

Tutorial problems – Friday 11 October 2019

5min Ask whether the students have any questions. Collect them by writing them on the board and decide with the whole group which of these to address.

20min Building on last weeks exercise about rectangles, let the students build a class **Rectangle** with field variables **private double width** and **private double height** with getters/setters and **toString()** method. Give the students 15min to work on this in groups of 2 or 3. Ask one group to present their solution.

25min Work on JUnit tests for the previous example. E.g.: with **Rectangle rectangle1 = new Rectangle(3.0, 2.0);**

```
@Test
    public void assertEqualsTest() {
        assertEquals(6.0, rectangle1.getArea(), 0.000001,
            "Failure in assertEqualsTest. Wrong area."
        );
    }
```

The students should come up with good examples (e.g., (3.0,2.0), (3.0,0.0), (2.0,3.0) for area, obviously also circumference if such a method were present).

[5min] If time you can discuss the **toString()** method. (Printing with and without a **toString()** method present.)

[5min] For advanced groups and if time: Discuss static vs. non-static methods.