A. Substring and Subsequence

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 $s = s_1 s_2 ... s_{|s|}$.

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

A *subsequence* of s is a non-empty string $y = s[p_1 p_2 ... p_{|y|}] = s_{p_1} s_{p_2} ... s_{p_{|y|}}$ $(1 \le p_1 < p_2 < ... < p_{|y|} \le |s|)$. For example, "coders" is a subsequence of "codeforces". Two subsequences $u = s[p_1 p_2 ... p_{|u|}]$ and $v = s[q_1 q_2 ... q_{|v|}]$ are considered *different* if the sequences p and q are different.

Input

The input consists of two lines. The first of them contains s $(1 \le |s| \le 5000)$, and the second one contains t $(1 \le |t| \le 5000)$. 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: "$s[1...1]\ t[1]$", "$s[2...2]\ t[1]$", "$s[1...1]\ t[2]$","$s[2...2]\ t[2]$", "$s[1...2]\ t[1\ 2]$".