

15-112-F26 Alternate Lab Setup

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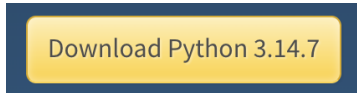
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Part 1: Setting up Python

Note: If you have Python 3.13 or later already installed, you can skip this Part.

1. Go to the [official Python website's downloads page](#) and click on this link:



If you do not see this link, then scroll down to the section **labeled “Looking for a specific release?”** Then look through the release history, and install any version starting with “Python 3.14.” (3.14.7 being the latest, most up-to-date one).

2. **If you are installing on Windows**, be sure to check the box that adds Python to your PATH!

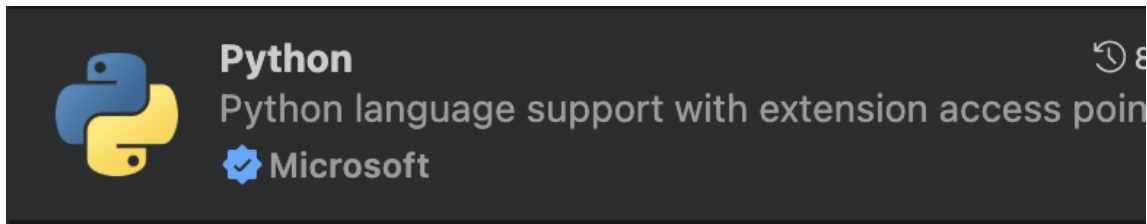
- ☒ Install launcher for all users (recommended)
- ☒ Add Python 3.14 to PATH

Part 2: Setting Up VSCode

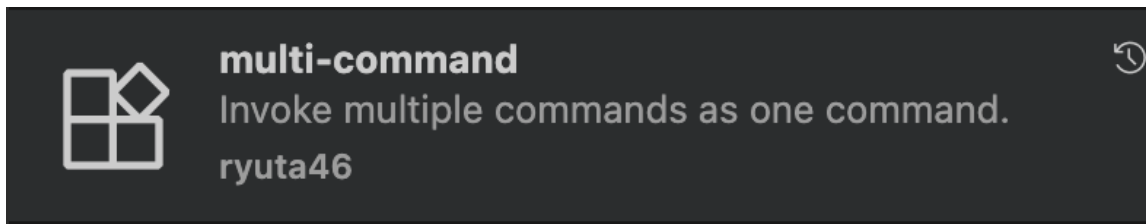
1. Download VSCode from [here](#).
2. Click on the 'Extensions' tab on the left toolbar.



3. Type 'Python' into the search bar and install the extension by Microsoft named simply 'Python'.
 - a. Note: you might see slight differences from this screenshot (colors, icons etc.)



4. Type 'multi-command' into the search bar and install the multi-command extension.



5. Create a new folder named **"15-112"** anywhere on your desktop.
 - a. **Note: To create a folder**, open "Finder" (Mac) or "File Explorer" (Windows) and go to "Desktop". Use cmd+shift+n (Mac) or ctrl+shift+n (Windows) to create a new folder, type "15-112", and hit "Enter".

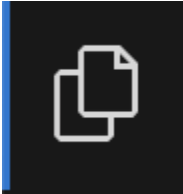
Part 3: Setting Up cmu_graphics

Note: If you managed to get cmu_graphics successfully installed and running via pip (i.e. from the first setup lab), skip to the next Part.

