C Programming Environment Setup on Windows

Using Visual Studio Code and GCC

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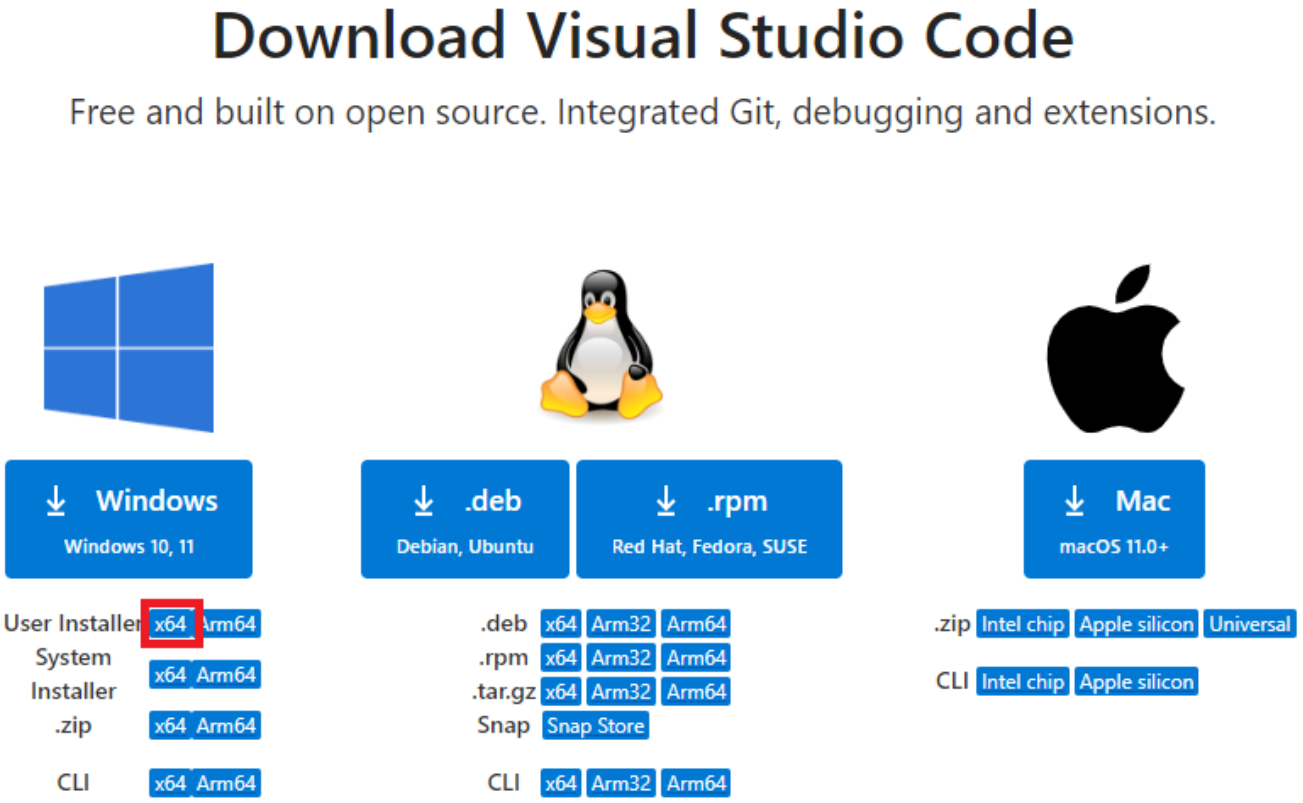
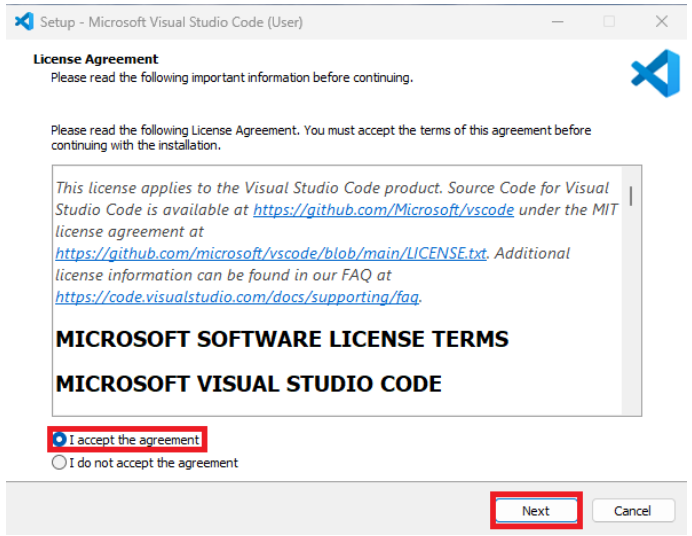
1.1. Installing VS Code(1/3)

Download link: https://code.visualstudio.com/Download

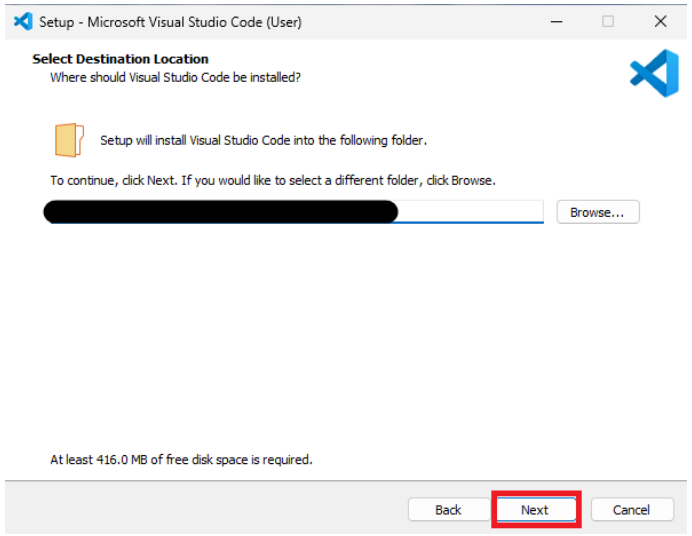


Click User Installer (x64) → Run the downloaded file to begin installation

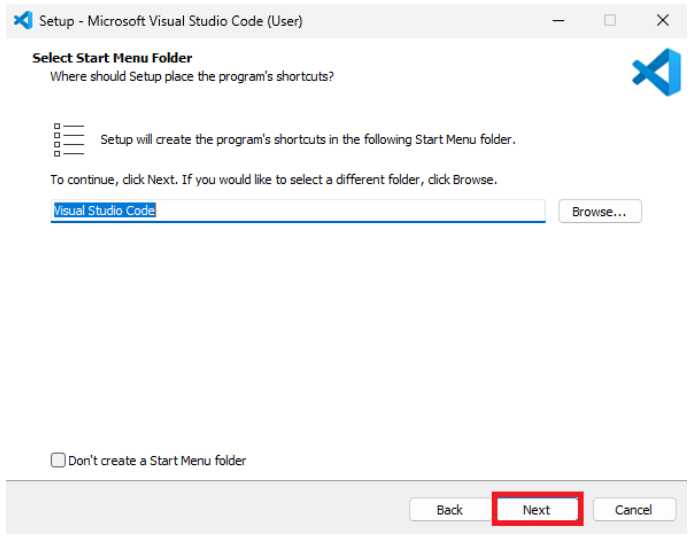
1.1. Installing VS Code(2/3)



- Check "I accept the agreement"
- Click "Next" to continue.

