Largest Palindromic Substring

Given a string, S, find its largest palindromic substring.

Input Format

A string, S.

Constraints

 $1 \leq |S| \leq 1000000$

All the characters are lower-case English letters.

Output Format

Print the largest possible substring of S.

Sample Input

hackerrekcahba

Sample Output

hackerrekcah

Explanation

The longest palindromic substring of the the given input hackerrekcahbahh is hackerrekcah.