

Exercise Sheet 1

Due: Sunday 26.04.2009, 23:59:59 via SVN

For help, contact aosd-staff@lists.iai.uni-bonn.de (staff only) or
aosd-course@lists.iai.uni-bonn.de (staff and participants).

Please start working on the exercises early enough so that you can contact us in time in case of problems. Don't expect us to be available during weekend!

Exercise 1: "Hello World" (4 Points)

If not done already, please install Eclipse, SVN and AJDT. Then create a new project with the name "HelloWorld" and insert the following class:

```
public class HelloWorld {
    public static void main(String[] args){
        System.out.println("Hello world!");
    }
}
```

- Write an aspect that adds "Hello Aspect!" to the console output of the above class.
- Which pointcut-advice combinations can achieve the expected result?
- Rewrite the aspect from part a) using a different pointcut-advice combination.
- Write an aspect that substitutes the output "Hello world!" with "Hello <your name>!"

Exercise 2: "Untangling" (4 Points)

In the lecture, the "transfer" method was presented as an example of tangled code. At https://svn.iai.uni-bonn.de/repos/IAI_Software/se/aosd2009ss/assignments/ES01__E02_Untangling you find a version of it that only contains the essential business logic.

Your task is to implement the aspects `ContractChecking`, `Security`, `Transaction` and `Logging` so that their joint effects restore the functionality of the original, tangled method (except for the ordering of events – ordering issues will be treated later in the course).

The aspect `ContractChecking` should check the input arguments. The supposed functionality of the aspects `Security`, `Logging` and `Transaction` should be obvious.

Make sure the provided test runs successfully without changing anything but the aspects!