**FOP 2 - Lab 5**

**Part A:** Type and compile the exercises from the lecture.

**Part B:**

1. Write a program **ShopApp** that has a list of product names to display to the customers; your program should only contain the method that does the following:

* Creates an empty list;
* Adds the initial product names: eggs, oranges, smoked ham, bread and lettuce;
* Displays the list to the customers;
* The owner realised that the ham is not in fact smoked, but cured; allow the user to correct that mistake;
* Re-display the list to the customers;
* After a while, the shop run out of oranges: allow the owner to remove it from the list;
* Re-display the list to the customers;
* But the best product by far: BROCCOLLI (☺) has just came in; allow the owner to add it to the top of list;
* Re-display the list to the customers.

1. Create a class **Car** that has 3 attributes/fields: make, registration number, and engine size. Provide at least one appropriate constructor to initialise these instance variables. Also, provide setters and getters for each of the fields. Finally, write a method that allows you to print the details of a car instance. Test your class by adding the main method where you create at least 2 Car objects.
2. Create a **CarShow** that holds a list of 3 Car object references; display it to the customers. You have noticed that you typed the wrong size engine for one of the cars, so you need to correct the mistake. Redisplay the list. One customer bought a car, so you should remove it from the list. Redisplay the list.
3. Implement a class **Pet** choosing 3 attributes/fields that you think apply to pets. Then provide constructor(s), setters, getters, and a display method. Test the functionalities of the **Pet** class by creating a new class **PetShow** where several Pet objects are instantiated and displayed; then modify those objects by using appropriate setters and display the changes.

**Make sure that your code is indented and commented appropriately.**

**Save all your exercises, put them into a zip folder with your student number and submit it using the moodle upload facility for lab 5 by next Monday, 2.00 pm.**