Calculator Challenge

Summary

Create a calculator that only supports an Add operation given a single formatted string

- Provide code via a public distributed version control repository i.e. GitHub. Do NOT fork this repo
- Console application using the language defined by your interviewer
- Include unit tests
- Show each requirement step as a separate commit. Think of each step as a "requirement change"
- Efficient code is always important but for this exercise... readability and separation of concerns are much more critical
- Excluding stretch goals will not affect your overall assessment but implementing them poorly will

Requirements

1. Support a maximum of 2 numbers using a comma delimiter. Throw an exception when more than 2 numbers are provided
    - examples: 20 will return 20; 1,5000 will return 5001; 4,-3 will return 1
    - empty input or missing numbers should be converted to 0
    - invalid numbers should be converted to 0 e.g. 5,tytyt will return 5
2. Remove the maximum constraint for numbers e.g. 1,2,3,4,5,6,7,8,9,10,11,12 will return 78
3. Support a newline character as an alternative delimiter e.g. 1\n2,3 will return 6
4. Deny negative numbers by throwing an exception that includes all of the negative numbers provided
5. Make any value greater than 1000 an invalid number e.g. 2,1001,6 will return 8
6. Support 1 custom delimiter of a single character using the format: //{delimiter}\n{numbers}
    - examples: //#\n2#5 will return 7; //,\n2,ff,100 will return 102
    - all previous formats should also be supported
7. Support 1 custom delimiter of any length using the format: //[{delimiter}]\n{numbers}
    - example: //[***]\n11***22***33 will return 66

    - all previous formats should also be supported

8. Support multiple delimiters of any length using the format: //[{delimiter1}][{delimiter2}]...\n{numbers}
    - example: //[*][!!][r9r]\n11r9r22*hh*33!!44 will return 110
    - all previous formats should also be supported

Stretch goals

1. Display the formula used to calculate the result e.g. 2,,4,rrrr,1001,6 will return 2+0+4+0+0+6 = 12
2. Allow the application to process entered entries until Ctrl+C is used
3. Allow the acceptance of arguments to define...
    - alternate delimiter in step #3
    - toggle whether to deny negative numbers in step #4
    - upper bound in step #5
4. Use DI
5. Support subtraction, multiplication, and division operations