

# Python Basic

## Initial settings

Carlos 2023 Fall

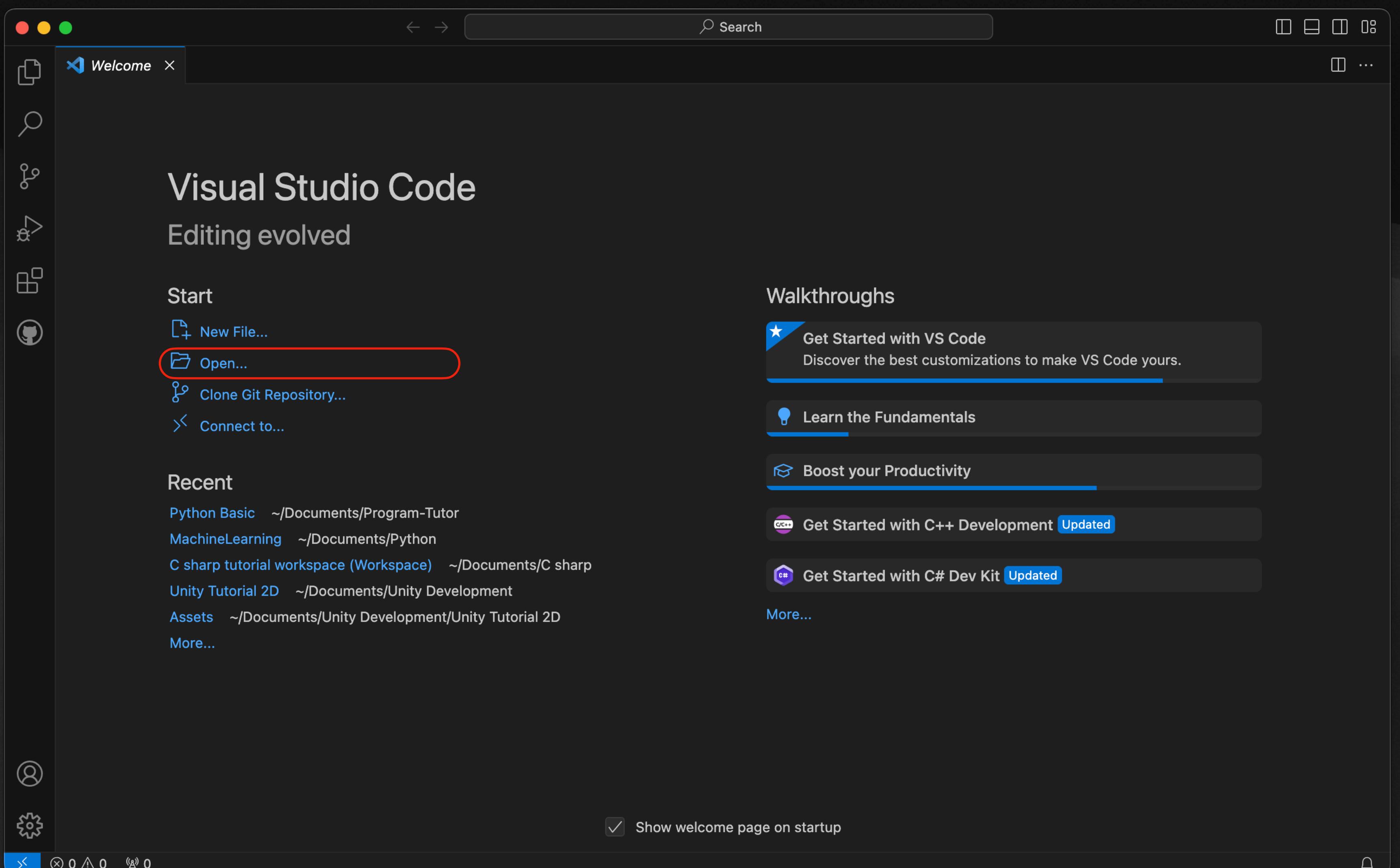
# 確認 Python 安裝成功

- 打開終端機 Terminal
- 輸入 python3
- 輸入 exit() 退出

```
Last login: Thu Nov 30 20:18:04 on ttys003
[REDACTED] ~ % python3
Python 3.11.4 (main, Jun 20 2023, 17:23:00) [Clang 14.0.3 (clang-1403.0.22.14.1)
] on darwin
Type "help", "copyright", "credits" or "license" for more information.
>>> [REDACTED]
```

