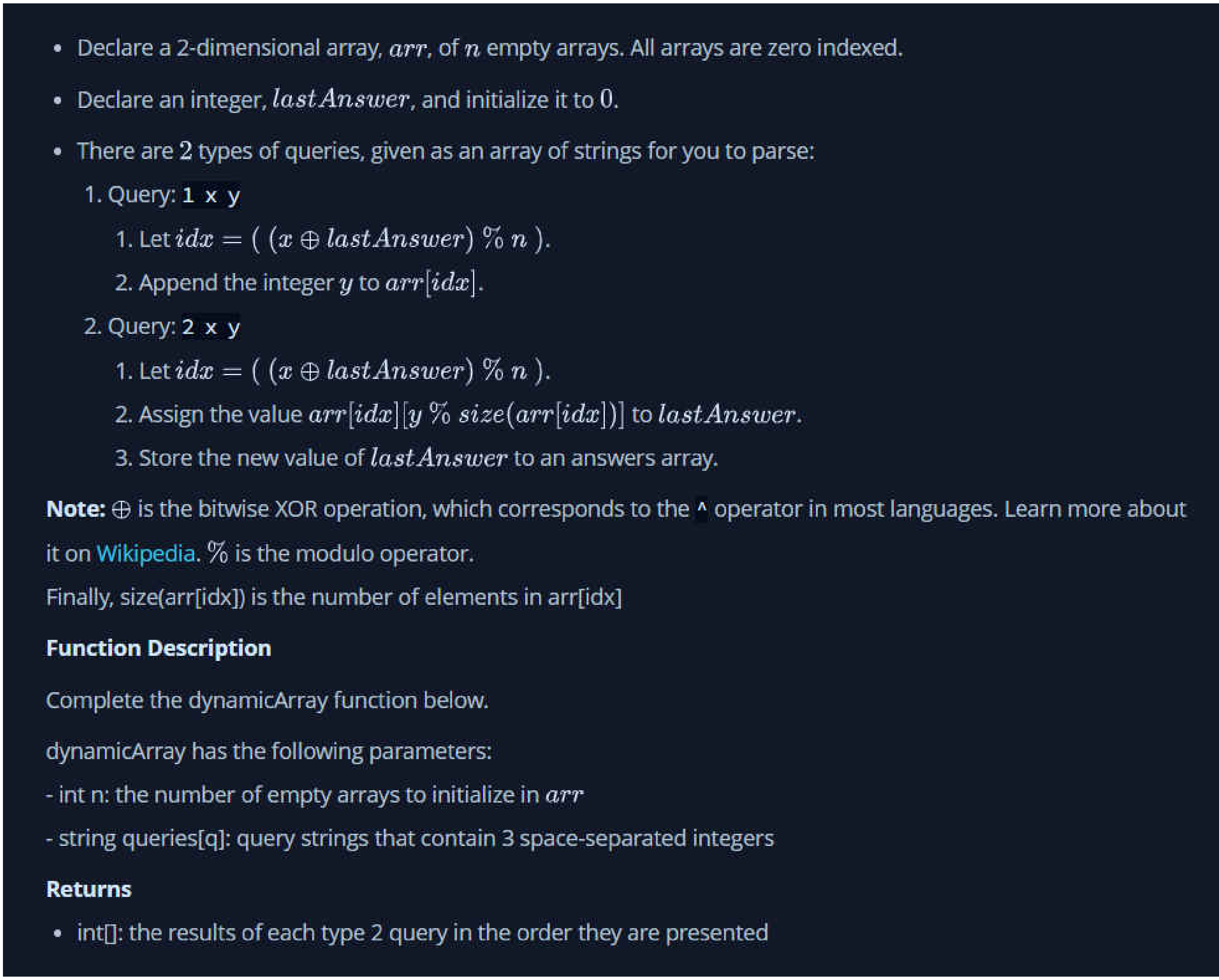


- Declare a 2-dimensional array, arr, of n empty arrays. All arrays are zero indexed.
- Declare an integer, $lastAnswer$, and initialize it to 0.
- There are 2 types of queries, given as an array of strings for you to parse:
  1. Query: `1 x y`
     1. Let $idx = (\ (x \oplus lastAnswer)\ \%\ n\ )$.
     2. Append the integer y to $arr[idx]$.
  2. Query: `2 x y`
     1. Let $idx = (\ (x \oplus lastAnswer)\ \%\ n\ )$.
     2. Assign the value $arr[idx][y\ \%\ size(arr[idx])]$ to $lastAnswer$.
     3. Store the new value of $lastAnswer$ to an answers array.

