Programming Mathematics

# Lab 03 Rational (Fraction) Class

1. Create a Class called Fraction with the following methods
   * Fraction (constructor)
   * Add
   * Subract
   * Multiply
   * Divide
   * Value
   * MostReducedForm
     + (Use the code below, will be explained in lab....)
2. Within the code write test code for each method illustrating that it works.
3. Write a loop which adds a fraction, which has a non trivial infinite decimal expansion , multiple times and show that it does not suffer from round off error.
   * ie 1/3 added 3000 times to see if you get 1000 (cant pick 1/3)
4. What are the limitations of the above class, write code to illustrate this.

**private**  **int** findGCD(**int** number1, **int** number2) {  
        *//base case*  
        if(number2 == 0){  
            **return** number1;  
        }  
        **return** findGCD(number2, number1%number2);  
    }