A. LLPS

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

This problem's actual name, "Lexicographically Largest Palindromic Subsequence" is too long to fit into the page headline.

You are given string s consisting of lowercase English letters only. Find its lexicographically largest palindromic subsequence.

We'll call a non-empty string $s[p_1 p_2 \ldots p_k] = s_{p_1} s_{p_2} \ldots s_{p_k}$ ($1 \le p_1 < p_2 < \ldots < p_k \le |s|$) a subsequence of string $s = s_1 s_2 \ldots s_{|s|}$, where $|s|$ is the length of string s. For example, strings "abcb", "b" and "abacaba" are subsequences of string "abacaba".

String $x = x_1 x_2 \ldots x_{|x|}$ is lexicographically larger than string $y = y_1 y_2 \ldots y_{|y|}$ if either $|x| > |y|$ and $x_1 = y_1$, $x_2 = y_2$, ..., $x_{|y|} = y_{|y|}$, or there exists such number r ($r < |x|$, $r < |y|$) that $x_1 = y_1, x_2 = y_2, \ldots, x_r = y_r$ and $x_{r+1} > y_{r+1}$. Characters in the strings are compared according to their ASCII codes. For example, string "ranger" is lexicographically larger than string "racecar" and string "poster" is lexicographically larger than string "post".

String $s = s_1 s_2 \ldots s_{|s|}$ is a palindrome if it matches string $rev(s) = s_{|s|} s_{|s|-1} \ldots s_1$. In other words, a string is a palindrome if it reads the same way from left to right and from right to left. For example, palindromic strings are "racecar", "refer" and "z".

Input

The only input line contains a non-empty string s consisting of lowercase English letters only. Its length does not exceed 10.

Output

Print the lexicographically largest palindromic subsequence of string s.

Examples

input	Copy
radar	
output	Copy
rr	

input	Copy
bowwowwow	
output	Copy
wwwww	

input	Copy
codeforces	

output Copy

```
s
```

input Copy

```
mississipp
```

output Copy

```
ssss
```

Note

Among all distinct subsequences of string "`radar`" the following ones are palindromes: "`a`", "`d`", "`r`", "`aa`", "`rr`", "`ada`", "`rar`", "`rdr`", "`raar`" and "`radar`". The lexicographically largest of them is "`rr`".