

Problem 503: Next Greater Element II

Problem Information

Difficulty: Medium

Acceptance Rate: 67.45%

Paid Only: No

Tags: Array, Stack, Monotonic Stack

Problem Description

Given a circular integer array `nums` (i.e., the next element of `nums[nums.length - 1]` is `nums[0]`), return `the next greater number` for every element in `nums`.

The `next greater number` of a number `x` is the first greater number to its traversing-order next in the array, which means you could search circularly to find its next greater number. If it doesn't exist, return `-1` for this number.

Example 1:

Input: `nums = [1,2,1]` **Output:** `[2,-1,2]` Explanation: The first 1's next greater number is 2; The number 2 can't find next greater number. The second 1's next greater number needs to search circularly, which is also 2.

Example 2:

Input: `nums = [1,2,3,4,3]` **Output:** `[2,3,4,-1,4]`

Constraints:

`1 <= nums.length <= 10^4` `-10^9 <= nums[i] <= 10^9`

Code Snippets

C++:

```
class Solution {  
public:  
    vector<int> nextGreaterElements(vector<int>& nums) {  
  
    }  
};
```

Java:

```
class Solution {  
    public int[] nextGreaterElements(int[] nums) {  
  
    }  
}
```

Python3:

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