codility

Training center
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Candidate Report: Anonymous

Test Name:

SUMMARY TIMELINE

Test Score

100 out of 100 points

100%

Tasks in Test

	Time Spent	Task Score
CyclicRotation Submitted in: C++	20 min	100%

TASKS DETAILS

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

Task Score	Correctness	Performance
100%	100%	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:

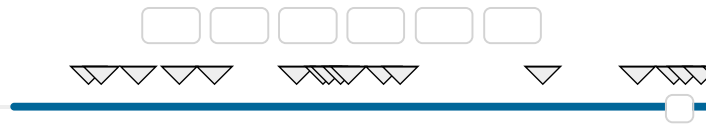
```
vector<int> solution(vector<int> &A, int K);
```

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

Solution

Programming language used:	C++
Total time used:	20 minutes
Effective time used:	20 minutes
Notes:	*not defined yet*

Task timeline



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

```
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.

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14:20:40 14:40:02

Code: 14:40:02 UTC, cpp, final, score: **100** show code in pop-up

```cpp
// you can use includes, for example:
// #include <algorithm>

// you can write to stdout for debugging pur
// cout << "this is a debug message" << endl

vector<int> solution(vector<int> &A, int K)
    // write your code in C++14 (g++ 6.2.0)
    int size = A.size();
    vector<int> afterRotation (size) ;

    for(int i = 0; i < size; i++) {
        afterRotation[(i+K)%size] = A[i];
    }

    return afterRotation;
}
```

Analysis summary

The solution obtained perfect score.

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	✔ OK
▶	single one element, 0 <= K <= 5	✔ OK
▶	double two elements, K <= N	✔ OK
▶	small1 small functional tests, K < N	✔ OK
▶	small2 small functional tests, K >= N	✔ OK
▶	small_random_all_rotations small random sequence, all rotations, N = 15	✔ OK
▶	medium_random	✔ OK

	medium random sequence, N = 100	
▶	maximal maximal N and K	✔ OK