

Problem 984: String Without AAA or BBB

Problem Information

Difficulty: Medium

Acceptance Rate: 0.00%

Paid Only: No

Problem Description

Given two integers

a

and

b

, return

any

string

s

such that:

s

has length

$a + b$

and contains exactly

a

'a'

letters, and exactly

b

'b'

letters,

The substring

'aaa'

does not occur in

s

, and

The substring

'bbb'

does not occur in

s

.

Example 1:

Input:

a = 1, b = 2

Output:

"abb"

Explanation:

"abb", "bab" and "bba" are all correct answers.

Example 2:

Input:

$a = 4, b = 1$

Output:

"aabaa"

Constraints:

$0 \leq a, b \leq 100$

It is guaranteed such an

s

exists for the given

a

and

b

Code Snippets

C++:

```
class Solution {  
public:  
    string strWithout3a3b(int a, int b) {  
  
    }  
};
```

Java:

```
class Solution {  
public String strWithout3a3b(int a, int b) {  
  
}  
}
```

Python3:

```
class Solution:  
    def strWithout3a3b(self, a: int, b: int) -> str:
```

Python:

```
class Solution(object):  
    def strWithout3a3b(self, a, b):  
        """  
        :type a: int  
        :type b: int  
        :rtype: str  
        """
```

JavaScript:

```
/**  
 * @param {number} a  
 * @param {number} b  
 * @return {string}  
 */  
var strWithout3a3b = function(a, b) {  
  
};
```

TypeScript:

```
function strWithout3a3b(a: number, b: number): string {  
};
```

C#:

```
public class Solution {  
    public string StrWithout3a3b(int a, int b) {  
        }  
    }
```

C:

```
char * strWithout3a3b(int a, int b){  
}
```

Go:

```
func strWithout3a3b(a int, b int) string {  
}
```

Kotlin:

```
class Solution {  
    fun strWithout3a3b(a: Int, b: Int): String {  
        }  
    }
```

Swift:

```
class Solution {  
    func strWithout3a3b(_ a: Int, _ b: Int) -> String {  
        }  
    }
```

Rust:

```
impl Solution {  
    pub fn str_without3a3b(a: i32, b: i32) -> String {  
        }  
    }  
}
```

Ruby:

```
# @param {Integer} a  
# @param {Integer} b  
# @return {String}  
def str_without3a3b(a, b)  
  
end
```

PHP:

```
class Solution {  
  
    /**  
     * @param Integer $a  
     * @param Integer $b  
     * @return String  
     */  
    function strWithout3a3b($a, $b) {  
  
    }  
}
```

Scala:

```
object Solution {  
    def strWithout3a3b(a: Int, b: Int): String = {  
        }  
    }
```

Solutions

C++ Solution:

```

/*
 * Problem: String Without AAA or BBB
 * Difficulty: Medium
 * Tags: string, tree, greedy
 *
 * Approach: String manipulation with hash map or two pointers
 * Time Complexity: O(n) or O(n log n)
 * Space Complexity: O(h) for recursion stack where h is height
 */

class Solution {
public:
string strWithout3a3b(int a, int b) {

}
};


```

Java Solution:

```

/**
 * Problem: String Without AAA or BBB
 * Difficulty: Medium
 * Tags: string, tree, greedy
 *
 * Approach: String manipulation with hash map or two pointers
 * Time Complexity: O(n) or O(n log n)
 * Space Complexity: O(h) for recursion stack where h is height
 */

class Solution {
public String strWithout3a3b(int a, int b) {

}
};


```

Python3 Solution:

```

"""
Problem: String Without AAA or BBB
Difficulty: Medium
Tags: string, tree, greedy

```

```

Approach: String manipulation with hash map or two pointers
Time Complexity: O(n) or O(n log n)
Space Complexity: O(h) for recursion stack where h is height
"""

class Solution:

def strWithout3a3b(self, a: int, b: int) -> str:
# TODO: Implement optimized solution
pass

```

Python Solution:

```

class Solution(object):
def strWithout3a3b(self, a, b):
"""
:type a: int
:type b: int
:rtype: str
"""

