



F. Chips

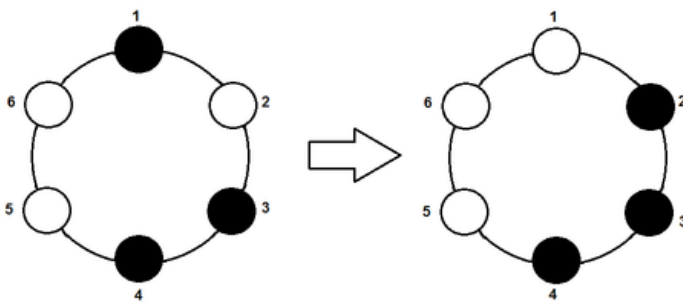
time limit per test: 1 second
 memory limit per test: 256 megabytes
 input: standard input
 output: standard output

There are n chips arranged in a circle, numbered from 1 to n .

Initially each chip has black or white color. Then k iterations occur. During each iteration the chips change their colors according to the following rules. For each chip i , three chips are considered: chip i itself and two its neighbours. If the number of white chips among these three is greater than the number of black chips among these three chips, then the chip i becomes white. Otherwise, the chip i becomes black.

Note that for each i from 2 to $(n - 1)$ two neighbouring chips have numbers $(i - 1)$ and $(i + 1)$. The neighbours for the chip $i = 1$ are n and 2. The neighbours of $i = n$ are $(n - 1)$ and 1.

The following picture describes one iteration with $n = 6$. The chips 1, 3 and 4 are initially black, and the chips 2, 5 and 6 are white. After the iteration 2, 3 and 4 become black, and 1, 5 and 6 become white.



Your task is to determine the color of each chip after k iterations.

Input

The first line contains two integers n and k ($3 \leq n \leq 200\,000$, $1 \leq k \leq 10^9$) — the number of chips and the number of iterations, respectively.

The second line contains a string consisting of n characters "w" and "b". If the i -th character is "w", then the i -th chip is white initially. If the i -th character is "b", then the i -th chip is black initially.

Output

Print a string consisting of n characters "w" and "b". If after k iterations the i -th chip is white, then the i -th character should be "w". Otherwise the i -th character should be "b".

Examples

input	Copy
6 1 WBbBWw	
output	Copy
WBBBWw	
input	Copy
7 3 WBWBWBW	
output	Copy
WWWWWWW	

Codeforces Round #592 (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](#)

→ Practice

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→ Clone Contest to Mashup

You can clone this contest to a mashup.

[Clone Contest](#)

→ Submit?

Language: GNU G++11 5.1.0

Choose file: [选择文件](#) 未选择任何文件

Be careful: there is 50 points penalty for submission which fails the pretests or resubmission (except failure on the first test, denial of judgement or similar verdicts). "Passed pretests" submission verdict doesn't guarantee that the solution is absolutely correct and it will pass system tests.

[Submit](#)

→ Problem tags

[constructive algorithms](#) [implementation](#)

*2300

No tag edit access

→ Contest materials

- Announcement #1 (en) 

input	Copy
6 4 BWBWBW	
output	Copy
BWBWBW	

- Announcement #2 (ru) ✕

Note

The first example is described in the statement.

The second example: "BWBWBW" → "WBWBWB" → "BWBWBW" → "WBWBWB" → "BWBWBW". So all chips become white.

The third example: "BWBWBW" → "WBWBWB" → "BWBWBW" → "WBWBWB" → "BWBWBW".

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