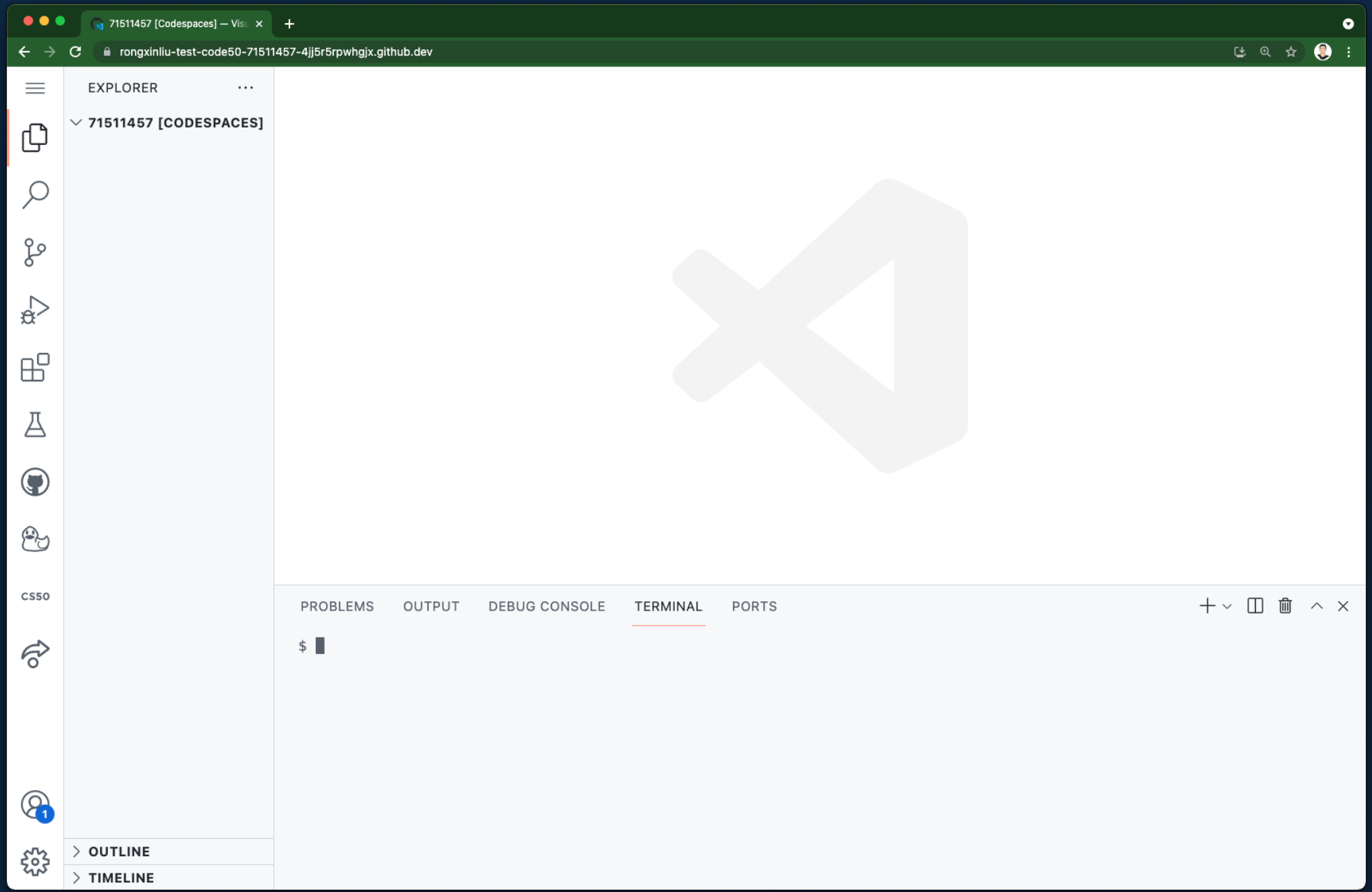
CS50 Seminar

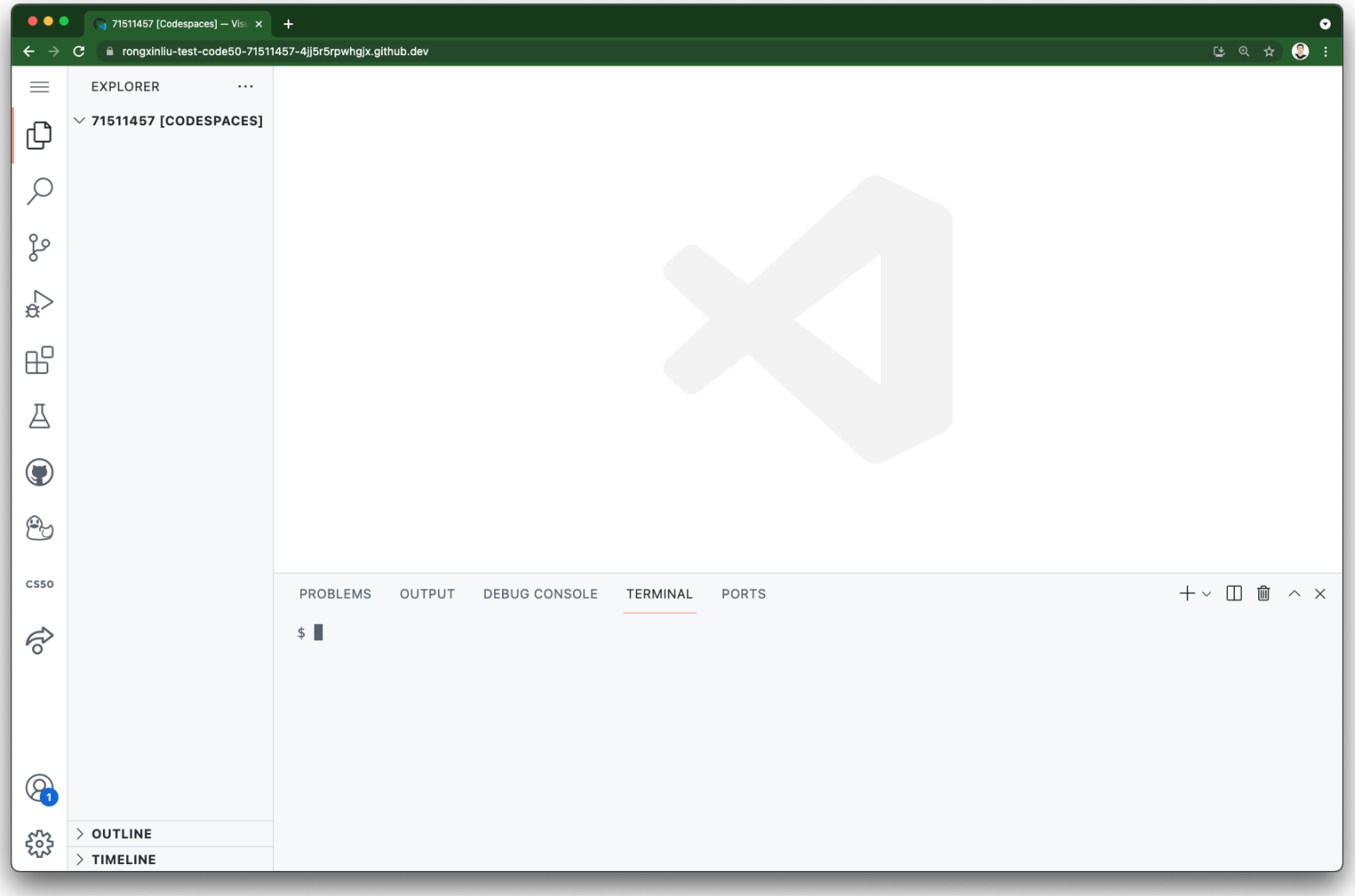
Flying the Nest

Andrew Holmes, Fall 2023

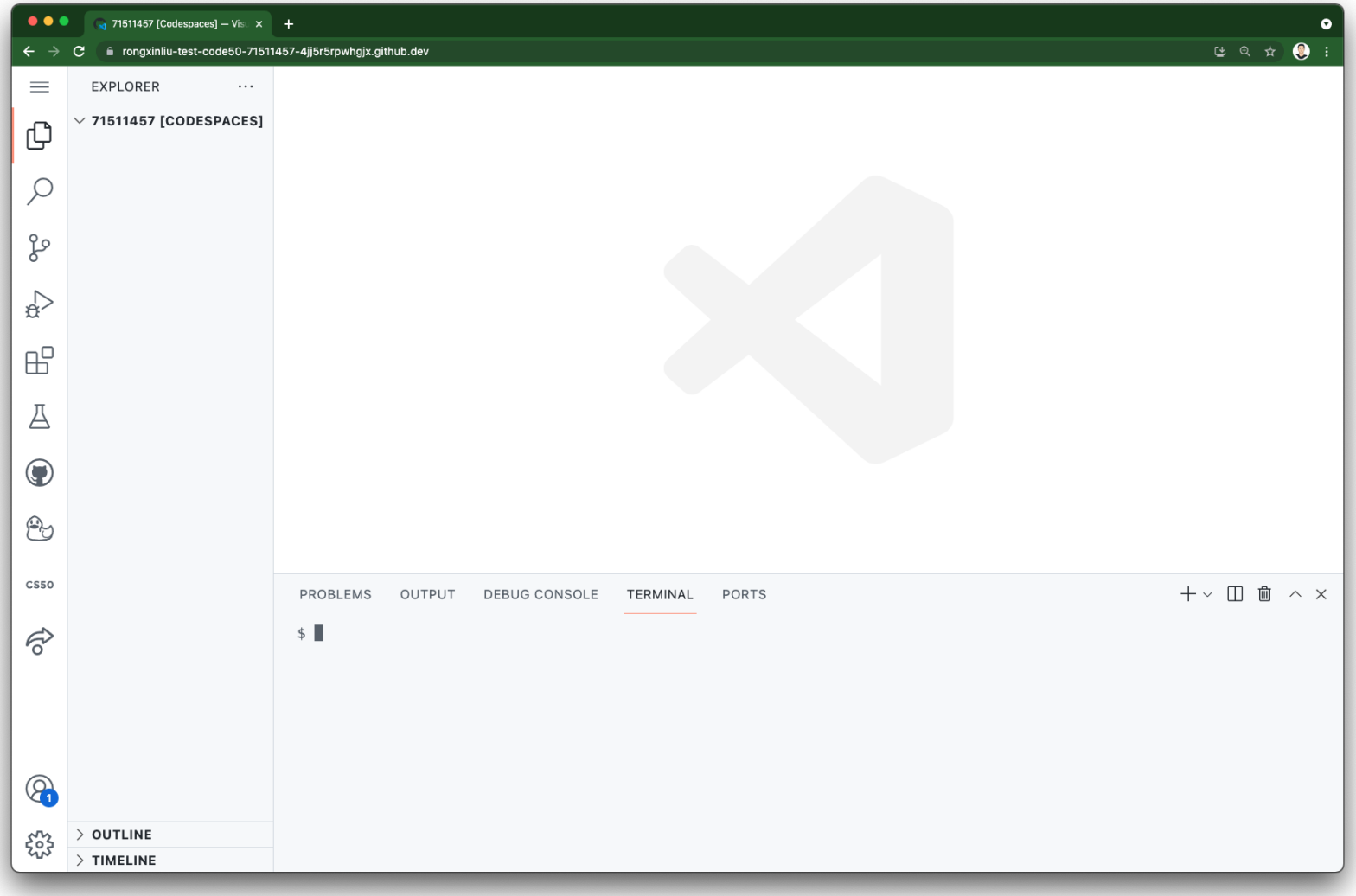

71511457 [Codespaces] — Visu
rongxinliu-test-code50-71511457-4jj5r5rpwhgjx.github.dev
EXPLORER
71511457 [CODESPACES]
CS50
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
$
OUTLINE
TIMELINE

Why Local Development?

