Problem 3423: Maximum Difference Between Adjacent Elements in a Circular Array

Problem Information

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

Problem Description

Given a

circular

array

nums

, find the

maximum

absolute difference between adjacent elements.

Note

: In a circular array, the first and last elements are adjacent.

Example 1:

Input:

nums = [1,2,4]

Output:

3

Explanation:

Because

nums

is circular,

nums[0]

and

nums[2]

are adjacent. They have the maximum absolute difference of

|4 - 1| = 3

.

Example 2:

Input:

nums = [-5,-10,-5]

Output:

5

Explanation:

The adjacent elements

nums[0]

and

nums[1]

have the maximum absolute difference of

|-5 - (-10)| = 5

.

Constraints:

2 <= nums.length <= 100

-100 <= nums[i] <= 100

Code Snippets

C++:

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

}
};
```

Java:

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

}
}
```

Python3:

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

Python:

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

JavaScript:

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

};
```

TypeScript:

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

};
```

C#:

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

}
}
```

C:

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

}
```

Go:

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

```
}
```

Kotlin:

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

}
}
```

Swift:

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

}
}
```

Rust:

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

}
}
```

Ruby:

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

end
```

PHP:

```
class Solution {

/**
* @param Integer[] $nums
* @return Integer
*/
```

```
function maxAdjacentDistance($nums) {

}
}
```

Dart:

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

}
}
```

Scala:

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

}
}
```

Elixir:

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

end
end
```

Erlang:

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

Racket:

```
(define/contract (max-adjacent-distance nums)
(-> (listof exact-integer?) exact-integer?)
)
```

Solutions

C++ Solution:

```
/*
* Problem: Maximum Difference Between Adjacent Elements in a Circular Array
* Difficulty: Easy
* 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 maxAdjacentDistance(vector<int>& nums) {

}
};
```

Java Solution:

```
/**
* Problem: Maximum Difference Between Adjacent Elements in a Circular 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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*/

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

}
}
```

Python3 Solution:

```
"""
Problem: Maximum Difference Between Adjacent Elements in a Circular Array
Difficulty: Easy
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 maxAdjacentDistance(self, nums: List[int]) -> int:
# TODO: Implement optimized solution
pass
```

Python Solution:

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

JavaScript Solution:

```
/**
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/**
* @param {number[]} nums
* @return {number}
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var maxAdjacentDistance = function(nums) {
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```
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TypeScript Solution:

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

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C# Solution:

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*/

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

}
}
```

C Solution:

```
/*
* Problem: Maximum Difference Between Adjacent Elements in a Circular Array
* Difficulty: Easy
```

```
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*/

int maxAdjacentDistance(int* nums, int numsSize) {

}
```

Go Solution:

```
// Problem: Maximum Difference Between Adjacent Elements in a Circular Array
// Difficulty: Easy
// Tags: array
//
// Approach: Use two pointers or sliding window technique
// Time Complexity: O(n) or O(n log n)
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func maxAdjacentDistance(nums []int) int {

}
```

Kotlin Solution:

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

}
}
```

Swift Solution:

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

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Rust Solution:

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

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}
```

Ruby Solution:

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

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PHP Solution:

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class Solution {

/**
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