Assignment 2 Turn it in on 22/03/2019

1. Create an arraylist of Cars. You are allowed to add, remove and list the Cars. Store Make, Model, Registration Number, Millage and year of manufacture.

Use a javaFx gui for this. (10 marks)

1. This class is to be persisted to an object file using serialization. You must load the contents at start-up. (10 marks)
2. Three lists/reports are to be produced about all the Cars. The first report is just ordered by the natural ordering i.e. Make and Model. The second report is to be ordered on the Year of manufacture. The third on millage. (20 marks)
3. Use Maven to create the jar file and have a project with a good package layout.

(10 marks)

1. Create a class library.

Add a few useful classes to a jar file. You will use this jar file in another project. You are to use at least one file from this jar file as a super class, so that you can inherit from it. Add either methods and/or attributes to the subclass of this super class.

e.g. Based on the car class.

Create a project. Add Car class to it. Car class is to have no millage attribute. It will be the super class for the real Car class later.

Add Basic Car to a jar (Car with no millage attribute).

Import this jar into a new project.

Extend this car class to add millage and appropriate methods …

Jar file (10 marks)

Extending a class (10 marks)

1. Use visual VM or other to examine your project’s memory. Create a loop that creates lots and lots of cloned dummy Car objects, add them to some collection (ArrayList) and then take a snapshot of the heap to see the effect on memory. Maybe a before and after picture.

Create another loop that runs forever and wait for the out of memory error.

(10 marks)

1. Write junit testcases ( at least 2) and a testsuite for some elements of

your code in your project. (15 marks)

1. Use Javadoc for documentation purposes. (5 marks)