# Multilevel Inheritance

The Car-Motorcycle-MotorVehicle example showed single-level inheritance. There's nothing to stop you from going further. You can define subclasses of cars for compacts, station wagons, sports coupes and more. For example, this class defines a compact as a car with two doors:

public class Compact extends Car {  
  
 // constructors  
 public Compact(String licensePlate, double maxSpeed,  
 String make, String model, int year, int numberOfPassengers) {  
 this(licensePlate, 0.0, maxSpeed, make, model, year, numberOfPassengers);   
 }  
  
 public Compact(String licensePlate, double speed, double maxSpeed,  
 String make, String model, int year, int numberOfPassengers) {  
 super(licensePlate, speed, maxSpeed, make, model,  
 year, numberOfPassengers, 2);  
 }  
   
}

Compact not only inherits from its immediate superclass, Car, but also from Car's superclass, MotorVehicle. Thus the Compact class also has a make, a model, a year and so on. There's no limit to this chain of inheritance, though getting more than four or five classes deep makes code excessively complex.

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