**Python for Beginners**

1. **Python Installation Guide**

Mac Installation:

Please follow this link for installation.

<https://wsvincent.com/install-python3-mac/>

Windows Installation:

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| Python Installation | Go to <https://www.python.org/downloads/> to install the latest version of Python. |
| Environment Setup | Once the Python package is downloaded, open the download and you will see a Setup Prompt this:    Select “**Install Now**” to download Python to the pre-selected folder path that your computer has selected for you.  If you want to save Python to another folder or directory click “**Customize installation**”.  Also make sure that the below checkboxes are selected as it will make your development easier in the future. |
| \*If you clicked “**Customize installation**” | Select all of the options on the screen since these important Python repositories needed to launch and install programs for Python. Your screen should like the above. Now click “**Next**”. |
| Final Step | Click “**Install**” to officially install the language and repositories. You will be prompted to verify your installation with your administrator credentials/password.  Congratulations! You have now have Python on your computer. |

**Note: Below tutorial video has installation instructions**

1. **Running Python**

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| Python IDLE | The Python IDLE also known as the Integrated Development Environment is a an Environment or Window where you can test single lines of code for experimentation or run a large body of code as well. They have two parts, the Shell Window for single executable commands or lines and the Editor Window to execute a whole program (many lines of code at once).    To Open the IDLE, open your Windows Start Menu. Now type in “IDLE”. You will the see the option “**IDLE (Python 3.7 32-bit)**” Click on this option.  You will get a screen that looks like this: |
| Quick Test | Let’s test a Python line. Let’s type in “**print(Hello World)**” next to the three arrows (>>>). Then click enter. You should get the below screen. |
| Open the Editor Window | Right now you are in the Shell Window where you can only execute single lines of code one at a time. Now let’s open the editor window where you can write large bodies of code.  Click the “File” dropdown in the toolbar and click “New File” from the dropdown. A new black window should popup. It should look like this:    This is where you can write your actual code and run it. Save you file by clicking the “File” dropdown button and clicking “Save As”. |
| Running your code | In the editor window, click the “Run” dropdown button from the toolbar at the top and click “Run Module” from the dropdown. This should again open up the Shell Window from before, but this time run your program. Of course, you haven’t type in any lines of code at this moment, so Python just won’t run it.  But now lets try doing a simple program. Type in the following lines.Each line on a separate tab:  a = 2  b = 3  print(a+b)  Your screen should look like this:    Now run the file and you should see “5” in the Shell Window. |

1. **Python Editors:**

**PyCharm** - Download Links:

* Windows: <https://www.jetbrains.com/pycharm/download/#section=windows>
* MacOS: <https://www.jetbrains.com/pycharm/download/#section=mac>

**Sublime Text** - Download Links:

* <http://www.sublimetext.com/3> - You can find the Windows and Mac donwloads here. The Mac download is stated as “OS X”. For Mac users, make sure you have a version 10.7 or above to download.

PyCharm Installation Guide

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| Installing PyCharm | Go to <https://www.jetbrains.com/pycharm/download/#section=windows> to install the latest version of Python. |
| Selecting the correct package | Select your Operating System (Windows or MacOS) in the top menu. Then under “**Community**”, click “**Download**”. |
| Installation for Windows | Once it has downloaded in your browser, click the download to open up the setup screen which look like above. Click “**Next**” and navigate through the instructions to complete installation. |
| Installation for Mac | Download mac version and click on the .dmg file and install. Drag Pycharm to applications.  A screenshot of a cell phone  Description automatically generated |

**Note: Below tutorial video has installation instructions**

1. **Python tutorials**

<https://www.codecademy.com/learn/learn-python-3>

<https://www.tutorialspoint.com/python3/>

<https://www.youtube.com/watch?v=rfscVS0vtbw>

<https://www.youtube.com/watch?v=_uQrJ0TkZlc>