Problem 205: Isomorphic Strings

Problem Information

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

Problem Description

Given two strings

s

and

t

,

determine if they are isomorphic

.

Two strings

s

and

t

are isomorphic if the characters in

s

can be replaced to get

t

.

All occurrences of a character must be replaced with another character while preserving the order of characters. No two characters may map to the same character, but a character may map to itself.

Example 1:

Input:

s = "egg", t = "add"

Output:

true

Explanation:

The strings

s

and

t

can be made identical by:

Mapping

'e'

to

'a'

.

Mapping

'g'

to

'd'

.

Example 2:

Input:

s = "foo", t = "bar"

Output:

false

Explanation:

The strings

s

and

t

can not be made identical as

'o'

needs to be mapped to both

'a'

and

'r'

.

Example 3:

Input:

s = "paper", t = "title"

Output:

true

Constraints:

1 <= s.length <= 5 * 10

4

t.length == s.length

s

and

t

consist of any valid ascii character.

Code Snippets

C++:

```
class Solution {
public:
bool isIsomorphic(string s, string t) {

}
};
```

Java:

```
class Solution {
public boolean isIsomorphic(String s, String t) {

}
}
```

Python3:

```
class Solution:
def isIsomorphic(self, s: str, t: str) -> bool:
```

Python:

```
class Solution(object):
def isIsomorphic(self, s, t):
"""
:type s: str
:type t: str
:rtype: bool
"""
```

JavaScript:

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

};
```

TypeScript:

```
function isIsomorphic(s: string, t: string): boolean {

};
```

C#:

```
public class Solution {
public bool IsIsomorphic(string s, string t) {

}
}
```

C:

```
bool isIsomorphic(char* s, char* t) {

}
```

Go:

```
func isIsomorphic(s string, t string) bool {

}
```

Kotlin:

```
class Solution {
fun isIsomorphic(s: String, t: String): Boolean {

}
}
```

Swift:

```
class Solution {
func isIsomorphic(_ s: String, _ t: String) -> Bool {

}
}
```

Rust:

```
impl Solution {
pub fn is_isomorphic(s: String, t: String) -> bool {

}
}
```

Ruby:

```
# @param {String} s
# @param {String} t
# @return {Boolean}
def is_isomorphic(s, t)

end
```

PHP:

```
class Solution {

/**
* @param String $s
* @param String $t
* @return Boolean
*/
function isIsomorphic($s, $t) {

}
}
```

Dart:

```
class Solution {
bool isIsomorphic(String s, String t) {

}
}
```

Scala:

```
object Solution {
def isIsomorphic(s: String, t: String): Boolean = {

}
```

```
}
```

Elixir:

```
defmodule Solution do
@spec is_isomorphic(s :: String.t, t :: String.t) :: boolean
def is_isomorphic(s, t) do

end
end
```

Erlang:

```
-spec is_isomorphic(S :: unicode:unicode_binary(), T ::
unicode:unicode_binary()) -> boolean().
is_isomorphic(S, T) ->
.
```

Racket:

```
(define/contract (is-isomorphic s t)
(-> string? string? boolean?)
)
```

Solutions

C++ Solution:

```
/*
* Problem: Isomorphic Strings
* Difficulty: Easy
* Tags: string, hash
*
* Approach: String manipulation with hash map or two pointers
* Time Complexity: O(n) or O(n log n)
* Space Complexity: O(n) for hash map
*/

class Solution {
public:
```

```
bool isIsomorphic(string s, string t) {

}
};
```

Java Solution:

```
/**
* Problem: Isomorphic Strings
* Difficulty: Easy
* Tags: string, hash
*
* Approach: String manipulation with hash map or two pointers
* Time Complexity: O(n) or O(n log n)
* Space Complexity: O(n) for hash map
*/

class Solution {
public boolean isIsomorphic(String s, String t) {

}
}
```

Python3 Solution:

```
"""
Problem: Isomorphic Strings
Difficulty: Easy
Tags: string, hash

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

class Solution:
def isIsomorphic(self, s: str, t: str) -> bool:
# TODO: Implement optimized solution
pass
```

Python Solution:

```
class Solution(object):
def isIsomorphic(self, s, t):
"""
:type s: str
:type t: str
:rtype: bool
"""
```

JavaScript Solution:

```
/**
* Problem: Isomorphic Strings
* Difficulty: Easy
* Tags: string, hash
*
* Approach: String manipulation with hash map or two pointers
* Time Complexity: O(n) or O(n log n)
* Space Complexity: O(n) for hash map
*/

/**
* @param {string} s
* @param {string} t
* @return {boolean}
*/
var isIsomorphic = function(s, t) {

};
```

TypeScript Solution:

```
/**
* Problem: Isomorphic Strings
* Difficulty: Easy
* Tags: string, hash
*
* Approach: String manipulation with hash map or two pointers
* Time Complexity: O(n) or O(n log n)
* Space Complexity: O(n) for hash map
*/

function isIsomorphic(s: string, t: string): boolean {
```

```
};
```

C# Solution:

```
/*
* Problem: Isomorphic Strings
* Difficulty: Easy
* Tags: string, hash
*
* Approach: String manipulation with hash map or two pointers
* Time Complexity: O(n) or O(n log n)
* Space Complexity: O(n) for hash map
*/

public class Solution {
public bool IsIsomorphic(string s, string t) {

}
}
```

C Solution:

```
/*
* Problem: Isomorphic Strings
* Difficulty: Easy
* Tags: string, hash
*
* Approach: String manipulation with hash map or two pointers
* Time Complexity: O(n) or O(n log n)
* Space Complexity: O(n) for hash map
*/

bool isIsomorphic(char* s, char* t) {

}
```

Go Solution:

```
// Problem: Isomorphic Strings
// Difficulty: Easy
```

```
// Tags: string, hash
//
// Approach: String manipulation with hash map or two pointers
// Time Complexity: O(n) or O(n log n)
// Space Complexity: O(n) for hash map

func isIsomorphic(s string, t string) bool {

}
```

Kotlin Solution:

```
class Solution {
fun isIsomorphic(s: String, t: String): Boolean {

}
}
```

Swift Solution:

```
class Solution {
func isIsomorphic(_ s: String, _ t: String) -> Bool {

}
}
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Rust Solution:

```
// Problem: Isomorphic Strings
// Difficulty: Easy
// Tags: string, hash
//
// Approach: String manipulation with hash map or two pointers
// Time Complexity: O(n) or O(n log n)
// Space Complexity: O(n) for hash map

impl Solution {
pub fn is_isomorphic(s: String, t: String) -> bool {

}
}
```

Ruby Solution:

```
# @param {String} s
# @param {String} t
# @return {Boolean}
def is_isomorphic(s, t)

end
```

PHP Solution:

```
class Solution {

/**
* @param String $s
* @param String $t
* @return Boolean
*/
function isIsomorphic($s, $t) {

}
}
```

Dart Solution:

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class Solution {
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Scala Solution:

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