

IST 256
Lab Week 12 – April 8, 2009

There is only one lab for Week 12 and it will not have to be handed in.

1. Extending a Two-dimensional Array Program

Use the new process for opening a Visual Studio project:

- a. Go to the C: drive and make a folder at the top level with your name or userid, something like: C:\njmccrac
- b. Open Visual Studio and go to create a new project/solution. When this Dialog box opens,
 - i. name: pick a name for the project – something like Averages
 - ii. **location:** browse to the folder that you just made on the C: drive or use **SaveAll** to save your project in the folder on the C: drive
- c. In this first part, create the form and use the program from last week that reads numbers from a file into a two-dimensional array.

Making the form: make four Labels and five Buttons on the form that looks something like:

__Read Numbers From File “samples.txt” __	Status
__ Sum of All Numbers __	Total Sum
__ Sum of Each Row __	Row Sums
__ Sum of Each Column __	Column Sums
Close	

You will want to leave more space in-between the Row and Column buttons to leave room for all 6 row sums.

- d. Copy the data file “samples.txt” from the web page from last week and save it in the **C:\name\Averages\bin\Debug** part of the project folder.
- e. Copy the “Two-D Array Program” from the web page last week and use it as the program for your TwoDArray program, either replacing the entire Public Class or replacing the individual button procedures.

Adjust the button and label numbers, if necessary, and test the program.

f. Now we are going to modify the program so that instead of having the button that computes the sum of all the numbers in each row, it will **find the highest number in each row**.

First, change the Text property of the button on the form that says “Sum of Each Row” so that it now says “Highest Number in Each Row”.

Now we are going to change the code in the button procedure. We have worked with code before that found the highest number in a One-dimensional Array; on the web page under Week 11, example 1, Temperatures in Arrays, there is a button that find the highest temperature over the array.

In our Two-Dimensional array program, under the button procedure, we will leave the two loops that go over each row and column. Leave the outer loop that goes over rows the same, and change the inner loop that goes over columns to find the highest number instead of adding the numbers, as discussed in class.

Test your program.

***** **At the end of lab** *****

Go to the C: drive where you put your folder with your name. Copy and paste this entire folder to the H: drive under your IST256 projects.

***** **Don't forget to save your work!** *****