Ses

session 2020-21

Experiment – No-12

Objective: Program to implement structure in C language		
Scheduled Date	**Compiled Date**	**Submission Date**
8-Feb-2021	**8-Feb-2021**	**15-Feb-2021**

Program : 1. Write a program to insert 10 records in a structure array as per the following structure
   a. name
b. age
c. semester
d. marks
2. Display the name of student, who has scored the highest marks using the pointer to the structure

3. Display total marks of all students

Program :

```c
#include<stdio.h>
#include<string.h>

struct student { char
name[20];
  int age; int
  sem; int
  marks;
};

void inputstruct(struct student s[],int n)
{
  int i;
  struct student *ptr; ptr=s;
for(i=0;i<n;i++)
  {
    printf("\nStudent %d",i+1);
    printf("\nEnter Name:");
    fflush(stdin); gets(ptr-
    >name); printf("Enter Age:
    "); scanf("%d",&ptr->age);
    printf("Enter Semester: ");
    scanf("%d",&ptr->sem);
    printf("Enter Marks: ");
    scanf("%d",&ptr->marks);

    ptr++;
  }
}
```

```c
void displayStruct(struct student s[10],int n)
{ int i;
        struct student *ptr;
        ptr=s;
        for(i=0;i<n;i++)
        {          printf("\n\nStudent
   %d",i+1); printf("\nName: %s",ptr-
   >name);      printf("\nAge:
   %d",ptr->age); printf("\nSemester:
   %d",ptr->sem); printf("\nMarks:
   %d",ptr->marks);
   ptr++;
  }
}


void sum(struct student s[],int n){
        int i,sum=0; struct student
        *ptr; ptr=s;
        for(i=0;i<n;i++){ sum+=
        ptr->marks; ptr++;
        }
        printf("\nTotal marks of all student: %d",sum);
}


void maximum(struct student s[],int n){ int
        i,maximum=0; char max_name[20]; struct
        student *ptr; ptr=s; for(i=0;i<n;i++){
        if(maximum<ptr->marks){ maximum=ptr-
        >marks; strcpy(max_name,ptr->name);
                }
                ptr++;
        }
        printf("\nName Of Student With Maximum Marks: %s with %d",max_name,maximum);
}


int main()
{
        struct student s[10]; int
        n;

printf("enter the number of student
        "); scanf("%d",&n);
        inputstruct(s,n);
        displayStruct(s,n); sum(s,n);
        maximum(s,n); return
        0;
}
```

Output screen:

```
enter the number of student.....3

Student 1
Enter Name:madhur
Enter Age: 21
Enter Semester: 1
Enter Marks: 31

Student 2
Enter Name:yash
Enter Age: 21
Enter Semester: 1
Enter Marks: 43

Student 3
Enter Name:sakshi
Enter Age: 21
Enter Semester: 1
Enter Marks: 54


Student 1
Name: madhur
Age: 21
Semester: 1
Marks: 31

Student 2
Name: yash
Age: 21
Semester: 1
Marks: 43

Student 3
Name: sakshi
Age: 21
Semester: 1
Marks: 54
Total marks of all student: 128
Name Of Student With Maximum Marks: sakshi with 54
--------------------------------
```