Installation Guide for Microsoft Visual Studio Code (VSC)
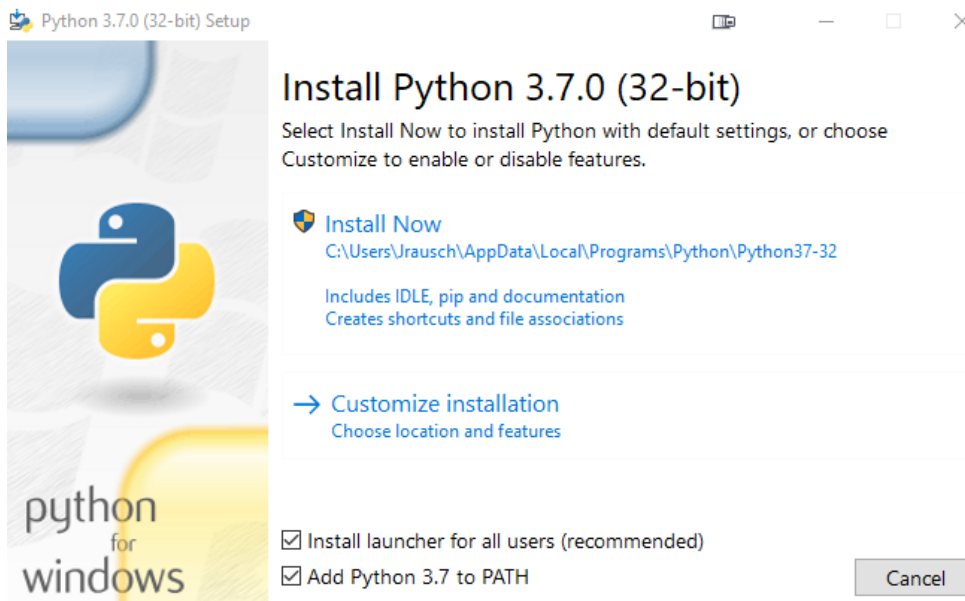
Updated: 1/7/2020

Procedure: Installation of Python 3.7.x

1. Navigate to the following website: https://www.python.org/downloads/
2. Click the yellow button at the top of the page to download the installer

3. Once the file downloads run it
    a. Check "Install launcher for all users"
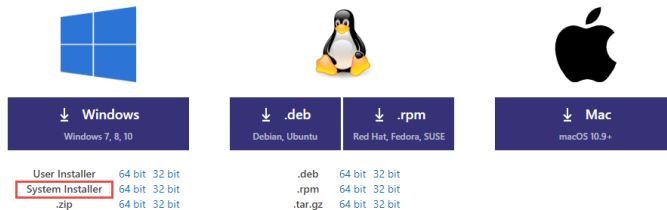   b. Check "Add Python 3.7.x to PATH"

4. Select Customize Install
   a. Choose all optional features
   b. Click Next
   c. Under Advanced Options, select all the options. Once you select "install for all users", you see the location change to C:\Program Files (x86)\Python37
   d. This should install Python in C:\Program Files (x86)\Python37, and add it to the SYSTEM PATH environment variable (for all users).
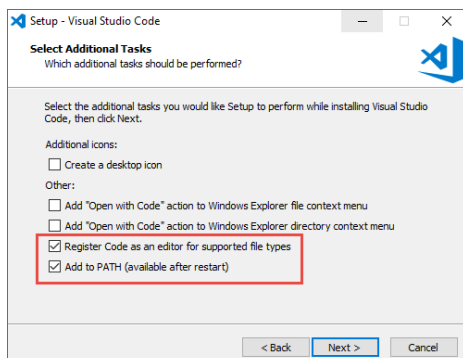
Procedure: Installation of Microsoft Visual Studio Code

1. Navigate to the following website: https://code.visualstudio.com/download
2. Select the installer for your OS
   a. If using Windows make sure to select the System Installer

