SE116 – LAB#4 2014-2015 SPRING

Aim: Inheritance in OOP using C++

Implement the following classes and methods accordingly:

1. Let there be a class called **Vehicle.** This class can be a base class for all kinds of vehicles such as, car, truck and bicycle.

2. Vehicle class shall have the following **protected** data members:

```
string brand;        // to store the information about the vehicle's brand.
int wheelNumber;     // that holds the number of wheels in a vehicle.
double maxSpeed;     // that holds the maximum speed capacity of a vehicle.
```

3. Create a class called **Car** which is derived from **Vehicle** class. **Car** class shall have extra private data members called `numberOfDoors` (as int) and `fuelType` (as string). `numberOfDoors` member holds the number of doors of the car and `fuelType` holds the type of the fuel that the car uses.

4. Both classes should have constructors (parameterized and non-parameterized) and a destructor defined as public. Both of the classes should have proper set and get methods for their data members.

5. Add a `printFeatures` method to **Car** class that displays the features of the car (brand, wheelNumber, maxSpeed, numberOfDoors and fuelType).

6. Write a main function to test your classes. Construct an appropriate instance of **Car** class and call `printFeatures` method to display the features of the created object.