Efficient tools and techniques for modern software development

Visual Studio Code

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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) – Eclispe/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
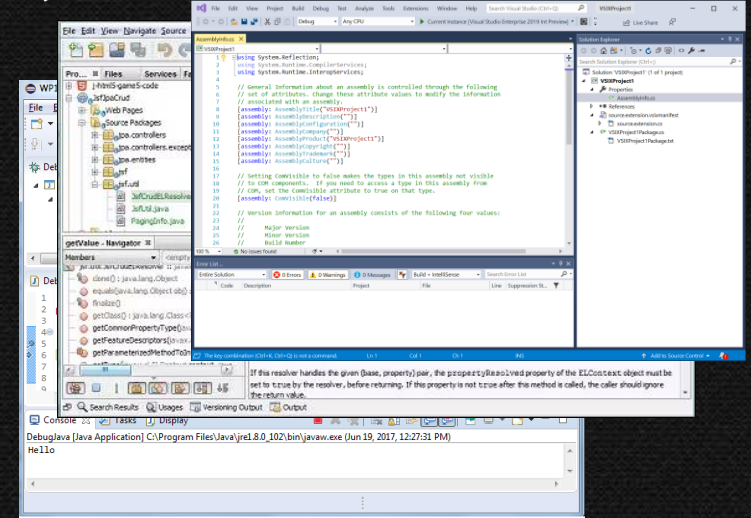
- Text Editors – Visual Studio Code/Vim/Emacs
    - Pros:
        - Light weight(around few MBs).
        - Can handle large code bases and very versatile and flexible to customize
        - Open source and free of cost
    - Cons:
        - Do not include compilers/debuggers.
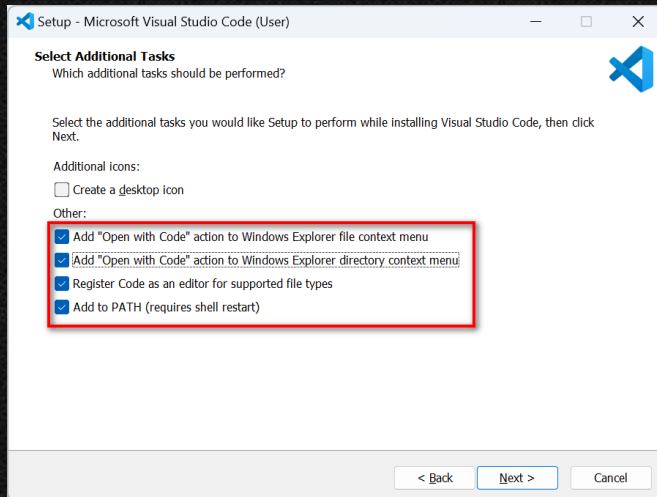   - Building end to end projects require working with build systems separately.
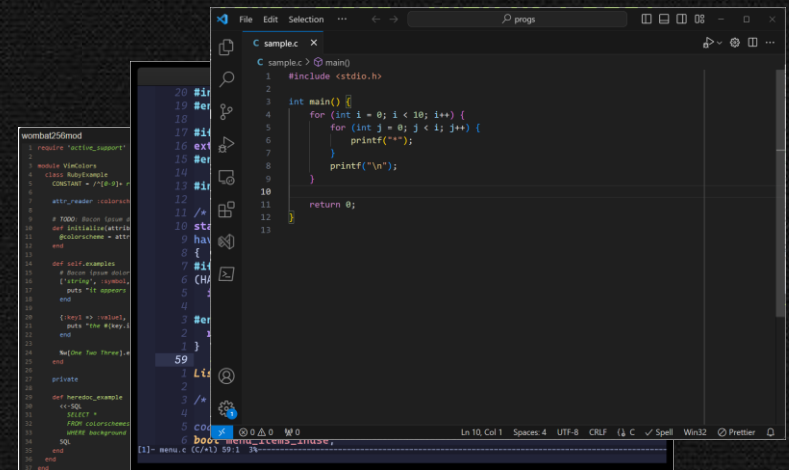
- Please do not use Notepad/Notepad++ 😄
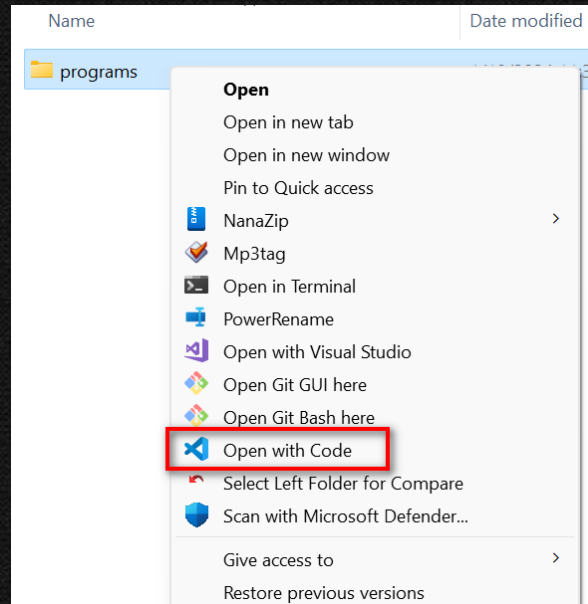
*Visual Studio is different from Visual Studio Code
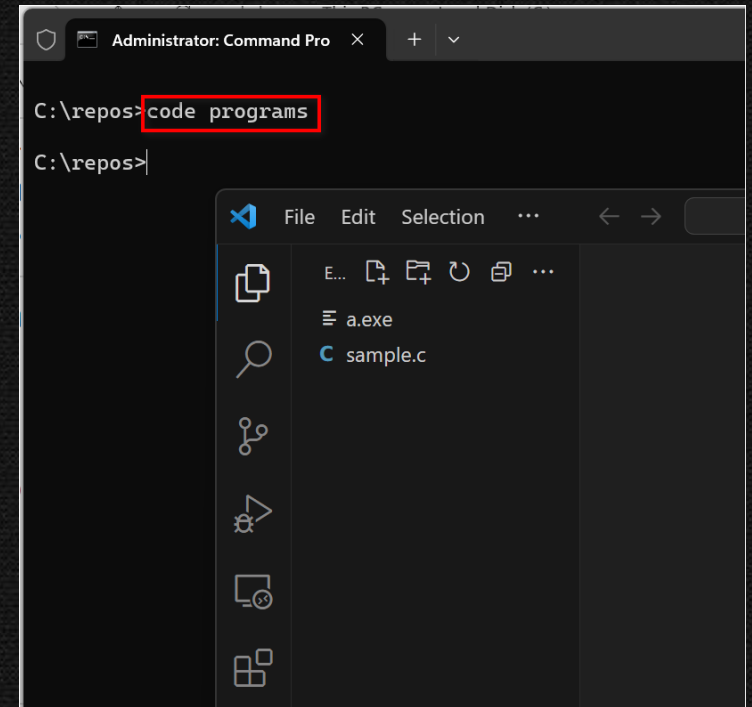
Installation – Launching VS Code

