

# Problem 945: Minimum Increment to Make Array Unique

## Problem Information

**Difficulty:** Medium

**Acceptance Rate:** 60.49%

**Paid Only:** No

**Tags:** Array, Greedy, Sorting, Counting

## Problem Description

You are given an integer array `nums`. In one move, you can pick an index `i` where `0 ≤ i < nums.length` and increment `nums[i]` by `1`.

Return the minimum number of moves to make every value in `nums` unique.

The test cases are generated so that the answer fits in a 32-bit integer.

**Example 1:**

**Input:** `nums = [1,2,2]` **Output:** `1` **Explanation:** After 1 move, the array could be `[1, 2, 3]`.

**Example 2:**

**Input:** `nums = [3,2,1,2,1,7]` **Output:** `6` **Explanation:** After 6 moves, the array could be `[3, 4, 1, 2, 5, 7]`. It can be shown that it is impossible for the array to have all unique values with 5 or less moves.

**Constraints:**

`1 ≤ nums.length ≤ 105` `0 ≤ nums[i] ≤ 105`

## Code Snippets

**C++:**

```
class Solution {  
public:  
    int minIncrementForUnique(vector<int>& nums) {  
  
    }  
};
```

**Java:**

```
class Solution {  
    public int minIncrementForUnique(int[] nums) {  
  
    }  
}
```

**Python3:**

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