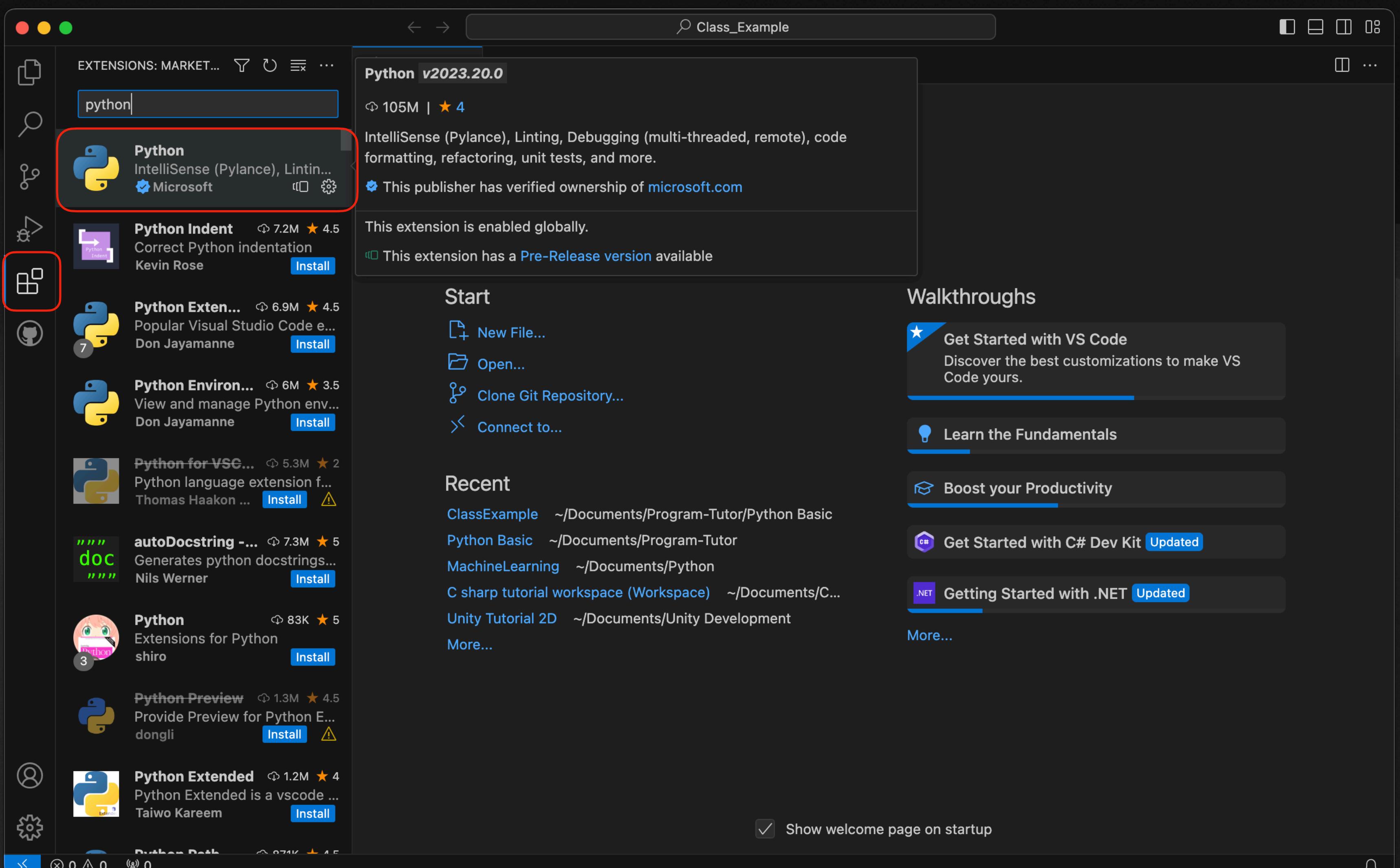
# VScode 建立專案

- 打開 VScode
- 點選 Open...
- 選擇專案位置



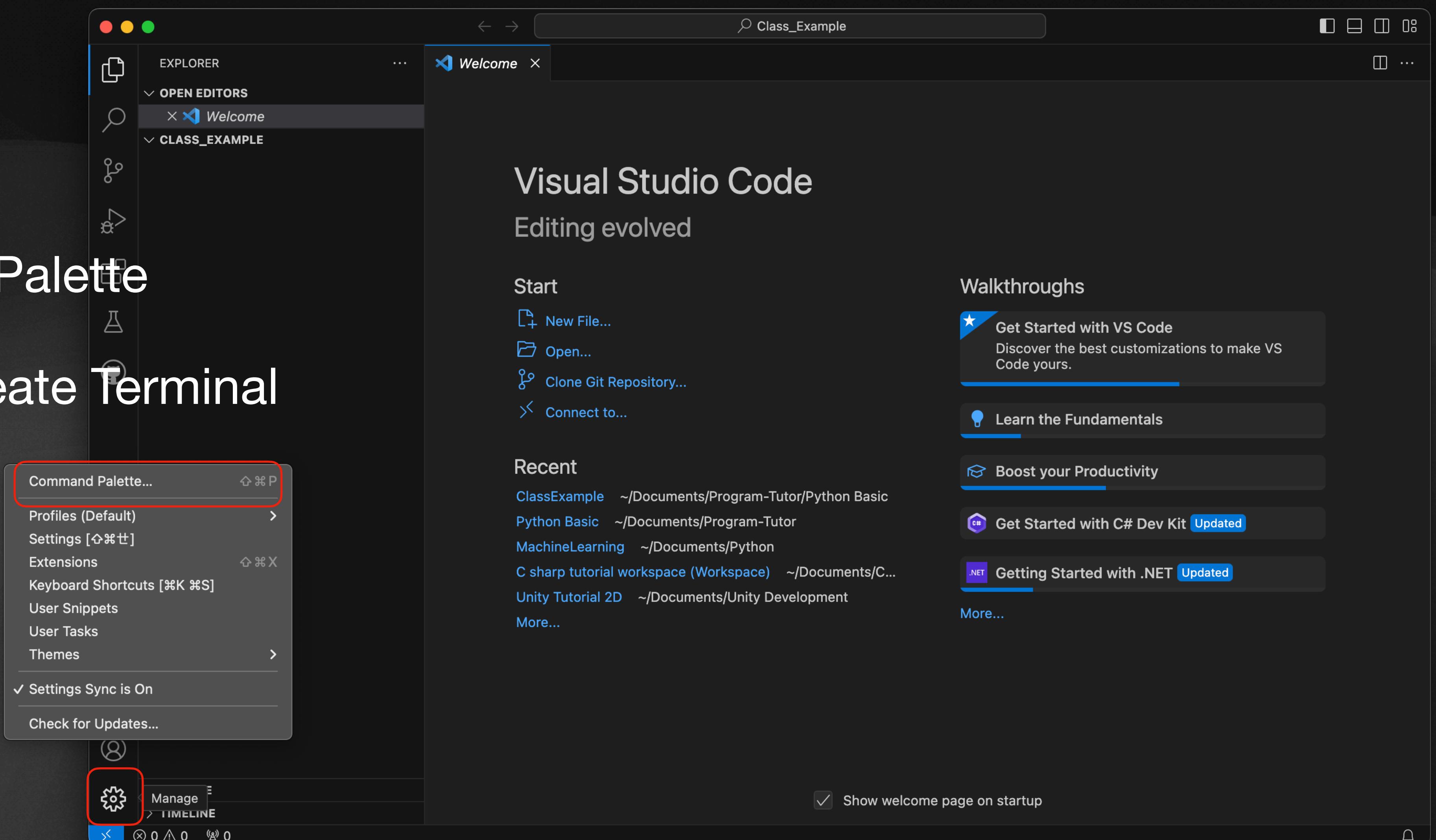
# 安裝 Python Extensions

- 點選 Extensions
- 輸入 python
- 點擊 install



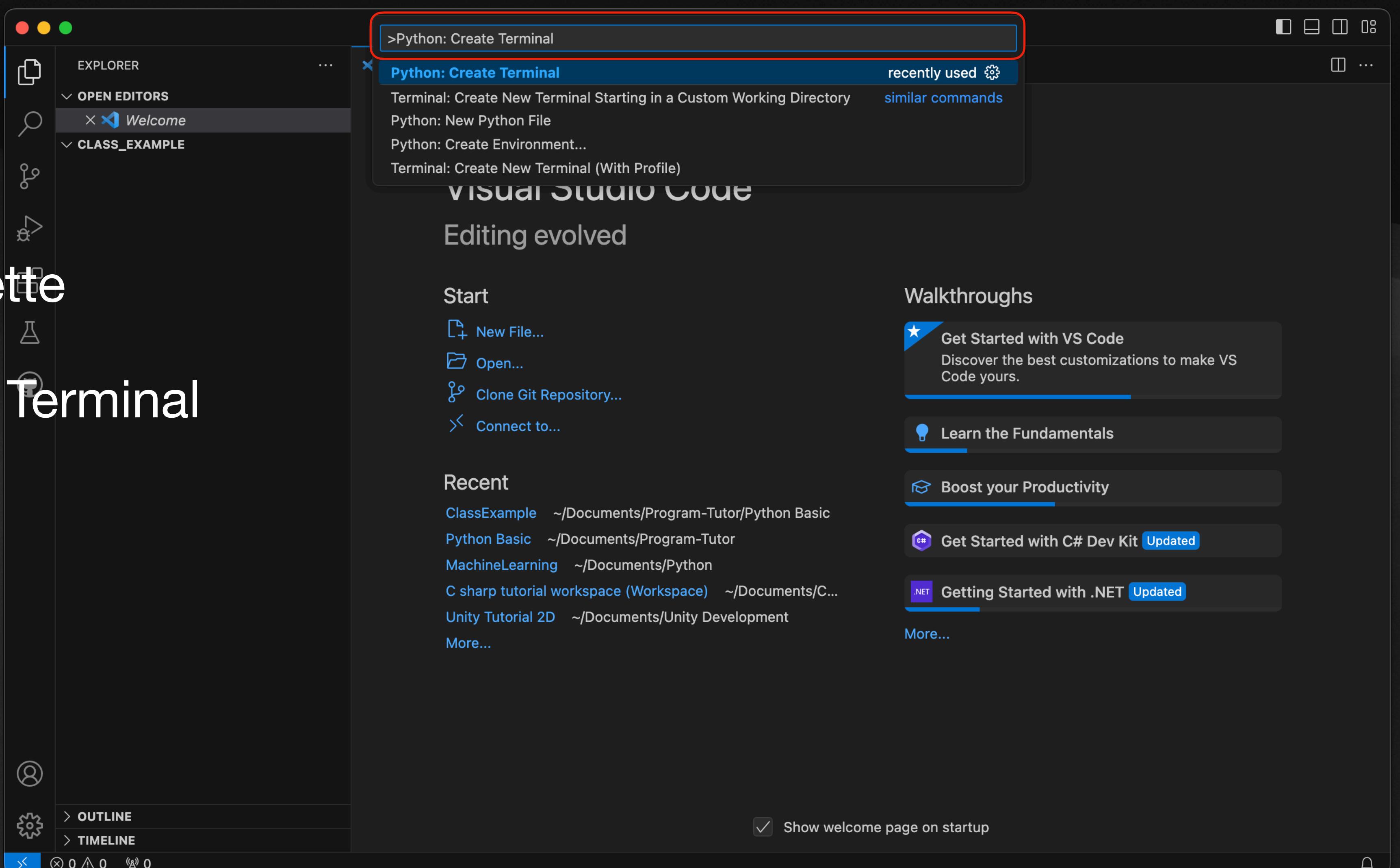
# 建置 Python 虛擬環境

- 點擊設定
- 打開 Command Palette
- 輸入 Python: Create Terminal



# 建置 Python 虛擬環境

- 點擊設定
- 打開 Command Palette
- 輸入 Python: Create Terminal



