Arrays: Left Rotation ☆

Problem Submissions Leaderboard Editorial

Check out the resources on the page's right side to learn more about arrays. The video tutorial is by Gayle Laakmann McDowell, author of the best-selling interview book Cracking the Coding Interview.

A *left rotation* operation on an array shifts each of the array's elements 1 unit to the left. For example, if 2 left rotations are performed on array $[1, 2, 3, 4, 5]$, then the array would become $[3, 4, 5, 1, 2]$.

Given an array a of n integers and a number, d, perform d left rotations on the array. Return the updated array to be printed as a single line of space-separated integers.

Function Description

Complete the function *rotLeft* in the editor below. It should return the resulting array of integers.

rotLeft has the following parameter(s):

- An array of integers a.
- An integer d, the number of rotations.

Input Format

The first line contains two space-separated integers n and d, the size of a and the number of left rotations you must perform.
The second line contains n space-separated integers $a[i]$.

Constraints

- $1 \leq n \leq 10^5$
- $1 \leq d \leq n$
- $1 \leq a[i] \leq 10^6$

Output Format

Print a single line of n space-separated integers denoting the final state of the array after performing d left rotations.

Sample Input

```
5 4
1 2 3 4 5
```

Sample Output

```
5 1 2 3 4
```

Explanation

When we perform $d = 4$ left rotations, the array undergoes the following sequence of changes:

$$[1, 2, 3, 4, 5] \rightarrow [2, 3, 4, 5, 1] \rightarrow [3, 4, 5, 1, 2] \rightarrow [4, 5, 1, 2, 3] \rightarrow [5, 1, 2, 3, 4]$$

C#

```
using System.CodeDom.Compiler;
using System.Collections.Generic;
using System.Collections;
using System.ComponentModel;
using System.Diagnostics.CodeAnalysis;
using System.Globalization;
using System.IO;
using System.Linq;
using System.Reflection;
using System.Runtime.Serialization;
using System.Text.RegularExpressions;
using System.Text;
using System;

class Solution {

    // Complete the rotLeft function below.
    static int[] rotLeft(int[] a, int d) {

        var result = new List<int>();

        for(int i = d;  i < a.Length; i++ )
            result.Add(a[i]);

        for(int i = 0; i < d; i++)
            result.Add(a[i]);

        return result.ToArray();
    }

```

Line: 28 Col: 33

Upload Code as File Test against custom input Run Code Submit Code

Facing any Issues? Let us know!

Congratulations

You solved this challenge. Would you like to challenge your friends?

Next Challenge

Testcase 0 | Testcase 1 | Testcase 2 | Testcase 3 | Testcase 4 | Testcase 5 | Testcase 6 | Testcase 7

Input (stdin) Download

```
5 4
1 2 3 4 5
```

Expected Output Download

```
5 1 2 3 4
```

Compiler Message

Success