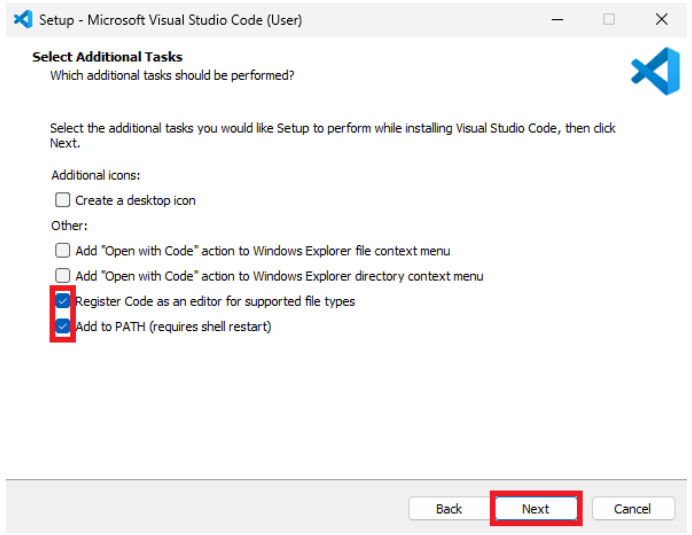


- Click "Next" to continue.

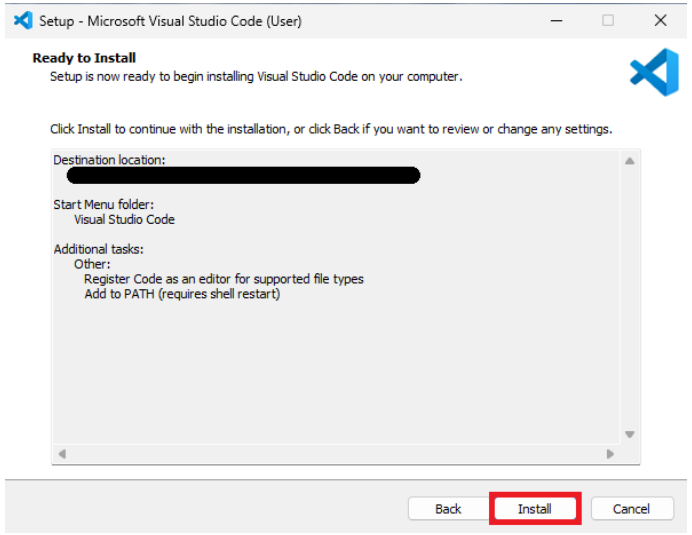


- Do not check "Don’t create a Start Menu folder".
- Click "Next" to continue.

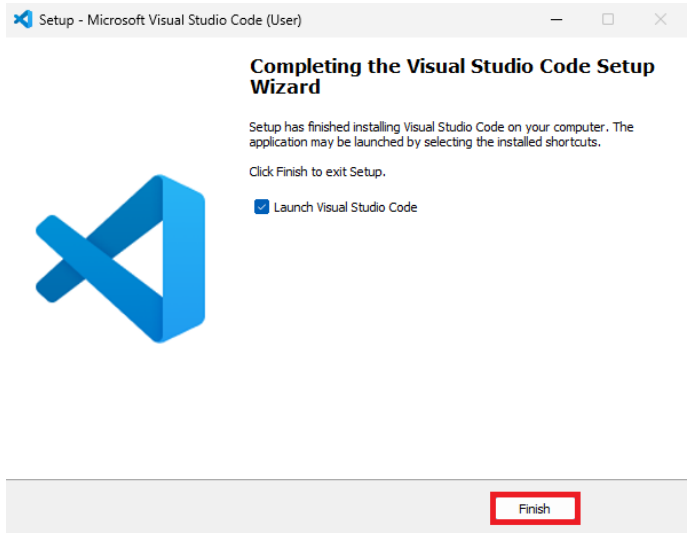
1.1. Installing VS Code(3/3)



- Check "Register Code as an editor for supported file types".
- Check "Add to PATH".
- Click "Next" to continue.

