

A Subsequence is a sequence obtained by deleting zero or more characters in a string. A Palindrome is a string which when read from left to right, reads same as when read from right to left. Given a string, find the longest palindromic subsequence. If there are many answers to it, print the one that comes lexicographically earliest.

Constraints

- Maximum length of string is 1000.
- Each string has characters 'a' to 'z' only.

Input

Input consists of several strings, each in a separate line. Input is terminated by EOF.

Output

For each line in the input, print the output in a single line.

Sample Input

```
aabbaabb  
computer  
abzla  
samhita
```

Sample Output

```
aabbaa  
c  
aba  
aha
```