**Escuela Superior Politécnica del Litoral**



Workshop: Empirical Software Testing

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# **Introduction**

The triangle problem is the most widely used example in software testing literature. The logic used for the problem is clear but complex, meaning that behind some intuitive conditions are other hidden ones more difficult to get.

The traditional problem states the following: the triangle program accepts three integers, a, b, and c, as input. These are taken to be sides of a triangle. The output of the program is the type of triangle determined by the three sides: Equilateral, Isosceles, Scalene, or NotATriangle. [1]

To start, it is important to define what a triangle is. Let’s see some definitions and compare them with yours:

• A closed plane figure having three sides and three angles [2].

• A polygon having three sides [3].

• A triangle is a polygon with three edges and three vertices [4].

# **Assumptions**

* Non numerical values are invalid, i.e. “A” or “?”
* Float numbers are invalid, i.e. “2.3”.
* The 0 values are not permitted in the set range of values.
* The negative numerical values are not permitted in the set range of values.
* Numerical values greater than 200 are not permitted in the set range of values.
* The classification of the triangles is according to their sides (Equilateral, Scalene, Isosceles).

# **Test Cases**

|  |  |  |
| --- | --- | --- |
| **Test Cases** | **Input Values(a,b,c)** | **Expected Output** |
| **1** | 3, 3, 3 | Equilateral Triangle |
| **2** | 2,3,4 | Scalene Triangle |
| **3** | 5,5,6 | Isosceles Triangle |
| **4** | 0,0,0 | Values are not in the range of permitted values |
| **5** | -3,5,6 | Value are not in the range of permitted values |
| **6** | 200,5,6 | Value are not in the range of permitted values |

## Case Test 1

Hacer una pequeña descripción de los casos de prueba en cada uno

## Case Test 2

## Case Test 3

## Case Test 4

## Case Test 5

## Case Test 6

## Case Test 7

## Case Test 8