

# 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>
```

```
struct Node {
    int data;
    struct Node* next;
};
```

```
void insertEnd(struct Node** head, int value) {
    struct Node* newNode = (struct Node*)malloc(sizeof(struct Node));
    newNode->data = value;
    newNode->next = NULL;
```

```
    if (*head == NULL) {
        *head = newNode;
        return;
    }
```

```
    struct Node* temp = *head;
    while (temp->next != NULL)
        temp = temp->next;
```

```
    temp->next = newNode;
}
```

```
void displayList(struct Node* head) {
```

```
    struct Node* temp = head;
    while (temp != NULL) {
        printf("%d", temp->data);
        if (temp->next != NULL)
            printf(" ");
        temp = temp->next;
    }
    printf("\n");
}
```

```
int main() {
    int n, roll;
    struct Node* head = NULL;

    scanf("%d", &n);

    for (int i = 0; i < n; i++) {
        scanf("%d", &roll);
        insertEnd(&head, roll);
    }
```

```
    displayList(head);
```

```
    return 0;
}
```

**Status :** Correct

**Marks :** 10/10