WORKSHEET - 4

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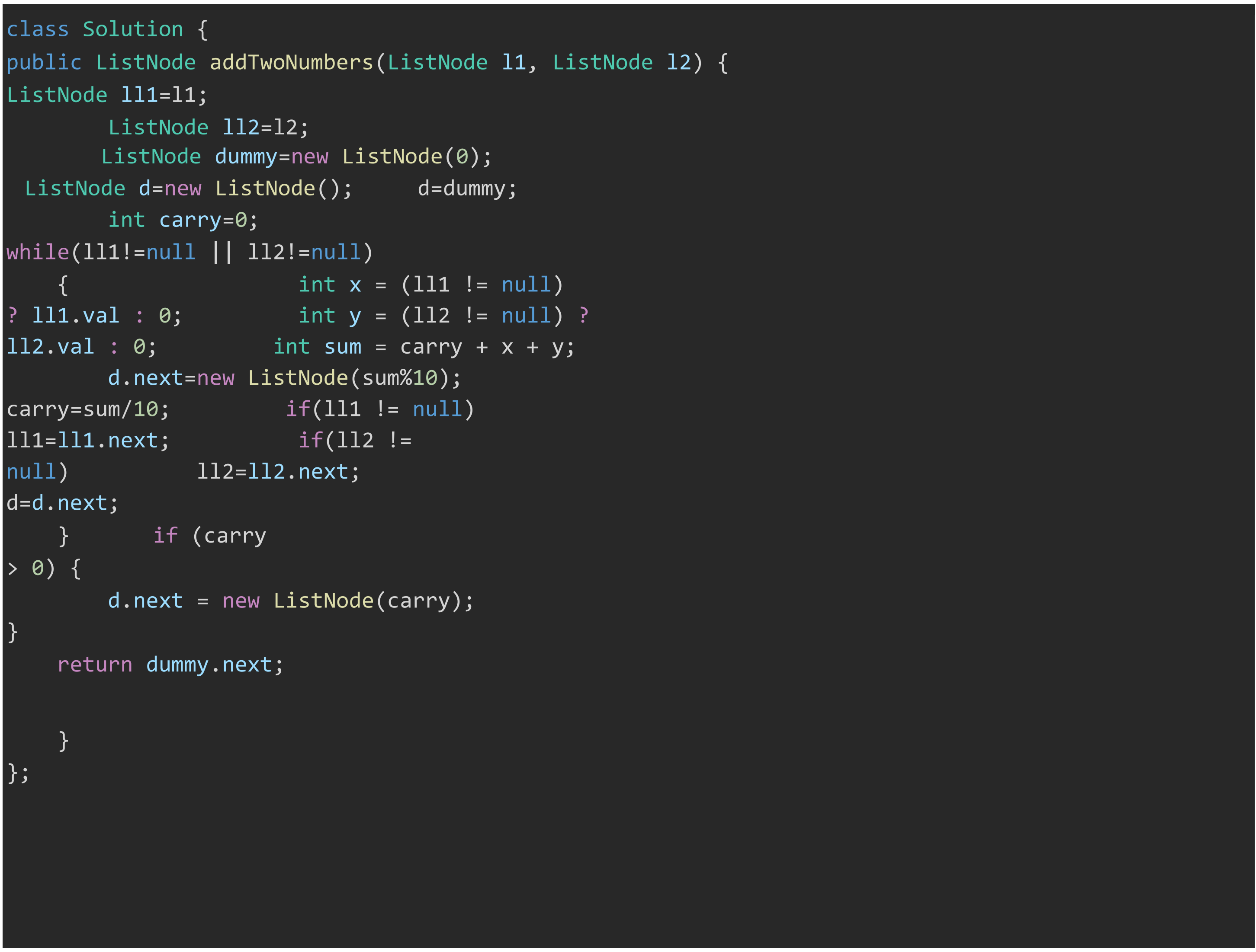
Branch: CSE

