**Institute of Technology Tralee**

**Ord/Hons BSc. in Computing with Specialism (Group 1) - Year 1**

**Continuous Assessment #1**

**Date: 17/2/14**

**Time: 2 p.m. – 3.30 p.m.**

**Object Oriented Programming 1**

**Instructions:** Attempt the following question. You should use the JCreator IDE. When you are finished coding, print out your code in **landscape** format.

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**Q1.**

There are three general categories of triangle as indicated in the following table, based on the number of sides that are equal in length:

|  |  |
| --- | --- |
| **Category** | **Number of Sides of Equal Length** |
| Equilateral | 3 |
| Isosceles | 2 |
| Scalene | 0 |

Write a Java program that first of all reads in the (possibly fractional) lengths of the three sides of a triangle in main() and then calls a user-defined method **triangleDetails**() which takes the three lengths entered as numeric arguments and does the following:

* Calculates the area of the triangle by using the formula:

Area =

where a, b and c are the lengths of the three sides of the triangle and

* Displays the calculated area to **3 decimal places** and also determines and displays whether the triangle in question is equilateral, isosceles or scalene.

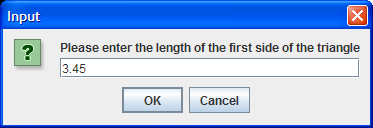
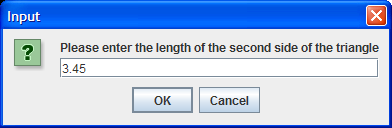
Note that the triangleDetails() method **returns nothing** to main() when it is called.

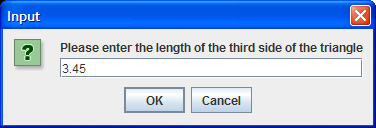
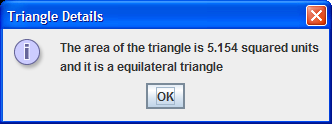
For full marks here your program should, along with a logically correct solution for the problem above, include the usual **single-line** and **multi-line comment** at the top of the program. The multi-line comment should briefly explain the purpose of the program.

Your program should run exactly as indicated in the following sample screenshots, with any newlines included. Also, you should use the test values indicated when testing your own program.

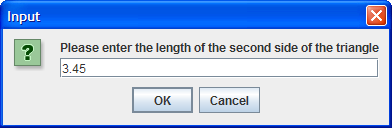
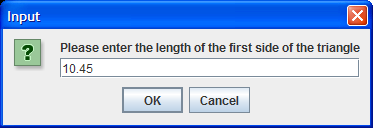
**Sample Screenshots**

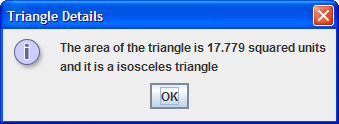
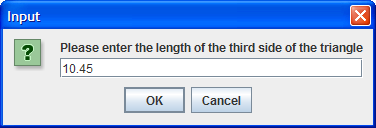
**Run 1 – All three lengths entered are identical**

**Run 2 – Two of the lengths are identical**





**Run 3 – None of the lengths are identical**

