Problem A. Doll Cemetery

Sana has a large integer S. Its decimal representation has length n and doesn't contain any leading zeroes. Sana 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 Sana finish with?

Input

The first line contains two integers n and k ($1 \leq n \leq 2 \times 10^5, 0 \leq k \leq n$) — 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 Sana can end with. Note that the resulting integer should also have n digits.

Examples

test	answer
5 3 51528	10028
3 2 102	100
1 1 1	0