MAT 115E Introduction to Programming Language
Lab-7 / CRN : 10610

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1   Question 1

Create an array of 12 elements consisting of random numbers in the range [-50, 50] and write a C source code that accomplishes the following tasks.

   a.) Print the number of negative and positive numbers in the array.

   b.) Print the minimum element and its index in the array.

2   Question 2

Suppose that we have a square matrix. Write a C program that performs the following operations in your program:

- Calculate the sum of main diagonal elements of the matrix.

- Calculate the sum of minor diagonal elements of the matrix.

- If the sum of main diagonal elements of the matrix is greater than sum of minor diagonal elements of the matrix, then calculate the sum of elements in each row of matrix and print them on the screen.

- If the sum of main diagonal elements of the matrix is less than sum of minor diagonal elements of the matrix, then calculate the sum of elements in each column of matrix and print them on the screen.

- Otherwise; if they are equal to each other, then find the sum of all elements in the matrix and print it on the screen.

Test Data:

$$A = \begin{bmatrix} 3 & 4 & 7 \\ 0 & 5 & 6 \\ 4 & 9 & 8 \end{bmatrix} \qquad B = \begin{bmatrix} 4 & 5 & 0 & 1 \\ 8 & 6 & 3 & 3 \\ -1 & 3 & 6 & 5 \\ 8 & -2 & -2 & 0 \end{bmatrix}$$