

Efficient tools and techniques for modern software development

Visual Studio Code

Vineel Kovvuri

Senior SDE @ Microsoft



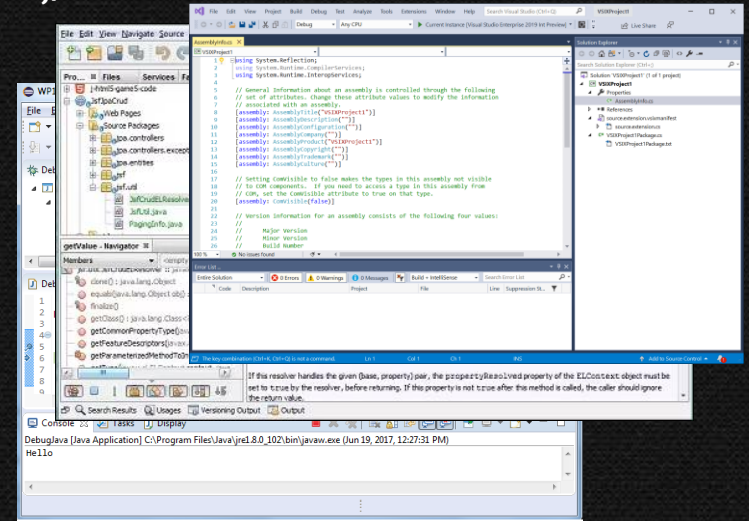
Agenda

- IDE vs Text Editor – Why VS Code?
- Installation – Launching VS Code
- How to write and execute programs
- Basic Editing/Navigation Tricks ★
- The Editor Overview
- Multiple Cursors ★★
- Extensions
- References

IDE vs Text Editor – Why VS Code?

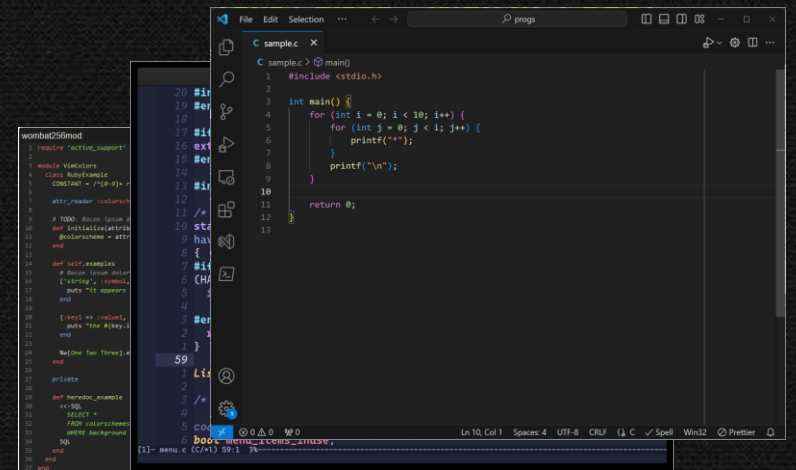
- IDE(Integrated Development Environment) – Eclipse/Netbeans/Intellij/**Visual Studio***

- Pros:
 - They include compilers and integrated tools to build end to end projects
- Cons:
 - Big in size(around few GBs)
 - Cannot handle large projects
 - Usually Paid and not free/open source



- Text Editors – **Visual Studio Code**/Vim/Emacs

- Pros:
 - **Light weight**(around few MBs).
 - Can handle **large code bases** and very versatile and flexible to customize
 - **Open source** and free of cost
- Cons:
 - Do not include compilers/debuggers.
 - Building end to end projects require working with build systems separately.