https://code.visualstudio.com/download

Via Explorer Context Menu
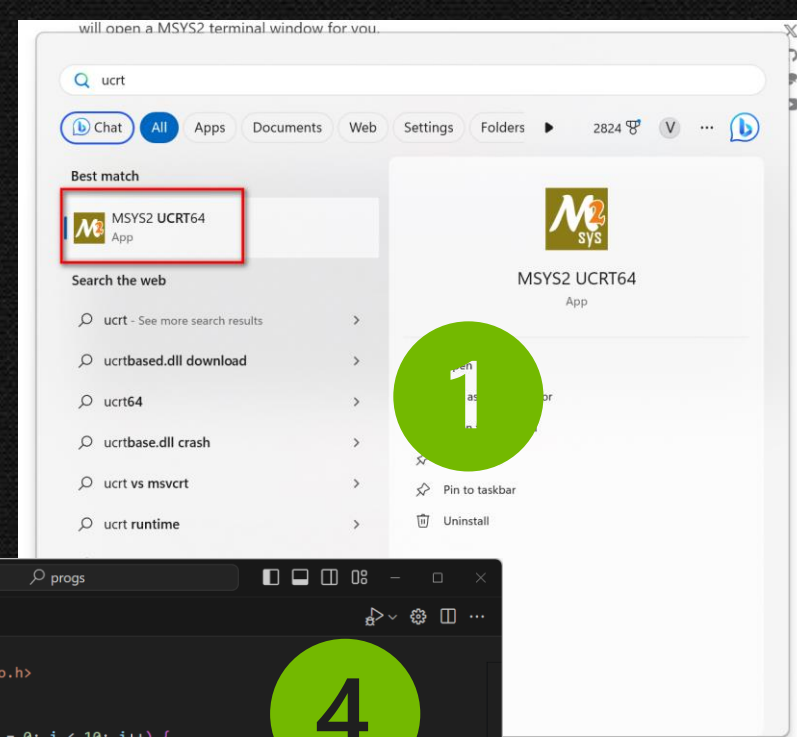
Via Command line – Code.exe