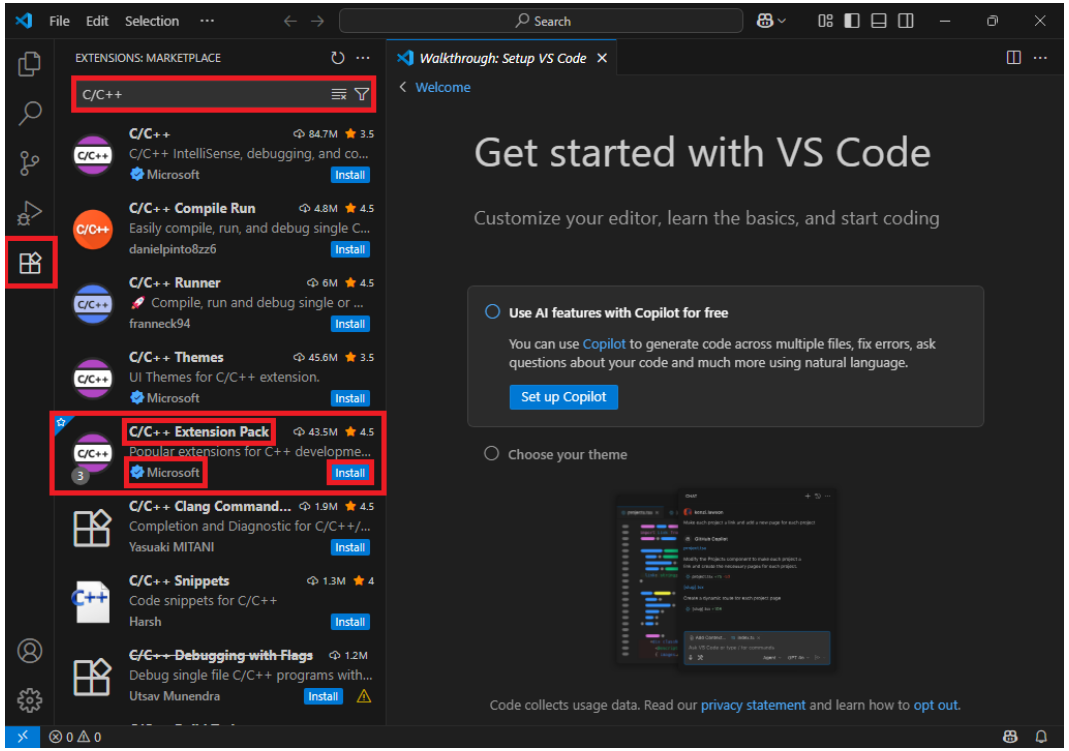


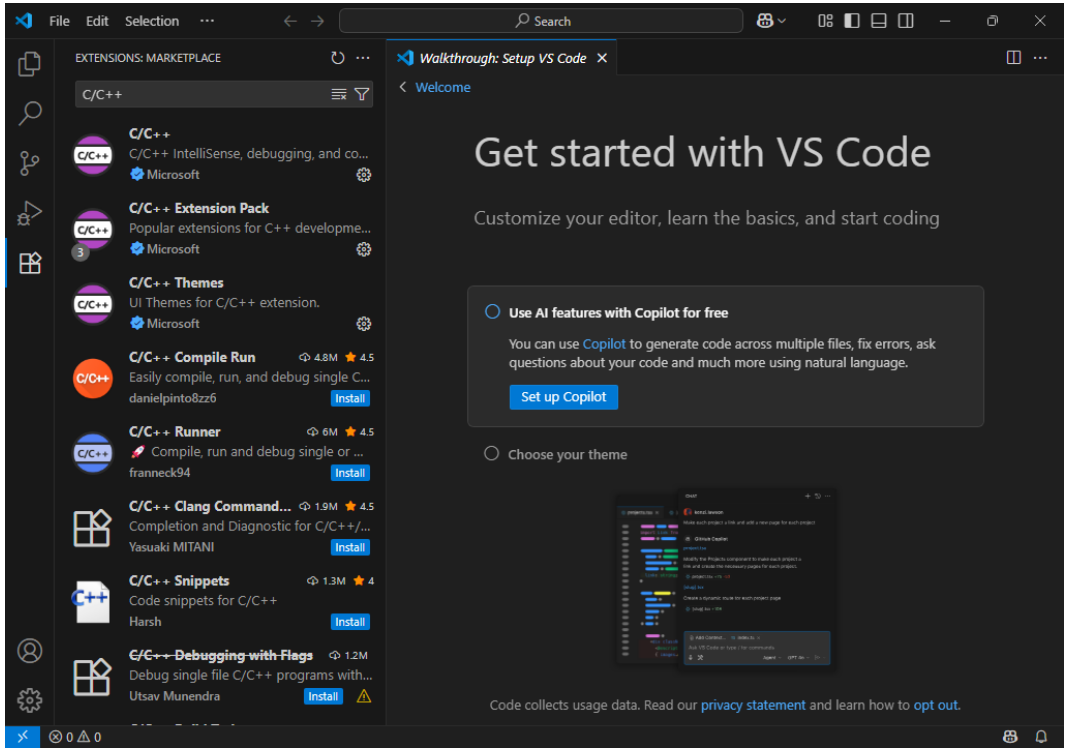
- Click "Install" to begin the installation.



- Check "Launch Visual Studio Code".
- Click "Finish" to complete the installation.

1.2. Installing C/C++ Extensions for VS Code



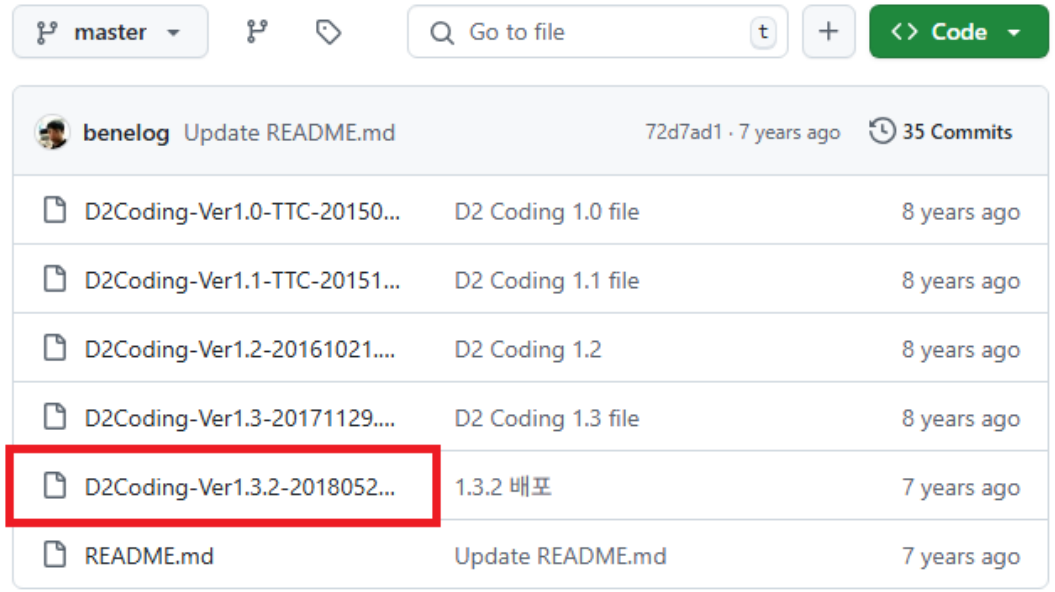


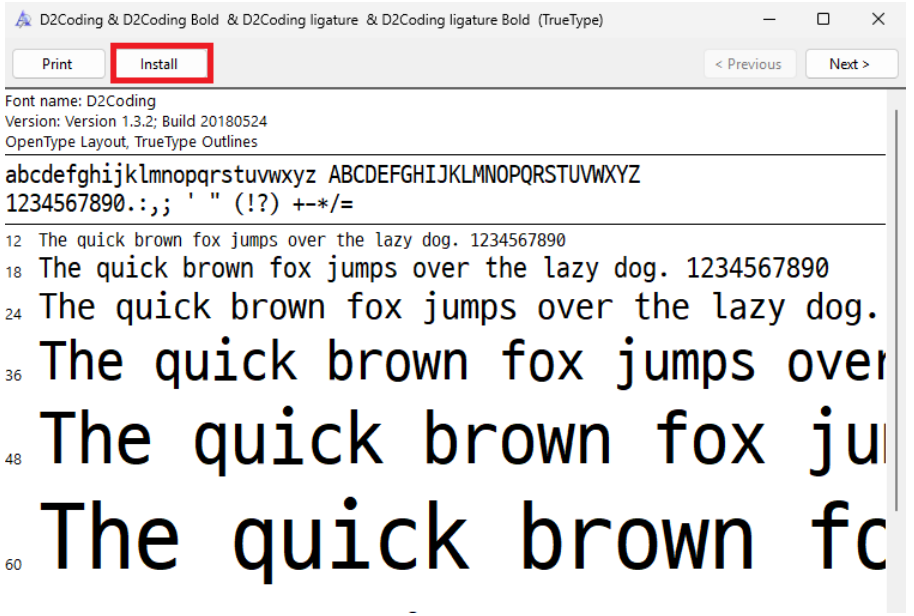
- Click the Extensions icon in the Activity Bar on the left.
- In the search bar, type "C/C++".
- Find and install "C/C++ Extension Pack" by Microsoft.

- After installing, 4 extensions are automatically added: C/C++, C/C++ Extension Pack, C/C++ Themes, CMake Tools

