

NAME _____

EGR 2261 Lab 10 Two-dimensional Arrays

OBJECTIVES

- Write and test C++ programs that use two-dimensional arrays.

Procedure

Each of these programs must use a two-dimensional array, and must use nested loops to process the array efficiently—do not adopt a brute-force approach that uses a separate statement for each array element or for each row or column of a 2-D array.

1. Do Chapter 8's Exercise 42 on page 601 in the 7th edition, or page 603 in the 8th edition. (Note that this is an Exercise, not a Programming Exercise.) Name your project **Lab10TwoDimensionalArray**, and name your source-code file **Lab10TwoDimensionalArray.cpp**. After step b and after step c, your program should display the contents of the array so that you can check the results. Show me your working program.
2. Do Chapter 8's Programming Exercise 13 on page 605 in the 7th edition, or page 607 in the 8th edition, using the name **Lab10TestScores**. Your program should read the input data from a file named **Lab10ScoresData.txt** that you'll create using Microsoft Notepad. (This file should have one line for each student, as shown in the book's directions for this exercise.) Your program's output should be formatted as shown in the image below. For this program it's okay to assume that there are five tests scores for each student—you don't have to make it flexible enough to handle a different number of tests. When declaring the two-dimensional array to hold the test scores, make it six columns wide instead of five, even though there are only five tests—use the sixth column to hold each student's average, which your program must compute. Show me your working program.

Name	Test 1	Test 2	Test 3	Test 4	Test 5	Average	Grade
Johnson	85.00	83.00	77.00	91.00	76.00	82.40	B
Aniston	80.00	90.00	95.00	93.00	48.00	81.20	B
Cooper	78.00	81.00	11.00	90.00	73.00	66.60	D
Gupta	92.00	83.00	30.00	69.00	87.00	72.20	C
Blair	23.00	45.00	96.00	38.00	59.00	52.20	F
Clark	60.00	85.00	45.00	39.00	67.00	59.20	F
Kennedy	77.00	31.00	52.00	74.00	83.00	63.40	D
Bronson	93.00	94.00	89.00	77.00	97.00	90.00	A
Sunny	79.00	85.00	28.00	93.00	82.00	73.40	C
Smith	85.00	72.00	49.00	75.00	63.00	68.80	D

Class average: 70.94

Press any key to continue . . .

***** This lab had 2 named programs for me to check. If you didn't finish both of these during class, finish them after class. Then upload your source-code files for both programs (including the ones that I checked in class) to the Lab 10 dropbox on the course website by the due date. Also turn in your lab sheet at the beginning of class.*****