Download Visual Studio Code

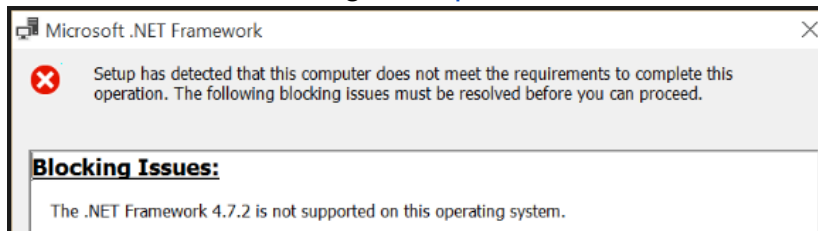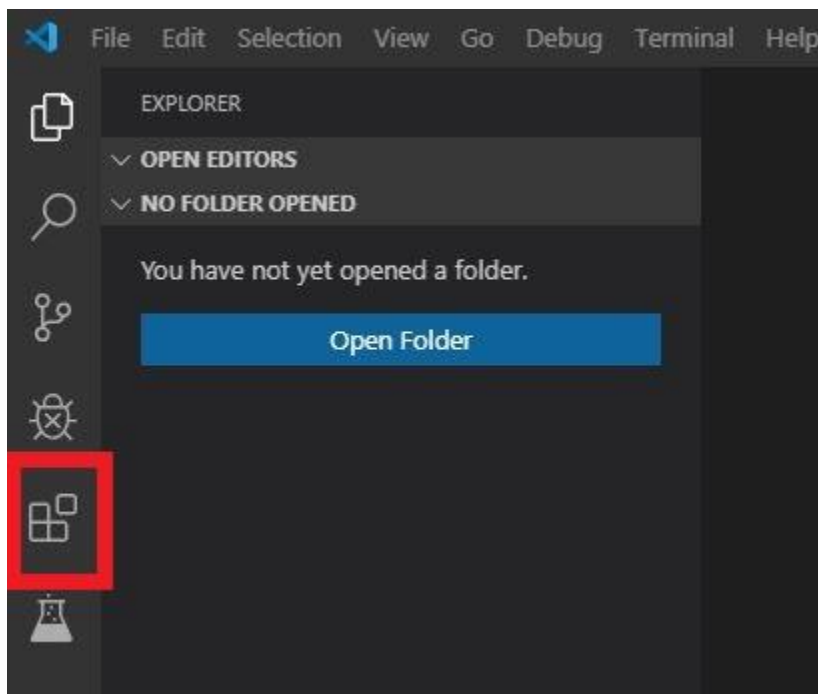Free and open source. Integrated Git, debugging and extensions.

Windows	.deb	.rpm	Mac
Windows 7, 8, 10	Debian, Ubuntu	Red Hat, Fedora, SUSE	macOS 10.9+
User Installer 64 bit 32 bit	.deb 64 bit 32 bit		
System Installer 64 bit 32 bit	.rpm 64 bit 32 bit		
.zip 64 bit 32 bit	.tar.gz 64 bit 32 bit		

