Problem 1371: Find the Longest Substring Containing Vowels in Even Counts

Problem Information

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

Problem Description

Given the string

s

, return the size of the longest substring containing each vowel an even number of times. That is, 'a', 'e', 'i', 'o', and 'u' must appear an even number of times.

Example 1:

Input:

s = "eleetminicoworoep"

Output:

13

Explanation:

The longest substring is "leetminicowor" which contains two each of the vowels:

e

,

i

and

o

and zero of the vowels:

a

and

u

.

Example 2:

Input:

s = "leetcodeisgreat"

Output:

5

Explanation:

The longest substring is "leetc" which contains two e's.

Example 3:

Input:

s = "bcbcbc"

Output:

6

Explanation:

In this case, the given string "bcbcbc" is the longest because all vowels:

a

,

e

,

i

,

o

and

u

appear zero times.

Constraints:

1 <= s.length <= 5 x 10^5

s

contains only lowercase English letters.

Code Snippets

C++:

```
class Solution {
public:
```

```
int findTheLongestSubstring(string s) {

}
};
```

Java:

```
class Solution {
public int findTheLongestSubstring(String s) {

}
}
```

Python3:

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

Python:

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

JavaScript:

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

};
```

TypeScript:

```
function findTheLongestSubstring(s: string): number {

};
```

C#:

```
public class Solution {
public int FindTheLongestSubstring(string s) {

}
}
```

C:

```
int findTheLongestSubstring(char* s) {

}
```

Go:

```
func findTheLongestSubstring(s string) int {

}
```

Kotlin:

```
class Solution {
fun findTheLongestSubstring(s: String): Int {

}
}
```

Swift:

```
class Solution {
func findTheLongestSubstring(_ s: String) -> Int {

}
}
```

Rust:

```
impl Solution {
pub fn find_the_longest_substring(s: String) -> i32 {

}
}
```

Ruby:

```
# @param {String} s
# @return {Integer}
def find_the_longest_substring(s)

end
```

PHP:

```
class Solution {

/**
* @param String $s
* @return Integer
*/
function findTheLongestSubstring($s) {

}
}
```

Dart:

```
class Solution {
int findTheLongestSubstring(String s) {

}
}
```

Scala:

```
object Solution {
def findTheLongestSubstring(s: String): Int = {

}
}
```

Elixir:

```
defmodule Solution do
@spec find_the_longest_substring(s :: String.t) :: integer
def find_the_longest_substring(s) do
```

```
end
end
```

Erlang:

```
-spec find_the_longest_substring(S :: unicode:unicode_binary()) -> integer().
find_the_longest_substring(S) ->
.
```

Racket:

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

Solutions

C++ Solution:

```
/*
* Problem: Find the Longest Substring Containing Vowels in Even Counts
* 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 findTheLongestSubstring(string s) {

}
};
```

Java Solution:

```
/**
* Problem: Find the Longest Substring Containing Vowels in Even Counts
```

```
* 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 findTheLongestSubstring(String s) {

}
}
```

Python3 Solution:

```
"""
Problem: Find the Longest Substring Containing Vowels in Even Counts
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 findTheLongestSubstring(self, s: str) -> int:
# TODO: Implement optimized solution
pass
```

Python Solution:

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

JavaScript Solution:

```
/**
* Problem: Find the Longest Substring Containing Vowels in Even Counts
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*/

/**
* @param {string} s
* @return {number}
*/
var findTheLongestSubstring = function(s) {

};
```

TypeScript Solution:

```
/**
* Problem: Find the Longest Substring Containing Vowels in Even Counts
* 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
*/

function findTheLongestSubstring(s: string): number {

};
```

C# Solution:

```
/*
* Problem: Find the Longest Substring Containing Vowels in Even Counts
* 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
*/

public class Solution {
public int FindTheLongestSubstring(string s) {

}
}
```

C Solution:

```
/*
* Problem: Find the Longest Substring Containing Vowels in Even Counts
* 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
*/

int findTheLongestSubstring(char* s) {

}
```

Go Solution:

```
// Problem: Find the Longest Substring Containing Vowels in Even Counts
// 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 findTheLongestSubstring(s string) int {

}
```

Kotlin Solution:

```
class Solution {
fun findTheLongestSubstring(s: String): Int {

}
}
```

Swift Solution:

```
class Solution {
func findTheLongestSubstring(_ s: String) -> Int {

}
}
```

Rust Solution:

```
// Problem: Find the Longest Substring Containing Vowels in Even Counts
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// Tags: array, string, tree, hash
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// Time Complexity: O(n) or O(n log n)
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impl Solution {
pub fn find_the_longest_substring(s: String) -> i32 {

}
}
```

Ruby Solution:

```
# @param {String} s
# @return {Integer}
def find_the_longest_substring(s)

end
```

PHP Solution:

```
class Solution {
```

```
/**
* @param String $s
* @return Integer
*/
function findTheLongestSubstring($s) {

}
}
```

Dart Solution:

```
class Solution {
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