codility

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Candidate Report: Anonymous

Test Name:

Summary Timeline

Test Score

50 out of 100 points

50%

Tasks in Test

	Time Spent	Task Score
CyclicRotation Submitted in: Java 8	20 min	50%

TASKS DETAILS

EASY

1. CyclicRotation
Rotate an array to the right by a given number of steps.

Task Score	Correctness	Performance
50%	50%	Not assessed

Task description

An array A consisting of N integers is given. Rotation of the array means that each element is shifted right by one index, and the last element of the array is moved to the first place. For example, the rotation of array A = [3, 8, 9, 7, 6] is [6, 3, 8, 9, 7] (elements are shifted right by one index and 6 is moved to the first place).

The goal is to rotate array A K times; that is, each element of A will be shifted to the right K times.

Write a function:

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

that, given an array A consisting of N integers and an integer K, returns the array A rotated K times.

For example, given

```
A = [3, 8, 9, 7, 6]
K = 3
```

the function should return [9, 7, 6, 3, 8]. Three rotations were made:

```
[3, 8, 9, 7, 6] -> [6, 3, 8, 9, 7]
[6, 3, 8, 9, 7] -> [7, 6, 3, 8, 9]
[7, 6, 3, 8, 9] -> [9, 7, 6, 3, 8]
```

For another example, given

```
A = [0, 0, 0]
K = 1
```

the function should return [0, 0, 0]

Given

Solution

Programming language used:	Java 8
Total time used:	20 minutes
Effective time used:	20 minutes
Notes:	*not defined yet*

Task timeline

16:54:03 17:13:14

Code: 17:13:14 UTC, java, final, score: **50**

show code in pop-up

```
1  // you can also use imports, for example:
2  // import java.util.*;
3
4  // you can write to stdout for debugging purposes, e.g.
5  // System.out.println("this is a debug message");
6
7  class Solution {
8      public static int[] solution(int[] a, int k) {
9              if (k == 0)
```

```
A = [1, 2, 3, 4]
K = 4
```

the function should return [1, 2, 3, 4]

Assume that:

- N and K are integers within the range [0..100];
- each element of array A is an integer within the range [−1,000..1,000].

In your solution, focus on **correctness**. The performance of your solution will not be the focus of the assessment.


```
10                      return a;
11
12              int[] r = new int[a.length];
13
14              for (int i = a.length - k; i < a.length; i
15                      r[i - a.length + k] = a[i];
16
17              for (int i = 0; i < a.length - k; i++)
18                      r[i + k] = a[i];
19
20              return r;
21      }
22  }
```

Analysis summary

The following issues have been detected: runtime errors.

For example, for the input `([], 1)` the solution terminated unexpectedly.

Analysis

expand all	Example tests	
▶	example first example test	✓ OK
▶	example2 second example test	✓ OK
▶	example3 third example test	✓ OK
expand all	Correctness tests	
▶	extreme_empty empty array	✗ RUNTIME ERROR tested program terminated with exit code 1
▶	single one element, 0 <= K <= 5	✗ RUNTIME ERROR tested program terminated with exit code 1
▶	double two elements, K <= N	✓ OK
▶	small1 small functional tests, K < N	✓ OK
▶	small2 small functional tests, K >= N	✗ RUNTIME ERROR tested program terminated with exit code 1
▶	small_random_all_rotations small random sequence, all rotations, N = 15	✓ OK
▶	medium_random medium random sequence, N = 100	✓ OK
▶	maximal maximal N and K	✗ RUNTIME ERROR tested program terminated with exit code 1

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