

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 $a[1], a[2], \dots, a[n]$ *interesting*, if it meets m constraints. The i -th of the m constraints consists of three integers l_i, r_i, q_i ($1 \leq l_i \leq r_i \leq n$) meaning that value $a[l_i] \& a[l_i + 1] \& \dots \& a[r_i]$ 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 ($1 \leq n \leq 10^5, 1 \leq m \leq 10^5$) — 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 ($1 \leq l_i \leq r_i \leq n, 0 \leq q_i < 2^{30}$) 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 $a[1], a[2], \dots, a[n]$ ($0 \leq a[i] < 2^{30}$) describing 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	Copy
3 1 1 3 3	
output	Copy
YES 3 3 3	

input	Copy
3 2 1 3 3 1 3 2	
output	Copy
NO	

Codeforces Round #275 (Div. 1)

Finished

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