D. 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 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