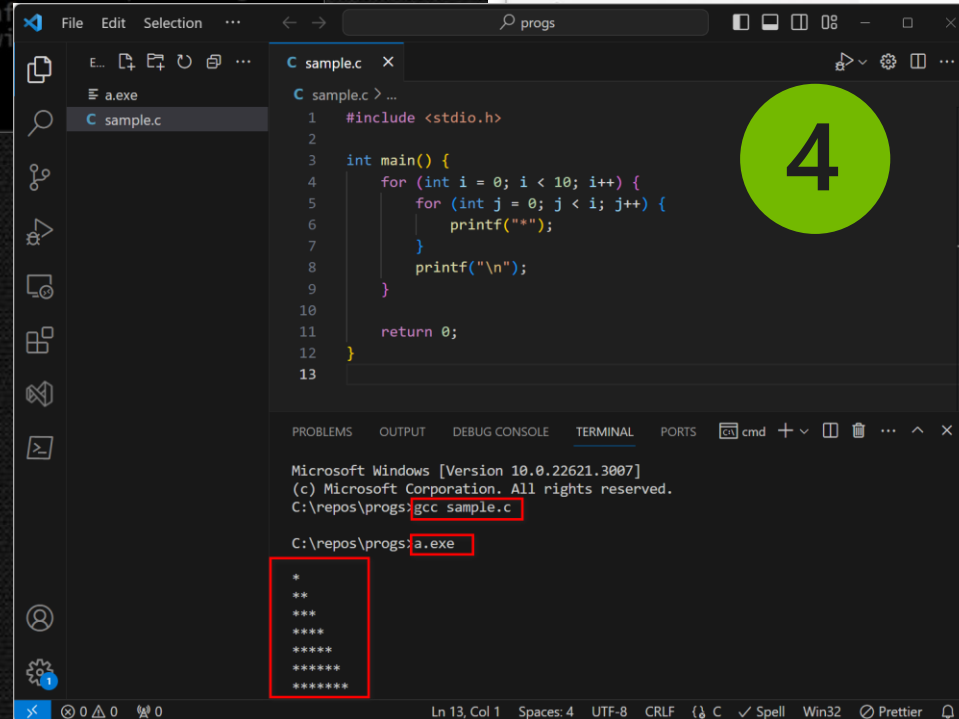
How to write and execute programs?
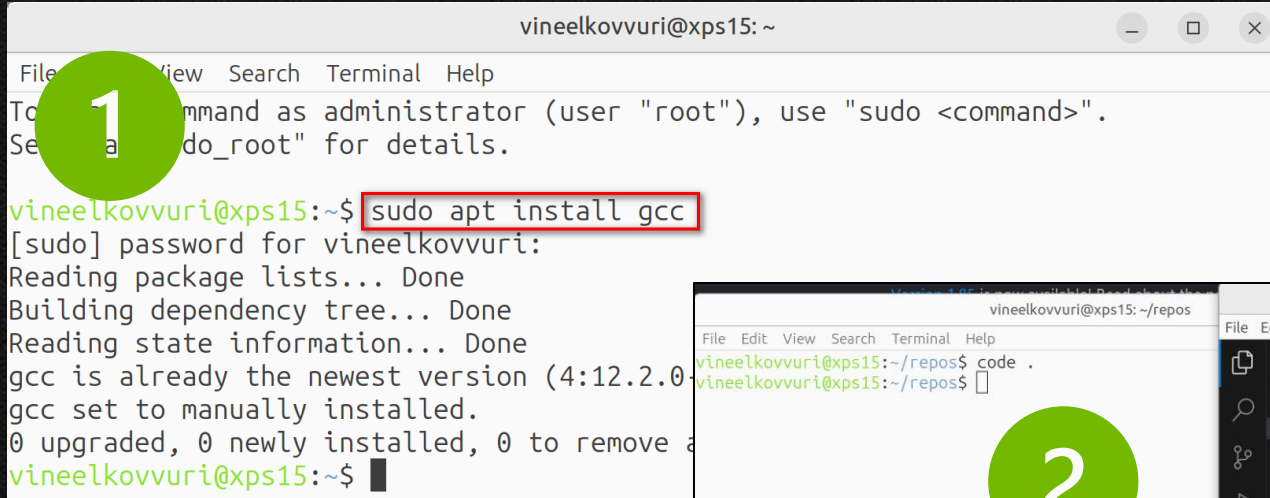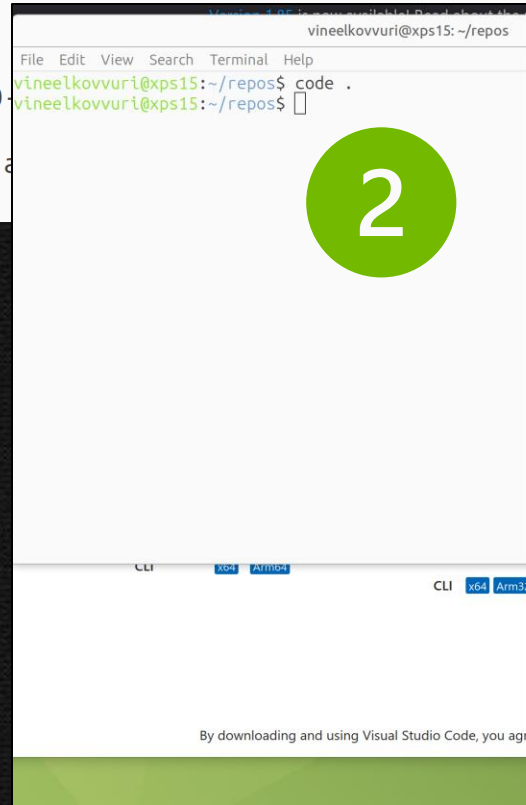
- Install MSYS2

