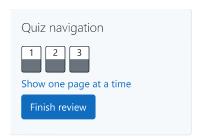
GE23131-Programming Using C-2024







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.

balancedSum has the following parameter(s):

int arr[n]: an array of integers

Returns:

int: an integer representing the index of the pivot

Constraints

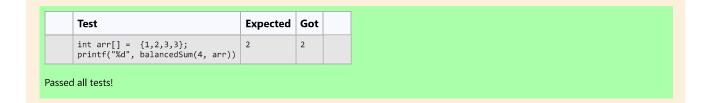
- $\cdot \qquad 3 \le n \le 10^5$
- . 1 ≤ arr[i] ≤ 2 × 10^4 , where 0 ≤ i < n
- · It is guaranteed that a solution always exists.

Input Format for Custom Testing

```
The first line contains an integer n, the size of the array arr.
Each of the next n lines contains an integer, arr[i], where 0 \le i < n.
Sample Case 0
Sample Input 0
STDIN Function Parameters
    \rightarrow arr[] size n = 4
    \rightarrow arr = [1, 2, 3, 3]
2
3
3
Sample Output 0
2
Explanation 0
      The sum of the first two elements, 1+2=3. The value of the last element is 3.
      Using zero based indexing, arr[2]=3 is the pivot between the two subarrays.
      The index of the pivot is 2.
Sample Case 1
Sample Input 1
STDIN Function Parameters
3 \rightarrow arr[] size n = 3
1 \rightarrow arr = [1, 2, 1]
2
Sample Output 1
1
```

The first and last elements are equal to 1.
 Using zero based indexing, arr[1]=2 is the pivot between the two subarrays.
 The index of the pivot is 1.

Answer: (penalty regime: 0 %)
Reset answer



Question **2**Correct

Flag
question

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.

```
int numbers[n]: an array of integers
Returns
int: integer sum of the numbers array
Constraints
1 \le n \le 10^4
1 \le numbers[i] \le 10^4
Input Format for Custom Testing
Input from stdin will be processed as follows and passed to the function.
The first line contains an integer n, the size of the array numbers.
Each of the next n lines contains an integer numbers[i] where 0 \le i < n.
Sample Case 0
Sample Input 0
STDIN Function
   \rightarrow numbers[] size n = 5
     \rightarrow numbers = [1, 2, 3, 4, 5]
2
3
4
5
Sample Output 0
15
Explanation 0
1 + 2 + 3 + 4 + 5 = 15.
Sample Case 1
Sample Input 1
```

```
\rightarrow numbers[] size n = 2
     \rightarrow numbers = [12, 12]
12
Sample Output 1
24
Explanation 1
12 + 12 = 24.
Answer: (penalty regime: 0 %)
  Reset answer
```

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

Passed all tests!

Question **3**Correct

Given an array of n integers, rearrange them so that the sum of the absolute differences of all adjacent elements is minimized. Then, compute the sum of those absolute differences. Example n = 5 arr = [1, 3, 3, 2, 4] If the list is rearranged as arr' = [1, 2, 3, 3, 4], the absolute differences are |1 - 2| = 1, |2 - 3| = 1, |3 - 3| = 0, |3 - 4| = 1. The sum of those differences is 1 + 1 + 0 + 1 = 3. Function Description Complete the function