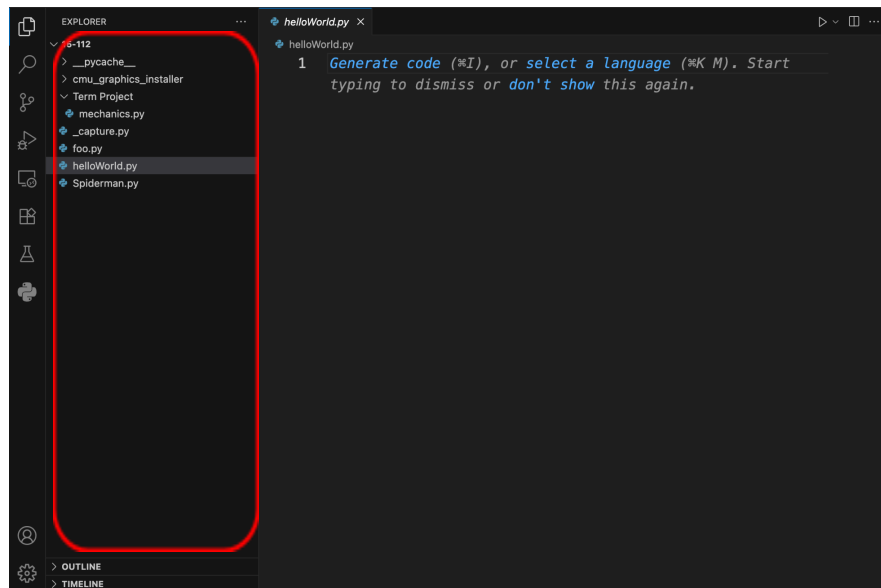
- Note that if you installed pip during the first setup lab but didn't manage to get it working (and are now attempting zip), you should uninstall the pip version before attempting to download the zip file. (Go to OH if you need assistance with this!)
1. Use [this link](#) to download cmu_graphics as a zip file.
 2. Navigate to the zip file in your downloads, and unzip the folder named "cmu_graphics-version-2.0.3".
 - a. **Note: to navigate** to your downloads folder
 - i. Mac: open "Finder" and search "cmu_graphics-version-2.0.3"
 - ii. Windows: open "File Explorer" and search "cmu_graphics-version-2.0.3"
 - b. **Note: to unzip** a file
 - i. Mac: double click on the file and a **folder** called "cmu_graphics" should appear
 - ii. Windows: Right click on the file, click "Extract all..." from the pop-up menu, choose where you want to extract it to, and press "Extract"
 3. Copy (or move) the whole "cmu_graphics" folder into the "15-112" folder in your computer

Part 4: Setting Up helloWorld.py (and more VS Code)

1. Going back to VSCode, click “File” on the menu bar at the top of the screen.
 - a. Click “Open Folder”, navigate to your new **15-112** folder, and open it.
2. Click on the “Explorer” icon on the left hand side (the double pages icon). This will open up a window with all the folders and files in the current folder you are looking at.



3. Create a blank new file called **helloWorld.py** in your 15-112 folder.
 - a. To create a new file within your project, right click anywhere within the highlighted region below, select “New File”, type in “helloWorld.py” and hit “Enter”.
 - b. Alternatively, you can also do so by clicking on the “New file” icon in the top right of this section.