Note: $\oplus$ is the bitwise XOR operation, which corresponds to the `^` 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 below.

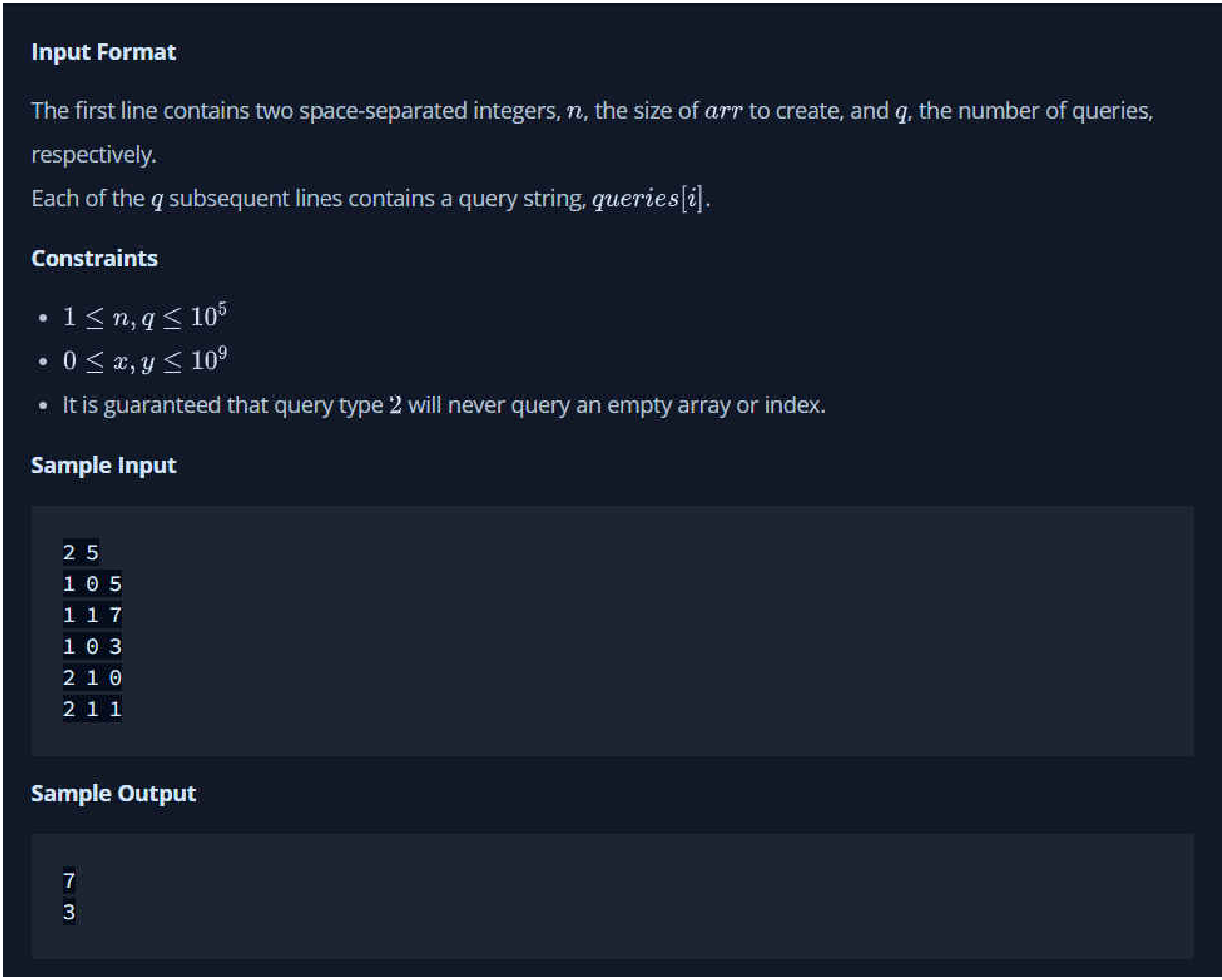
dynamicArray has the following parameters:

- int n: the number of empty arrays to initialize in arr

- string queries[q]: query strings that contain 3 space-separated integers

Returns

- int[]: the results of each type 2 query in the order they are presented



Input Format

The first line contains two space-separated integers, n, the size of arr to create, and q, the number of queries, respectively.
Each of the q subsequent lines contains a query string, $queries[i]$.

