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 the i-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 $(1 \leq i < n)$, 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 $(1 \leq n \leq 10^5, 0 \leq k < n)$ — 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
```