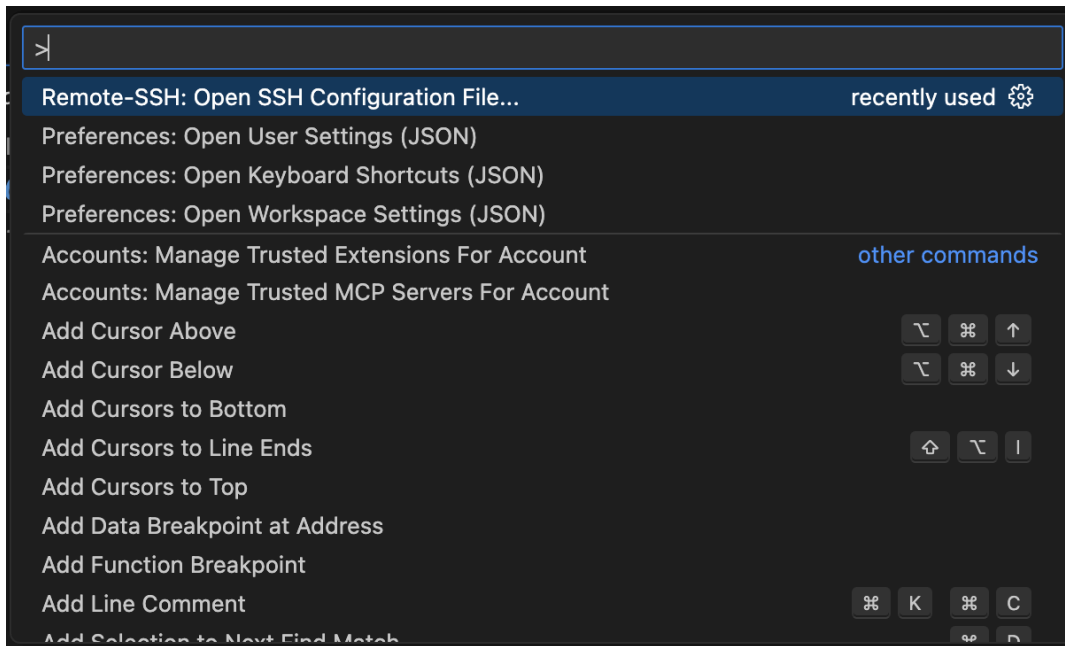


- c. **Note:** In general, end your files with “.py” so that they get read as a Python file
4. Copy-and-paste [this Python program](#) that displays “Hello World” using cmu_graphics into **helloWorld.py**.
 - a. **Note:** This step can also be achieved by downloading the file and then opening it directly in VSCode.
 - b. **Note:** If it does not work, try restarting VSCode

5. Look at the bottom bar for something similar to the following:

Python 3.13.7

6. If the text says 'Python 3.14.x' (or a similar acceptable version), you're set! If not, click on the text. After the dropdown appears, select any version starting with "Python 3.14" (i.e. 3.14.7).
7. Click 'cmd + shift + p' (Mac) or 'ctrl + shift + p' (Windows) to open the 'Command Palette'.



8. Type in 'settings' then click on 'Preferences: Open User Settings (JSON)' (or 'Preferences: Open Settings (JSON)' if you see that instead).

9. Paste these settings into the page that opens up (replacing the settings that are there) and **hit save**.
 - a. Save these settings by hitting Save under File in the top left, or use cmd+s (Mac) or ctrl+s (Windows).

JSON

```
{
  "window.zoomLevel": 0,
  "editor.fontSize": 18,
  "terminal.integrated.fontSize": 18,

  "python.terminal.executeInFileDir": true,
  "python.terminal.launchArgs": ["-i"],
  "python.linting.pylintEnabled": false,

  "editor.quickSuggestions": {
    "other": false,
    "comments": false,
    "strings": false
  },
  "editor.acceptSuggestionOnEnter": "off",
  "editor.quickSuggestionsDelay": 10,
  "editor.wordBasedSuggestions": "off",
  "editor.parameterHints.enabled": false,
  "editor.rulers": [80]
}
```

10. Click 'cmd + shift + p' (Mac) or 'ctrl + shift + p' (Windows) to open the 'Command Palette' again and type in 'Keyboard Shortcuts' and click on 'Preferences: Open Keyboard Shortcuts (JSON)'

11. Paste these settings into the page that opens up (replacing the settings that are there) and **hit save**.
 - a. Save these settings by hitting Save under File in the top left, or use cmd+s (Mac) or ctrl+s (Windows).

JSON

```
[
  {
    "key": "cmd+b",
    "command": "runCommands",
    "args": {
      "commands": [
        "workbench.action.terminal.kill",
        "python.execInTerminal"
      ]
    }
  },
  {
    "key": "ctrl+b",
    "command": "runCommands",
    "args": {
      "commands": [
        "workbench.action.terminal.kill",
        "python.execInTerminal"
      ]
    }
  }
]
```

- a. **Note:** Exclusively run your code using “cmd + b” when using VSCode

Part 5: Setting Up Github Copilot

1. If you haven't already, sign up for a Github account [here](#).
2. Download the Github Copilot extension by clicking "Open Copilot in VSCode" [here](#).
3. When it asks you to, sign into your Github account and press "Authorize Visual Studio Code." Then, click on "open VSCode".
4. Open your "15-112" folder again in VSCode. The "chat" should be open already.
 - a. Note: to open and collapse the chat, simply press the top right icon