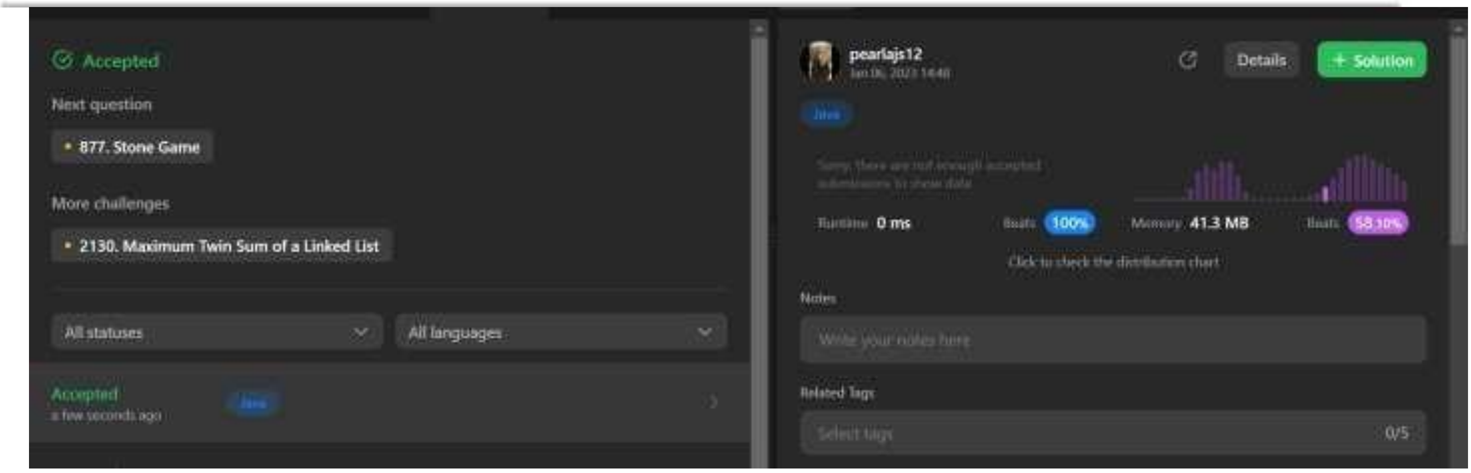
Section: DWWC - 43

Q1) **ADD TWO NUMBERS:-**



```
class Solution {
public ListNode addTwoNumbers(ListNode l1, ListNode l2) {
ListNode ll1=l1;
        ListNode ll2=l2;
       ListNode dummy=new ListNode(0);
 ListNode d=new ListNode();     d=dummy;
        int carry=0;
while(ll1!=null || ll2!=null)
    {                  int x = (ll1 != null)
? ll1.val : 0;         int y = (ll2 != null) ?
ll2.val : 0;         int sum = carry + x + y;
        d.next=new ListNode(sum%10);
carry=sum/10;          if(ll1 != null)
ll1=ll1.next;           if(ll2 !=
null)          ll2=ll2.next;
d=d.next;
    }      if (carry
> 0) {
        d.next = new ListNode(carry);
}
    return dummy.next;


    }
};
```



Accepted

Next question

- 877. Stone Game

More challenges

- 2130. Maximum Twin Sum of a Linked List

All statuses | All languages

Accepted
a few seconds ago
Java

pearlajs12
Jan 06, 2023 14:48

Java

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Runtime 0 ms Beats 100% Memory 41.3 MB Beats 58.10%

