

TASKS DETAILS

1. MinAvgTwoSlice **Task Score** Performance Correctness Find the minimal average of any slice 100% 100% 100% containing at least two elements.

Task description

A non-empty zero-indexed array A consisting of N integers is given. A pair of integers (P, Q), such that $0 \le P < Q < N$, is called a *slice* of array A (notice that the slice contains at least two elements). The average of a slice (P, Q) is the sum of A[P] + A[P + 1] + ... + A[Q] divided by the length of the slice. To be precise, the average equals (A[P] + A[P + 1] + ... + A[Q]) /(Q - P + 1).

For example, array A such that:

A[0] = 4A[1] = 2A[2] = 2A[3] = 5A[4] = 1A[5] = 5

A[6] = 8

contains the following example slices:

• slice (1, 2), whose average is (2 + 2) / 2 = 2; • slice (3, 4), whose average is (5 + 1) / 2 = 3;

• slice (1, 4), whose average is (2 + 2 + 5 + 1) / 4 = 2.5.

The goal is to find the starting position of a slice whose average is minimal.

Write a function:

class Solution { public int solution(int[] A); }

that, given a non-empty zero-indexed array A consisting of N integers, returns the starting position of the slice with the minimal average. If there is more than one slice with a minimal average, you should return the smallest starting position of such a slice.

For example, given array A such that:

A[0] = 4A[1] = 2A[2] = 2A[3] = 5A[4] = 1A[5] = 5A[6] = 8

the function should return 1, as explained above.

Assume that:

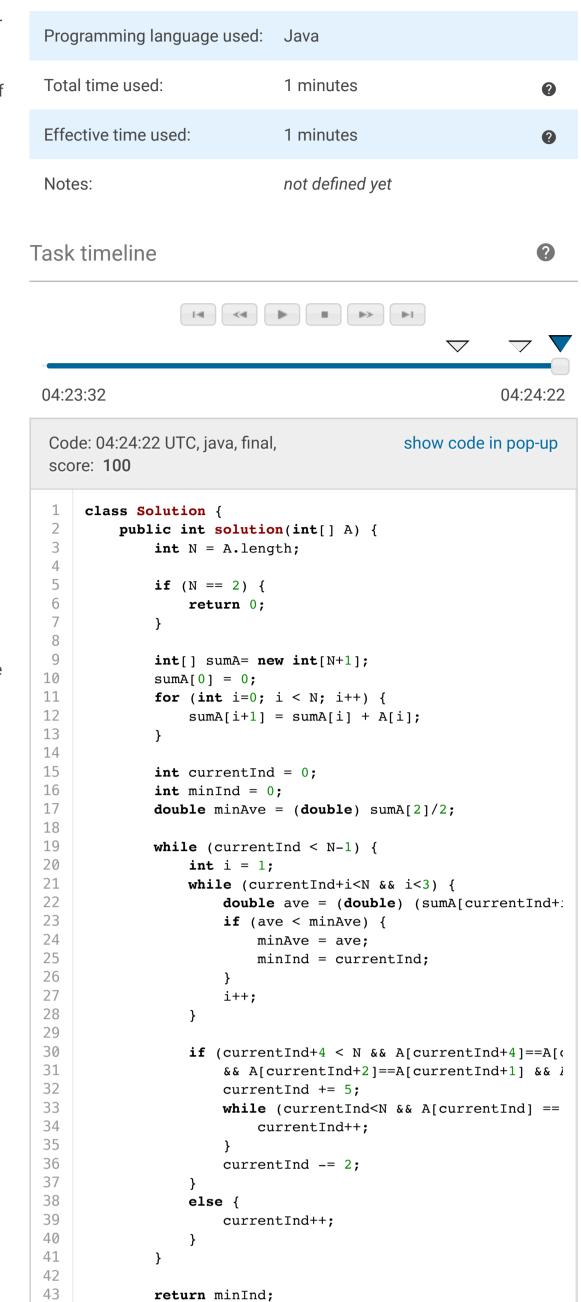
- N is an integer within the range [2..100,000];
- each element of array A is an integer within the range [-10,000..10,000].

Complexity:

- expected worst-case time complexity is O(N);
- expected worst-case space complexity is O(N), beyond input storage (not counting the storage required for input arguments).

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Solution

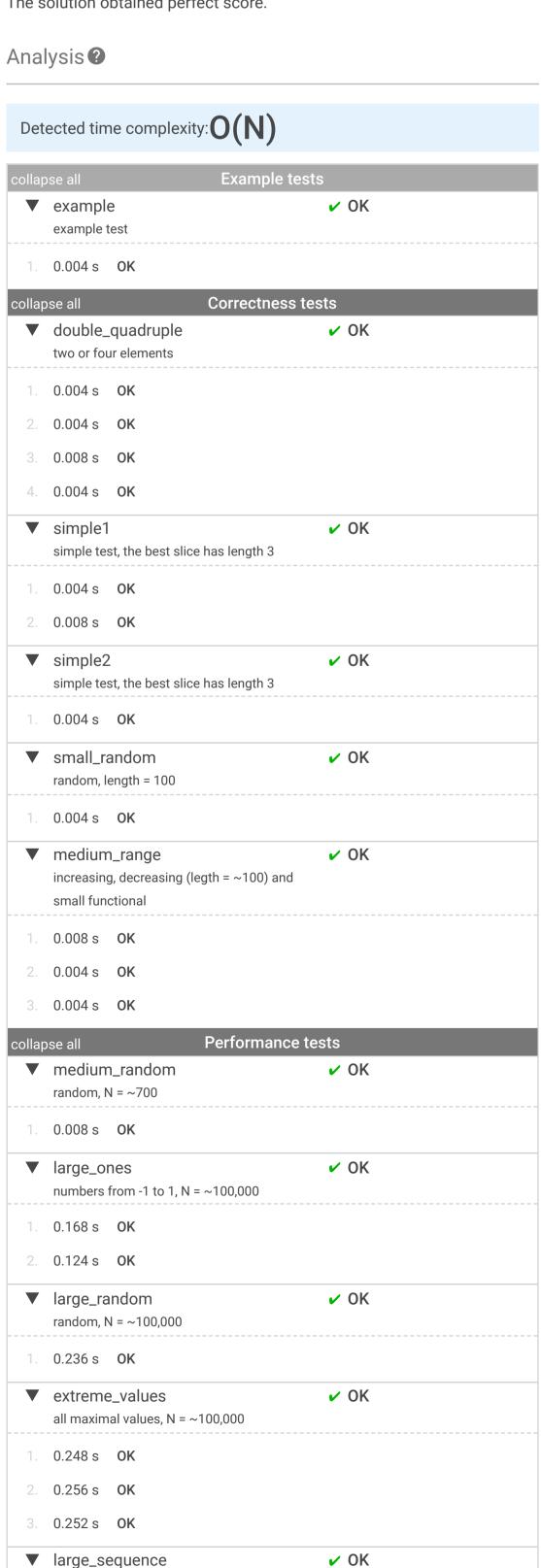


Analysis summary

44 45

}

The solution obtained perfect score.



many seqeneces, N = ~100,000

1. 0.164 s **OK**

2. 0.128 s **OK**