

Visual Studio Code

Unidade 3 | Capítulo 2

Executores:



INSTITUTO FEDERAL
Piauí



INSTITUTO FEDERAL
Rio Grande do Norte



INSTITUTO FEDERAL
Maranhão



INSTITUTO FEDERAL
Ceará



INSTITUTO
HARDWARE BR

Coordenação:



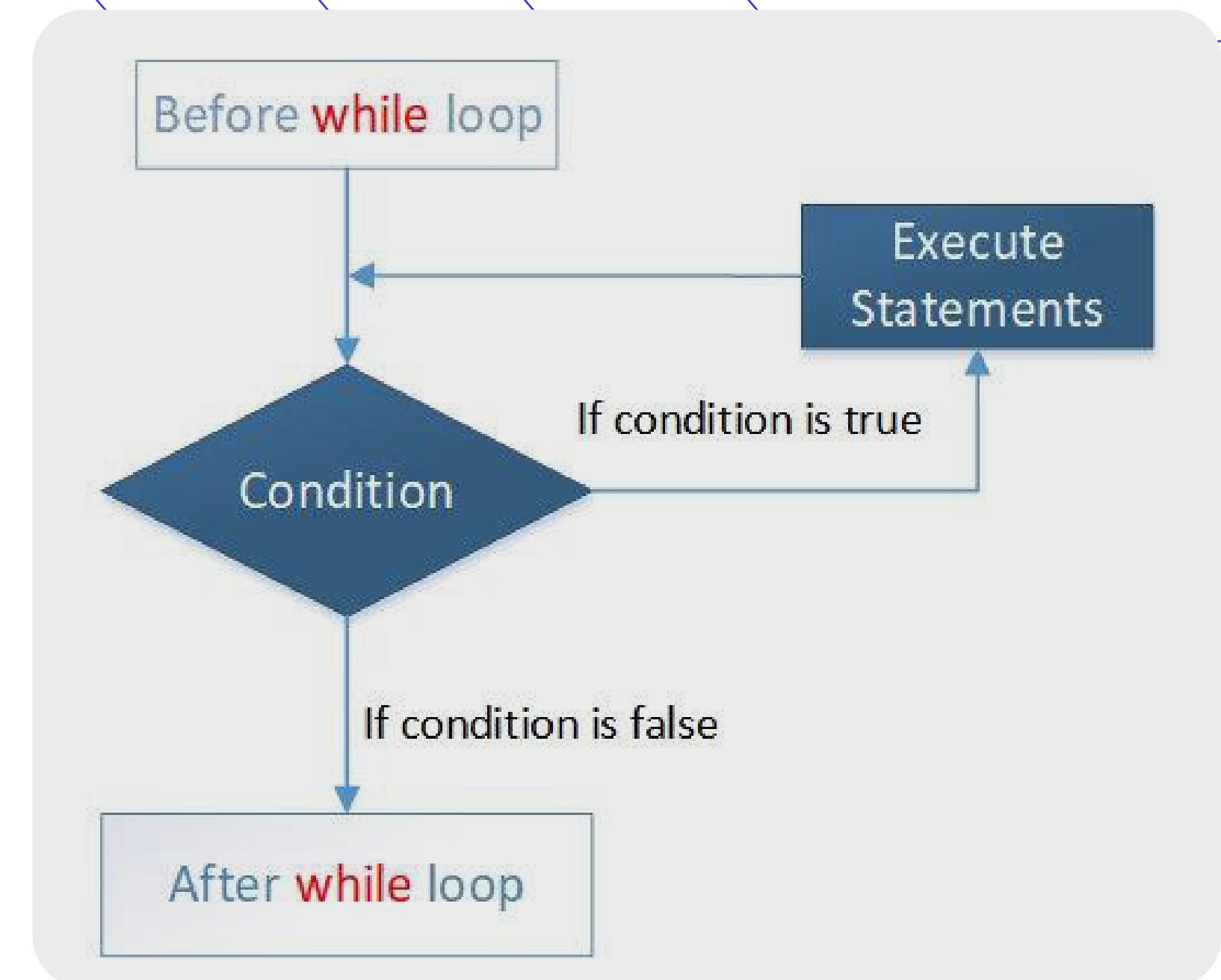
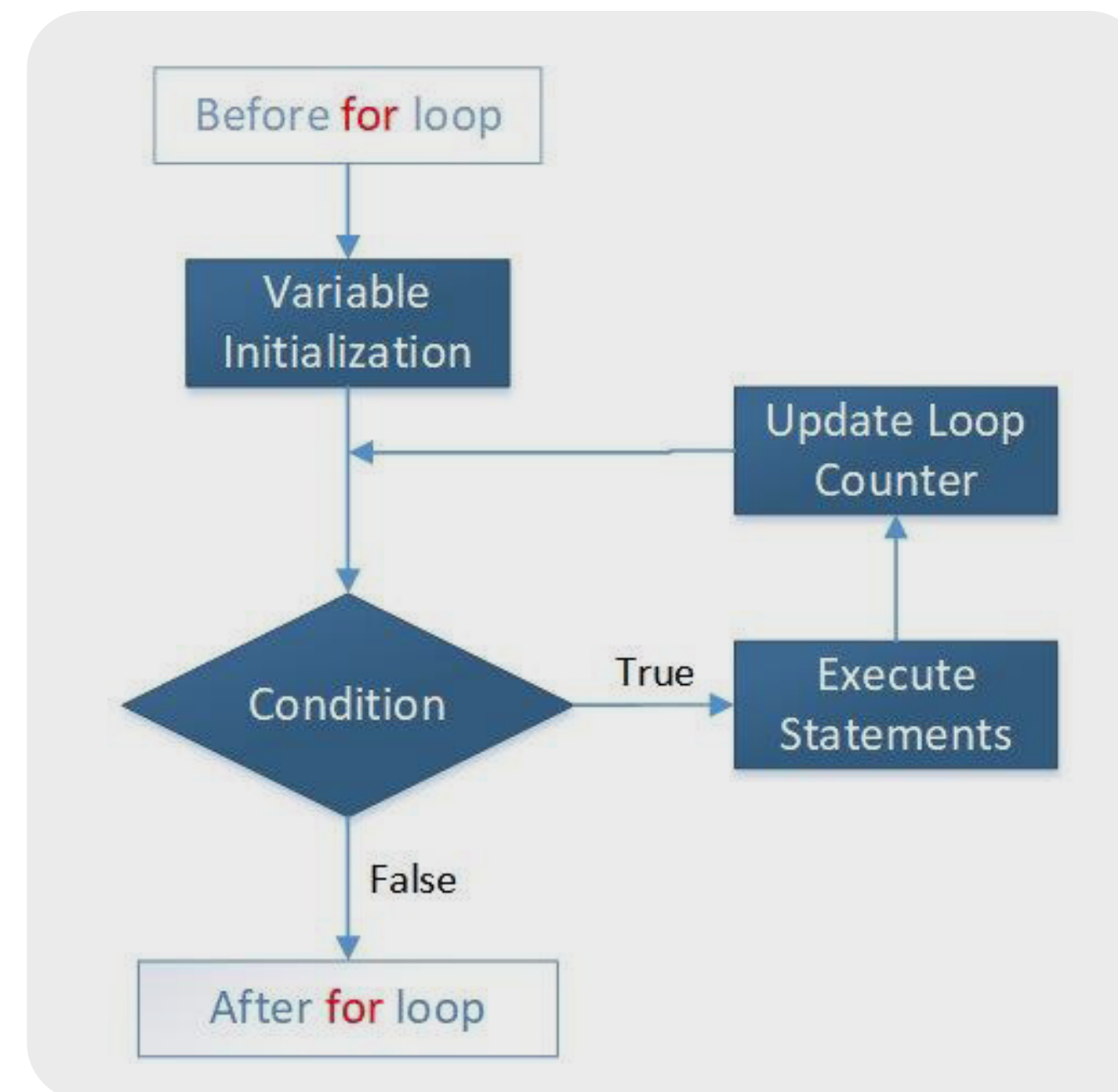
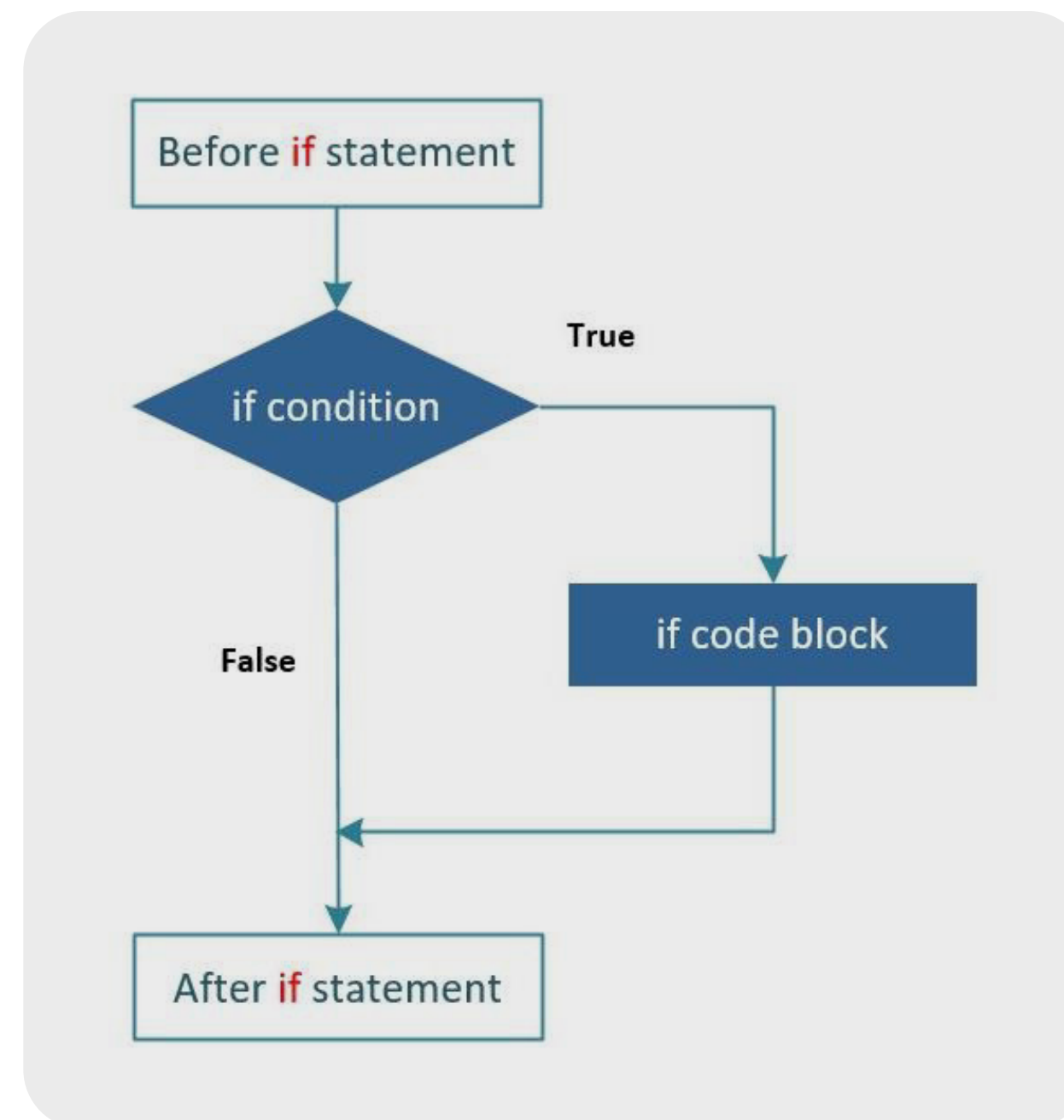
Softex

