COSC 1336 Section 013
Programming Fundamentals I
Assignment # 2
Spring 2016
66 points

Instructor: Dr. Castañeda
Date assigned: February 1, 2016
Due date: February 10, 2016 @ 11:55 pm

On your flash drive or on your home PC create a folder called **Assignment02**. Note: you may save your workspace anywhere you want (PC, flash drive, etc). Now do the following programming problem from your textbook using Eclipse:

Within Eclipse, create a project called **Assignment02**. Now, convert the following pseudo-code into an actual Java program that will execute properly. Call this program **MoneyConverter**. This program is actually from your textbook on page 113 Programming Project # 11 but with a few added things.

```
//-------------------------------------------------
// Programmer:      <your name here>
// Course:          COSC 1336 Section <###>
// Semester:        <semester year>
// Assignment #:    <assignment number here>
// Due Date:        <due date here>
//-------------------------------------------------
```

```
     // import the Scanner class to enable
     // reading in from the keyboard
import java.util.Scanner;
```

```
     // declare constants to be used
```

Declare a constant called **TEN_DOLLARS** with a value of 1000
Declare a constant called **FIVE_DOLLARS** with a value of 500
Declare a constant called **ONE_DOLLAR** with a value of 100
Declare a constant called **QUARTER** with a value of 25

Declare a constant called **DIME** with a value of 10
Declare a constant called **NICKEL** with a value of 5
Declare a constant called **HUNDRED** with a value of 100

```
// declare variables to be used
```

tens, **fives**, **ones**, **quarters**, **dimes**, **nickels**, and **remainingCents** will be integers
total, **twiceAmount**, **halfAmount** will all be floating point numbers
addTwoDollars, **subtractOneDollar** will all be floating point numbers
dollarSign and **cents** will be characters
prefix, **firstName**, **lastName** will be strings

assign the '$' to **dollarSign**
assign the number 162 to **cents**
assign a title to **prefix**
assign your first name to **firstName**
assign your lasts name to **lastName**

```
// instantiate an object from the
// Scanner class to enable reading
// in from the keyboard
Scanner keyboard = new Scanner(System.in);
```

```
// prompt the user to enter a money
// amount then read it in
```

prompt "Enter monetary amount: "
read in the monetary amount and assign it to **total**

```
// calculate twice, half, adding two dollars
// and subtracting one dollar from the
// amount entered
```

calculate **total** multiplied by **2** and assign it to **twiceAmount**
calculate **total** divided by **2** and assign it to **halfAmount**
calculate **total** plus **2.0** and assign it to **addTwoDollars**
calculate **total** subtracted by **1.0** and assign it to **subtractOneDollar**

```
// convert the amount of money read into cents
```

multiply the **total** by **HUNDRED**, cast it to an **int**, and assign it to **remaingCents**

```
    // print out current calculations

    // calculate how many ten dollar bills there are
```
calculate **remainingCents** divided by **TEN_DOLLARS** and assign it to **tens**
calculate **remainingCents** remainder operator by **TEN_DOLLARS** and assign it **remaingCents**; use a shortcut notation for doing this

```
    // repeat procedure for five dollar bills,
    // one dollar bill, quarters, dimes, nickels, and
    // pennies using appropriate variables and
    // constants; note: at the end, the last value of
    // remaingCents will be the value for pennies

    // print out information accordingly
```

Look at example output below and duplicate the way it looks for your program.

print "This program was written by " concatenate with **prefix** concatenate with one blank space concatenate with **firstName** concatenate with one blank space concatenate with **lastName**

print "End of program."

In the end, your program will look similar to what is below:

```
Enter monetary amount: 46.73

The amount of $46.73 is equivalent to 4673¢ (cents)
Twice the amount is $93.46!
Half the amount is $23.365!
Adding two dollars is $48.73!
Subtracting one dollar is $45.73!

That's equivalent to:

4 ten dollar bills
```

```
1 five dollar bills
1 one dollar bills
2 quarters
2 dimes
0 nickels
3 pennies

This program was written by Dr. Robert Castaneda
End of program.
```

For this program, you are to turn in only the source code. You will copy it into the folder called **Assignment02**, thus your **Assignment02** folder will contain only one document for this assignment. Now you are to compress the folder **Assignment02**. Finally, it is this *compressed folder* that you must submit via Canvas for this assignment.

Note: If you have any problems in reference to Eclipse or forgot how to do certain steps in preparing to turn in your assignment, please take a look at the tutorial documents that I have created for Eclipse. In these tutorials I go into great detail on how to create, run, what to turn in, etc. about an assignment.

You can view this entire program by clicking on the video associated with this assignment within our **Semester Schedule**. If needed, zoom in (Ctrl +) or zoom out (Ctrl –) to get a better view of the video. You may download the entire video on to your computer if you wish or simply view it online.

Submit this assignment through Canvas! Click on the Assignments link on the left hand side on our class Canvas page to do this.

Prepared by Dr. Castañeda