**Lab 05 – Road Trip**

Open BlueJ, and create a new BlueJ project titled **Lab05-RoadTrip** in your CS\LABS folder (H:\CS\LABS).

Create a new class with this code skeleton:

//Name:

**import java.util.\*;**

public class PracticeProblems

{

public static void main(String[] args)

{

**Scanner console = new Scanner(System.in);**

}

}

REMEMBER – before getting input from the user (keyboard), you should **prompt** them to enter information with a print statement. **Without a prompt, the user just has a blank screen, a flashing cursor, and no idea what to do!** Prompts should be clear and offer appropriate explanation. If you prompt the user with Enter a number >>> , are you going to get an integer or a double? Be as specific as possible. For help with keyboard input syntax, refer to the powerpoint notes.

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

1. PROMPT the user, asking them to enter an integer variable. Save their response in a variable called num1 and print the value entered plus 10.
2. PROMPT the user, asking them to enter their name. Save their response in a variable called name1. Using ONE print statement, print out a greeting in the form of “Hello, <name>!”.
3. PROMPT the user, asking them to enter a double type variable. Save their response in a variable called something*.* Print the value of something squared.
4. (Riddle) What belongs to you, but other people use it more than you do?
5. PROMPT the user to enter a String, name2*,* and an integer, age. Using one print statement, write the code to print (**user input is shown in red / angle brackets**):

**<name>** is **<age>** years old

1. PROMPT the user, asking them to enter a double type number.  Save their response in a variable called radius.  Write the code to print out the area of the corresponding circle, given the radius.
2. PROMPT the user, asking them to enter a double type number. Save their response in a variable called time. Write the code to print the distance a brick would fall if dropped from a tower in time seconds. Sample run (**user input shown in red**):

Enter the number of seconds of free fall >>> **5.4**

Distance traveled (in feet) >>> 469.09692

//gravity constant = 32.174 ft per sec squared. You’ll need to find the equation on your own!

1. PROMPT the user, saving the response into the name1variable declared earlier in your program*.* Print out their name three times, like this (assuming the user's name is Sarah):

SarahSarahSarah

**Road trip calculator**

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

//Name:

**import java.util.\*;**

public class RoadTrip

{

public static void main(String[] args)

{

**Scanner console = new Scanner(System.in);**

}

}

You and your friends, having recently acquired a car, are planning a road trip. This is your first road trip, and you’re a little unsure of yourself. As a programmer, your first instinct is to write an app that can help! This app will perform some calculations to make budgeting and planning your road trip easier.

When your program runs, it will get the values of the following variables **from the user**:

* double fuelEconomy
* double tripMiles
* double averageSpeed
* double avgPriceOfGas

Using the values of the variables (obtained by the program user), output the following:

* Total gallons of gas needed
* Total cost of gas
* Total driving hours

Sample program run (**user input shown in red**):

Please enter information for my calculations.

Fuel economy (mpg) >>> **20**

Total miles of trip >>> **1500**

Anticipated average speed (mph) >>> **50**

Avg. price of gas (per gallon) >>> $**2.80**

Road trip calculations:

Gallons of gas used >>> 75.0

Total cost of gas >>> $210.0

Total driving hours >>> 30.0