**Lab 02 – NomNomNom**

Open BlueJ, and create a new BlueJ project titled **Lab02-NomNomNom** in your CS\LABS folder (H:\CS\Labs).

Create a new class with this code skeleton:



//Name: 

public class PracticeProblems

{

public static void main(String[] args)

{

}

}

Variables can be visualized as containers of information. Variables are (to the computer) a location in memory that stores a particular value. In Java, a variable must have both a name and a *type*.

REMEMBER – You print multiple items using BOTH types of print statements, like this:

int age = 59; //int is the type of the variable, age is the name of the variable

System.out.print("You are ");

System.out.print(age); //notice there are not quotation marks on this one.

System.out.println(" years old");

The above statement will print out (on one line): You are 59 years old

*NOTE – When printing the value of a variable, you don’t need the quotation marks! You only need quotation marks when you want to print that literal text.*

**Before each problem, insert a COMMENT with the problem number.**

1. Declare an integer variable called apples*.*
2. **Initialize** the integer variable applesto 12 (on a separate line from the declaration above).
3. Declare an integer variable called oranges and initialize it to 24 (on one line, using only one semi-colon).
4. Write the code to print the following, **using the values of the variables** (not just literal text):

You have this many apples >>> 12

You have this many oranges >>> 24

1. On one line (with only 1 semicolon), declare and initialize two double variables: applePrice and orangePrice, with the values 1.29 and 1.49 respectively.
2. Write the code to print the following (and don’t forget the dollar sign!), **using the values of the variables** (not just literal text):

The price of an apple is >>> $1.29

The price of an orange is >>> $1.49

1. Declare a final (constant) double called PI, initialized to the value 3.14159.

1. Write the code to print the following:

Pi is equal to >>> 3.14159

1. (Riddle) 3 = S on a T (Put your answer in your code as a comment.) Riddles are always optional.

//this is a language equation riddle. Example: 4 = L on a C >>> 4 legs on a chair

1. Declare and initialize a new String variable called day*.* Set its value to "Tuesday".
2. Write the code to print the following, using the value of the dayvariable:

Hello! Today is >>> Tuesday

1. Complete the ‘Worksheet – Variable Names’ (Excel file). Make sure to save it when done.

**NomNomNom app**

In your current project, create a new class with this code skeleton:



//Name: 

public class NomNomNom

{

public static void main(String[] args)

{

}

}

Declare two integer variables called cookiesAvailable and cakesAvailableand two double variables called myHeightInFeet and myWeight. The initial values should be 6, 0, 5.5, and 127.3, respectively.

Print the starting value of each variable to the screen.

Follow each of the steps below carefully using the **special assignment operators** from the last slide of your notes. After each step, print to the screen the new value of the variable that changed. Make sure that your output perfectly matches the sample output provided.

* Your mom bakes a fresh batch of cookies. Increase the number of cookies by 12.
* You and your friends eat half of the cookies. Divide the number of cookies by 2.
* Eating those cookies causes your weight to go up 0.3 pounds.
* A year passes and you grow a little taller. Add 3 inches to your height. (What is 3 inches in feet?)
* Your grandma buys you 16 cakes for your 16th birthday. Increase cakes by 16.
* You can’t resist the temptation of so many amazing cakes. You eat all 16 by yourself. Decrease the number of cakes by 16.
* Eating those cakes causes you to gain a lot of weight. In fact, your weight doubles.
* Time to hit the gym. Your extreme dedication helps you lose 67.7 pounds!

After all that, print the final values of each variable to the screen.

HINT: You should never (in this lab, at least) print a number directly. You should be printing your variables!

Example:

System.out.println("Number of cookies to start >>> 6"); //This is BAD.

System.out.print("Number of cookies to start >>> ");

System.out.println(cookiesAvailable); //This is GOOD.

Also, make sure that you are using the appropriate special assignment operators to alter your variables.

Example:

cookiesAvailable += 12;

System.out.print("Thanks, Mom. Cookies available >>> ");

System.out.println(cookiesAvailable);

When you run your NomNomNom program it should look like…

Number of cookies to start >>> 6

Number of cakes to start >>> 0

My starting height >>> 5.5

My starting weight >>> 127.3

Thanks, Mom. Cookies available >>> 18

Tasty! Cookies available >>> 9

My new weight >>> 127.6

My new height >>> 5.75

Happy birthday to me! Cakes available >>> 16

Nom nom nom! Remaining cakes >>> 0

My new weight >>> 255.2

Obligatory workout montage. My new weight >>> 187.5

Number of cookies at end >>> 9

Number of cakes at end >>> 0

My final height >>> 5.75

My final weight >>> 187.5