Constraints

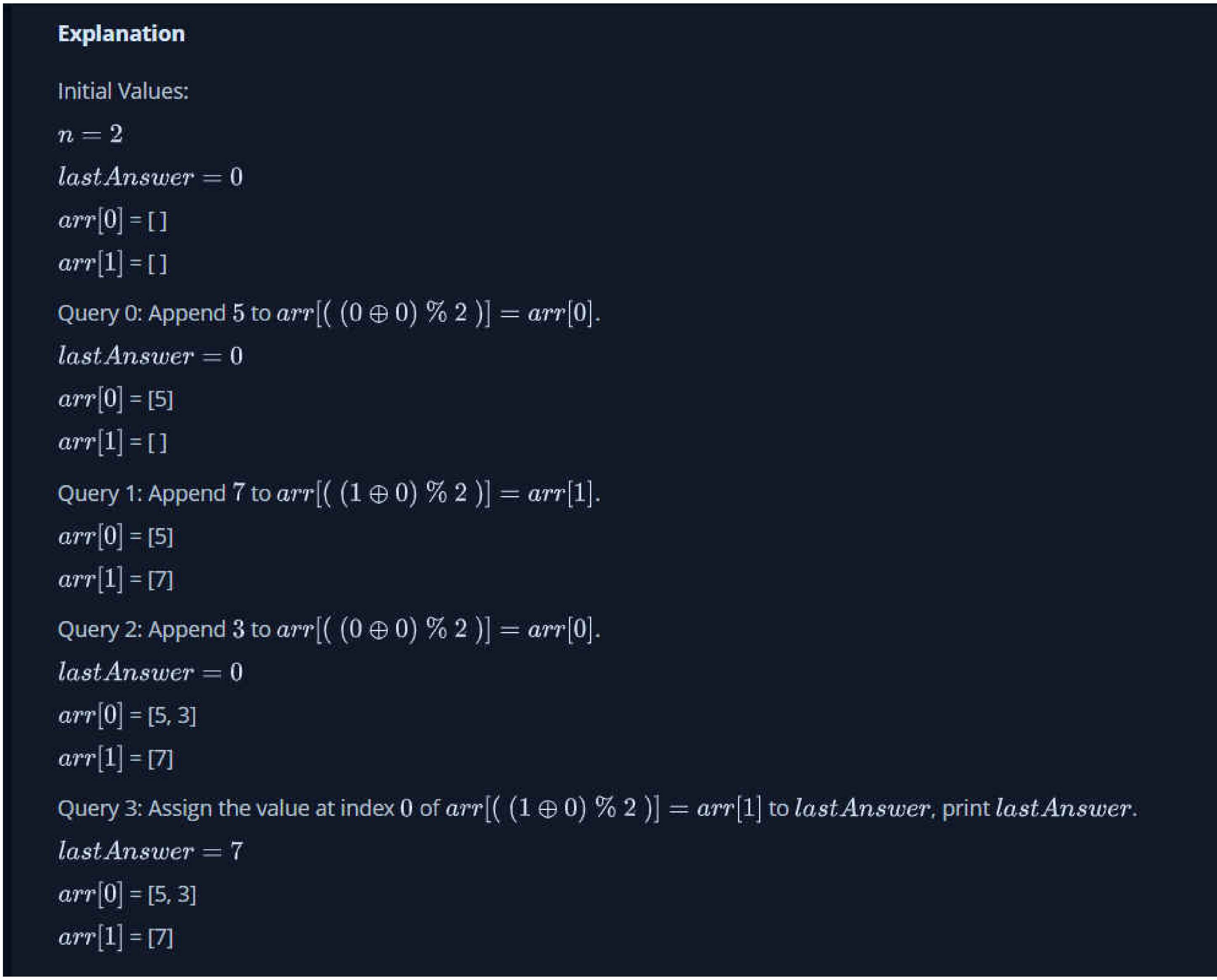
- $1 \leq n, q \leq 10^5$
- $0 \leq x, y \leq 10^9$
- It is guaranteed that query type 2 will never query an empty array or index.

