

Q1) Given an array of numbers, find the index of the smallest array element (the pivot), for which the sums of all elements to the left and to the right are equal. The array may not be reordered.

Example

`arr=[1,2,3,4,6]`

- the sum of the first three elements,  $1+2+3=6$ . The value of the last element is 6.
- Using zero based indexing, `arr[3]=4` is the pivot between the two subarrays.
- The index of the pivot is 3.

Function Description

Complete the function `balancedSum` in the editor below.

ode:

```
1  /*
2  * Complete the 'balancedSum' function below.
3  *
4  * The function is expected to return an INTEGER.
5  * The function accepts INTEGER_ARRAY arr as parameter.
6  */
7
8  int balancedSum(int arr_count, int* arr)
9  {
10     int totalsum = 0;
11     for (int i = 0; i < arr_count; i++) {
12         totalsum += arr[i];
13     }
14     int leftsum = 0;
15     for (int i = 0; i < arr_count; i++) {
16         int rightsum = totalsum - leftsum - arr[i];
17         if (leftsum == rightsum) {
18             return i;
19         }
20         leftsum += arr[i];
21     }
22     return 1;
23 }
24
```

```
int balancedSum(int arr_count, int* arr)
{
    int totalsum = 0;
    for (int i =0;i<arr_count;i++){
        totalsum += arr[i];
    }
    int leftsum =0;
    for(int i =0;i<arr_count;i++){
        int rightsum = totalsum - leftsum -arr[i];
        if(leftsum==rightsum){
            return i;
        }
        leftsum +=arr[i];
    }
    return 1;
}
```

	Test	Expected	Got	
✓	<pre>int arr[] = {1,2,3,3}; printf("%d", balancedSum(4, arr))</pre>	2	2	✓

Passed all tests! ✓

Q2) Calculate the sum of an array of integers.

Example

numbers = [3, 13, 4, 11, 9]

The sum is  $3 + 13 + 4 + 11 + 9 = 40$ .

Function Description

Complete the function arraySum in the editor below

arraySum has the following parameter(s):

int numbers[n]: an array of integers

Returns

int: integer sum of the numbers array

Constraints

```
int arraySum(int numbers_count, int *numbers)
{
    int sum = 0;
    for (int i = 0; i < numbers_count; i++) {
        sum = sum + numbers[i];
    }
    return sum;
}
```

	Test	Expected	Got	
✓	<pre>int arr[] = {1,2,3,4,5}; printf("%d", arraySum(5, arr))</pre>	15	15	✓

Passed all tests! ✓