

Rajalakshmi Engineering College

Name: Jeevaveni S
Email: 241501076@rajalakshmi.edu.in
Roll no: 241501076
Phone: 9342214985
Branch: REC
Department: I AIML AD
Batch: 2028
Degree: B.E - AI & ML

Scan to verify results



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 data;
    struct node*blink,*flink;
};
void insertatend(struct node**head,int x)
{
    struct node*newnode;
    newnode=(struct node*)malloc(sizeof(struct node));
    if(newnode!=NULL)
    {
        if(*head==NULL)
        {
            newnode->data=x;
            newnode->blink=NULL;
            newnode->flink=NULL;
            *head=newnode;
        }
        else
        {
            struct node*p;
            p=*head;
```

```

        while(p->flink!=NULL)
        {
            p=p->flink;
            newnode->data=x;
            newnode->flink=NULL;
            p->flink=newnode;
            newnode->blink=p;
        }
    }
}
int main()
{
    struct node*head=NULL;
    int n,x;
    scanf("%d",&n);
    for(int i=0;i<n;i++)
    {
        scanf("%d",&x);
        insertatend(&head,x);
    }
    struct node*p=head;
    while(p!=NULL){
        printf("%d ",p->data);
        p=p->flink;
    }
}

```

Status : Correct

Marks : 10/10