Problem J. Divide the String

Little Cyan Fish has two binary strings s and t. A *binary string* is a string where each character is either 0 or 1.

For a binary string s, let $c_0(s)$ be the number of zeroes in s and $c_1(s)$ be the number of ones in s. Of course, we will have $c_0(s) + c_1(s) = |s|$, as s contains only zeroes and ones.

Little Cyan Fish wants to divide s into $k = |t|$ substrings $\sigma_1, \sigma_2, \ldots, \sigma_k$, in other words, $s = \sigma_1 + \sigma_2 + \ldots + \sigma_k$. For each i, σ_i satisfies the following conditions:

- if $t_i = 0$, then $c_0(\sigma_i) > c_1(\sigma_i)$.

- if $t_i = 1$, then $c_0(\sigma_i) < c_1(\sigma_i)$.

Help Little Cyan Fish find a way to divide the string, or report that it is impossible to meet his requirements!

Input

There are multiple test cases. The first line of the input contains a single integer T ($T \geq 1$), indicating the number of the test cases. For each test case:

The first line of the input contains a single string s ($1 \leq |s| \leq 10^6$).

The next line of the input contains a single string t ($1 \leq |t| \leq |s|$).

It is guaranteed that the sum of $|s|$ over all test cases does not exceed 10^6.

Output

For each test case:

If it is impossible to meet Little Cyan Fish's requirements, output a single line with a single word "No".

Otherwise, the first line of the output should contain the word "Yes".

To reduce the size of the output, you should output the solution in the following format.

The next line of the output contains a binary string A with length $|A| = |s|$, describing the solution. If you divide the string S between the i-th digit and the $(i+1)$-th digit, then the i-th digit of A shall be marked as 1. Otherwise, the i-th digit of A should be marked 0. Specifically, A_n should always be equal to 1, as the string always ends at the last character.

For example, if you would like to divide the string $\underline{00101010}$ into three segments $\underline{00}, \underline{10101}, \underline{0}$, then you should output $\underline{01000011}$.

Example

standard input	standard output
3	No
1001	Yes
0	001
111	Yes
1	000011000110011
011011010011101	
110111	