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 e;
   struct node *prev;
   struct node *next;
};
typedef struct node Node;
int main(){
   Node *List=NULL;
   Node *pos;
   int n;
   scanf("%d",&n);
   for(int i=0;i<n;i++){
      Node *newnode=(Node*)malloc(sizeof(Node));
      scanf("%d",&newnode->e);
      if(List==NULL){
         List=newnode;
      }else{
         pos=List;
         while(pos->next!=NULL){
            pos=pos->next;
         }
         pos->next=newnode;
```

```
            newnode->prev=pos;
        }

    }
    pos=List;
    while(pos!=NULL){
        printf("%d ",pos->e);
        pos=pos->next;
    }
}
```

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