D. String Mark

time limit per test: 4 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

At the Byteland State University marks are strings of the same length. Mark x is considered better than y if string y is lexicographically smaller than x.

Recently at the BSU was an important test work on which Vasya recived the mark a. It is very hard for the teacher to remember the exact mark of every student, but he knows the mark b, such that every student recieved mark strictly smaller than b.

Vasya isn't satisfied with his mark so he decided to improve it. He can swap characters in the string corresponding to his mark as many times as he like. Now he want to know only the number of different ways to improve his mark so that his teacher didn't notice something suspicious.

More formally: you are given two strings a, b of the same length and you need to figure out the number of different strings c such that:

1) c can be obtained from a by swapping some characters, in other words c is a permutation of a.

2) String a is lexicographically smaller than c.

3) String c is lexicographically smaller than b.

For two strings x and y of the same length it is true that x is lexicographically smaller than y if there exists such i, that $x_1 = y_1, x_2 = y_2, \ldots, x_{i-1} = y_{i-1}, x_i < y_i$.

Since the answer can be very large, you need to find answer modulo $10^9 + 7$.

Input

First line contains string a, second line contains string b. Strings a, b consist of lowercase English letters. Their lengths are equal and don't exceed 10^6.

It is guaranteed that a is lexicographically smaller than b.

Output

Print one integer — the number of different strings satisfying the condition of the problem modulo $10^9 + 7$.

Examples

input
abc ddd

output
5

input
abcdef abcdeg

output
0

input

```
abacaba
ubuduba
```

output

```
64
```

Note

In first sample from string abc can be obtained strings acb, bac, bca, cab, cba, all of them are larger than abc, but smaller than ddd. So the answer is 5.

In second sample any string obtained from $abcdef$ is larger than $abcdeg$. So the answer is 0.