Program 2 and Comparison

1. Program 2 (25 pts)

Write a Python program to get the average of a collection/assortment of numbers. The numbers can be input from the console or a file and the result output to the console or a file. Provide sufficient *console* instructions to anyone running the program. If there are constraints that the user needs to be aware of, make sure to communicate these to the user. The user should not be adversely constrained by number of elements or type of data (integer and decimal numbers should work). Be sure to handle and test invalid input.

Your program should use the following features, constructs:

* a variable
* an aggregate data type such as an array (a string will not satisfy this requirement)
* an expression and assignment statement
* a statement-level control structure such as a loop
* a subprogram
* error handling

You may develop and run this program on our Windows or Linux systems.

Due at class start time (by e-mail and printout): turn in a printout of your source code, screen prints of your testing (screen changed from black), and a printout of your input and the program output. Your printout should show that you sufficiently tested the program. E-mail a copy of your source code (as a separate file), screen prints of your testing, your input and output. Font size should be 12 or larger.

**See grading rubric (available on the class website and the syllabus)**

1. Comparison (10 pts)

Compare Python and Java based on the following characteristics and design choices. Number your comparisons to match the below characteristics.

1. variables
2. aggregate data types
3. expressions
4. assignment statements
5. statement-level control structures
6. subprograms
7. error handling capabilities
8. type checking requirements

Do not just compare your programs; compare the language features.