Daanish Husain

Steve Lai

Anjani Mallampati

Paul Diaz

CS 187: Software Quality Engineering Team 09

Homework 1

Writing Test Cases

1. Make sure there are 3 inputs
   1. <x != null, True>
   2. <y != null, True>
   3. <z != null, True>
2. Test if all 3 inputs are integers
   1. <x = integer, True>
   2. <y = integer, True>
   3. <z = integer, True>
3. Test if all input integers > 0
   1. <x > 0, True>
   2. <y > 0, True>
   3. <z > 0, True>
4. Then apply Triangle Inequality Theorem
   1. <x + y > z, is a triangle>
   2. <x + z > y, is a triangle>
   3. <y + z > x, is a triangle>
5. Then test what kind of triangle (equilateral, isosceles, or scalene)
   1. Equilateral Triangle
      1. <x = y, True>
      2. <y = z, Equilateral>
   2. Isosceles Triangle
      1. Case 1
         1. <x = y, True>
         2. <y != z, True>
         3. <y > z or y < z, Isosceles>
      2. Case 2
         1. <z = y, True>
         2. <y != x, True>
         3. <y > x or y < x, Isosceles>
      3. Case 3
         1. <x = z, True>
         2. <z != y, True>
         3. <y > x or y < x, Isosceles>

OR

1. <x = z, True>

2. <z != y, True>

3. <y > z or y < z, Isosceles>

* 1. Scalene Triangle
     1. <x!=y, true>
     2. <y!=z, Scalene>

**Pseudo code**

Initialize x,y, and z as integers

Input three values for lengths of triangle sides

If values are null

Inform user that a value is null and prompt for lengths again

If values are not integers

Inform user that all values need to be integers and prompt for lengths again

If values are not greater than zero

Inform user that all values need to be greater and prompt for lengths again

If (x+y)<z || (x+z)<y || (y+z)<x

Inform user that the input lengths cannot form a triangle and restart program

If x==y && y==z

Inform user that the given inputs form an equilateral triangle

If x==y && y != z

Inform user that the given inputs form an isosceles triangle

If x==z && z != y

Inform user that the given inputs form an isosceles triangle

If z==y && x != z

Inform user that the given inputs form an isosceles triangle

If x==y && y != z

Inform user that the given inputs form an isosceles triangle

If x!=y && y != z && x!=z

Inform user that the given inputs form an scalene triangle