

# Aibohphobia

Input file:            **standard input**  
Output file:           **standard output**  
Time limit:            1 second  
Memory limit:         256 megabytes

*It's not a situation, it's a condition.  
Electromagnetic Hypersensitivity. For reasons  
unknown, my nervous system has become  
sensitized to certain frequencies of  
electromagnetic radiation.*

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—Chuck McGill, *Better Call Saul*

Chuck McGill suffers from electromagnetic hypersensitivity: he is afraid of electricity. But did you know he is also afraid of palindromes?

Once he received a string  $s$  as a birthday present from Jimmy. He wants to rearrange its symbols, obtaining string  $t$ , so that the following condition holds:

- For every  $i = 2, 3, \dots, |s|$ , string  $t_1t_2 \dots t_i$  is **not** a palindrome.

Can you help him?

As a reminder, a string  $s$  is called a **palindrome**, if it reads the same backwards as forwards. For example, `aibohphobia` is a palindrome.

## Input

The first line contains a single integer  $t$  ( $1 \leq t \leq 10^5$ ) — the number of test cases. The description of test cases follows.

The only line of each test case contains a string  $s$ , consisting of lowercase Latin letters.

It is guaranteed that the sum of lengths of  $s$  over all test cases does not exceed  $10^6$ .

## Output

For each test case, if there is no such way to rearrange characters of  $s$ , print **NO**.

Otherwise, print **YES**. On the next line output a single string  $t$ . It should be the rearrangement of characters of  $s$ , and it should satisfy the condition from the statement.

You can print **YES** and **NO** in any case (e.g. the strings `yEs`, `yes`, `Yes` will be taken as a positive answer).

## Example

standard input	standard output
5	YES
a	a
sos	YES
abba	oss
icpc	NO
tenet	YES
	icpc
	YES
	tente