CPS 245 ***Java*** Name: Joshua Wiley

Lab Assignment #3

Due: <1 week after receipt!>

```
public class TwoNumbers
{
    private double number1;
    private double number2;

    public TwoNumbers( double n1, double n2 )
    {
        number1 = n1;
        number2 = n2;
    }

    public void setNums( double n1, double n2 )
    {
        number1 = n1;
        number2 = n2;
    }

    public double getSum()
    {
        return number1 + number2;
    }
}
```

Part I.

Given the above definition of the TwoNumbers class, write Java code to implement the TwoNumbers class (TwoNumbers.java). **Students are expected to update/add all necessary documentation to the code.**

Part II.

Then using ***true*** OOPs design (similar to the *HelloWorld* slide in Chapter 2 of the textbook), write Java code to test the *TwoNumbers* class. From the textbook example, this means that you will have a TwoNumbersTester.java file and a Test.java file when you are done.

As part of the test you should instantiate two instances of the *TwoNumbers* class, set the first to 10 and 15, and the second to 100 and 200. Then, add statements to print their respective sums. Change the first instance to 50 and 60 and print the respective sum.

Part III.

Create another *TwoNumbers* method called "getDifference" that returns the difference between number2 and number1. Do the same for product, quotient, and average. Update your testing programs to test these new methods.

Part IV.

Add a ***`main`*** method to the *TwoNumbers* class which should test the TwoNumbers class "exactly" as your previous testing program. Test the *TwoNumbers* class using the *TwoNumbers* class as a Java application.

When you are done, your lab instructor should be able to test the TwoNumbers class by compiling and executing the Test.java file ***or*** the TwoNumbers.java file.

Submission Instructions

You will need to turn in a hardcopy printout of all of your *.java files to the instructor and upload the zip file (containing all the*.java files) to the appropriate D2L dropbox.

The hardcopy files turned in to your lab instructor should be stapled in this order (from front to back):

1. Lab 3 Evaluation Sheet
2. Lab 3 Specification Sheet (this sheet)
3. Test.java
4. TwoNumbersTester.java
5. TwoNumbers.java