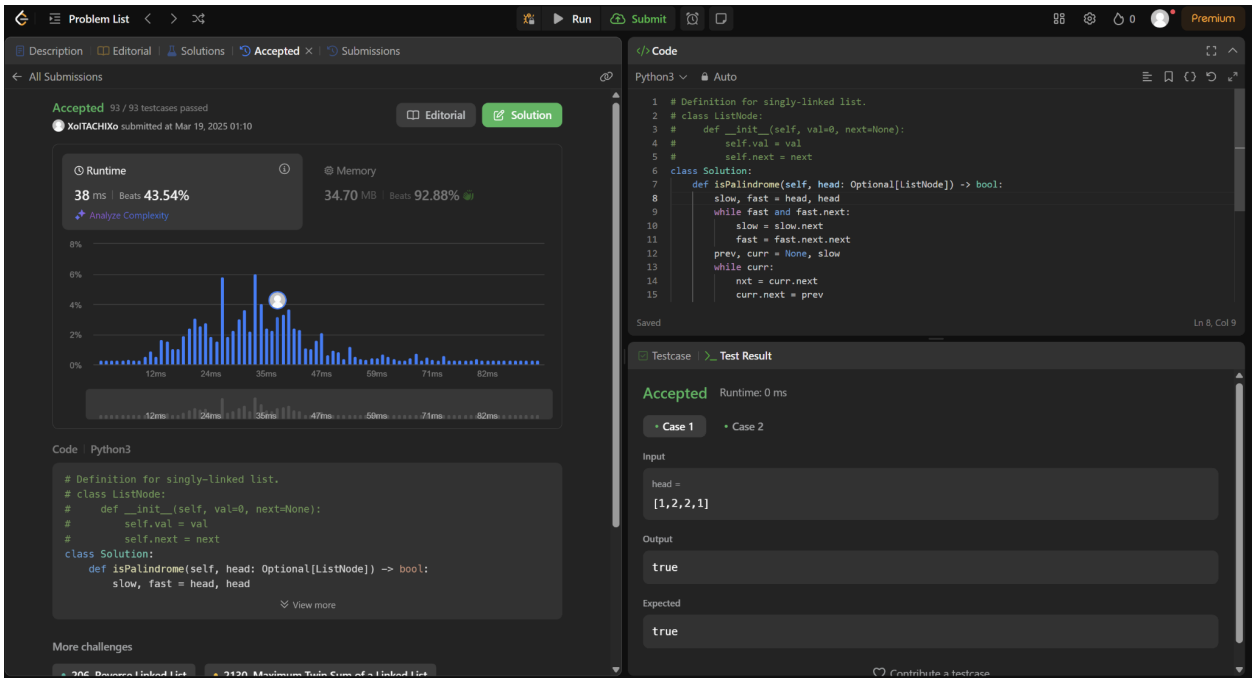
# LEETCODE BOOTCAMP

## ASSIGNMENT 3

```python
# Definition for singly-linked list.
# class ListNode:
#     def __init__(self, val=0, next=None):
#         self.val = val
#         self.next = next
class Solution:
    def isPalindrome(self, head: Optional[ListNode]) -> bool:
        slow, fast = head, head
        while fast and fast.next:
            slow = slow.next
            fast = fast.next.next
        prev, curr = None, slow
        while curr:
            nxt = curr.next
            curr.next = prev
            prev = curr
            curr = nxt
        while prev:
            if prev.val != head.val: return False
            prev, head = prev.next, head.next
        return True
```

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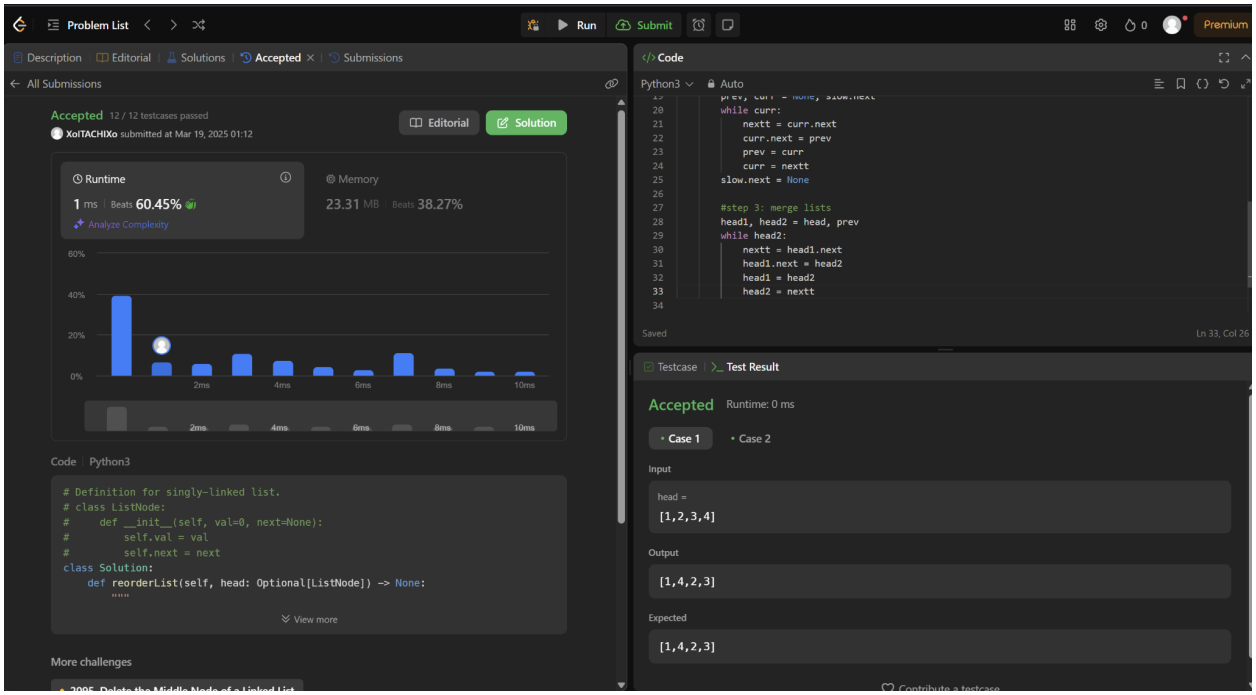


```python
class Solution:
    def setZeroes(self, matrix: List[List[int]]) -> None:
        """
        Do not return anything, modify matrix in-place instead.
        """
        m, n = len(matrix), len(matrix[0])
        firstRowZero = any(matrix[0][j] == 0 for j in range(n))
        firstColZero = any(matrix[i][0] == 0 for i in range(m))

        # Mark zeros in the first row and column
        for i in range(1, m):
            for j in range(1, n):
                if matrix[i][j] == 0:
                    matrix[i][0] = 0
                    matrix[0][j] = 0

        # Set matrix cells to zero based on markers
        for i in range(1, m):
```

```
            for j in range(1, n):
                if matrix[i][0] == 0 or matrix[0][j] == 0:
                    matrix[i][j] = 0

        # Zero out the first row if needed
        if firstRowZero:
            for j in range(n):
                matrix[0][j] = 0

        # Zero out the first column if needed
        if firstColZero:
            for i in range(m):
                matrix[i][0] = 0
```