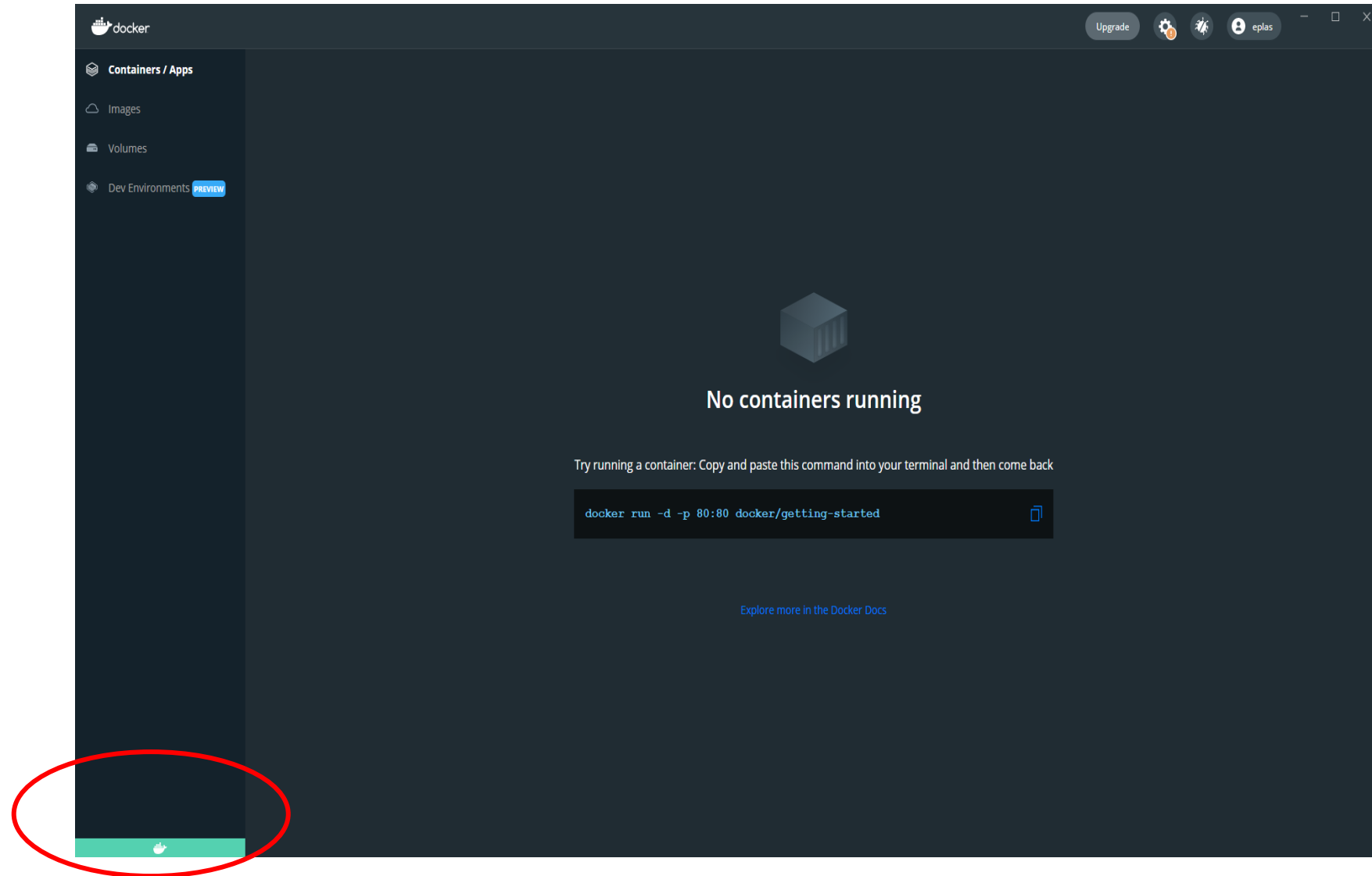
Path          :
Online        : True
RestartNeeded : False

