.NET Developer Interview

Practical Exercise

1.   STRING CALCULATOR

Before you start:

Try not to read ahead and do one task at a time.

Create a simple String calculator with a method int Add(string numbers).

The method can take a string representing numbers separated by commas, and will return their sum (for an empty string it will return 0) for example "" or "1" or "1,2".

1. Start with the simplest case of an empty string and move to 1 and 2 numbers.
2. Allow the Add method to handle an unknown amount of numbers.
3. Allow the Add method to handle new lines between numbers (as well as commas).
    a. The following input is ok: "1\n2,3" (will equal 6).
    b. The following input is NOT ok: "1,\n".
4. Support different single character delimiters (case-insensitive).
    a. To change a delimiter, the beginning of the string will contain a separate line that looks like this: "//[delimiter]\n[numbers…]" for example "//;\n1;2" should return three where the delimiter is ';'.
5. Calling Add with a negative number will throw an exception "Negatives not allowed" - and the negative that was passed in. If there are multiple negatives, show all of them in the exception message.
6. Numbers greater than 1000 should be ignored, so adding 2 + 1001 + 13 = 15.
7. Allow multiple delimiters like this: "//[delim1][delim2]\n" for example "//*%\n1*2%3" should return 6.