- Offline work
- Customizable environment
- Simplicity and speed



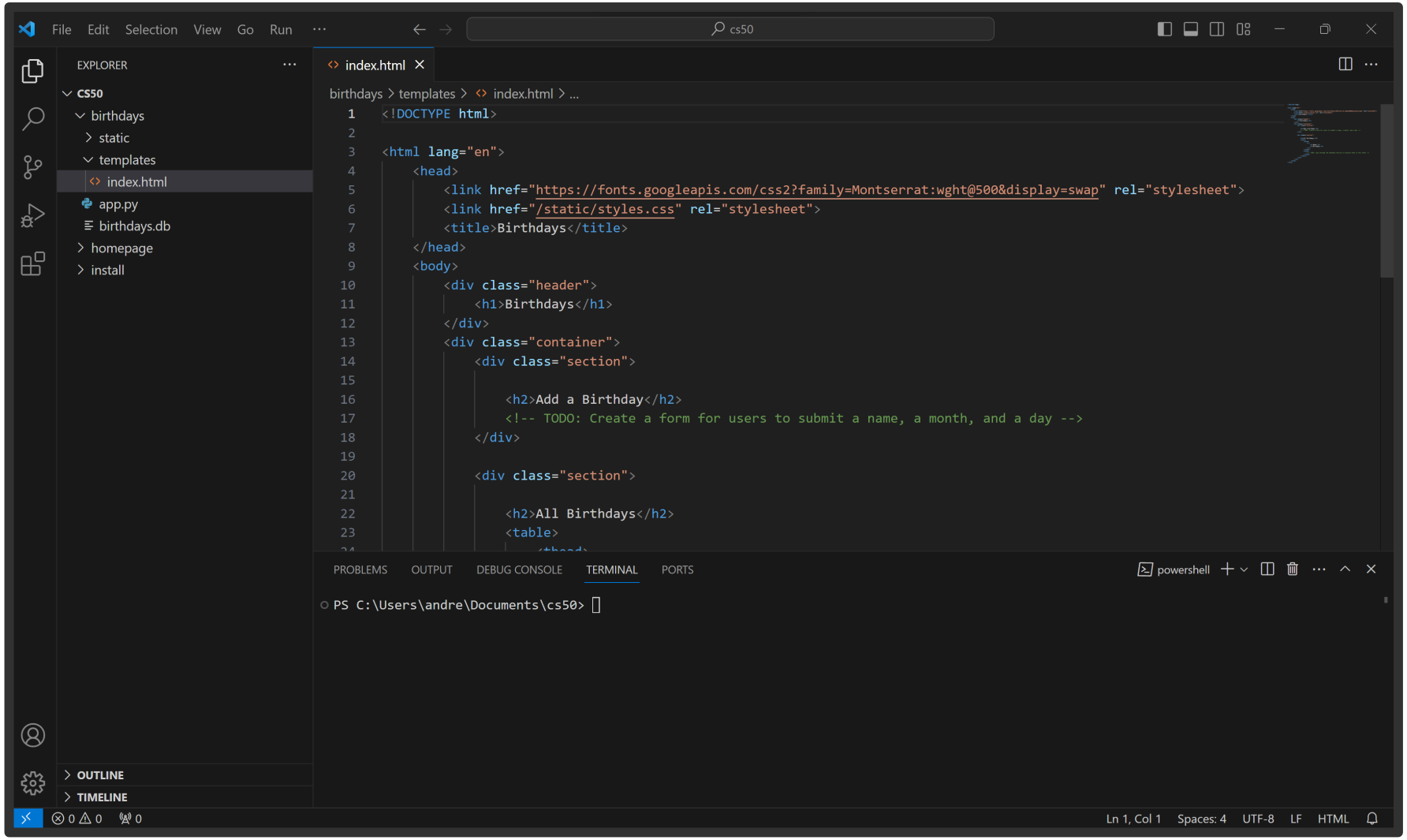
Why not Local Development?



- Pain to setup
- Hardware limitations
- Hardware dependent behavior
- Security

VSCode

- Familiar!
- Powerful!
- Common!

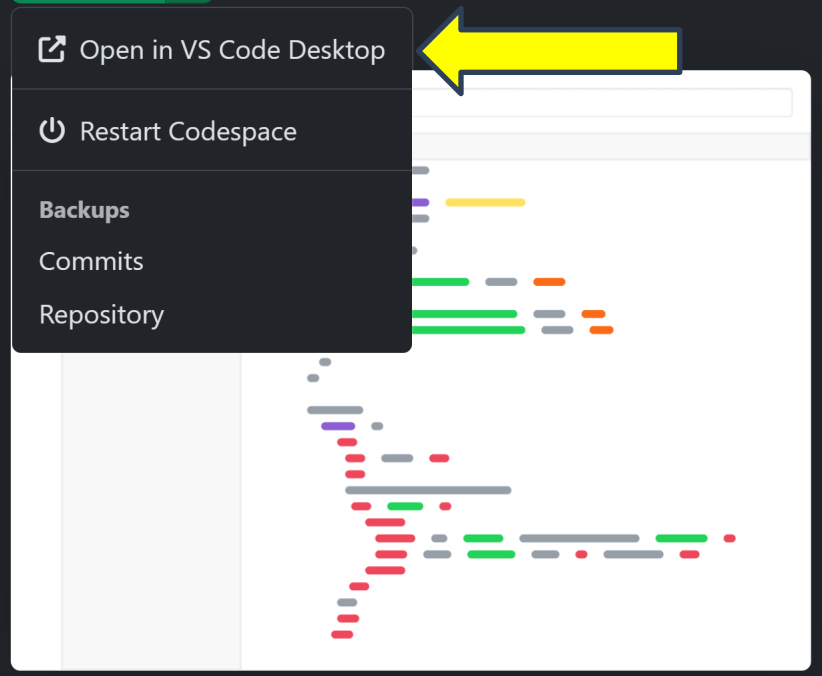


Visual Studio Code for CS50

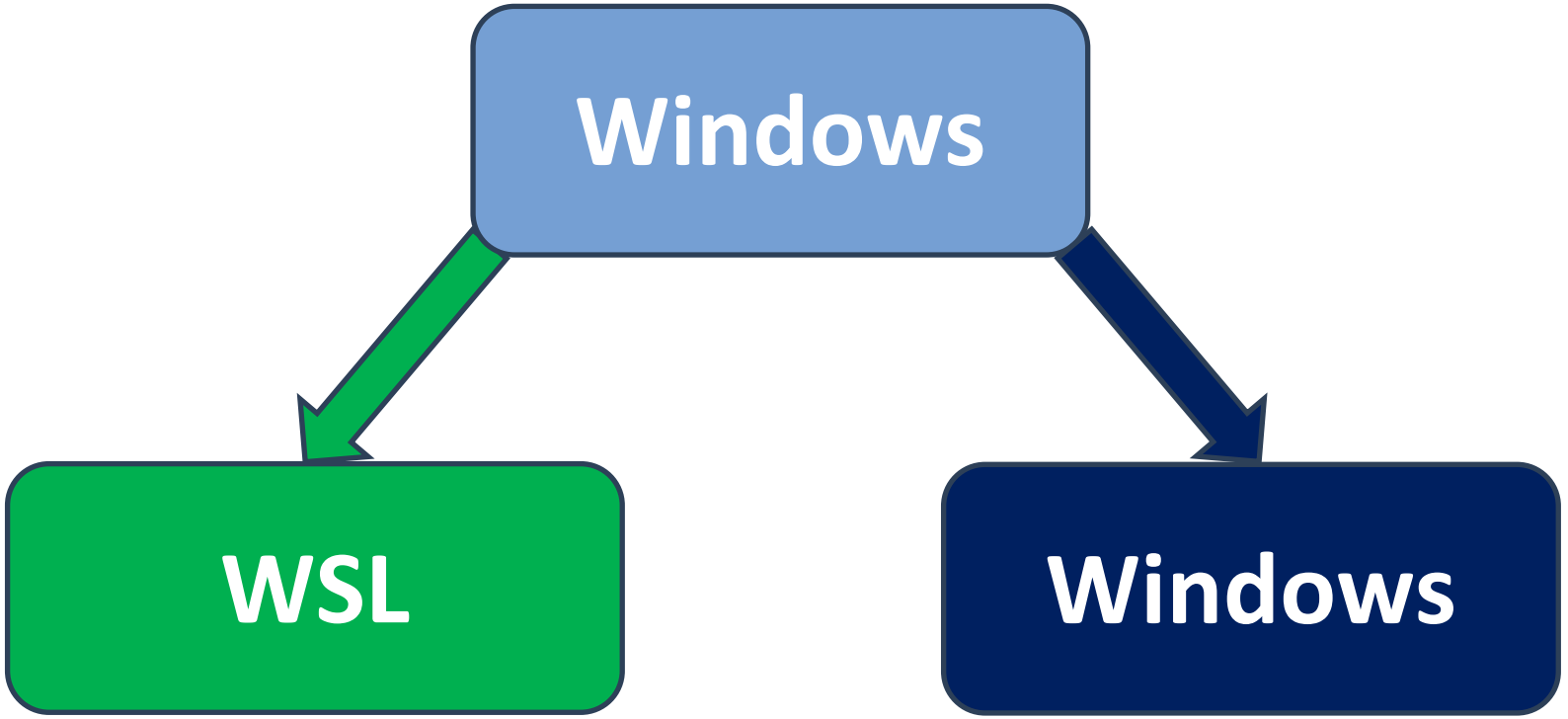
CS50's adaptation of **Codespaces** for students and teachers

