B. Levko and Permutation

Levko loves permutations very much. A permutation of length n is a sequence of distinct positive integers, each is at most n.

Let's assume that value $gcd(a, b)$ shows the greatest common divisor of numbers a and b. Levko assumes that element p_i of permutation $p_1, p_2, \ldots, p_n$ is good if $gcd(i, p_i) > 1$. Levko considers a permutation *beautiful*, if it has exactly k good elements. Unfortunately, he doesn't know any beautiful permutation. Your task is to help him to find at least one of them.

Input

The single line contains two integers n and k ($1 \leq n \leq 10^5$, $0 \leq k \leq n$).

Output

In a single line print either any beautiful permutation or -1, if such permutation doesn't exist.

If there are multiple suitable permutations, you are allowed to print any of them.

Examples

input

```
4 2
```

output

```
2 4 3 1
```

input

```
1 1
```

output

```
-1
```

Note

In the first sample elements 4 and 3 are good because $gcd(2, 4) = 2 > 1$ and $gcd(3, 3) = 3 > 1$. Elements 2 and 1 are not good because $gcd(1, 2) = 1$ and $gcd(4, 1) = 1$. As there are exactly 2 good elements, the permutation is beautiful.

The second sample has no beautiful permutations.