Click to check the distribution chart

Notes

Write your notes here

Related Tags

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Q2) Palindrome Linked List

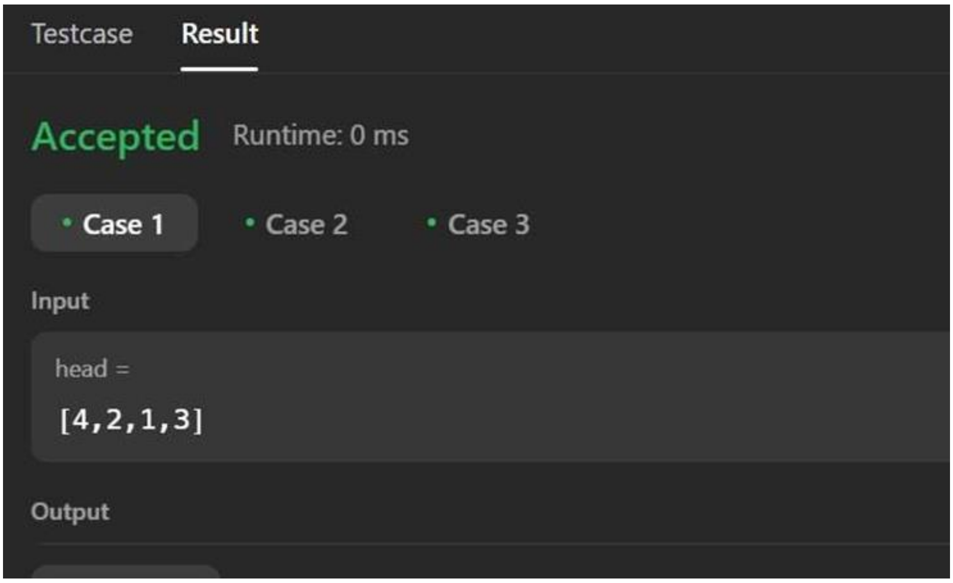
Code:-

```
class
{
   ListNode getMid(ListNode head) {
                        ListNode slow = head, fast = head;      while
(fast != null) {
                                    slow = slow.next;
                                    fast = fast.next == null ? null : fast.next.next;
                        }
                        return slow;
            }

            ListNode reverse(ListNode head) {
                        ListNode prev = null, curr = head, next = head.next;
    while (curr != null) {         curr.next =
prev;                               prev = curr;
            curr = next;                              if
(next != null)
                                                next = next.next;
                        }
                        return prev;
            }
```

```
          boolean isPalindrome(ListNode head) {
          if (head == null) return false;               ListNode mid = getMid(head);
                    if (mid != null) // this is to handle when there is only 1 element
                    mid = reverse(mid);
                    ListNode pointer_1 = head, pointer_2 = mid;
          while (pointer_1 != null && pointer_2 != null) {
                    if (pointer_1.val != pointer_2.val)
                    return false;
                              pointer_1 = pointer_1.next;
pointer_2 = pointer_2.next;
                    }
                    return true;
          }
}
```

OUTPUT:-



Testcase Result

Accepted Runtime: 0 ms

Case 1 Case 2 Case 3

Input

head =

[4,2,1,3]

Output

Q3) TEMPLE LAND:-

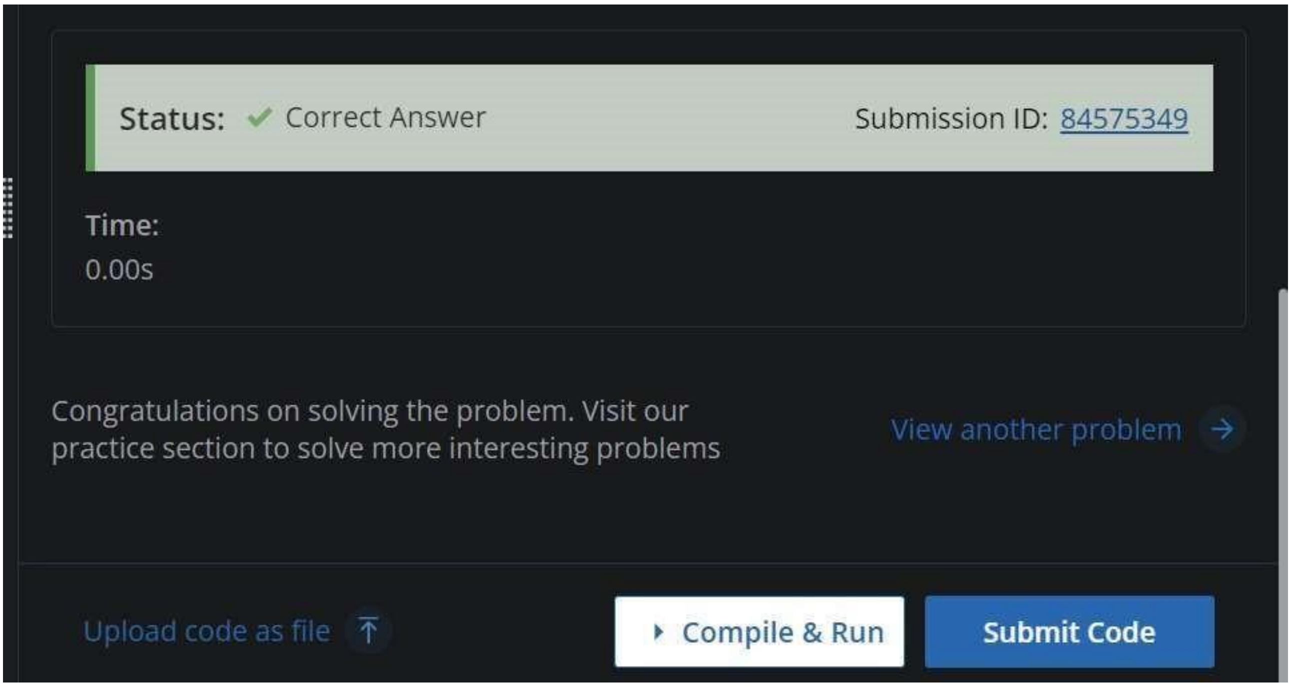
Ans)

```
#include <bits/stdc++.h>
using namespace std;

int main() {
            // ASHISH RANA
 int t;   cin>>t;             while(t-){
                int n;                cin>>n;
                vector<int>a(n);
for(auto &i:a)cin>>i;

                if(n&1){           bool flag=1;
                   for(int i=0;i<=n/2;i++){
                       if(i+1!=a[i])flag=0;
         }                              for(int
i=n/2+1;i<n;i++){
if(ni!=a[i])            flag=0;
       }
                   cout<<(flag?"yes":"no")<<'\n';
                }          else
cout<<"no\n";
            }
            return 0;
}
```