Iniciativa:

MINISTÉRIO DA
CIÊNCIA, TECNOLOGIA
E INOVAÇÃO

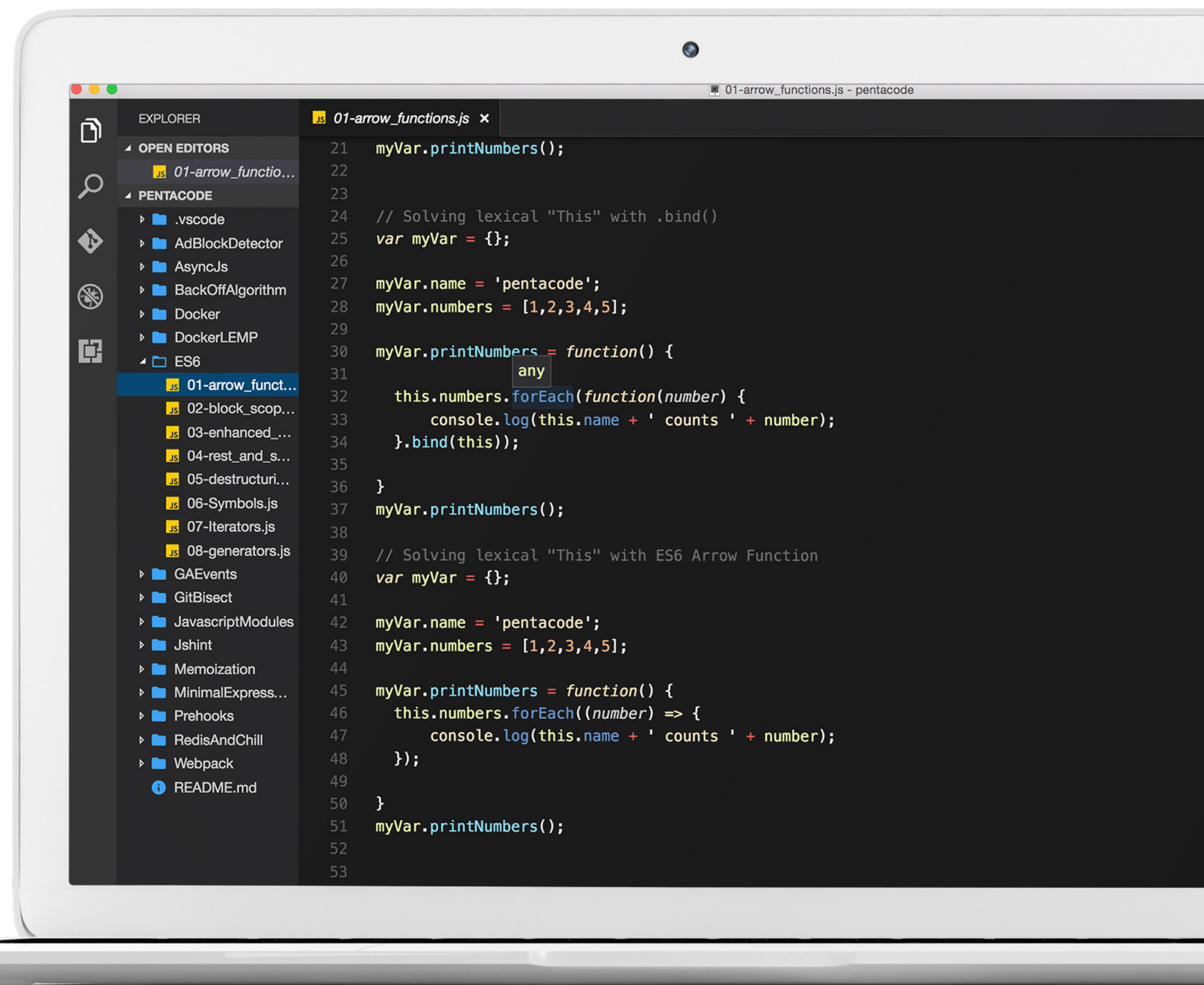
GOVERNO FEDERAL
BRASIL
UNIÃO E RECONSTRUÇÃO

Na aula passada...



Nesta aula...

Compreender as funcionalidades e a correta forma de configuração e utilização do VS Code, importante para avaliar os códigos desenvolvidos inicialmente.