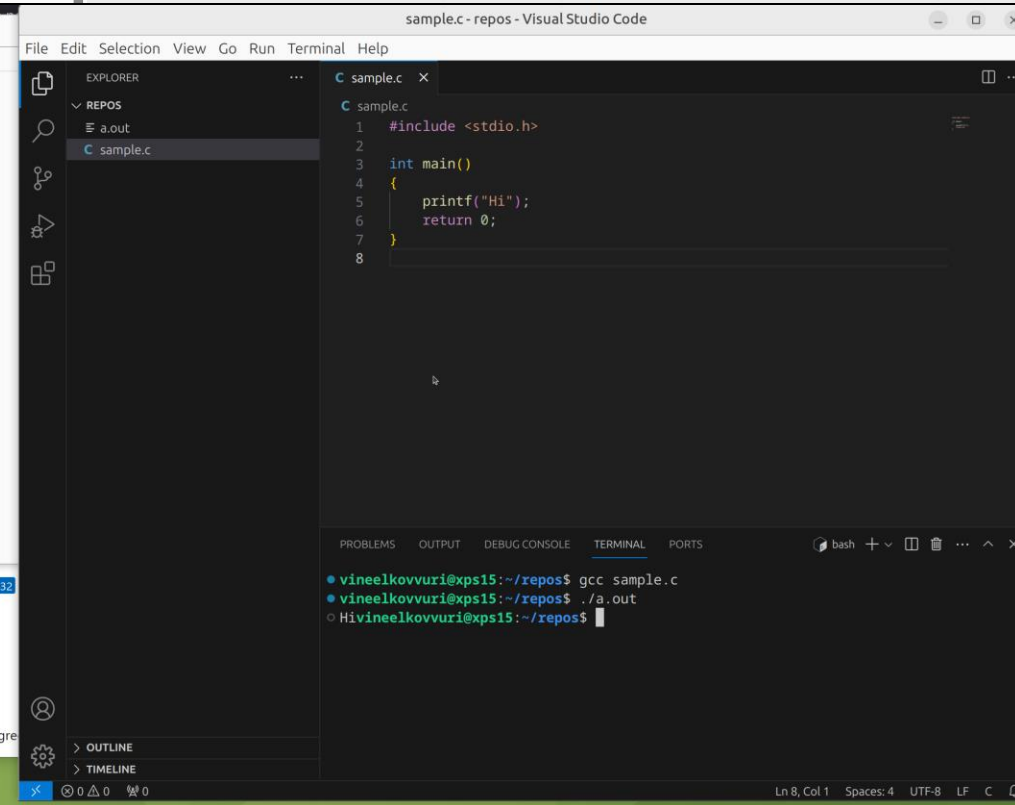# How to write and execute programs in Linux?

