A. Slightly Decreasing Permutations

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

Permutation p *is an ordered set of integers* $p_1, p_2, ..., p_n$*, consisting of* n *distinct positive integers, each of them doesn't exceed* n*. We'll denote thei-th element of permutation* p *as* p_i*. We'll call number* n *the size or the length of permutation* $p_1, p_2, ..., p_n$*.*

The decreasing coefficient of permutation $p_1, p_2, ..., p_n$ is the number of such i $(1 \le i < n)$, that $p_i > p_{i+1}$.

You have numbers n and k. Your task is to print the permutation of length n with decreasing coefficient k.

Input

The single line contains two space-separated integers: n, k $(1 \le n \le 10^5, 0 \le k < n)$ — the permutation length and the decreasing coefficient.

Output

In a single line print n space-separated integers: $p_1, p_2, ..., p_n$ — the permutation of length n with decreasing coefficient k.

If there are several permutations that meet this condition, print any of them. It is guaranteed that the permutation with the sought parameters exists.

Examples

input
5 2
output
1 5 2 4 3

input
3 0
output
1 2 3

input
3 2
output
3 2 1