**Dynamic Array**

<https://www.hackerrank.com/challenges/dynamic-array/problem>

* Create a 2-dimensional array, arr, of n empty arrays. All arrays are zero indexed.
* Create an integer, lastAnswer, and initialize it to 0.
* There are 2 types of queries:

1. Query: 1 x y
   1. Find the list within arr at index idx = (( x ⊕ lastAnswer ) % n).
   2. Append the integer y to the arr[inx].
2. Query: 2 x y
   1. Find the list within arr at index idx = (( x ⊕ lastAnswer ) % n).
   2. Find the value of element y % size (arr [idx]) where size is the number of elements in arr[idx]. Assign the value to lastAnswer.
   3. Print the new value of lastAnswer on a new line

**Note:** ⊕ is the *bitwise XOR* operation, which corresponds to the ^ operator in most languages. Learn more about it on [Wikipedia](https://en.wikipedia.org/wiki/Exclusive_or). % is the modulo operator.

**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]:* an array of query strings

**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 in the format defined above, queries[i].

**Constraints**

* *1 <= n, q <= 105*
* *0 <= x <= 109*
* *0 <= y <= 109*
* *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 ⊕ 0) % 2) ] = arr[0].  
lastAnswer = 0  
arr[0] = [5]  
arr[1] = [ ]

Query 1: Append 7 to arr[ (( 1 ⊕ 0) % 2) ] = arr[1].  
lastAnswer = 0  
arr[0] = [5]  
arr[1] = [7]

Query 2: Append 3 to arr[ (( 0 ⊕ 0) % 2) ] = arr[0].  
lastAnswer = 0  
arr[0] = [5, 3]  
arr[1] = [7]

Query 3: Assign the value at index 0 of arr[ (( 1 ⊕ 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 ⊕ 7) % 2) ] = arr[0] to lastAnswer , print lastAnswer.  
lastAnswer = 3

arr[0] = [5, 3]  
arr[1] = [7]

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