402. Remove K Digits

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.