

Assignment# 3

Programming Fundamentals

Deadline: Sunday 13, 2021 till 11:00 PM

Question 1:

Write a C++ program that dynamically creates 2D matrix and reads its values from a file (input.txt). First Value will represent row size, second will represent column size. Pass 2D matrix to **function** to find and print the largest and smallest number in the matrix.

Example:

2 3

2 5 9

3 5 7

Output:

Largest number is: 9

Smallest number is: 2

Question 2:

Write a C++ program that dynamically creates 2D matrix and reads its values from a file (input.txt). First Value will represent row size, second will represent column size. Pass 2D matrix to **function** to sort the rows in ascending order. Print original matrix and sorted matrix from the main function.

Example:

2 3

3 5 9

2 5 7

Output:

Original Matrix:

3 5 9

2 5 7

Sorted Matrix:

2 5 7

3 5 9

Question 3:

Write a C++ program that dynamically creates 2D matrix and reads its values from a file (input.txt). First Value will represent row size, second will represent column size. Pass 2D matrix to **function** and now read a smaller 2d array from file and copy it into original matrix at the row and column given by user. Now print original Matrix and changed matrix from the main function.

Example:

4 4

1 6 5 4

8 9 7 2

1 2 7 9

4 5 7 3

Small matrix

2 2

1 2

9 8

Row: 2

Column: 2

Output: original matrix

1 6 5 4

8 9 7 2

1 2 7 9

4 5 7 3

Changed matrix

1 6 5 4

8 9 7 2

1 2 1 2

4 5 9 8