How to Download and Install Python

Brought to you by **VEX** Robotics Team - VRC 99909A Rising Phoenix

This instruction is for Windows machines only. Python comes pre-installed on Mac and Linux machines.

Step 1: Download Python

- Download Python from http://www.Python.org/downloads or use this link
  https://www.python.org/ftp/python/3.8.3/python-3.8.3.exe
  After successful download, an executable file "***python-3.8.3.exe***" shall appear in your computer's "Downloads" folder.
  Note: there are currently 2 versions of Python - Python 2 and Python 3. Stay with Python 3 as it's the latest and most supported Python version.

Step 2: Install Python

- Double-click on "***python-3.8.3.exe***" in "Downloads" folder to start the installation process
  A "Python for Windows" installation session window will pop up.
- Make sure "Add Python 3.8 to PATH" is selected/checked
- Click on "Install Now" to complete the installation process
  Note: This installation will include Python shell, IDLE, and Pip (Python package manager/installer)

Step 3: Verify Python

- Open "Command Prompt" terminal
Click on the windows logo at the lower left corner of your screen and start typing "command"-> "Command Prompt" App should appear under ""Best match"-> Click on that to start the terminal
A black Command Prompt terminal window shall appear.
- Type python --version in the terminal
"Python 3.8.3" shall appear in the terminal. This verifies successful installation of Python on your windows machine.

Step 4: Scripting in Python Shell (REPL)

- Open Python shell terminal
Click on the windows logo at the lower left corner of your screen and start typing "Python"-> "Python 3.8" App should appear under ""Best match"-> Click on that to start the Python shell terminal
A black Python shell terminal window shall appear.
- Type print("Hello World!") in the terminal
"Hello World" shall appear in the terminal.
- Now try other Python commands you learned in the class

Step 5: Programming in IDLE

- Open Python IDLE (Integrated DeveLopment Environment)
Click on the windows logo at the lower left corner of your screen and start typing "Python" -> "IDLE (Python 3.8)" App should appear under ""Best match" -> Click on that to start the Python IDLE.
- A white Python shell window shall appear (you can use it the same way as the black Python shell terminal in the last step).
- Start a new Python program file
Top menu "File" -> "New File"
A file editor window shall appear.
- Type your Python program in that editor window
- Save your Python program
Top menu "File" -> "Save as"
Select/create a folder to save all your Python program files

- Run your Python program
Top menu "Run" -> "Run Module"
Alternatively, you can press the "F5" key on your keyboard to run your program.
- Debug your Python program
After you click "Run Module", your program will either run successfully or terminate if bugs/errors are encountered. The results/error messages shall appear in the white Python shell window.

Step 6: Pip

- Pip is one of the popular Python's package installers. It allows you to install Python packages (with internet connection) by simply typing commands in Command Prompt terminal

  Example:

  Type pip install pygame in command prompt terminal

  The package "pygame" shall get installed on your machine so you can import it in your program to use all its modules to create fancy games.