

Visual Studio Code Quickstart

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Chapter 1: Using Visual Studio Code with Python

Objectives

- Use VS Code to develop Python applications

About Visual Studio Code

Visual Studio Code (AKA "Code" or "VS Code") is a full-featured IDE for programming. It is free, lightweight, and works across common platforms and with many languages.

Visual Studio Code Features

- Autocomplete (AKA IntelliSense™)
- Autoindent
- Syntax checking/highlighting
- Debugging
- git integration
- Code navigation
- Command palette (easily find any command)
- Smart search-and-replace
- Project management
- Split views
- Zen mode (hide UI details)
- Code snippets (macros)
- Variable explorer
- Integrated Python console
- Interpreter configuration
- Unit testing tools
- Keyboard shortcuts
- Many powerful extensions
- Works with many languages
- Free

Getting started

Installing

If VS Code is not already installed, download and install from <https://code.visualstudio.com> .

Adding Python extensions

On some platforms, VS Code comes with Python extensions already installed. Otherwise, please follow these steps:

1. Start VS Code
2. Go to **Extensions** in sidebar on left
3. Search for "python"
4. Select and install the Python extension from Microsoft

Configuration

A little configuration makes VS Code more convenient.

Auto save

Select **File › Auto Save** to turn on Auto Save, which saves your file as you type. You can also configure **Auto Save** permanently in user settings.

Useful settings

Many aspects of VS Code can be configured. For these, go to **File › Preferences › Settings** (or **Code › Preferences › Settings** on Mac).

Launch folder

For convenience, we can set VS Code to run scripts from the folder that contains the scripts.

1. Search for "execute in"
2. Find the setting for **Execute in File Dir**
3. Check the box

Activate environment

For class, it is useful to skip activating the Python environment for all Terminal windows.

1. Search for "Activate Environment"
2. Find the setting for **Activate Environment**
3. Uncheck the box

Minimap

If you do not want to use the minimap (the guide strip along the right margin), you can turn it off.

1. Search for "minimap enabled"
2. Uncheck the box

Font size

You can change the theme (text colors, etc) or font size of VS Code

1. Search for "editor font size"
2. Find setting for **Editor: Font Size**
3. Set font size to desired value

Themes

You can also set the overall theme (colors, font, etc)

1. Go to **File > Preferences > Themes > Color Themes**
2. Choose a new theme

NOTE | **Visual Studio Code** may be already setup and configured.

Opening a project

To open a folder, choose **File > Open Folder....** When you open a folder, it automatically becomes a VS Code *workspace*. This means that you can configure settings specific to this folder and any folders under it.

Generally speaking, this is great for managing individual projects.

Creating a Python script

Use the **File** menu

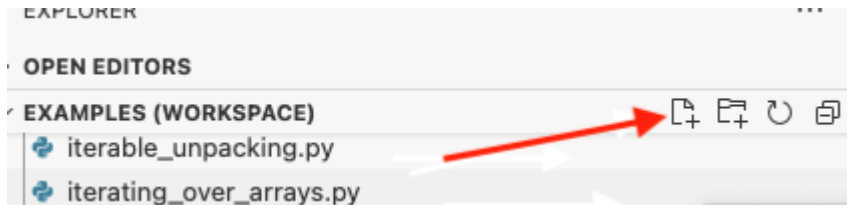
Go to **File > New File....**

Type a name in the blank, including the **.py** extension. You'll get a file dialog for where to save it.

You can also just select "Python File" and Code will create a new editor window named **untitled-n**, where *n* is a unique number. You can then use **File > Save** to save the file with a permanent name.

Use the "new file" icon

Click on the "new file" icon next to the folder/workplace name in the Explorer panel.



Click on "select a language" and choose Python. As above, it will create a new file named **untitled-n**. Use **File > Save** to save the file.

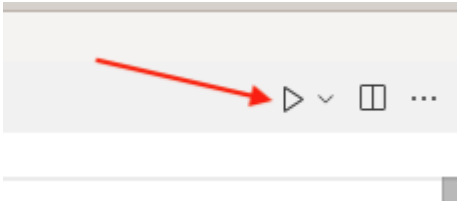
WARNING

This will create a file in the same folder as the currently open file.

Running the script

Click the "run" icon

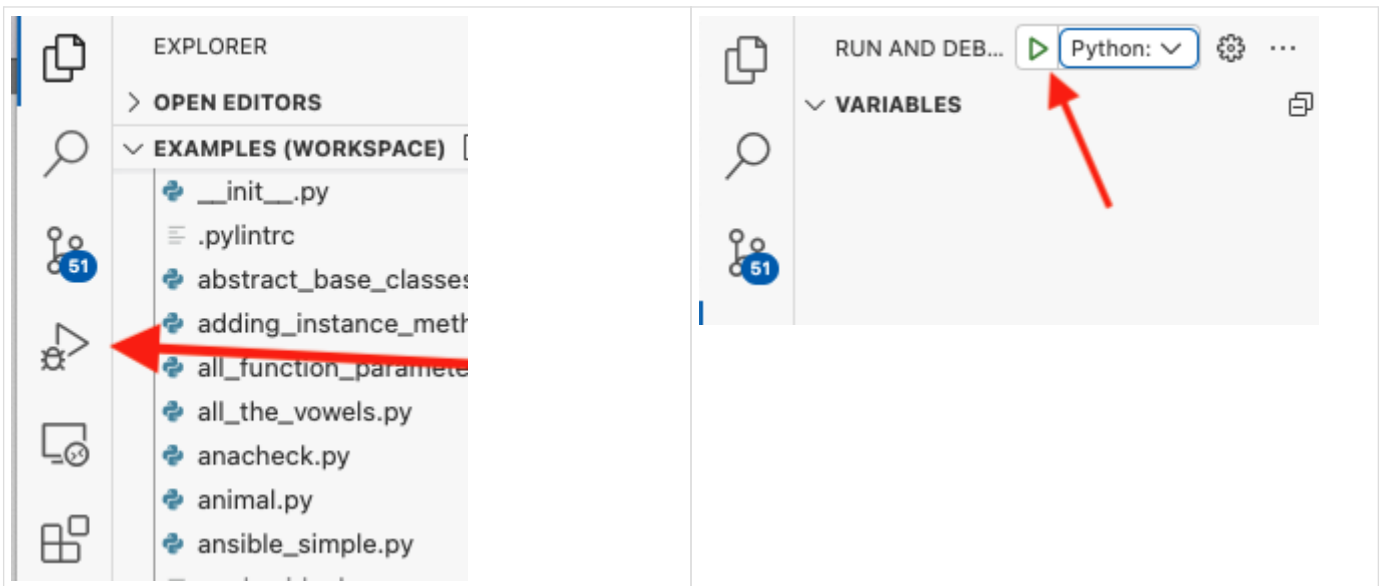
The easiest way to run a script is to click the "Run Python File" icon next to the editor tabs



Once you have run the file, you can re-run it by pressing up-arrow in the terminal window. This makes it easy to add arguments.

Use Run/Debug panel

You can open the Run/Debug panel, and then click on the green arrow to run the script. This uses the default launch configuration, which can be customized.



TIP

You can create custom launch configurations to fine-tune how you want to launch each script.

Use Run menu

The Run menu is essentially a shortcut for the tools on the Run/Debug panel. You can choose to run with or without debugging. If you have no breakpoints set, there is not much difference.

Chapter 1 Exercises

Exercise 1-1 (hellocode.py)

In VS Code, create a new script named `hellocode.py`. Put one or more `print()` calls in it and run it with VS Code

Now run it from the command line as well (not in the VS Code integrated terminal).

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