HW 02A - Testing a legacy program and reporting on testing results

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1. **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

2. **Author**: Jessica Patwa

3. **Summary**:

Initial test results:

Test ID	Input	Expected Result	Actual Result	Pass/Fail
test_RightTriangleA	(3,4,5)	Right Angled	Right Angled	Pass
test_RightTriangleB	(5,12,13)	Right Angled	Right Angled	Pass
test_RightTriangleC	(3,4,5)	Right Angled	Right Angled	Pass
test_RightTriangleD	(8,15,17)	Right Angled	Right Angled	Pass
test_EquilateralTriangleA	(1,1,1)	Equilateral	Equilateral	Pass
test_EquilateralTriangleA	(10,10,10)	Equilateral	Equilateral	Pass
test_IsocelesTriangleA	(3,3,2)	Iscocles	Iscocles	Pass
test_IsocelesTriangleB	(4,5,5)	Iscocles	Iscocles	Pass
test_NotATriangleA	(1,5,1)	Not a Triangle	Not a Triangle	Pass
test_NotATriangleB	(1,1,5)	Not a Triangle	Not a Triangle	Pass

Final Test Summary

	TestRun 1	TestRun2
Test Planned	10	10
Test Executed	10	10
Test Passed	2	10
Defects Found	8	0
Defects Fixed	0	0

After the first test run it gave 8 defects and only two of them were passed out of 10
The test run 2 gave a successful result of all the test passed i.e., 10.

4. **Honor** – I pledge my honor that I have abided by my work according to Stevens Policy

Test Report 1 :-

This test case includes many bugs counting upto 8 of them.

```
/usr/local/bin/python3 "/Users/jessicapatwa/Desktop/CODES/Software Testing
/TestTriangle.py"
jessicapatwa @Jessica-MacBook-Air Desktop % /usr/local/bin/python3 "/Users/ jessicapatwa
/Desktop/CODES/Software Testing /TestTriangle.py"
Running unit tests
FF.FFFFF.F
======================================================================
FAIL: testEquilateralTriangleA (__main__.TestTriangles)
----------------------------------------------------------------------
Traceback (most recent call last):
  File "/Users/jessicapatwa/Desktop/CODES/Software Testing /TestTriangle.py", line 21, in
testEquilateralTriangleA
    self.assertEqual(classifyTriangle(1,23,1),'Equilateral')
AssertionError: 'NotATriangle' != 'Equilateral'
- NotATriangle
+ Equilateral


======================================================================
FAIL: testEquilateralTriangleB (__main__.TestTriangles)
----------------------------------------------------------------------
Traceback (most recent call last):
  File "/Users/jessicapatwa/Desktop/CODES/Software Testing /TestTriangle.py", line 24, in
testEquilateralTriangleB
    self.assertEqual(classifyTriangle(10,23,10),'Equilateral')
AssertionError: 'NotATriangle' != 'Equilateral'
- NotATriangle
+ Equilateral


======================================================================
FAIL: testIsocelesTriangleB (__main__.TestTriangles)
----------------------------------------------------------------------
Traceback (most recent call last):
  File "/Users/jessicapatwa/Desktop/CODES/Software Testing /TestTriangle.py", line 30, in
testIsocelesTriangleB
    self.assertEqual(classifyTriangle(4, 5, 6),'Isoceles')
AssertionError: 'Scalene' != 'Isoceles'
- Scalene
```

```
+ Isoceles


======================================================================
FAIL: testNotATriangleB (__main__.TestTriangles)
----------------------------------------------------------------------
Traceback (most recent call last):
  File "/Users/jessicapatwa/Desktop/CODES/Software Testing /TestTriangle.py", line 33, in
testNotATriangleB
    self.assertEqual(classifyTriangle(1, -5, 1),'NotATriangle')
AssertionError: 'InvalidInput' != 'NotATriangle'
- InvalidInput
+ NotATriangle


======================================================================
FAIL: testNotATriangleC (__main__.TestTriangles)
----------------------------------------------------------------------
Traceback (most recent call last):
  File "/Users/jessicapatwa/Desktop/CODES/Software Testing /TestTriangle.py", line 36, in
testNotATriangleC
    self.assertEqual(classifyTriangle(1,-2, -5),'NotATriangle')
AssertionError: 'InvalidInput' != 'NotATriangle'
- InvalidInput
+ NotATriangle


======================================================================
FAIL: testRightTriangleA (__main__.TestTriangles)
----------------------------------------------------------------------
Traceback (most recent call last):
  File "/Users/jessicapatwa/Desktop/CODES/Software Testing /TestTriangle.py", line 9, in
testRightTriangleA
    self.assertEqual(classifyTriangle(3,9,1),'Right')
AssertionError: 'NotATriangle' != 'Right'
- NotATriangle
+ Right


======================================================================
FAIL: testRightTriangleB (__main__.TestTriangles)
----------------------------------------------------------------------
Traceback (most recent call last):
```

```
  File "/Users/jessicapatwa/Desktop/CODES/Software Testing /TestTriangle.py", line 12, in
testRightTriangleB
    self.assertEqual(classifyTriangle(5,3,9),'Right')
AssertionError: 'NotATriangle' != 'Right'
- NotATriangle
+ Right


======================================================================
FAIL: testRightTriangleD (__main__.TestTriangles)
----------------------------------------------------------------------
Traceback (most recent call last):
  File "/Users/jessicapatwa/Desktop/CODES/Software Testing /TestTriangle.py", line 18, in
testRightTriangleD
    self.assertEqual(classifyTriangle(0, 6, 10), 'Right')
AssertionError: 'InvalidInput' != 'Right'
- InvalidInput
+ Right


----------------------------------------------------------------------
Ran 10 tests in 0.001s

FAILED (failures=8)
jessicapatwa@Jessica-MacBook-Air Desktop %
```

Test Report 2 :-

This test successfully gave no bugs after fixing the code and test cases.

```
jessicapatwa@Jessica-MacBook-Air Desktop % /usr/local/bin/python3
"/Users/jessicapatwa/Desktop/CODES/Software Testing /TestTriangle.py"
Running unit tests
..........
----------------------------------------------------------------------
Ran 10 tests in 0.000s

OK
jessicapatwa@Jessica-MacBook-Air Desktop %
```

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