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Dashboard > Algorithms > Strings > Letter Islands

Badge Progress (Details)

Points: 126   Rank: 270087

Letter Islands 🔖

H by Gera1d

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You are given string s and number k.

Consider a substring p of string s. For each position of string s mark it if there is an occurence of the substring that covers the position. More formally, position i will be marked if there exists such index j that: $j \leq i \leq j + |p| - 1$ and $s_j s_{j+1} \ldots s_{j+|p|-1} = p$. We will tell p produce x islands if all the marked positions form x groups of contiguous positions.

For example, if we have a string ababaewabaq the substring aba marks the positions 1, 2, 3, 4, 5, 8, 9, 10; that is XXXXXewXXXq (X denotes marked position). We can see 2 groups of contiguous positions, that is 2 islands. Finally, substring aba produces 2 islands in the string ababaewabaq .

Calculate and print the number of different substrings of string s that produce exactly k islands.

Input Format

The first line contains string s ($1 \leq |s| \leq 10^5$). The string consists of lowercase letters only. The second line contains an integer k ($1 \leq k \leq |s|$).

Output Format

Output a single integer — the answer to the problem.

Sample Input

```
abaab
2
```

Sample Output

```
3
```

Explanation

All the suitable substrings are: a , ab , b .

f   𝕏   in

Submissions:841

Max Score:100
Difficulty: Expert

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More

| Current Buffer (saved locally, editable) ⑂ 🕑 | Java 7   ⌄ | ⤢ ⚙ |

```
1 ▾ import java.io.*;
```

```
 2  import java.util.*;
 3  import java.text.*;
 4  import java.math.*;
 5  import java.util.regex.*;
 6
 7  public class Solution {
 8
 9      public static void main(String[] args) {
10          /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named Solution. */
11      }
12  }
```

Line: 1 Col: 1

⬆ Upload Code as File   ☐ Test against custom input   Run Code   Submit Code

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