```

JavaScript Solution:

```

/**
 * Problem: String Without AAA or BBB
 * Difficulty: Medium
 * Tags: string, tree, greedy
 *
 * Approach: String manipulation with hash map or two pointers
 * Time Complexity: O(n) or O(n log n)
 * Space Complexity: O(h) for recursion stack where h is height
 */

/**
 * @param {number} a
 * @param {number} b
 * @return {string}
 */
var strWithout3a3b = function(a, b) {

};


```

TypeScript Solution:

```
/**  
 * Problem: String Without AAA or BBB  
 * Difficulty: Medium  
 * Tags: string, tree, greedy  
 *  
 * Approach: String manipulation with hash map or two pointers  
 * Time Complexity: O(n) or O(n log n)  
 * Space Complexity: O(h) for recursion stack where h is height  
 */  
  
function strWithout3a3b(a: number, b: number): string {  
};
```

C# Solution:

```
/*  
 * Problem: String Without AAA or BBB  
 * Difficulty: Medium  
 * Tags: string, tree, greedy  
 *  
 * Approach: String manipulation with hash map or two pointers  
 * Time Complexity: O(n) or O(n log n)  
 * Space Complexity: O(h) for recursion stack where h is height  
 */  
  
public class Solution {  
    public string StrWithout3a3b(int a, int b) {  
        return string.Empty;  
    }  
}
```

C Solution:

```
/*  
 * Problem: String Without AAA or BBB  
 * Difficulty: Medium  
 * Tags: string, tree, greedy  
 *  
 * Approach: String manipulation with hash map or two pointers  
 * Time Complexity: O(n) or O(n log n)
```

```

* Space Complexity: O(h) for recursion stack where h is height
*/
char * strWithout3a3b(int a, int b){

}

```

Go Solution:

```

// Problem: String Without AAA or BBB
// Difficulty: Medium
// Tags: string, tree, greedy
//
// Approach: String manipulation with hash map or two pointers
// Time Complexity: O(n) or O(n log n)
// Space Complexity: O(h) for recursion stack where h is height

func strWithout3a3b(a int, b int) string {

}

```

Kotlin Solution:

```

class Solution {
    fun strWithout3a3b(a: Int, b: Int): String {
        return if (a > b) {
            strWithout3a3b(b, a)
        } else {
            val sb = StringBuilder()
            var countA = 0
            var countB = 0
            for (c in a..b) {
                if (c == 'a') {
                    if (countB >= 2) {
                        sb.append('b')
                        countB = 0
                    } else {
                        sb.append('a')
                        countA++
                    }
                } else {
                    if (countA >= 2) {
                        sb.append('a')
                        countA = 0
                    } else {
                        sb.append('b')
                        countB++
                    }
                }
            }
            sb.toString()
        }
    }
}
```

Swift Solution:

```

class Solution {
    func strWithout3a3b(_ a: Int, _ b: Int) -> String {
        return if (a > b) {
            strWithout3a3b(b, a)
        } else {
            var sb = ""
            var countA = 0
            var countB = 0
            for c in a...b {
                if c == "a" {
                    if countB >= 2 {
                        sb.append("b")
                        countB = 0
                    } else {
                        sb.append("a")
                        countA++
                    }
                } else {
                    if countA >= 2 {
                        sb.append("a")
                        countA = 0
                    } else {
                        sb.append("b")
                        countB++
                    }
                }
            }
            sb
        }
    }
}
```

Rust Solution:

```

// Problem: String Without AAA or BBB
// Difficulty: Medium
// Tags: string, tree, greedy
//
// Approach: String manipulation with hash map or two pointers
// Time Complexity: O(n) or O(n log n)
// Space Complexity: O(h) for recursion stack where h is height

impl Solution {
    pub fn str_without3a3b(a: i32, b: i32) -> String {
        ...
    }
}

```

Ruby Solution:

```

# @param {Integer} a
# @param {Integer} b
# @return {String}
def str_without3a3b(a, b)

end

```

PHP Solution:

```

class Solution {

    /**
     * @param Integer $a
     * @param Integer $b
     * @return String
     */
    function strWithout3a3b($a, $b) {

    }
}

```

Scala Solution:

```

object Solution {
    def strWithout3a3b(a: Int, b: Int): String = {
        ...
    }
}

```

