P1U1 Documentation

In this documentation, I will elaborate some design thinking for this P1U1 Project.

This lab familiarizes me with some of the basic conventions in Java such as the usage of getter/setter method, inner class and how to manage package efficiently. Also, the concept of Serialization is learnt throughout this unit.

First of all, I applied the Option class as an inner class of OptionSet class. Both the OptionSet class and the Option class are declared as “protected” so that it will not be accessed in other packages which helps improve the data encapsulation of the whole project. These two classes can only be accessed by the Automotive class which is declared as “public” and can be accessed from the outside. The concept of encapsulation is quite important as it is one of the most outstanding characteristics of Java.

Secondly, in my Automotive class, I implemented methods related to the getting, setting, finding, updating and deleting operations of the Automotive, OptionSet and Option object. These methods are designed to meet with every possible requirement of the user so that for example, the user can not only update an object field by index, but also can update it by the field name. I learnt from it that when designing our program, we should think from the aspect of the users and what these users will need in the future.

Finally, I learnt about the concept of Serialization and Deserialization which is a useful strategy to store an object to local hard disk so that whenever the user need it in the future, he can conveniently read it from the disk and reconstruct the object. Also, I familiarize myself with the use of Java I/O and related “read” and “write” operations which were a big challenge.