

Assignment Environment Setup Guide(Windows)

Programming Languages and Compilers(EC3204)

Written by Sunwoo Lee

E-mail: sunwoolee@gm.gist.ac.kr



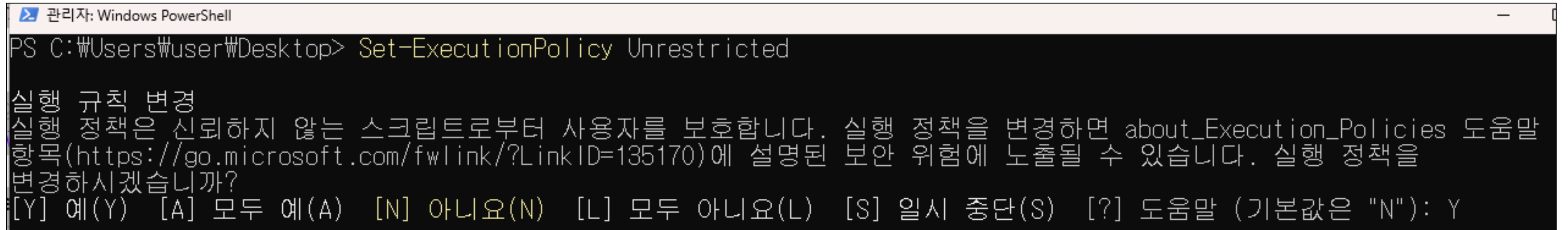
Contents

- 01** How to install WSL2 (Pages 1-4)
- 02** How to transfer files (Pages 5-6)
- 03** FAQ (Pages 7-10)

☐ Preparing to run the install script

- Enter the command below using a Windows shell.
- Enter 'Y' in "Do you want to change execution policy?".

> Set-ExecutionPolicy Unrestricted



```
관리자: Windows PowerShell
PS C:\Users\User\Desktop> Set-ExecutionPolicy Unrestricted

실행 규칙 변경
실행 정책은 신뢰하지 않는 스크립트로부터 사용자를 보호합니다. 실행 정책을 변경하면 about_Execution_Policies 도움말
항목(https://go.microsoft.com/fwlink/?LinkID=135170)에 설명된 보안 위험에 노출될 수 있습니다. 실행 정책을
변경하시겠습니까?
[Y] 예(Y) [A] 모두 예(A) [N] 아니요(N) [L] 모두 아니요(L) [S] 일시 중단(S) [?] 도움말 (기본값은 "N"):
```

□ Run the installation script

- Run 'wsl_install.ps1' using a Windows shell(administrator privileges).



```
관리자: Windows PowerShell
PS C:\Users\user\Downloads> .\wsl_install.ps1
```

- When the script is executed, the screen shown below is displayed.

```
Activating WSL and Virtual Machine Platform features...
배포 이미지 서비스 및 관리 도구
버전: 10.0.22621.2792

이미지 버전: 10.0.22631.4169

기능을 사용하도록 설정하는 중
[=====100.0%=====]
작업을 완료했습니다.

배포 이미지 서비스 및 관리 도구
버전: 10.0.22621.2792

이미지 버전: 10.0.22631.4169

기능을 사용하도록 설정하는 중
[=====100.0%=====]
작업을 완료했습니다.
Installing WSL with Ubuntu...
설치 중: Ubuntu
Ubuntu이(가) 설치되었습니다.
Ubuntu을(를) 시작하는 중...
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
```

☐ Check for installation

☐ Check if WSL2 is installed correctly

```
PS C:\Users\User\Desktop> wsl -v
WSL 버전: 2.2.4.0
커널 버전: 5.15.153.1-2
WSLg 버전: 1.0.61
MSRDC 버전: 1.2.5326
Direct3D 버전: 1.611.1-81528511
DXCore 버전: 10.0.26091.1-240325-1447.ge-release
Windows 버전: 10.0.22631.4169
```

Verify that the WSL version is 2.x

☐ Check if Linux is installed correctly

```
PS C:\Users\User\Desktop> wsl --list
Linux용 Windows 하위 시스템 배포:
Ubuntu(기본값)
PS C:\Users\User\Desktop> wsl -d Ubuntu -- lsb_release -a
No LSB modules are available.
Distributor ID: Ubuntu
Description:    Ubuntu 22.04.3 LTS
Release:        22.04
Codename:       jammy
```

