

VIT - Vellore

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BCSE102P_Structured and Object Oriented Programming Lab_VL2024250502365

VIT V_Structured and OOP_Lab 4_COD_Hard_Structure within Structures

Attempt : 1

Total Mark : 10

Marks Obtained : 10

Section 1 : Coding

1. Problem Statement

Rajesh is a teacher who wants to create a program to manage student data. Each student would have a name, age, and marks in three subjects: C, DS, and Physics. Implement a nested structure named Marks within the Student structure to encapsulate subject-wise marks.

The program should read the data for 'n' students, calculate each student's total marks, and then display the students in ascending order based on their total marks.

Answer

// You are using GCC

```

#include<stdio.h>
struct Marks{
    int c_marks;
    int ds_marks;
    int physics_marks;
};
struct Student{
    char name[20];
    int age;
    struct Marks m;
    int total;
};
int main(){
    int n;
    scanf("%d",&n);
    struct Student s[10];
    for(int i = 0; i<n; i++)
    {
        scanf("%s %d %d %d %d",
        &s[i].name,&s[i].age,&s[i].m.c_marks,&s[i].m.ds_marks,&s[i].m.physics_marks);
        s[i].total = s[i].m.c_marks + s[i].m.ds_marks + s[i].m.physics_marks;
    }
    struct Student temp;
    for(int i = 0; i < n; i++){
        for(int j = 0; j < n-i-1; j++){
            if(s[j].total>s[j+1].total){
                temp = s[j];
                s[j] = s[j+1];
                s[j+1] = temp;
            }
        }
    }
    for(int i = 0; i<n; i++){
        printf("%s %d %d\n",s[i].name, s[i].age,s[i].total);
    }
    return 0;
}

```

Status : Correct

Marks : 10/10