3. Once the file downloads, run it
4. Follow the prompts in the installer
   a. Accept license agreement
   b. It should install to "C:\Program Files\Microsoft VS Code" if you selected the Window system installer
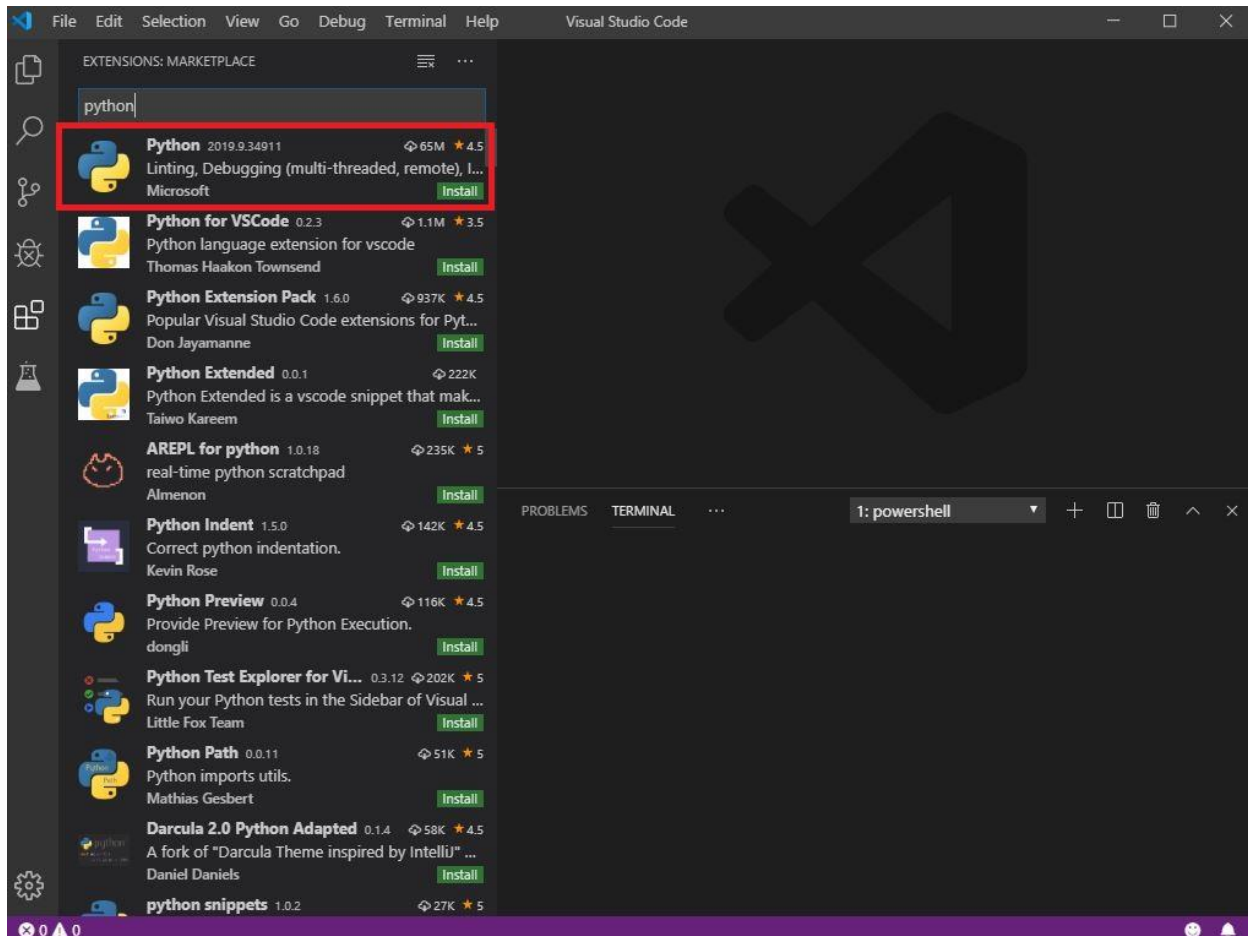   c. At the additional tasks page make the selections shown below to Register Code and Add to PATH

5. Continue to follow the prompts in the installer
6. Click Install
7. Click Finish once done installing
    a. You might be prompted to Install the correct .NET framework, as your machine must be running at least .NET Framework 4.5.2. If prompted, download the most recent version that will work with the operating system on the computers you are installing on. https://www.microsoft.com/net/download

8. Right click on the Visual Studio Code application in the Start menu and select to Run as Admin.
9. Select the Extensions menu on the left

10. Search for "python" and install the Python extension shown in the picture below. It will have "linting, debugging" in the description.

