Logo

STUDENT REPORT

DETAILS

Name

SYED ASHFAQUR RAHEMAN

Roll Number

KUB23CSE143

EXPERIMENT

Title

BEST GRADE

Description

Andrew has a string N consisting of lowercase English letters representing respective grades of N students in his class. His grade is at Pth index. He can swap any two adjacent grades.

Your task is to help Andrew find and return a string value, representing maximized grade by bringing lexicographically smallest character on the Pth index after doing at most K swaps

Note: use 1 based indexing.

Input format:

(i) The first line contains the string s.

(ii) The second line contains the integer P.

(iii) The third line contains the integer K.

Sample Input:

abcdefg

3

2

Sample Output:

a

Source Code:

```
def maximize_grade(s, P, K):
    # Convert 1-based index to 0-based
    P -= 1
    n = len(s)

    # Define the range to look for the smallest character
    left = max(0, P - K)
    right = min(n - 1, P + K)

    # Find the smallest character in the range and its index
    min_char = s[P]
    min_index = P
    for i in range(left, right + 1):
        if s[i] < min_char:
            min_char = s[i]
            min_index = i

    # Calculate how many swaps are needed to bring min_char to position P
    needed_swaps = min_index - P

    if needed_swaps <= K:
        return min_char
    else:
        return s[P]  # If we can't swap, return the original character

# Example usage
s = input()
P = int(input())
K = int(input())
print(maximize_grade(s, P, K))
```

RESULT

5 / 5 Test Cases Passed | 100 %