Verify that Release is 22.04

☐ Run Ubuntu

- After installing ubuntu, the first run will ask you to set your account information.
Set it to the desired information
- You can now use Linux with WSL on Windows.

```
Installing, this may take a few minutes...
Please create a default UNIX user account. The username does not need to match your Windows username.
For more information visit: https://aka.ms/wslusers
Enter new UNIX username: sunwoolee
New password:
Retype new password:
passwd: password updated successfully
Installation successful!
이제 Linux용 Windows 하위 시스템을 Microsoft Store에서 사용할 수 있습니다.
'wsl.exe --update'를 실행하거나 https://aka.ms/wslstorepage를 방문하여 업그레이드할 수 있습니다.
Microsoft Store의 WSL을 설치하면 최신 WSL 업데이트가 더 빠르게 제공됩니다.
자세한 내용은 https://aka.ms/wslstoreinfo를 방문하세요.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 5.10.16.3-microsoft-standard-WSL2 x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

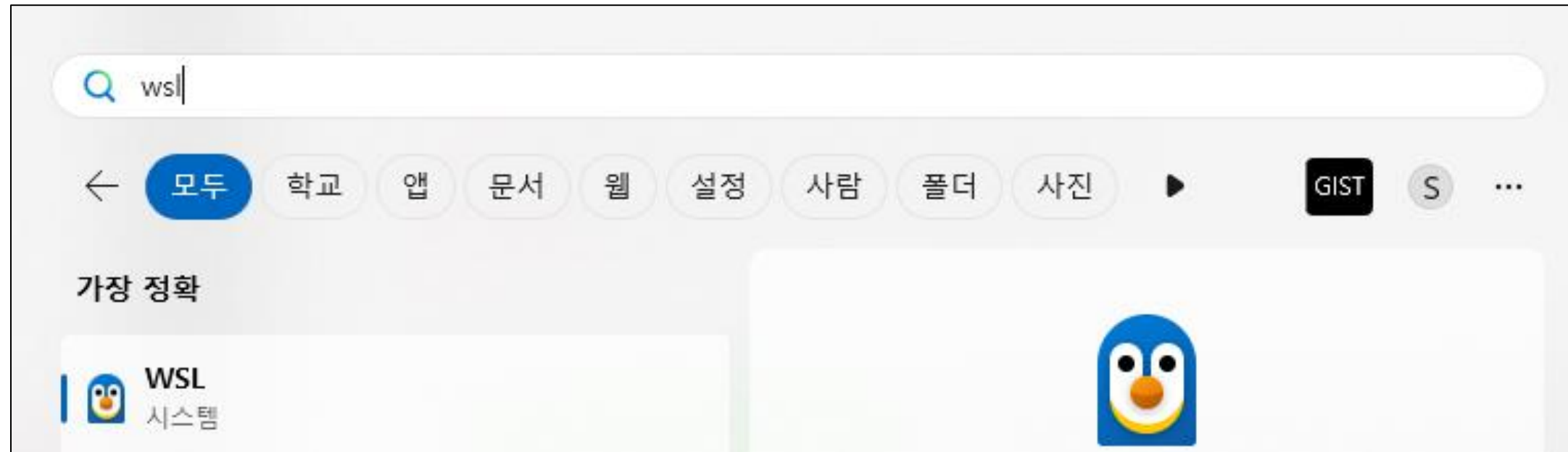
This message is shown once a day. To disable it please create the
/home/sunwoolee/.hushlogin file.
sunwoolee@DESKTOP-U7IVOBB:~$ |
```

2. How to transfer files

05

☐ Windows → WSL2-based Ubuntu

☐ Run WSL shell



☐ File transfer

The file you want to transfer(Windows)

```
sunwooLee@DESKTOP-U7IV0BB:~$ cp /mnt/c/Users/user/Downloads/file1.txt ./
```

The path you want to receive(Ubuntu)

☐ Directory transfer

The directory you want to transfer(Windows)

```
sunwooLee@DESKTOP-U7IV0BB:~$ cp -R /mnt/c/Users/user/Downloads/ ./
```

