ming Questions

nting subarrays + 30.0

queries + 30.0

...ensure that you have submitted all your answers.

Max. score 30.00

XOR queries

You are given a list S that initially contained a single value 0. You must perform Q queries of the following types:

- $0\ X$: Insert X in the list.
- $1\ X$: For every element A in S, replace it by $A \oplus X$ where $\oplus$ denotes the bitwise XOR operation.

After performing Q queries, print all the values of the list in increasing order of their values.

Input format

- The first line contains a single integer T denoting the number of test cases.
- The first line of each test case contains a single integer Q denoting the number of queries.
- Next Q lines of each test case contain queries of the two types.

Output format

For each test case, print space-separated values of S in increasing order of their values in a new line.

Constraints

$1 \leq T \leq 100$

$1 \leq Q \leq 10^6$

Type here to search

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ghd2020.hackerearth.com/challenges/test/GOCC11_coding_in_internship/problems/37fc34d96a3141b7975411eb58823372/

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End test

2 Questions

Total score

Your test will end in 2 minutes. Ensure that you have submitted all your answers.

2 Programming Questions

1. Counting subarrays + 30.0

2. XOR queries + 30.0

The following test cases are the actual test cases of this question that may be used to evaluate your submission.

Sample input 2 Copy

```
4
2
1 58
1 56
4
1 5
0 0
1 35
1 65
4
```

Sample output 2 Copy

```
2
98 103
56
21 55 78 95
```

Sample input 3 Copy

```
4
2
1 59
1 30
1
1 98
2
0 72
0 95
```

Sample output 3 Copy

```
37
98
0 72 95
67 72 89 109 118
```

Type here to search

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End test

2 Questions

Total score

Your test will end in 3 minutes. Ensure that you have submitted all your answers.

2 Programming Questions

1. Counting subarrays + 30.0

2. XOR queries + 30.0

First test case

Initially, bag $S = \{0\}$

1st query
Insert 4 in the bag.
Bag $S = \{0, 4\}$

2nd query
Insert 2 in the bag.
Bag $S = \{0, 4, 2\}$

3rd query
Replace every element A in S by $A \oplus 4$
Bag $S = \{4, 0, 6\}$

4th query
Insert 5 in the bag.
Bag $S = \{4, 0, 6, 5\}$

5th query
Replace every element A in S by $A \oplus 8$
Bag $S = \{12, 8, 14, 13\}$

Bag in the sorted form $S = \{8, 12, 13, 14\}$