PS C:\WINDOWS\system32>
```

**\* Some PC may need to restart after running these two steps.**

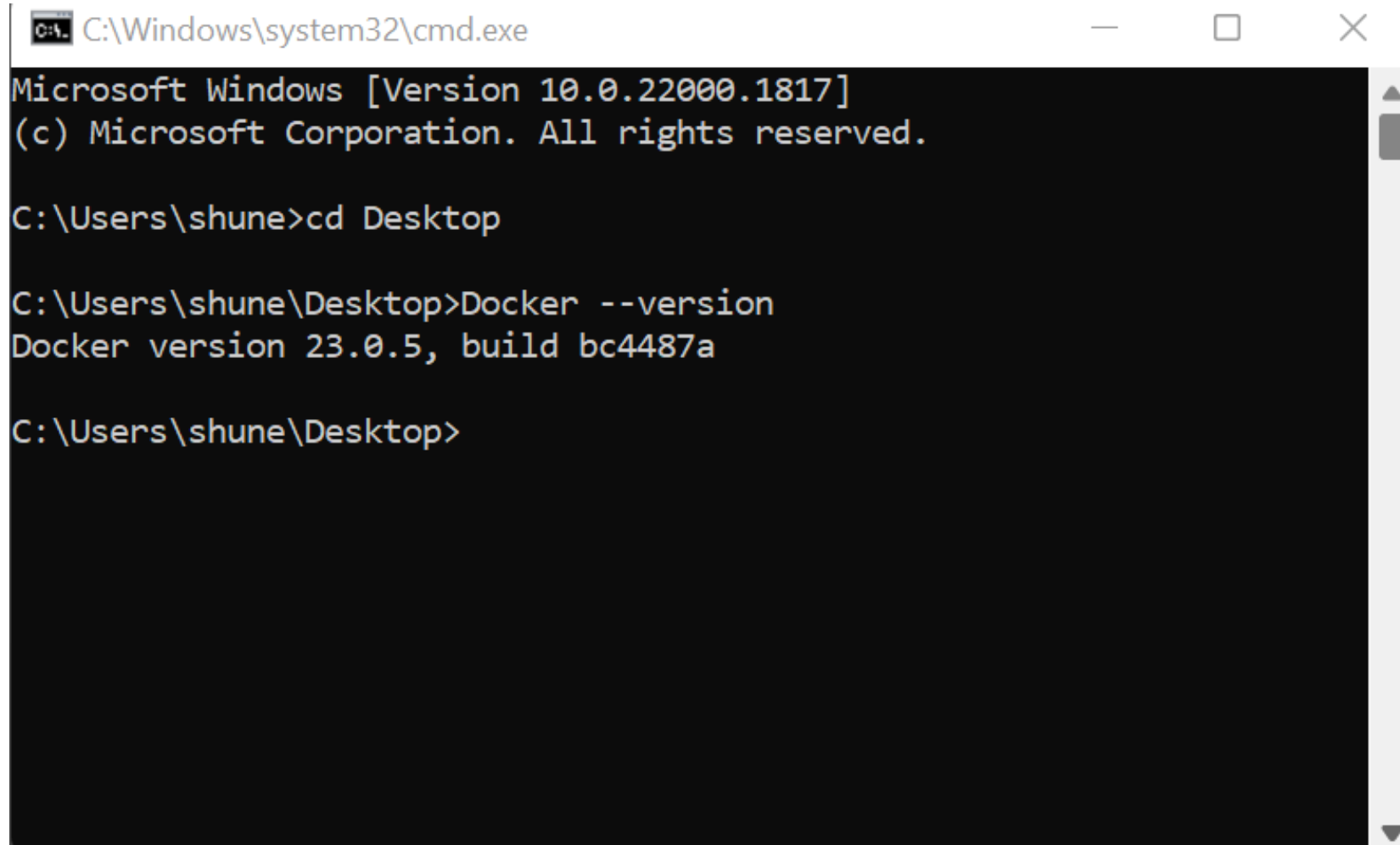
**Download NPLAS System from Docker**

# 1. Open Docker on your PC.



If the docker is running on your PC, the color should be green here.

2. Open **cmd** and check Docker using **docker --version**.

A screenshot of a Windows Command Prompt window. The title bar at the top shows the file path 'C:\Windows\system32\cmd.exe' and standard window controls (minimize, maximize, close). The command prompt displays the following text:  
Microsoft Windows [Version 10.0.22000.1817]  
(c) Microsoft Corporation. All rights reserved.  
  
C:\Users\shune>cd Desktop  
  
C:\Users\shune\Desktop>Docker --version  
Docker version 23.0.5, build bc4487a  
  
C:\Users\shune\Desktop>  
The text is displayed in a monospaced font on a black background. The prompt character is a greater-than sign (>).