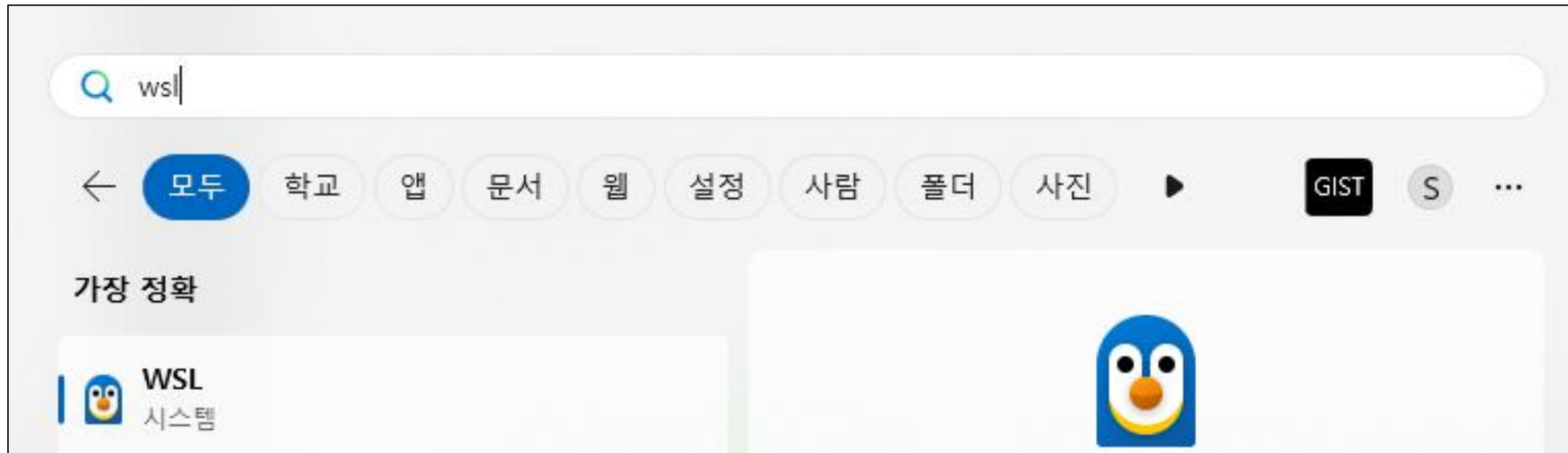
The path you want to receive(Ubuntu)

2. How to transfer files

06

☐ WSL2-based Ubuntu → Windows

☐ Run WSL shell



☐ File transfer

The file you want to transfer(Ubuntu)

```
sunwooLee@DESKTOP-U7IV0BB:~$ cp ./file2 /mnt/c/Users/user/Downloads/
```

The path you want to receive(Windows)

☐ Directory transfer

The directory you want to transfer(Ubuntu)

