# Problem 3550: Smallest Index With Digit Sum Equal to Index

## Problem Information

**Difficulty:** Easy
**Acceptance Rate:** 80.06%
**Paid Only:** No
**Tags:** Array, Math

## Problem Description

You are given an integer array `nums`.

Return the **smallest** index `i` such that the sum of the digits of `nums[i]` is equal to `i`.

If no such index exists, return `-1`.

**Example 1:**

**Input:** nums = [1,3,2]

**Output:** 2

**Explanation:**

* For `nums[2] = 2`, the sum of digits is 2, which is equal to index `i = 2`. Thus, the output is 2.

**Example 2:**

**Input:** nums = [1,10,11]

**Output:** 1

**Explanation:**

* For `nums[1] = 10`, the sum of digits is `1 + 0 = 1`, which is equal to index `i = 1`. * For `nums[2] = 11`, the sum of digits is `1 + 1 = 2`, which is equal to index `i = 2`. * Since index 1 is the smallest, the output is 1.

**Example 3:**

**Input:** nums = [1,2,3]

**Output:** -1

**Explanation:**

* Since no index satisfies the condition, the output is -1.

**Constraints:**

* `1 <= nums.length <= 100` * `0 <= nums[i] <= 1000`

## Code Snippets

**C++:**

```
class Solution {
public:
    int smallestIndex(vector<int>& nums) {

    }
};
```

**Java:**

```
class Solution {
    public int smallestIndex(int[] nums) {

    }
}
```

**Python3:**

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