

# Problem I. Substring Order I

**Time limit** 1000 ms  
**Mem limit** 524288 kB

You are given a string of length  $n$ . If all of its distinct substrings are ordered lexicographically, what is the  $k$ th smallest of them?

## Input

The first input line has a string of length  $n$  that consists of characters  $a-z$ .

The second input line has an integer  $k$ .

## Output

Print the  $k$ th smallest distinct substring in lexicographical order.

## Constraints

- $1 \leq n \leq 10^5$
- $1 \leq k \leq \frac{n(n+1)}{2}$
- It is guaranteed that  $k$  does not exceed the number of distinct substrings.

Explanation: The 10 smallest distinct substrings in order are a, aa, aab, aac, aacb, aacba, aacbaa, aacbaab, ab, and aba.

## Sample

Input	Output
babaacbaab 10	aba