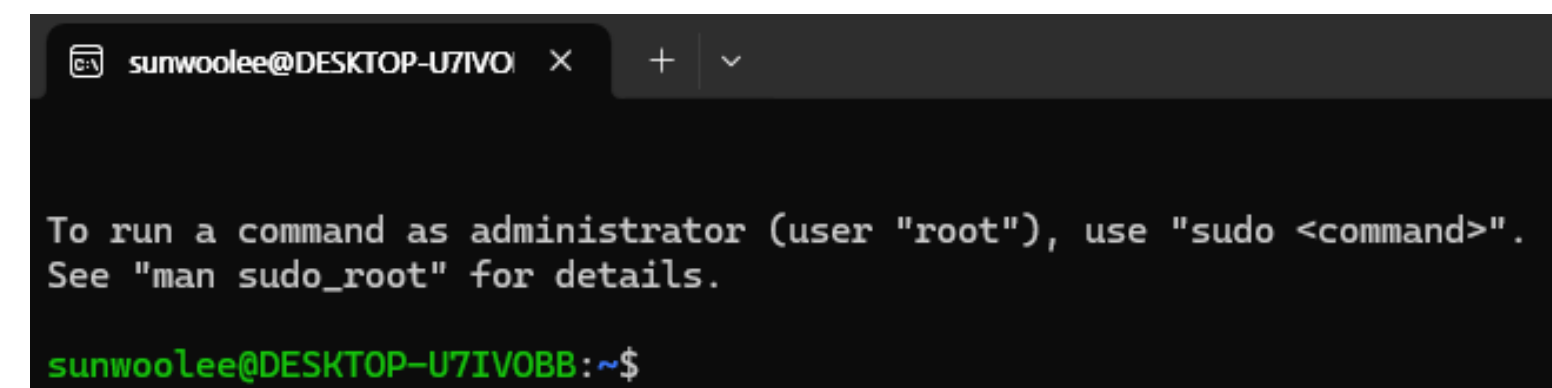
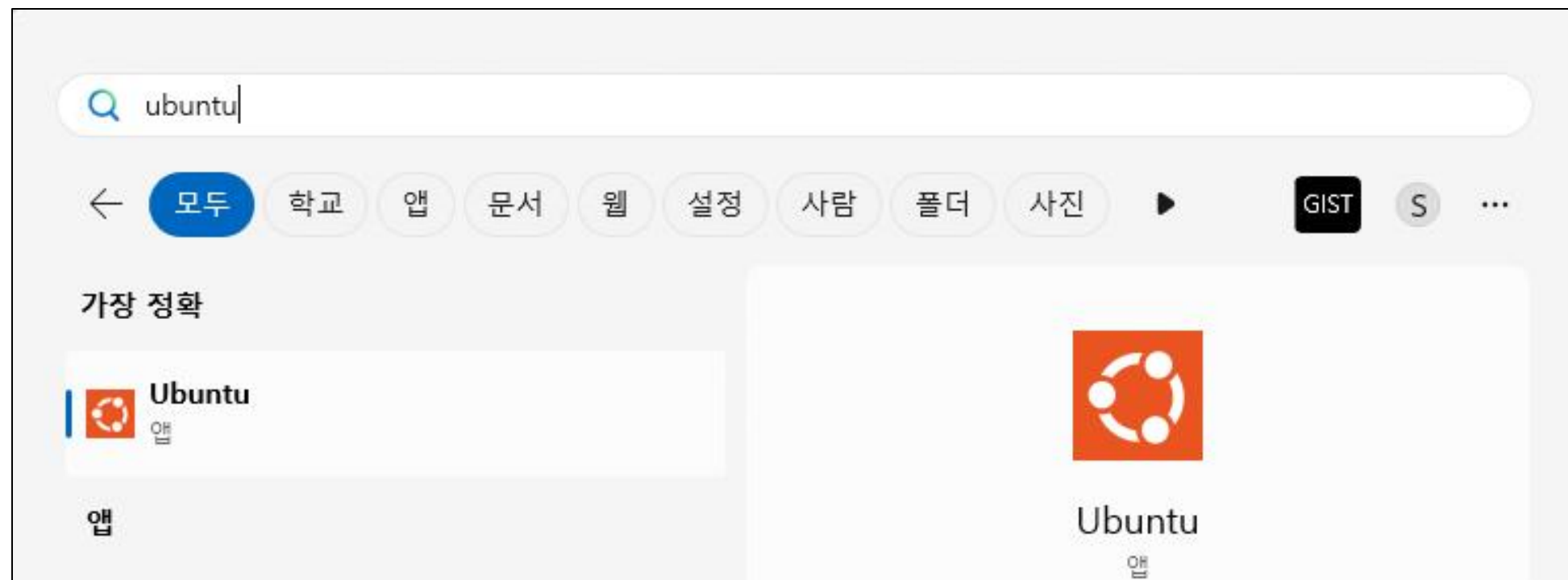
```
sunwooLee@DESKTOP-U7IV0BB:~$ cp -rf ./ /mnt/c/Users/user/Downloads/
```

The path you want to receive(Windows)

Q1. When I run Ubuntu, I get broken characters and WSLRegisterDistribution failed error.

```
Ubuntu 20.04 LTS
Installing, this may take a few minutes...
WslRegisterDistribution failed with error: 0x800701bc
Error: 0x800701bc WSL 2 ?????????????????????? https://aka.ms/wsl2kernel
Press any key to continue...
-
```

A. This is because Linux Kernel Update is not reflected normally.
Please try running Ubuntu after rebooting.



Q2. Can I use the GUI to move files between WSL-based Ubuntu and Windows?

