# Rajalakshmi Engineering College

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## NeoColab_REC_CS23231_DATA STRUCTURES

### REC_DS using C_Week 1_COD_Question 4

Attempt : 1
Total Mark : 10
Marks Obtained : 10

### Section 1 : Coding

1. Problem Statement

As part of a programming assignment in a data structures course, students are required to create a program to construct a singly linked list by inserting elements at the beginning.

You are an evaluator of the course and guide the students to complete the task.

***Input Format***

The first line of input consists of an integer N, which is the number of elements.

The second line consists of N space-separated integers.

***Output Format***

The output prints the singly linked list elements, after inserting them at the beginning.

Refer to the sample output for formatting specifications.

***Sample Test Case***

Input: 5
78 89 34 51 67

Output: 67 51 34 89 78

***Answer***

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

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

void insertAtFront(struct Node**head,int value){
   struct Node* newNode=(struct Node*)malloc(sizeof(struct Node));
   if(newNode==NULL){
      return;
   }
   newNode->data=value;
   newNode->next=*head;
   *head=newNode;
}
void printList(struct Node*head){
   struct Node* current=head;
   while(current!=NULL){
      printf("%d",current->data);
      current=current->next;
   }
}

int main(){
   struct Node* head = NULL;

   int n;
```

```
    scanf("%d", &n);

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

    printList(head);
    struct Node* current = head;
    while (current != NULL) {
        struct Node* temp = current;
        current = current->next;
        free(temp);
    }

    return 0;
}
```

***Status :*** Correct ***Marks : 10/10***