Lab 3 – Money class object – 2018 Fall CS-116

Define class object Money with the following characteristics:

Private attribute:

- int dollars;
- int cents

Define any Methods/functions/operators you need for this program.

The class object should also have the following overloaded operators:

-	***Subtraction operator.*** If one `Money` object is subtracted from another, the operator should give the difference between the two Money. For example, if $5.80 is subtracted from $8.75, the result will be $2.95.
+	***Addition operator.*** If one `Money` object is added from another, the operator should give the sum between the two Money. For example, if $5.80 is subtracted from $8.75, the result will be $14.55.
*	***Multiplication operator.*** If one `Money` object is multiplying by x the operator should return x * Money object. For example, $8.75 * 2 will return $17.50.
==	***Equality operator.*** If one `Money` object is compared from another (x == y), the operator should return true if x is same as y. For example, $10.01 == 10.01 will return true.

Use the following test driver program:

```
int main()
{
  Money m1(8, 75);  // set dollars to 8 and cents to 75
  Money m2 (5, 80); // set dollars to 5 and cents to 80
  Money m3;  // initialize dollars to 0 and cents to 0

  printMeFirst("Ron Sha", "CS-116 2018 Fall – Lab Money");  // use your name

  cout << m1 << " * 2 = " << m1 * 2 << "\n";
  cout << m1 << " - " << m2 <<  " = " << m1 - m2 << "\n";
  m3 = m1 + m2;
  cout << m1 << " + " << m2 <<  " = " << m3 << "\n";
  if (m1 < m2) // check to see if Money object m1 is less than m2 or not
     cout << m1 << " < " << m2 <<   "\n";
  else
     cout << m1 << " > " << m2 <<   "\n";
  m1.setValue(10,1); // set m1.dollars to 10; m1.cents to 1
  m2.setValue(10,1);
  if (m1 == m2)
                  cout << m1 << " equals to " << m2 << endl;
  else
                  cout << m1 << " NOT equals to " << m2 << endl;
  m2.setValue(10,45);
  if (m1 == m2)  // compare Money object m1 and m2
                  cout << m1 << " equals to " << m2 << endl;
  else
                  cout << m1 << " NOT equals to " << m2 << endl;
  return 0;
}
```

Your program submission:
1. Single pdf file contains all of the following:
a. Program description (the purpose of this program)
b. Include the source codes
c. Include the screen shots of the program output when you test the program. Your test cases must include the in the driver test program.

2. Include zip file contains all the files you used for this program a. Your source code must be properly documented with the following information:
• Description:
• Parameters
• Inputs/Outputs
• You can use block comments for section of codes and/or line comments

Your program should have similar output:

```
Program written by: Ron Sha
Course Info: CS-116 2018 Spring
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$8.75 * 2 = $17.50
$8.75 - $5.80 = $2.95
$8.75 + $5.80 = $14.55
$8.75 > $5.80
$10.01 equals to $10.01
$10.01 NOT equals to $10.45
```