

# Rajalakshmi Engineering College

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## NeoColab\_REC\_CS23231\_DATA STRUCTURES

### REC\_DS using C\_Week 1\_COD\_Question 6

Attempt : 1  
Total Mark : 10  
Marks Obtained : 10

#### Section 1 : Coding

##### 1. Problem Statement

John is tasked with creating a program to manage student roll numbers using a singly linked list.

Write a program for John that accepts students' roll numbers, inserts them at the end of the linked list, and displays the numbers.

##### ***Input Format***

The first line of input consists of an integer N, representing the number of students.

The second line consists of N space-separated integers, representing the roll numbers of students.

##### ***Output Format***

The output prints the space-separated integers singly linked list, after inserting the roll numbers of students at the end.

Refer to the sample output for formatting specifications.

### **Sample Test Case**

Input: 5

23 85 47 62 31

Output: 23 85 47 62 31

### **Answer**

```
// You are using GCC
#include<stdio.h>
#include<stdlib.h>
struct node
{
    int roll;
    struct node *next;
};
struct node *createnode(int data)
{
    struct node *newnode=(struct node*)malloc(sizeof(struct node));
    newnode->roll=data;
    newnode->next=NULL;
    return newnode;
}
void list(struct node **head,int n)
{
    struct node *temp;
    for(int i=0;i<n;i++)
    {
        int roll;
        scanf("%d",&roll);
        struct node *newnode=createnode(roll);
        if(*head==NULL)
        {
            *head=newnode;
            temp=newnode;
        }
    }
}
```

```
        else
        {
            temp->next=newnode;
            temp=newnode;
        }
    }
}

void display(struct node *head)
{
    struct node *temp=head;
    while(temp!=NULL)
    {
        printf("%d ",temp->roll);
        temp=temp->next;
    }
}

int main()
{
    int n;
    scanf("%d",&n);
    struct node *head=NULL;
    list(&head,n);
    display(head);
    return 0;
}
```

**Status :** Correct

**Marks :** 10/10