

# Rajalakshmi Engineering College

Name: Gowtham M  
Email: 241501059@rajalakshmi.edu.in  
Roll no: 241501059  
Phone: 8778441691  
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 : 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 data;
```

```
    struct node* next;
```

```
};
```

```
struct node* memorycreate(int data){
```

```
    struct node* newnode;
```

```
    newnode=(struct node*)malloc(sizeof(struct node));
```

```
    newnode->data=data;
```

```
    newnode->next=NULL;
```

```
    return newnode;
```

```
}
```

```
void insert(struct node** head,int data){
```

```
    struct node* newnode=memorycreate(data);
```

```
    if(*head==NULL){
```

```
        *head=newnode;
```

```
        return;
```

```
    }
```

```
    else{
```

```
        struct node* temp=*head;
```

```
        while(temp->next!=NULL){
```

```
            temp=temp->next;
```

```
        }
```

```
        temp->next=newnode;
```

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

**Status :** Correct

**Marks : 10/10**