Lab3
Due: Wednesday, 9/25/2019

Part 1: Write a program Receipt that prints a receipt representing the total of these items:

banana          2.25
sweetPotatoe 4.50
taco               1.10

Sum the above items and print out the total

Hints: The above variables should be declared as double (means they have a decimal)

double banana, sweetPotatoe, taco;

You also have to declare a variable representing the total

double total;

To get the variable called total to contain the sum of the items

total = banana + sweetPotatoe + taco;

Your receipt is made by a statement like this

System.out.println(" The total of the items is " + total);

Save program as Receipt.java. Compile and run your program.

Now use printf to print out your output

Part 2. Temperature Convertor
Write a Java class called **FahrenToCels** that converts a temperature from degrees Fahrenheit to degrees Celsius.

Here is the formula you will need  
\[
\text{fahrenTemp} = \text{celsTemp} \times \left( \frac{9.0}{5.0} \right) + 32
\]

\[
\text{celsTemp} = (\text{fahrenTemp} - 32) \times \left( \frac{5.0}{9.0} \right)
\]

Develop a class that takes 20°F and converts that to equivalent degrees Celsius. Think about what primitives to use when you declare the variables. The output should look like

**20.0 degrees Fahrenheit equals ___ degrees Celsius.**

**Steps**

1. **Declare and initialize variables**
   
   ```java
double fahrenTemp, celsTemp;
```

2. **Initialize fahrenTemp =20.0**
   
   ```java
   fahrenTemp=20.0;
   ```

3. **Use above formula to compute celsTemp**

4. **Print out answer**
   
   ```java
   System.out.println(fahrenTemp + " degrees Fahrenheit equals " + celsTemp + " degrees Celsius");
   ```

6. **Write a test to verify answer and print out the answer. This means take what you got for celsTemp and use the other formula to arrive at the fahrenTemp**
   
   ```java
   double testFahren;
   testFahren= (celsTemp * (9.0/5.0)+32;
   ```

   ```java
   System.out.println("Regression test gives " + testFahren + " as answer");
   ```

7. **Now use Printf to print out answer**
Part 3: Interactive Input

You will write a program to read in the first and last name and age and then print a Happy Birthday message.

Steps.

1. import java.util.Scanner as the first line of your program
2. After the start of the main method declare the keyboard as the input means
   Scanner keyboard = new Scanner(System.in);
3. Print messages to cue the use to enter first name
   System.out.println(“Enter your first name”);
4. Read the input String in
   String firstName=keyboard.next();
5. Repeat steps 3 and 4 for last name
6. Cue the user to enter their age
   System.out.println(“Enter your age”);
7. Read the age in
   int age=keyboard.nextInt();
8. Print out birthday message that combines the variables
   System.out.println(firstName + “ “ + lastName + “ Happy “ + age + “ Birthday”);