Sobre o VS Code

Diversas
Linguagens de
Programação

JS JavaScript

C# C#

J Java


 Markdown

TS TypeScript

C++ C++

{ } JSON

> Powershell

 Python


< > HTML


 PHP


! YAML

Plugins oficiais e
da comunidade


 **Python**
Adds rich language
support for Python

 **GitHub Copilot**
Your AI pair programmer


 **C/C++**
Adds rich language
support for C/C++


 **Jupyter**
Language support for
Jupyter Notebooks

 **GitLens**
Supercharge your Git
experience

 **C# Dev Kit**
Powerful tools for your C#
environment

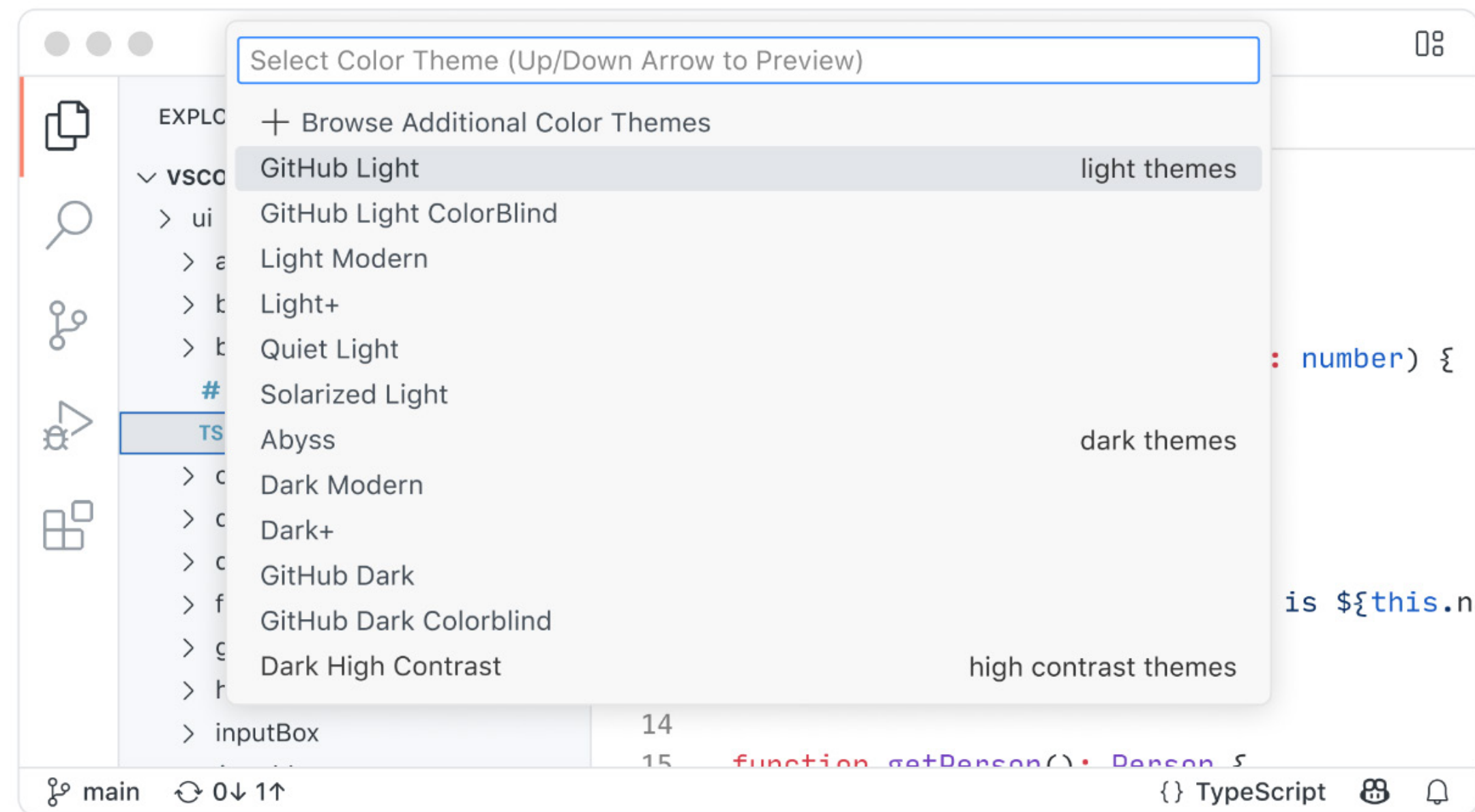
 **GitHub Codespaces**
Fully configured dev
environments in the cloud

 **GitHub Pull Requests**
Collaborate on issues and
pull requests

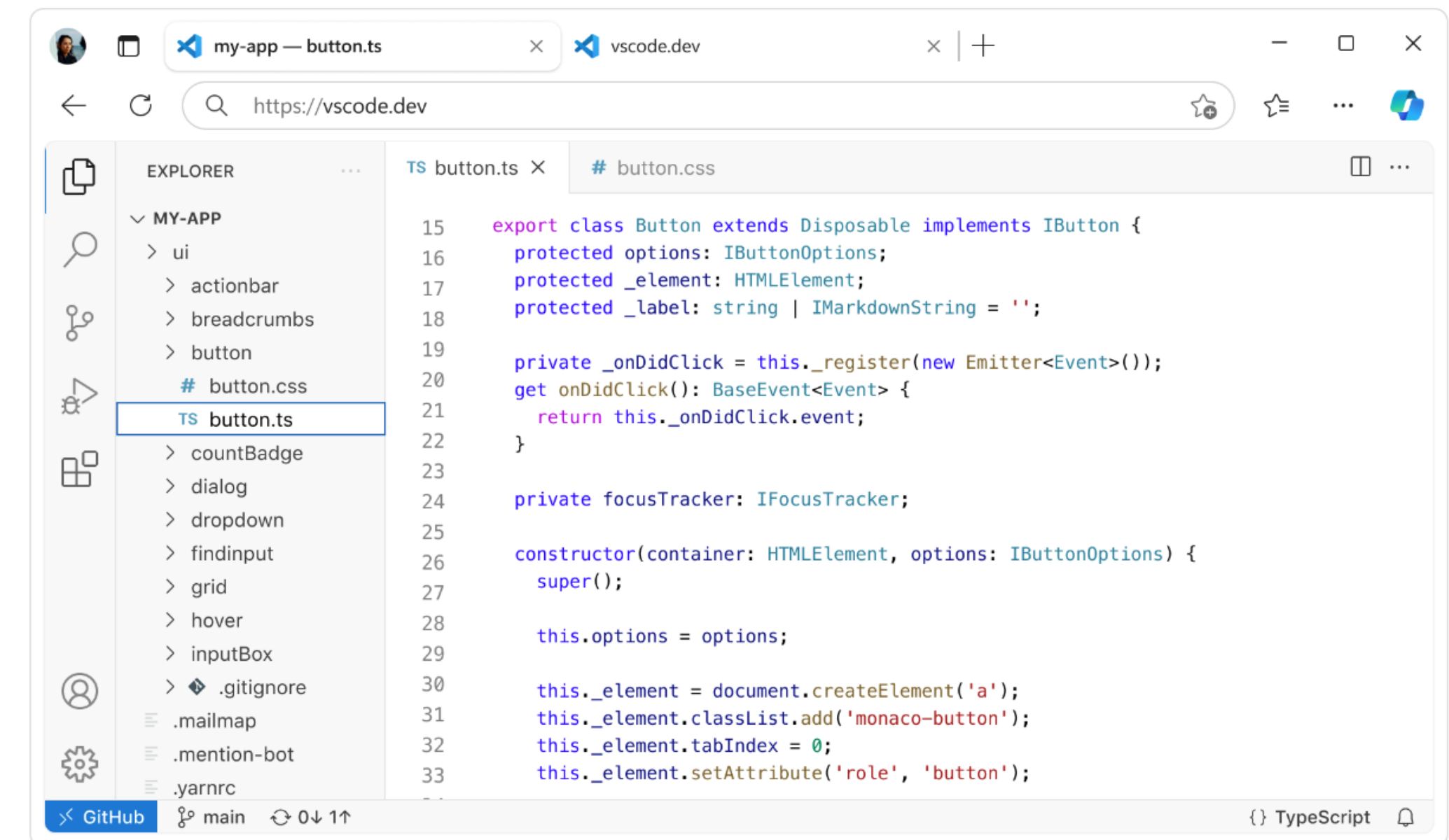
 **Remote Development**
Open folders in a
container on a remote
machine

Sobre o VS Code

<https://code.visualstudio.com>



Tema da interface com muitas opções de customização



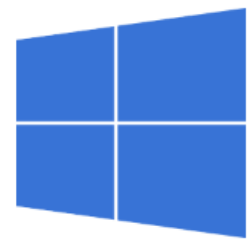
Integração multiplataforma, inclusive web

Baixando e Instalando o VS Code

[Version 1.92](#) is now available! Read about the new features and fixes from July.

Download Visual Studio Code

Free and built on open source. Integrated Git, debugging and extensions.



