

Virtual Env Walkthrough - VS CODE

macOS

Install Python Package from Brew

1. Open Terminal.
2. Install Xcode Command Line Tools if you haven't already (may take time):

```
xcode-select --install
```

3. Install Homebrew if you haven't already:

```
/bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"
```

4. Install Python 3.11 using Homebrew:

```
brew install python@3.11
```

MAC OS VS CODE

5. Install VS Code from the official website: <https://code.visualstudio.com/download>
6. Launch VS Code.
7. Open the Command Palette by pressing **Cmd + Shift + P**.
8. Type "Python: Select Interpreter" and choose it from the list.
 - a. If you do not see this, you'll need to install Python extension for VS Code first!
9. In the Python interpreter selection window, click on "Enter interpreter path...".

- a. Select "Find...".
- b. Navigate to the directory where you want to create your virtual environment and click "New Folder".
- c. Name the folder (e.g., `myenv`) and click "Create".
- d. Select the newly created folder and click "Open".
- e. In the terminal within VS Code, run the following command to create a virtual environment:

```
python3.11 -m venv .
```

10. VS Code will automatically activate the virtual environment.
 - a. Alternatively you can run: `source .venv/bin/activate` in terminal
 - b. You should also verify this by checking the Python interpreter path in the bottom-left corner of the VS Code window.
 - i. If it does not automatically update, you can change to the correct Python 3.11 environment WITHIN `myenv` (not `base`)
 - c. It should display the path to your virtual environment.
11. Open a new terminal in VS Code to ensure the virtual environment is activated.
12. Upgrade pip to the latest version:

```
pip install --upgrade pip
```

13. Check Python Version:
 - a. `python --version` or `python3 --version` or `python3.11 --version` whichever one provides that you have python3.11 active in your environment
 14. Finally we may have to check about `Jupyter` `Python` and `ipykernel` extensions in VS Code being installed properly for everything to work smoothly (heads-up!)
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WINDOWS

1. Download the Python 3.11 installer from the official website:
<https://www.python.org/downloads/windows/>
2. Run the installer and make sure to check the option "Add Python 3.11 to PATH" during the installation process.
3. You'll want to make sure that Python 3.11 is added to your Environment variables in your path otherwise our IDE won't recognize it! Since sometimes there can be issues here, refer to the guide here IF you need it: [Link to Guide on Environment Variables](#).
4. Install VS Code from the official website: <https://code.visualstudio.com/download>
5. Launch VS Code.
6. Open the Command Palette by pressing `Ctrl + Shift + P`.
7. Type "Python: Select Interpreter" and choose it from the list.
 - a. If you do not see this, you'll need to install Python extension for VS Code first!
8. Open Command Prompt. (NOT POWERSHELL, Make sure you select top right of terminal in VS code to select the right one) Alternatively You can do this within your cmd within your system outside of VS Code
9. Navigate to the directory where you want to create your virtual environment:

```
cd C:\path\to\your\project
```

10. Create a new virtual environment with Python 3.11:

```
python -m venv myenv
```

11. Activate the virtual environment:

```
myenv\Scripts\activate
```

```
myenv\Scripts\.activate.bat
```

OR

```
myenv\Scripts\.activate.ps1
```

12. Your Terminal prompt at this point should change to whatever you named your environment. Your env name will be a flag inside your terminal prompt.
13. Verify that you are using the correct Python version:

```
python --version
```

It should display "Python 3.11.x".

14. Upgrade pip to the latest version:

```
python -m pip install --upgrade pip
```

15. To deactivate the virtual environment when you're done working on your project (after this course or to return to normal environment), simply run:

```
deactivate
```

16. Finally we may have to check about `Jupyter` `Python` and `ipykernel` extensions in VS Code being installed properly for everything to work smoothly (heads-up!)

Now you have a Python 3.11 virtual environment set up on Windows. You can install packages using `pip` within this virtual environment without affecting your system-wide Python installation. Wonderful!