1.3. Additional Settings (Optional) – Fonts(1/2)

Download link: https://github.com/naver/d2codingfont

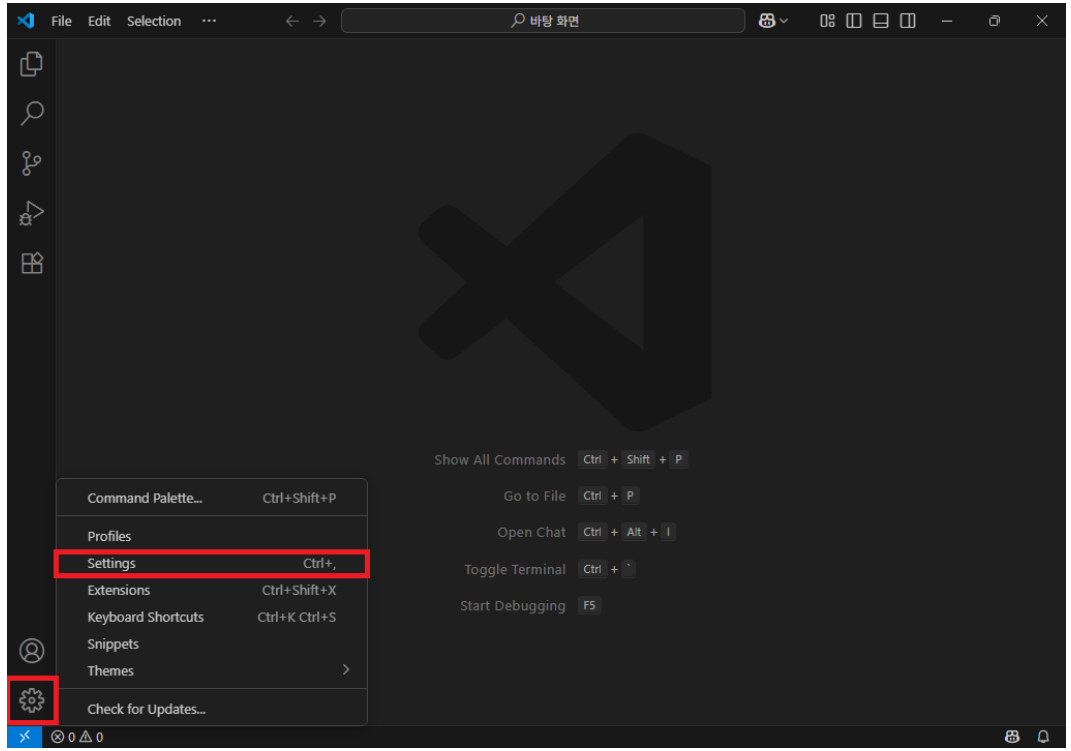




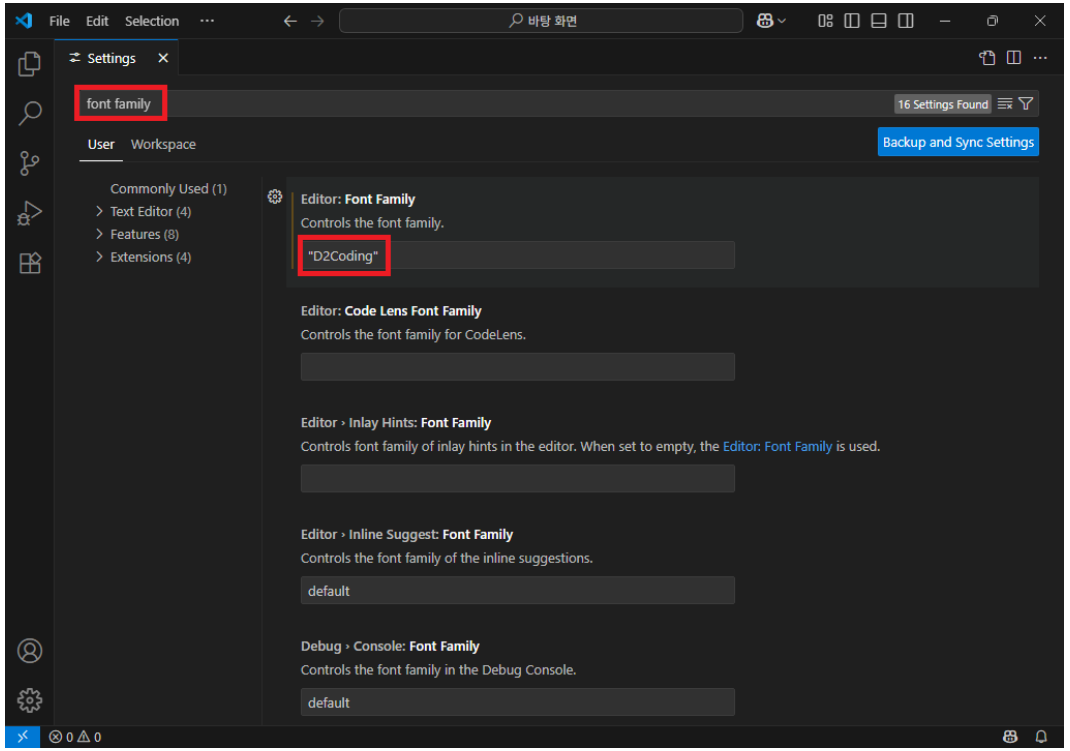
- Download the latest version.
- Extract the downloaded archive.

- Open the .ttc file inside the D2CodingAll.
- Click "Install" to install the font.

1.3. Additional Settings (Optional) – Fonts(2/2)

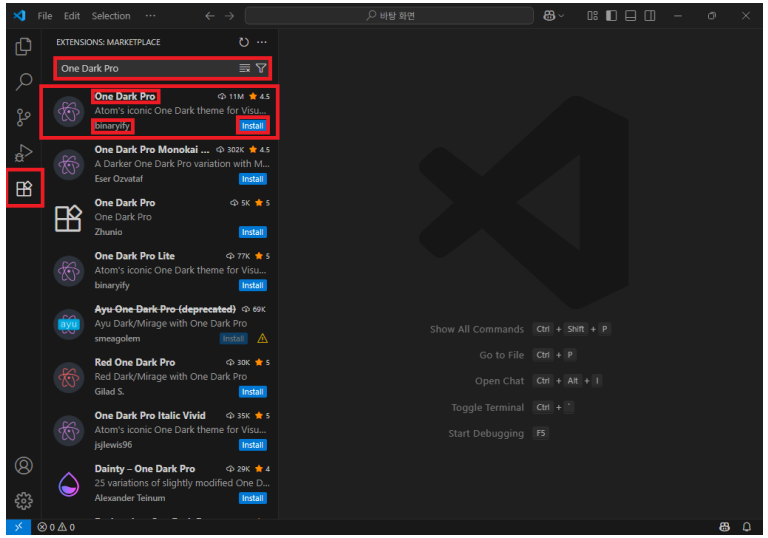


- Click the gear icon in the bottom-left corner to open the menu.
- From the menu, select “Settings”.

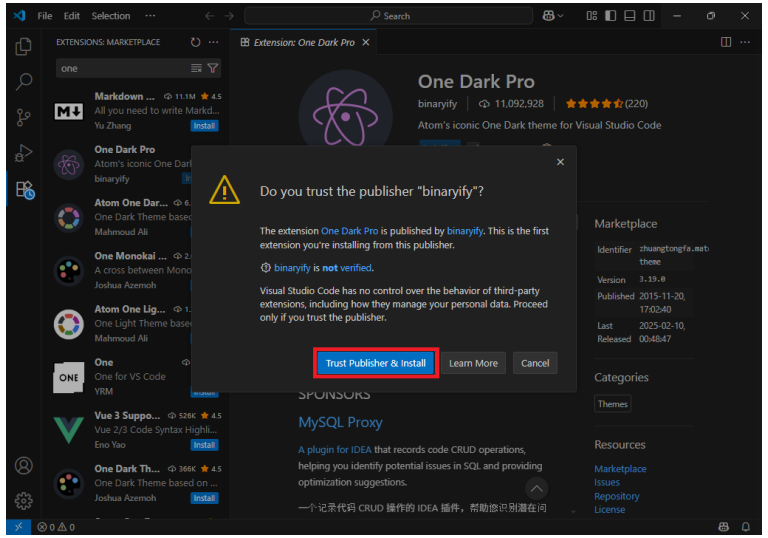


- In the search bar at the top, type font family.
- In Editor: Font Family, type "D2Coding" to set the editor font.

