

Day-27

Python DSA

Leetcode 34 Find First and Last Position of Element in Sorted Array

<https://leetcode.com/problems/find-first-and-last-position-of-element-in-sorted-array/>

```
class Solution:
    def binarySearchLeft(self, nums, target):
        n = len(nums)
        low = 0
        high = n - 1
        index = -1
        while low <= high:
            mid = (low + high) // 2
            if nums[mid] == target:
                index = mid
                high = mid - 1
            elif nums[mid] > target:
                high = mid - 1
            else:
                low = mid + 1
        return index

    def binarySearchRight(self, nums, target):
        n = len(nums)
        low = 0
        high = n - 1
        index = -1
        while low <= high:
            mid = (low + high) // 2
            if nums[mid] == target:
                index = mid
                low = mid + 1
            elif nums[mid] > target:
                high = mid - 1
            else:
                low = mid + 1
```

```
return index
```

```
def searchRange(self, nums: List[int], target: int) -> List[int]:  
    ext_left = self.binarySearchLeft(nums, target)  
    ext_right = self.binarySearchRight(nums, target)  
    return [ext_left, ext_right]
```

TC-  $O(\log N)$

SC- $O(1)$