piRover Builds with K2

Installing Python and VS Code on Your Workstation (optional!) Rev 1.0

Overview:

In the piRover activities you run VS Code on the Raspberry Pi creating Python solutions for your piRover. You may also want to install Python and VS Code on your workstation for other project work.

This activity provides the steps required to install both resources on a PC or a Mac. Installing these resources on your workstation is not required and this activity is optional. All required coding is completed using Python and VS Code installed on the Raspberry Pi.

Review IDEs

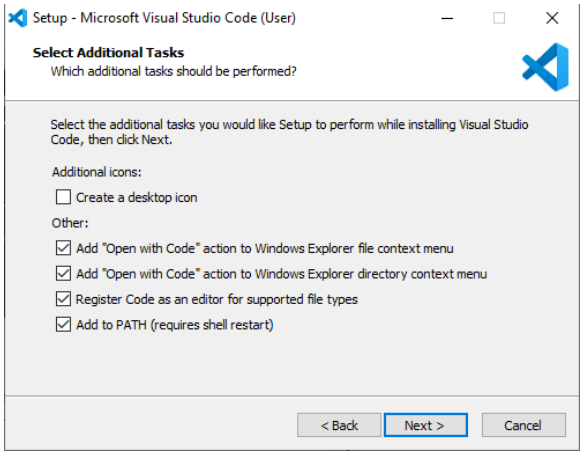
- Review the Stack Overflow 2019 Survey at https://insights.stackoverflow.com/survey/2019
- Specifically look at preferred IDEs at https://insights.stackoverflow.com/survey/2019#technology-_-most-popular-development-environments

Visual Studio Code

- Why VS Code? - https://code.visualstudio.com/Docs/editor/whyvscode

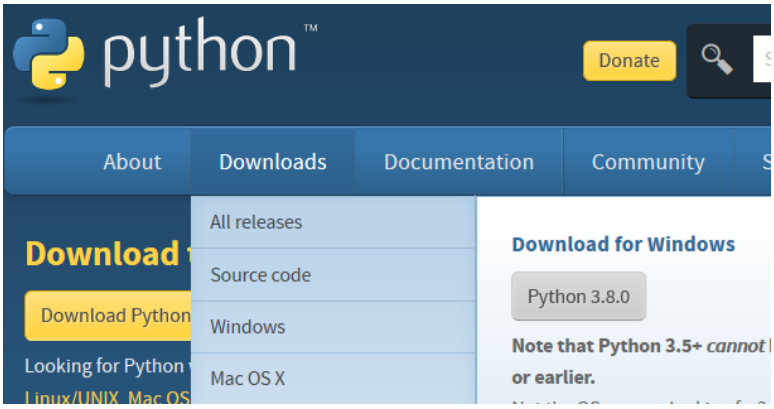
Install VS Code

1. See installation overview at https://code.visualstudio.com/docs/setup/setup-overview
2. Use the appropriate installer located at one of these links.
    a. Windows - https://code.visualstudio.com/docs/setup/windows
    b. Mac - https://code.visualstudio.com/docs/setup/mac
3. During the installation, select the checkboxes shown below on the following page. Accept other defaults and complete the installation.



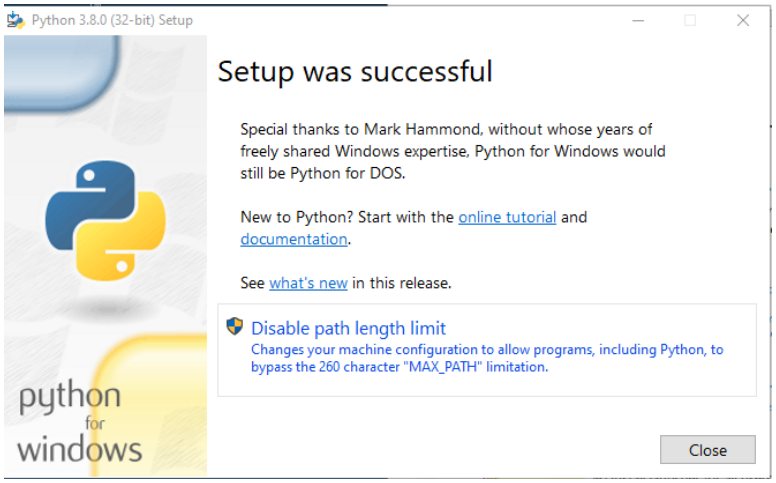
Configure for Python

4. Open python.org to install the latest version of Python.



5. Be sure to click the "Add Python to Path" option at the bottom of the screen shown below.

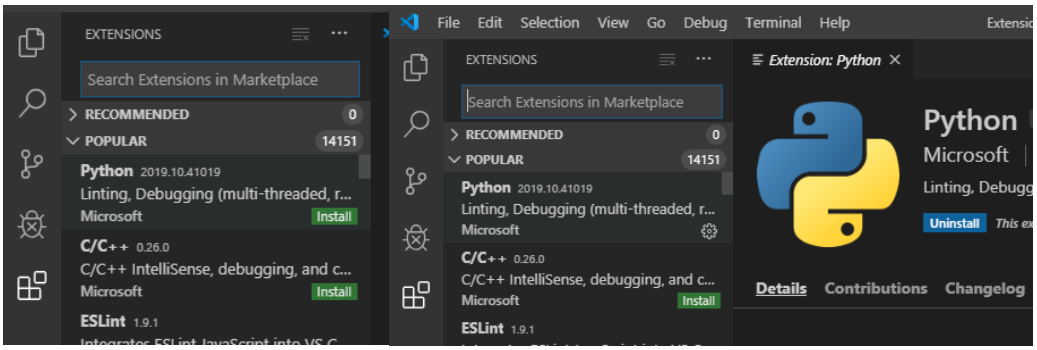
6. Complete the installation of Python using default values.



