

2905. Find Indices With Index and Value Difference II

Description

You are given a **0-indexed** integer array `nums` having length `n`, an integer `indexDifference`, and an integer `valueDifference`.

Your task is to find **two** indices `i` and `j`, both in the range `[0, n - 1]`, that satisfy the following conditions:

- `abs(i - j) >= indexDifference`, and
- `abs(nums[i] - nums[j]) >= valueDifference`

Return *an integer array* `answer`, *where* `answer = [i, j]` *if there are two such indices*, and `answer = [-1, -1]` *otherwise*. If there are multiple choices for the two indices, return *any of them*.

Note: `i` and `j` may be **equal**.

Example 1:

Input: `nums = [5,1,4,1]`, `indexDifference = 2`, `valueDifference = 4`
Output: `[0,3]`
Explanation: In this example, `i = 0` and `j = 3` can be selected.
`abs(0 - 3) >= 2` and `abs(nums[0] - nums[3]) >= 4`.
Hence, a valid answer is `[0,3]`.
`[3,0]` is also a valid answer.

Example 2:

Input: `nums = [2,1]`, `indexDifference = 0`, `valueDifference = 0`
Output: `[0,0]`
Explanation: In this example, `i = 0` and `j = 0` can be selected.
`abs(0 - 0) >= 0` and `abs(nums[0] - nums[0]) >= 0`.
Hence, a valid answer is `[0,0]`.
Other valid answers are `[0,1]`, `[1,0]`, and `[1,1]`.

Example 3:

Input: `nums = [1,2,3]`, `indexDifference = 2`, `valueDifference = 4`
Output: `[-1,-1]`
Explanation: In this example, it can be shown that it is impossible to find two indices that satisfy both conditions.
Hence, `[-1,-1]` is returned.

Constraints:

- `1 <= n == nums.length <= 105`
- `0 <= nums[i] <= 109`
- `0 <= indexDifference <= 105`
- `0 <= valueDifference <= 109`

