Rajalakshmi Engineering College

Name: shiloh .s
Email: 240701498@rajalakshmi.edu.in
Roll no: 240701498
Phone: 9488883273
Branch: REC
Department: I CSE FE
Batch: 2028
Degree: B.E - CSE

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*next;
   struct node*prev;
};
struct node*head=NULL;
void insert(int a)
{
   struct node*newnode=(struct node*)malloc(sizeof(struct node));
   struct node*position=head;
   newnode->data=a;
   newnode->next=NULL;
   newnode->prev=NULL;
   if(head==NULL)
   {
      head=newnode;
   }
   else
   {
      while(position->next!=NULL)
      {
```

```
            position=position->next;
        }
        position->next=newnode;
        newnode->prev=position;
    }
}
void print()
{
    while(head!=NULL)
    {
        printf("%d ",head->data);
        head=head->next;
    }
}
int main()
{
    int a;
    scanf("%d",&a);
    for(int i=0;i<a;i++)
    {
        int b;
        scanf("%d",&b);
        insert(b);
    }
    print();
}
```

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