Exercise 1:

Write a class which instances represent cars. A car has color, a current tank level (0), a current mileage (0), an average consumption (5.2) and a maximum tank level (52). Use appropriate data types. Implement appropriate constructors to fill no data or all data during initialization. Write the corresponding getter- and setter-methods. Implement a method to drive the car a given distance as parameter. Implement a method to print all attributes of a car.

Write a separate class with a Mainmethod. Create four different cars. Set the current tank level to 10 using a constructor. Implement a loop (Scanner) that prompts the user to enter the distance to drive (for instance 100 for 100km). Calculate the new tank level, raise the current mileage and print the values. Stop the loop by entering 0.

Exercise 2:

Write a class which instances represent persons. The person has a name, surname, state ("married", "unmarried", "divorced"), nationality ("stateless", "Iran", "Austria", "Afghanistan", …) and an age. Write two constructors: One without parameter, one with a parameter per attribute. Write the corresponding getter- and setter-methods. Limit the age to be only positive. Write a method to marry a person with another and write also a method for divorcing. Write a print-method to print all attributes and their values.

Create an unmarried male person as test in a main-method. Set the name, surname, nationality and age and print the person. Change some attributes and print again. Create another female person and marry both persons as test and print them. Use the method for divorce and print the result again.