▶ with these features

Log In or browse **documentation**



Local Development on Windows



Why WSL?

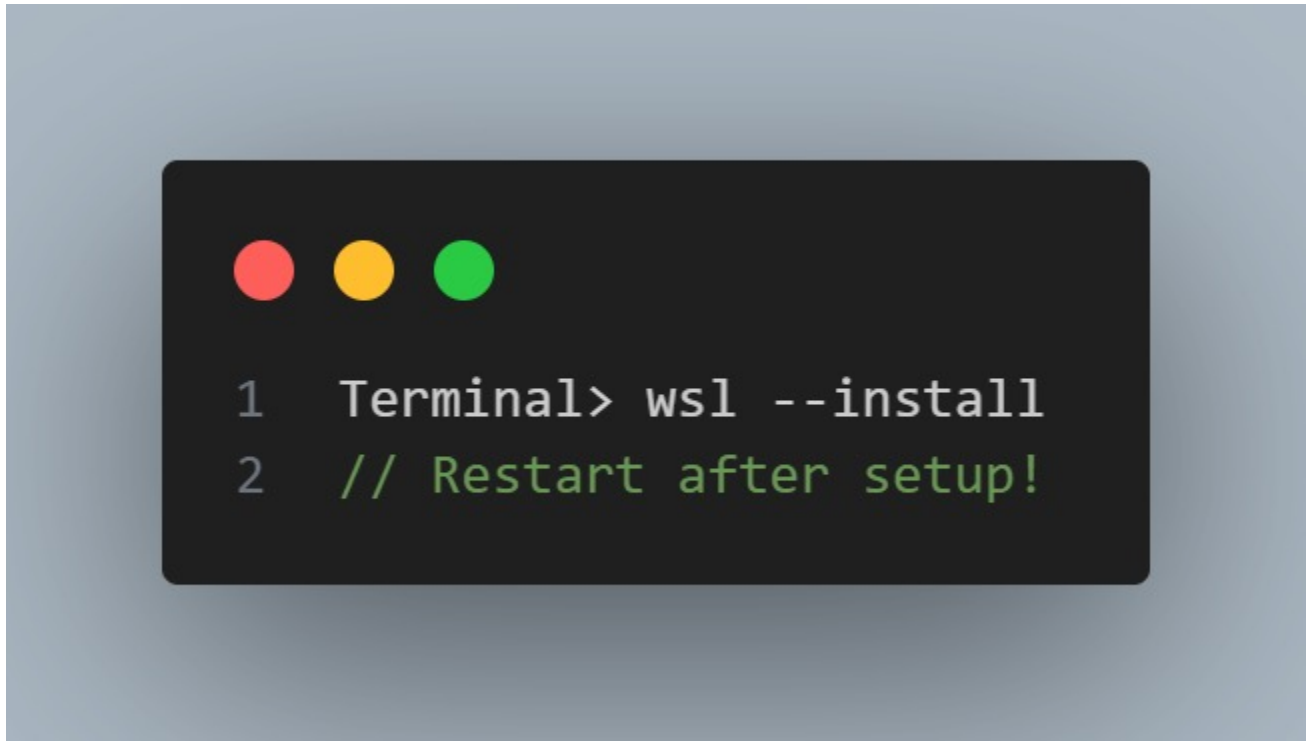
Pros

- More similar to CS50 tools.
- Easier to install once setup.
- Linux / unix system better compatibility.

Cons

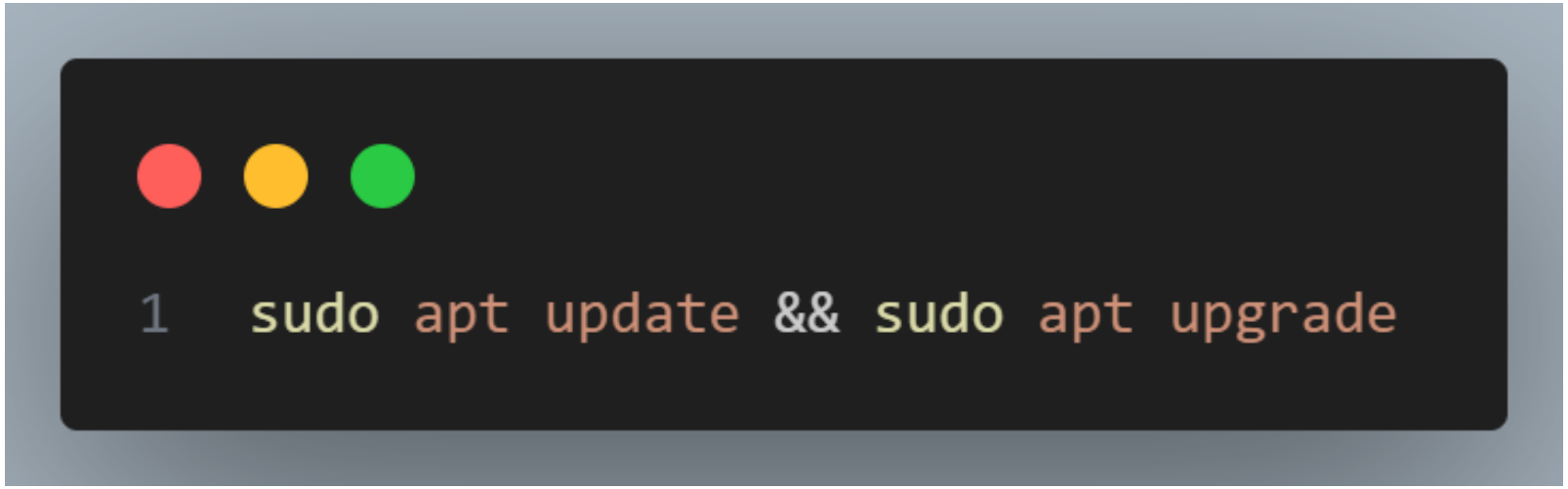
- Some overhead.
- Demanding to run.
- It’s not as good as just running Linux :P

