220. Contains Duplicate III

Hint

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:

- $2 <= nums.length <= 10^5$
- $-10^9 <= nums[i] <= 10^9$
- $1 <= indexDiff <= nums.length$
- $0 <= valueDiff <= 10^9$