

## C. Substring and Subsequence

time limit per test: 2 seconds

memory limit per test: 256 megabytes

input: standard input

output: standard output

One day Polycarpus got hold of two non-empty strings  $s$  and  $t$ , consisting of lowercase Latin letters. Polycarpus is quite good with strings, so he immediately wondered, how many different pairs of " $x\ y$ " are there, such that  $x$  is a substring of string  $s$ ,  $y$  is a subsequence of string  $t$ , and the content of  $x$  and  $y$  is the same. Two pairs are considered different, if they contain different substrings of string  $s$  or different subsequences of string  $t$ . Read the whole statement to understand the definition of different substrings and subsequences.

The *length* of string  $s$  is the number of characters in it. If we denote the length of the string  $s$  as  $|s|$ , we can write the string as  $s = s_1s_2\dots s_{|s|}$ .

A *substring* of  $s$  is a non-empty string  $x = s[a\dots b] = s_as_{a+1}\dots s_b$  ( $1 \leq a \leq b \leq |s|$ ). For example, "code" and "force" are substrings of "codeforces", while "coders" is not. Two substrings  $s[a\dots b]$  and  $s[c\dots d]$  are considered to be *different* if  $a \neq c$  or  $b \neq d$ . For example, if  $s = \text{"codeforces"}$ ,  $s[2\dots 2]$  and  $s[6\dots 6]$  are different, though their content is the same.

A *subsequence* of  $s$  is a non-empty string  $y = s[p_1p_2\dots p_{|y|}] = s_{p_1}s_{p_2}\dots s_{p_{|y|}}$  ( $1 \leq p_1 < p_2 < \dots < p_{|y|} \leq |s|$ ). For example, "coders" is a subsequence of "codeforces". Two subsequences  $u = s[p_1p_2\dots p_{|u|}]$  and  $v = s[q_1q_2\dots q_{|v|}]$  are considered *different* if the sequences  $p$  and  $q$  are different.

### Input

The input consists of two lines. The first of them contains  $s$  ( $1 \leq |s| \leq 5000$ ), and the second one contains  $t$  ( $1 \leq |t| \leq 5000$ ). Both strings consist of lowercase Latin letters.

### Output

Print a single number — the number of different pairs " $x\ y$ " such that  $x$  is a substring of string  $s$ ,  $y$  is a subsequence of string  $t$ , and the content of  $x$  and  $y$  is the same. As the answer can be rather large, print it modulo 1000000007 ( $10^9 + 7$ ).

### Examples

input
aa aa
output
5

input
codeforces forceofcode
output
60

### Note

Let's write down all pairs " $x\ y$ " that form the answer in the first sample: " $s[1\dots 1]\ t[1]$ ", " $s[2\dots 2]\ t[1]$ ", " $s[1\dots 1]\ t[2]$ ", " $s[2\dots 2]\ t[2]$ ", " $s[1\dots 2]\ t[1\ 2]$ ".