

1. You are given the lengths of the three sides of a triangle. Write a program that checks what kind of triangle it is, based on the side lengths.

Input:

- Three integers a , b , and c ($1 \leq a, b, c \leq 1000$) representing the lengths of the three sides of a triangle.

Output:

Return a string:

- "Equilateral" if all three sides are equal.
- "Isosceles" if exactly two sides are equal.
- "Scalene" if all three sides are different.
- "Invalid" if the three sides cannot form a triangle (The sum of any two sides of a triangle is always greater than the third side)

Sample Test Case 1 :

$a = 3$

$b = 3$

$c = 3$

output : "Equilateral"

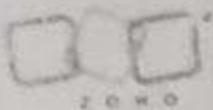
Sample Test Case 2 :

$a = 5$

$b = 5$

$c = 8$

output : "Isosceles"



3. Continuous Subsequence (Contiguous Subarray)

Given two integer arrays, arr1 and arr2, determine whether all the elements of arr2 occur together and in the same order somewhere inside arr1.

Sample Test Case 1 :

arr1 = [1, 2, 3, 4, 2, 3, 5]

arr2 = [2, 3, 5]

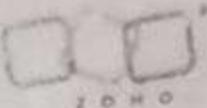
Output: true

Sample Test Case 2 :

arr1 = [1, 2, 3, 4, 5]

arr2 = [2, 5]

Output: false



2. Move All Zeros to End

You are given an array of integers of size n .

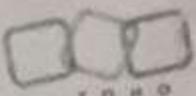
Your task is to rearrange the array such that **all zeros are moved to the end**, while maintaining the relative order of the non-zero elements.

Input:

$n = 7$

$\text{arr} = [0, 1, 0, 3, 12, 0, 5]$

Output: $[1, 3, 12, 5, 0, 0, 0]$



4. A number is called **digit-balanced** if the sum of digits in its left half equals the sum of digits in its right half.

If the number has an odd number of digits, ignore the middle digit while comparing.

You need to check whether the given number is balanced or not.

INPUT:

A single integer **N** (can be large)

OUTPUT:

Print "**Balanced**" if the number satisfies the condition, otherwise print "**Not Balanced**".

Sample Test Case 1 :

Input :

123321

Output :

Balanced

Explanation:

Left half \rightarrow 123 \rightarrow sum = 6

Right half \rightarrow 321 \rightarrow sum = 6

Sample Test Case 2 :

Input :

123456

Output :

Not Balanced

Explanation:

Left half \rightarrow 123 \rightarrow sum = 6

Right half \rightarrow 456 \rightarrow sum = 15