Test Report for HW2a

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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.

1. Old test summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | Input | Expected Results | Actual Results | Pass or Fail |
| testRightTriangleA | 3,4,5 | 'Right','3,4,5 is a Right triangle' | InvalidInput | Fail |
| testRightTriangleB | 5,3,4 | 'Right','5,3,4 is a Right triangle' | InvalidInput | Fail |
| testEquilateralTriangles | 1,1,1 | 'Equilateral','1,1,1 should be equilateral' | InvalidInput | Fail |

1. Github repo for this test

<https://github.com/yuzhi-wang/Python-test>

1. Screen dump for improved test

电脑萤幕的截图

描述已自动生成

1. New test summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | Input | Expected Results | Actual Results | Pass or Fail |
| testValidInputA | 2, 1, 0 | InvalidInput1 | InvalidInput1 | pass |
| testValidInputB | 1.5, 1, 1 | InvalidInput2 | InvalidInput2 | pass |
| testValidInputC | 201, 199, 199 | InvalidInput0 | InvalidInput0 | pass |
| testValidTriangleA | 199, 50, 1 | NotATriangle | NotATriangle | pass |
| testRightTriangleA | 3, 4, 5 | Right | Right | pass |
| testRightTriangleB | 5, 3, 4 | Right | Right | pass |
| testEquilateralTrianglesA | 1, 1, 1 | Equilateral | Equilateral | pass |
| testIsoscelesTrianglesA | 10, 10, 12 | Isosceles | Isosceles | pass |
| testIsoscelesTrianglesB | 12, 10, 10 | Isosceles | Isosceles | pass |
| testIsoscelesTrianglesC | 10, 12, 10 | Isosceles | Isosceles | pass |
| testScaleneTrianglesA | 10, 11, 12 | Scalene | Scalene | pass |
| testScaleneTrianglesB | 10, 12, 11 | Scalene | Scalene | pass |
| testScaleneTrianglesC | 12, 11, 10 | Scalene | Scalene | pass |

6. Assignment summary

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Tests Planned | Tests Executed | Tests Passed | Defects Found | Defects Fixed |
| Test Run 1 | testRightTriangleA  testRightTriangleB  testEquilateralTrianglesA | testRightTriangleA  testRightTriangleB  testEquilateralTrianglesA | Failed | Always return “Invalidinput1” | In line 34, b <=b should be b<= 0 |
| Test Run 2 | testValidTriangleA | testValidTriangleA | Failed | Return Scalene, not  NotATriangle | In line 46, the if statement should be if (a >= (b + c)) or (b >= (a + c)) or (c >= (a + b)) |
| Test Run 3 | testIsoscelesTrianglesA | testIsoscelesTrianglesA | Failed | Return Equilateral, not Isosceles | In line 50, the if statement should be if a == b and b == c and c == a |
| Test Run 4 | testRightTriangleB | testRightTriangleB | Failed | Return Scalene, not Right | In line 52, the elif statement should be elif ((a \* a) + (b \* b)) == (c \* c) or ((c \* c) + (b \* b)) == (a \* a) or ((a \* a) + (c \* c)) == (b \* b) |
| Test Run 4 | testIsoscelesTrianglesC | testIsoscelesTrianglesC | Failed | Return Scalene, not Isosceles | In line 54, the elif statement should be elif (a != b) and (b != c) and (a != b) |

Through this project, I further learned how to use testcase for testing. I learned how to set up a testcase and correct the source code using the testcase's error reporting.

7. Honor pledge

“I pledge on my honor that I have not given or received any unauthorized assistance on this assignment/examination. I further pledge that I have not copied any material from a book, article, the Internet or any other source except where I have expressly cited the source.”