



# DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

## Experiment 2

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**Semester:6<sup>TH</sup>**

**Date of Performance:27/01/25**

**Subject Name: AP LAB 2**

**Subject Code:22CSP-351**

### 1. Aim: Linked List

**a. Remove Duplicates from A Sorted List**

**b. Merge Two Sorted Linked Lists**

### 2. Code:

```
a. class Solution {  
    public ListNode deleteDuplicates(ListNode head) {  
        ListNode temp = head;  
        while (temp != null && temp.next != null) {  
            if (temp.val == temp.next.val) {  
                temp.next = temp.next.next;  
            } else {  
                temp = temp.next;  
            }  
        }  
        return head;  
    }  
}
```

```
b. class Solution {  
    public ListNode mergeTwoLists(ListNode list1, ListNode list2) {  
        ListNode dummy = new ListNode();  
        ListNode cur = dummy;  
        while (list1 != null && list2 != null) {  
            if (list1.val < list2.val) {  
                cur.next = list1;  
                list1 = list1.next;  
            } else {  
                cur.next = list2;  
                list2 = list2.next;  
            }  
        }  
        if (list1 != null) {  
            cur.next = list1;  
        } else if (list2 != null) {  
            cur.next = list2;  
        }  
        return dummy.next;  
    }  
}
```



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```
        list1 = list1.next;
    }
    cur = cur.next;
}
cur.next = (list1 != null) ? list1 : list2;
return dummy.next;
}
```

### 3. Output:

a.

Testcase Test Result

Accepted Runtime: 0 ms

Case 1 Case 2

Input

head =

[1, 1, 2]

Output

[1, 2]

Expected

[1, 2]

Testcase Test Result

Accepted Runtime: 0 ms

Case 1 Case 2

Input

head =

[1, 1, 2, 3, 3]

Output

[1, 2, 3]

Expected

[1, 2, 3]

b.

Testcase Test Result

Accepted Runtime: 0 ms

Case 1 Case 2 Case 3

Input

head1 =

[1, 2, 4]

head2 =

[1, 3, 4]

Output

[1, 1, 2, 3, 4, 4]

Expected

[1, 1, 2, 3, 4, 4]

Testcase Test Result

Accepted Runtime: 0 ms

Case 1 Case 2 Case 3

Input

head1 =

[]

head2 =

[]

Output

[]

Expected

[]

Testcase Test Result

Accepted Runtime: 0 ms

Case 1 Case 2 Case 3

Input

head1 =

[]

head2 =

[0]

Output

[0]

Expected

[0]