# CODE-IT

## National Level Coding Competition

Organised by

**AISSMS Institute of Information Technology, Pune**

In Association with

**Wisdom Sprouts Training & Career Solutions**

# Problem Statements

**Time:** 90 Minutes **Marks:** 100

**Instructions**

- It is mandatory to attempt every problem statement.
- Each problem statement carries 50 marks each.
- Complete the solutions within 90 minutes and submit before the 95th minute on the link provided you in the email.
- Make sure you attach 2 files at the time of submitting your answers. Submitting 2 solutions is mandatory, one solution for each problem statement. Only one solution will not be accepted.
- The name of the solution file should be in the given format.
    - Format - PROBLEM1_PROGRAMMING_LANGUAGE_FIRSTNAME_LASTNAME.FILE_EXTENSION
    - Example - PROBLEM1_JAVA_SARANG_JOSHI.java
- You need to write the code in your favourite IDE/Code Editor. Then save the file in the given name format and the upload.
- You don't need to write the code directly into answer submission google form.

====ALL THE BEST====

## Problem Statement 1

Given an array somearray[] of size N, the task is to find the number of K elements which satisfy the below condition.

somearray[i-1] > somearray[i] < somearray[i+1]

Where,
K = somearray[i]

**Example**:
**Input** : arr[] = {4, 2, 5}
**Output**: 1
**Explanation**: only arr[1] satisfies the above given condition.
**Test Cases:**

1. Input : arr[] = {1, 2, 3, 4, 5, 6, 7, 8}
   Output: 0
2. Input : arr[] = {3, 2, 5}
   Output: 1
3. Input : arr[] = {9, 8, 10, 7, 11, 2, 5}
   Output: 3
4. Input : arr[] = {1, 2}
   Output: Wrong Input
5. Input : arr[] = {2, 1, 3, 4, 2, 3, 1, 2, 4}
   Output: 4

## Problem Statement 2

Given strings s1 and s2. The task is to find that if **s1** is substring in shuffled form of **s2** or not. Print “true” if **str1** is substring in shuffled form of **str2** else print “false”.

somearray[i-1] > somearray[i] < somearray[i+1]

Where,
K = somearray[i]

**Example**:
**Input** :
s1= ”sproutswisdom” and s2=”wisdomsproutsisawesome”
**Output**: true
**Explanation**: s1 is substring in shuffled form of s2
s2 = “wisdomsprouts” + “isawesome”
S2 = s1 + “isawesome”, where s1 = “sproutswisdom” (shuffledform)
**Test Cases:**

1. Input : s1=”sproutswisdom” s2=”wisdomsproutsisawesome”
   Output: true
2. Input : s1=”aissms”s 2=”ioit”
   Output: false
3. Input : s1=”helloworld” s2=”hiworldhihello”
   Output: false
4. Input : s1=”hihelloeveryone” s2=”everyonehihello”
   Output: true
5. Input : s1=”aissmioitcomp” s2=”aissmcompioit”
   Output: true