

# DSA Assignment - 18 June

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Github Repo Link - [raus-kun/Training\\_Placement](https://github.com/raus-kun/Training_Placement)

## DSA- Section -

### Question 1: Two Sum

Platform: LeetCode

Problem Link: <https://leetcode.com/problems/two-sum/>

Screenshot:

The screenshot shows the LeetCode interface for the 'Two Sum' problem. The problem description states: 'Given an array of integers `nums` and an integer `target`, return *indices of the two numbers such that they add up to `target`*.' It also mentions that there is exactly one solution and that the same element cannot be used twice. Examples provided are: Example 1: Input: `nums = [2,7,11,15]`, `target = 9`, Output: `[0,1]`; Example 2: Input: `nums = [3,2,4]`, `target = 6`, Output: `[1,2]`; Example 3: Input: `nums = [3,3]`, `target = 6`, Output: `[0,1]`. The code editor shows a Python solution using a hash map to find the complement of each number in the array.

```
1 class Solution:
2     def twoSum(self, nums, target):
3         num_to_index = {}
4
5         for i, num in enumerate(nums):
6             complement = target - num
7             if complement in num_to_index:
8                 return [num_to_index[complement], i]
9             num_to_index[num] = i
10
11     # As per problem, there's always one solution.
12     return []
```

### Question 2: Alone in Couple

Platform: GeeksforGeeks

Problem Link: <https://www.geeksforgeeks.org/problems/alone-in-couple5507/0>

Submission Screenshot:

The screenshot shows the GeeksforGeeks submission page for the 'Alone in Couple' problem. The page indicates that the problem was solved successfully with 1111/1111 test cases passed, 1/1 attempts correct, and a score of 2/2. The code editor shows a Python3 solution using XOR to find the single element in an array where every other element appears twice.

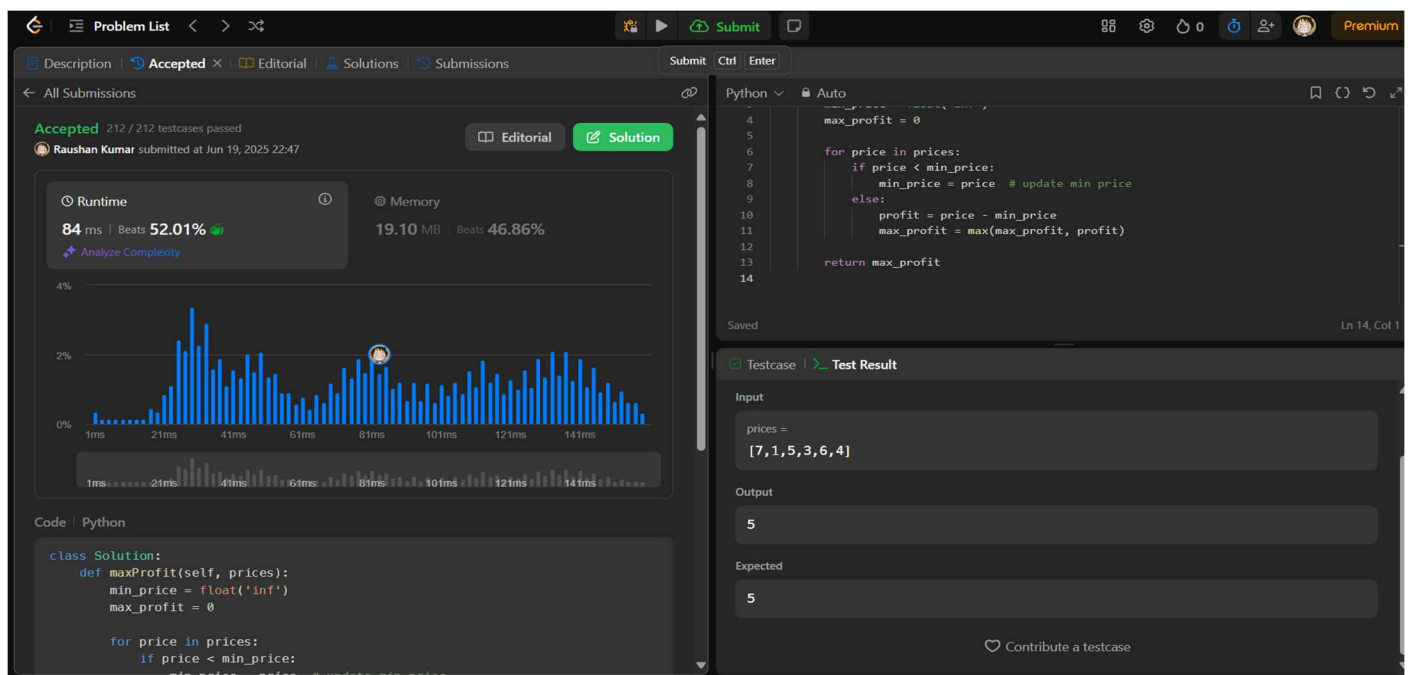
```
1 class Solution:
2     def findSingle(self, arr):
3         result = 0
4         for num in arr:
5             result ^= num # XOR cancels out all pairs
6         return result
```

### Question 3: Best Time to Buy and Sell Stock

Platform: LeetCode

Problem Link: <https://leetcode.com/problems/best-time-to-buy-and-sell-stock/>

Submission Screenshot:



### Question 4: Sort Colors

Platform: LeetCode

Problem Link: <https://leetcode.com/problems/sort-colors/>

