Lab 6 – Error / Exception Handling

(Spring 2024)

Lab Description:

In this lab, you will examine a pre-made Python file (student.py) that has been created with several intentional errors. You will identify the areas within the code that contain errors and/or are likely to produce exceptions, then create code to handle those errors / exceptions. Exception handling in this lab should be performed using the **try-except** blocks as discussed in lecture. This lab will also provide experience working within someone else's code, which will be useful for future courses and projects.

Lab Instructions:

1. Ensure you have access to both **student.py** and **students.json**. These files are necessary to complete the lab.

2. For **student.py** to access **students.json**, place the .json file in the working directory specified in your PyCharm configuration, if it is not there already.

3. Examine **student.py** for areas of code that are likely to produce exceptions. When doing so, keep the following in mind:
    - Some exceptions will manifest as soon as you try to run the code.
    - Some exceptions will manifest only when you give certain inputs during runtime.
    - Some exceptions will not manifest at all unless you change the conditions under which the program is run.

4. Correct any errors in the code that are necessary for the program to run correctly. Then, handle each potential exception by implementing a **try-except** block to catch that exception. You may address each exception as you wish, but the following must be true:
    - Prioritize handling your exceptions in **main()**; do not modify the code for the Student or School classes, unless you feel there is no alternative.
    - If the program can continue running correctly after the exception is handled, it should do so. Do not terminate the program unless it is reasonable or necessary.
    - If the program cannot continue running correctly after the exception is handled, terminate the program voluntarily with an error message (of your creation).
    - As discussed in class, **do not** implement any general exception catching. Each of your **except** blocks should specify the exact exception it is meant to handle.

5. When you feel you have correctly located and handled the areas of the code that may produce exceptions, run the program (and provide input as necessary) to verify that the exceptions no longer occur and/or are handled appropriately

Submission

Rename your **student.py** file to **userid_student.py** (where "userid" is your Tech username; e.g. jstrickler_student.py) and submit the file to the Lab 06 Submission dropbox in iLearn. You do not need to resubmit the **students.json** file, as the .json used to test your submission will be the same one provided in the lab materials.