

Building with Blocks

Problem code: HS09BWB

Little John enjoys playing with blocks. He builds constructions along an imaginary straight line in such a way that we can describe his work by means of an integer N , the length of the line, and a list of N non-negative integers, the height of the building at each horizontal position.

Today he would like to build a skyscraper. But, before that, he needs to make sure there are K consecutive positions of the same height, in order to use that section as a base for the skyscraper.

You are to write a program that finds a section such that the number of block addition/removal operations needed to achieve such a flat base is minimized.

You may assume Little John has an infinite number of blocks at his disposal.

Input

Input starts with two space separated integers: the length of the line ($1 \leq N \leq 1000000$) and the length of the required base ($1 \leq K \leq N$). N space-separated non-negative integers follow, representing the height of the current building at each horizontal position ($0 \leq H_i \leq 1000000$).

Output

Output two space-separated integers O and P on a single line. The first one must correspond to the number of operations needed to make the base in the section starting at position P (the leftmost position is 0 and the rightmost is $N-1$). P must be as small as possible.

Example

Input: 6 40 4 2 4 5 8 **Output:** 3 1

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Time limit: 5s-18s

Source
limit: 50000B

Languages: SED C99 strict C++ 4.0.0-8 C++ 4.3.2 TCL SCALA NICE NEM BASH PHP SCM guile
LISP sbcl LISP clisp ERL TECS TEXT DOC PDF PS PERL 6 JS

Resource: High School Programming League 2009/10