

Lab 7

Turn In:

1. Code Assignment – Exercise #1 Due in class on Thursday, April 22, 2010
 - a) For each exercise, a (Word, OpenOffice, PDF, etc.) document must be generated to include the following items:
 - Cover Sheet (see the sample copy include in lecture note)
 - Exercise/problem statement
 - Copy of your source file (C++ program)
 - Copy of output (copy and paste from output screen as possible)
 - Naming the document as
cis25Spring2010YourNameLab7CodeEx1
 - b) Submitting one hard copy of the document
 - c) Emailing document as follows,
 - One message for each exercise.
 - Attaching ONLY the source file that was created in part a).
 - The SUBJECT line of each message should have one of the following lines:

CIS 25 Spring 2010 Your Name : Lab 7 – Code Exercise #1
Or,
cis25Spring2010YourNameLab7CodeEx1.cpp

3. Q.E.D.

1. Code Assignment/Exercises

Exercise 1 – Due on Thursday, April 22, 2010

Update the `Fraction` class given in the Lecture notes or as discussed in class meetings as follows,

1. Add your FIRST NAME to the name **`Fraction`** and use this as your updated class. For examples, if your first name is **`John`** then update the class name to be **`JohnFraction`**; if your first name is **`Smith`** then update the class name to be **`SmithFraction`**.
2. Add and update all class constructors for your fraction class to handle the initialization appropriately.

There must be at least 3 constructors of

- (i) default,
- (ii) copy, and
- (iii) convert taking on an `int`.

3. Provide all `get/set` member functions for each private member data.
4. Provide the following member functions,
 - a. A member function `operator+()` to add the current fraction to a fraction given as an argument, and
 - b. A member function `operator-()` to subtract a fraction given as an argument from the current fraction, and
 - c. A member function `operator*()` to multiply the current fraction with a fraction given as an argument, and
 - d. A member function `operator/()` to divide the current fraction by a fraction given as an argument, and
 - e. A member function `print()` that will print the current fraction.
5. Save the program as `cis25Spring2010YourNameLab7CodeEx1.cpp`,
6. Run and record the output of the program.

- (a) The output screen should have the following lines displayed before any other display or input can be seen,

```
CIS 25 - C++ Programming
Laney College
Your Name

Assignment Information --
Assignment Number:  Lab 7,
                   Exercise #1
Written by:         Your Name
Due Date:           Due Date
```

- (b) Then, the output screen should be followed by a sample output as follows,

```
CREATE A REASONABLE FRACTION HERE FIRST
```

```
*****
*           MENU           *
*                           *
*  1. Calling operator+()  *
*  2. Calling operator-()  *
*  3. Calling operator*()  *
*  4. Calling operator/()  *
*  5. Calling print()      *
*  6. Quit                 *
*                           *
*****
Select an option (use integer value only): 5

Calling print() --
```

REPLACE WITH YOUR CODE AND ACTUAL OUTPUT

```
*****
*           MENU           *
*                           *
*  1. Calling operator+()  *
*  2. Calling operator-()  *
*  3. Calling operator*()  *
*  4. Calling operator/()  *
*  5. Calling print()      *
*  6. Quit                 *
*                           *
*****
Select an option (use integer value only): 1

Calling operator+() --
```

REPLACE WITH YOUR CODE AND ACTUAL OUTPUT

```
*****
*           MENU           *
*                           *
*  1. Calling operator+()  *
*  2. Calling operator-()  *
*  3. Calling operator*()  *
*  4. Calling operator/()  *
*  5. Calling print()      *
*  6. Quit                 *
*                           *
*****
Select an option (use integer value only): 2

Calling operator-() --
```

REPLACE WITH YOUR CODE AND ACTUAL OUTPUT

```
*****
*           MENU           *
*                           *
*  1. Calling operator+()  *
*  2. Calling operator-()  *
*  3. Calling operator*()  *
```

```
* 4. Calling operator/() *
* 5. Calling print()      *
* 6. Quit                 *
*                         *
*****
Select an option (use integer value only): 3
```

Calling operator*() --

REPLACE WITH YOUR CODE AND ACTUAL OUTPUT

```
*****
*           MENU           *
*                         *
* 1. Calling operator+()  *
* 2. Calling operator-()  *
* 3. Calling operator*()  *
* 4. Calling operator/()  *
* 5. Calling print()      *
* 6. Quit                 *
*                         *
*****
Select an option (use integer value only): 4
```

Calling operator/() --

REPLACE WITH YOUR CODE AND ACTUAL OUTPUT

```
*****
*           MENU           *
*                         *
* 1. Calling operator+()  *
* 2. Calling operator-()  *
* 3. Calling operator*()  *
* 4. Calling operator/()  *
* 5. Calling print()      *
* 6. Quit                 *
*                         *
*****
Select an option (use integer value only): 6
```

Thank you for trying!

7. Add a comment block after your program name (shown below) to suggest about improving your current code (Optional)

```
/**
 * Program Name:    cis25Spring2010YourNameLab7CodeEx1.cpp
 * Discussion:      Fraction Class and Operator Functions
 *
 * Suggestion:      YOUR SUGGESTION HERE
 */
```