402. Remove K Digits

Description

Given string num representing a non-negative integer `num` , and an integer `k` , return *the smallest possible integer after removing* `k` *digits from* `num` .

Example 1:

```
Input:  num = "1432219", k = 3
Output: "1219"
Explanation: Remove the three digits 4, 3, and 2 to form the new number 1219 which is the smallest.
```

Example 2:

```
Input:  num = "10200", k = 1
Output: "200"
Explanation: Remove the leading 1 and the number is 200. Note that the output must not contain leading zeroes.
```

Example 3:

```
Input:  num = "10", k = 2
Output: "0"
Explanation: Remove all the digits from the number and it is left with nothing which is 0.
```

Constraints:

- `1 <= k <= num.length <= 10`^{5}
- `num` consists of only digits.
- `num` does not have any leading zeros except for the zero itself.