Problem 1027: Longest Arithmetic Subsequence

Problem Information

Difficulty: Medium
Acceptance Rate: 49.71%
Paid Only: No
Tags: Array, Hash Table, Binary Search, Dynamic Programming

Problem Description

Given an array `nums` of integers, return _the length of the longest arithmetic subsequence in_ `nums`.

Note that:

* A **subsequence** is an array that can be derived from another array by deleting some or no elements without changing the order of the remaining elements. * A sequence `seq` is arithmetic if `seq[i + 1] - seq[i]` are all the same value (for `0 <= i < seq.length - 1`).

Example 1:

Input: nums = [3,6,9,12] **Output:** 4 **Explanation:** The whole array is an arithmetic sequence with steps of length = 3.

Example 2:

Input: nums = [9,4,7,2,10] **Output:** 3 **Explanation:** The longest arithmetic subsequence is [4,7,10].

Example 3:

Input: nums = [20,1,15,3,10,5,8] **Output:** 4 **Explanation:** The longest arithmetic subsequence is [20,15,10,5].

Constraints:

* `2 <= nums.length <= 1000` * `0 <= nums[i] <= 500`

Code Snippets

C++:

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

}
};
```

Java:

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

}
}
```

Python3:

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