Problem 395: Longest Substring with At Least K Repeating Characters

Problem Information

Difficulty: Medium
Acceptance Rate: 0.00%
Paid Only: No

Problem Description

Given a string

s

and an integer

k

, return

the length of the longest substring of

s

such that the frequency of each character in this substring is greater than or equal to

k

.

if no such substring exists, return 0.

Example 1:

Input:

s = "aaabb", k = 3

Output:

3

Explanation:

The longest substring is "aaa", as 'a' is repeated 3 times.

Example 2:

Input:

s = "ababbc", k = 2

Output:

5

Explanation:

The longest substring is "ababb", as 'a' is repeated 2 times and 'b' is repeated 3 times.

Constraints:

1 <= s.length <= 10

4

s

consists of only lowercase English letters.

1 <= k <= 10

5

Code Snippets

C++:

```
class Solution {
public:
int longestSubstring(string s, int k) {

}
};
```

Java:

```
class Solution {
public int longestSubstring(String s, int k) {

}
}
```

Python3:

```
class Solution:
def longestSubstring(self, s: str, k: int) -> int:
```

Python:

```
class Solution(object):
def longestSubstring(self, s, k):
"""
:type s: str
:type k: int
:rtype: int
"""
```

JavaScript:

```
/**
* @param {string} s
* @param {number} k
* @return {number}
*/
var longestSubstring = function(s, k) {
```

```
};
```

TypeScript:

```
function longestSubstring(s: string, k: number): number {

};
```

C#:

```
public class Solution {
public int LongestSubstring(string s, int k) {

}
}
```

C:

```
int longestSubstring(char* s, int k) {

}
```

Go:

```
func longestSubstring(s string, k int) int {

}
```

Kotlin:

```
class Solution {
fun longestSubstring(s: String, k: Int): Int {

}
}
```

Swift:

```
class Solution {
func longestSubstring(_ s: String, _ k: Int) -> Int {
```

```
}
}
```

Rust:

```
impl Solution {
pub fn longest_substring(s: String, k: i32) -> i32 {

}
}
```

Ruby:

```
# @param {String} s
# @param {Integer} k
# @return {Integer}
def longest_substring(s, k)

end
```

PHP:

```
class Solution {

/**
* @param String $s
* @param Integer $k
* @return Integer
*/
function longestSubstring($s, $k) {

}
}
```

Dart:

```
class Solution {
int longestSubstring(String s, int k) {

}
}
```

Scala:

```
object Solution {
def longestSubstring(s: String, k: Int): Int = {

}
}
```

Elixir:

```
defmodule Solution do
@spec longest_substring(s :: String.t, k :: integer) :: integer
def longest_substring(s, k) do

end
end
```

Erlang:

```
-spec longest_substring(S :: unicode:unicode_binary(), K :: integer()) ->
integer().
longest_substring(S, K) ->
.
```

Racket:

```
(define/contract (longest-substring s k)
(-> string? exact-integer? exact-integer?)
)
```

Solutions

C++ Solution:

```
/*
* Problem: Longest Substring with At Least K Repeating Characters
* Difficulty: Medium
* Tags: array, string, tree, hash
*
* Approach: Use two pointers or sliding window technique
* Time Complexity: O(n) or O(n log n)
* Space Complexity: O(h) for recursion stack where h is height
```

```
*/

class Solution {
public:
int longestSubstring(string s, int k) {

}
};
```

Java Solution:

```
/**
* Problem: Longest Substring with At Least K Repeating Characters
* Difficulty: Medium
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* Approach: Use two pointers or sliding window technique
* Time Complexity: O(n) or O(n log n)
* Space Complexity: O(h) for recursion stack where h is height
*/

class Solution {
public int longestSubstring(String s, int k) {

}
}
```

Python3 Solution:

```
"""
Problem: Longest Substring with At Least K Repeating Characters
Difficulty: Medium
Tags: array, string, tree, hash

Approach: Use two pointers or sliding window technique
Time Complexity: O(n) or O(n log n)
Space Complexity: O(h) for recursion stack where h is height
"""

class Solution:
def longestSubstring(self, s: str, k: int) -> int:
```

```
# TODO: Implement optimized solution
pass
```

Python Solution:

```
class Solution(object):
def longestSubstring(self, s, k):
"""
:type s: str
:type k: int
:rtype: int
"""
```

JavaScript Solution:

```
/**
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* Approach: Use two pointers or sliding window technique
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*/

/**
* @param {string} s
* @param {number} k
* @return {number}
*/
var longestSubstring = function(s, k) {

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```

TypeScript Solution:

```
/**
* Problem: Longest Substring with At Least K Repeating Characters
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* Approach: Use two pointers or sliding window technique
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function longestSubstring(s: string, k: number): number {

};
```

C# Solution:

```
/*
* Problem: Longest Substring with At Least K Repeating Characters
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* Approach: Use two pointers or sliding window technique
* Time Complexity: O(n) or O(n log n)
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*/

public class Solution {
public int LongestSubstring(string s, int k) {

}
}
```

C Solution:

```
/*
* Problem: Longest Substring with At Least K Repeating Characters
* Difficulty: Medium
* Tags: array, string, tree, hash
*
* Approach: Use two pointers or sliding window technique
* Time Complexity: O(n) or O(n log n)
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*/

int longestSubstring(char* s, int k) {
```

```
}
```

Go Solution:

```
// Problem: Longest Substring with At Least K Repeating Characters
// Difficulty: Medium
// Tags: array, string, tree, hash
//
// Approach: Use two pointers or sliding window technique
// Time Complexity: O(n) or O(n log n)
// Space Complexity: O(h) for recursion stack where h is height

func longestSubstring(s string, k int) int {

}
```

Kotlin Solution:

```
class Solution {
fun longestSubstring(s: String, k: Int): Int {

}
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```

Swift Solution:

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func longestSubstring(_ s: String, _ k: Int) -> Int {

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```
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```
impl Solution {
pub fn longest_substring(s: String, k: i32) -> i32 {

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}
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Ruby Solution:

```
# @param {String} s
# @param {Integer} k
# @return {Integer}
def longest_substring(s, k)

end
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PHP Solution:

```
class Solution {

/**
* @param String $s
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