A. Yes, try typing 'explorer.exe .' in Ubuntu.
After that, you can send and receive files in the desired directory.

```
sunwoolee@DESKTOP-U7IVOB:~$ explorer.exe .
```

네트워크 > wsl.localhost > Ubuntu > home > sunwoolee >

Navigate to the desired directory

이름	수정한 날짜	유형	크기
.cache	2024-09-19 오후 5:40	파일 폴더	
.bash_history	2024-09-19 오후 5:44	BASH_HISTORY ...	1KB
.bash_logout	2024-09-19 오후 5:40	Bash Logout 원본...	1KB
.bashrc	2024-09-19 오후 5:40	Bash RC 원본 파일	4KB
.motd_shown	2024-09-19 오후 5:40	MOTD_SHOWN ...	0KB
.profile	2024-09-19 오후 5:40	Profile 원본 파일	1KB

이름	수정한 날짜	유형	크기
.cache	2024-09-19 오후 5:40	파일 폴더	
.bash_history	2024-09-19 오후 5:44	BASH_HISTORY ...	1KB
.bash_logout	2024-09-19 오후 5:40	Bash Logout 원본...	1KB
.bashrc	2024-09-19 오후 5:40	Bash RC 원본 파일	4KB
.motd_shown	2024-09-19 오후 5:40	MOTD_SHOWN ...	0KB
.profile	2024-09-19 오후 5:40	Profile 원본 파일	1KB

Move files with Drag & Drop

→ sunwoolee(으)로 이동

Q3. I ran the script you provided, but it didn't install Ubuntu. And I got the log below.

```
사용법: wsl.exe [인수]

인수:

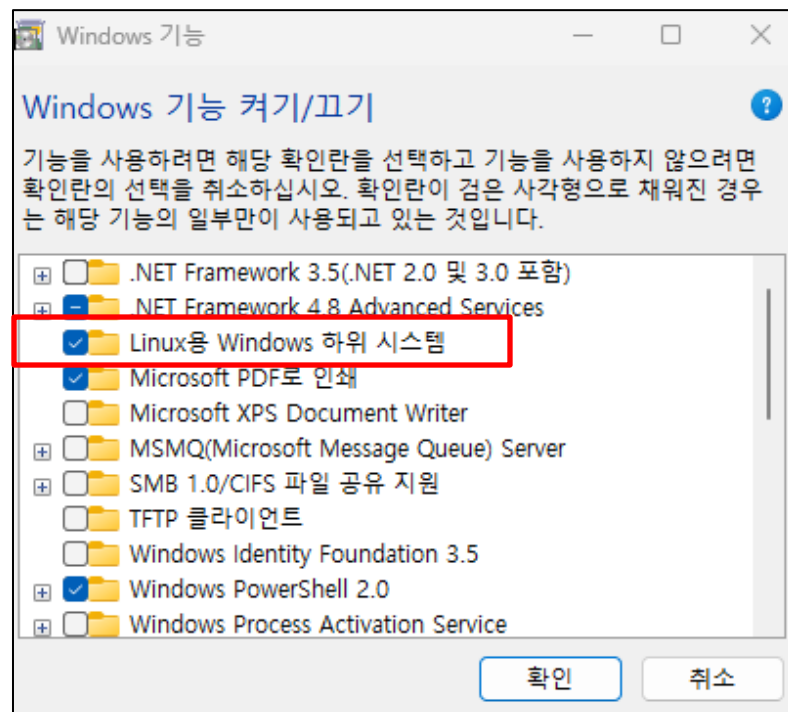
--install <옵션>
Linux용 Windows 하위 시스템 기능을 설치합니다. 옵션을 지정하지 않으면
권장 기능은 기본 배포와 함께 설치됩니다.

기본 배포 및 다른 유효한 배포 목록을 보려면
'wsl --list --online'을 사용하세요.

옵션:
--distribution, -d [인수]
이름별로 다운로드 및 설치할 배포를 지정합니다.

인수:
유효한 배포 이름(대소문자 구분 안 함).
```

A. This is caused by a conflict with the existing WSL. Please follow the steps below to resolve it.
Turn Windows features on/off > Uncheck 'Windows Subsystem for Linux'
> Reboot > Run 'wsl_install.ps1'



wsl_install.ps1



Q4. My Windows build version is 19041 or lower. Can I still install it?

```
PS C:\Users\user> winver
```



A. Yes, we've made sure that 'wsl_install.ps1' will install for build versions 19041 and lower. If the installation fails, please open an issue on [Github\(ec3204-pl-and-compilers\)](https://github.com/ec3204/pl-and-compilers).