Install WSL



https://learn.microsoft.com/en-us/windows/wsl/install

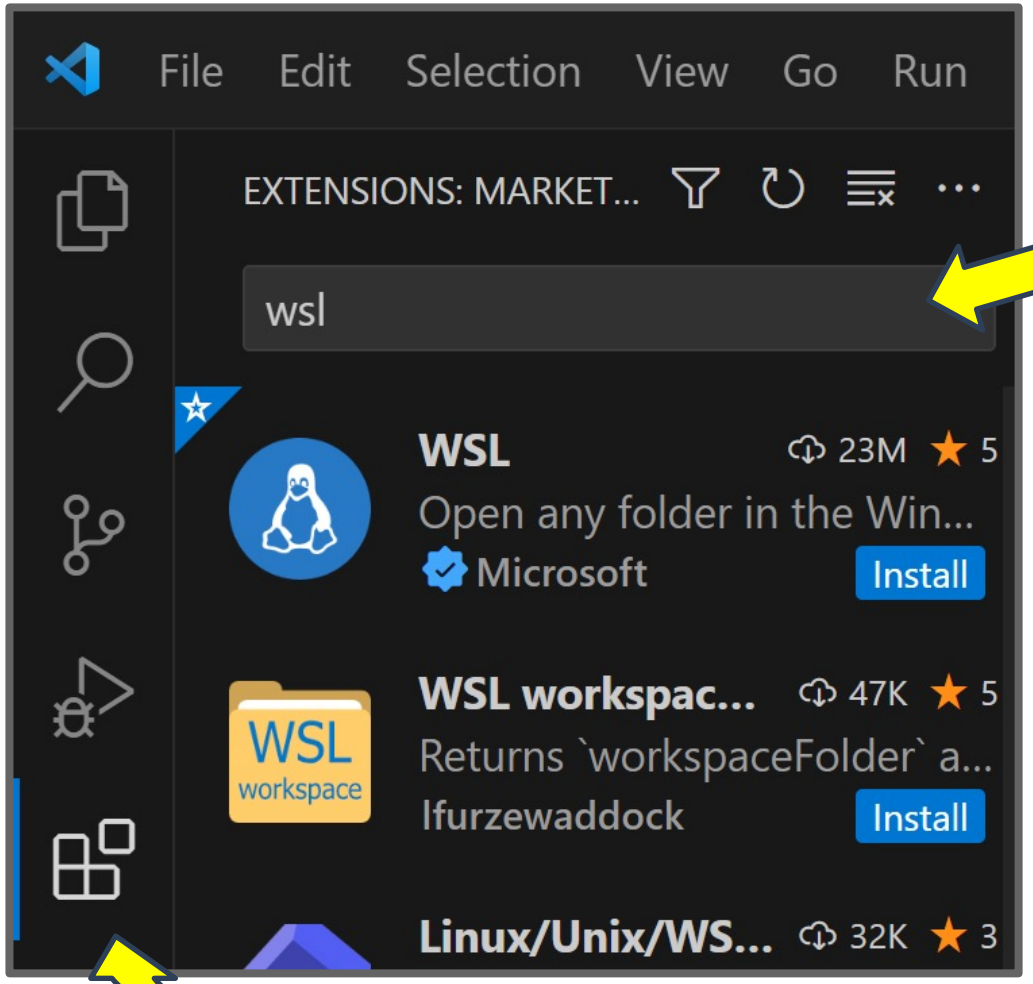
Setup WSL



***Sudo**: super user do*

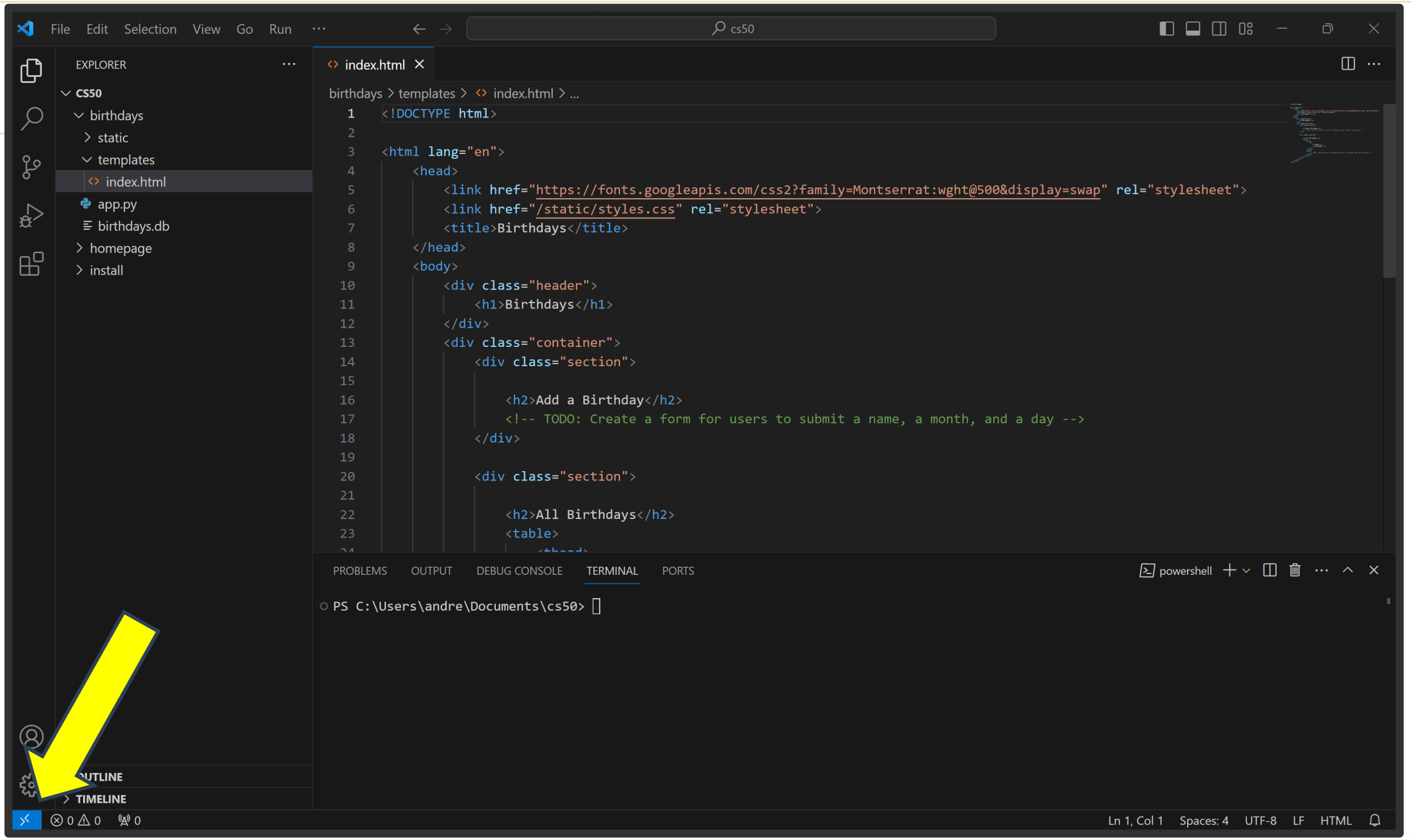
(Windows equivalent: run as administrator)

