

Aspect-Oriented Software Development 2015/16

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1. (5 b) A building is secured with motion sensors. To each sensor a back-up one is installed. Sensors can be controlled by software means. Among other things, a sensor can be activated, which creates an object that represents it. If a main sensor fails during the activation, a back-up sensor is activated and used instead.

Introduce the corresponding code in AspectJ. If that would be appropriate, apply the Worker Object Creation, Wormhole, or Cuckoo's Egg aspect-oriented design pattern. Explain your decision.

2. (2 b) What is the difference between the `cflow()` and `withincode()` pointcuts in AspectJ?

3. (1 b) The following AspectJ code is given:

```
around(int i, char c) : call(* C.*(..) && args(i, String, c) {  
    ...  
    proceed( ... );  
}
```

What parameters has to be provided with the `proceed()` clause in the code introduced above?

4. (2 b) What is the significance of abstract aspects?