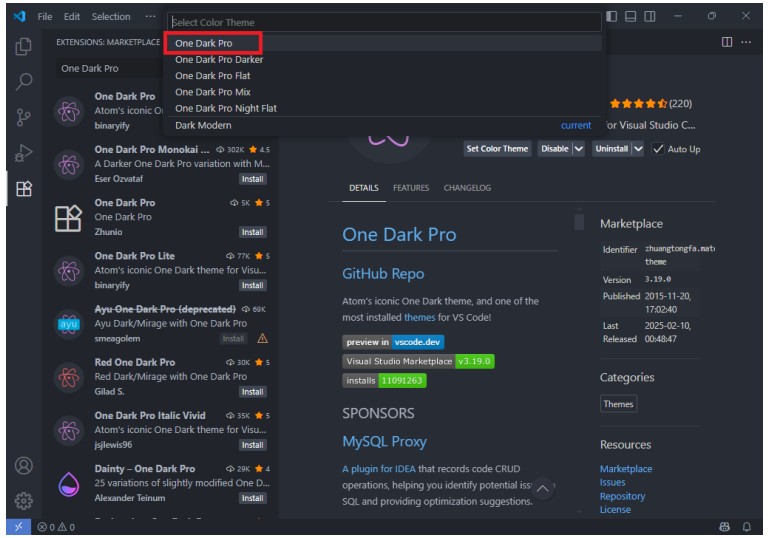
1.3. Additional Settings (Optional) – Themes



- Click the Extensions icon in the Activity Bar on the left.
- In the search bar, type "One Dark Pro".
- Find and install One Dark Pro by binaryify.



- Click "Trust Publisher & Install" when prompted.
- This completes the theme installation.



- After installation, a list of themes appears.
- Select "One Dark Pro" to apply it.

2. Installing the GCC Compiler(1/4)

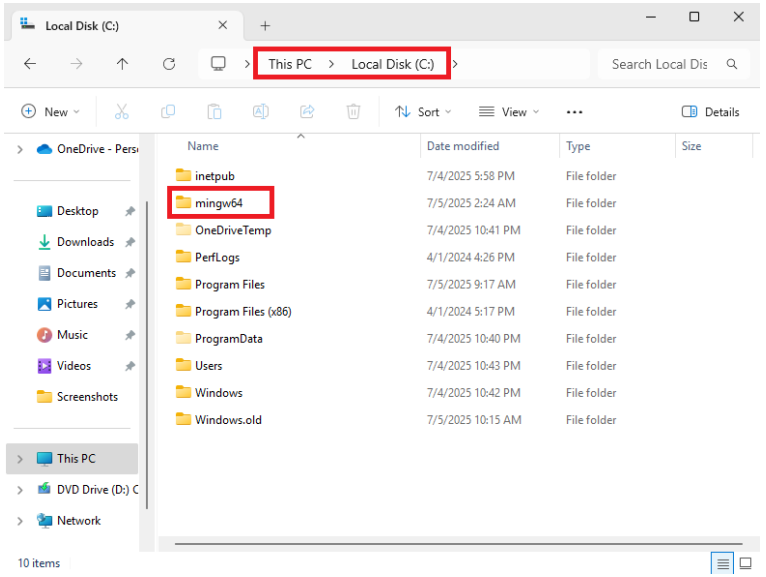
Download link: https://winlibs.com

Release versions

UCRT runtime

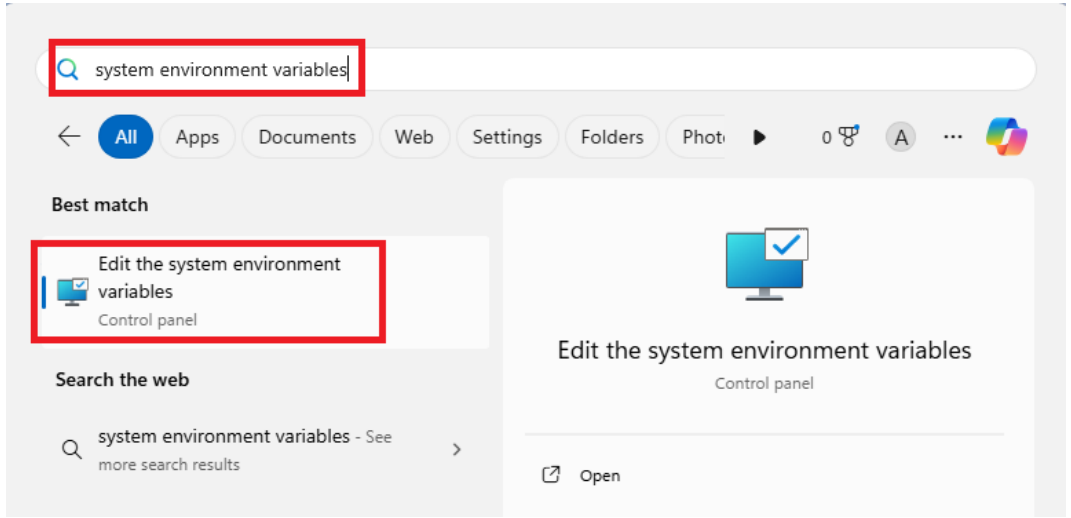
- GCC 15.1.0 (with **POSIX** threads) + MinGW-w64 13.0.0 UCRT - release 2 **(LATEST)**
  - Win32 (without LLVM/Clang/LLD/LLDB): 7-Zip archive* | Zip archive
  - Win64 (without LLVM/Clang/LLD/LLDB): 7-Zip archive* | Zip archive
- GCC 15.1.0 (with **POSIX** threads) + MinGW-w64 12.0.0 UCRT - release 1
  - Win32 (without LLVM/Clang/LLD/LLDB): 7-Zip archive* | Zip archive
  - Win64 (without LLVM/Clang/LLD/LLDB): 7-Zip archive* | Zip archive

- Click on Zip archive (Win64) to download the latest GCC version.
  Recommended: version with UCRT and POSIX threads
- Extract the downloaded archive.

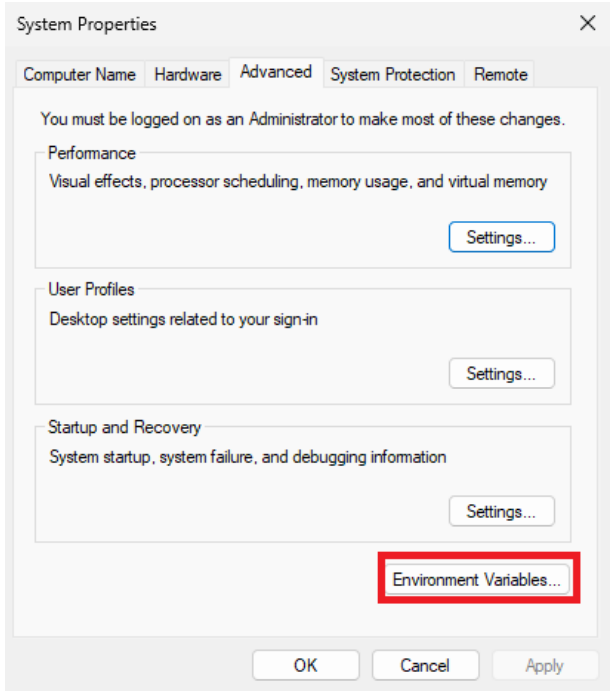


- Move the root-level mingw64 folder to the C: drive.
- Make sure the final path is exactly C:\mingw64.