```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 10.0.22000.1817]
(c) Microsoft Corporation. All rights reserved.

C:\Users\shune>cd Desktop

C:\Users\shune\Desktop>Docker --version
Docker version 23.0.5, build bc4487a

C:\Users\shune\Desktop>
```



3. To download NPLAS docker image, copy this following command and wait until the downloading finished.

`docker pull shune/docker-plas:v0`

```
C:\Users\shune\Desktop>docker pull shune/docker-plas:v0
v0: Pulling from shune/docker-plas
Digest: sha256:67fc5b513fccb8bb441dafac39a036d65bb55edee88fa85b783085a896f623a6
Status: Downloaded newer image for shune/docker-plas:v0
docker.io/shune/docker-plas:v0

C:\Users\shune\Desktop>
```


**\* Please make sure your internet connection can run well. \***

4. To run the image for Window OS, type or copy the following command

```
docker run -v "C:/Users/shune/Desktop/output":/usr/src/app/addon/output -p 3000:3000 -d shune/docker-plas:v0
```

To put the path you want to save "output" folder on your PC

\*\* Change only red part \*\*



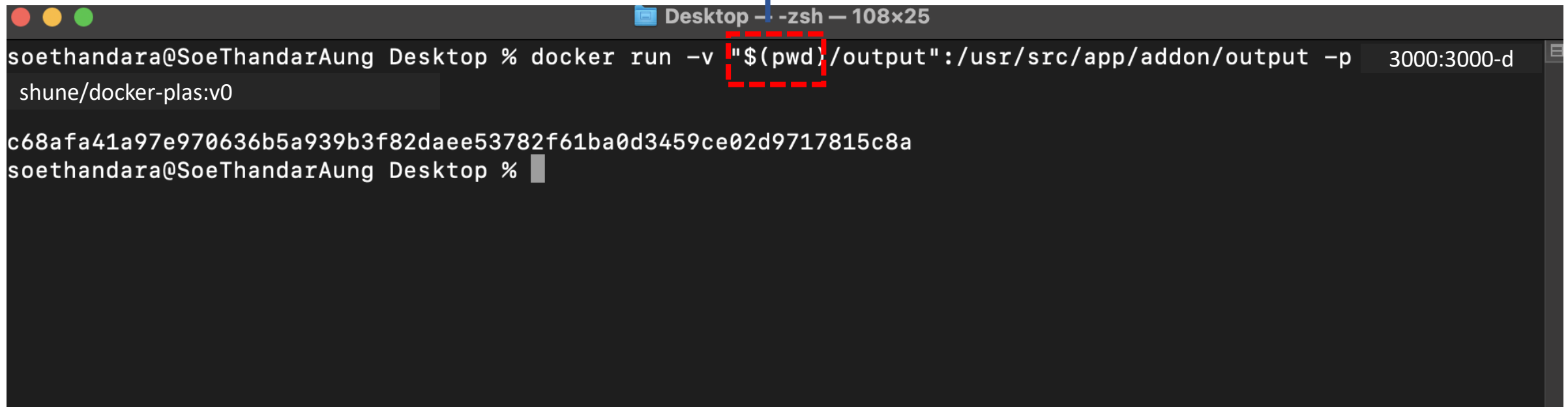
```
C:\Users\shune\Desktop>  
C:\Users\shune\Desktop>docker run -v "C:/Users/shune/Desktop/output":/usr/src/app/addon/output  
-p 3000:3000 -d shune/docker-plas:v0  
bcd25e7c3580c1094c49dcf95c7105d44534916d3a56ffa59345962a94e0f9fc  
  
