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Question 1 :

33. Search in Rotated Sorted Array
Medium
20K
1.2K
Companies

There is an integer array nums sorted in ascending order (with **distinct** values).

Prior to being passed to your function, nums is **possibly rotated** at an unknown pivot index k (1 <= k < nums.length) such that the resulting array is [nums[k], nums[k+1], ..., nums[n-1], nums[0], nums[1], ..., nums[k-1]] (**0-indexed**). For example, [0,1,2,4,5,6,7] might be rotated at pivot index 3 and become [4,5,6,7,0,1,2].

Given the array nums **after** the possible rotation and an integer target, return *the index of* target *if it is in* nums*, or* -1 *if it is not in* nums.

You must write an algorithm with O(log n) runtime complexity.

Example 1:

Input: nums = [4,5,6,7,0,1,2], target = 0
Output: 4

Example 2:

Input: nums = [4,5,6,7,0,1,2], target = 3
Output: -1

Example 3:

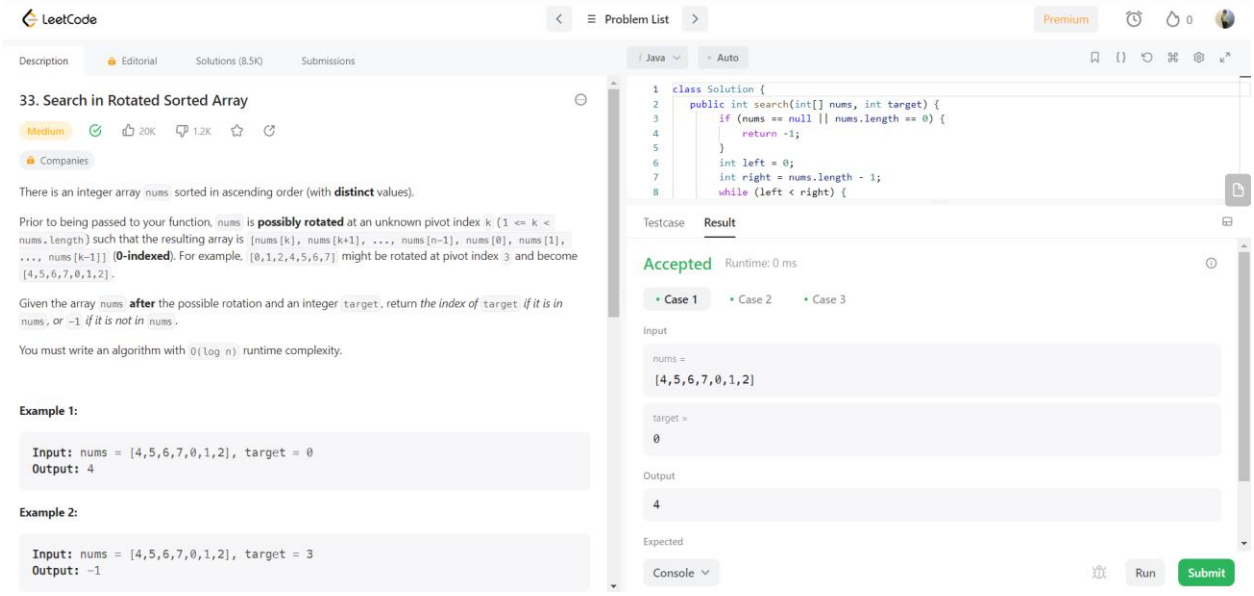
Input: nums = [1], target = 0
Output: -1

Answer :

Java :

```java
class Solution {
   public int search(int[] nums, int target) {
        if (nums == null || nums.length == 0) {
            return -1;
        }
        int left = 0;
        int right = nums.length - 1;
        while (left < right) {
            int middle = left + (right - left) / 2;
            if (nums[middle] > nums[right]) {
                left = middle + 1;
            }
            else {
                right = middle;
            }
        }
        int pivot = left;
        left = 0;
        right = nums.length - 1;
        if (target >= nums[pivot] && target <= nums[right]) {
            left = pivot;
        } else {
            right = pivot;
        }
        while (left <= right) {
            int middle = left + (right - left) / 2;
            if (nums[middle] == target) {
                return middle;
            } else if (target < nums[middle]) {
                right = middle - 1;
            } else {
                left = middle + 1;
            }
        }
        return -1;
    }
}
```

Output :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33. Search in Rotated Sorted Array
Medium
20K
1.2K
Companies
There is an integer array nums sorted in ascending order (with distinct values).
Prior to being passed to your function, nums is possibly rotated at an unknown pivot index k (1 <= k < nums.length) such that the resulting array is [nums[k], nums[k+1], ..., nums[n-1], nums[0], nums[1], ..., nums[k-1]] (0-indexed). For example, [0,1,2,4,5,6,7] might be rotated at pivot index 3 and become [4,5,6,7,0,1,2].
Given the array nums after the possible rotation and an integer target, return the index of target if it is in nums, or -1 if it is not in nums.
You must write an algorithm with O(log n) runtime complexity.
Example 1:
Input: nums = [4,5,6,7,0,1,2], target = 0
Output: 4
Example 2:
Input: nums = [4,5,6,7,0,1,2], target = 3
Output: -1
class Solution {
public int search(int[] nums, int target) {
if (nums == null || nums.length == 0) {
return -1;
}
int left = 0;
int right = nums.length - 1;
while (left < right) {
Testcase
Result
Accepted
Runtime: 0 ms
Case 1
Case 2
Case 3
Input
nums =
[4,5,6,7,0,1,2]
target =
0
Output
4
Expected
Console
Run
Submit