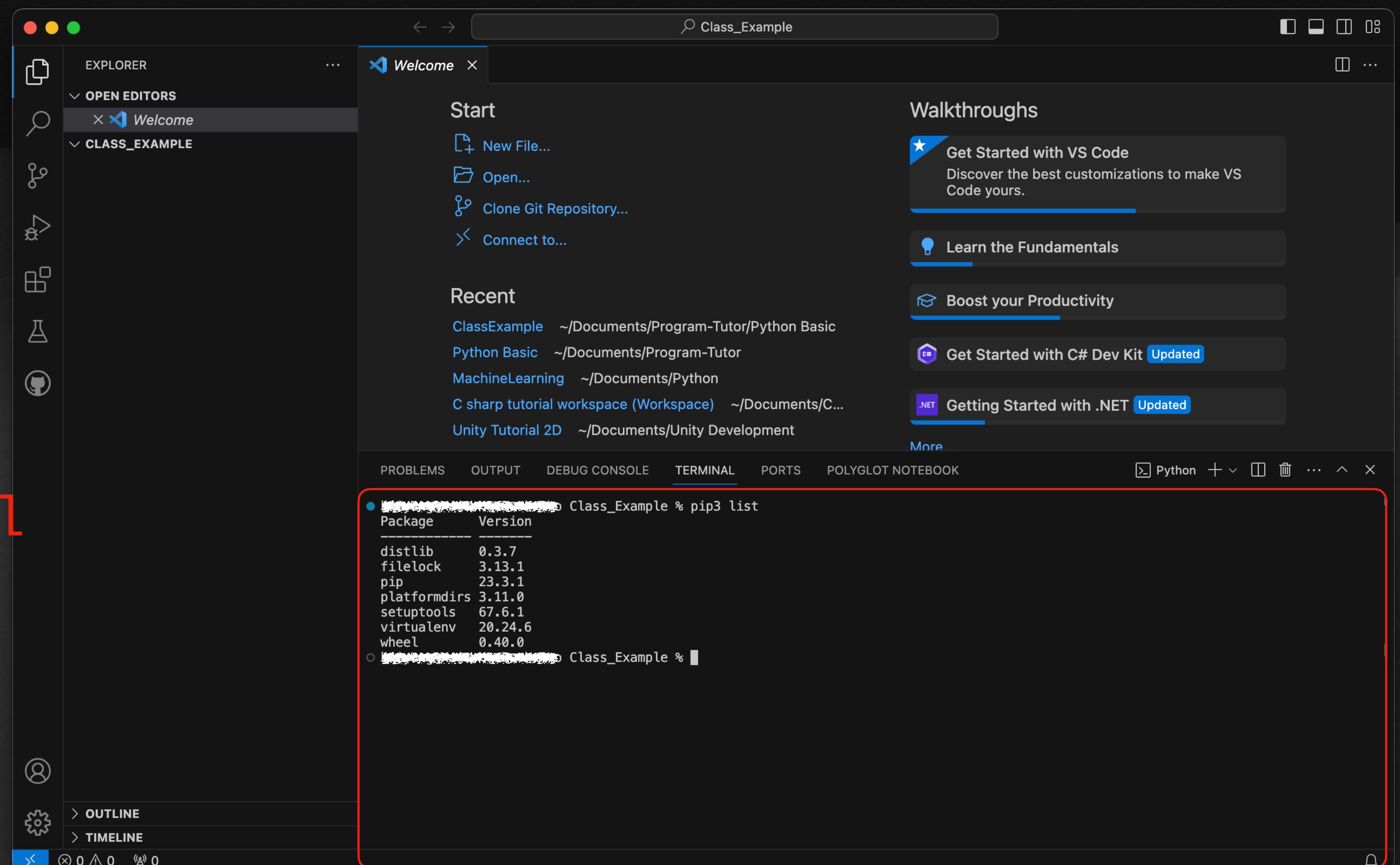
# 建置 Python 虛擬環境

查看現有的 Packages

- 輸入 pip3 list

安裝 virtualenv

- 輸入 pip3 install virtualenv



The screenshot shows the VS Code interface with a dark theme. The Explorer sidebar on the left lists 'OPEN EDITORS' (Welcome) and 'CLASS\_EXAMPLE'. The Welcome tab is active, displaying the 'Start' section with options like 'New File...', 'Open...', 'Clone Git Repository...', and 'Connect to...'. Below it is the 'Recent' section listing workspace files. The central area is the Terminal tab, which has been highlighted with a red border. It displays the command 'pip3 list' and its output:

```
Class_Example % pip3 list
Package    Version
distlib    0.3.7
filelock   3.13.1
pip        23.3.1
platformdirs 3.11.0
setuptools 67.6.1
virtualenv 20.24.6
wheel      0.40.0
```

