

Problem 3503: Longest Palindrome After Substring Concatenation I

Problem Information

Difficulty: **Medium**

Acceptance Rate: 0.00%

Paid Only: No

Problem Description

You are given two strings,

s

and

t

.

You can create a new string by selecting a

substring

from

s

(possibly empty) and a substring from

t

(possibly empty), then concatenating them

in order

.

Return the length of the

longest

palindrome

that can be formed this way.

Example 1:

Input:

s = "a", t = "a"

Output:

2

Explanation:

Concatenating

"a"

from

s

and

"a"

from

t

results in

"aa"

, which is a palindrome of length 2.

Example 2:

Input:

s = "abc", t = "def"

Output:

1

Explanation:

Since all characters are different, the longest palindrome is any single character, so the answer is 1.

Example 3:

Input:

s = "b", t = "aaaa"

Output:

4

Explanation:

Selecting "

aaaa

" from

t

is the longest palindrome, so the answer is 4.

Example 4:

Input:

s = "abcde", t = "ecdab"

Output:

5

Explanation:

Concatenating

"abc"

from

s

and

"ba"

from

t

results in

"abcba"

, which is a palindrome of length 5.

Constraints:

1 <= s.length, t.length <= 30

s

and

t

consist of lowercase English letters.

Code Snippets

C++:

```
class Solution {  
public:  
    int longestPalindrome(string s, string t) {  
  
    }  
};
```

Java:

```
class Solution {  
    public int longestPalindrome(String s, String t) {  
  
    }  
}
```

Python3:

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

Python:

```
class Solution(object):  
    def longestPalindrome(self, s, t):  
        """  
        :type s: str
```

```
:type t: str
:rtype: int
"""
```

JavaScript:

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

};
```

TypeScript:

```
function longestPalindrome(s: string, t: string): number {

};
```

C#:

```
public class Solution {
    public int LongestPalindrome(string s, string t) {

    }
}
```

C:

```
int longestPalindrome(char* s, char* t) {

}
```

Go:

```
func longestPalindrome(s string, t string) int {

}
```

Kotlin:

```

class Solution {
    fun longestPalindrome(s: String, t: String): Int {

    }
}

```

Swift:

```

class Solution {
    func longestPalindrome(_ s: String, _ t: String) -> Int {

    }
}

```

Rust:

```

impl Solution {
    pub fn longest_palindrome(s: String, t: String) -> i32 {

    }
}

```

Ruby:

```

# @param {String} s
# @param {String} t
# @return {Integer}
def longest_palindrome(s, t)

end

```

PHP:

```

class Solution {

    /**
     * @param String $s
     * @param String $t
     * @return Integer
     */
    function longestPalindrome($s, $t) {

    }
}

```

```
}
```

Dart:

```
class Solution {  
  int longestPalindrome(String s, String t) {  
  
  }  
}
```

Scala:

```
object Solution {  
  def longestPalindrome(s: String, t: String): Int = {  
  
  }  
}
```

Elixir:

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

Erlang:

```
-spec longest_palindrome(S :: unicode:unicode_binary(), T ::  
  unicode:unicode_binary()) -> integer().  
longest_palindrome(S, T) ->  
  .
```

Racket:

```
(define/contract (longest-palindrome s t)  
  (-> string? string? exact-integer?)  
  )
```


Solutions

C++ Solution:

```
/*
 * Problem: Longest Palindrome After Substring Concatenation I
 * Difficulty: Medium
 * Tags: array, string, tree, dp
 *
 * Approach: Use two pointers or sliding window technique
 * Time Complexity: O(n) or O(n log n)
 * Space Complexity: O(n) or O(n * m) for DP table
 */

class Solution {
public:
    int longestPalindrome(string s, string t) {

    }
};
```

Java Solution:

```
/**
 * Problem: Longest Palindrome After Substring Concatenation I
 * Difficulty: Medium
 * Tags: array, string, tree, dp
 *
 * Approach: Use two pointers or sliding window technique
 * Time Complexity: O(n) or O(n log n)
 * Space Complexity: O(n) or O(n * m) for DP table
 */

class Solution {
    public int longestPalindrome(String s, String t) {

    }
}
```

Python3 Solution:

```
"""
Problem: Longest Palindrome After Substring Concatenation I
```

Difficulty: Medium

Tags: array, string, tree, dp

Approach: Use two pointers or sliding window technique

Time Complexity: $O(n)$ or $O(n \log n)$

Space Complexity: $O(n)$ or $O(n * m)$ for DP table

"""

```
class Solution:
```

```
def longestPalindrome(self, s: str, t: str) -> int:
```

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

```
pass
```

Python Solution:

```
class Solution(object):
```

```
def longestPalindrome(self, s, t):
```

```
"""
```

```
:type s: str
```

```
:type t: str
```

```
:rtype: int
```

```
"""
```

JavaScript Solution:

```
/**
```

```
 * Problem: Longest Palindrome After Substring Concatenation I
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```
 * Difficulty: Medium
```

```
 * Tags: array, string, tree, dp
```

```
 *
```

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

```
 * Time Complexity:  $O(n)$  or  $O(n \log n)$ 
```

```
 * Space Complexity:  $O(n)$  or  $O(n * m)$  for DP table
```

```
 */
```

```
/**
```

```
 * @param {string} s
```

```
 * @param {string} t
```

```
 * @return {number}
```

```
 */
```

```
var longestPalindrome = function(s, t) {
```

```
};
```

TypeScript Solution:

```
/**
 * Problem: Longest Palindrome After Substring Concatenation I
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function longestPalindrome(s: string, t: string): number {

};
```

C# Solution:

```
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public class Solution {
    public int LongestPalindrome(string s, string t) {

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C Solution:

```
/*
 * Problem: Longest Palindrome After Substring Concatenation I
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```

* Difficulty: Medium
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* Time Complexity: O(n) or O(n log n)
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*/

int longestPalindrome(char* s, char* t) {

}

```

Go Solution:

```

// Problem: Longest Palindrome After Substring Concatenation I
// Difficulty: Medium
// Tags: array, string, tree, dp
//
// Approach: Use two pointers or sliding window technique
// Time Complexity: O(n) or O(n log n)
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func longestPalindrome(s string, t string) int {

}

```

Kotlin Solution:

```

class Solution {
    fun longestPalindrome(s: String, t: String): Int {

    }
}

```

Swift Solution:

```

class Solution {
    func longestPalindrome(_ s: String, _ t: String) -> Int {

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// Problem: Longest Palindrome After Substring Concatenation I
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impl Solution {
    pub fn longest_palindrome(s: String, t: String) -> i32 {

    }
}
```

Ruby Solution:

```
# @param {String} s
# @param {String} t
# @return {Integer}
def longest_palindrome(s, t)

end
```

PHP Solution:

```
class Solution {

    /**
     * @param String $s
     * @param String $t
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    function longestPalindrome($s, $t) {

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