Assignment Description:

The objective of this assignment is for you to (a) develop a set of tests for an existing triangle classification program, (b) use those tests to find and fix defects in that program, and (c) report on your testing results for the Triangle problem.

Author:

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Summary:

Part 1: Initial buggy implementation of classifyTriangle

Test ID	Input	Expected Results	Actual Result	Pass of Fail
testRightTriangleScalene	8, 6, 10	Right	InvalidInput	Fail
testScalene	5, 6, 7	Scalene	InvalidInput	Fail
testIsosceles	4, 4, 5	Isosceles	InvalidInput	Fail
testEquilateralTriangle	3, 3, 3	Equilateral	InvalidInput	Fail
invalidTriangle	7, 2, 10	NotATriangle	InvalidInput	Fail
invalidInput_1	-7, 2, 10	InvalidInput	InvalidInput	Pass
invalidInput_2	3, "4", "5"	InvalidInput	TypeError: '>' not supported between instances of 'str' and 'int'	Fail
invalidInput_3	13.5, 14.5, 15	InvalidInput	InvalidInput	Pass

Part 2: Improved implementation of classifyTriangle

Test ID	Input	Expected Results	Actual Result	Pass of Fail
testRightTriangleScalene	8, 6, 10	Right	Right	Pass
testScalene	5, 6, 7	Scalene	Scalene	Pass
testIsosceles	4, 4, 5	Isosceles	Isosceles	Pass
testEquilateralTriangle	3, 3, 3	Equilateral	Equilateral	Pass
invalidTriangle	7, 2, 10	NotATriangle	NotATriangle	Pass
invalidInput_1	-7, 2, 10	InvalidInput	InvalidInput	Pass
invalidInput_2	3, "4", "5"	InvalidInput	InvalidInput	Pass
invalidInput_3	13.5, 14.5, 15	InvalidInput	InvalidInput	Pass
invalidInput_4	0, 1, 1	InvalidInput	InvalidInput	Pass
invalidInput_5	201, 150, 180	InvalidInput	InvalidInput	Pass

Matrix Summary

	Test Run 1	Test Run 2
Tests Planned	8	10
Tests Executed	8	10
Tests Passed	2	10
Defects Found	6	0
Defects Fixed	0	None

Reflection

In this assignment, I have learned to dive into the code through the test cases. When the test cases are written first, I learned it is easier to understand the problem. For instance, many of the test cases fail in the first test run due to minor errors in the code itself. All I needed to do was switch the order of some logic and correct a few mathematical errors. As shown above in the summary matrix, the original number of tests that run increased in the test run 2. This is because I forgot to test the outliers of the code, in order words, the breaking points of the program. These breaking points include numbers greater than 200 and the number zero. Due to the requirements of only integers, I assumed that there can only right triangles from scalene parameters, not isosceles.

Honor Pledge:

I pledge my honor that I have abided by the Stevens Honor System. – Francesca Severino