January 2023 CSE 106
Online Assignment on Arrays
Anagrams

Time: 30 minutes

Subsections B1 & B2

An anagram is a word or phrase formed by rearranging the letters of another word or phrase, using all the original letters exactly once. In other words, two words are considered anagrams if they contain the same characters but possibly in a different order.

For example, let's consider the word "listen" and the word "silent". These two words are anagrams of each other because they use the same characters ('l', 'i', 's', 't', 'e', 'n') but in a different order. By rearranging the letters of "listen", we can form the word "silent". Any word can be thought as an anagram of its own.

You will be given a string. You have to tell if you can split it to two anagrams. You can change the order of the letters as you like. For example, "sendends" can be divided into "send" and "ends", and "leleovov" can be divided into "love" and "vole".

Input

The only line of input will be a string of lowercase letters (a-z).

Output

Task 1 (70%) Print "YES" if you can split it to two anagrams and "NO" otherwise.

Task 2 (30%) Print any two possible anagrams obtained from the given string.

Sample I/O

Input

```
leleovov
```

Output

```
YES
love vole
```

Input

```
teammate
```

Output

```
YES
team mate
```

Input

```
tourmate
```

Output

```
NO
```

Hints

Try keep the counts of each character in an array.

Please note that any usage of the internet is strictly prohibited during the assignment. Usage of any unfair means will be duly punished.