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Dashboard › Data Structures › Arrays › Dynamic Array   **Points: 145.00 Rank: 37580**

Dynamic Array 🔖

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Problem	Submissions	Leaderboard	Discussions	Editorial

- Create a list, $seqList$, of N empty sequences, where each sequence is indexed from 0 to $N-1$. The elements within each of the N sequences also use 0-indexing.

- Create an integer, $lastAns$, and initialize it to 0.

- The 2 types of queries that can be performed on your list of sequences ($seqList$) are described below:

  1. Query: `1  x  y`

     1. Find the sequence, seq, at index $(\,(x \oplus lastAns)\ \%\ N\,)$ in $seqList$.

     2. Append integer y to sequence seq.

  2. Query: `2  x  y`

     1. Find the sequence, seq, at index $(\,(x \oplus lastAns)\ \%\ N\,)$ in $seqList$.

     2. Find the value of element $y\ \%\ size$ in seq (where $size$ is the size of seq) and assign it to $lastAns$.

     3. Print the new value of $lastAns$ on a new line

Task
Given N, Q, and Q queries, execute each query.

Note: $\oplus$ is the *bitwise XOR* operation, which corresponds to the `^` operator in most languages. Learn more about it on Wikipedia.

Input Format

The first line contains two space-separated integers, N (the number of sequences) and Q (the number of queries), respectively.
Each of the Q subsequent lines contains a query in the format defined above.

Constraints

- $1 \leq N, Q \leq 10^5$

- $0 \leq x \leq 10^9$

- $0 \leq y \leq 10^9$

- It is guaranteed that query type **2** will never query an empty sequence or index.

Output Format

For each type **2** query, print the updated value of *lastAns* 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

Initial Values:
$N = 2$
$lastAns = 0$
$S_0 = \{\}$
$S_1 = \{\}$

Query 0: Append **5** to sequence $((0 \oplus 0) \% 2) = 0$.
$lastAns = 0$
$S_0 = \{5\}$
$S_1 = \{\}$

Query 1: Append **7** to sequence $((1 \oplus 0) \% 2) = 1$.
$S_0 = \{5\}$
$S_1 = \{7\}$

Query 2: Append 3 to sequence $((0 \oplus 0) \% 2) = 0$.

$lastAns = 0$

$S_0 = \{5, 3\}$

$S_1 = \{7\}$

Query 3: Assign the value at index 0 of sequence $((1 \oplus 0) \% 2) = 1$ to $lastAns$, print $lastAns$. $lastans = 7$

$S_0 = \{5, 3\}$

$S_1 = \{7\}$

> 7

Query 4: Assign the value at index 1 of sequence $((1 \oplus 7) \% 2) = 0$ to $lastAns$, print $lastAns$. $lastans = 3$

$S_0 = \{5, 3\}$

$S_1 = \{7\}$

> 3

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Submissions: 20335

Max Score: 15

Difficulty: Easy

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More

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```cpp
1  #include <cmath>
2  #include <cstdio>
3  #include <vector>
4  #include <iostream>
5  #include <algorithm>
6  using namespace std;
7
8
9  int main() {
10     /* Enter your code here. Read input from STDIN. Print output to STDOUT */
11     return 0;
12 }
13
```

```
                                                                                            Line: 1 Col: 1
```

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