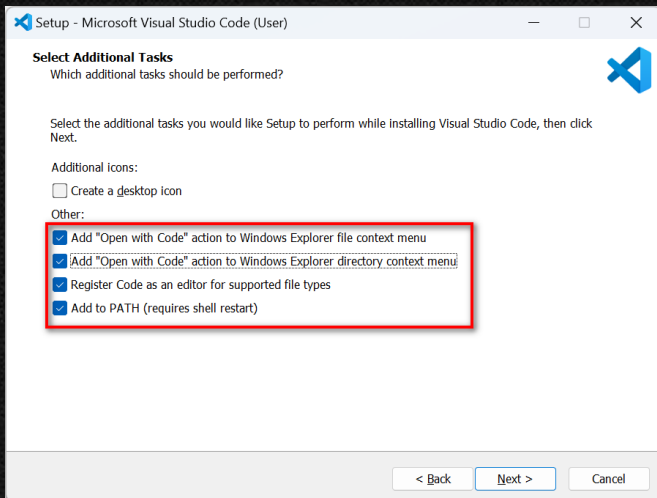


- Please do not use Notepad/Notepad++ 😊

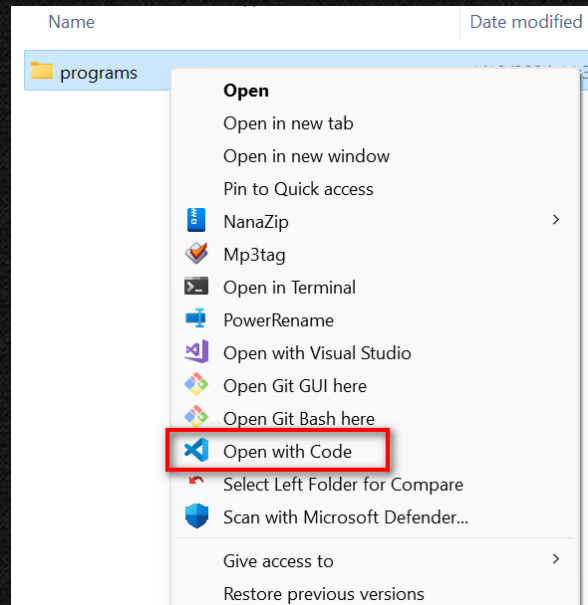
***Visual Studio** is different from **Visual Studio Code**

Installation – Launching VS Code

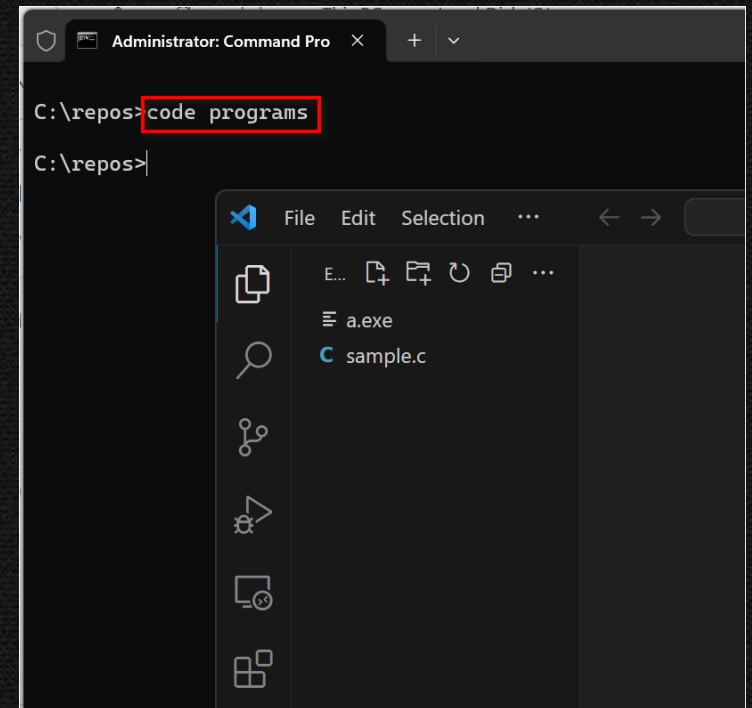
<https://code.visualstudio.com/download>



