PROG 110

Project 4
Table of Necessary Data
25 points

Due: See Calendar
Use Assignment Tool

Objective: To use the random number generator to populate a 2D arrays, using nested for loops, and a foreach loop.

Application Specification:
On the last page, you will see an example of the layout required. The data will vary since you will be using the random number generator.
Solution Name: yourLastName Project4Sol (e.g. UnwinProject4Sol)
Project Name: yourLastNameProject4
Source File Name: Array2D.cs, Class Name: Array2D

Follow the Software Development Standards for implementing the required naming conventions, whitespace, indentations, file documentation and other details.

Requirements:

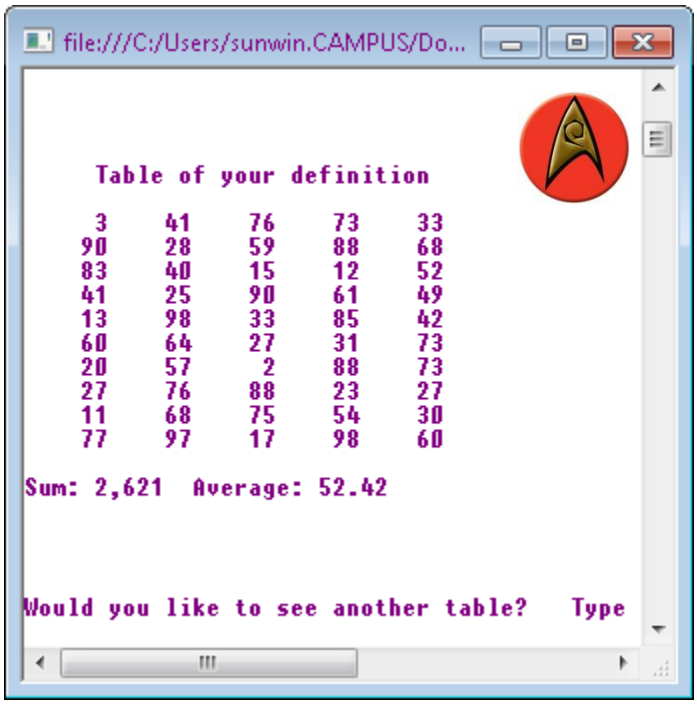
1. Introduce the user to the program – what is the purpose – and be creative! I don't want to see "To use the random number generator to populate a 2D arrays, using nested for loops, and a foreach loop."
2. Incorporate the specifications listed below. When displaying the table use a title appropirate for **your** purpose.
3. Display the array data in a table format
4. Display the accumulated sum and the caclucated average.
5. Prompt the user to "Would you like to see another table?" and have your program execute accordingly. The user may respond with lower or uppercase text, and you need to explain to tthe user what to type.
6. Let the user know when the program has ended and what to do next.

Specifications:

1. Make sure to include internal documentation.
2. Declare a constant ROW equal to 10 and COLS equal to 5, MAX equal to 100
3. Declare an integer 2-d array named **numbers** of size ROWS, COLS
4. Create a Random object named **rand**
5. Use nested for loops to assign a random number to an element in the 2-d array
    - Make the random number range from 1 through 99 inclusive. (this means that values displayed will be 1 through 99; use the constant MAX)
    - Here is a website to explain the Next method and the arguments required. http://msdn.microsoft.com/en-us/library/2dx6wyd4.aspx
7. Use a foreach loop to calculate the total
8. Calculate the average
9. Display the title of the table data.
10. Display the 2-d array in its rows and columns using nested for loops.

11. Display the aggregated sum with 0 decimal places and commas when appropriate and the average with 2 decimal places and commas when appropriate. Instead of creating custom specifiers, use exisiting ones.

Exact Layout:



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Follow the Program Development Life Cycle to plan, design, code, and test your application.

Memo Requirement

1. No memo required

Turn in:

1. The complete Visual Studio solution you developed.
2. Submit all files in one Zip file named *yourLastName*P4 (e.g. UnwinP4.zip).

It is your responsibility to ensure that all files are submitted and that I don't receive a "shortcut", or missing a file. If I don't have the correct files, I cannot grade your project and therefore, you will receive a zero for the assignment.