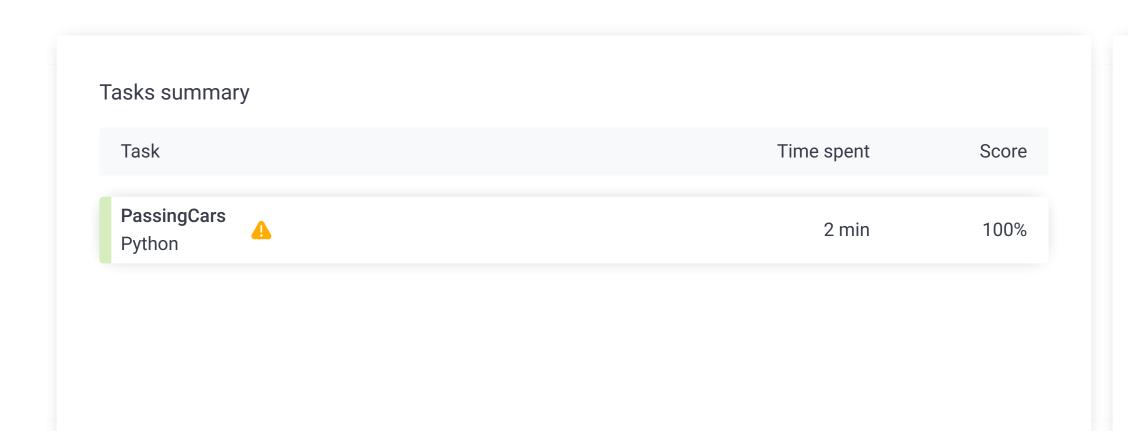
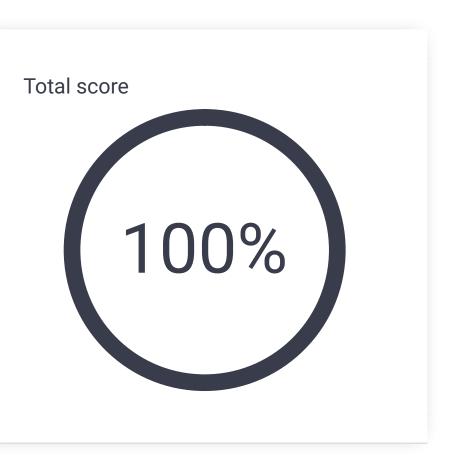
CodeCheck Report: trainingPTWYDV-K3S

Test Name:

Summary Timeline

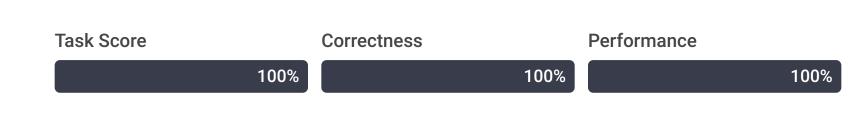




Tasks Details



1. PassingCars
Count the number of passing cars on the road.



Task description

A non-empty array A consisting of N integers is given. The consecutive elements of array A represent consecutive cars on a road.

Array A contains only 0s and/or 1s:

- 0 represents a car traveling east,
- 1 represents a car traveling west.

The goal is to count passing cars. We say that a pair of cars (P, Q), where $0 \le P < Q < N$, is passing when P is traveling to the east and Q is traveling to the west.

For example, consider array A such that:

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

We have five pairs of passing cars: (0, 1), (0, 3), (0, 4), (2, 3), (2, 4).

Write a function:

that, given a non-empty array A of N integers, returns the number of pairs of passing cars.

The function should return -1 if the number of pairs of passing cars exceeds 1,000,000,000.

For example, given:

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

the function should return 5, as explained above.

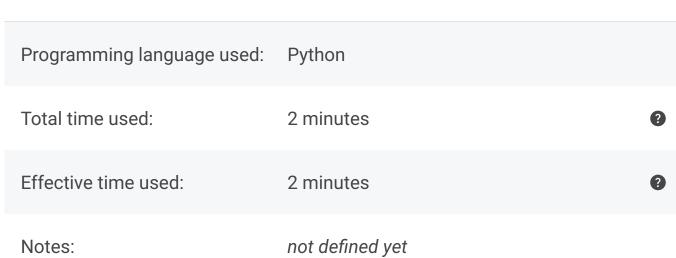
Write an **efficient** algorithm for the following assumptions:

- N is an integer within the range [1..100,000];
- each element of array A is an integer that can have one of the following values: 0, 1.

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Solution

Task timeline





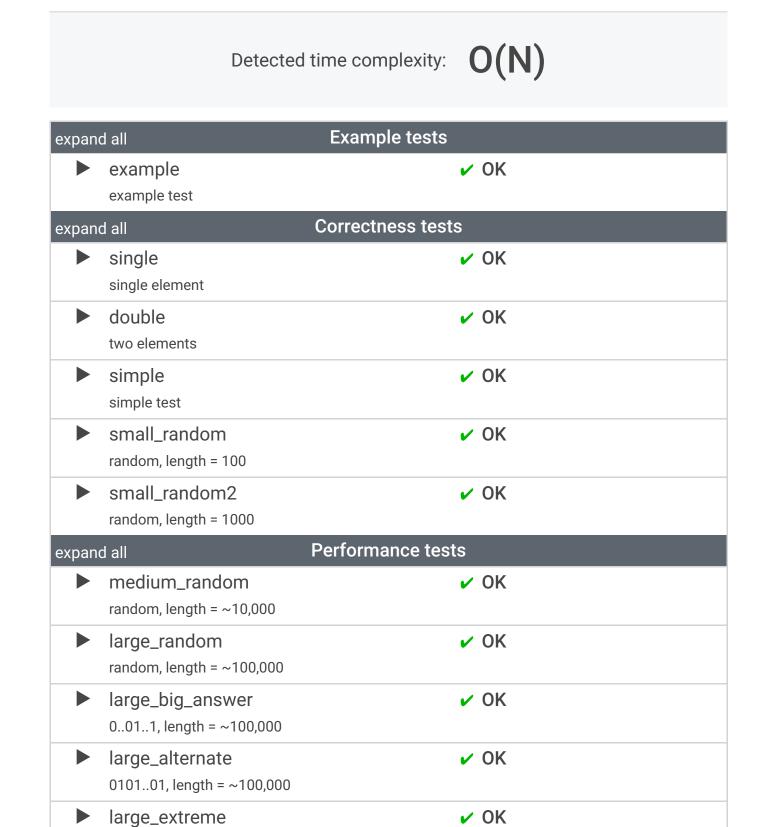
03:42:46	03:43:50

Code: 03 100		de: 03:43:49 UTC, py, final, score: 0	show code in pop-up
	1	# you can write to stdout for debugging p	urposes, e.g.
	2	<pre># print("this is a debug message")</pre>	
	4	<pre>def solution(A):</pre>	
	5	# write your code in Python 3.6	
	6	west = sum(A)	
	7	<pre>if west == 0 or west == len(A):</pre>	
	8	return 0	
	9	east = 0	
	10	npairs = 0	
	11	for el in A:	
	12	if el == 0:	
	13	east += 1	
	14	npairs += west	
	15	if npairs > 100000000:	
	16	return −1	
	17	else:	
	18	west -= 1	
	19	if west == 0:	
	20	return npairs	
	21	return npairs	

Analysis summary

The solution obtained perfect score.

Analysis



large test with all 1s/0s, length = ~100,000