↓ Windows
Windows 10, 11

User Installer [x64](#) [Arm64](#)
System Installer [x64](#) [Arm64](#)
.zip [x64](#) [Arm64](#)
CLI [x64](#) [Arm64](#)



↓ .deb
Debian, Ubuntu

↓ .rpm
Red Hat, Fedora, SUSE

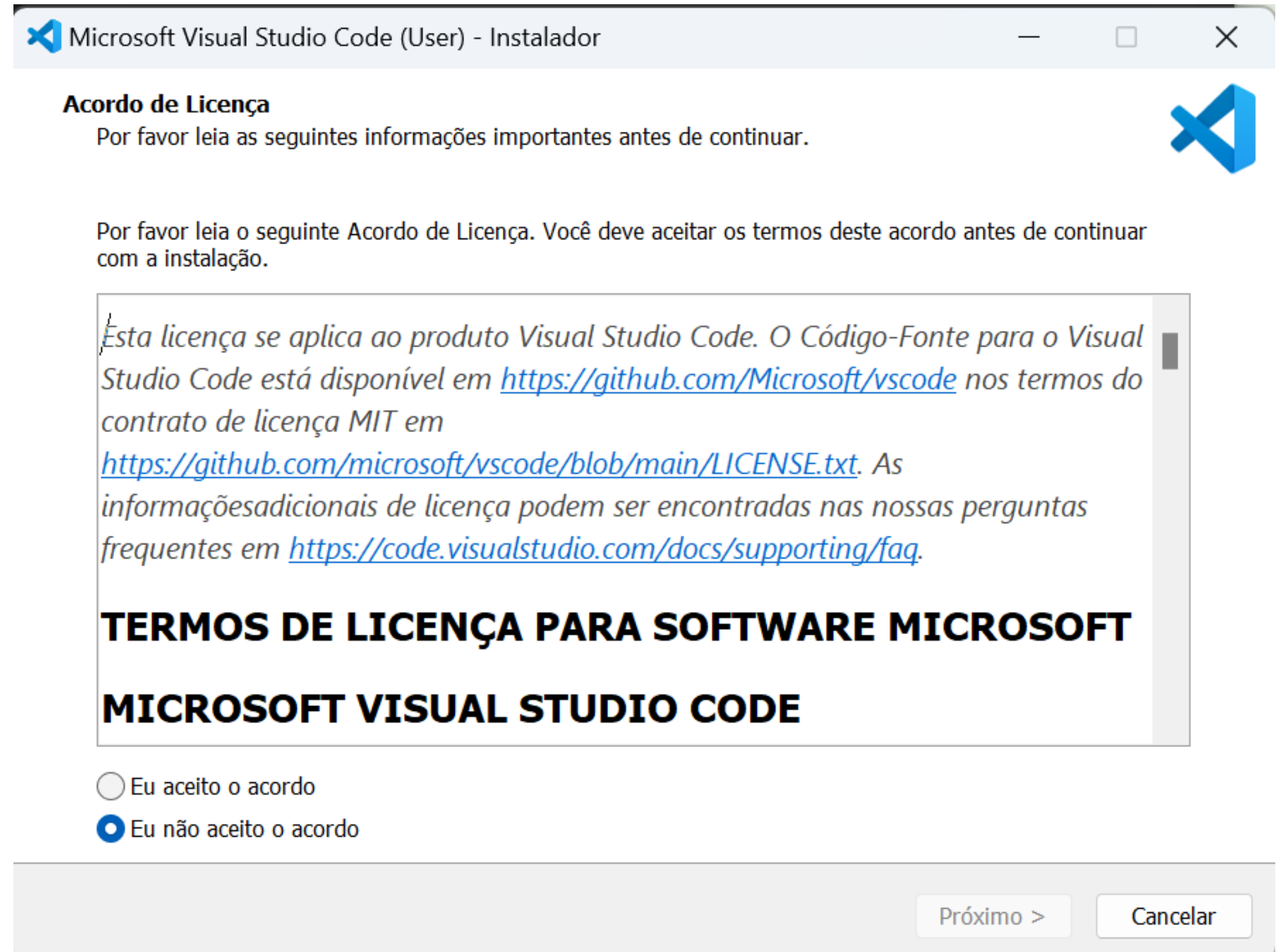
.deb [x64](#) [Arm32](#) [Arm64](#)
.rpm [x64](#) [Arm32](#) [Arm64](#)
.tar.gz [x64](#) [Arm32](#) [Arm64](#)
Snap [Snap Store](#)
CLI [x64](#) [Arm32](#) [Arm64](#)



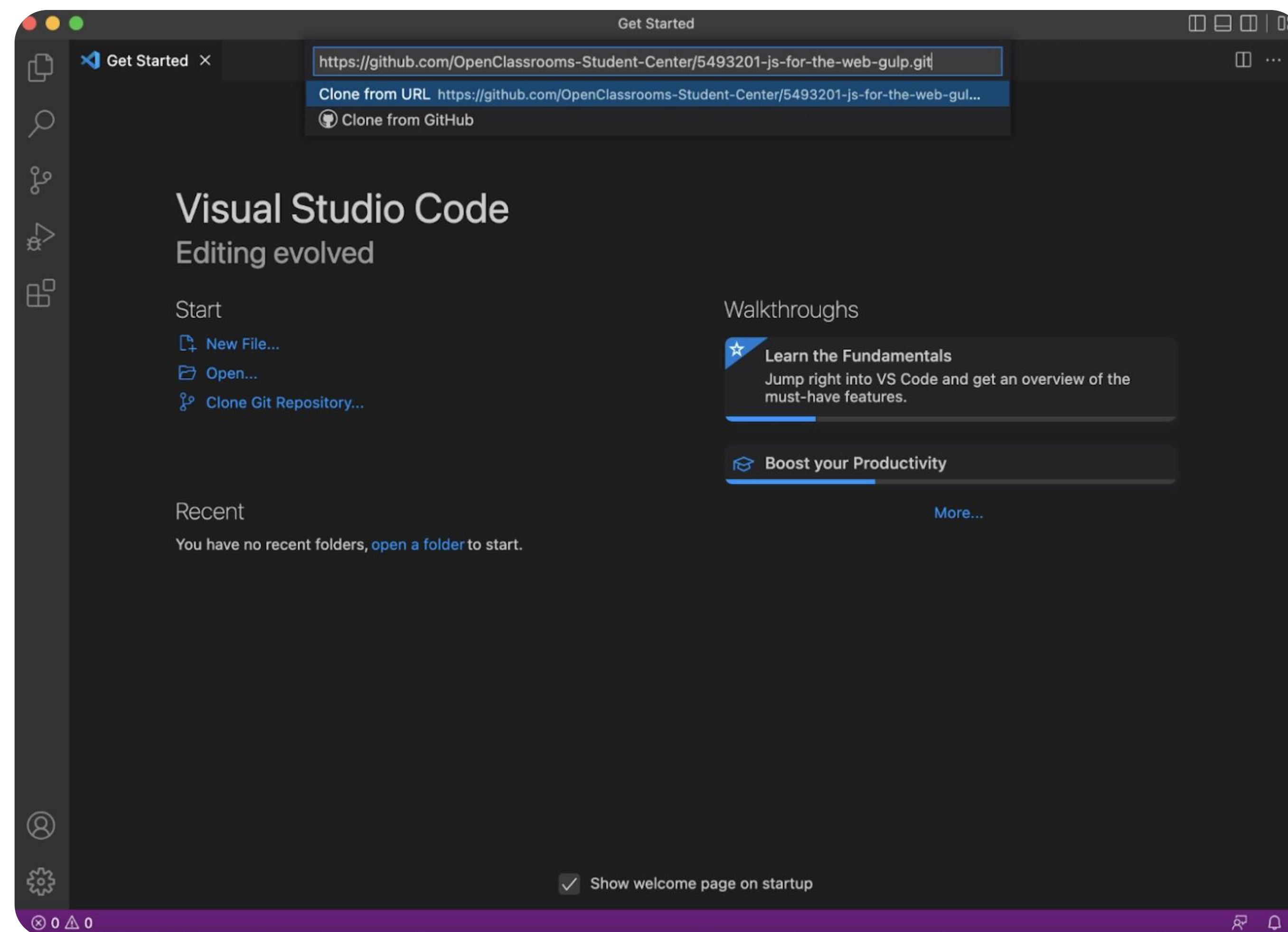
↓ Mac
macOS 10.15+

.zip [Intel chip](#) [Apple silicon](#) [Universal](#)
CLI [Intel chip](#) [Apple silicon](#)

