B. Restoration of the Permutation

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

Let $A = \{a_1, a_2, ..., a_n\}$ be any permutation of the first n natural numbers $\{1, 2, ..., n\}$. You are given a positive integer k and another sequence $B = \{b_1, b_2, ..., b_n\}$, where b_i is the number of elements a_j in A to the left of the element $a_t = i$ such that $a_j \geq (i + k)$.

For example, if $n = 5$, a possible A is $\{5, 1, 4, 2, 3\}$. For $k = 2$, B is given by $\{1, 2, 1, 0, 0\}$. But if $k = 3$, then $B = \{1, 1, 0, 0, 0\}$.

For two sequences $X = \{x_1, x_2, ..., x_n\}$ and $Y = \{y_1, y_2, ..., y_n\}$, let i-th elements be the first elements such that $x_i \neq y_i$. If $x_i < y_i$, then X is lexicographically smaller than Y, while if $x_i > y_i$, then X is lexicographically greater than Y.

Given n, k and B, you need to determine the lexicographically smallest A.

Input

The first line contains two space separated integers n and k ($1 \leq n \leq 1000$, $1 \leq k \leq n$). On the second line are n integers specifying the values of $B = \{b_1, b_2, ..., b_n\}$.

Output

Print on a single line n integers of $A = \{a_1, a_2, ..., a_n\}$ such that A is lexicographically minimal. It is guaranteed that the solution exists.

Examples

input
5 2 1 2 1 0 0

output
4 1 5 2 3

input
4 2 1 0 0 0

output
2 3 1 4