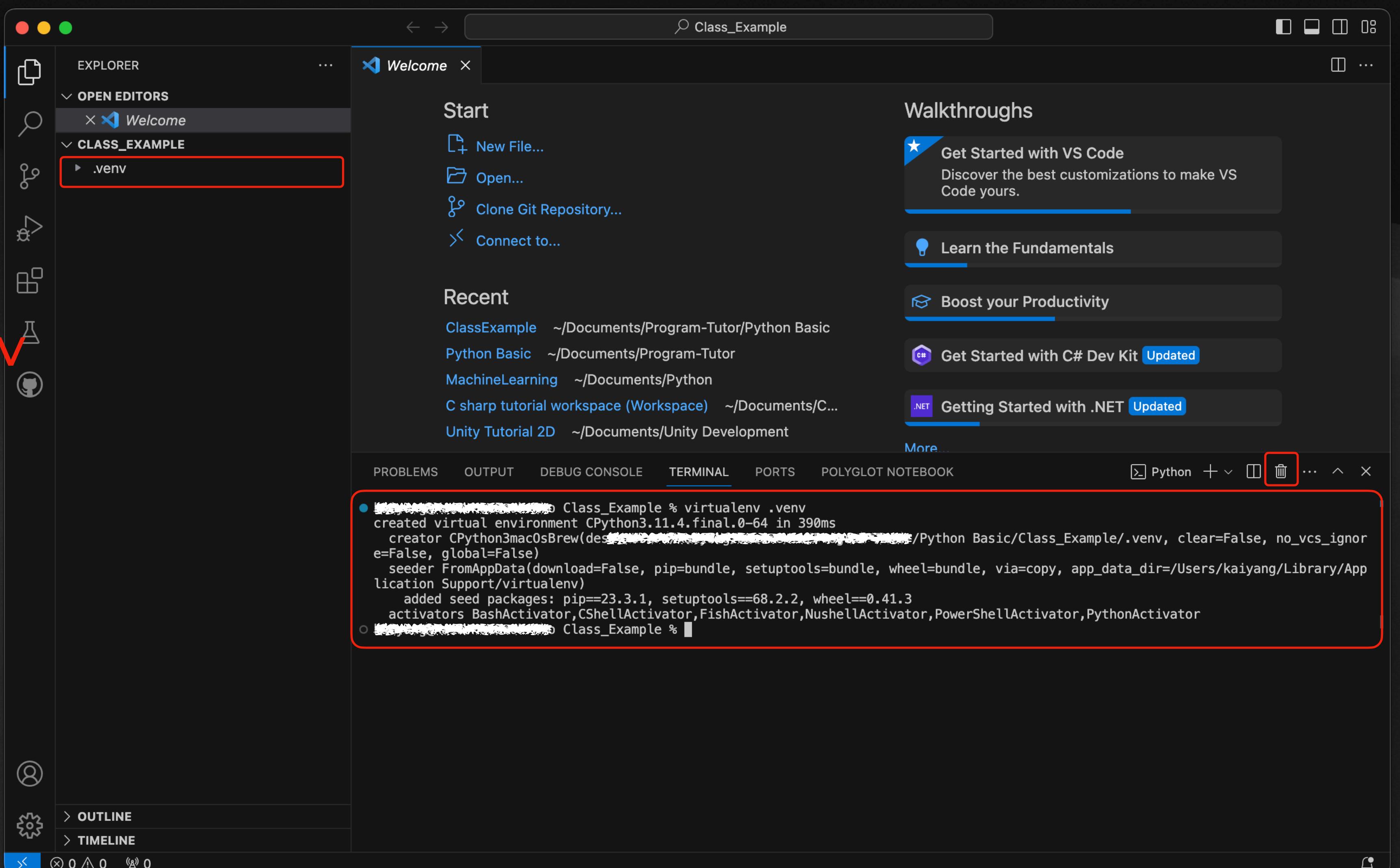
The status bar at the bottom shows '0 ▲ 0 ⚡ 0'.

# 建置 Python 虛擬環境

## 創建虛擬環境

- 輸入  
`virtualenv .venv`

- 關閉終端



The screenshot shows the VS Code interface with a dark theme. The Explorer sidebar on the left has a tree view with 'OPEN EDITORS' expanded, showing 'Welcome' and 'CLASS\_EXAMPLE'. Under 'CLASS\_EXAMPLE', there is a folder named '.venv' which is highlighted with a red box. The 'TERMINAL' tab at the bottom is active, displaying the command-line output of creating a virtual environment:

```
Class_Example % virtualenv .venv
