Day 4:

Exercise 1:

a. Download and unzip Day 4 -> carproject.zip in a folder with other labs.

b. Open the cars2 project and open the Car class.

c. Write the method ‘signature’ (the same as the public interface) and write the code to ‘implement’ the methods for: public void getGasInTank(); and public void getMilesDriven();

d. Instantiate a car using ‘right-button’ clicks. Test the methods.

e. Modify the drive() method to reflect that drive() needs to reduce the gasInTank instance variable:

* Create a variable for milesPerGallon (see slide for assumed value)
* Create variable and calculation for gasConsumed
* Update gasInTank

Exercise 2:

a. Open the cars4 project and open the Car class.

b. Add a private instance variable named milesPerGallon and put it in with the other instance variables.

c. Create a new constructor that takes a parameter, double mpg.

* Copy the constructor, Car(), and all its code and paste it under the code for Car().
* Change the ‘signature’, or first line: public Car(), so that it takes a parameter, double mpg.
* Create a statement that sets the instance variable, milesPerGallon, to take the value in mpg.

d. Change the constructor, Car() so that it sets the instance variable, milesPerGallon to 50.

e. Change the drive() method so that it does NOT re-declare and initialize milesPerGallon.

f. Now we need to write the tester class. Then when we make changes like this, we can just run the tester to make sure the code is correct. Open CarTester. Write code to:

* Add 20 gallons to the variable of type Car, car. Drive car 100 miles.
* Print actual and expected gas level (Note: you need to get a whiteboard and calculate these by hand.)
* Run the tester.

Exercise 3:

a. Open the cars5 project and open the Car class.

b. Complete the constructor: public Car(double mpg, String pictureFile)

c. Run the CarDemo.

d. Pat yourself on the back!