ASSIGNMENT: 08

NAME: SYEDA FAIZA ASLAM

ROLL NO: CT-25064

SECTION: B

COURSE: CODE IN PLACE

TASKS:

QUESTION NO: 01

A school stores students marks for 2 terms in a 2D array where:

- The first dimension represents the students (upto 5)
- The second dimension represent the subjects (upto 4)

Write a C program to:

- Input marks for all students, subjects
- Calculate each students average marks and then overall average
- Display the highest overall score in which they performed best

SOURCECODE:

```c
#include<stdio.h>
int main()
{
int marks[5][4];   //5 students 4 subjects
int i,j;
float student_avg[5],overall_avg=0.0,sum,highest=0.0;
int top_student=0;

printf("Enter marks of 5 students (4 subject each): \n");
for(i=0;i<5;i++)
{
        printf("\nEnter marks for student %d: \n",i+1);
        for(j=0;j<4;j++)
        {
                printf("Subject %d: ",j+1);
                scanf("%d",&marks[i][j]);
        }
}
for(i=0;i<5;i++)
{
        sum=0;
        for(j=0;j<4;j++)
        {
```

```c
                sum=sum+marks[i][j];
        }
        student_avg[i]=sum/4.0;
        if(student_avg[i]>highest)
        {
                highest=student_avg[i];
                top_student=i;
        }
        overall_avg+=student_avg[i];
}
overall_avg/=5.0;
printf("\n----STUDENT AVERAGE MARKS----\n");
for(i=0;i<5;i++)
{
        printf("Student %d average is %.2f\n",i+1,student_avg[i]);
}
printf("\nOverall average marks of all students: %.2f\n",overall_avg);
printf("\nStudent %d scored the highest average: %.2f\n",top_student+1,highest);
return 0;
}
```

OUTPUT:

```
C:\Users\AA\Desktop\cip8.exe

Enter marks of 5 students (4 subject each):

Enter marks for student 1:
Subject 1: 15
Subject 2: 16
Subject 3: 17
Subject 4: 18

Enter marks for student 2:
Subject 1: 20
Subject 2: 18
Subject 3: 16
Subject 4: 15

Enter marks for student 3:
Subject 1: 18
Subject 2: 18
Subject 3: 16
Subject 4: 20

Enter marks for student 4:
Subject 1: 14
Subject 2: 10
Subject 3: 7
Subject 4: 14

Enter marks for student 5:
Subject 1: 12
Subject 2: 14
Subject 3: 16
Subject 4: 18

----STUDENT AVERAGE MARKS----
Student 1 average is 16.50
Student 2 average is 17.25
Student 3 average is 18.00
Student 4 average is 11.25
Student 5 average is 15.00

Overall average marks of all students: 15.60

Student 3 scored the highest average: 18.00

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```