

COLORFUL ARRAY

You have been given an array of n unpainted elements. By unpainted, we mean that each element initially has a value of 0 . You have to process q queries of the form $l\ r\ c$, in which you paint all the elements of the array from index l to index r with color c . Assume that, each new color currently being applied to an element overrides its previous color. Output the color of each element after all the queries have been processed.

Note: The problem is guaranteed to be solved using C or C++ programming language.

Input

The first line of input consists of two integers n and q . Next q lines consists of 3 integers l , r and c denoting the starting index, ending index and the color respectively.

- $1 \leq n \leq 200000$
- $1 \leq q \leq 200000$
- $1 \leq l \leq r \leq n$
- $1 \leq c \leq 1\ 000\ 000\ 000$

Output

Output the final color of each element starting from index 1 on a new line.

Example

Input

```
4 3
1 3 2
2 4 6
2 3 7
```

Output:

```
2
7
7
6
```

Input

```
10 5
3 9 13
1 4 9
2 10 14
2 7 10
6 9 44
```

Output

```
9
10
10
10
10
44
44
```

44
44
14