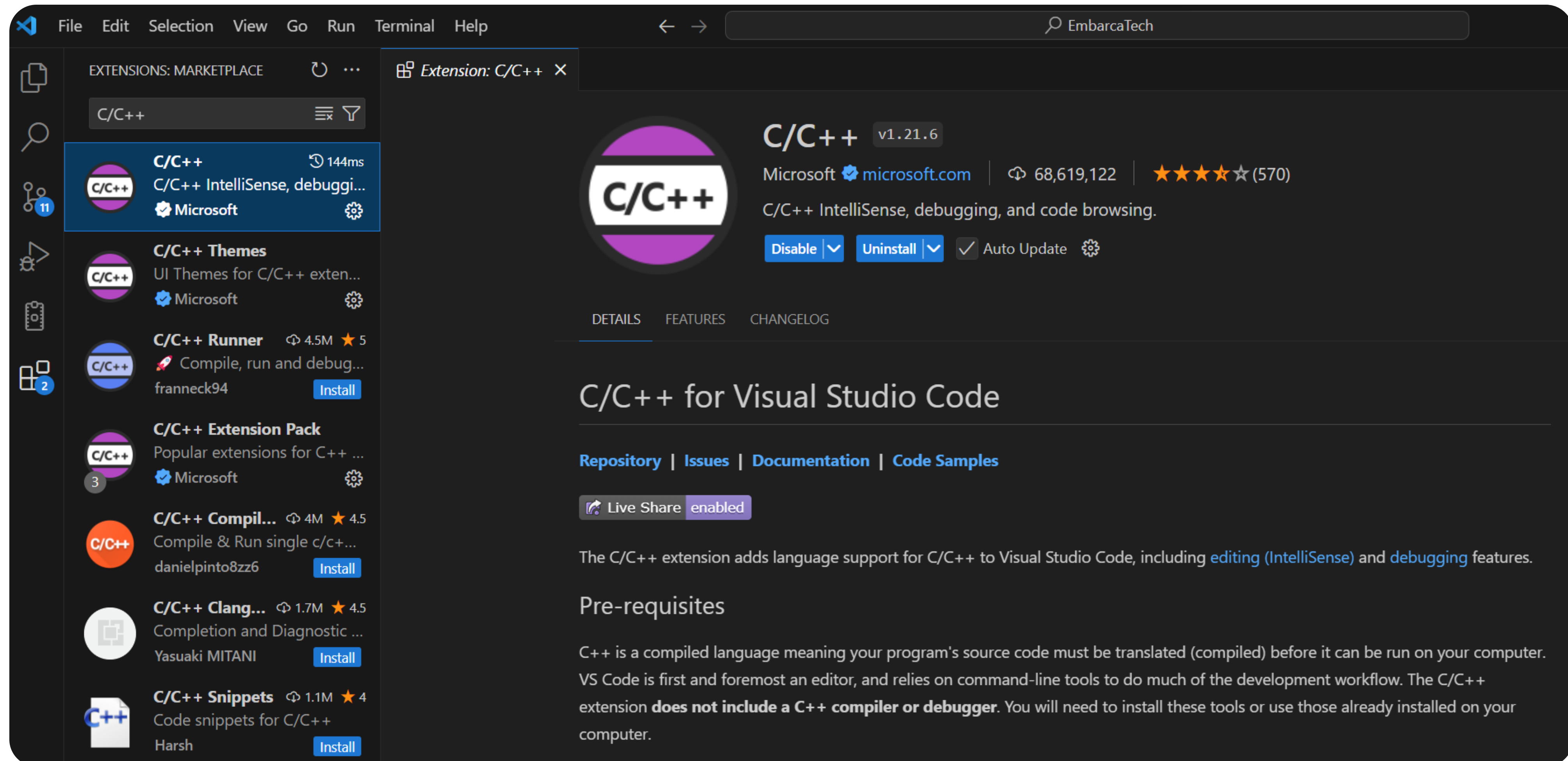
By downloading and using Visual Studio Code, you agree to the [license terms](#) and [privacy statement](#).



Baixando e Instalando o VS Code



Plugin



The screenshot displays the Visual Studio Code interface with the Extensions Marketplace open. The left sidebar shows a list of extensions related to C/C++, with the 'C/C++' extension by Microsoft selected. The main panel shows the details for the 'C/C++' extension, including its version (v1.21.6), publisher (Microsoft), and a list of features. The extension is described as providing IntelliSense, debugging, and code browsing for C/C++ in Visual Studio Code. The interface also shows the 'C/C++ Themes' and 'C/C++ Runner' extensions in the sidebar, and the 'C/C++ Compiler' and 'C/C++ Clang' extensions in the main panel.

File Edit Selection View Go Run Terminal Help

EXTENSIONS: MARKETPLACE

C/C++

C/C++ 144ms
C/C++ IntelliSense, debuggi...
Microsoft

C/C++ Themes
UI Themes for C/C++ exten...
Microsoft

C/C++ Runner 4.5M ★ 5
Compile, run and debug...
franneck94 **Install**

C/C++ Extension Pack
Popular extensions for C++ ...
Microsoft

C/C++ Compil... 4M ★ 4.5
Compile & Run single c/c+...
danielpinto8zz6 **Install**

C/C++ Clang... 1.7M ★ 4.5
Completion and Diagnostic ...
Yasuaki MITANI **Install**

C/C++ Snippets 1.1M ★ 4
Code snippets for C/C++
Harsh **Install**

C/C++ v1.21.6
Microsoft [microsoft.com](#) | 68,619,122 | ★★★★★ (570)
C/C++ IntelliSense, debugging, and code browsing.
Disable **Uninstall** ☒ Auto Update

DETAILS FEATURES CHANGELOG

C/C++ for Visual Studio Code

[Repository](#) | [Issues](#) | [Documentation](#) | [Code Samples](#)


[Live Share](#) enabled

The C/C++ extension adds language support for C/C++ to Visual Studio Code, including [editing \(IntelliSense\)](#) and [debugging](#) features.

Pre-requisites

C++ is a compiled language meaning your program's source code must be translated (compiled) before it can be run on your computer. VS Code is first and foremost an editor, and relies on command-line tools to do much of the development workflow. The C/C++ extension **does not include a C++ compiler or debugger**. You will need to install these tools or use those already installed on your computer.

Plugin



C/C++ Compile Run

v1.0.58

danielpinto8zz6 | 4,042,852 | ★★★★★ (56)

