# Rajalakshmi Engineering College

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## NeoColab_REC_CS23231_DATA STRUCTURES

## REC_DS using C_Week 2_COD_Question 4

Attempt : 1
Total Mark : 10
Marks Obtained : 10

## Section 1 : Coding

1.  Problem Statement

Ravi is developing a student registration system for a college. To efficiently store and manage the student IDs, he decides to implement a doubly linked list where each node represents a student's ID.

In this system, each student's ID is stored sequentially, and the system needs to display all registered student IDs in the order they were entered.

Implement a program that creates a doubly linked list, inserts student IDs, and displays them in the same order.

### Input Format

The first line contains an integer N the number of student IDs.

The second line contains N space-separated integers representing the student IDs.

### Output Format

The output should display the single line containing N space-separated integers representing the student IDs stored in the doubly linked list.

Refer to the sample output for formatting specifications.

### Sample Test Case

Input: 5
10 20 30 40 50
Output: 10 20 30 40 50

### Answer

```
#include<stdio.h>
#include<stdlib.h>
struct Node
{
    int n;
    struct Node *next;
    struct Node *pre;
}*start,*ptr;

int main()
{
    start=NULL;
    int a;
    scanf("%d",&a);
    while(a)
    {
        struct Node *new1;
        new1=(struct Node*)malloc(sizeof(struct Node));
        scanf("%d",&new1->n);
        new1->next=NULL;
        new1->pre=NULL;
        if(start==NULL)
        start=new1;
        else
```

```
    {
        for(ptr=start;ptr->next!=NULL;ptr=ptr->next);
        new1->pre=ptr;
        ptr->next=new1;
    }
    a--;
  }
  for(ptr=start;ptr!=NULL;ptr=ptr->next)
  printf("%d ",ptr->n);
}
```

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