

# 220. Contains Duplicate III

## Description

You are given an integer array `nums` and two integers `indexDiff` and `valueDiff`.

Find a pair of indices `(i, j)` such that:

- `i != j`,
- `abs(i - j) <= indexDiff`.
- `abs(nums[i] - nums[j]) <= valueDiff`, and

Return `true` *if such pair exists or* `false` *otherwise*.

### Example 1:

**Input:** `nums = [1,2,3,1]`, `indexDiff = 3`, `valueDiff = 0`

**Output:** `true`

**Explanation:** We can choose `(i, j) = (0, 3)`.

We satisfy the three conditions:

`i != j --> 0 != 3`

`abs(i - j) <= indexDiff --> abs(0 - 3) <= 3`

`abs(nums[i] - nums[j]) <= valueDiff --> abs(1 - 1) <= 0`

### Example 2:

**Input:** `nums = [1,5,9,1,5,9]`, `indexDiff = 2`, `valueDiff = 3`

**Output:** `false`

**Explanation:** After trying all the possible pairs `(i, j)`, we cannot satisfy the three conditions, so we return `false`.

### Constraints:

- `2 <= nums.length <= 105`
- `-109 <= nums[i] <= 109`
- `1 <= indexDiff <= nums.length`
- `0 <= valueDiff <= 109`