Sample Input

```
2 5
1 0 5
1 1 7
1 0 3
2 1 0
2 1 1
```

Sample Output

```
7
3
```



Explanation

Initial Values:

$n = 2$

$lastAnswer = 0$

$arr[0]$ = [ ]

$arr[1]$ = [ ]

Query 0: Append 5 to $arr[(\ (0 \oplus 0)\ \%\ 2\ )] = arr[0]$.

$lastAnswer = 0$

$arr[0]$ = [5]

$arr[1]$ = [ ]

Query 1: Append 7 to $arr[(\ (1 \oplus 0)\ \%\ 2\ )] = arr[1]$.

$arr[0]$ = [5]

$arr[1]$ = [7]

Query 2: Append 3 to $arr[(\ (0 \oplus 0)\ \%\ 2\ )] = arr[0]$.

$lastAnswer = 0$

$arr[0]$ = [5, 3]

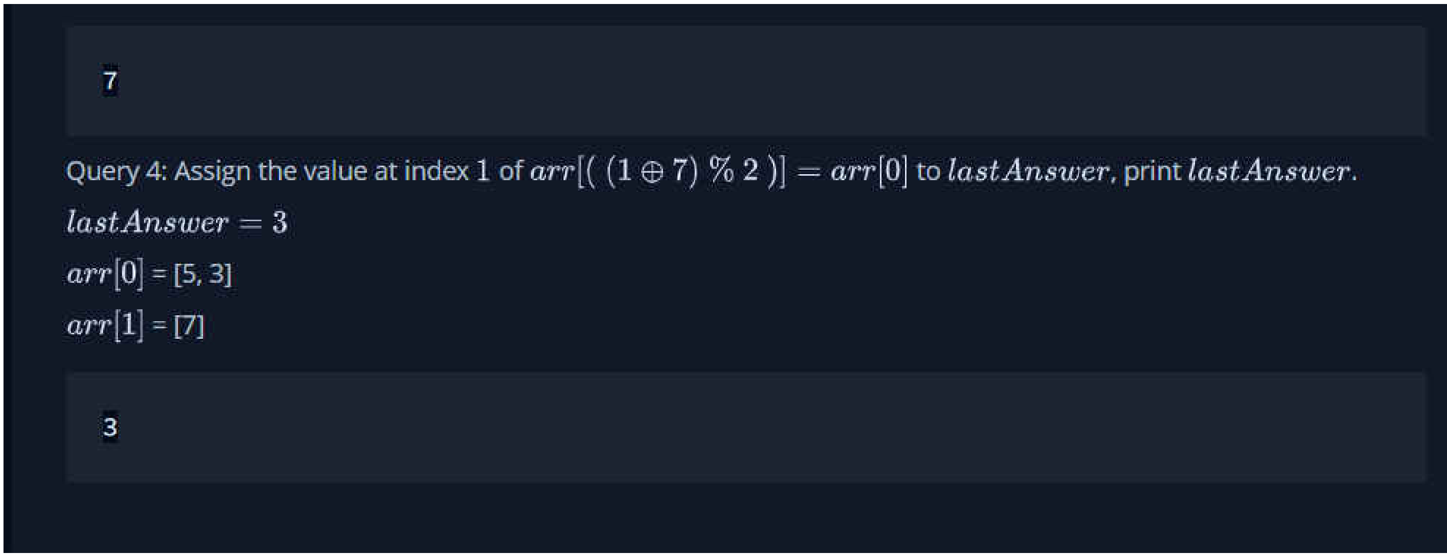
$arr[1]$ = [7]

Query 3: Assign the value at index 0 of $arr[(\ (1 \oplus 0)\ \%\ 2\ )] = arr[1]$ to $lastAnswer$, print $lastAnswer$.

$lastAnswer = 7$

$arr[0]$ = [5, 3]

$arr[1]$ = [7]



```
7
```

Query 4: Assign the value at index 1 of $arr[(\ (1 \oplus 7)\ \%\ 2\ )] = arr[0]$ to $lastAnswer$, print $lastAnswer$.

$lastAnswer = 3$

$arr[0]$ = [5, 3]

$arr[1]$ = [7]

```
3
```