

Problem G. Replace Digits

Time limit 2000 ms
Mem limit 1048576 kB

Problem Statement

You have a string S of length N . Initially, all characters in S are **1** s.

You will perform queries Q times. In the i -th query, you are given two integers L_i, R_i and a character D_i (which is a digit). Then, you must replace all characters from the L_i -th to the R_i -th (inclusive) with D_i .

After each query, read the string S as a decimal integer, and print its value modulo 998, 244, 353.

Constraints

- $1 \leq N, Q \leq 200,000$
- $1 \leq L_i \leq R_i \leq N$
- $1 \leq D_i \leq 9$
- All values in input are integers.

Input

Input is given from Standard Input in the following format:

```
N Q
L1 R1 D1
:
LQ RQ DQ
```

Output

Print Q lines. In the i -th line print the value of S after the i -th query, modulo 998, 244, 353.

Sample 1

Input	Output
8 5	11222211
3 6 2	77772211
1 4 7	77333333
3 8 3	72333333
2 2 2	72311333
4 5 1	

Sample 2

Input	Output
200000 1 123 456 7	641437905

Don't forget to take the modulo.