Setup VSCode + WSL



Search for the **WSL** extension and press ‘install’.

The extension tab is the one with the four cubes, one being added to the pile of three!

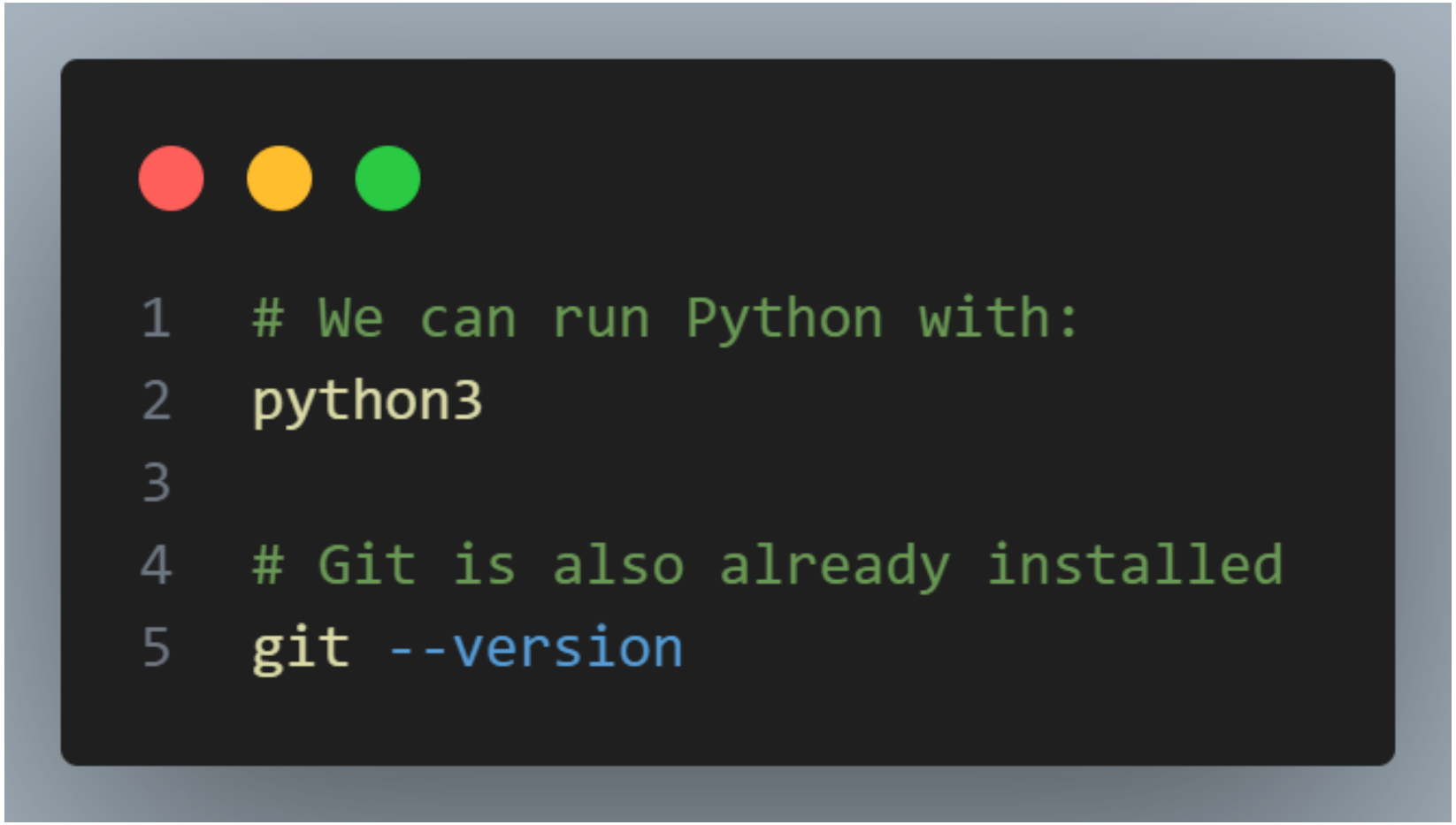

File Edit Selection View Go Run
cs50
EXPLORER
CS50
birthdays
static
templates
index.html
app.py
birthdays.db
homepage
install
index.html
birthdays > templates > index.html > ...
<!DOCTYPE html>
<html lang="en">
<head>
<link href="https://fonts.googleapis.com/css2?family=Montserrat:wght@500&display=swap" rel="stylesheet">
<link href="/static/styles.css" rel="stylesheet">
<title>Birthdays</title>
</head>
<body>

<h1>Birthdays</h1>

<h2>Add a Birthday</h2>
<!-- TODO: Create a form for users to submit a name, a month, and a day -->

<h2>All Birthdays</h2>
<table>
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
powershell
PS C:\Users\andre\Documents\cs50>
TIMELINE
Ln 1, Col 1 Spaces: 4 UTF-8 LF HTML

