55. Jump Game

Difficulty	medium
☑	☑
Finished	@July 11, 2023
Problem	array
Previously asked company	Amazon
website	leetcode

Question:

You are given an integer array `nums`. You are initially positioned at the array's **first index**, and each element in the array represents your maximum jump length at that position.

Return `true` *if you can reach the last index, or* `false` *otherwise*.

Example 1:

```
Input: nums = [2,3,1,1,4]
Output: true
Explanation: Jump 1 step from index 0 to 1, then 3 steps to the last index.
```

Example 2:

```
Input: nums = [3,2,1,0,4]
Output: false
Explanation: You will always arrive at index 3 no matter what. Its maximum jump length is
 0, which makes it impossible to reach the last index.
```

Optimal solution:

Time complexity: O(n)

Space complexity: O(1)

```
class Solution(object):
    def canJump(self, nums):
        goal = len(nums) - 1

        for i in range(len(nums)-1, -1, -1):
            if i + nums[i] >= goal:
                goal = i

        return True if goal == 0 else False
```