

D. Scissors

time limit per test: 1 second

memory limit per test: 256 megabytes

input: standard input

output: standard output

Jenya has recently acquired quite a useful tool — k -scissors for cutting strings. They are generally used for cutting out two non-intersecting substrings of length k from an arbitrary string s (its length should be at least $2 \cdot k$ in order to perform this operation) and concatenating them afterwards (preserving the initial order). For example, with the help of 2-scissors you can cut ab and de out of $abcde$ and concatenate them into $abde$, but not ab and bc since they're intersecting.

It's a nice idea to test this tool before using it in practice. After looking through the papers, Jenya came up with two strings s and t . His question is whether it is possible to apply his scissors to string s such that the resulting concatenation contains t as a substring?

Input

The first line contains three integers n, m, k ($2 \leq m \leq 2 \cdot k \leq n \leq 5 \cdot 10^5$) — length of s , length of t and the aforementioned scissors' parameter correspondingly.

The next two lines feature s and t consisting of lowercase latin letters.

Output

If there is no answer, print «No».

Otherwise print «Yes» and two integers L and R denoting the indexes where cutted substrings start (1-indexed). If there are several possible answers, output any.

Examples

input
7 4 3 baabaab aaaa
output
Yes 1 5

input
6 3 2 cbcbcb bcc
output
Yes 2 5

input
7 5 3 aabbaaa aaaaa
output
No

Note

In the first sample case you can cut out two substrings starting at 1 and 5. The resulting string *baaaab* contains *aaaa* as a substring.

In the second sample case the resulting string is *bccb*.