

Arrays within Structures

Aim:

To write a C program to prepare the total marks for N students by reading Reg.No., name and Six Marks by using array within structures.

Algorithm:

- 1) Start the program.
- 2) Declare a structure 'Student' to store Reg.No., Name and six marks.
- 3) Get number of students 'n'.
- 4) For i equal to 0 to n do the following
 - a). Get student 'regno'.
 - b). Get student 'Name'.
 - c). For j equal to 0 to 6 do the following
 - i). Get 'mark' of each subject.
- 5) Display student details.
- 6) For i equal to 0 to n do the following
 - a). Display student 'regno' and 'Name'.
 - b). Initialize total equal to 0.
 - c). For j equal to 0 to 6 do the following
 - i). Display 'mark'.
 - ii). Calculate total as sum of total and mark.
 - d). Display total marks.
- 7) Stop the program.

Program:

```
#include<stdio.h>
#include<conio.h>

struct student
{
int reg_no;
char name[30];
int mark[6];
}cse[20];

void main()
{
int i,j,n,total;
clrscr();
printf("\nEnter the number of students: ");
scanf("%d",&n);
printf("\nEnter Student Details...");
for(i=0;i<n;i++)
{
printf("\nEnter Register No: ");
scanf("%d",&cse[i].reg_no);
printf("Enter Name: ");
scanf("%s",cse[i].name);
printf("Enter Six Subject Marks\n");
for(j=0;j<6;j++)
{
printf("Enter mark %d: ",j+1);
scanf("%d",&cse[i].mark[j]);
}
}
}
```

```
printf("\nStudent Details");
for(i=0;i<n;i++)
{
printf("\n\nRegister No: %d",cse[i].reg_no);
printf("\nName: %s",cse[i].name);
total = 0;
printf("\nMarks Details");
for(j=0;j<6;j++)
{
printf("\nMark %d: %d",j+1,cse[i].mark[j]);
total += cse[i].mark[j];
}
printf("\nTotal Marks: %d", total);
}
getch();
}
```

Result:

Thus the C program to prepare the total marks for N students by reading Reg.No., name and Six Marks by using array within structures is executed successfully.