Compile & Run single c/c++ files easily

Disable Uninstall ✓ Auto Update ⚙

DETAILS FEATURES CHANGELOG

⚙

<> ⊗ 0 △ 0 ▶ Compile & Run ⚙ Compile 🔍 Debug

Ln 9, Col 1 Spaces: 4 UTF-8 LF C Linux 🔔

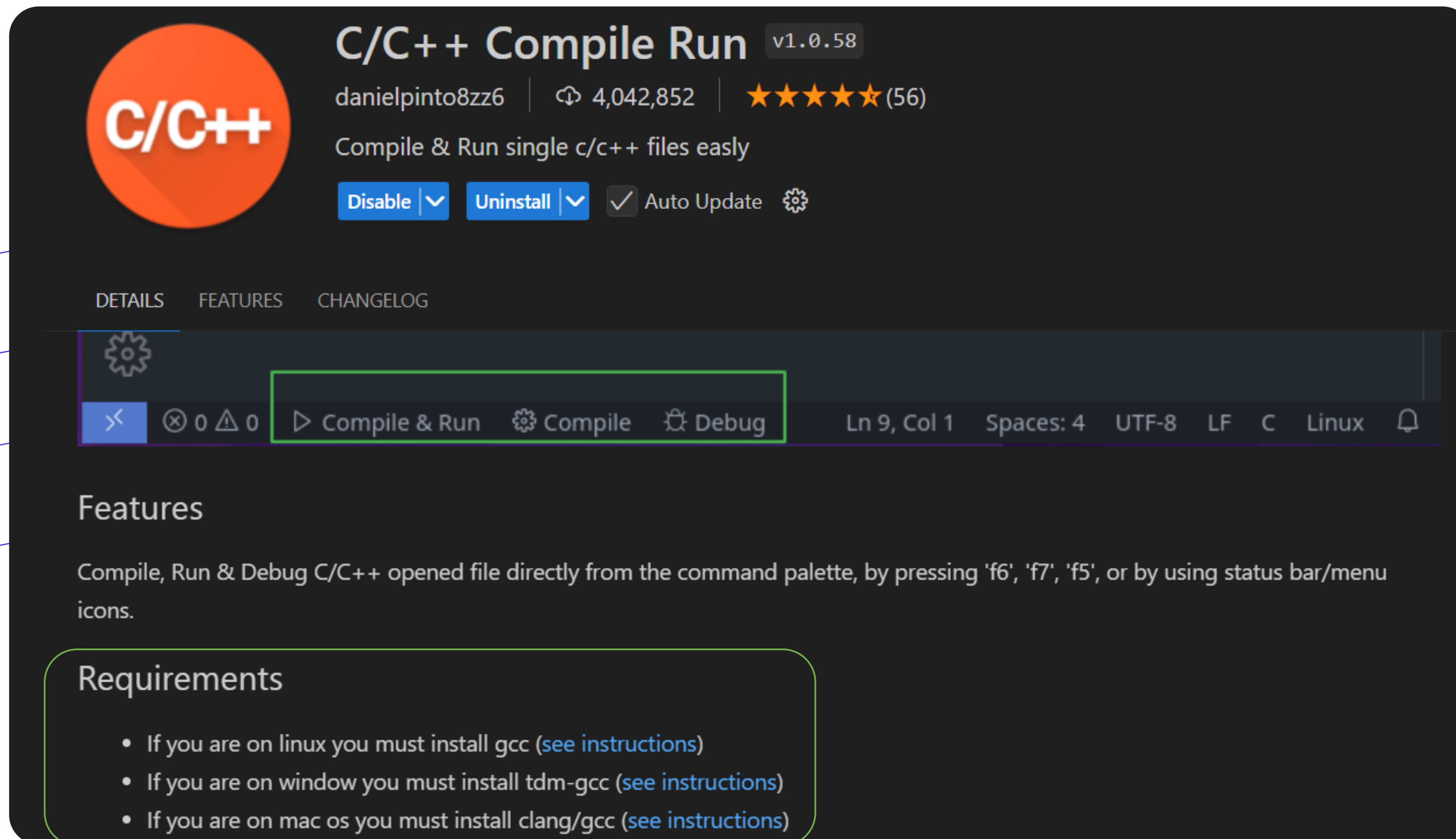
Features

Compile, Run & Debug C/C++ opened file directly from the command palette, by pressing 'f6', 'f7', 'f5', or by using status bar/menu icons.

Requirements

- If you are on linux you must install gcc ([see instructions](#))
- If you are on window you must install tdm-gcc ([see instructions](#))
- If you are on mac os you must install clang/gcc ([see instructions](#))

Compilador




The screenshot shows the 'C/C++ Compile Run' extension interface. At the top, there's an orange circular icon with 'C/C++' text. To its right, the extension name 'C/C++ Compile Run' is displayed with version 'v1.0.58'. Below this, the author 'danielpinto8zz6' is listed, followed by a download count of '4,042,852' and a star rating of '5 stars (56)'. A description reads 'Compile & Run single c/c++ files easily'. Below the description are three buttons: 'Disable' with a dropdown arrow, 'Uninstall' with a dropdown arrow, and 'Auto Update' with a checkmark and a settings gear icon. Below these buttons are three tabs: 'DETAILS', 'FEATURES', and 'CHANGELOG'. The 'FEATURES' tab is selected, showing a settings gear icon. Below the tabs is a toolbar with icons for 'Compile & Run' (a play button), 'Compile' (a gear icon), and 'Debug' (a bug icon). To the right of the toolbar, the status bar shows 'Ln 9, Col 1', 'Spaces: 4', 'UTF-8', 'LF', 'C', and 'Linux'. Below the toolbar is a section titled 'Features' with the text 'Compile, Run & Debug C/C++ opened file directly from the command palette, by pressing 'f6', 'f7', 'f5', or by using status bar/menu icons.' Below the 'Features' section is a section titled 'Requirements' with a list of three items: 'If you are on linux you must install gcc (see instructions)', 'If you are on window you must install tdm-gcc (see instructions)', and 'If you are on mac os you must install clang/gcc (see instructions)'.


C/C++ Compile Run v1.0.58


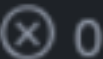



danielpinto8zz6 | 4,042,852 | ★★★★★ (56)


Compile & Run single c/c++ files easily

[Disable](#) | [Uninstall](#) | ☒ Auto Update 

[DETAILS](#) [FEATURES](#) [CHANGELOG](#)



   [Compile & Run](#)  [Compile](#)  [Debug](#)

Ln 9, Col 1 Spaces: 4 UTF-8 LF C Linux 

Features

Compile, Run & Debug C/C++ opened file directly from the command palette, by pressing 'f6', 'f7', 'f5', or by using status bar/menu icons.

Requirements

- If you are on linux you must install gcc ([see instructions](#))
- If you are on window you must install tdm-gcc ([see instructions](#))
- If you are on mac os you must install clang/gcc ([see instructions](#))

Compiler: gcc

GCC Setup

Table of Contents

- 1. [Windows](#)
- 2. [Linux](#)
- 3. [MacOS](#)
- 4. [WSL Example](#)

Windows

Install Tdm-gcc via the website. Click [Tdm-gcc](#) to download the Windows Tdm-gcc installer.

- Run the installer.
- Select create a new install
- Choose your **Architecture** and then select **Next** until complete.
- Restart your vscode



Download

The easiest way to get TDM-GCC is via an installer.

Download a TDM-GCC installer:

tdm-gcc-webdl.exe	Minimal online installer. Select the components you want, and it downloads and unpacks them. Either edition, latest release only. <i>(GCC 10.3.0)</i>
tdm64-gcc-10.3.0-2.exe	64+32-bit MinGW-w64 edition. Includes GCC C/C++, GNU binutils, mingw32-make, GDB (64-bit), the MinGW-w64 runtime libraries and tools, and the windows-default-manifest package.
tdm-gcc-10.3.0.exe	32-bit-only MinGW.org edition. Includes GCC C/C++, GNU binutils, mingw32-make, GDB (32-bit), the MinGW.org mingwrt and w32api packages, and t windows-default-manifest package.

The following links are for TDM-GCC releases since the TDM-GCC 9 series. Older versions are still available on SourceForge: [TDM-GCC files](#).

Linux

- First, check to see wheter GCC is already istalled. To verify whether it is, open a Terminal window and enter the following command:
`gcc -v`
- If GCC isn't installed, run the following command from the terminal window to update the Ubuntu package lists. An out-of-date Linux distribution can sometimes interfere with attempts to install new packages.
`sudo apt-get update`
- Next install the GNU compiler tools and the GDB debugger with this command:
`sudo apt-get install build-essential gdb`

MacOS

On MacOS you can use gcc or clang, choose the one you prefer.

gcc

- Install Homebrew.
- After Homebrew installs, type in the terminal:

