Problem 3708: Longest Fibonacci Subarray

Problem Information

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

Problem Description

You are given an array of

positive

integers

nums

.

A

Fibonacci

array is a contiguous sequence whose third and subsequent terms each equal the sum of the two preceding terms.

Return the length of the longest

Fibonacci

subarray

in

nums

.

Note:

Subarrays of length 1 or 2 are always

Fibonacci

.

Example 1:

Input:

nums = [1,1,1,1,2,3,5,1]

Output:

5

Explanation:

The longest Fibonacci subarray is

nums[2..6] = [1, 1, 2, 3, 5]

.

[1, 1, 2, 3, 5]

is Fibonacci because

1 + 1 = 2

,

1 + 2 = 3

, and

2 + 3 = 5

.

Example 2:

Input:

nums = [5,2,7,9,16]

Output:

5

Explanation:

The longest Fibonacci subarray is

nums[0..4] = [5, 2, 7, 9, 16]

.

[5, 2, 7, 9, 16]

is Fibonacci because

5 + 2 = 7

,

2 + 7 = 9

, and

7 + 9 = 16

.

Example 3:

Input:

nums = [1000000000,1000000000,1000000000]

Output:

2

Explanation:

The longest Fibonacci subarray is

nums[1..2] = [1000000000, 1000000000]

.

[1000000000, 1000000000]

is Fibonacci because its length is 2.

Constraints:

3 <= nums.length <= 10

5

1 <= nums[i] <= 10

9

Code Snippets

C++:

```
class Solution {
public:
```

```
int longestSubarray(vector<int>& nums) {

}
};
```

Java:

```
class Solution {
public int longestSubarray(int[] nums) {

}
}
```

Python3:

```
class Solution:
def longestSubarray(self, nums: List[int]) -> int:
```

Python:

```
class Solution(object):
def longestSubarray(self, nums):
"""
:type nums: List[int]
:rtype: int
"""
```

JavaScript:

```
/**
* @param {number[]} nums
* @return {number}
*/
var longestSubarray = function(nums) {

};
```

TypeScript:

```
function longestSubarray(nums: number[]): number {

};
```

C#:

```
public class Solution {
public int LongestSubarray(int[] nums) {

}
}
```

C:

```
int longestSubarray(int* nums, int numsSize) {

}
```

Go:

```
func longestSubarray(nums []int) int {

}
```

Kotlin:

```
class Solution {
fun longestSubarray(nums: IntArray): Int {

}
}
```

Swift:

```
class Solution {
func longestSubarray(_ nums: [Int]) -> Int {

}
}
```

Rust:

```
impl Solution {
pub fn longest_subarray(nums: Vec<i32>) -> i32 {

}
}
```

Ruby:

```
# @param {Integer[]} nums
# @return {Integer}
def longest_subarray(nums)

end
```

PHP:

```
class Solution {

/**
* @param Integer[] $nums
* @return Integer
*/
function longestSubarray($nums) {

}
}
```

Dart:

```
class Solution {
int longestSubarray(List<int> nums) {

}
}
```

Scala:

```
object Solution {
def longestSubarray(nums: Array[Int]): Int = {

}
}
```

Elixir:

```
defmodule Solution do
@spec longest_subarray(nums :: [integer]) :: integer
def longest_subarray(nums) do
```

```
end
end
```

Erlang:

```
-spec longest_subarray(Nums :: [integer()]) -> integer().
longest_subarray(Nums) ->
.
```

Racket:

```
(define/contract (longest-subarray nums)
(-> (listof exact-integer?) exact-integer?)
)
```

Solutions

C++ Solution:

```
/*
* Problem: Longest Fibonacci Subarray
* Difficulty: Medium
* Tags: array
*
* Approach: Use two pointers or sliding window technique
* Time Complexity: O(n) or O(n log n)
* Space Complexity: O(1) to O(n) depending on approach
*/

class Solution {
public:
int longestSubarray(vector<int>& nums) {

}
};
```

Java Solution:

```
/**
* Problem: Longest Fibonacci Subarray
```

```
* Difficulty: Medium
* Tags: array
*
* Approach: Use two pointers or sliding window technique
* Time Complexity: O(n) or O(n log n)
* Space Complexity: O(1) to O(n) depending on approach
*/

class Solution {
public int longestSubarray(int[] nums) {

}
}
```

Python3 Solution:

```
"""
Problem: Longest Fibonacci Subarray
Difficulty: Medium
Tags: array

Approach: Use two pointers or sliding window technique
Time Complexity: O(n) or O(n log n)
Space Complexity: O(1) to O(n) depending on approach
"""

class Solution:
def longestSubarray(self, nums: List[int]) -> int:
# TODO: Implement optimized solution
pass
```

Python Solution:

```
class Solution(object):
def longestSubarray(self, nums):
"""
:type nums: List[int]
:rtype: int
"""
```

JavaScript Solution:

```
/**
* Problem: Longest Fibonacci Subarray
* Difficulty: Medium
* Tags: array
*
* Approach: Use two pointers or sliding window technique
* Time Complexity: O(n) or O(n log n)
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*/

/**
* @param {number[]} nums
* @return {number}
*/
var longestSubarray = function(nums) {

};
```

TypeScript Solution:

```
/**
* Problem: Longest Fibonacci Subarray
* Difficulty: Medium
* Tags: array
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* Approach: Use two pointers or sliding window technique
* Time Complexity: O(n) or O(n log n)
* Space Complexity: O(1) to O(n) depending on approach
*/

function longestSubarray(nums: number[]): number {

};
```

C# Solution:

```
/*
* Problem: Longest Fibonacci Subarray
* Difficulty: Medium
* Tags: array
*
* Approach: Use two pointers or sliding window technique
```

```
* Time Complexity: O(n) or O(n log n)
* Space Complexity: O(1) to O(n) depending on approach
*/

public class Solution {
public int LongestSubarray(int[] nums) {

}
}
```

C Solution:

```
/*
* Problem: Longest Fibonacci Subarray
* Difficulty: Medium
* Tags: array
*
* Approach: Use two pointers or sliding window technique
* Time Complexity: O(n) or O(n log n)
* Space Complexity: O(1) to O(n) depending on approach
*/

int longestSubarray(int* nums, int numsSize) {

}
```

Go Solution:

```
// Problem: Longest Fibonacci Subarray
// Difficulty: Medium
// Tags: array
//
// Approach: Use two pointers or sliding window technique
// Time Complexity: O(n) or O(n log n)
// Space Complexity: O(1) to O(n) depending on approach

func longestSubarray(nums []int) int {

}
```

Kotlin Solution:

```
class Solution {
fun longestSubarray(nums: IntArray): Int {

}
}
```

Swift Solution:

```
class Solution {
func longestSubarray(_ nums: [Int]) -> Int {

}
}
```

Rust Solution:

```
// Problem: Longest Fibonacci Subarray
// Difficulty: Medium
// Tags: array
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// Approach: Use two pointers or sliding window technique
// Time Complexity: O(n) or O(n log n)
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impl Solution {
pub fn longest_subarray(nums: Vec<i32>) -> i32 {

}
}
```

Ruby Solution:

```
# @param {Integer[]} nums
# @return {Integer}
def longest_subarray(nums)

end
```

PHP Solution:

```
class Solution {
```

```
/**
* @param Integer[] $nums
* @return Integer
*/
function longestSubarray($nums) {

}
}
```

Dart Solution:

```
class Solution {
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Scala Solution:

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object Solution {
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```

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defmodule Solution do
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end
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