created virtual environment CPython3.11.4.final.0-64 in 390ms
  creator CPython3macOsBrew(desktop) /Users/kaiyang/Library/Application Support/virtualenv
    seeder FromAppData(download=False, pip=bundle, setuptools=bundle, wheel=bundle, via=copy, app_data_dir=/Users/kaiyang/Library/Application Support/virtualenv)
      added seed packages: pip==23.3.1, setuptools==68.2.2, wheel==0.41.3
      activators BashActivator,CShellActivator,FishActivator,NushellActivator,PowerShellActivator,PythonActivator
Class_Example %
```

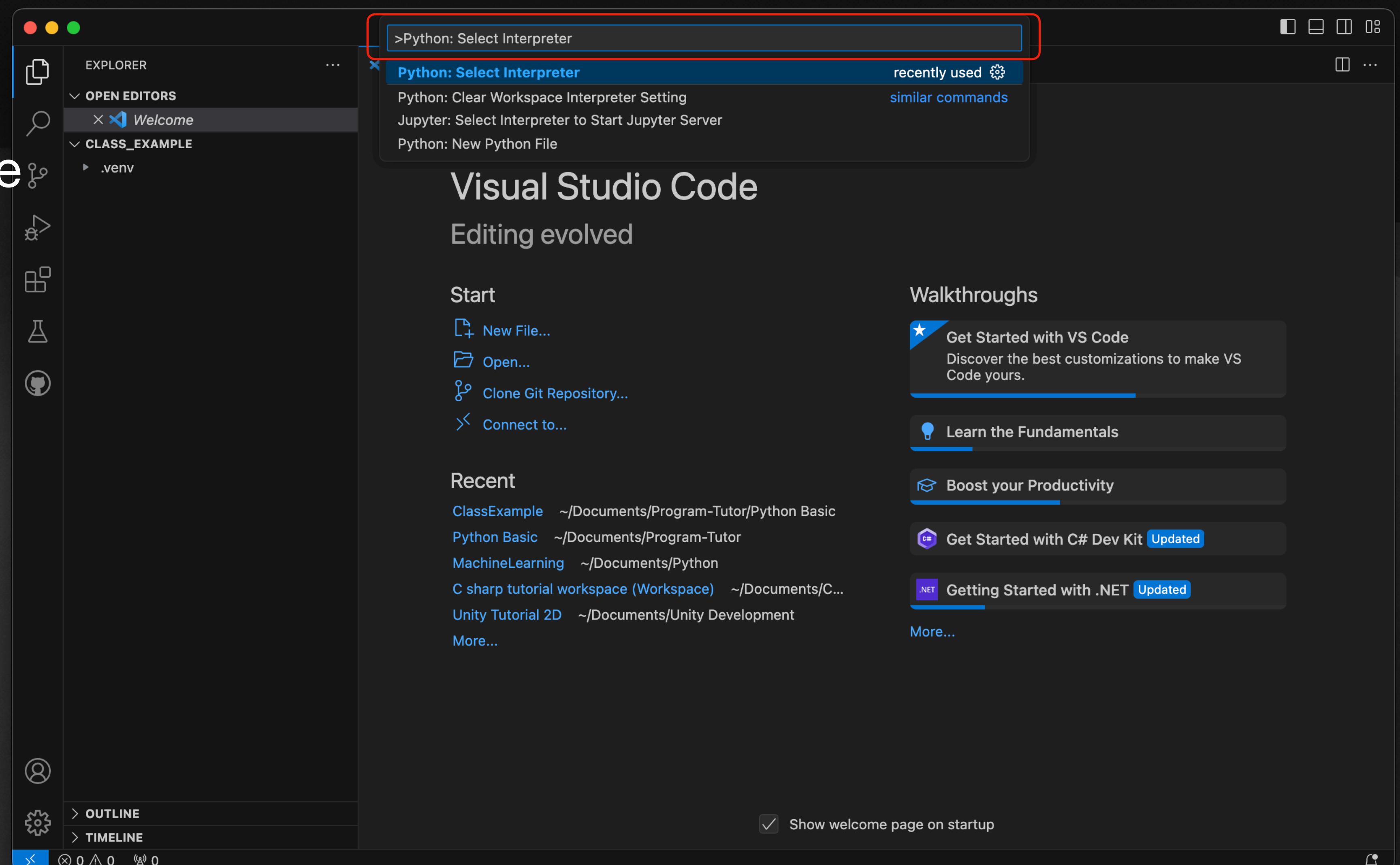
A red box also highlights the close button ('x') in the terminal tab bar.

