

E. Kefa and Watch

time limit per test: 1.5 seconds
memory limit per test: 256 megabytes

One day Kefa the parrot was walking down the street as he was on the way home from the restaurant when he saw something glittering by the road. As he came nearer he understood that it was a watch. He decided to take it to the pawnbroker to earn some money.

The pawnbroker said that each watch contains a serial number represented by a string of digits from 0 to 9, and the more quality checks this number passes, the higher is the value of the watch. The check is defined by three positive integers l , r and d . The watches pass a check if a substring of the serial number from l to r has period d . Sometimes the pawnbroker gets distracted and Kefa changes in some substring of the serial number all digits to c in order to increase profit from the watch.

The seller has a lot of things to do to begin with and with Kefa messing about, he gave you a task: to write a program that determines the value of the watch.

Let us remind you that number x is called a period of string s ($1 \leq x \leq |s|$), if $s_i = s_{i+x}$ for all i from 1 to $|s| - x$.

Input

The first line of the input contains three positive integers n , m and k ($1 \leq n \leq 10^5$, $1 \leq m + k \leq 10^5$) — the length of the serial number, the number of change made by Kefa and the number of quality checks.

The second line contains a serial number consisting of n digits.

Then $m + k$ lines follow, containing either checks or changes.

The changes are given as 1 l r c ($1 \leq l \leq r \leq n$, $0 \leq c \leq 9$). That means that Kefa changed all the digits from the l -th to the r -th to be c .

The checks are given as 2 l r d ($1 \leq l \leq r \leq n$, $1 \leq d \leq r - l + 1$).

Output

For each check on a single line print "YES" if the watch passed it, otherwise print "NO".

Examples

input	Copy
3 1 2 112 2 2 3 1 1 1 3 8 2 1 2 1	
output	Copy
NO YES	

input	Copy
6 2 3 334934 2 2 5 2 1 4 4 3 2 1 6 3 1 2 3 8 2 3 6 1	
output	Copy
NO YES NO	

Note


In the first sample test two checks will be made. In the first one substring "12" is checked on whether or not it has period 1, so the answer is "NO". In the second one substring "88", is checked on whether or not it has period 1, and it has this period, so the answer is "YES".

In the second statement test three checks will be made. The first check processes substring "3493", which doesn't have period 2. Before the second check the string looks as "334334", so the answer to it is "YES". And finally, the third check processes substring "8334", which does not have period 1.

Codeforces Round 321 (Div. 2)

Finished

Practice



→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

→ Clone Contest to Mashup

You can clone this contest to a mashup.

Clone Contest

→ Submit?

Language: GNU G++20 13.2 (64 bit, win

Choose file: Choose File No file chosen

Submit

→ Last submissions

Submission	Time	Verdict
280136450	Sep/07/2024 05:38	Accepted
280115901	Sep/06/2024 22:20	Accepted
280115585	Sep/06/2024 22:17	Accepted
280105329	Sep/06/2024 20:36	Accepted
280095676	Sep/06/2024 19:15	Accepted
280093662	Sep/06/2024 19:01	Accepted
279872678	Sep/05/2024 04:03	Accepted
279872441	Sep/05/2024 03:57	Time limit exceeded on test 19
279872369	Sep/05/2024 03:55	Wrong answer on test 2
279871914	Sep/05/2024 03:44	Accepted

→ Problem tags

data structures hashing strings

*2500

No tag edit access

→ Contest materials

Announcement

Tutorial