

## Lab2-1 Remove Duplicate Linked List

Write a program to input the sorted linked list. Delete all nodes that have duplicate numbers, leaving only distinct numbers from the sorted original list.

# This is the structure of a linked list in this question

```
struct ListNode {  
    int val;  
    struct ListNode *next;  
};
```

## You have to solve this question using pointer only

### If output empty print None

**Input:** First line : integer  $X_i$  is a member of linked list, index equal to  $i$

while  $-10000 \leq X_i \leq 10000$  and with END

**Output:** First line : Distinct numbers from the original list.

Input	Output
3 4 5 5 5 6 7 7 7 8 9 10 END	3 4 6 8 9 10
28 30 32 32 34 36 END	28 30 34 36

## Lab2-2 Reverse Linked List

Write a program to input the linked list. reverse the linked list from provided start point to the endpoint.

# This is the structure of a linked list in this question

```
struct ListNode {  
    int val;  
    struct ListNode *next;  
};
```

## You have to solve this question using pointer only

**Input:** First line : integer Xi is a member of linked list, index equal to i while  $-10000 \leq X_i \leq 10000$  and with END

Second line : integer StartPoint and EndPoint #  $\text{StartPoint} \leq \text{EndPoint}$

**Output:** First line : Reverse Linked List.

Input	Output
3 4 5 6 7 8 9 END 2 4	3 6 5 4 7 8 9
28 30 32 32 34 36 END 2 6	28 36 34 32 32 30

### Lab2-3 Palindrome (Drop One)

Write a program to input the linked list. Drop one number from linked list to create palindrome linked list, return the drop index.

# if linked list already palindrome or can not make palindrome print None

## You have to solve this question using pointer only

### if multiple possible drop index found, output the smallest index

**Input:** First line : integer Xi is a member of linked list, index equal to i while  $-10000 \leq X_i \leq 10000$  and with END

**Output:** First line : Drop index.

Input	Output
3 2 1 1 1 3 END	1
4 2 1 7 2 1 1 2 2 7 1 2 4 END	7