Problem 704: Binary Search

Problem Information

Difficulty: Easy
Acceptance Rate: 60.15%
Paid Only: No
Tags: Array, Binary Search

Problem Description

Given an array of integers `nums` which is sorted in ascending order, and an integer `target`, write a function to search `target` in `nums`. If `target` exists, then return its index. Otherwise, return `-1`.

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

Example 1:

Input: nums = [-1,0,3,5,9,12], target = 9 **Output:** 4 **Explanation:** 9 exists in nums and its index is 4

Example 2:

Input: nums = [-1,0,3,5,9,12], target = 2 **Output:** -1 **Explanation:** 2 does not exist in nums so return -1

Constraints:

* `1 <= nums.length <= 104` * `-104 < nums[i], target < 104` * All the integers in `nums` are **unique**. * `nums` is sorted in ascending order.

Code Snippets

C++:

```
class Solution {
public:
int search(vector<int>& nums, int target) {

}
};
```

Java:

```
class Solution {
public int search(int[] nums, int target) {

}
}
```

Python3:

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