

# Rajalakshmi Engineering College

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Branch: REC

Department: I AIML AD

Batch: 2028

Degree: B.E - AI & ML

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## NeoColab\_REC\_CS23231\_DATA STRUCTURES

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

Attempt : 2

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**

```
#include<stdio.h>
#include<stdlib.h>
struct Node{
    int data;
    struct Node* next;
};
struct Node* insert(struct Node* head,int value){
    struct Node* newNode=(struct Node*)malloc(sizeof(struct Node));
    newNode->data=value;
    newNode->next=NULL;
    if(head==NULL){
        return newNode;
    }
    struct Node* temp=head;
    while(temp->next!=NULL){
        temp=temp->next;
    }
    temp->next=newNode;
    return head;
}
void printList(struct Node* head){
    struct Node*temp=head;
    while(temp!=NULL){
        printf("%d ",temp->data);
        temp=temp->next;
    }
}
void freeList(struct Node* head){
```

```
    struct Node* temp;
    while(head!=NULL){
        temp=head;
        head=head->next;
        free(head);
    }
}
int main(){
    int n;
    scanf("%d",&n);
    struct Node* head=NULL;
    for(int i=0;i<n;i++){
        int v;
        scanf("%d",&v);
        head=insert(head,v);
    }
    printList(head);
    return 0;
}
```

**Status :** Correct

**Marks : 10/10**