Rajalakshmi Engineering College

Name: Darshan C.S
Email: 241801039@rajalakshmi.edu.in
Roll no:
Phone: 7358528466
Branch: REC
Department: I AI & DS FA
Batch: 2028
Degree: B.E - AI & DS

Scan to verify results

NeoColab_REC_CS23231_DATA STRUCTURES

REC_DS using C_Week 2_COD_Question 4

Attempt : 2
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

```
// You are using GCC
#include <stdio.h>
#include <stdlib.h>
struct node{
   int data;
   struct node* next,*prev;
};

struct node* head=NULL;

void insert(int newdata){
   struct node* newnode=(struct node*)malloc(sizeof(struct node));
   newnode->data=newdata;
   newnode->prev=NULL;
   newnode->next=NULL;

   if(head==NULL){
      head=newnode;
      return;
   }
   struct node* temp;
   temp=head;
   while(temp->next!=NULL){
      temp=temp->next;
```

```
    }
    newnode->prev=temp;
    temp->next=newnode;
}

void printlist(){
    struct node* temp;
    temp=head;
    while(temp!=NULL){
        printf("%d ",temp->data);
        temp=temp->next;
    }
    return;
}

int main(){
    int n;
    scanf("%d",&n);
    int num;
    for(int i=0;i<n;i++){
        scanf("%d",&num);
        insert(num);
    }
    printlist();
}
```

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