

Cards and Boxes

There are n boxes on a line numbered from 1 to n . Each box has an unlimited number of slots for storing Pokemon cards. Bob is a rich kid and he has just bought lots of Pokemon packs. After open the packs to get the Pokemon cards, he wants to place the cards in the boxes. Given that each card has a number on it and there can be cards with the same number, there are two types of operations that Bob can perform:

- Bob place cards that have number c on them into the all the boxes from index L to R . Note that each card should be placed in one box. ($0 < c \leq 10^9$).
- Take one card on the top of each box for all boxes from index L to R

Bob wants to know that after m operations, what the numbers on the top cards of each box are.

Given a list of operations, find the number on the top card of each box after all the operations are performed.

Input

The first line contains two integers n, m ($1 \leq n, m \leq 10^5$) – the number of boxes and the number of operations.

- In the next m line, each line contains three integers L, R, c ($1 \leq L \leq R \leq 10^5$; $0 \leq c \leq 10^9$) describe the operation; if $c > 0$, the operation is type 1, $c = 0$ is for type 2.
- The input data guarantees that there is no operation that takes out card from an empty box.

Output

The output should contains n integers, each integer is the number of the top card of box. The number is 0 in case the box is empty.

Sample

| INPUT | OUTPUT |
|---------------------------------|-------------|
| 5 3 1 5 1 2 4 0 4 5 10 | 1 0 0 10 10 |