# Dynamic Array

**Problem Statement**

There are $N$ sequences. All of them are initially empty, and you are given a variable $lastans = 0$. You are given $Q$ queries of two different types:

- "$1$ $x$ $y$" - Insert $y$ at the end of the (($x \oplus lastans$) mod $N$)$^{th}$ sequence.
- "$2$ $x$ $y$" - Print the value of the ($y$ mod $size$)$^{th}$ element of the (($x \oplus lastans$) mod $N$)$^{th}$ sequence. Here, $size$ denotes the size of the related sequence. Then, assign this integer to $lastans$.

**Note**: You may assume that, for the second type of query, the related sequence will not be an empty sequence. Sequences and the elements of each sequence are indexed by zero-based numbering.

The $\oplus$ symbol denotes the *xor* operation. You can get more information about it from Wikipedia. It is defined as $^$ in most of the modern programming languages.

**Input Format**

The first line consists of $N$, number of sequences, and $Q$, number of queries, separated by a space. The following $Q$ lines contains one of the query types described above.

**Constraints**
$1 \leq N,Q \leq 10^5$
$0 \leq x \leq 10^9$
$0 \leq y \leq 10^9$

**Output Format**

For each query of type two, print the answer on a new line.

**Sample Input**

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

**Sample Output**

```
7
3
```

**Explanation**

The first sequence is $5,3$ and the second sequence is $7$.