

## ***Exercise 5 – Interfaces, Collections, and Generics***

### **1. Reading Assignment**

From <http://openbook.rheinwerk-verlag.de/javainsel/>, please read the following chapter(s):

- 6.7 Schnittstellen
- 10 Generics<T>

### **2. Programming Exercise**

Please develop a Java program, which

- has interfaces derived from multiple interfaces (with naming conflicts and conflicting default implementations),
- has classes implementing multiple interfaces (with naming conflicts and conflicting default implementations),
- makes use of the interface Comparable,
- uses at least one collection data type storing objects implementing an interface IStudent or which subclasses or instances of the class clsPerson.

### **3. Self-Assessment**

Please answer the following questions:

- (1) What is the result of implementation inheritance?
- (2) What is the result of interface inheritance?
- (3) Is there a difference in a class implementing one interface derived from multiple interfaces in contrast to a class implementing multiple interfaces? What is about polymorphism?
- (4) How can you reuse signatures, behavior, and implementations in Java?
- (5) What is the purpose of Generics in Java?
- (6) Does the concept of default implementations in interfaces conflict with another concept in Java?