1. Assignment Description:

Sometimes you will be given a program that someone else has written, and you will be asked to fix, update, and enhance that program. In this assignment you will start with an existing implementation of the classify triangle program that will be given to you. You will also be given a starter test program that tests the classify triangle program, but those tests are not complete.

In order to determine if the program is correctly implemented, you will need to update the set of test cases in the test program. You will need to update the test program until you feel that your tests adequately test all of the conditions. Then you should run the complete set of tests against the original triangle program to see how correct the triangle program is. Capture and then report on those results in a formal test report described below. For this first part you should not make any changes to the classify triangle program. You should only change the test program.

Based on the results of your initial tests, you will then update the classify triangle program to fix all defects. Continue to run the test cases as you fix defects until all of the defects have been fixed. Run one final execution of the test program and capture and then report on those results in a formal test report described below.

2. Author: Anish Malhotra

3. Summary:

TDD is the best approach for fixing the code. At first, I wrote all the testcases with expected output. I started executing test case by test case slowing uncovering and fixing the bugs. At first It had 8 major issues. I fixed the base cases of python code and reran the testcases. I repeated the same process till I ensure that all the tests are passed. This activity of TDD helped me in fixing the quality of the code.

Github Repository: https://github.com/SeeAnish/SSW567/tree/main/HW%202a

4. Honor pledge:

I pledge my honor that I have abided by the Stevens Honor System. - Anish Malhotra

5. Detailed results:

Initial test results:

__main__.TestTriangles	Status	
testEquilateralTriangleA	Fail	View
testEquilateralTriangleB	Fail	View
testInvalidInputA	Pass	
testInvalidInputB	Pass	
testInvalidInputC	Error	View
testIsocelesTriangleA	Fail	View
testIsocelesTriangleB	Fail	View
testIsocelesTriangleC	Fail	View
testIsocelesTriangleD	Fail	View
testNotATriangleA	Fail	View
testNotATriangleB	Fail	View
testNotATriangleC	Fail	View
testRightTriangleA	Fail	View
testRightTriangleB	Fail	View
testRightTriangleC	Fail	View
testRightTriangleD	Fail	View
testScaleneTriangleA	Fail	View

Total: 17, Pass: 2, Fail: 14, Error: 1 -- Duration: 38 ms

I captured the initial test results using python test runner html report.

Test Run Matrix:

	Test Run 1	Test Run 2	Test Run 3	Test Run 4
Tests Planned	17	17	17	17
Tests Executed	17	17	17	17
Tests Passed	2	5	12	17
Defects Found	8	6	4	0
Defects Fixed	0	2	4	8

Final test results:

__main__.TestTriangles	Status
testEquilateralTriangleA	Pass
testEquilateralTriangleB	Pass
testInvalidInputA	Pass
testInvalidInputB	Pass
testInvalidInputC	Pass
testInvalidInputD	Pass
testIsocelesTriangleA	Pass
testIsocelesTriangleB	Pass
testIsocelesTriangleC	Pass
testIsocelesTriangleD	Pass
testNotATriangleA	Pass
testNotATriangleC	Pass
testRightTriangleA	Pass
testRightTriangleB	Pass
testRightTriangleC	Pass
testRightTriangleD	Pass
testScaleneTriangleA	Pass

Total: 17, Pass: 17 -- Duration: 29 ms

After fixing the code and making it bug free, I captured the results again in html