Problem C. Kmajo

Input file	`stdin`
Output file	`stdout`

You are given an array A of N non-zero natural numbers and a natural number K.

A **subarray** of the array is a sequence formed from one or more elements at consecutive positions in the original array.

We say that a value x is a **majority element** of a subarray of length m if it appears at least $\left\lfloor \frac{m}{2} \right\rfloor + 1$ times in that subarray.

Your task is to find all values that are majority elements in at least one subarray of length at least K.

Input Data

Data is read from standard input.

The first line contains two integers N and K, the number of elements and the minimum subarray length. The second line contains N integers, the elements of the array A.

Output Data

Print all values that are majority elements in at least one subarray of length at least K, in strictly increasing order, separated by spaces.

If no such value exists, print `-1`.

Restrictions

- $1 \leq K \leq N \leq 1\,000\,000$
- $1 \leq A_i \leq N$ for all $1 \leq i \leq N$

Examples

Input file	Output file	Explanations
12 3 2 2 1 3 4 2 2 3 3 3 4 4	2 3 4	• 2 is a majority in the subarray [4 2 2]. • 3 is a majority in [2 2 3 3 3]. • 4 is a majority in [3 4 4].