C:\Users\shune\Desktop>
```

Then, you will see the **output** folder on your given path.

To run the image for Linux or Mac OS, type

```
docker run -v "$(pwd)/output":/usr/src/app/addon/output -p 3000:3000 -d  
shune/docker-plas:v0
```

"pwd" means current directory path

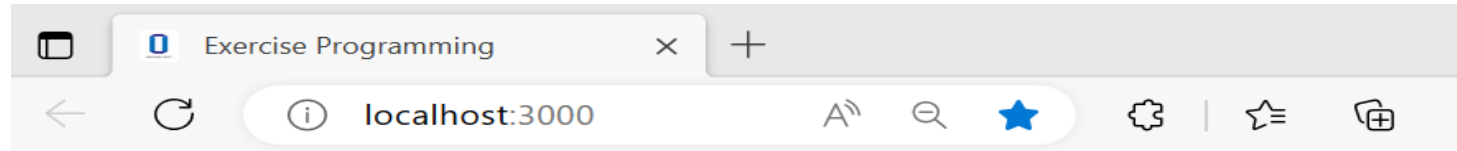


```
Desktop -- -zsh -- 108x25  
soethandara@SoeThandarAung Desktop % docker run -v "$(pwd)/output":/usr/src/app/addon/output -p 3000:3000-d  
shune/docker-plas:v0  
c68afa41a97e970636b5a939b3f82daee53782f61ba0d3459ce02d9717815c8a  
soethandara@SoeThandarAung Desktop %
```

Then, you will see the **output** folder on your given path.

5. Open your browser and type **localhost:3000**. Then, you will see the PLAS system as follows.

\* No need internet connection when you solve the NPLAS system using localhost:5000



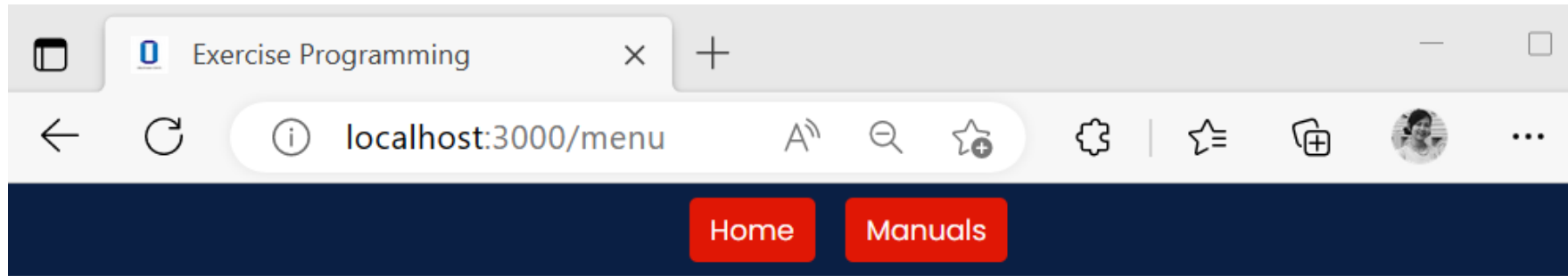
# **Programming Learning Assistant System (PLAS)**

**IMPROVE your  
programming  
skills**



Online Exercise

## 6. Click **Exercise Problems for Python Programming**.



**Exercise Problems  
for Python  
Programming**



**Manuals for PLAS**

## 7. Solve the Python\_CWP\_GUI under CWP.

localhost:3000/python\_programming

Home

Manuals

### **Grammar-Concept Understanding Problem (GUP)**

[Basic Grammar \(P\\_GU1\)](#)

