

Mathematisch-Naturwissenschaftliche Fakultät Fachbereich Informatik (WSI) Praktische Informatik Prof. Dr. Klaus Ostermann

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## Homework Assignment 7 Software Design & Programming Techniques (WS2014)

The deadline for this assignment is Dec 10, 23:59. Hand in the assignments via email to jonathan.brachthaeuser@uni-tuebingen.de. Please include all names of the group members in your email.

## 1 Fragile Base Class Problem

Answer the following questions regarding the Fragile Base Class Problem:

- 1. What is the fragile base class problem?
- 2. Think about forwarding vs. delegation. How does this relate to the fragile base class problem? Why are private methods not a problem?
- 3. Find a possible instance of the fragile base class problem in real world software. Describe the problem in terms of this particular instance.
- 4. How can the decorator pattern be seen as a solution to the fragile base class problem? Try to express (do only sketch the program) the above found problem using the decorator pattern.