Via Explorer Context Menu



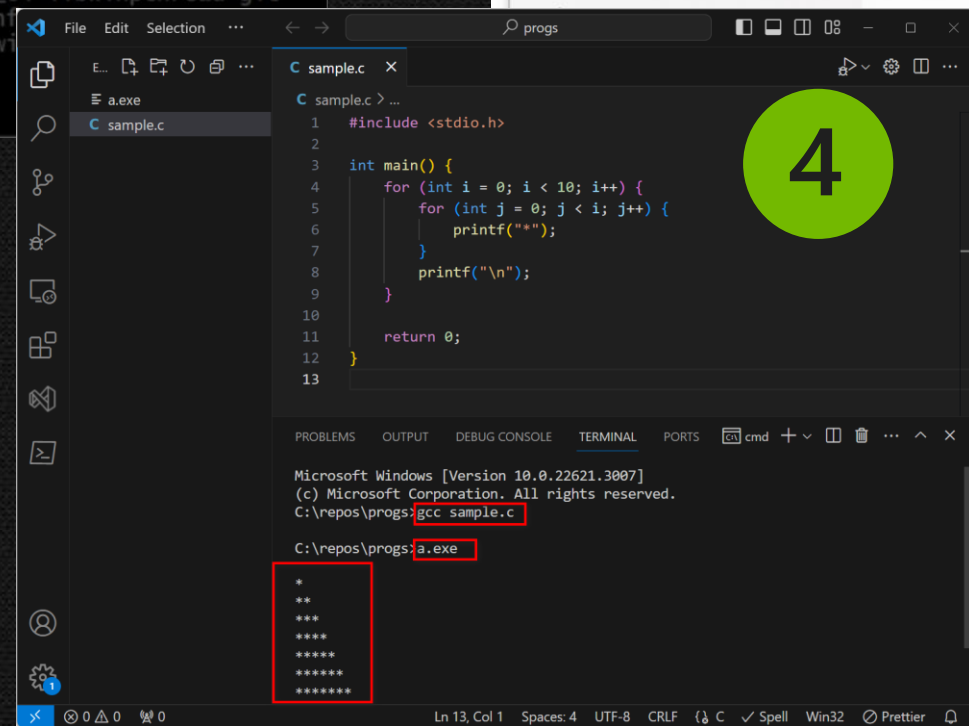
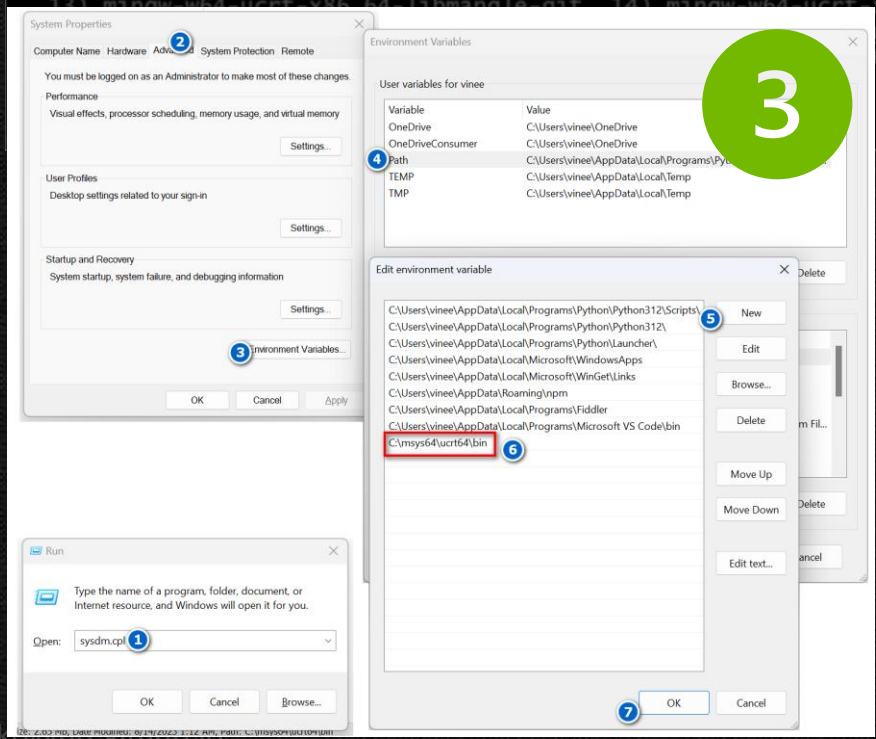
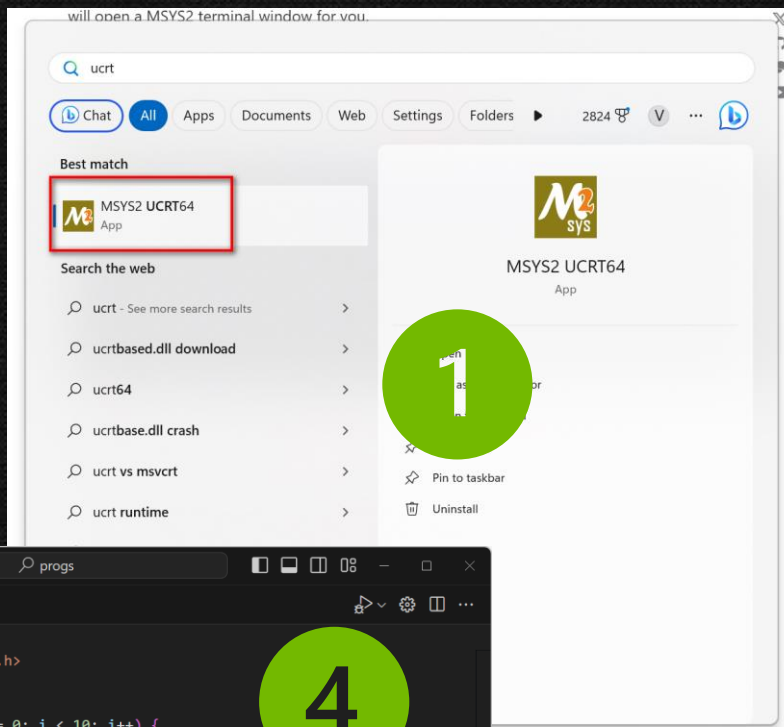
Via Command line – Code.exe



