CSC103 Programming Fundamentals Two Dimensional Arrays

Searching

Sorting

# LAB TASKS

1. Sort values {56, 23, 100, 15, 3, 75, 49} in ascending order using Insertion sort algorithm.

Use the following method: public static void InsertionSort(int[] arr)

1. Sort values {56, 23, 100, 15, 3, 75, 49} in descending order using Selection sort. The original list of values should remain intact. The sorted values must be saved in another list. use the following method:

public static void SelectionSort(int[] unsorted, int[] sorted)

1. Sort values {56, 23, 100, 15, 3, 75, 49} in ascending order. Use Bubble sorting. The original list of values should not be harmed. Use the following method:

public static int[] BubbleSort(int[] arr)

You have the following matrix:

23 0 62

95 38 81

3 77 19

Do the following on the above matrix:

1. Make a method that would sum all the elements of the array (row-wise) and return it.
2. Make a method that would sum all the elements of the array column-wise and return it.
3. Make a method that would calculate sum of all rows (you will have three total values).

Return the results.

1. Make a method that would sum all columns and return the calculated values.
2. Make a method that would return elements on the diagonal, i.e. {23, 38, 19} and {62, 38, 3}. Use the following method:

public static void diagonal(int[][] matrix, int[] d1, int[] d2)

1. Make a method that would return sum of all elements on the diagonal, i.e. 23 + 38 + 19 + 62 + 38 + 3
2. Input two one dimensional arrays from user of same length. Make a method that would create a two-dimensional array from them by copying references. Your method will have the following header: public static void createTwoD(int[][] table, int[] arr1, int[] arr2).
3. Repeat the above task for different lengths of 1D arrays.

CSC103 Programming Fundamentals Two Dimensional Arrays

Searching

Sorting

1. Input two one dimensional arrays from user of same length. Make a method that would create a two-dimensional array from them by copying contents. Your method will have the following header: public static int[][] createTwoD(int[] arr1, int[] arr2).
2. Repeat the above task for different lengths of 1D arrays.