(1)

```
vineelkovvuri@xps15: ~

File    Edit    View    Search    Terminal    Help

To        mmand as administrator (user "root"), use "sudo <command>".
Se    a    do_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
gcc set to manually installed.
0 upgraded, 0 newly installed, 0 to remove
vineelkovvuri@xps15:~$
```

(2)

```
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                    C  sample.c  ✕

∨ REPOS                     C  sample.c
  ≡ a.out                   1    #include <stdio.h>
  C  sample.c               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
○ Hivineelkovvuri@xps15:~/repos$

> OUTLINE
> TIMELINE
                                                    Ln 8, Col 1   Spaces: 4   UTF-8   LF   C
```

CLI x64 Arm64   CLI x64 Arm32

By downloading and using Visual Studio Code, you agre

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
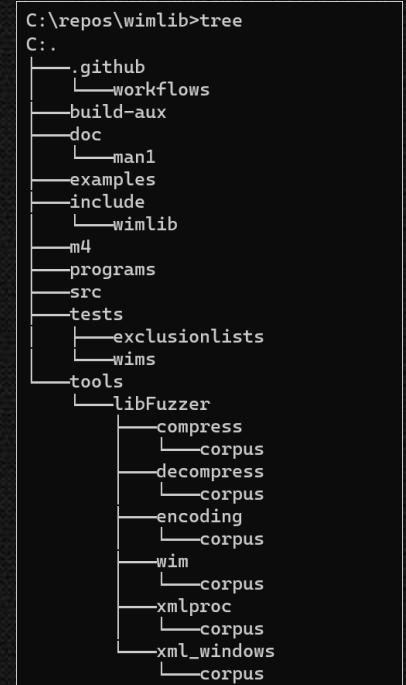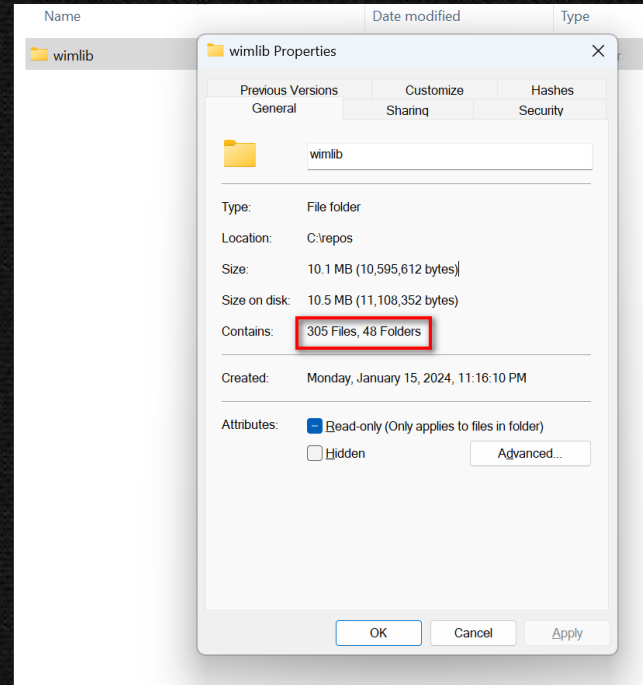
Basic Editing/Navigation Tricks

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 subscriptio
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

Thank You

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