How to write and execute programs?

- Install **MSYS2**

```
pacman -S --needed base-devel mingw-w64-ucrt-x86_64-toolchain
warning: base-devel-2022.12-2 is up to date -- skipping
:: There are 19 members in group mingw-w64-ucrt-x86_64-toolchain:
:: Repository ucrt64
 1) mingw-w64-ucrt-x86_64-binutils  2) mingw-w64-ucrt-x86_64-crt-git
 3) mingw-w64-ucrt-x86_64-gcc      4) mingw-w64-ucrt-x86_64-gcc-ada
 5) mingw-w64-ucrt-x86_64-gcc-fortran 6) mingw-w64-ucrt-x86_64-gcc-libgfortran
 7) mingw-w64-ucrt-x86_64-gcc-libs 8) mingw-w64-ucrt-x86_64-gcc-objc
 9) mingw-w64-ucrt-x86_64-gdb     10) mingw-w64-ucrt-x86_64-gdb-multiarch
11) mingw-w64-ucrt-x86_64-headers-git 12) mingw-w64-ucrt-x86_64-libgccjit
13) mingw-w64-ucrt-x86_64-libmangle-git 14) mingw-w64-ucrt-x86_64-libwinpthread-git
```



How to write and execute programs in Linux?

```
vineelkovvuri@xps15: ~  
File Edit View Search Terminal Help  
To run a command as administrator (user "root"), use "sudo <command>".  
See "man sudo_root" for details.  
vineelkovvuri@xps15:~$ sudo apt install gcc  
[sudo] password for vineelkovvuri:  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
gcc is already the newest version (4:12.2.0-1ubuntu1).  
gcc set to manually installed.  
0 upgraded, 0 newly installed, 0 to remove and 0 not installed.  
vineelkovvuri@xps15:~$
```

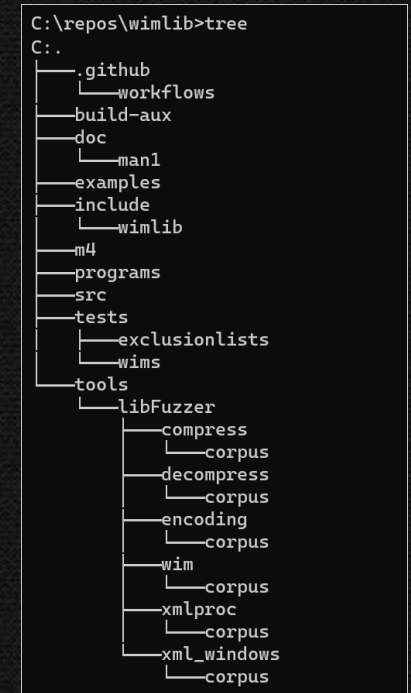
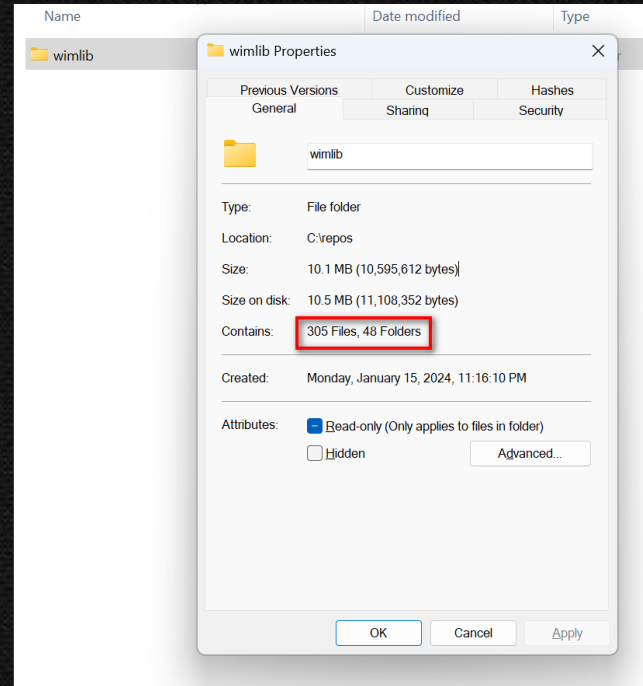
```
vineelkovvuri@xps15: ~/repos  
File Edit View Search Terminal Help  
vineelkovvuri@xps15:~/repos$ code .  
vineelkovvuri@xps15:~/repos$
```

```
sample.c - repos - Visual Studio Code  
File Edit Selection View Go Run Terminal Help  
EXPLORER  
REPOS  
a.out  
sample.c  
C sample.c x  
C sample.c  
1 #include <stdio.h>  
2  
3 int main()  
4 {  
5     printf("Hi");  
6     return 0;  
7 }  
8  
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS  
bash +  
● vineelkovvuri@xps15:~/repos$ gcc sample.c  
● vineelkovvuri@xps15:~/repos$ ./a.out  
● Hi  
vineelkovvuri@xps15:~/repos$  
Ln 8, Col 1 Spaces: 4 UTF-8 LF C
```