OUTPUT:-



Status: ✓ Correct Answer Submission ID: 84575349

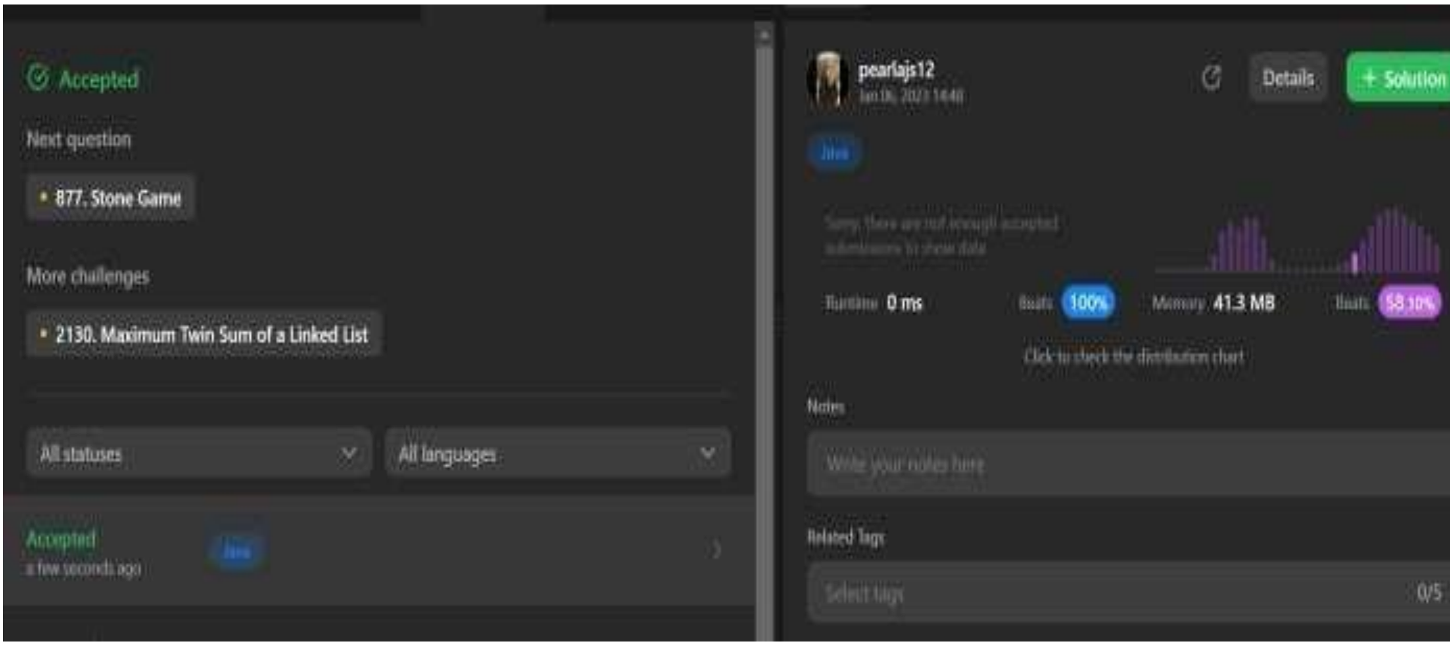
Time:
0.00s

Congratulations on solving the problem. Visit our practice section to solve more interesting problems

