Codility_

CodeCheck Report: trainingQ8275K-JFN

Test Name:

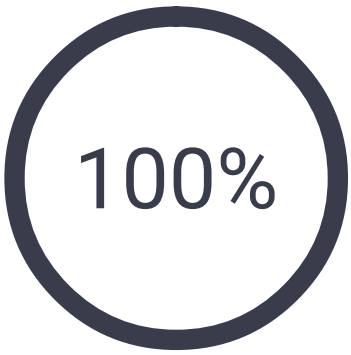
Check out Codility training tasks

Summary Timeline

Tasks summary

Task	Time spent	Score
MissingInteger Java 8	31 min	100%

Total score



Tasks Details

Medium

1. MissingInteger

Find the smallest positive integer that does not occur in a given sequence.

Task Score	Correctness	Performance
100%	100%	100%

Task description

This is a demo task.

Write a function:

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

that, given an array A of N integers, returns the smallest positive integer (greater than 0) that does not occur in A.

For example, given A = [1, 3, 6, 4, 1, 2], the function should return 5.

Given A = [1, 2, 3], the function should return 4.

Given A = [−1, −3], the function should return 1.

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 within the range [−1,000,000..1,000,000].

Solution

Programming language used:	Java 8
Total time used:	31 minutes
Effective time used:	31 minutes
Notes:	*not defined yet*

Task timeline

05:42:26 06:12:43

Code: 06:12:43 UTC, java, final, score: **100** show code in pop-up

```
1  // you can also use imports, for example:
2  // import java.util.*;
3
```

```java
// you can write to stdout for debugging purposes,
// System.out.println("this is a debug message");
import java.util.*;
class Solution {
    public int solution(int[] A) {
        Arrays.sort(A);
   int min = 1;
   for (int i : A) {
     if (i == min) {
       min++;
     }
   }
   return min;
    }
}
```

Analysis summary

The solution obtained perfect score.

Analysis

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

expand all	Example tests	
▶	example1 first example test	✓ OK
▶	example2 second example test	✓ OK
▶	example3 third example test	✓ OK
expand all	Correctness tests	
▶	extreme_single a single element	✓ OK
▶	simple simple test	✓ OK
▶	extreme_min_max_value minimal and maximal values	✓ OK
▶	positive_only shuffled sequence of 0...100 and then 102...200	✓ OK
▶	negative_only shuffled sequence -100 ... -1	✓ OK
expand all	Performance tests	
▶	medium chaotic sequences length=10005 (with minus)	✓ OK
▶	large_1 chaotic + sequence 1, 2, ..., 40000 (without minus)	✓ OK
▶	large_2 shuffled sequence 1, 2, ..., 100000 (without minus)	✓ OK
▶	large_3 chaotic + many -1, 1, 2, 3 (with minus)	✓ OK