The Editor Overview

- **Ctrl + Shift + P** – Open Command Palette
- **Ctrl + P** – Open File from workspace(?)
- Explorer
 - Create files with multiple sub directories deep
 - Compare Files
- Editor tabs – Copy Path
- 80/100 Column Guides
- Indent Guides
- **Ctrl + F/H** – Find/Replace in current file
- Scroll bar search highlights
- **Ctrl + Shift + F/H** – Find/Replace in workspace
- **Ctrl + ** - Splits
- Sticky Scroll

- **Ctrl + Shift + ** - Find the matching brace
- **Alt + Left/Right** – Navigation history
- Remove blank lines



Basic Editing/Navigation Tricks

Left/Right – Navigate each character left/right

Ctrl – Jump b/w words

Home/End – Move to beginning and end of the line

Shift – Selection character

Delete/Backspace – deletes the next/previous character

Ctrl+A – Select all text

VS Code Specific

- Line Operations(no selection)
 - **Ctrl + C** – Copy entire line
 - **Ctrl + X** – Cut Line
- **Alt + Down/Up** – Move lines

```
1 Register a preview feature in your Azure subscription
2 functionality for a resource provider. Some preview
3
4 Ffeat require approval, the state is Registered. If
5 a preview feature requires approval, the registratio
6 request approval from the Azure service offering the
7 you request access through a support ticket. To requ
8 Azure support request. After the registration is app
9 state changes to Registered.
```

Ctrl+A

Basic editing walkthrough

Multiple Cursor

Ctrl + D – Create Multiple cursor at next occurrence – Search Method

Ctrl + Alt + Down/Up – Create Multiple cursors on each line – Drag Method

Shift + Alt + I – Create Multiple Cursors on all selected lines – Select Lines Method

Ctrl+F > Search > Alt+Enter – Create multiple cursor on all occurrences - Find All Method

```
1 Register a preview feature in your Azure subscription to expose more
2 functionality for a resource provider. Some preview features require
3 approval.
4
5 For a preview feature that doesn't require approval, the state is
6 Registered. If a preview feature requires approval, the registration
7 state is Pending. You must request approval from the Azure service
8 offering the preview feature. Usually, you request access through a
9 support ticket. To request approval, submit an Azure support request.
10 After the registration is approved, the preview feature's state changes
11 to Registered.
12
```

Multiple Cursors Walkthrough

Extensions

- Align
- Case conversion(Transform)
- Text Pastry - 1 to X
- Delete trailing spaces
- Commenting flow – **Alt + Q**
- Prettier – Code formatter – **Shift + Alt + F**
- VSCode-PDF extension
- Rainbow CSV extension

Extensions Walkthrough

References

- <https://github.com/vineelkovvuri/gvpcoe-sessions-2024/blob/master/VSCode>
- <https://stackoverflow.com/>
- <https://www.youtube.com/@code/shorts>
- <https://code.visualstudio.com/docs>



<https://vineelkovvuri.github.io>



vineel.kovvuri@gmail.com



<https://github.com/vineelkovvuri>



<https://www.linkedin.com/in/vineelkovvuri>



<https://youtube.com/@vineelkovvuri>



<https://discord.gg/baDQSPpE>

Thank You