```
//Created By Ritwik Chandra Pandey on 03/03/21
//183215
//Remove Duplicates in LL (sort independent)



/* C Program to remove duplicates from a linked list */
#include<stdio.h>
#include<stdlib.h>

/* Structure for a node */
struct node
{
    int data;
    struct node* next;
};

void addNodes(struct node **first, int x) {
    struct node *temp = (struct node*) malloc(sizeof(struct node));
    struct node *lastNode = *first;

    temp -> data = x;
    if ((*first) == NULL) {
        (*first) = temp;
    } else {
        while (lastNode -> next != NULL) {
            lastNode = lastNode -> next;
        }
        lastNode -> next = temp;
    }


}


/* Function to print nodes */
void display_list(struct node *node)
{
```

```
    while (node!=NULL)
    {
        printf("%d ", node->data);
        node = node -> next;
    }
}

/* Function to remove duplicates from a sorted list */
void remove_duplicate_elements(struct node* head)
{
    struct node* current = head;

    struct node* next_next;

    if (current == NULL)
        return;

    while (current -> next != NULL)
    {
        /* Compare current node with its next */
        if (current -> data == current -> next -> data)
        {
            next_next = current -> next -> next;
            free(current -> next);
            current -> next = next_next;
        }
        else
        {
            current = current -> next;
        }
    }
}




int main()
{
    struct node* head = NULL;
```

```
    int x;

    printf("Enter elements up to -1 : ");
    scanf("%d", &x);
    while (x != -1) {
        addNodes(&head,x);
        scanf("%d", &x);
    }


    printf("\nLinked list before removing duplicates : ");
    display_list(head);
    printf("\n");
    remove_duplicate_elements(head);
    printf("\nLinked list after removing duplicates : ");

    display_list(head);
    printf("\n");



    return 0;
}
```