

```
1  #include <string>
2
3
4  ////////////////////////////////////////
5  //                                CLASS DEFINITION                                //
6  ////////////////////////////////////////
7
8
9  class fraction {
10 private:
11     // Internal representation of a fraction as 2 integers
12     int n;                                // numerator
13     int d;                                // denominator
14
15     // I put these in the private section because they are
16     // internal operations that shouldn't not be part of an
17     // interface.
18     void simplify();
19     int naiveGCD();
20     int euclidianGCD(int, int);
21     int binaryGCD(int, int);
22
23 public:
24     fraction();                            // class constructor
25     void setFraction(int, int);
26     void setFraction(fraction);
27     void add(fraction);
28     void mult(fraction);
29     void div(fraction);
30     void display(void);
31 };
32
33
34
35
36
37
38  ////////////////////////////////////////
39  //                                FUNCTION PROTOTYPES                                //
40  ////////////////////////////////////////
41
42 void calculate(std::stringstream &, fraction &);
43 fraction calculateRecursive(std::stringstream &);
```