

String by Deletions

time limit per test: 1 second (1 second for Python)
memory limit per test: 976.6 megabytes
input: standard input
output: standard output
points: 100 · problem code: stringbydeletions

You are given a decimal string s and an integer k .

Delete exactly k digits from s so that the remaining digits, in their original order, form the smallest possible number. If the resulting number has leading zeroes, do not print them. If every digit is deleted, or the result is all zeroes, print `0`.

Input

The first line contains the string s .

The second line contains the integer k .

Output

Print the smallest possible number after deleting exactly k digits.

Constraints

- $1 \leq |s| \leq 2 \cdot 10^5$
- $0 \leq k \leq |s|$
- s consists only of digits `0` through `9`

Example 1

Input

```
1432219
3
```

Output

```
1219
```

Explanation

Deleting the digits `4`, `3`, and `2` gives the smallest possible result.

Example 2

Input

```
10200
1
```

Output

```
200
```

Explanation

Deleting the leading `1` gives `0200`, which is printed as `200`.

Example 3

Input

```
10
2
```

Output

```
0
```