

B. Ania and Minimizing

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

Ania has a large integer S . Its decimal representation has length n and doesn't contain any leading zeroes. Ania is allowed to change at most k digits of S . She wants to do it in such a way that S still won't contain any leading zeroes and it'll be minimal possible. What integer will Ania finish with?

Input

The first line contains two integers n and k ($1 \leq n \leq 200\,000$, $0 \leq k \leq n$) — the number of digits in the decimal representation of S and the maximum allowed number of changed digits.

The second line contains the integer S . It's guaranteed that S has exactly n digits and doesn't contain any leading zeroes.

Output

Output the minimal possible value of S which Ania can end with. Note that the resulting integer should also have n digits.

Examples

input	Copy
5 3 51528	
output	Copy
10028	
input	Copy
3 2 102	
output	Copy
100	
input	Copy
1 1 1	
output	Copy
0	

Note

A number has leading zeroes if it consists of at least two digits and its first digit is 0. For example, numbers 00, 00069 and 0101 have leading zeroes, while 0, 3000 and 1010 don't have leading zeroes.

Codeforces Round #588 (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

You are registered for practice. You can solve problems unofficially. Results can be found in the contest status and in the bottom of standings.

→ 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

greedy implementation

No tag edit access

→ Contest materials

Announcement (en)

Tutorial (en)

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