

E. A Simple Task

time limit per test: 5 seconds
memory limit per test: 512 megabytes

This task is very simple. Given a string S of length n and q queries each query is on the format $i\ j\ k$ which means sort the substring consisting of the characters from i to j in non-decreasing order if $k = 1$ or in non-increasing order if $k = 0$.

Output the final string after applying the queries.

Input

The first line will contain two integers n, q ($1 \leq n \leq 10^5, 0 \leq q \leq 50\,000$), the length of the string and the number of queries respectively.

Next line contains a string S itself. It contains only lowercase English letters.

Next q lines will contain three integers each i, j, k ($1 \leq i \leq j \leq n, k \in \{0, 1\}$).

Output

Output one line, the string S after applying the queries.

Examples

input	Copy
10 5 abacdabcda 7 10 0 5 8 1 1 4 0 3 6 0 7 10 1	
output	Copy
cbcaaaabdd	

input	Copy
10 1 agjucbvdfk 1 10 1	
output	Copy
abcdfgjkuv	

Note

First sample test explanation:

abacdabcda → abacdadcba

abacdadcba → abacacddba

abacacddba → cbaaacddba

cbaaacddba → cbcaaaddba

cbcaaaddba → cbcaaaabdd

Codeforces Round 312 (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
292879929	Nov/23/2024 13:55	Accepted
292873427	Nov/23/2024 12:54	Wrong answer on test 1
292873007	Nov/23/2024 12:50	Time limit exceeded on test 53
292872811	Nov/23/2024 12:49	Time limit exceeded on test 53
292872441	Nov/23/2024 12:45	Wrong answer on test 6
292872297	Nov/23/2024 12:44	Memory limit exceeded on test 6
292871866	Nov/23/2024 12:40	Wrong answer on test 6
292781362	Nov/22/2024 19:01	Accepted
292780516	Nov/22/2024 18:55	Accepted
292779795	Nov/22/2024 18:49	Accepted

→ Problem tags

data structures

sortings

strings

*2300

No tag edit access

→ Contest materials

Announcement (en)