2. Installing the GCC Compiler(2/4)

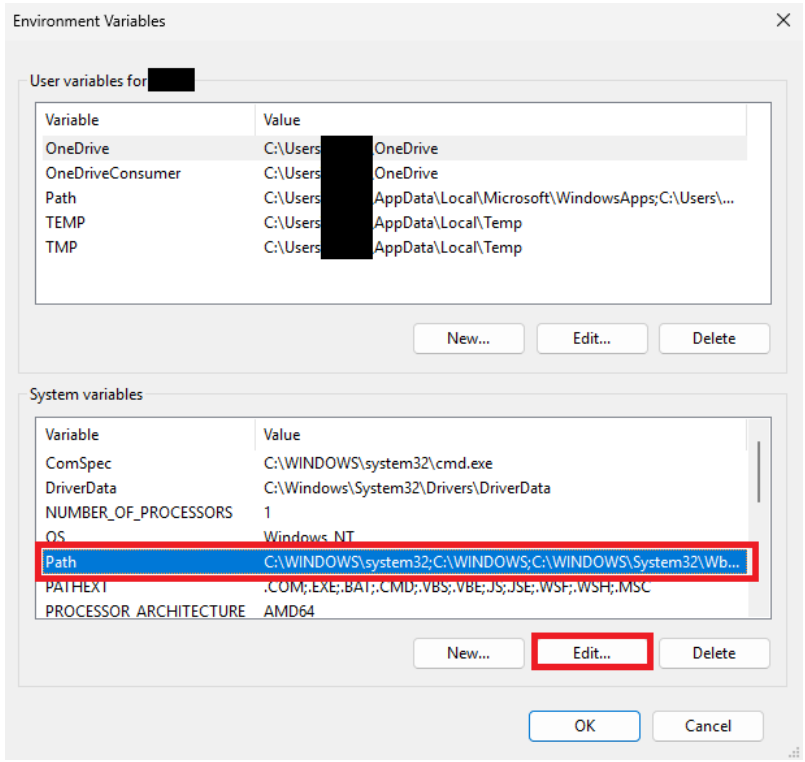


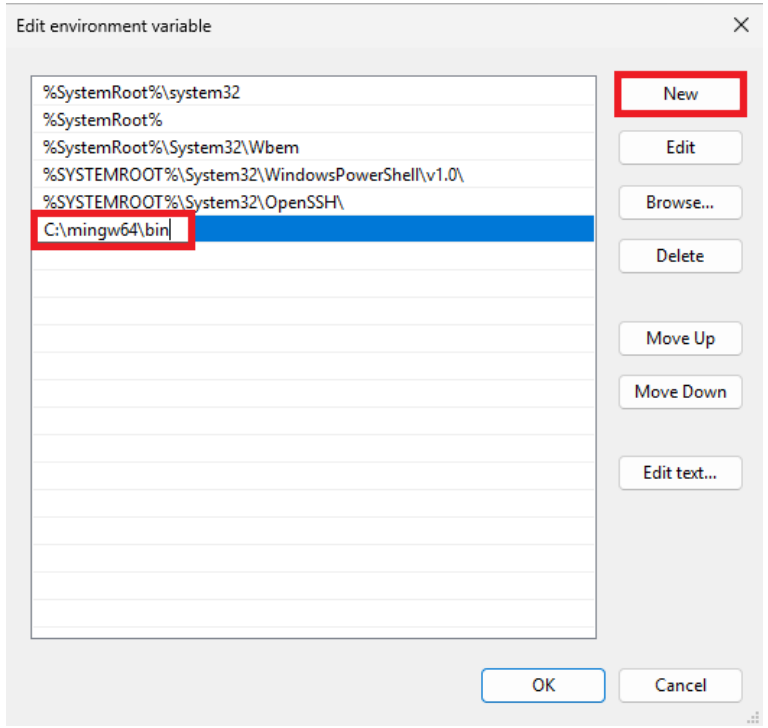
- Press the Windows key and type "system environment variables".
- Select "Edit the system environment variables" from the search results.



- Click "Environment Variables..." at the bottom.

2. Installing the GCC Compiler(3/4)

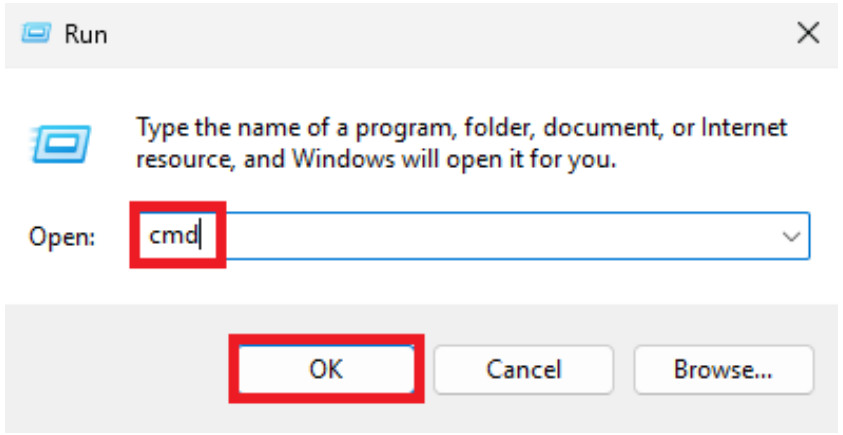


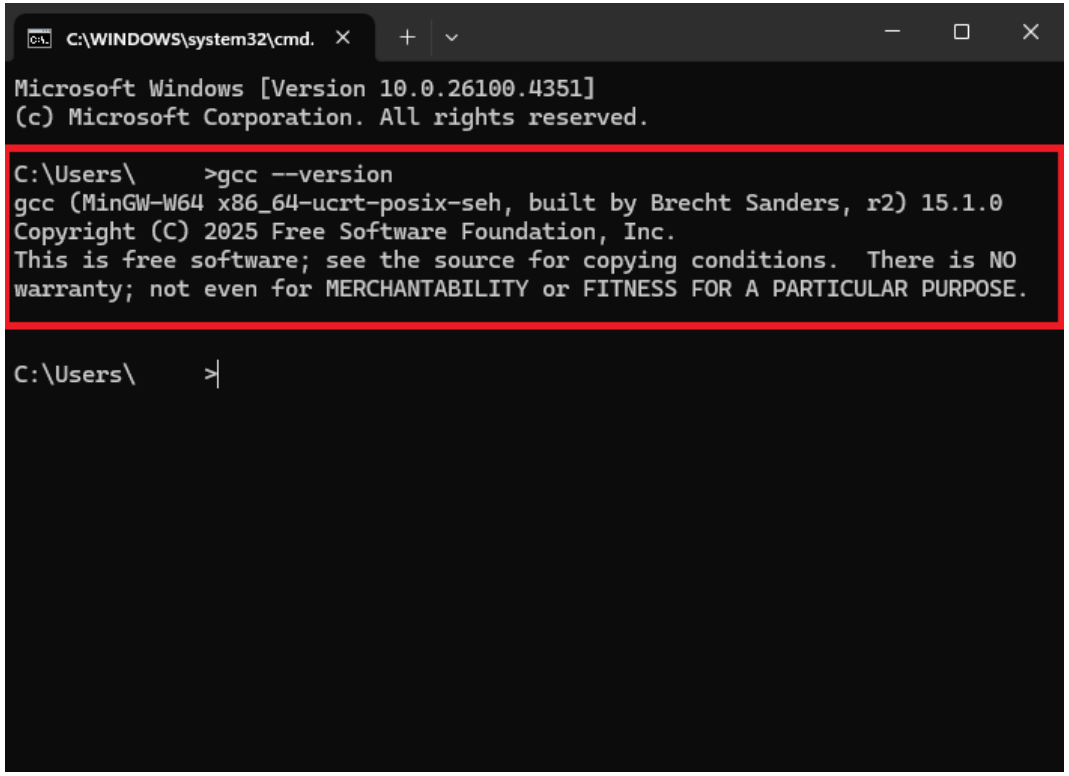


- Under System variables, find and select the Path variable.
- Click "Edit..." to open the list of environment paths.

