

Problem F. Password

Input file: *standard input*
Output file: *standard output*
Time limit: 3 seconds (*4 seconds for Java*)
Memory limit: 128 mebibytes

For security reasons, every employee at Yandex must change the password to his or her @yandex-team.ru mailbox once in a while.

Yasha has a remarkable password changing routine.

On his first day at Yandex, he chose the lexicographically smallest sequence of M printable non-whitespace ASCII characters as a password. Each of his next passwords was the lexicographically smallest sequence of M printable non-whitespace ASCII characters that was previously unused by Yasha.

Yasha works at Yandex for so long that he has started to worry that he will run out of sequences of this kind real soon, and decided to change his password choosing strategy in the future.

As for this day, Yasha's password is T .

For his new password, Yasha has come up with a sequence of printable non-whitespace ASCII characters S of length N . This new password is not restricted by T in any way: it can be shorter or longer, or even completely equal to T . Now Yasha wants to estimate the combined similarity between S and all his previous passwords.

The *similarity* of S to a single password P from the past is equal to the length of the longest common substring of S and P . The *combined similarity* to all the passwords starting from the lexicographically smallest one up to his current one is equal to the sum of similarities between S and each of these passwords, taken modulo $10^9 + 7$.

Your task is to help Yasha to compute this combined similarity.

Input

The input consists of two lines.

The first line contains Yasha's future password S of length N ($1 \leq N \leq 100$).

The second lone contains Yasha's current password T of length M ($1 \leq M \leq 70$).

Each sequence consists entirely of printable non-whitespace ASCII characters with codes ranging from 33 to 126 inclusive.

Output

Output a single integer that is the answer to this problem.

Example

standard input	standard output
xyz bb	195