B. Interesting Array

time limit per test: 1 second

memory limit per test: 256 megabytes

input: standard input

output: standard output

We'll call an array of n non-negative integers $a[1], a[2], ..., a[n]$ *interesting*, if it meets m constraints. The i-th of the m constraints consists of three integers l_i, r_i, q_i ($1 \le l_i \le r_i \le n$) meaning that value

$a[l_i] \; \& \; a[l_i + 1] \; \& \; ... \; \& \; a[r_i]$ should be equal to q_i.

Your task is to find any *interesting* array of n elements or state that such array doesn't exist.

Expression $x \& y$ means the bitwise AND of numbers x and y. In programming languages C++, Java and Python this operation is represented as "&", in Pascal — as "and".

Input

The first line contains two integers n, m ($1 \le n \le 10^5$, $1 \le m \le 10^5$) — the number of elements in the array and the number of limits.

Each of the next m lines contains three integers l_i, r_i, q_i ($1 \le l_i \le r_i \le n$, $0 \le q_i < 2^{30}$) describing the i-th limit.

Output

If the *interesting* array exists, in the first line print "YES" (without the quotes) and in the second line print n integers $a[1], a[2], ..., a[n]$ ($0 \le a[i] < 2^{30}$) decribing the *interesting* array. If there are multiple answers, print any of them.

If the *interesting* array doesn't exist, print "NO" (without the quotes) in the single line.

Examples

input

```
3 1
1 3 3
```

output

```
YES
3 3 3
```

input

```
3 2
1 3 3
1 3 2
```

output

```
NO
```