Programing Technologies
Lesson 3

Annotations

1. Download the L3_start.zip project file from the page of the class.

2. Rename the project (and the folder of it) to Lesson3.

3. Note that if you try to run your code, there is a warning saying:
   "`Lab.java uses unchecked or unsafe operations`"
   <u>We know that there is no problem</u>. The problem that we are warned can't really happen, so make the compiler suppress this warning using the `@SuppressWarnings("unchecked")` annotation on the `printStudents()` method.

4. In the Student class a char is used to store the gender of the student. This is not very comfortable, because a char variable may take several other values then what we use it for. Update your class by changing this field to be boolean. Do not forget to correct the errors appearing because of this type change. You must not remove existing methods from your project.

5. Since the gender is not stored in a char anymore it is advised to add a new constructor to the class where the user can set the gender as a boolean value. Add this constructor. From now on it is better to use this new constructor (however using the previous one is still not an error). To show this to others, make the previous constructor deprecated using the `@Deprecated` annotation.

6. Following the Java convention add JavaDoc to your constructor (`/** …*/`) in which you tell why it is deprecated.

7. Try to modify the name of the `toString()` method. Note that you cannot use the `@Override` annotation if the method you write is not present in a superclass.

8. Add a simple marker annotation type to the project. The name has to be MarkSg. You have to be able to use this annotation on a method or on a constructor. It has to stay in the project till runtime. Make the presence of this annotation visible in the JavaDoc as well.

9. Try to add this annotation to the constructor of the Student class, and to a field of it. Note that the latter one is not allowed. Try to instantiate a new Student in the Main class. Check the pop-up text appearing while you type.

10. Modify the annotation type so that it has a String element (follow the convention when naming it). Note that now you have to provide this String as well when you use this annotation. Note the change of the pop-up text as well.