# 開始使用虛擬環境

開啟 Command Palette

- 輸入 Python:  
Select  
Interpreter

- 選擇 .venv 的版本
- 創建終端

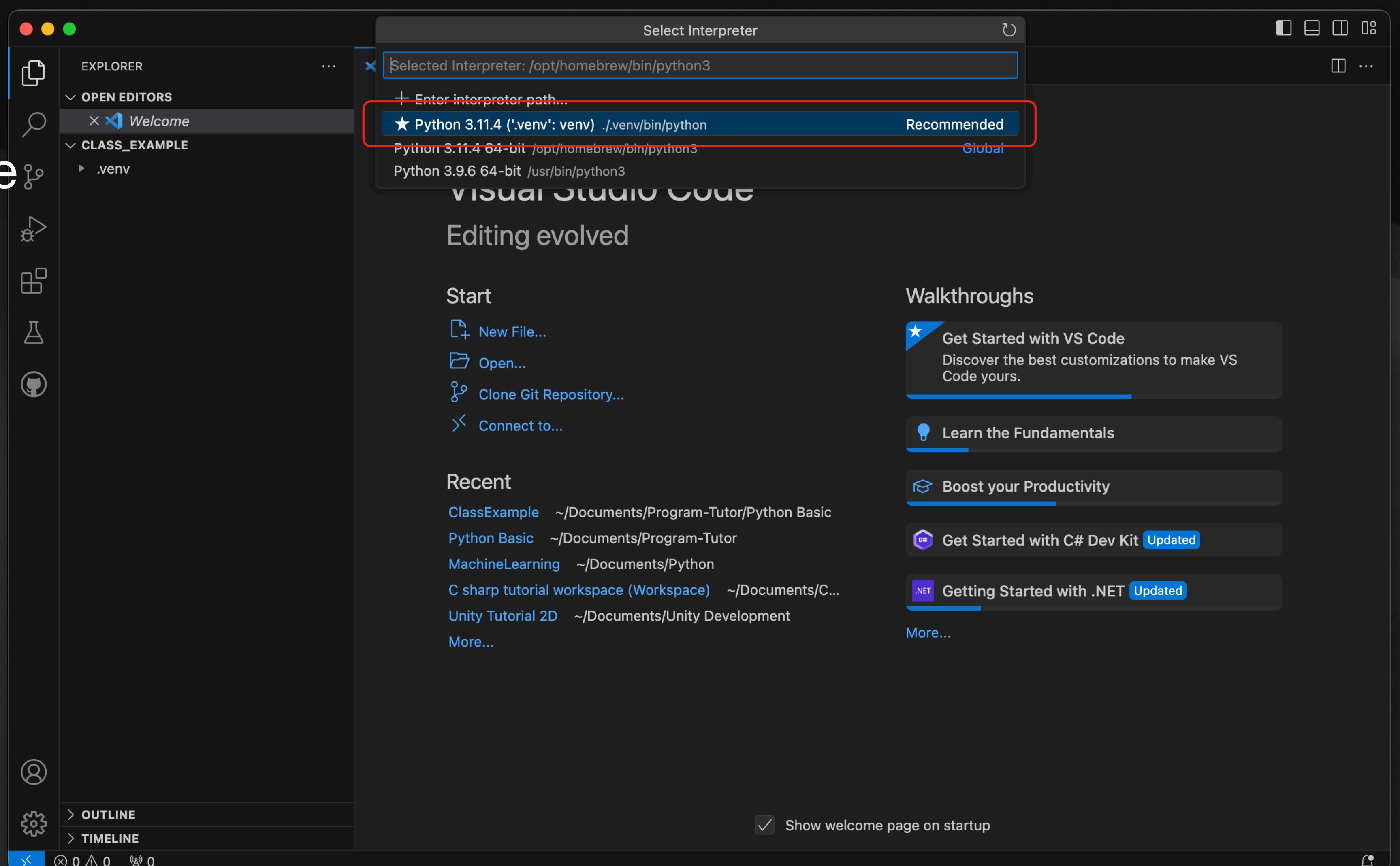


# 開始使用虛擬環境

開啟 Command Palette

- 輸入 Python:  
**Select Interpreter**

- 選擇 .venv 的版本
- 創建終端



# 開始使用虛擬環境

開啟 Command Palette

- 輸入 Python:  
Select Interpreter

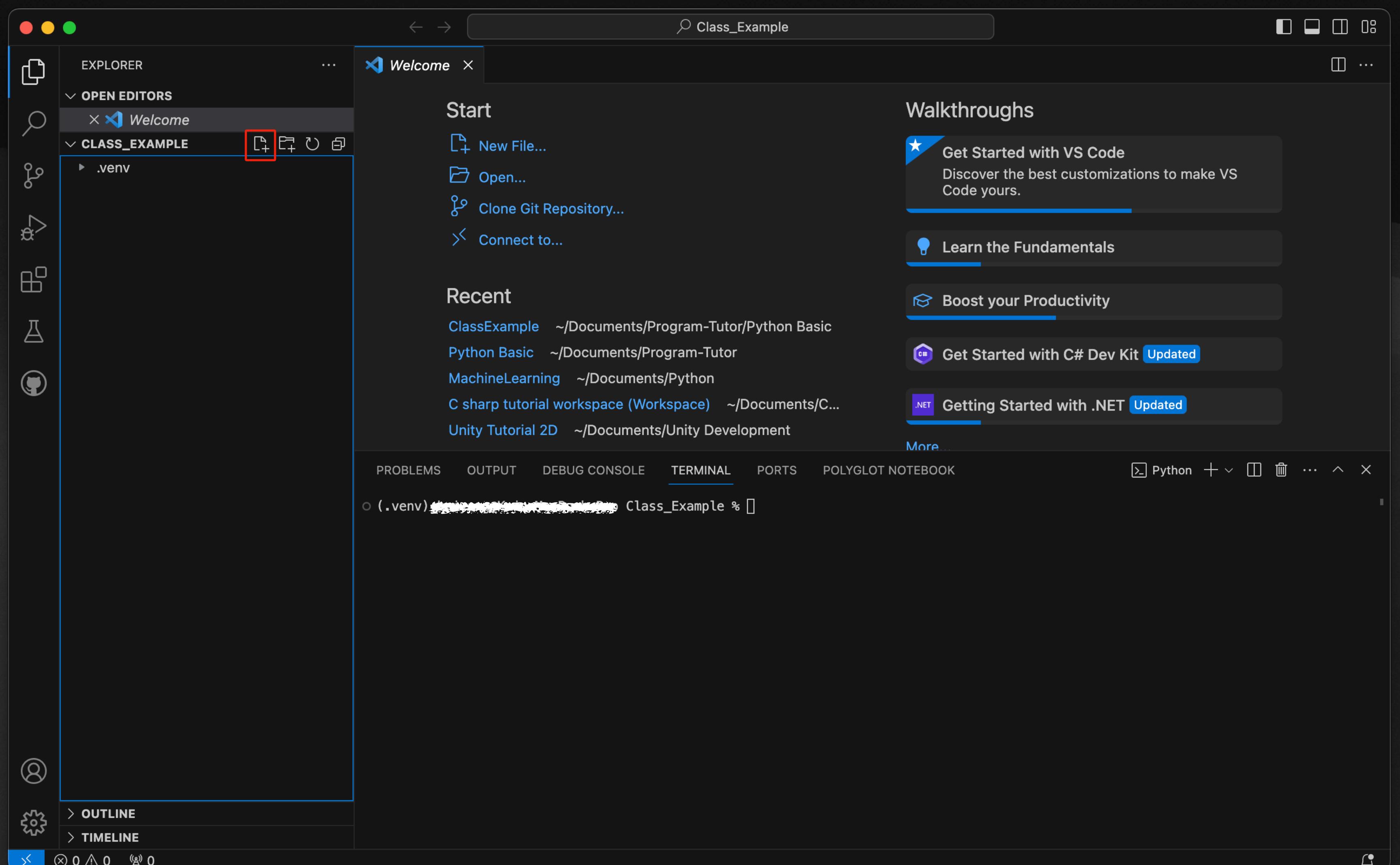
- 選擇 .venv 的版本

- 創建終端

The screenshot shows the VS Code interface with the Command Palette open. The palette has sections for 'Start' (New File..., Open..., Clone Git Repository..., Connect to...), 'Recent' (ClassExample, Python Basic, MachineLearning, C sharp tutorial workspace (Workspace), Unity Tutorial 2D), and 'Walkthroughs' (Get Started with VS Code, Learn the Fundamentals, Boost your Productivity, Get Started with C# Dev Kit, Getting Started with .NET). At the bottom, the 'TERMINAL' tab is selected, showing the command 'source /Users/.../Documents/Program-Tutor/Python Basic/Class\_Example/.venv/bin/activate'. A red box highlights the '( .venv )' part of the terminal output.