### **Value Trace Problem (VTP)**

[Basic Grammar \(P\\_VTP1\)](#)

[Advanced Grammar \(P\\_VTP2\)](#)

[Data Structure & Algorithms \(P\\_VTP3\)](#)

[Numpy Library Use \(P\\_VTP4\)](#)

[Pandas Library Use \(P\\_VTP5\)](#)

[Object-Oriented Programming \(P\\_VTP6\)](#)

### **Code Modification Problem (CMP)**

[Pandas Library for Graph Plot \(P\\_CMP1\)](#)

[Project Assignment for Pandas Library for Graph Plot \(P\\_CMP1\\_PJ\)](#)

[Pandas Library for Excel Use \(P\\_CMP2\)](#)

[Project Assignment for Pandas Library for Excel Use \(P\\_CMP2\\_PJ\)](#)

### **Code Writing Problem (CWP)**

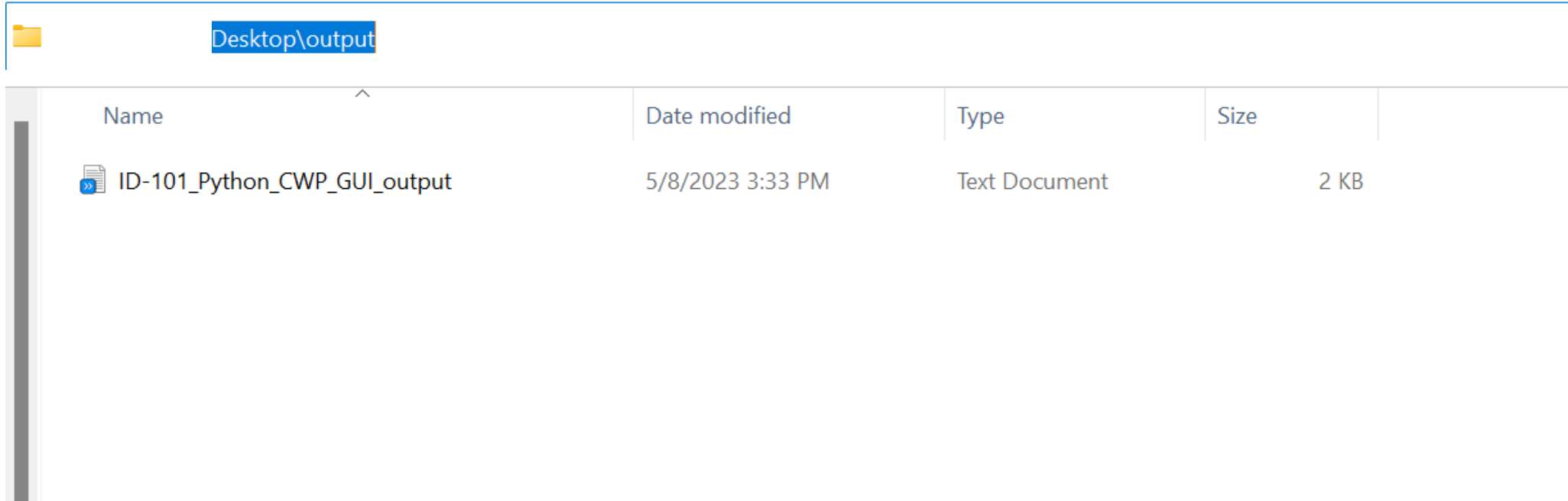
[Basic\\_Advance Grammar](#)


[Python\\_CWP\\_GUI](#)

Click



8. After submitting your problems, all your answer files will be saved on the output folder as follows.



Name	Date modified	Type	Size
 ID-101_Python_CWP_GUI_output	5/8/2023 3:33 PM	Text Document	2 KB

- Don't forget to put your student id or name when you submit your answer if you want to know your score.
- Please send the output folder to this email -> [p1kl27uw@s.okayama-u.ac.jp](mailto:p1kl27uw@s.okayama-u.ac.jp)

Please answer the **QUESTIONNAIRE** from the given link

<https://forms.gle/2ZHbXMEbvJ8jyByAA>

Thank you for your cooperation.

Your feedback will be helpful to improve our NPLAS system.