`brew install gcc gdb`

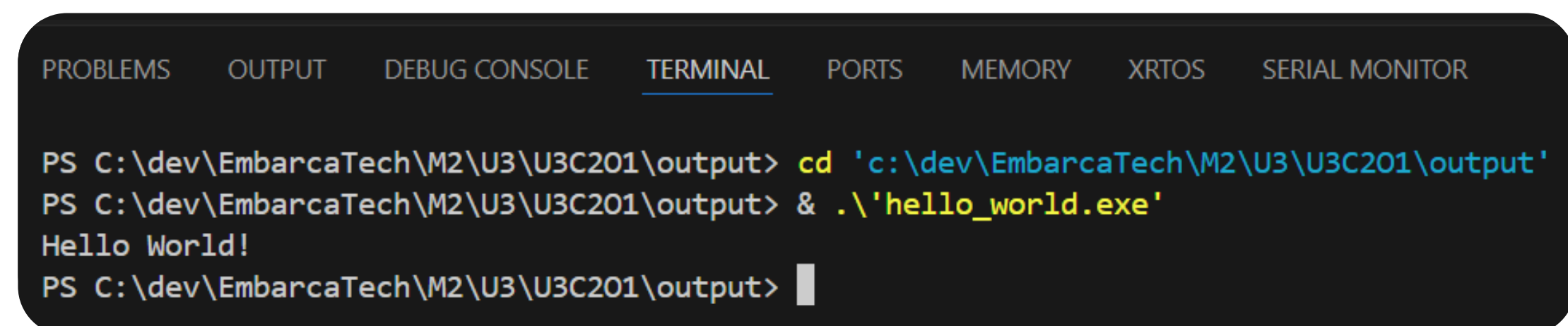
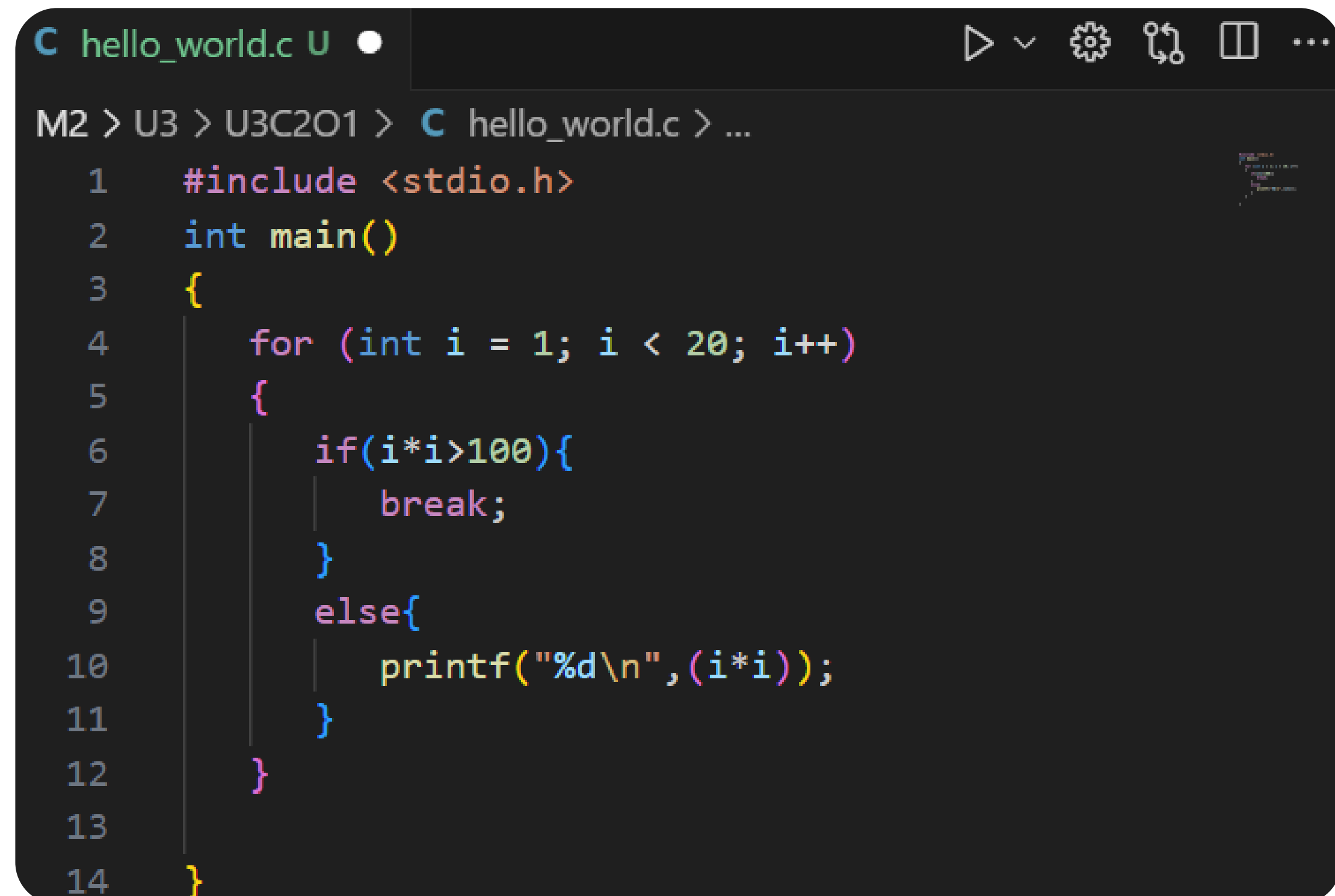
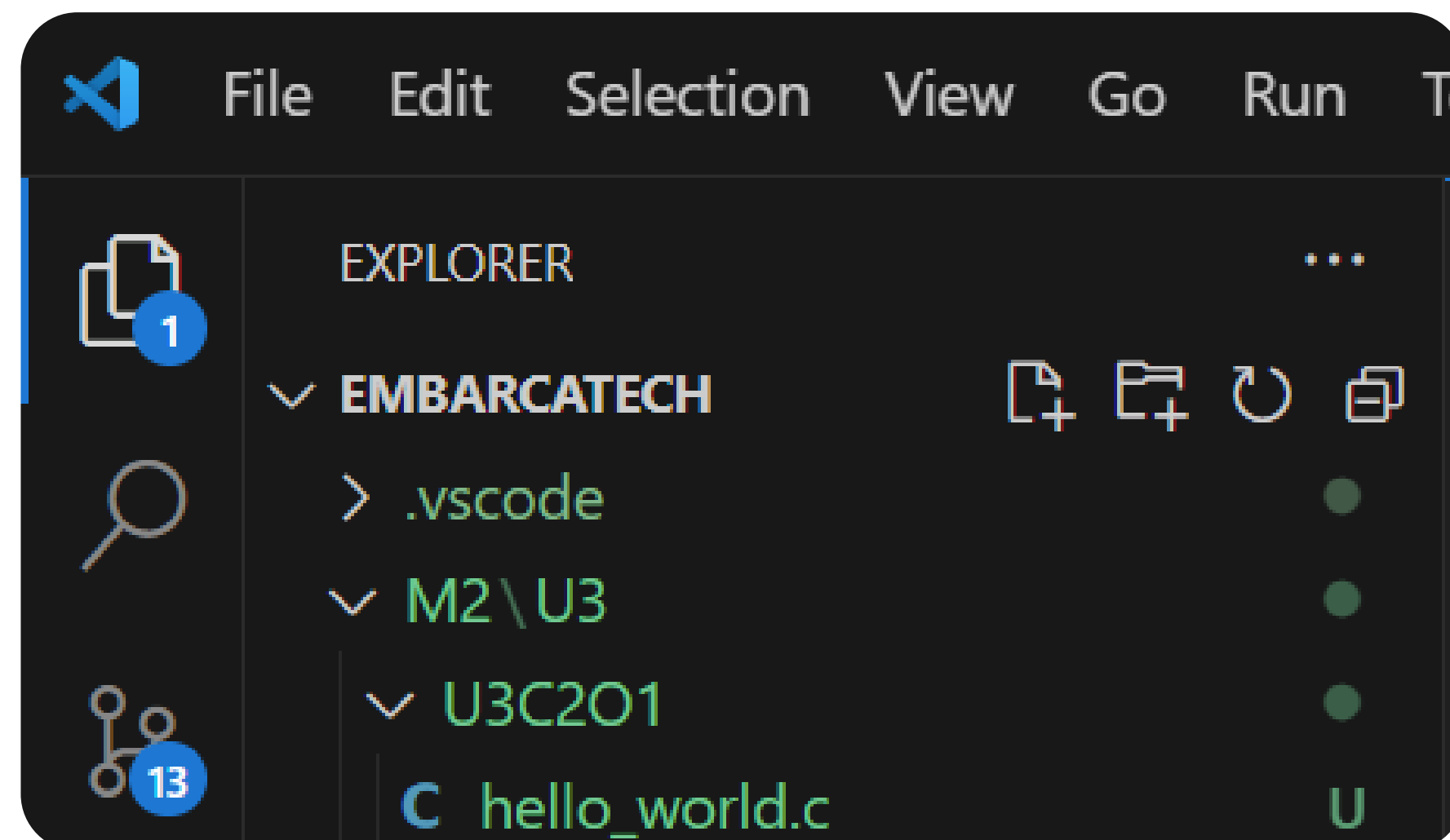
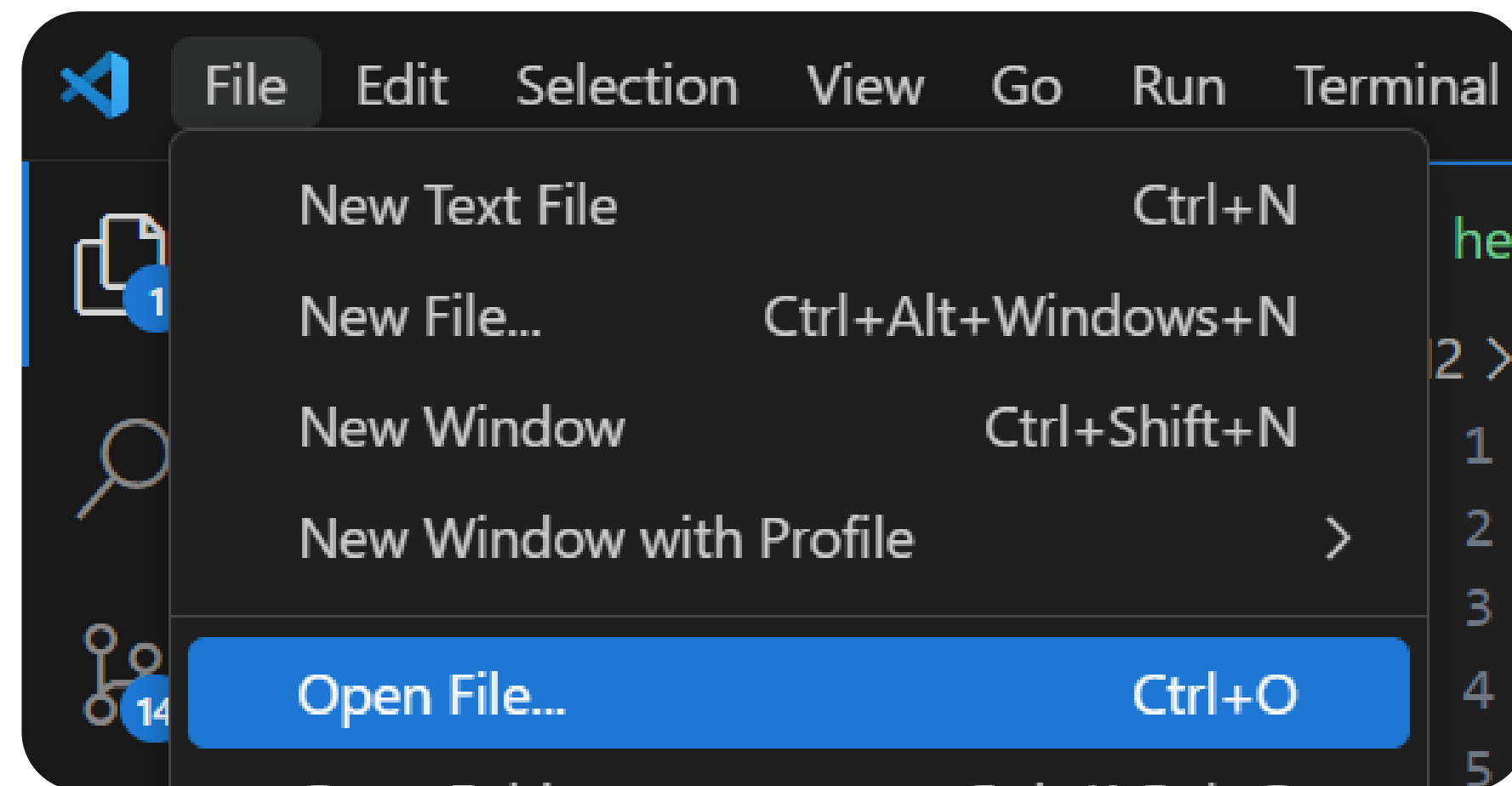
Clang

