Assignments (Arrays, Methods, Recursion, Strings, Classes)

Reverse Array
Create a program to ask the user for 5 numbers, store them in an array and show them in reverse order.

Display Even Numbers : Write a C# program to ask the user for 10 integer numbers and display the even ones.

Input several numbers and stop when user enters “end”

Create a program which asks the user for several numbers (until he enters "end" and displays their sum). When the execution is going to end, it must display all the numbers entered, and the sum again, as follows:

Enter a number: 5
Sum = 5
Enter a number: 3
Sum = 8
Enter a number: end
The numbers are: 5 3
The sum is: 8

Two Dimensional Array:
Write a C# program to ask the user for marks for 20 pupils (2 groups of 10, using a two-dimensional array), and display the average for each group.

Palindrome String: Write a C# program to check if a string user entered is palindrome or not

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Max in Array : Create a function which returns the greatest value stored in an array of real numbers which is specified as parameter:

float[] data={1.5f, 0.7f, 8.0f}
float max = Maximum(data);

Recursive Palindrome

Create a recursive function to say whether a string is symmetric (a palindrome). For example, "RADAR" is a palindrome.

Factorial:
The factorial of a number is expressed as follows:

n! = n · (n-1) · (n-2) · (n-3) · ... · 3 · 2 · 1

For example,
6! = 6·5·4·3·2·1

Create a recursive function to calculate the factorial of the number specified as parameter:

Console.Write (Factorial (6));
would display 720

IsInteger

Create a function that tells if a string is an integer number. It should be used like this:

if (IsNumber ("1234"))

System.Console.WriteLine ("It is a numerical value");

Books Database

Create a small database, which will be used to store data about books. For a certain book, we want to keep the following information:

Title
Author
The program must be able to store 1000 books, and the user will be allowed to:

Add data for one book
Display all the entered books (just title and author, in the same line)
Search for the book(s) with a certain title
Delete a book at a known position (for example, book number 6)
Exit the program

Hint: to delete an item in an array, you must move backwards every item which was placed after it, and the decrease the counter.
