

Lab Program 4(B)

1)

Program - LeetCode program :-

Code :-

```
struct ListNode* middleNode(struct ListNode* head) {  
    struct ListNode *slow = head;  
    struct ListNode *fast = head;  
  
    while (fast != NULL && fast->next != NULL) {  
        slow = slow->next;  
        fast = fast->next->next;  
    }  
  
    return slow;  
}
```

OUTPUT :-

Case 1:-



The screenshot shows a LeetCode test results page. At the top, there are two buttons: "Testcase" (with a checked checkbox) and "Test Result". Below these, the status is "Accepted" and the runtime is "0 ms". There are two case selection buttons: "Case 1" (checked) and "Case 2". The "Input" field contains "head = [1,2,3,4,5]". The "Output" field contains "[3,4,5]". The "Expected" field also contains "[3,4,5]".

Case 2 :-

The screenshot shows a LeetCode test case results page. At the top, there are two tabs: "Testcase" and "Test Result". The "Test Result" tab is selected, showing the status "Accepted" and a runtime of "0 ms". Below the tabs, there are two buttons: "Case 1" and "Case 2", with "Case 2" being the active one. The "Input" section contains the code "head = [1,2,3,4,5,6]". The "Output" section contains the code "[4,5,6]". The "Expected" section also contains the code "[4,5,6]". At the bottom right of the input/output sections, there is a button labeled "Contribute a testcase".

2)

Program - LeetCode program :-

Code :-

```
struct ListNode* removeElements(struct ListNode* head, int val) {  
    while (head != NULL && head->val == val) {  
        head = head->next;  
    }  
  
    struct ListNode *curr = head;  
  
    while (curr != NULL && curr->next != NULL) {  
        if (curr->next->val == val) {  
            curr->next = curr->next->next;  
        } else {  
            curr = curr->next;  
        }  
    }  
  
    return head;  
}
```

OUTPUT :-

Case 1 :-

Testcase | [Test Result](#)

Accepted Runtime: 0 ms

Case 1 Case 2 Case 3

Input

```
head =
[1,2,6,3,4,5,6]
```

val =

```
6
```

Output

```
[1,2,3,4,5]
```

Expected

```
[1,2,3,4,5]
```

Case 2 :-

Testcase | [Test Result](#)

Accepted Runtime: 0 ms

Case 1 Case 2 Case 3

Input

```
head =
[]
```

val =

```
1
```

Output

```
[]
```

Expected

```
[]
```

Case 3 :-

Testcase | [Test Result](#)

Accepted Runtime: 0 ms

Case 1 Case 2 Case 3

Input

```
head =  
[7,7,7,7]
```

val =
7

Output

```
[]
```

Expected

```
[]
```