- Click "New" and add the following path: C:\mingw64\bin
- This allows you to run gcc and related commands from any terminal.
- Click "OK" on all open dialogs to save the changes and close the windows.

2. Installing the GCC Compiler(4/4)

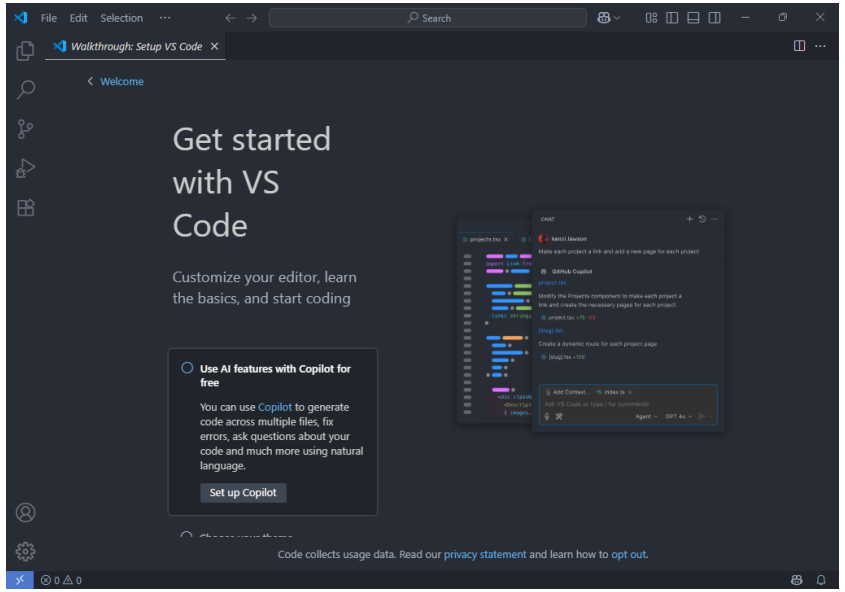




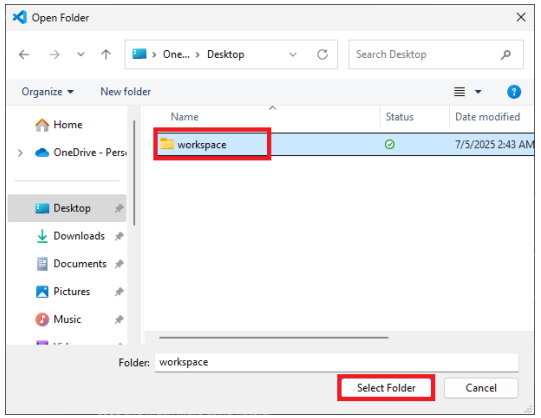
- Press "Windows + R", type "cmd" in the Run dialog box, and click "OK".

- To verify the setup, open Command Prompt and run "gcc --version".
- The version number should be displayed without any errors.

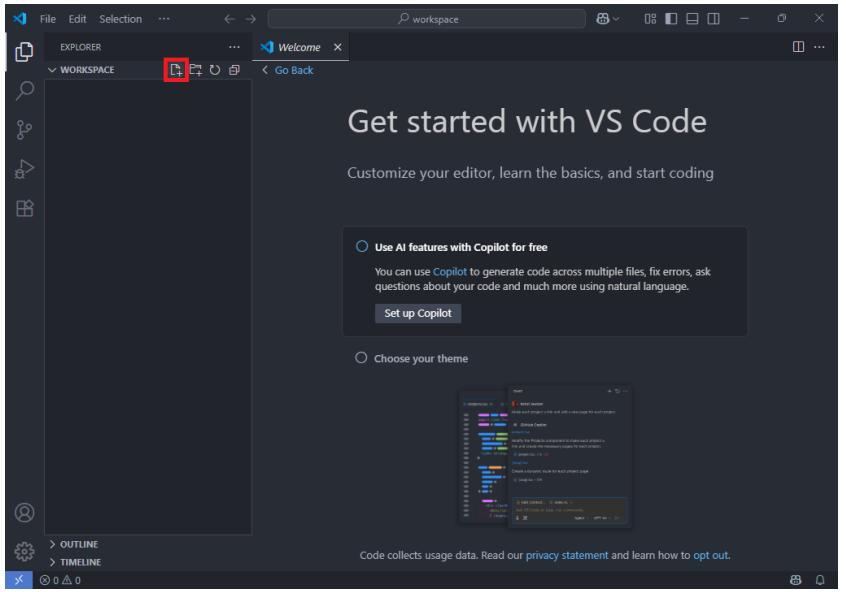
3. Writing and Running Your First C Program(1/3)



- Launch Visual Studio Code.
- Press "Ctrl + K", then "O" to open the folder you want to use.

