Description | Editorial | Solutions | Submissions

2863. Maximum Length of Semi-Decreasing Subarrays

Premium

Solved

Medium | Topics | Companies | Hint

You are given an integer array `nums`.

Return *the length of the* ***longest semi-decreasing*** *subarray of* `nums`*, and* `0` *if there are no such subarrays.*

- A **subarray** is a contiguous non-empty sequence of elements within an array.
- A non-empty array is **semi-decreasing** if its first element is **strictly greater** than its last element.

Example 1:

```
Input: nums = [7,6,5,4,3,2,1,6,10,11]
Output: 8
Explanation: Take the subarray [7,6,5,4,3,2,1,6].
The first element is 7 and the last one is 6 so the condition is met.
Hence, the answer would be the length of the subarray or 8.
It can be shown that there aren't any subarrays with the given condition with a length greater than 8.
```

Example 2:

```
Input: nums = [57,55,50,60,61,58,63,59,64,60,63]
Output: 6
Explanation: Take the subarray [61,58,63,59,64,60].
The first element is 61 and the last one is 60 so the condition is met.
Hence, the answer would be the length of the subarray or 6.
It can be shown that there aren't any subarrays with the given condition with a length greater than 6.
```

Example 3:

```
Input: nums = [1,2,3,4]
Output: 0
Explanation: Since there are no semi-decreasing subarrays in the given array, the answer is 0.
```

Constraints:

- `1 <= nums.length <= 10^5`
- `-10^9 <= nums[i] <= 10^9`

Seen this question in a real interview before? 1/5

Yes | No

Accepted 8.3K | Submissions 11.6K | Acceptance Rate 71.8%

Topics

Companies

Hint 1

Hint 2

Hint 3

Hint 4

Hint 5

Hint 6

Discussion (11)

88 | 11

Code

Python3 | Auto

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

        max_length = 0
        length = len(nums)

        for i in range(0, length-1):
            for j in range(length-1, 0, -1):
                if j > i + max_length - 1:
                    if nums[i] > nums[j]:
                        max_length = j - i + 1
                        break
            if max_length > length - i + 1:
                break

        return max_length
```

Saved

Ln 10, Col 42

Testcase | Test Result

Accepted Runtime: 42 ms

Case 1 | Case 2 | Case 3

Input

nums =

[57,55,50,60,61,58,63,59,64,60,63]

Output