

LAB - 1

Q1. Write a program to accept 3 marks and roll, name using structure and find sum average and cgpa by using sum(), avg & cgpa() function.

```
#include <stdio.h>
struct student
{
    int rollno, tot;
    char name[25];
    int mark[3];
};
void main()
{
    struct student s[5];
    int i, n, j;
    printf("Enter the number of students:");
    scanf("%d", &n);
    printf("\t*Students Records *\n");
    for (i = 0; i < n; i++)
    {
        printf("\nEnter Student Roll Number:");
        scanf("%d", &s[i].rollno);
        printf("\nEnter Student name:");
        scanf("%s", s[i].name);
        printf("\nEnter Student 3 subject's marks, Total marks 50:");
        for (j = 0; j < 3; j++)
            scanf("%d", &s[i].mark[j]);
    }
    for (i = 0; i < n; i++)
    {
        s[i].tot = 0;
        for (j = 0; j < 3; j++)
            s[i].tot = s[i].tot + s[i].mark[j];
    }
    for (i = 0; i < n; i++)
    {
        printf("\t*Students Records *\n");
        printf("\nStudent's Roll no: %d", s[i].rollno);
        printf("\nStudent's Name: %s", s[i].name);
        printf("\nStudent's Total Marks: %d", s[i].tot);
        printf("\nStudent's Average Marks: %d", s[i].tot / 3);
        printf("\nStudent's CGPA: %d", s[i].tot / 15);
    }
}
```

```

Enter the number of students:2
*Students Records*

Enter Student Roll Number: 1

Enter Student name: Anupam

Enter Student 3 subject's marks, Total marks 50: 100
89
90

Enter Student Roll Number: 2

Enter Student name: Moharana

Enter Student 3 subject's marks, Total marks 50: 89
98
93

*Students Records*

Student's Roll no. : 1
Student's Name : Anupam
Student's Total Marks : 279
Student's Average Marks : 93
Student's CGPA : 18      *Students Records*

Student's Roll no. : 2
Student's Name : Moharana
Student's Total Marks : 280
Student's Average Marks : 93
Student's CGPA : 18

```

Q2. WAP to display third highest marks of entered students.

```

#include <stdio.h>
#include <stdlib.h>
struct student
{
    int roll_no, marks;
    char name[25];
} stud[100], t;
void main()
{
    int i, j, n;
    printf("No of students:\n");
    scanf("%d", &n);
    printf("Enter students roll_no, name and marks:\n");
    for (i = 0; i < n; i++)
    {
        scanf("%d %s %d", &stud[i].roll_no, stud[i].name, &stud[i].marks);
    }
    for (i = 0; i < n; i++)
    {
        for (j = 0; j < n - 1; j++)
        {
            if (stud[j].marks < stud[j + 1].marks)
            {
                t = stud[j];
                stud[j] = stud[j + 1];
                stud[j + 1] = t;
            }
        }
    }
    printf("\n Sorted:\n");
    printf("-----\n");
    for (i = 0; i < n; i++)
    {

```

```

printf("Roll No: %d\t\tName: %s\t\tMarks %d\n", stud[i].roll_no, stud[i].name, stud[i].marks);
}
printf("-----\n");
printf("\n Third Highest Marks: \n");
printf("Roll No: %d\t\tName: %s\t\tMarks %d\n", stud[2].roll_no, stud[2].name, stud[2].marks);
}

```

```

No of students:
4
Enter students roll_no , name and marks:
1 Anupam 99
2 Moharana 98
3 Franklin 100
4 Trevor 89

Sorted:
-----
Roll No: 3          Name: Franklin          Marks100
Roll No: 1          Name: Anupam            Marks99
Roll No: 2          Name: Moharana          Marks98
Roll No: 4          Name: Trevor             Marks89
-----

Third Highest Marks:
Roll No: 2          Name: Moharana          Marks98

```

- Q3. WAP to create EMP having eno, ename, ebasic_sal, and display gross which is calculated DA= 10% of Basic, HRA =15% of basic & TA = 8% of basic.

```

#include <stdio.h>
#include <stdlib.h>

```

```

typedef struct{

```

```

    char name[30];
    int id;
    int salary;
    float gsalary;

```

```

} Employee;

```

```

int main()
{

```

```

    int i, n=2;

```

```

    Employee employees[n];

```

```

    printf("Enter %d Employee Details \n\n", n);
    for(i=0; i<n; i++){

```

```

        printf("Employee %d:- \n", i+1);
        //Name
        printf("Name: ");
        scanf("%s", employees[i].name);
        //ID
        printf("Id: ");
        scanf("%d", &employees[i].id);
    }
}

```

```

//Salary
printf("Salary:");
scanf("%d",&employees[i].salary);
employees[i].gsalary = employees[i].salary * (0.1 + 0.15 + 0.18 + 1);
printf("\n");
}

//Displaying Employee details

printf("----- All Employees Details ----- \n");

for(i=0; i<n; i++){

    printf("Name \t:");
    printf("%s \n",employees[i].name);

    printf("Id \t:");
    printf("%d \n",employees[i].id);

    printf("Salary \t:");
    printf("%d \n",employees[i].salary);
    printf("Net Salary with DA: 10, HRA: 15, TA = 18 \t:");
    printf("%0.2lf \n", employees[i].gsalary);

    printf("\n");
}
return 0;
}

```

```

Enter 2 Employee Details

Employee 1:-
Name: Anupam
Id: 1
Salary: 10000

Employee 2:-
Name: Moharana
Id: 2
Salary: 15000

----- All Employees Details -----
Name      : Anupam
Id        : 1
Salary    : 10000
Net Salary with DA : 10, HRA : 15, TA = 18      : 14300.00

Name      : Moharana
Id        : 2
Salary    : 15000
Net Salary with DA : 10, HRA : 15, TA = 18      : 21450.00

```