Lab 4 Flow control (I) – Conditional statements

Please test the correctness of your program in **Q.1 Q.2 and Q.3** using PASS.

Question-1.

Write a program that reads 3 integer values (>0) from the user. The 3 values are interpreted as representing the lengths of the three sides of a triangle. The program prints a message saying whether the triangle is *equilateral* (all sides equal), *isosceles* (only 2 sides equal), *scalene* (all sides unequal), or *impossible* (can't form a triangle). A triangle can be formed only if the sum of the length of *any 2* sides is greater than the length of the 3rd side and the length of all the sides of the triangle are *positive*.

Expected Output:

Example 1	Example 2
Enter the value of A, B and C: 3 4 5 *Scalene*	*Enter the value of A, B and C:* 3 3 3 *Equilateral*
Example 3	Example 4
Enter the value of A, B and C: 5 5 2 *Isosceles*	*Enter the value of A, B and C:* 1 2 10 *Impossible*
Example 5	Example 6
Enter the value of A, B and C: 0 2 10 *Impossible*	*Enter the value of A, B and C:* 1 -2 10 *Impossible*

Hint-1: If you'd like to check for equality, you should not write something like: if (A==B==C), but instead, you should use the && operator: if (A==B && B==C)

Hint-2: The *order* of checking may affect the complexity of your code *(although it still works)*. You may wish to check for impossible cases first, and identify the scalene case last.

NOTE: Your program MUST follow the EXACT input/output format! Otherwise, you may not pass the test cases even though your calculation is correct.