16th October, 2023

Laboratory Activity Questions

1) A small company has 5 salesmen. Each salesman is supposed to sell 3 products. Write a program using 2D array to print:
   i. The total sales by each salesman
   ii. Total sales of each item

   Your program output must look like as given below:

```
ENTER THE DATA
******************
Enter the sales of 3 items sold by salesman 0: 23 23 45
Enter the sales of 3 items sold by salesman 1: 34 45 63
Enter the sales of 3 items sold by salesman 2: 36 33 43
Enter the sales of 3 items sold by salesman 3: 33 52 35
Enter the sales of 3 items sold by salesman 4: 32 45 64


TOTAL SALES BY EACH SALESMAN
**********************************
Total sales by Salesman 0 : 91
Total sales by Salesman 1: 142
Total sales by Salesman 2: 112
Total sales by Salesman 3: 120
Total sales by Salesman 4: 141
TOTAL SALES OF EACH ITEMS
****************************
Total sales of item 0 : 158
Total sales of item 1 : 198
Total sales of item 2 : 250
```

2) In a class there are 5 students. Each student is supposed to appear in 3 tests. Write a program using two dimensional arrays to print:
   i. The marks obtained by each student in different subjects

ii. Total marks and average obtained by each student
iii. Store the average of each student in a separate 1D array so that it can be used to calculate the class average.

3) Write a program to read a 2D array named marks which can store marks of 5 students from BE1IT in 5 modules. Display the highest marks in each subject.

The expected output:

READING THE MARKS OF EACH STUDENTS
****
Enter the marks obtained by student 1 in 5 modules:
Mark[0][0] = 4
Mark[0][1] = 5
Mark[0][2] = 7
Mark[0][3] = 8
Mark[0][4] =3
Enter the marks obtained by student 2 in 5 modules:
Mark[1][0] =4
Mark[1][1] =4
Mark[1][2] = 4
Mark[1][3] = 4
Mark[1][4] =2
Enter the marks obtained by student 3 in 5 modules:
Makr[2][0] =1
Mark[2][1] =2
Mark[2][2] = 3
Mark[2][3] = 4
Mark[2][4] =5
Enter the marks obtained by student 4 in 5 modules:
Makr[3][0] =9
Mark[3][1] =8
Mark[3][2] = 7
Mark[3][3] = 8
Mark[3][4] =6
Enter the marks obtained by student 5 in 5 modules:
Makr[4][0] =10
Mark[4][1] =6
Mark[4][2] = 5
Mark[4][3] = 9
Mark[4][4] =7

RESULT
****

The highest marks obtained in subject 1 = 10
The highest marks obtained in subject 2 = 8
The highest marks obtained in subject 3 = 7
The highest marks obtained in subject 4 = 9
The highest marks obtained in subject 5 = 7

4) Write a program to read two sorted floating point 1D arrays. Pass these arrays to a function and merge these arrays and display the resultant array.
5) Write a program to read 3x3x5 array elements. Pass the array to a function named as 'arrToFunc', calculate the sum and average of all array elements and display it.
6) Write a program to read and print the names of N students of your class.
7) Write a program to read two strings, one having all uppercase characters and the other one with all lower case characters. Convert and display the characters of the first string having uppercase letters to Lower case letters. Similarly, convert the second string having lower case letters to upper case letters.
8) Write a program to read a sentence. Then count the total number or words and characters available in the sentence.
9) Write a program to copy a string into another string using strcpy function.
10) Write a menu-driven program to demonstrate the use of string related function available in string.h namely strcpy, strcat, strlen and strcmp.