CSC 110 Assignment 8
2-D Arrays

Due August 3rd @ 11:55pm

Learning Outcomes:

When you have completed this assignment, you should understand:

- How to design a suite of tests that will check the various cases in a program
- How to use 2D Arrays
- How to model multiple dimensions of a problem using nested loops: the nesting may occur across method boundaries.

Part 1:

Write a program with a 2xArrays that are initialized with test data. Use any primitive numerical type of your choice. The program should have the following methods:

`getTotal`. This method should accept a 2-dimensional array as its argument and return the total of the values in the array.

`getAverage`. This method should accept a 2-dimensional array as its argument and return the average of the values in the array.

`getHighest`. This method should accept a 2-dimensional array as its argument and return the highest value in the array.

`getLowest`. This method should accept a 2-dimensional array as its argument and return the lowest value in the array.

`Add`. This method should accept 2 x 2-dimensional arrays as its arguments and returns the sum of the 2 arrays (Look up Matrix Addition).

`Multiplication`. This method should accept 2 x 2-dimensional arrays as its arguments and returns the product of the 2 arrays (Look up Matrix Multiplication).

`Amplify`. This method should accept a 2-dimensional array and a double factor as its arguments and returns all values in the array amplified by factor .

HAND IN: Submit your code using the 'Assignments' link of the course connex web page.