Problem 467: Unique Substrings in Wraparound String

Problem Information

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

Problem Description

We define the string

base

to be the infinite wraparound string of

"abcdefghijklmnopqrstuvwxyz"

, so

base

will look like this:

"...zabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyzabcd...."

.

Given a string

s

, return

the number of

unique non-empty substrings

of

s

are present in

base

.

Example 1:

Input:

s = "a"

Output:

1

Explanation:

Only the substring "a" of s is in base.

Example 2:

Input:

s = "cac"

Output:

2

Explanation:

There are two substrings ("a", "c") of s in base.

Example 3:

Input:

s = "zab"

Output:

6

Explanation:

There are six substrings ("z", "a", "b", "za", "ab", and "zab") of s in base.

Constraints:

1 <= s.length <= 10

5

s

consists of lowercase English letters.

Code Snippets

C++:

```cpp
class Solution {
public:
    int findSubstringInWraproundString(string s) {

    }
};
```

Java:

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


}
}
```

Python3:

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

Python:

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

JavaScript:

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


};
```

TypeScript:

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


};
```

C#:

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


}
}
```

C:

```c
int findSubstringInWraproundString(char* s) {

}
```

Go:

```go
func findSubstringInWraproundString(s string) int {

}
```

Kotlin:

```kotlin
class Solution {
fun findSubstringInWraproundString(s: String): Int {

}
}
```

Swift:

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

}
}
```

Rust:

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

}
}
```

Ruby:

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

end
```

PHP:

```php
class Solution {

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

}
}
```

Dart:

```dart
class Solution {
int findSubstringInWraproundString(String s) {

}
}
```

Scala:

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

}
}
```

Elixir:

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

end
end
```

Erlang:

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

.

Racket:

```
(define/contract (find-substring-in-wrapround-string s)
(-> string? exact-integer?)
)
```

Solutions

C++ Solution:

```cpp
/*
* Problem: Unique Substrings in Wraparound String
* Difficulty: Medium
* Tags: string, tree, dp
*
* Approach: String manipulation with hash map or two pointers
* Time Complexity: O(n) or O(n log n)
* Space Complexity: O(n) or O(n * m) for DP table
*/


class Solution {
public:
int findSubstringInWraproundString(string s) {


}
};
```

Java Solution:

```java
/**
* Problem: Unique Substrings in Wraparound String
* Difficulty: Medium
* Tags: string, tree, dp
*
* Approach: String manipulation with hash map or two pointers
* Time Complexity: O(n) or O(n log n)
* Space Complexity: O(n) or O(n * m) for DP table
*/

```

```java
class Solution {
public int findSubstringInWraproundString(String s) {

}
}
```

Python3 Solution:

```python
"""
Problem: Unique Substrings in Wraparound String
Difficulty: Medium
Tags: string, tree, dp

Approach: String manipulation with hash map or two pointers
Time Complexity: O(n) or O(n log n)
Space Complexity: O(n) or O(n * m) for DP table
"""

class Solution:
def findSubstringInWraproundString(self, s: str) -> int:
# TODO: Implement optimized solution
pass
```

Python Solution:

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

JavaScript Solution:

```javascript
/**
* Problem: Unique Substrings in Wraparound String
* Difficulty: Medium
* Tags: string, tree, dp
*
* Approach: String manipulation with hash map or two pointers
```

```
* Time Complexity: O(n) or O(n log n)
* Space Complexity: O(n) or O(n * m) for DP table
*/


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


};
```

TypeScript Solution:

```
/**
* Problem: Unique Substrings in Wraparound String
* Difficulty: Medium
* Tags: string, tree, dp
*
* Approach: String manipulation with hash map or two pointers
* Time Complexity: O(n) or O(n log n)
* Space Complexity: O(n) or O(n * m) for DP table
*/


function findSubstringInWraproundString(s: string): number {


};
```

C# Solution:

```
/*
* Problem: Unique Substrings in Wraparound String
* Difficulty: Medium
* Tags: string, tree, dp
*
* Approach: String manipulation with hash map or two pointers
* Time Complexity: O(n) or O(n log n)
* Space Complexity: O(n) or O(n * m) for DP table
*/


public class Solution {
```

```csharp
    public int FindSubstringInWraproundString(string s) {

    }
}
```

C Solution:

```c
/*
 * Problem: Unique Substrings in Wraparound String
 * Difficulty: Medium
 * Tags: string, tree, dp
 *
 * Approach: String manipulation with hash map or two pointers
 * Time Complexity: O(n) or O(n log n)
 * Space Complexity: O(n) or O(n * m) for DP table
 */

int findSubstringInWraproundString(char* s) {

}
```

Go Solution:

```go
// Problem: Unique Substrings in Wraparound String
// Difficulty: Medium
// Tags: string, tree, dp
//
// Approach: String manipulation with hash map or two pointers
// Time Complexity: O(n) or O(n log n)
// Space Complexity: O(n) or O(n * m) for DP table

func findSubstringInWraproundString(s string) int {

}
```

Kotlin Solution:

```kotlin
class Solution {
fun findSubstringInWraproundString(s: String): Int {

}
```

```
    }
```

Swift Solution:

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


}
}
```

Rust Solution:

```rust
// Problem: Unique Substrings in Wraparound String
// Difficulty: Medium
// Tags: string, tree, dp
//
// Approach: String manipulation with hash map or two pointers
// Time Complexity: O(n) or O(n log n)
// Space Complexity: O(n) or O(n * m) for DP table

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


}
}
```

Ruby Solution:

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


end
```

PHP Solution:

```php
class Solution {

/**
* @param String $s
* @return Integer
```

```
    */
    function findSubstringInWraproundString($s) {

    }
    }
```

Dart Solution:

```dart
class Solution {
int findSubstringInWraproundString(String s) {

}
}
```

Scala Solution:

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

}
}
```

Elixir Solution:

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

end
end
```

Erlang Solution:

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

Racket Solution:

```
(define/contract (find-substring-in-wrapround-string s)
(-> string? exact-integer?)
)
```