

CS4354 – Fall 2014 – Assignment 5

Due date: Friday, Nov. 21, 2014 at 5:00 pm.

Goal:

The goal of this assignment is to help students understand GUI development in Java.

Description:

This assignment extends the car dealership software from Assignment 4, by replacing **only** the Customer console-based user interface with a graphical user interface (GUI). The General View, Employee and Admin views will continue to be in console mode.

All the operations remain the same as in assignment 4, but this time the Customer input/output will be handled through a Swing-based Java GUI. The decision regarding which Swing components should be used to achieve the required functionality is left to the students. The program will initially start in console mode (General View), prompting the user to choose one of the possible views (Customer, Employee, or Admin). If the Customer view is chosen, then a JFrame appears, that gives the customer the options to send a message to the dealership or to search for vehicles. The search can be performed by <VIN> or by <Make, Model, Year, and Price range>. In the later case, the user should also specify the type of vehicle they are looking for (passenger car, truck, or motorcycle). If any of the fields is left empty, the program ignores that field in the search process. If all the fields are empty or if the input is incorrect, the program shows an appropriate message to the user. The results of the search should be shown in a table.

The GUI should be started on a separate Thread, so that possible slow responses of the back end do not make unresponsive. During the waiting time, the application should show a busy cursor. Slow responses should be simulated in the back-end with a random sleep time.

Tasks:

1. Implement the GUI functionality as stated in the description section above.
2. Try to make your program as robust as possible, by using Exception handling to deal with possible problems that may occur during the program execution.
3. Use a standard Java coding style to improve your program's visual appearance and make it more readable. I suggest the Google Java coding style: <https://google-styleguide.googlecode.com/svn/trunk/javaguide.html>

4. Use Javadoc is for every public class, and every public or protected member of such a class.

Other classes and members still have Javadoc as needed. Whenever an implementation comment would be used to define the overall purpose or behavior of a class, method or field, that comment is written as Javadoc instead. (It's more uniform, and more tool-friendly.)

Logistics:

This assignment will be done and submitted **individually** by each student.

Submit your answer in a single file (assign5_XXXXXX.zip). The XXXXXX is your TX State NetID.

Submit an electronic copy only, using the Assignments tool on the TRACS website for this class. Do NOT include executable or .class files in your submission.