35. Search Insert Position

Binary Search 大法。

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Given a sorted array of distinct integers and a target value, return the index if the target is found. If not, return the index where it would be if it were inserted in order.

You must write an algorithm with `O(log n)` runtime complexity. → Binary Search

找到第一个 ≥ 其target的值in下标。

模板：

```
class Solution {
    public int searchInsert(int[] nums, int target) {
        int left = 0, right = nums.length - 1; // 注意
        while(left <= right) { // 注意
            int mid = (left + right) / 2; // 注意
            if(nums[mid] == target) { // 注意
                // 相关逻辑
            } else if(nums[mid] < target) {
                left = mid + 1; // 注意
            } else {
                right = mid - 1; // 注意
            }
        }
        // 相关返回值
        return 0;
    }
}
```

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

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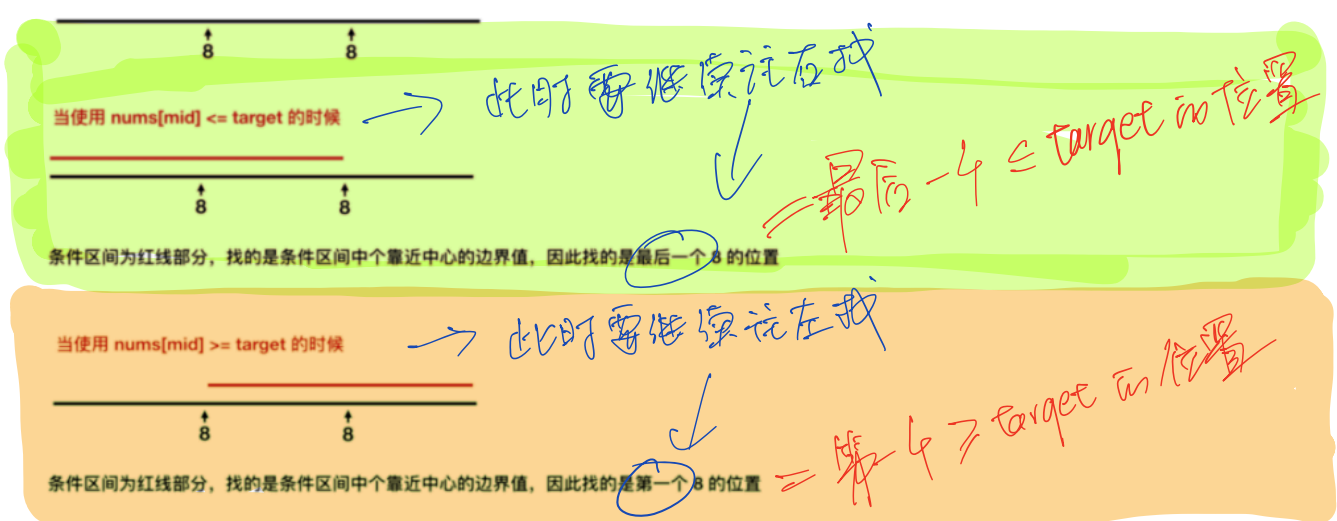
Given an array of integers `nums` sorted in ascending order, find the starting and ending position of a given `target` value.

If `target` is not found in the array, return `[-1, -1]`.

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



704. 略

最后一个<target 的位置
arr[mid] >= target
high = mid - 1
else low = mid

第一个>target 的位置
arr[mid] <= target
low = mid + 1
else high = mid

981. Time Based Key-Value Store

难度 中等 135 收藏 分享 切换为中文 接收动态 反馈

Design a time-based key-value data structure that can store multiple values for the same key at different time stamps and retrieve the key's value at a certain timestamp.

Implement the `TimeMap` class:

- `TimeMap()` Initializes the object of the data structure.
- `void set(String key, String value, int timestamp)` Stores the key `key` with the value `value` at the given time `timestamp`.
- `String get(String key, int timestamp)` Returns a value such that `set` was called previously, with `timestamp_prev <= timestamp`. If there are multiple such values, it returns the value associated with the largest `timestamp_prev`. If there are no values, it returns `""`.

key: 找到最后一个 ≤ timestamp 的值

Map<String, List<Object[]>> map

new Object[]{value, timestamp}