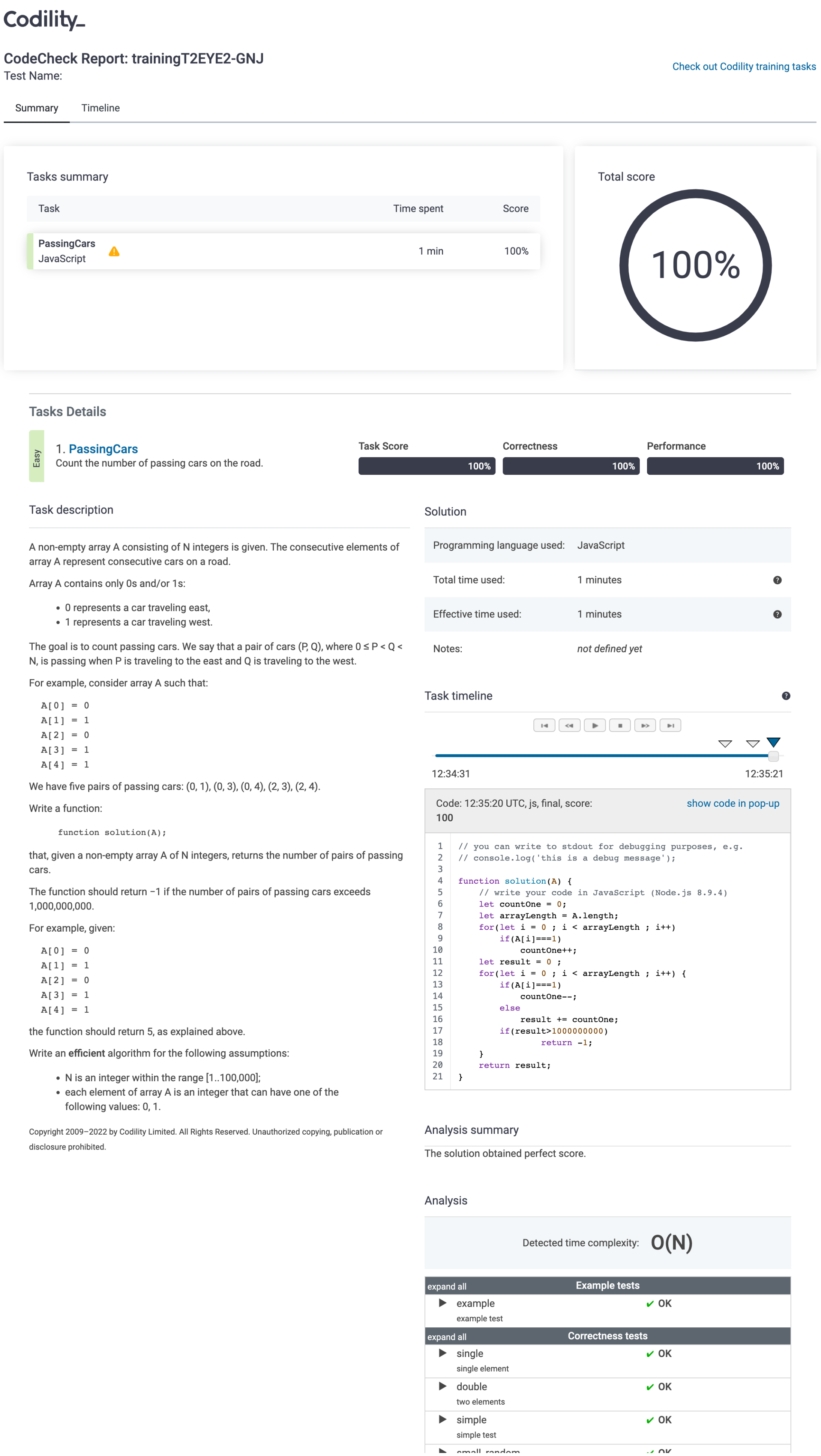


CodeCheck Report: trainingT2EYE2-GNJ

Test Name:

Tasks summary

Task	Time spent	Score
PassingCars JavaScript ⚠	1 min	100%

Total score

100%

Tasks Details

Easy

1. PassingCars

Count the number of passing cars on the road.

Task Score	Correctness	Performance
100%	100%	100%

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 ≤ 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] = 1
A[4] = 1
```

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

Write a function:

```
function solution(A);
```

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] = 0
A[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.

Solution

Programming language used:	JavaScript
Total time used:	1 minutes
Effective time used:	1 minutes
Notes:	*not defined yet*

Task timeline

Code: 12:35:20 UTC, js, final, score: 100

```
// you can write to stdout for debugging purposes, e.g.
// console.log('this is a debug message');

function solution(A) {
    // write your code in JavaScript (Node.js 8.9.4)
    let countOne = 0;
    let arrayLength = A.length;
    for(let i = 0 ; i < arrayLength ; i++)
        if(A[i]===1)
            countOne++;
    let result = 0 ;
    for(let i = 0 ; i < arrayLength ; i++) {
        if(A[i]===1)
            countOne--;
        else
            result += countOne;
        if(result>1000000000)
                return -1;
    }
    return result;
}
```

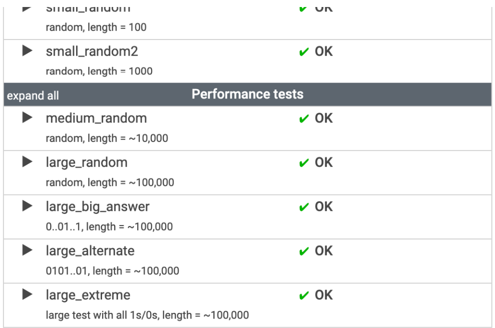
Analysis summary

The solution obtained perfect score.

Analysis

Detected time complexity: **O(N)**

expand all	Example tests	
▶	example example test	✔ OK
expand all	**Correctness tests**	
▶	single single element	✔ OK
▶	double two elements	✔ OK
▶	simple simple test	✔ OK
▶	small_random	✔ OK



▶ small_random random, length = 100	✔ OK
▶ small_random2 random, length = 1000	✔ OK
expand all **Performance tests**	
▶ medium_random random, length = ~10,000	✔ OK
▶ large_random random, length = ~100,000	✔ OK
▶ large_big_answer 0..01..1, length = ~100,000	✔ OK
▶ large_alternate 0101..01, length = ~100,000	✔ OK
▶ large_extreme large test with all 1s/0s, length = ~100,000	✔ OK