VIT - Vellore

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BCSE102P_Structured and Object Oriented Programming Lab_VL2024250502365

VIT V_Structured and OOP_Lab 3_COD_Hard_Pointers and Arrays

Attempt : 1
Total Mark : 20
Marks Obtained : 20

Section 1 : Coding

1. Problem Statement

In a classroom, students provide their test scores one by one. Write a program that takes the number of students and their test scores as input, calculates the total score using a pointer, and prints the overall sum of the test scores.

Use an array and a pointer to navigate through the scores efficiently.

Answer

```
// You are using GCC
#include<stdio.h>
int main(){
    int n;
```

```
    int a[10];
    scanf("%d",&n);
    int *pa = &a[0];
    for(int i = 0; i<n; i++){
        scanf("%d",pa+i);
    }
    int sum = 0;
    for(int i = 0;i<n; i++){
        sum +=(*(pa+i));
    }
    printf("%d",sum);
    return 0;
}
```

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

2. Problem Statement

John wants to write a program to understand how to swap the first and last elements of an integer array using pointers. Help him by writing a program that takes the number of elements in the array and the array elements as input from the user.

Your program should then swap the first and last elements of the array using pointers and display the array before and after the swap.

Answer

```
// You are using GCC
#include<stdio.h>
int main(){
    int n;
    int a[20];
    scanf("%d",&n);
    int *pa = &a[0];
    for(int i = 0; i<n; i++){
        scanf("%d",pa+i);
    }
    printf("Array before swap: ");
    for(int i = 0; i<n; i++){
        printf("%d ",*(pa+i));
```

```
    }
    printf("\n");
    int temp = *(pa+n-1);
    *(pa+n-1) = *pa;
    *pa = temp;
    printf("Array after swap: ");
    for(int i =0; i<n; i++){
        printf("%d ",*(pa+i));
    }
    return 0;
}
```

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