13016209 Object-Oriented Concepts and Programmings

Lab 2

Note: For each program, you must write your information as comments using the following format:

/*

ID:

Name:

Lab No:

Question No:

Date:

*/

Summit the program to the Google classroom as a separated text file (1 file/1 question).

1. Write a C++ program that allows a user to enter values into a matrix that the user can specify the size of row and column, but the size cannot exceed 5X5. After the matrix is created the program find the minimum value of each row and display the result. The example output of the program is as follows:

Enter number of rows for your matrix (not greater than 5) 3

Enter number of columns for your matrix (not greater than 5) 3

Enter the value for Matrix[1][1] 3

Enter the value for Matrix[1][2] 5

Enter the value for Matrix[1][3] 2

Enter the value for Matrix[2][1] 7

Enter the value for Matrix[2][2] 9

Enter the value for Matrix[2][3] 3

Enter the value for Matrix[3][1] 5

Enter the value for Matrix[3][2] 2

Enter the value for Matrix[3][3] 8

The value of the matrix you entered is

3 5 2

7 9 3

5 2 8

The minimum number in each row is as follows:

row 1 is 2

row 2 is 3

row 3 is 2

Good Bye.

Note that the output must be printed in separate lines.

Note: Your program must check that the user does not enter the size that is not in the range of 5X5.

2. Modify the first program by using the vector instead of the array. In this program there is no limitation that the size of the array cannot exceed 5X5 since the vector is used. The example output of the program is as follows:

Enter number of rows for your matrix 3

Enter number of columns for your matrix 3

Enter the value for Matrix[1][1] 3

Enter the value for Matrix[1][2] 5

Enter the value for Matrix[1][3] 2

Enter the value for Matrix[2][1] 7

Enter the value for Matrix[2][2] 9

Enter the value for Matrix[2][3] 3

Enter the value for Matrix[3][1] 5

Enter the value for Matrix[3][2] 2

Enter the value for Matrix[3][3] 8

The value of the matrix you entered is

3 5 2

7 9 3

5 2 8

The minimum number in each row is as follows:

row 1 is 2

row 2 is 3

row 3 is 2

Good Bye.

Note:

a. You may need to use a temporary one-dimensional vector to receive the input of each row before adds it to the matrix.
b. You may think about using the function that works with vector to find the minimum number in each row.