

COMP 1409 Introduction to Software Development 1

Quiz #10 – Suggested Solution

1. Below is the beginning of a class called `CarLot`. You fill in the missing bits according to the comments provided.

```
import java.util.ArrayList;
import java.util.Iterator;
public class CarLot
{
    private ArrayList<Car> theLot;

    public CarLot()
    {
        theLot = new ArrayList<Car>();
        // initialize the instance variable to hold a new ArrayList of Car ( 1 point )
    }

    public void addCar(Car carToAdd)
    {
        theLot.add(carToAdd);
        // add the car to the car lot ( 1 point )
    }
}
```

2. The `Car` class has these fields with appropriate accessor methods: `make`, `colour`, `year`.
You are not required to write this class.
Write a method for the `CarLot` class that displays on the screen all the information about each car on the lot. This method must use a while loop with an index. (4 points).

```
public void showCars()
{
    int index = 0;
    Car oneCar = null;
    while(index < theLot.size()) {
        oneCar = theLot.get(index);
        System.out.println(oneCar.getMake());
        System.out.println(oneCar.getColour());
        System.out.println(oneCar.getYear());
        index++;
    }
}
```

3. Write a method for the `CarLot` class that returns a count of the number of cars of a specific make, e.g. "Toyota". Use a while loop with an Iterator. (6 points)

```
public int countCars(String make)
{
    Iterator<Car> it = theLot.iterator();
    Car aCar = null;
    int carCount = 0;

    while(it.hasNext()){
        aCar = it.next();
        if(aCar.getMake().equals(make)) {
            carCount++;
        }
    }
    return carCount;
}
```