11. Close Microsoft Visual Studio Code
12. Launch Microsoft Visual Studio Code as an administration again
13. Click the extensions icon again and verify the Python extension is installed

Procedure: Upgrading pip and Installing pylint

1. In VSC open a terminal by selecting Terminal from the menu bar and then selecting New Terminal
2. Upgrade pip by typing the command below or copy/paste it at the terminal prompt
   a. python -m pip install --upgrade pip

```
PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL                                                                    2: cmd

Microsoft Windows [Version 10.0.16299.371]
(c) 2017 Microsoft Corporation. All rights reserved.

c:\Users\abusch\Desktop\VSC Test Files>C:/Users/abusch/AppData/Local/Enthought/Canopy/edm/envs/User/Scripts/activate.bat
(User) c:\Users\abusch\Desktop\VSC Test Files>python -m pip install --upgrade pip
Cache entry deserialization failed, entry ignored
Collecting pip
  Downloading https://files.pythonhosted.org/packages/c2/d7/90f34cb0d83a6c5631cf71dfe64cc1054598c843a92b400e55675cc2ac37/pip-18.1-py2.py3-none-any.whl (1.3MB)
    100% |################################| 1.3MB 736kB/s
Installing collected packages: pip
  Found existing installation: pip 9.0.3
    Uninstalling pip-9.0.3:
      Successfully uninstalled pip-9.0.3
Successfully installed pip-18.1

(User) c:\Users\abusch\Desktop\VSC Test Files>
```

3. Install pylint by typing the following in the terminal prompt
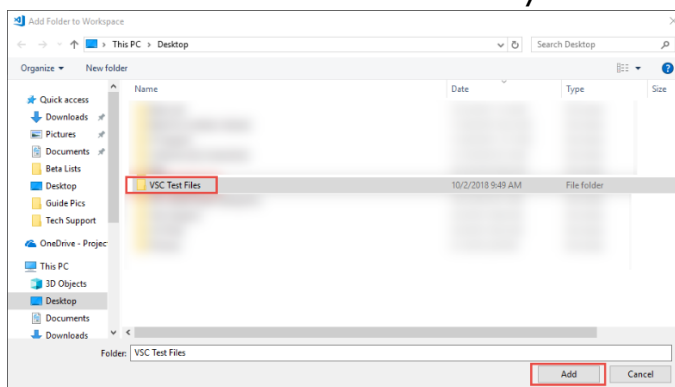   a. pip install pylint

```
(User) c:\Users\abusch\Desktop\VSC Test Files>pip install pylint
Collecting pylint
  Downloading https://files.pythonhosted.org/packages/59/65/adcffa71fe942313c4d9e9284565d9a9e67798f4771f464e1d5dd58fea88/pylint-1.9.4-py2.py3-none-any.whl (689kB)
    100% |UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU| 696kB 2.8MB/s
Collecting isort>=4.2.5 (from pylint)
  Downloading https://files.pythonhosted.org/packages/41/d8/a945da414f2adc1d9e2f7d6e7445b27f2be42766879062a2e63616ad4199/isort-4.3.4-py2-none-any.whl (45kB)
    100% |UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU| 51kB 2.4MB/s
```
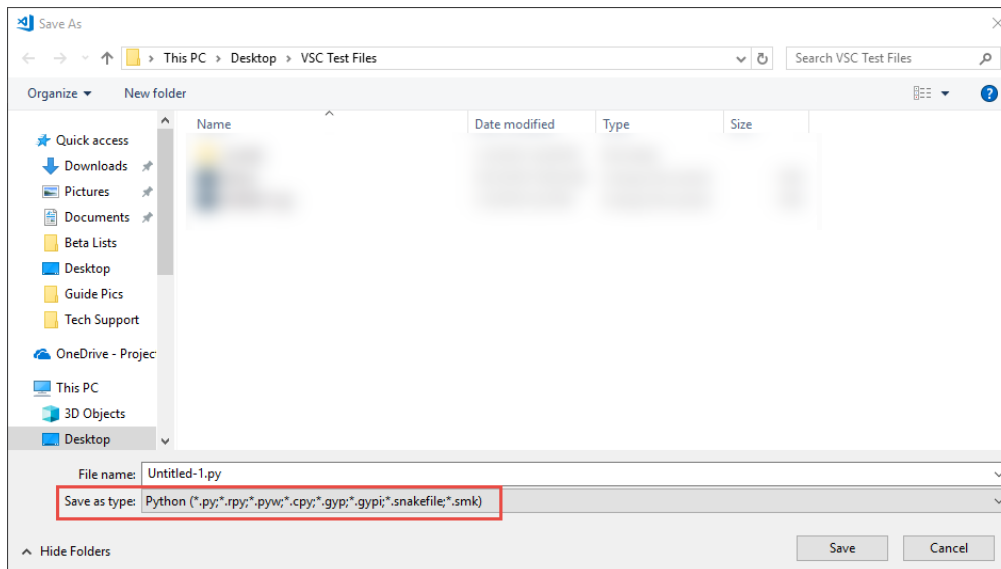
4. Close VSC

