
 Marwadi University	Marwadi University Faculty of Technology Department of Information and Communication Technology	
Sem : 3	Name : VEDANT BHARAD	
Day : 66	Date : 22/12/2022	Enrollment No: 92100133023

CP Club 365Days Challenge

Programming language – C++


Problem Statement

[https://practice.geeksforgeeks.org/problems/equilibrium-point-1587115620/1?page=1&curated\[\]=1&sortBy=submissions](https://practice.geeksforgeeks.org/problems/equilibrium-point-1587115620/1?page=1&curated[]=1&sortBy=submissions)

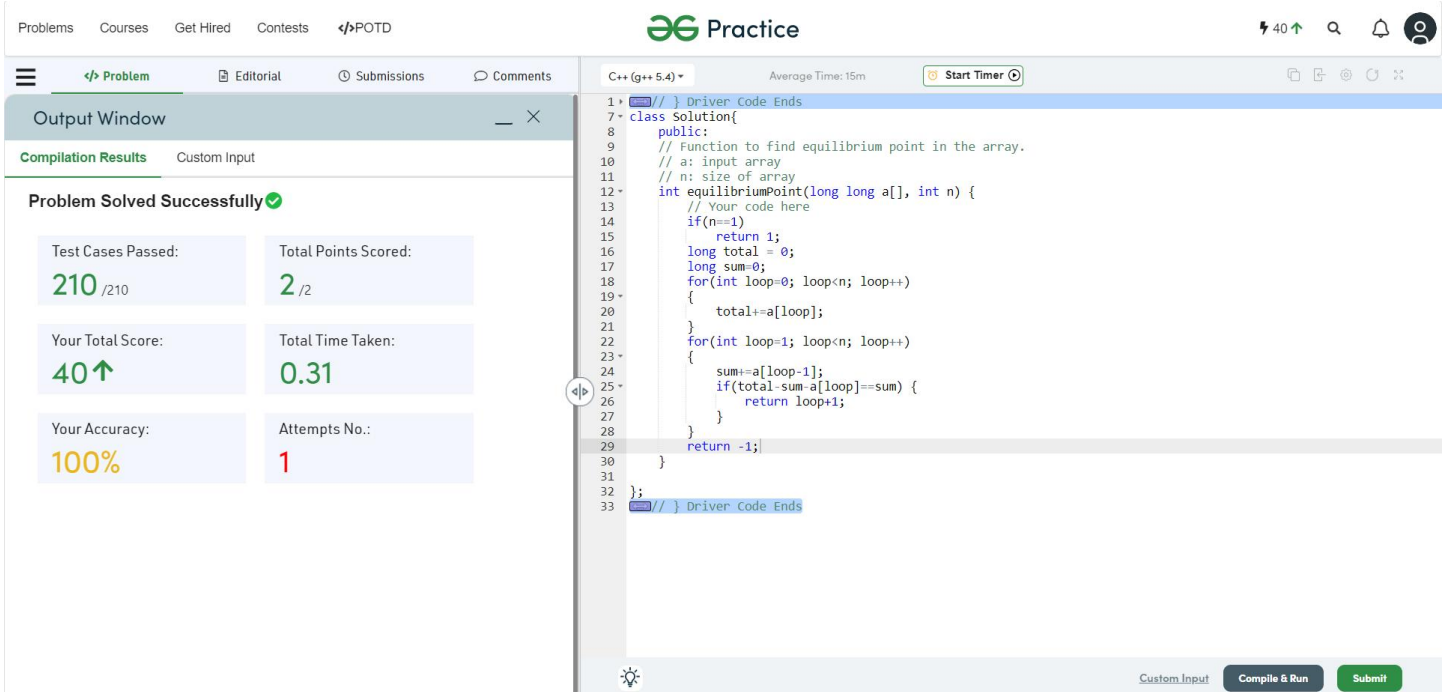
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Your Code:

```
// 0x66Day of 0x365Days challenge
// VEDANT BHARAD
// 22-12-2022
//{ Driver Code Starts
#include <iostream>
using namespace std;
// } Driver Code Ends
class Solution{
public:
    // Function to find equilibrium point in the array.
    // a: input array
    // n: size of array
    int equilibriumPoint(long long a[], int n) {
        // Your code here
        if(n==1)
            return 1;
        long total = 0;
        long sum=0;
        for(int loop=0; loop<n; loop++){
            total+=a[loop];
        }
        for(int loop=1; loop<n; loop++)
        {
            sum+=a[loop-1];
            if(total-sum-a[loop]==sum) {
                return loop+1;
            }
        }
        return -1;
    }
};
//{ Driver Code Starts.
int main() {
    long long t;
    //taking testcases
    cin >> t;
    while (t--) {
        long long n;
        //taking input n
        cin >> n;
        long long a[n];
        //adding elements to the array
        for (long long i = 0; i < n; i++) {
            cin >> a[i];
        }
        Solution ob;
        //calling equilibriumPoint() function
        cout << ob.equilibriumPoint(a, n) << endl;
    }
    return 0;
}
// } Driver Code Ends
```

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Output (Screen Shot):



The screenshot displays a coding practice platform interface. On the left, the 'Output Window' shows 'Compilation Results' with a green checkmark indicating 'Problem Solved Successfully'. It lists performance metrics: 210/210 test cases passed, 2/2 total points scored, a total score of 40 with an upward arrow, a total time taken of 0.31, 100% accuracy, and 1 attempt.

The main area shows the C++ code for the solution. The code defines a class 'Solution' with a public method 'equilibriumPoint' that takes an array 'a' and its size 'n'. It uses two loops: the first calculates the total sum of the array, and the second iterates through the array to find the first index where the sum of elements before it equals the sum of elements after it. If found, it returns the index; otherwise, it returns -1.

```

1 // Driver Code Ends
2 class Solution{
3 public:
4     // Function to find equilibrium point in the array.
5     // a: input array
6     // n: size of array
7     int equilibriumPoint(long long a[], int n) {
8         // Your code here
9         if(n==1)
10            return 1;
11        long total = 0;
12        long sum=0;
13        for(int loop=0; loop<n; loop++)
14        {
15            total+=a[loop];
16        }
17        for(int loop=1; loop<n; loop++)
18        {
19            sum+=a[loop-1];
20            if(total-sum-a[loop]==sum) {
21                return loop+1;
22            }
23        }
24        return -1;
25    }
26 }
27 // Driver Code Ends

```

At the bottom right, there are buttons for 'Custom Input', 'Compile & Run', and 'Submit'.

Understanding about problem:

- In this task I need to return first Equilibrium Point in an array.
- Equilibrium Point in an array is a position such that the sum of elements before it is equal to the sum of elements after it.

Note: If you can't understand the problem, feel free to contact us and we'll help you. Please don't copy and paste from anywhere.

ALL THE BEST
Team CP Club