Q4) MIDDLE OF LINKED LIST

```
class Solution {
    public ListNode middleNode(ListNode head) {
ListNode slow = head, fast = head;          while
(fast != null && fast.next != null) {
slow = slow.next;              fast =
fast.next.next;          }
        return slow;
    } }
```

OUTPUT:-



Accepted

Next question

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More challenges

- 2130. Maximum Twin Sum of a Linked List

All statuses

All languages

Accepted
a few seconds ago

pearlajs12
Jan 06, 2023 16:48

Sorry, there are not enough accepted submissions to show data

Runtime 0 ms Beats 100% Memory 41.3 MB Beats 58.10%

Click to check the distribution chart

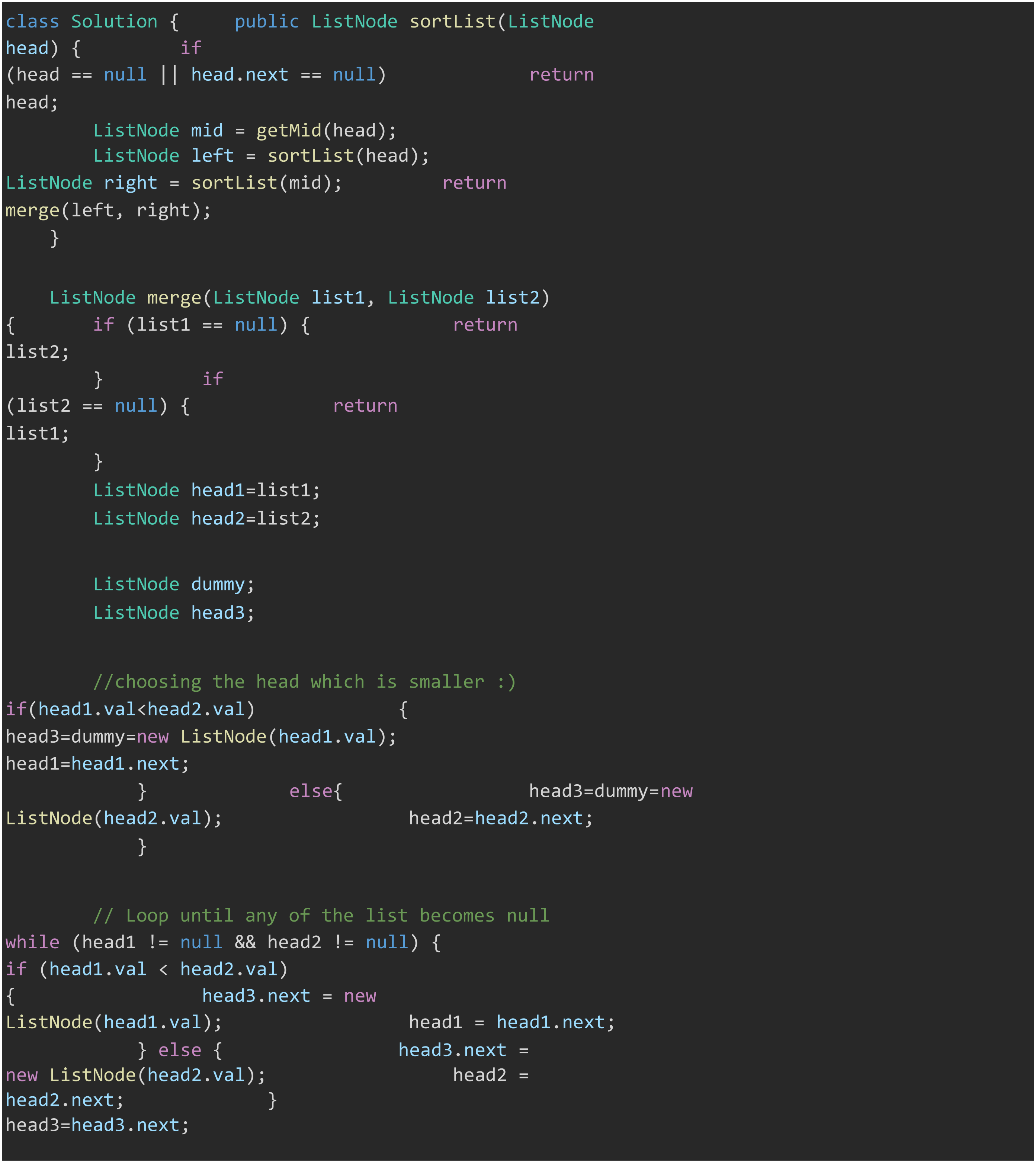
Notes

Write your notes here

Related Tags

Select tags 0/5

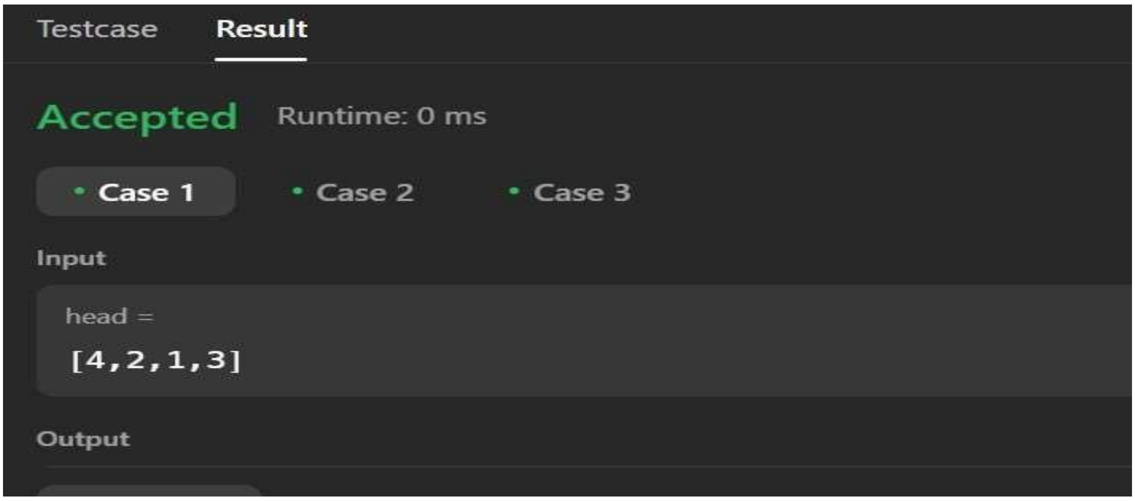
Q5) LONG LONG SUM:-



```
class Solution {     public ListNode sortList(ListNode
head) {          if
(head == null || head.next == null)             return
head;
        ListNode mid = getMid(head);
        ListNode left = sortList(head);
ListNode right = sortList(mid);         return
merge(left, right);
    }

    ListNode merge(ListNode list1, ListNode list2)
{       if (list1 == null) {             return
list2;
        }         if
(list2 == null) {             return
list1;
        }
        ListNode head1=list1;
        ListNode head2=list2;


        ListNode dummy;
