Test Report

1. **Assignment Description:** Develop a set of tests for an existing triangle classification program. Use those tests to find and fix defects in that program, Report on your testing results for the Triangle problem
2. **Author: Xiangyu Wang**
3. **Summary:** The program should identify the type of triangle based on given inputs of the lengths of the sides. The test cases included different possible inputs including negative values and positive values that cannot form a triangle.
4. The buggy implementation of classifyTriangle in the origianl Triangle.py

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| --- | --- | --- | --- | --- |
| **Test ID** | **Input** | **Expected Results** | **Actual Result** | **Pass or Fail** |
| 1 | 3,4,5 | Invalid Input | Right | Fail |
| 2 | 5,3,4 | Invalid Input | Right | Fail |
| 3 | 1,1,1 | Invalid Input | Equilateral | Fail |
| 4 | 11, 11, 11 | Invalid Input | Equilateral | Fail |
| 5 | 6, 6, 5 | Invalid Input | Isoceles | Fail |
| 6 | 12, 13, 12 | Invalid Input | Isoceles | Fail |
| 7 | 12, 8, 13 | Invalid Input | Scalene | Fail |
| 8 | 17, 11, 13 | Invalid Input | Scalene | Fail |
| 9 | 1,2, 3 | Invalid Input | Not a triangle | Fail |
| 10 | 15,7,7 | Invalid Input | Not a triangle | Fail |
| 11 | 6, 3, 3 | Invalid Input | Not a triangle | Fail |
| 12 | 2, False, 2 | Invalid Input | Invalid Input | Pass |
| 13 | -1, -2, -1 | Invalid Input | Invalid Input | Pass |

**Improved Test**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test ID** | **Input** | **Expected Results** | **Actual Result** | **Pass or Fail** |
| 1 | 3,4,5 | Right | Right | Pass |
| 2 | 5,3,4 | Right | Right | Pass |
| 3 | 1,1,1 | Equilateral | Equilateral | Pass |
| 4 | 11, 11, 11 | Equilateral | Equilateral | Pass |
| 5 | 6, 6, 5 | Isoceles | Isoceles | Pass |
| 6 | 12, 13, 12 | Isoceles | Isoceles | Pass |
| 7 | 12, 8, 13 | Scalene | Scalene | Pass |
| 8 | 17, 11, 13 | Scalene | Scalene | Pass |
| 9 | 1,2, 3 | Not a triangle | Not a triangle | Pass |
| 10 | 15,7,7 | Not a triangle | Not a triangle | Pass |
| 11 | 6, 3, 3 | Not a triangle | Not a triangle | Pass |
| 12 | 2, False, 2 | Invalid Input | Invalid Input | Pass |
| 13 | -1, -2, -1 | Invalid Input | Invalid Input | Pass |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Test 1** | **Test 2** | **Test 3** |
| **Tests Planned** | Positive and valid inputs | Negative and valid inputs | Invalid inputs |
| **Tests Executed** | Positive and valid inputs | Negative and valid inputs | Invalid inputs like alphabets, special characters |
| **Tests passed** | All | All | All |
| **Defects found** | None | None | None |
| **Defects fixed** | None | None | None |

1. **Honor pledge**
2. **Detailed results, if any:**

**if a <= 0 or b <= b or c <= 0:**

**I missed this mistake at first and the result didn’t change.**