# 第一個 Python Script

- 新增檔案命名為 hello.py

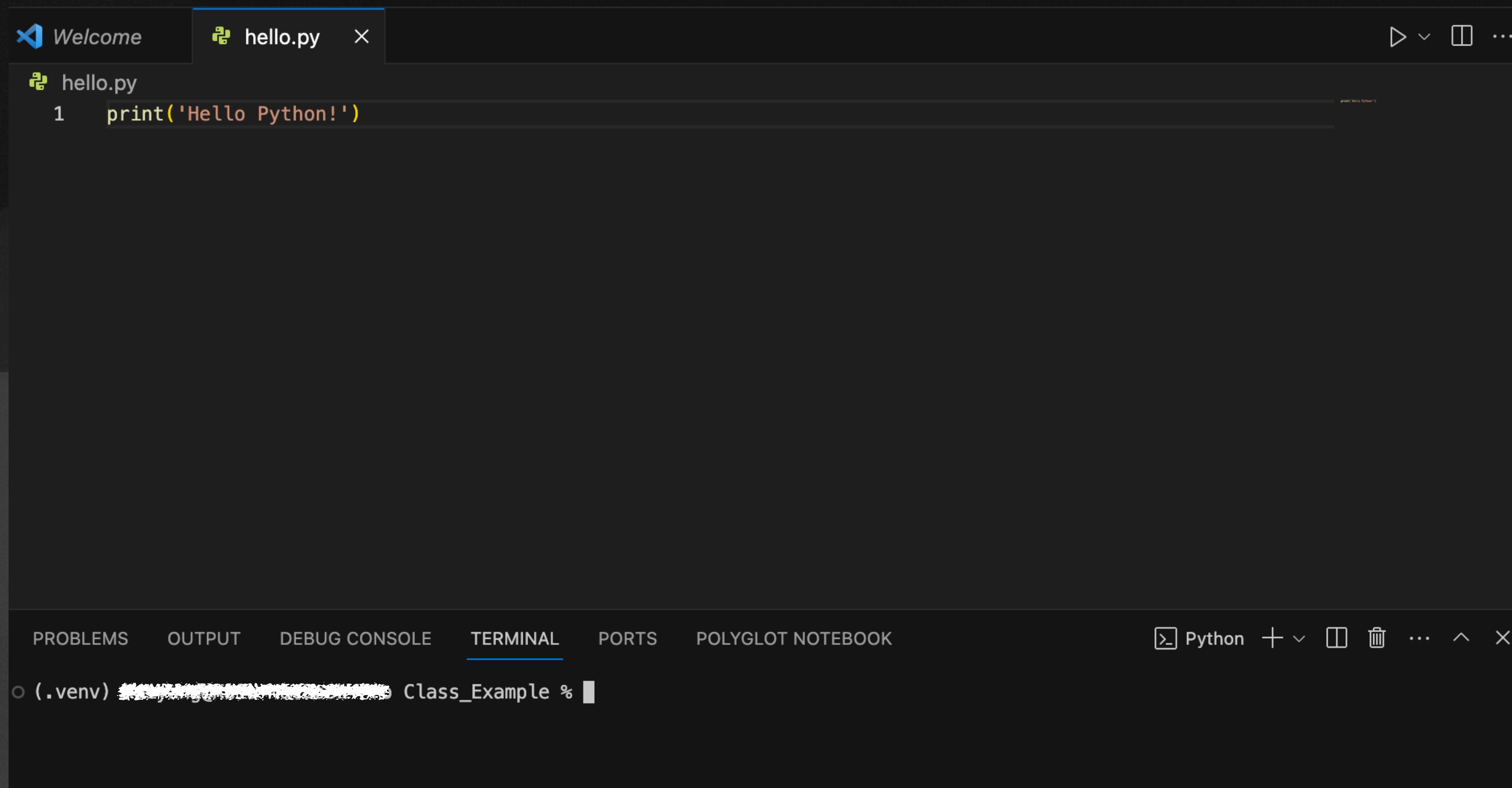


# 第一個 Python Script

- 新增檔案命名為 hello.py

The screenshot shows the Visual Studio Code interface. The Explorer sidebar on the left displays a file tree with a folder named 'CLASS\_EXAMPLE' containing a '.venv' folder and two 'hello.py' files. One 'hello.py' file is highlighted with a red border. The Editor pane on the right shows a single line of code '1 |' in a file named 'hello.py'. The bottom status bar indicates the file is 'Python 3.11.4 (.venv: venv)'. The terminal tab is active at the bottom.

# 第一個 Python Script



A screenshot of the Visual Studio Code (VS Code) interface. The title bar shows 'Welcome' and 'hello.py'. The main editor area displays the following Python code:

```
1 print('Hello Python!')
```

The bottom navigation bar includes tabs for PROBLEMS, OUTPUT, DEBUG CONSOLE, TERMINAL (which is underlined), PORTS, and POLYGLOT NOTEBOOK. A terminal window below shows a session in a '.venv' environment, with the command 'python' entered and the output 'Python' displayed.

# 第一個 Python Script

The screenshot shows the Visual Studio Code (VS Code) interface. At the top, there is a tab bar with 'Welcome' and 'hello.py'. Below the tabs, there is a code editor window containing the following Python code:

```
1 print('Hello Python!')
```

Below the code editor, there is a navigation bar with tabs: PROBLEMS, OUTPUT, DEBUG CONSOLE, TERMINAL, PORTS, and POLYGLOT NOTEBOOK. The TERMINAL tab is currently selected. In the terminal pane, there is a single line of text:

```
○ (.venv) [REDACTED] Class_Example % python3 hello.py
```

At the bottom of the screen, there is another set of tabs: PROBLEMS, OUTPUT, DEBUG CONSOLE, TERMINAL, PORTS, and POLYGLOT NOTEBOOK. The TERMINAL tab is selected here as well. In the terminal pane at the bottom, there is a single line of text:

```
○ (.venv) [REDACTED] Class_Example %
```

# 第一個 Python Script

The screenshot shows the Visual Studio Code interface with a dark theme. At the top, there's a tab bar with 'Welcome' and 'hello.py'. Below the tabs is a code editor window containing the following Python code:

```
1 print('Hello Python!')
```

Below the code editor is a navigation bar with tabs: PROBLEMS, OUTPUT, DEBUG CONSOLE, TERMINAL, PORTS, and POLYGLOT NOTEBOOK. The TERMINAL tab is currently selected. In the terminal pane, there is one entry:

- (.venv) [REDACTED] Class\_Example % python3 hello.py  
Hello Python!

At the bottom of the terminal pane, there is a small circular icon with a question mark.

Below the terminal pane, there is another set of tabs: PROBLEMS, OUTPUT, DEBUG CONSOLE, TERMINAL, PORTS, and POLYGLOT NOTEBOOK. The TERMINAL tab is selected. In the terminal pane, there is one entry:

- (.venv) [REDACTED] Class\_Example %

At the bottom of the terminal pane, there is a small circular icon with a question mark.