702. Search in a Sorted Array of Unknown Size `Premium`

`Medium`   🏷 Topics   🏢 Companies

This is an **interactive problem**.

You have a sorted array of **unique** elements and an **unknown size**. You do not have an access to the array but you can use the `ArrayReader` interface to access it. You can call `ArrayReader.get(i)` that:

- returns the value at the ith index (**0-indexed**) of the secret array (i.e., `secret[i]`), or

- returns $2^{31} - 1$ if the `i` is out of the boundary of the array.

You are also given an integer `target`.

Return the index `k` of the hidden array where `secret[k] == target` or return `-1` otherwise.

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

Example 1:

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

Example 2:

```
Input: secret = [-1,0,3,5,9,12], target = 2
Output: -1
Explanation: 2 does not exist in secret so return -1.
```
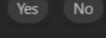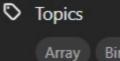
Constraints:

- `1 <= secret.length <= 10⁴`

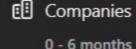- `-10⁴ <= secret[i], target <= 10⁴`

- `secret` is sorted in a strictly increasing order.

Seen this question in a real interview before?   1/5

Yes   No

Accepted **101.7K** | Submissions **140.4K** | Acceptance Rate **72.4%**

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