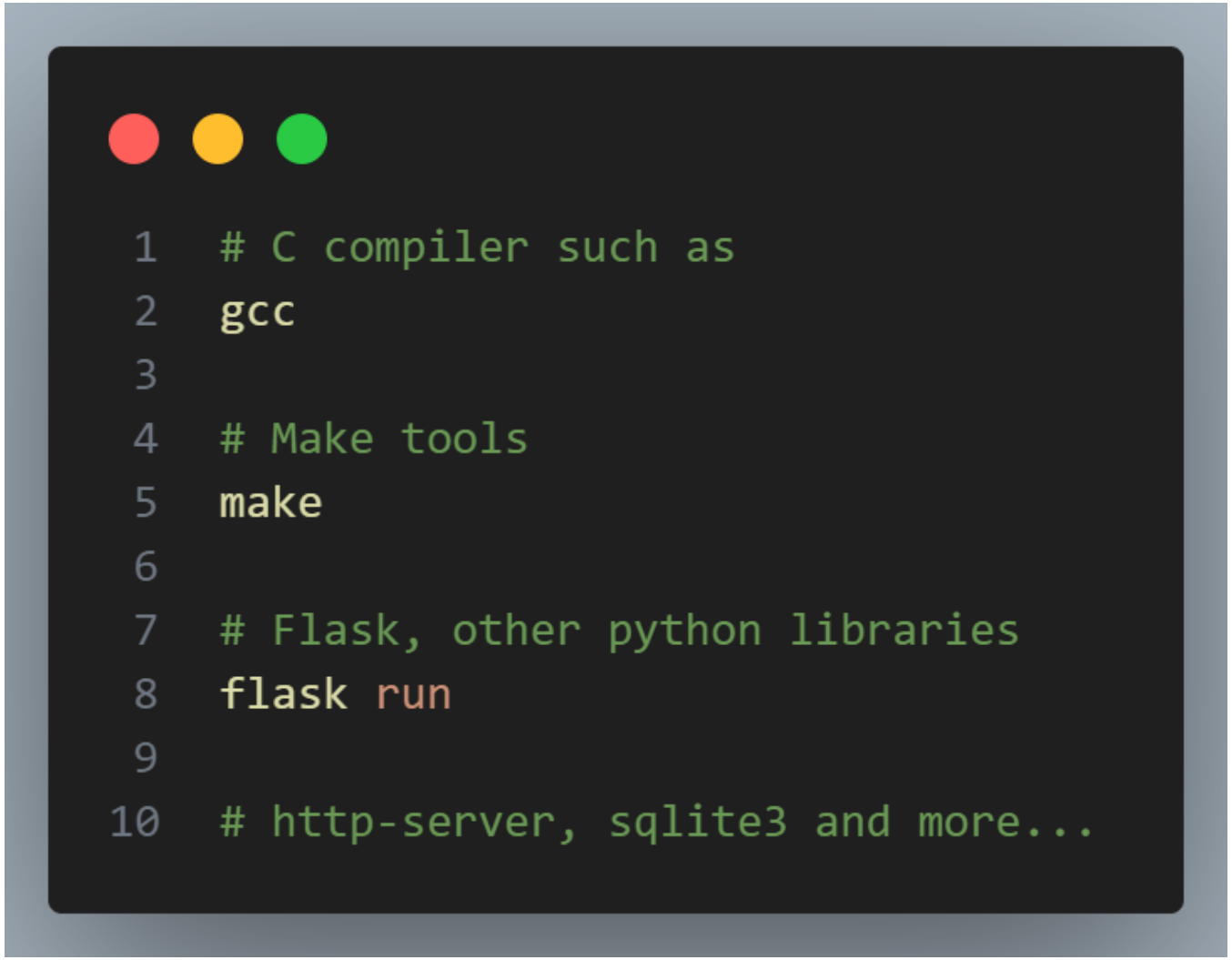
Already installed for us



Things we are missing ☹

There’s plenty we are missing though! Not to worry, installing all of these on Linux is super easy.

Note: you may want to update your python and git installations.



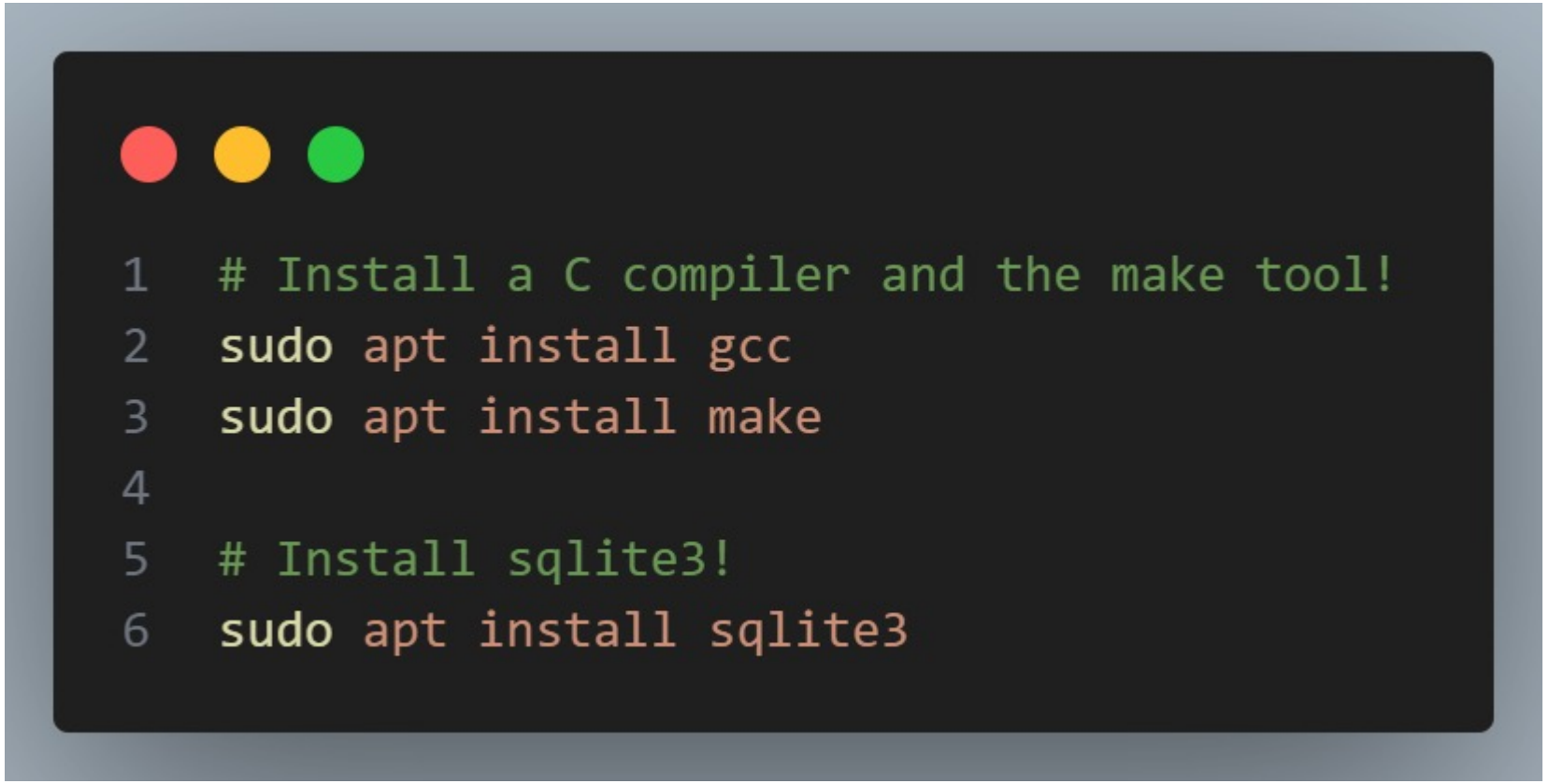
```
# C compiler such as
gcc

# Make tools
make

# Flask, other python libraries
flask run

# http-server, sqlite3 and more...
```