- Ensure Clang is installed
- Clang may already be installed on your Mac. TO verify that it is, open a macOS Terminal window and enter the following command:
`clang -- version`
- If Clang isn't installed, enter the following command to install the command line developes tools:
`xcode-select --install`

Configurations

Key	Description
c-cpp-compile-run.c-compiler	The C compiler path (e.g: /usr/bin/gcc or C:\TDM-GCC-64\bin\gcc.exe)
c-cpp-compile-run.cpp-compiler	The Cpp compiler path (e.g: /usr/bin/g++ C:\TDM-GCC-64\bin\gcc.exe)
c-cpp-compile-run.save-before-compile	Whether should save the file before compiling
c-cpp-compile-run.c-flags	The C flags: e.g. -Wall. default: -Wall -Wextra -g3
c-cpp-compile-run.cpp-flags	The Cpp flags: e.g. -Wall. default: -Wall -Wextra -g3
c-cpp-compile-run.run-args	The run arguments
c-cpp-compile-run.run-in-external-terminal	Whether should run in an external terminal
c-cpp-compile-run.should-show-notifications	Whether should show notifications
c-cpp-compile-run.output-location	Custom output location for the compiled file
c-cpp-compile-run.custom-run-prefix	Prefix command before run (e.g: valgrind ./foobar)

Exemplos: Hello World



Exemplos: Loops & Condicionais

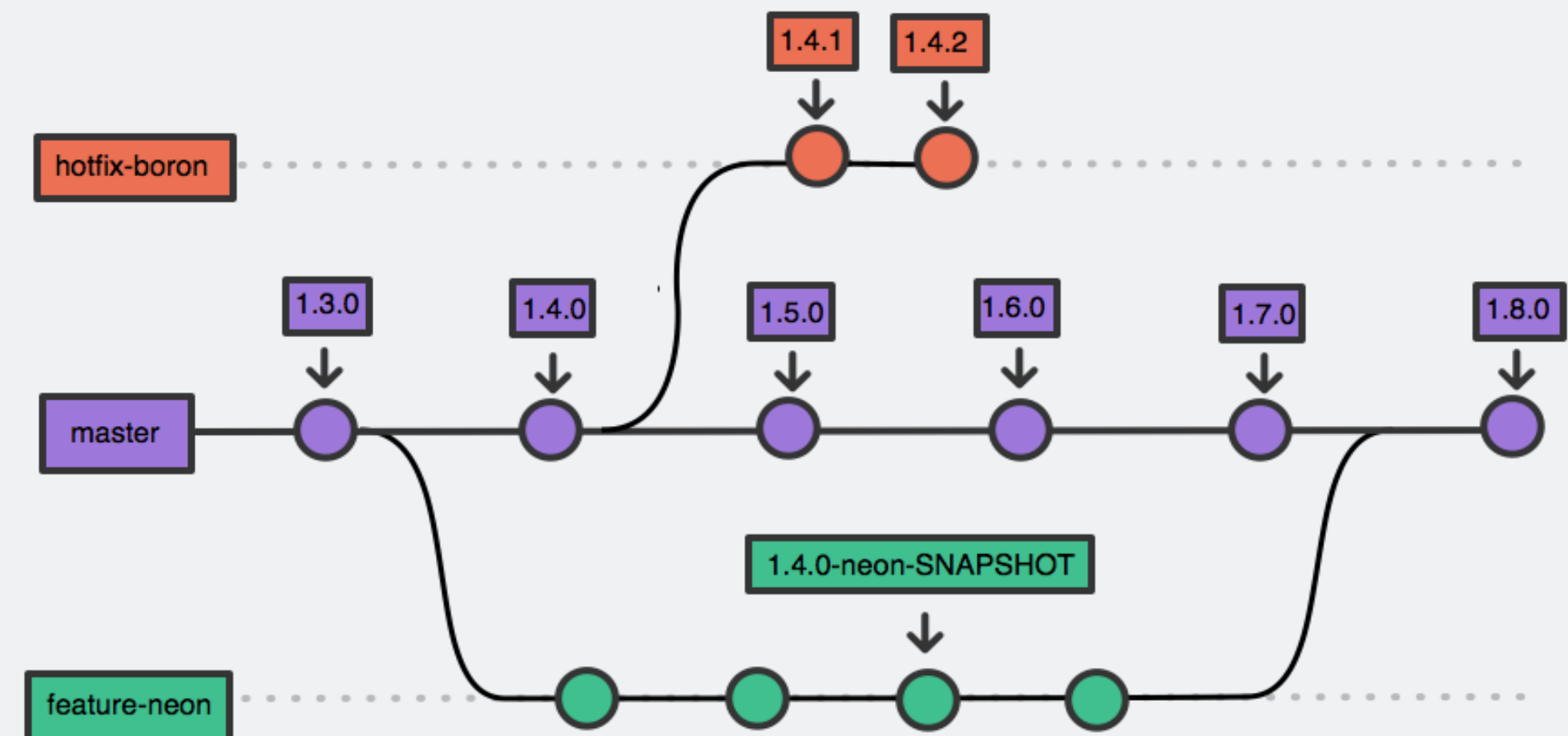
```
#include <stdio.h>


int main()
{
    for (int i = 1; i < 20; i++)
    {
        if(i*i>100){
            break;
        }
        else{
            printf("%d\n", (i*i));
        }
    }
}
```


Conclusão



Visual Studio Code





<https://medium.com/@juniortrojilio/preparando-o-vs-code-para-compilar-c-c-no-windows-988f4a91a557>

https://github.com/danielpinto8zz6/c-cpp-compile-run/blob/HEAD/docs/COMPILER_SETUP.md#Windows