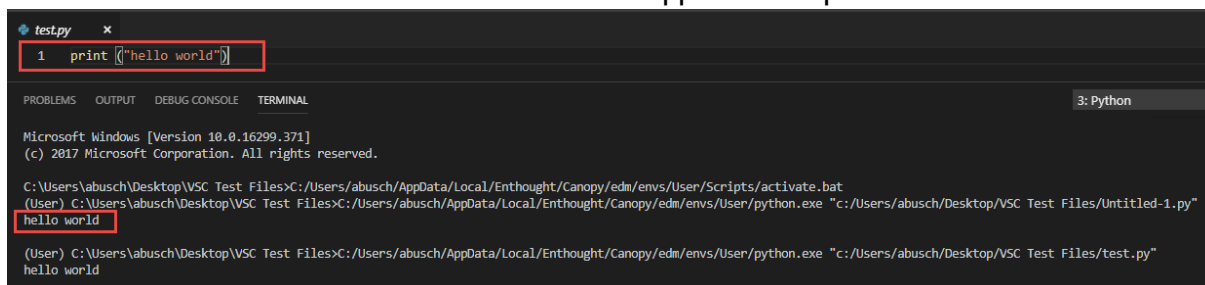# Procedure: Testing the Installation by Running a Python File

1. Create a folder named VSC Test Files on your desktop or anywhere else you want to save files.
2. Open VSC again (not as an admin)
3. Click on File and select Add Folder to Workspace
4. In the browser select the folder you created

5. Create a new file by clicking File and selecting New File
6. Type the following into the file
    a. print ("hello world")
7. Save the file as a Python file

8. To run the script, right-click on the editor window and select "Run Python File in Terminal". You should see "hello world" appear as output in the Terminal.

Procedure: Installing the Additional Packages in VSC

1) Launch Visual Studio Code as administrator (right-click on VSC in the Windows Start Menu and select More > Run as Administrator)
2) Open a new Terminal (Terminal > New Terminal)
3) Run the "pip install" command for each of the following packages.

   a) pillow (pip install pillow)
   b) pygame (pip install pygame)
   c) matplotlib (pip install matplotlib)

d) pandas (pip install panda)

```
PS C:\Users\meichert> pip install pillow
Collecting pillow
  Downloading https://files.pythonhosted.org/packages/1b/b9/cd3ff64a48067becccf3966d069235ac062e3ac4028ca34e8cc0960d815b/Pillow-
5.4.0-cp37-cp37m-win32.whl (1.7MB)
    100% |████████████████████████████████| 1.7MB 3.2MB/s
Installing collected packages: pillow
Successfully installed pillow-5.4.0
PS C:\Users\meichert> pip install pygame
Collecting pygame
  Downloading https://files.pythonhosted.org/packages/b0/30/4df62b0eb0f09a8ad1c329ff5479b3b115e8dce25475fd0c2f73cb790aa4/pygame-
1.9.4-cp37-cp37m-win32.whl (4.0MB)
    100% |████████████████████████████████| 4.0MB 2.8MB/s
Installing collected packages: pygame
Successfully installed pygame-1.9.4
PS C:\Users\meichert> pip install matplotlib
Collecting matplotlib
  Downloading https://files.pythonhosted.org/packages/3f/16/4500e22ea8d11f4946bd902695d0113f82a0aaca45f352478f157ca6623d/matplot
```

e) pip (pip install godirect[USB,BLE])