

7710 Cutting

You have two strings and you need to check whether you can cut the second one into three pieces so that the first string can be concatenated from these three pieces.

Input

The input file contains several test cases, each of them as described below.

The input contains two non-empty strings, each on a separate line. Each string consists of at most 5000 lowercase roman letters. Strings have the same length and each letter has the same number of occurrences in both strings.

Output

For each test case, the output must follow the description below.

Print 'YES' if it is possible to cut the string as described, and 'NO' in the opposite case. If you print 'YES', the following three lines should contain the parts of the second string in the correct concatenation order. These parts cannot be empty. If you have several options to cut, print any of them.

Sample Input

```
Beast
betas
Royalitem
Romeitaly
```

Sample Output

```
YES
be
as
t
NO
```