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C# Project

BigNum Library in C#:

In this project, I attempted to implement a big number library in C#. I original planned to complete the four basic operations of addition, subtraction, multiplication, and division, as well as put together a test library that proved that my library functioned as desired. I’ve succeeded in implementing addition and subtraction, but not multiplication or division. My tests cover as many edge cases as I could think of and demonstrate the flexibility of my library. I also implemented several other operators that were necessary to make my class function, as well as multiple constructors and a toString method.

I wanted to include LINQ in this project, but I only succeeded in using it in the toString method. I think I could also figure out a way to use it in my implementations of the math operators, but I would need more time to figure that out. It was a big struggle figuring out where boundaries and such were for my arrays, so I was happy to simply get the library in a working state.

I attempted to use a TDD approach on this project. For the most part, this worked well. However, I ran into problems when I did not do a good job of anticipating edge cases. There were several times where I thought a method was completely done and tested, only to find out later that I had missed something. I think this would have been easier if I had partnered with someone for this project so that I had another set of eyes on the code, but it was a good experience for me to learn about the benefits and drawbacks of TDD.

I don’t have any special build instructions. My submission simply includes a class library and a test project, just like all of the homeworks we’ve submitted so far this quarter.