TROUBLESHOOT EV3dev Python

Be reminded that the official documentation for EV3dev Python can be found at **python-ev3dev.readthedocs.io/en/ev3dev-stretch/**, especially at the bottom of that page.

In general, you can look for help on my site **ev3python.com** or on **ev3dev.org** or perhaps in the ev3dev Python forums **github.com/ev3dev/ev3dev-lang-python/issues** or (for issues with the VS Code workflow) **github.com/ev3dev/vscode-ev3dev-browser/issues**.

1) **There is a delay of several seconds each time I launch a Python script on the EV3.** This is normal because the Python interpreter has to start up each time you launch a script. Delays of more than 15 seconds would be abnormal. You can minimise the launch delay by importing only the modules needed by your script. There is a version of ev3dev Python for the EV3 called EV3dev **MicroPython** which uses only a subset of Python commands and therefore has faster start times but many Python commands are not available in that version and it is not the subject of this course.
2) **A sensor is not detected.** Sometimes the presence of the sensor is not detected even though it is properly connected. For sensors that have a built-in LED (the US sensor, color sensor) the problem is obvious since the LED does not light up as it should. The solution is to disconnect and reconnect the sensor.
3) **The Output panel does not scroll.** Click on it to give it the focus, then use the page down button to scroll to the bottom.
4) **The gyro sensor seems to misbehave.** Whenever you use the gyro sensor, always make sure that the robot is very still when the brick is turned on or the gyro sensor is plugged in otherwise its readings will wander even when the robot is still. To see whether the sensor is experience the 'wandering' problem, it's helpful to have the sensor readings output to the VS Code output panel while the script is running. Indeed, printing values to the VS Code output panel is a very useful EV3 Python debugging technique in many situations.
5) **On my Windows PC, when trying to use SSH, the terminal panel is empty or does have a prompt**. This was due to a bug in a recent version of Windows which has since been fixed. If you experience this bug, click the terminal panel then press the Enter key a dozen times or until the prompt appears. Consider upgrading Windows to the latest version.
6) **I get an error when my script tries to play a sound or image file**. There are no sound or image files built into EV3 Python. This course shows how to obtain and install the standard Lego EV3 sound and images files in the correct formats (WAV and BMP).
7) **I can't run the polygon.py script**. If you didn't get Python from python.org then it may be that the turtle module was not installed. Download the latest version of Python from python.org and click at the bottom left of the VS Code window to tell VS Code to use the new version of Python.
8) **I got the message 'Starting remote process failed: Failed to execute child process "/home/robot/xxxxx/xxxxx.py" (Permission denied) Exited with error code 1.'** You will get this message if the first line of your script is not the needed 'shebang' which is exactly: **#!/usr/bin/env python3**
9) **I got the message ' /usr/bin/env: 'python3\r': No such file or directory. Exited with error code 127.** You could get that message if the lines of your script end with CRLF characters as opposed to the LF characters that are required. Normally the VS Code workflow automatically uses the correct line endings but you could have problems with scripts written elsewhere. Check the right end of the VS Code status bar and if you see CRLF then click that and at the top of the VS Code window choose LF instead.
10) **I got a message that my script is not executable.** You should not get this message if you use the workflow described in this video. Try copying your code, making a new script in VS Code, pasting and saving the copied code.
11) **I got the message ' '$(relativeFile)' cannot be resolved. Please open an editor**'. This means either that the active script has not yet been saved and thus does not have a name, so save it, or perhaps that the code editor panel does not have the focus (maybe the output panel has it). Click the code editor panel to give it back the focus and press F5 again.
12) **When I start VS Code I get a message that Pylint or Github is not installed.** This is a minor annoyance that you can perhaps suppress by adjusting settings in the user-friendly settings editor.
13) **On my Windows PC, in the terminal, I can't start the Python interpreter by typing 'python'(and not 'Python3').** It could be that Python is not mentioned in you Windows path. See https://geek-

university.com/Python/add-Python-to-the-windows-path/ and note that the dialog has become easier and more foolproof since that page was written.

14) **When trying to use the drawbot/writerbot the pen is up when it should be down and vice versa.** The pen needs to be in the 'up' position when any of the main drawbot/writerbot scripts are run. There is a separate script called **adjust_cam.py** that you can use to set the cam (which lifts the pen-holding mechanism) to the upward position.
15) **My drawbot/writerbot drawings are inaccurate.** The drawbot/writerbot will never produce perfect drawings due to the accumulation of errors as the drawing progresses. You can minimise errors by making sure that the pen is carefully centered and held firmly by the elastic bands. Make sure that the wheels are installed the right way round and pressed against the body of the robot so there is only a tiny gap between the tires and the robot body. Use a marker with a bullet tip rather than a chisel tip. If you are using the home version of the drawbot/writerbot, make sure that the rubber tires are removed from the rear wheels so as to reduce their grip. The drawings are affected by the type of surface so try different surfaces (paper, glass, etc).