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Description Solution Discuss (557) Submissions Java Autocomplete

384. Shuffle an Array

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Given an integer array `nums`, design an algorithm to randomly shuffle the array. All permutations of the array should be **equally likely** as a result of the shuffling.

Implement the `Solution` class:

- `Solution(int[] nums)` Initializes the object with the integer array nums.
- `int[] reset()` Resets the array to its original configuration and returns it.
- `int[] shuffle()` Returns a random shuffling of the array.

Example 1:

```
Input
["Solution", "shuffle", "reset", "shuffle"]
[[[1, 2, 3]], [], [], []]
Output
[null, [3, 1, 2], [1, 2, 3], [1, 3, 2]]

Explanation
Solution solution = new Solution([1, 2, 3]);
solution.shuffle();    // Shuffle the array [1,2,3] and return
its result.
                       // Any permutation of [1,2,3] must be
equally likely to be returned.
                       // Example: return [3, 1, 2]
solution.reset();      // Resets the array back to its
original configuration [1,2,3]. Return [1, 2, 3]
solution.shuffle();    // Returns the random shuffling of
array [1,2,3]. Example: return [1, 3, 2]
```

Constraints:

- $1 <= nums.length <= 200$
- $-10^6 <= nums[i] <= 10^6$
- All the elements of `nums` are **unique**.
- At most $5 * 10^4$ calls **in total** will be made to `reset` and `shuffle`.

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```
class Solution {

    public Solution(int[] nums) {
        
    }
    
    /** Resets the array to its original configuration and return it. */
    public int[] reset() {
        
    }
    
    /** Returns a random shuffling of the array. */
    public int[] shuffle() {
        
    }
}

/**
 * Your Solution object will be instantiated and called as such:
 * Solution obj = new Solution(nums);
 * int[] param_1 = obj.reset();
 * int[] param_2 = obj.shuffle();
 */
```

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