Configuring/Extending VS Code

7. See installation at https://code.visualstudio.com/docs/python/python-tutorial

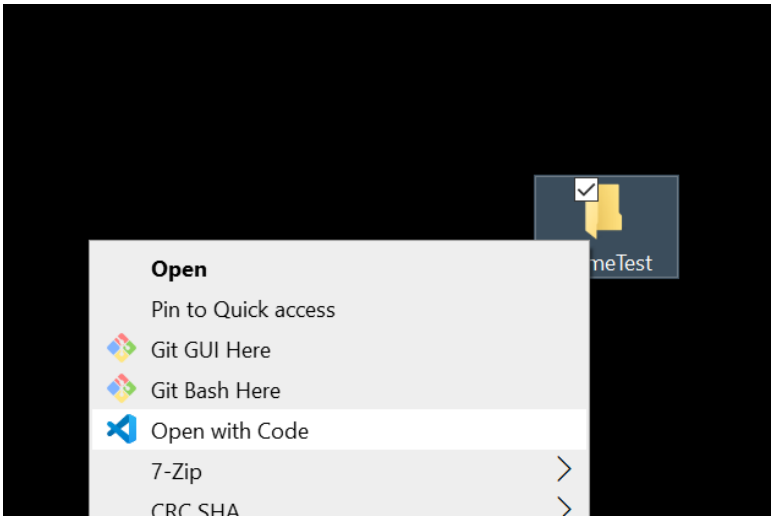
8. Open VS Code to install Python Extension for VS Code. See the Python link on the Welcome page or access the Extensions pane, enter Python into the Marketplace search.



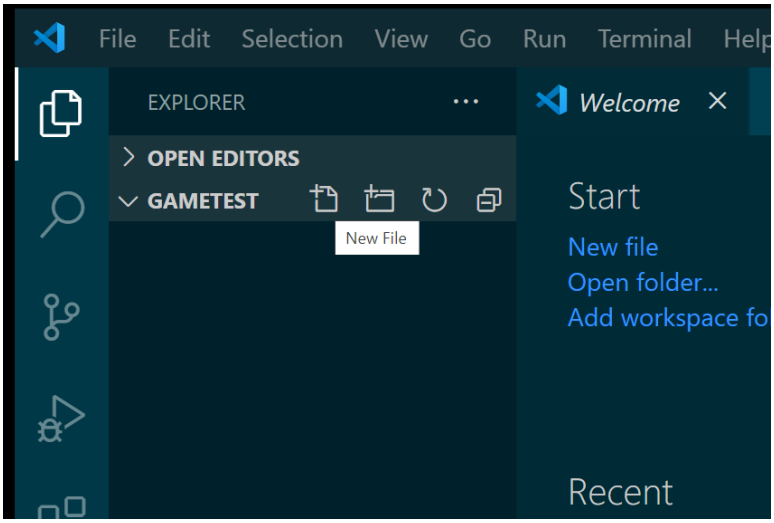
Testing VS Code

9. Create a GameTest folder on your workstation.

10. Right-click on the GameTest folder and select Open with VS Code option.

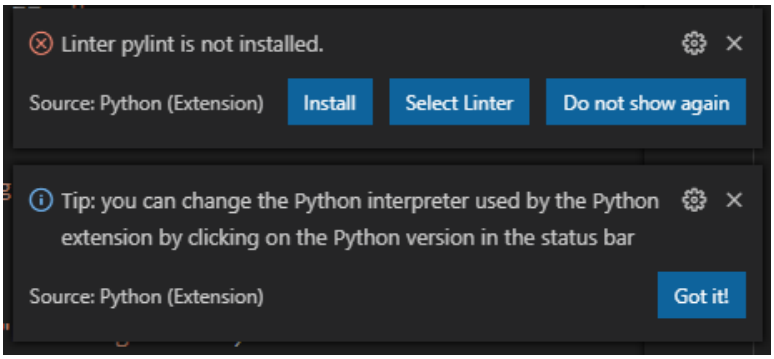


11. The GameTest folder is visible in Code's Explorer pane. Click on the New File icon and create a new Python file name GameTest.py



12. Open the GameTest.py file from the Moodle link and copy the contents into your new GameTest.py file.

13. You should see a notification to Install pylint. Install this linter to assist with code syntax.



14. Run the code using the debugger (F5) to test the game code.
15. Practice using breakpoints and single stepping.

This activity is optional No submission is required.