Intro to Java Week 1 Coding Assignment

Points possible: 70

Category	Criteria	% of Grade
Functionality	Does the code work?	25
Organization	Is the code clean and organized? Proper use of white space, syntax, and consistency are utilized. Names and comments are concise and clear.	25
Creativity	Student solved the problems presented in the assignment using creativity and out of the box thinking.	25
Completeness	All requirements of the assignment are complete.	25

Instructions: In Eclipse, or an IDE of your choice, write the code that accomplishes the objectives listed below. Ensure that the code compiles and runs as directed. Take screenshots of the code and of the running program (make sure to get screenshots of all required functionality) and paste them in this document where instructed below. Create a new repository on GitHub for this week's assignments and push this document, with your Java project code, to the repository. Add the URL for this week's repository to this document where instructed and submit this document to your instructor when complete.

Coding Steps:

1. Create a new Java project in Eclipse (make sure the JRE is set to 1.8).
2. Create a new class in the project and name it App. Make sure the box is checked for the option that reads "public static void main(String[] args).
3. Inside the main method, create **two** variables for the following real-life examples and assign them values (choose the best data type for the values):
    a. Item price
    b. Amount of money in wallet

c. Number of friends

d. Age in years (as a whole number)

e. First name

f. Last name

g. Middle initial

4. Create the following variables by performing operations (addition, subtraction, concatenation) on the variables created in the previous step:

    a. New amount of money in wallet after buying the item

    b. Number of friends you've made each year based on your age variable and your number of friends variable

    c. Full name based on first name, middle initial, and last name

5. Use System.out.println() to print out the values of all the variables you've created. Provide some detail as to what the value being printed is. For example, if I had a variable called favorite state, I would do the following:

String favoriteState = "AZ";

System.out.println("My favorite state is: " + favoriteState);

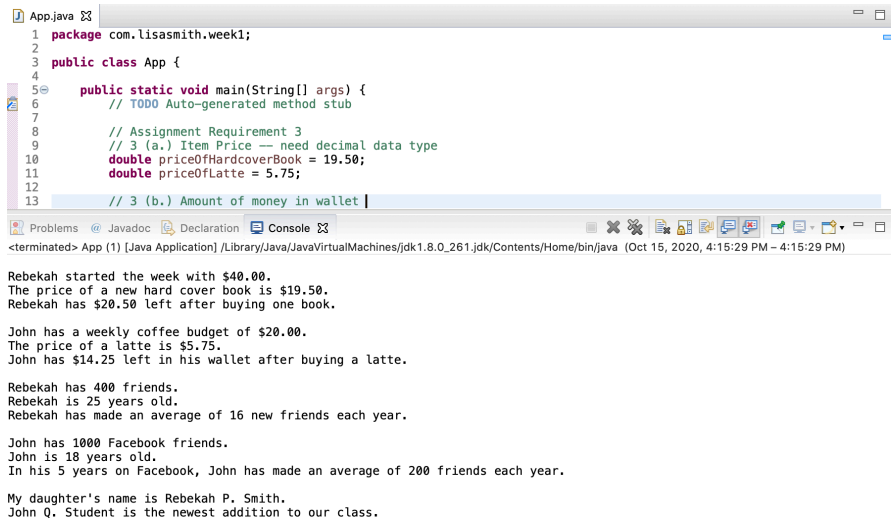
Screenshots of Code:

App.java

```
1  package com.lisasmith.week1;
2
3  public class App {
4
5      public static void main(String[] args) {
6          // TODO Auto-generated method stub
7
8          // Assignment Requirement 3
9          // 3 (a.) Item Price -- need decimal data type
10         double priceOfHardcoverBook = 19.50;
11         double priceOfLatte = 5.75;
12
13         // 3 (b.) Amount of money in wallet
14         double weeklySpendingMoney = 40.00;
15         double budgetForCoffee = 20.00;
16
17         // 3 (c.) Number of Friends -- int datatype needed
18         int numOfFacebookFriends = 1000;
19         int numOfRealFriends = 400;
20
21         // 3 (d.) Age in years (as a whole number) -- int data type needed
22         int ageInYears = 25;
23         int studentAgeInYears = 18;
24         int studentYearsOnFacebook = studentAgeInYears - 13;
25
26         // 3 (e.) First Name -- String object
27         String firstName = "Rebekah";
28         String studentFirstName = "John";
29
30         // 3 (f.) Last Name Variables -- String object
31         String lastName = "Smith";
32         String studentLastName = "Student";
33
34         // 3 (g.) Middle Initial -- single character
35         char middleInitial = 'P';
36         char studentMiddleInitial = 'Q';
37
```

```java

        // Assignment Requirement 4
        // 4 (c.) Full Name Variables -- Use Concatenate
        String fullName = firstName + " " + middleInitial + ". "
                + lastName;
        String studentFullName = studentFirstName + " "
                + studentMiddleInitial + ". " + studentLastName;

        //4 (a.) Amount of Money Variables -- subtraction
        double remainingSpendingMoney = weeklySpendingMoney - priceOfHardcoverBook;
        double remainingCoffeeMoney = budgetForCoffee - priceOfLatte;

        //4 (b.) Number of Friends Variables -- average
        int avgNumOfRealFriends = numOfRealFriends/ageInYears;
        int avgNumOfFacebookFriends = numOfFacebookFriends/studentYearsOnFacebook;


        //5 Printing all created variables!
        //  Use of String.format ("%.2f", <double variable name>)
        //      to ensure 2 decimal points would print for a currency value.
        System.out.println(" ");
        // (a.) Amount of Money After Purchase Variables
        System.out.println(firstName + " started the week with $"
                + String.format ("%.2f", weeklySpendingMoney) + ".");
        System.out.println("The price of a new hard cover book is $"
                + String.format ("%.2f", priceOfHardcoverBook) + ".");

        System.out.println(firstName + " has $"
                + String.format ("%.2f", remainingSpendingMoney) + " left "
                +  "after buying one book.");
        System.out.println(" ");

        System.out.println(studentFirstName + " has a weekly coffee budget of $"
                + String.format ("%.2f", budgetForCoffee) + ".");


        System.out.println("The price of a latte is $"
                + String.format ("%.2f", priceOfLatte) + ".");
        System.out.println(studentFirstName + " has $"
                + String.format ("%.2f", remainingCoffeeMoney)
                + " left in his wallet after buying a latte." );
        System.out.println(" ");

        // (b.) Average Number of Friends Made Per Year Variables
        System.out.println(firstName + " has " + numOfRealFriends + " friends.");
        System.out.println(firstName + " is "+ ageInYears + " years old.");
        System.out.println(firstName + " has made an average of "
                + avgNumOfRealFriends + " new friends each year.");
        System.out.println(" ");

        System.out.println(studentFirstName + " has "
                + numOfFacebookFriends + " Facebook friends.");
        System.out.println(studentFirstName + " is "
                + studentAgeInYears + " years old.");
        System.out.println("In his " + studentYearsOnFacebook
                + " years on Facebook, " + studentFirstName
                + " has made an average of "
                + avgNumOfFacebookFriends + " friends each year.");
        System.out.println(" ");

        // (c.) Full Name Variables
        System.out.println("My daughter's name is " + fullName + ".");
        System.out.println(studentFullName + " is the newest addition to our class.");

    }

}
```

Screenshots of Running Application:



URL to GitHub Repository:

https://github.com/sw-dev-lisa-s-nh/IntroToJava-week1.git