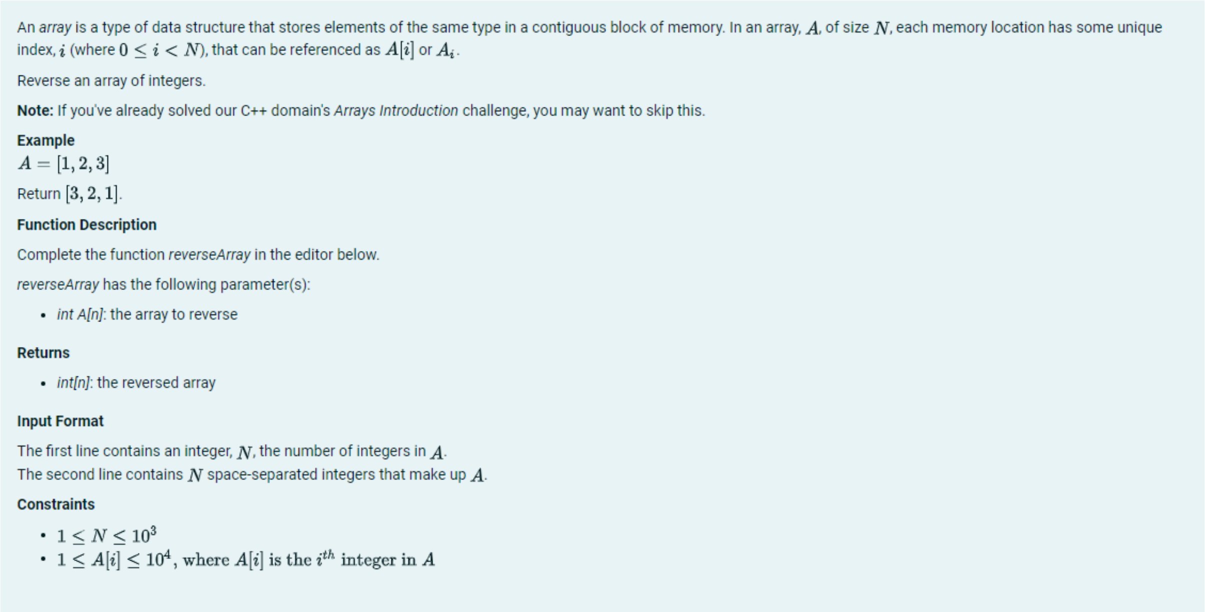
1.



An *array* is a type of 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.

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* in the editor below.

reverseArray has the following parameter(s):

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

Returns

- *int[n]*: the reversed array

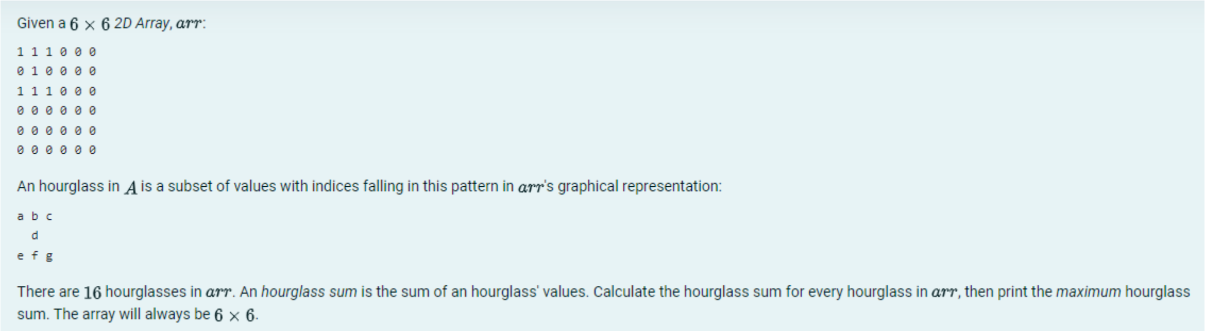
Input Format

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

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

2.



Given a 6×6 *2D Array*, arr:

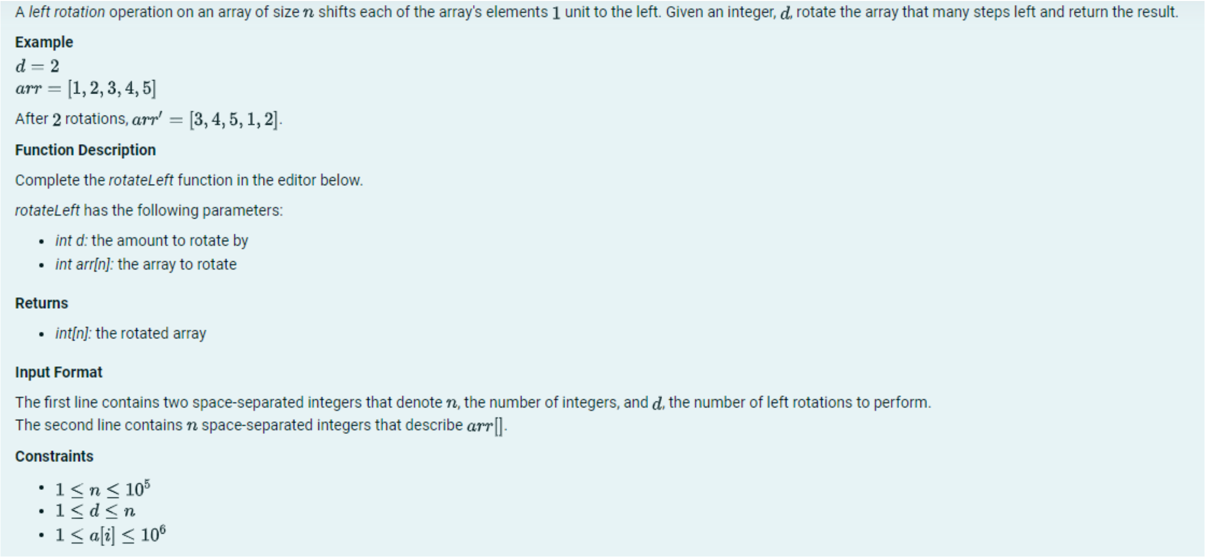
```
1 1 1 0 0 0
0 1 0 0 0 0
1 1 1 0 0 0
0 0 0 0 0 0
0 0 0 0 0 0
0 0 0 0 0 0
```

An hourglass in A is a subset of values with indices falling in this pattern in arr's graphical representation:

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

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

3.



A *left rotation* operation on an array of size n shifts each of the array's elements 1 unit to the left. Given an integer, d, rotate the array that many steps 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 in the editor below.

rotateLeft has 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 $arr[]$.

Constraints

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