        ListNode head3;


        //choosing the head which is smaller :)
if(head1.val<head2.val)             {
head3=dummy=new ListNode(head1.val);
head1=head1.next;
            }             else{                head3=dummy=new
ListNode(head2.val);                 head2=head2.next;
            }


        // Loop until any of the list becomes null
while (head1 != null && head2 != null) {
if (head1.val < head2.val)
{                 head3.next = new
ListNode(head1.val);                 head1 = head1.next;
            } else {                 head3.next =
new ListNode(head2.val);                  head2 =
head2.next;             }
head3=head3.next;
```

```
         }


                          while(head1!=null)
        {
head3.next=new ListNode(head1.val);
head1=head1.next;
head3=head3.next;          }
while(head2!=null)
        {              head3.next=new
ListNode(head2.val);
head2=head2.next;             head3=head3.next;
        }
return dummy;
    }
    ListNode getMid(ListNode head) {          ListNode
midPrev = null;         while (head != null && head.next
!= null) {              midPrev = (midPrev == null) ? head
: midPrev.next;              head = head.next.next;
        }
        ListNode mid =
midPrev.next;         midPrev.next
= null;         return mid;
    }
}
```

OUTPUT:-



Testcase Result

Accepted Runtime: 0 ms

Case 1 Case 2 Case 3

Input

head =

[4,2,1,3]

Output