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

```
// You are using GCC
#include<stdio.h>
#include<stdlib.h>
typedef struct node{
    int value;
    struct node* next;
}node;
void insertnode(node** head,int value){
    node* nn=(node*)malloc(sizeof(node));
    nn->value=value;
    nn->next=NULL;

    if(*head==NULL){
        *head=nn;
        return;
    }
    node* temp=*head;
    while(temp->next!=NULL){
        temp=temp->next;
    }
    temp->next=nn;
}
void tranverse(node* head){
    node* temp=head;
```

```
    while(temp!=NULL){
        printf("%d ",temp->value);
        temp=temp->next;
    }
}
int main(){
    int n;
    int value;
    scanf("%d",&n);
    node* head=NULL;
    for(int i=0; i<n; i++){
        scanf("%d",&value);
        insertnode(&head,value);
    }
    tranverse(head);
}
```

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