

# 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**

```
#include<stdio.h>
#include<stdlib.h>
#include<stdlib.h>

typedef struct node{
    int data;
    struct node *next;
}node;

node *create(int val){
    node *newnode=(node*)malloc(sizeof(node));
    newnode->data=val;
    newnode->next=0;
    return newnode;
}

void insert(node **head,int data){
    node*newnode=create(data);
    if(*head==0){
        *head=newnode;
    }
    else{
        node*temp=*head;
        while(temp->next!=0){
            temp=temp->next;
        }
        temp->next=newnode;
    }
}
```

```
void printlist(node*head){
    node*temp=head;
    while(temp!=0){
        printf("%d",temp->data);
        temp=temp->next;
    }
}
int main(){
    int n,val;
    node*head=0;
    scanf("%d",&n);
    for(int i=0;i<n;i++){
        scanf("%d",&val);
        insert(&head,val);
    }
    printlist(head);
}
```

**Status :** Correct

**Marks :** 10/10