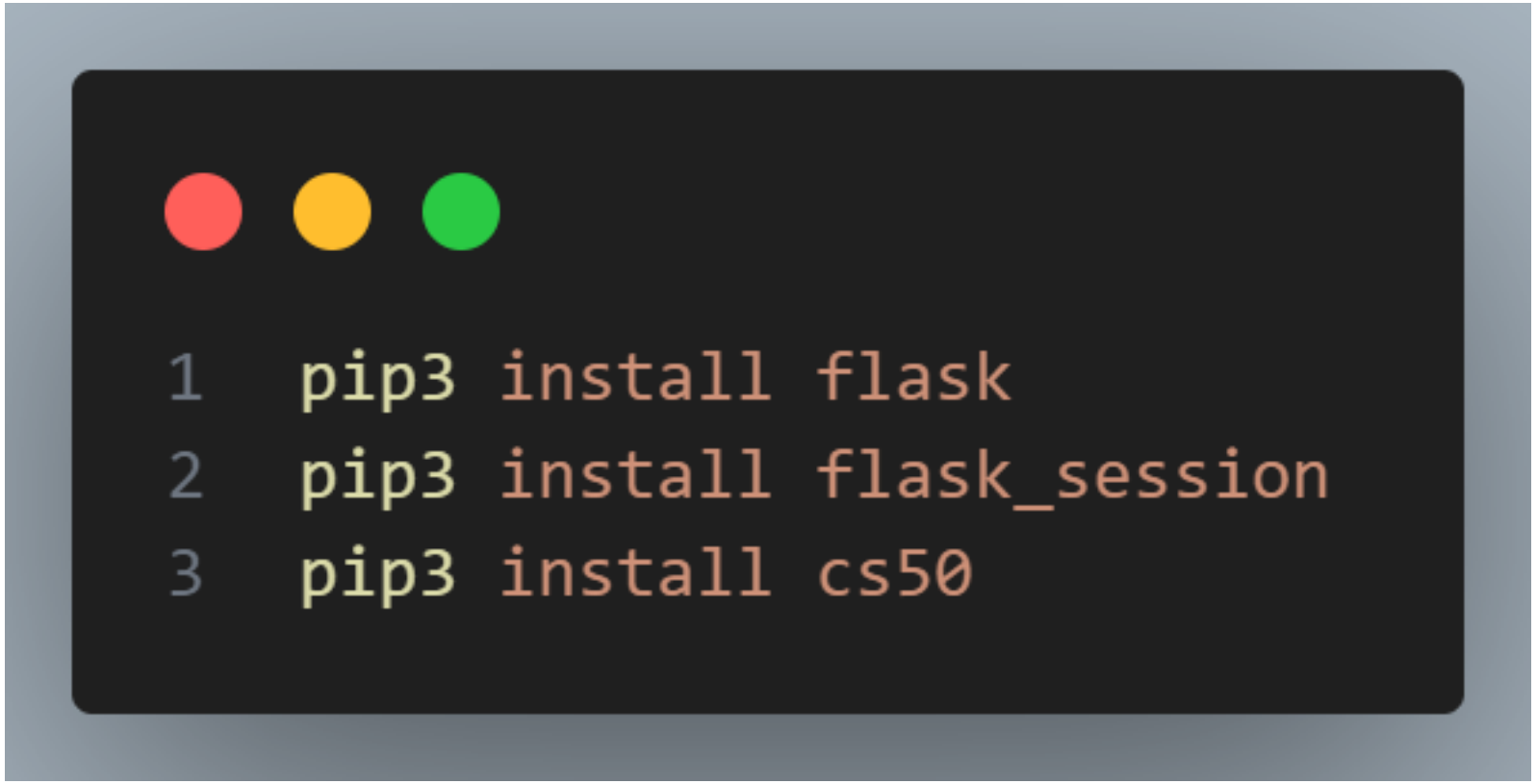
Things we are missing ☹



```
# Install a C compiler and the make tool!
sudo apt install gcc
sudo apt install make

# Install sqlite3!
sudo apt install sqlite3
```

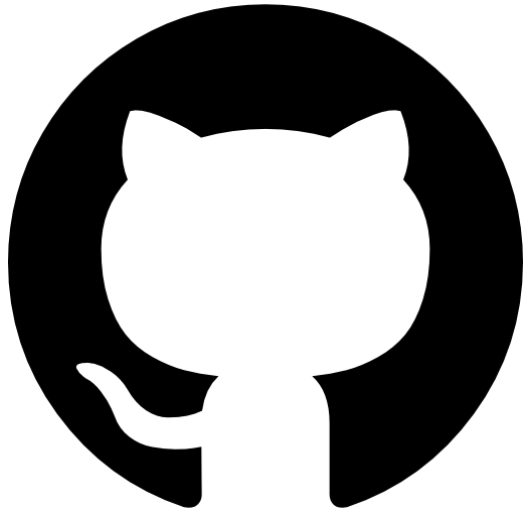
Things we are missing ☹



VSCode Extensions

- **Live Server**
- **Live Share**
- **C / Python**
- Codesnap
- Plenty of others!

Working on a final project together demo!



A million more options

There’s a world of possibilities for you to explore!
Customize to your heart’s content!

Local development with just pure Windows is often still useful.

Install other tools that you need!

Thanks!

Hopefully this was useful! I'll try to help out in the comments when I have time!

CREDITS: This presentation template was created by **Slidesgo**, and includes icons by **Flaticon** and infographics & images by **Freepik**