

An array is a data structure that stores elements of the same type in a contiguous block of memory. In an array, A , of size N , each memory location has some unique index, i (where $0 \leq i < N$), that can be referenced as $A[i]$ or A_i .

Your task is to reverse an array of integers.

Note: If you've already solved our C++ domain's Arrays Introduction challenge, you may want to skip this.

Example

$A = [1, 2, 3]$

Return $[3, 2, 1]$.

Function Description

Complete the function `reverseArray` with the following parameter(s):

- `int A[n]`: the array to reverse

Returns

- `int[n]`: the reversed array

Input Format

Congratulations!

You have passed the sample test cases. Click the submit button to run your code against all the test cases.

✓ Sample Test case 0

Input (stdin)

[Download](#)

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

Your Output (stdout)

```
1 2 3 4 1
```

Expected Output

[Download](#)

```
1 2 3 4 1
```

Given a 6×6 2D array, *arr*, an hourglass is a subset of values with indices falling in the following pattern:

```
a b c
  d
e f g
```

There are 16 hourglasses in a 6×6 array. The *hourglass sum* is the sum of the values in an hourglass. Calculate the hourglass sum for every hourglass in *arr*, then print the *maximum* hourglass sum.

Example

arr =

```
-9 -9 -9 1 1 1
 0 -9 0 4 3 2
-9 -9 -9 1 2 3
 0 0 8 6 6 0
 0 0 0 -2 0 0
 0 0 1 2 4 0
```

The 16 hourglass sums are:

```
-62 -24 -10 12
```

Congratulations!

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✓ Sample Test case 0

✓ Sample Test case 1

✓ Sample Test case 2

Input (stdin)

```
1 1 1 1 0 0 0
2 0 1 0 0 0 0
3 1 1 1 0 0 0
4 0 0 2 4 4 0
5 0 0 0 2 0 0
6 0 0 1 2 4 0
```

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Your Output (stdout)

```
1 19
```

Expected Output

```
1 19
```

Download

- Declare a 2-dimensional array, *arr*, with *n* empty arrays, all zero-indexed.
- Declare an integer, *lastAnswer*, and initialize it to 0.

You need to process two types of queries:

1. Query: 1 *x y*

- Compute $idx = (x \oplus lastAnswer)$.
- Append the integer *y* to *arr[idx]*.

2. Query: 2 *x y*

- Compute $idx = (x \oplus lastAnswer)$.
- Set $lastAnswer = arr[idx][y \% size(arr[idx])]$.
- Store the new value of *lastAnswer* in an answers array.

Notes:

- \oplus is the bitwise XOR operation, which corresponds to the \wedge operator in most languages. Learn more about it on [Wikipedia](#).
- $\%$ is the modulo operator.
- Finally, $size(arr[idx])$ is the number of elements in *arr[idx]*.

Function Description

Complete the *dynamicArray* function with the following parameters:

- *int n*: the number of empty arrays to initialize in *arr*
- *int queries[q][3]*: 2-D array of integers

Congratulations!

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✓ Sample Test case 0

Input (stdin)

```
1 2 5
2 1 0 5
3 1 1 7
4 1 0 3
5 2 1 0
6 2 1 1
```

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Your Output (stdout)

```
1 7
2 3
```

Expected Output

Download

A *left rotation* operation on a circular array shifts each of the array's elements 1 unit to the left. The elements that fall off the left end reappear at the right end. Given an integer d , rotate the array that many steps to the left and return the result.

Example

$d = 2$
 $arr = [1, 2, 3, 4, 5]$

After 2 rotations, $arr' = [3, 4, 5, 1, 2]$.

Function Description

Complete the *rotateLeft* function with the following parameters:

- *int d*: the amount to rotate by
- *int arr[n]*: the array to rotate

Returns

- *int[n]*: the rotated array

Input Format

The first line contains two space-separated integers that denote n , the number of integers, and d , the number of left rotations to perform.
The second line contains n space-separated integers that describe $arr[]$.

Congratulations!

You have passed the sample test cases. Click the submit button to run your code against all the test cases.

Sample Test case 0

Input (stdin)

Download

1 5 4
2 1 2 3 4 5

Your Output (stdout)

1 5 1 2 3 4

Expected Output

Download

1 5 1 2 3 4

An array is a data structure that stores elements of the same type in a contiguous block of memory. In an array, A , of size N , each memory location has some unique index, i (where $0 \leq i < N$), that can be referenced as $A[i]$ or A_i .

Your task is to reverse an array of integers.

Notes: If you've already solved our C++ domain's Arrays Introduction challenge, you may want to skip this.

Example

$A = [1, 2, 3]$

Return $[3, 2, 1]$.

Function Description

Complete the function `reverseArray` with the following parameter(s):

- `int A[n]`: the array to reverse

Returns

- `int[n]`: the reversed array

Input Format

The first line contains an integer, N , the number of integers in A .

The second line contains N space-separated integers that make up A .

Constraints

- $1 \leq N \leq 10^3$
- $1 \leq A[i] \leq 10^4$, where $A[i]$ is the i^{th} integer in A

Sample Input 1

1	4	3	2
---	---	---	---

Array: arr

4
1 4 3 2

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30 *
31 * For example,

Line: 222 Col: 1

Upload Code as File

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Run Code

Submit Code

Congratulations!

You have passed the sample test cases. Click the submit button to run your code against all the test cases.

Sample Test case 0

Input (stdin)

Download

1 4
2 1 4 3 2

Your Output (stdout)

1 2 3 4 1

Expected Output

Download

1 2 3 4 1



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