

split('+')

split = Vikash 's a good boy

Vikash _____ 's

arr = split ('+')

+

Vikash ----- 's

Vikash ⊕ 's

HW_Remove K Digits 2

Given a non-negative integer num represented as a string, remove k digits from the number so that the new number is the smallest possible.

Note:

- The length of num is less than 10002 and will be $\geq k$.
- The given num does not contain any leading zero.

Input Format

First line contain a string num and number k.

Constraints

The length of num is less than 10002 and will be $\geq k$.

Output Format

Print the output string after removing K digits.

Sample Input 0

1432219 3

Sample Output 0

1219

Explanation 0

Remove the three digits 4, 3, and 2 to form the new number 1219 which is the smallest.

```
1 import java.io.*;
2 import java.util.*;
3
4 public class Solution {
5
6     public static void main(String[] args) {
7         Scanner sc = new Scanner(System.in);
8         String str = sc.next();
9         int k = sc.nextInt();
10        Stack<Character> st = new Stack<>();
11
12        for (int i = 0; i < str.length(); i++) {
13            char ch = str.charAt(i);
14            while (!st.isEmpty() && st.peek() > ch && k > 0) {
15                st.pop();
16                k--;
17            }
18            st.push(ch);
19        }
20
21        while (!st.isEmpty() && k > 0) {
22            st.pop();
23            k--;
24        }
25
26        String ans = "";
27        while (!st.isEmpty()) {
28            ans += st.pop();
29        }
30        if (k > str.length() || ans.length() == 0) {
31            System.out.print(0);
32            return;
33        }
34        String result = "";
35        for (int i = ans.length() - 1; i >= 0; i--) result += ans.charAt(i);
36        int val = Integer.parseInt(result);
37        System.out.print(val);
38    }
39 }
40 }
```

Handwritten notes and diagrams illustrating the algorithm:

- Diagram showing a stack with digits 9, 1, 2, 1.
- Handwritten calculations: $k=40$, $k=3$.
- Handwritten sequence: $1432219 \rightarrow 12219 \rightarrow 1219$.

Handwritten notes and diagrams illustrating the algorithm:

- Diagram showing a stack with digits 9, 1, 2, 1.
- Handwritten calculations: $k=5$.
- Handwritten sequence: $1432219 \rightarrow 12219 \rightarrow 1219$.

Handwritten diagram showing a stack with digits 9, 1, 2, 1.

Handwritten sequence: $1432219 \rightarrow 12219 \rightarrow 1219$.

Handwritten code snippet: `for(i=0; i < str.length(); i++)`

Handwritten code snippet: `while(st.peek() > str.charAt(i))`

Handwritten code snippet: `st.pop();`

Handwritten code snippet: `k--;`

Handwritten code snippet: `st.push(ch);`

Handwritten diagram showing a stack with digits 9, 1, 2, 1.

Handwritten sequence: $1432219 \rightarrow 12219 \rightarrow 1219$.

Handwritten diagram showing a stack with digits 9, 1, 2, 1.

Handwritten sequence: $1432219 \rightarrow 12219 \rightarrow 1219$.

HW_Remove Outermost Parentheses 4

A valid parentheses string is either empty "", "(" + A + ")", or A + B, where A and B are valid parentheses strings, and + represents string concatenation.

Return s after removing the outermost parentheses of every primitive string in the primitive decomposition of s.

Input Format

The first line be String S .

Constraints

1 <= s.length <= 10⁵

s[i] is either '(' or ')'.

s is a valid parentheses string.

Output Format

Return s after removing the outermost parentheses of every primitive string in the primitive decomposition of s.

Sample Input 0

~~((()())())~~

Sample Output 0

()()

Input: s = "~~((()())())~~"

Output: "()()()()()"

Explanation:

The input string is "~~((()())())~~", with primitive decomposition "~~((()())())~~" + "~~((()())())~~" + "~~((()())())~~".

After removing outer parentheses of each part, this is "~~((()())())~~" + "~~((()())())~~" + "~~((()())())~~" = "()()()()()".

Sample 3:

Input: s = "()()"

Output: ""

Explanation:

The input string is "()()", with primitive decomposition "()" + "()".

After removing outer parentheses of each part, this is "" + "" = "".