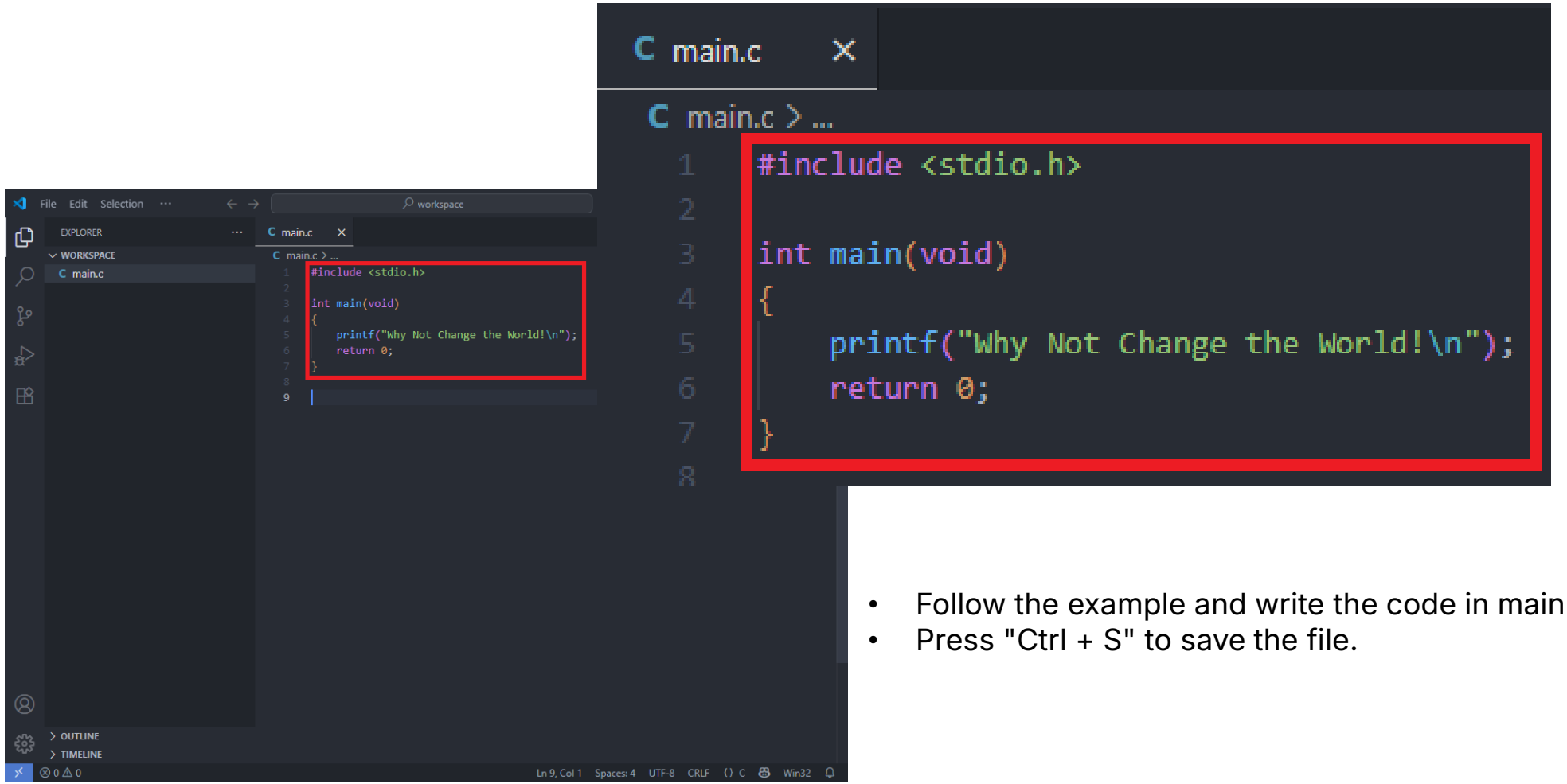


- Create a folder and click "Select Folder".



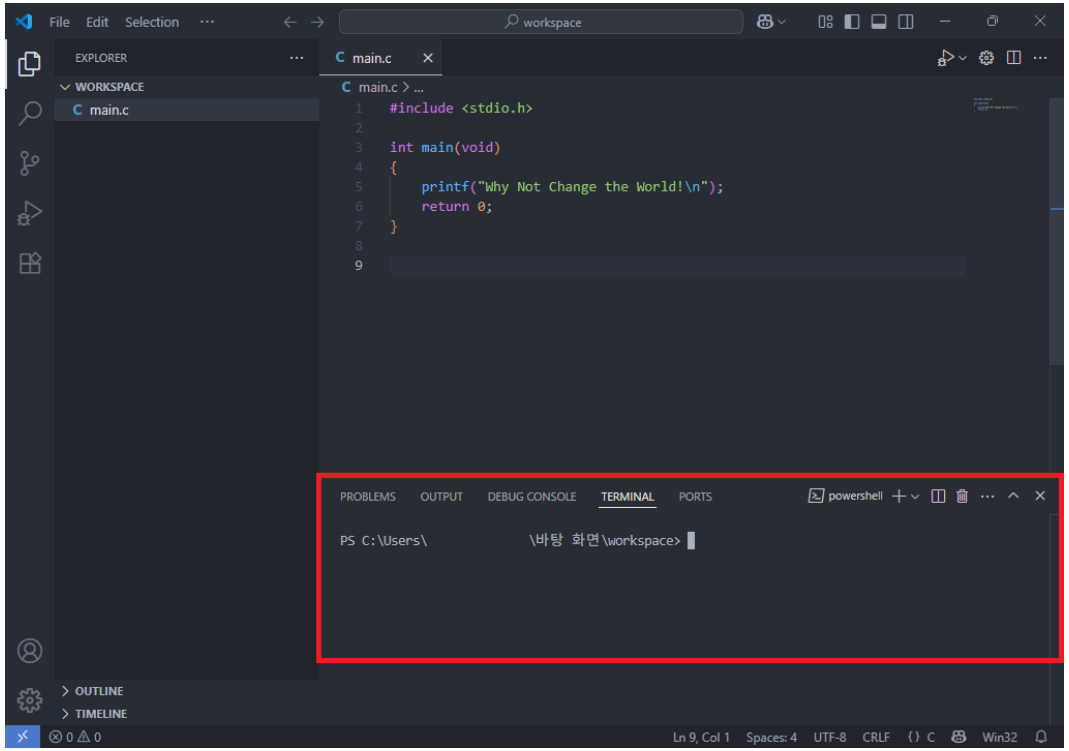
- Click the New File icon and create a file named "main.c".

3. Writing and Running Your First C Program(2/3)

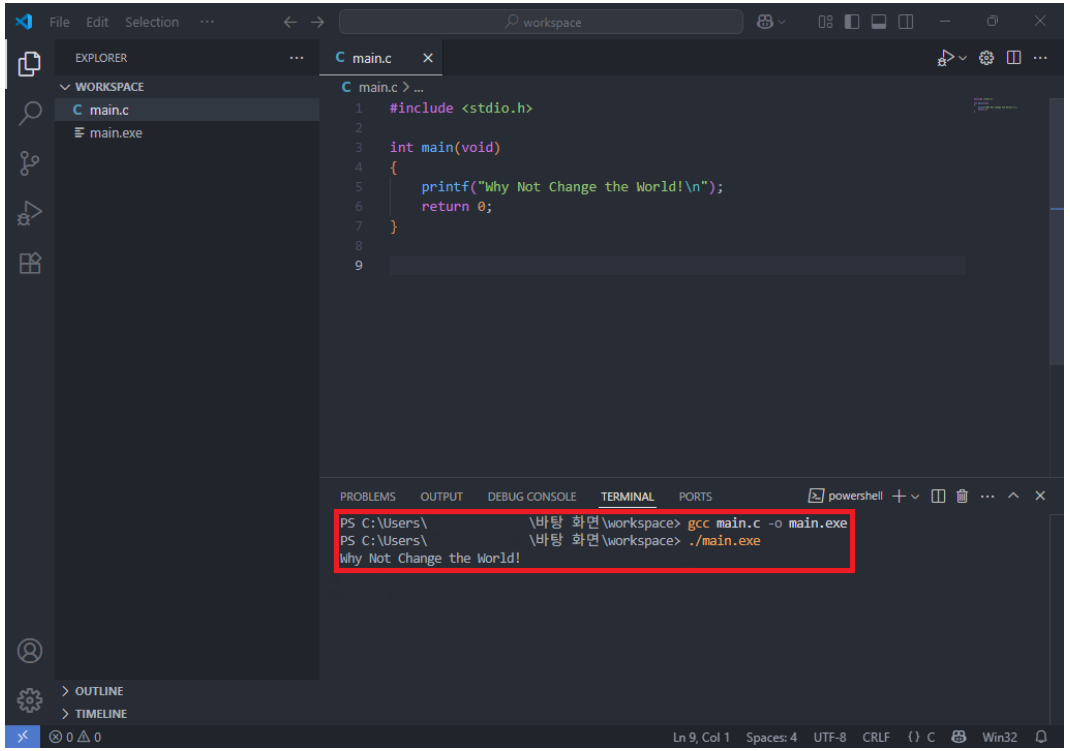


- Follow the example and write the code in main.c.
- Press "Ctrl + S" to save the file.

3. Writing and Running Your First C Program(3/3)



- Press "Ctrl + `" to open the integrated terminal at the bottom.



- In the terminal, type: "gcc main.c -o main.exe"
- In the terminal, type: "./main.exe"
- Seeing the printed message means the setup is complete.

Thank you

Wishing you an enjoyable and meaningful learning experience.

May you grow into an engineer who learns with joy and shares with others.

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