HOME TOP CATALOG CONTESTS GYM PROBLEMSET GROUPS RATING EDU API CALENDAR HELP

PROBLEMS SUBMIT STATUS STANDINGS CUSTOM TEST

F. MEX Queries

time limit per test: 2 seconds memory limit per test: 256 megabytes

You are given a set of integer numbers, initially it is empty. You should perform n queries.

There are three different types of queries:

- 1 lr Add all missing numbers from the interval [l, r]
- 2 lr Remove all present numbers from the interval [l, r]
- 3 lr Invert the interval [l, r] add all missing and remove all present numbers from the interval [l, r]

After each query you should output MEX of the set — the smallest positive ($MEX \ge 1$) integer number which is not presented in the set.

Input

The first line contains one integer number n ($1 \le n \le 10^5$).

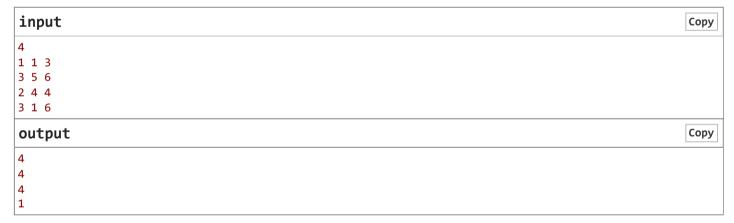
Next n lines contain three integer numbers t, l, r ($1 \le t \le 3, 1 \le l \le r \le 10^{18}$) — type of the query, left and right bounds.

Output

Print MEX of the set after each query.

Examples

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Note

Here are contents of the set after each query in the first example:

- 1. $\{3,4\}$ the interval [3,4] is added
- 2. $\{1, 2, 5, 6\}$ numbers $\{3, 4\}$ from the interval [1, 6] got deleted and all the others are added
- 3. $\{5,6\}$ numbers $\{1,2\}$ got deleted

Educational Codeforces Round 23

Finished

Practice



→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

→ Clone Contest to Mashup

You can clone this contest to a mashup.

Clone Contest

→ Submit?

Language: GNU G++20 13.2 (64 bit, win **∨**

Choose file:

Submission

311415618

Choose File No file chosen

Verdict

Submit

311466591 Mar/20/2025 03:55 Accepted 311465785 Mar/20/2025 03:35 Accepted 311459471 Mar/20/2025 00:52 Wrong answer on test 5 311426377 Mar/19/2025 Wrong answer on test 7 Wrong answer on test 7 311425023 Mar/19/2025 Wrong answer on test 7 Wrong answer on test 7

Time

→ Last submissions

311426377	Mar/19/2025 18:37	Wrong answer on test 7
311425023	Mar/19/2025 18:25	Wrong answer on test 7
311420802	Mar/19/2025 17:48	Wrong answer on test 7
311419666	Mar/19/2025 17:39	Wrong answer on test 7
311419401	Mar/19/2025 17:37	Wrong answer on test 1
311416341	Mar/19/2025 17:13	Wrong answer on test 7



17:08

Mar/19/2025 Wrong answer on

test 7

