Tutorial problems – Friday 4 October 2019

5min Explain how to submit exercises and how to follow the guidelines for the creation of the zip-file. [See module web page.]

5min Discuss Plagiarism:

> "Whilst you are encouraged to seek advice from your colleagues, *do not copy their work*. This should go without saying—we expect you to do your own work, and to acknowledge anyone who helps you. If you cheat, for instance, by copying someone else's work, or even worse by getting someone to do the work for you, we will find out, and disciplinary measures will be taken.
>
> On top of this, think about it: it does not benefit you to get someone else to do the work. It is for your benefit, and no one will be there in the exam to help you or in your job. The idea of the exercises and lectures is not to test you as often as possible, but to enhance your knowledge so you will become a better programmer. If you do not understand something, it is a far better idea to ask your tutor, or a demonstrator, for help, than to sit there in silence (or cheat). You must not cooperate on the assessed worksheets or the class tests. However, you may cooperate on the extra work that we offer."

15min Ask whether there are any questions. Collect these by writing them on the board and decide with the whole group which of these to address in the 15 minutes available for question answering. The answering of the question may also be put to the end of the tutorial.

5min Students to work in small groups (of 2 or 3) to answer:
"Explain: types, variables, assignment. What does `x = x + 1;` mean?"

Expected answer: Java is strictly typed and all expressions have either a base type (six number types, one for characters, one for booleans) or a composed type [Note, if the type can be inferred it can be replaced by **`var`**.] Variables have a name, a type, and a value (if properly declared and initialized). Assignment is used to give a value to a variable. After an assignment the old value of the variable is overwritten. **`x = x + 1;`** means that first the expression **`x + 1`** is evaluated (with the current value of **`x`**), the value of **`x`** is overwritten by this new value.

20min The students should again work in small group of 2 or 3 to address the following problem with respect to evaluating expressions and writing a static method:

- What is the value of **`x`** after the declaration **`int x = 2 + 1/2`**?
- What is the value of **`x`** after the declaration **`double x = 2 + 1/2`**?
- Write a static method that computes the area of a rectangle with two arguments **`width`** and **`height`** for the lengths of the two sides.
- What is the problem with the following static method?

```
public static String foo(int n) {
     return n;
}
```