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 data;
    struct node *next;
    struct node *prev;
 } *head=NULL,*tail=NULL;
void insert()
 {
    struct node *temp=(struct node*)malloc(sizeof(struct node)),*a=head;
    scanf("%d",&temp->data);
    if(head==NULL)
     {
        head=tail=temp;
        temp->next=NULL;
        temp->prev=NULL;
     }
    else
     {
        tail->next=temp;
        temp->prev=tail;
        temp->next=NULL;
        tail=temp;
```

```
    }
  }
void print()
  {
     struct node *a=head;
     while(a!=NULL)
      {
         printf("%d ",a->data);
         a=a->next;
      }
  }
int main()
  {
     int n;
     scanf("%d",&n);
     while(n--)
       insert();
     print();
  }
```

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