



Seminar 2, Design

Object-Oriented Design, IV1350

Goal

- Practice basic object-oriented design

Literature

- Chapter five in *A First Course in Object Oriented Development*.

Grading

There are three possible grades:

Fail (0 points) To pass the LAB1 sub course you must pass all four seminars. If you fail this seminar you have to report it again at the end of the course, at the fifth seminar.

1 point Active participation in seminar discussions. Written solution submitted in Canvas proving that you can, with minor defects, follow a method for designing an object-oriented program.

2 points Active participation in seminar discussions. Written solution submitted in Canvas proving that you can, without defects, use cohesion, coupling and encapsulation to design an object-oriented program. In the written solution you must also motivate how these principles are used.



Task

Design a program that can handle all parts, including alternative flows, of the *Process Sale* scenario, specified in the document with tasks for seminar one. Remember to also design the startup, that is, the `main` method. You should not write any code, just design the program. Your solution must meet the following requirements.

- The design must have high cohesion, low coupling and good encapsulation with a well-designed public interface.
- The solution must be divided into layers, as specified by the *MVC* and *Layer* patterns.
- You are not required to follow the domain model and system sequence diagram you made for seminar one; you may change them now if you find flaws in them. However, do keep your existing analysis model (DM and SSD) unless there are obvious reasons to change it.
- You do not have to design the view, it can be replaced with a class called **View**.
- In the **Method** chapter of your report, explain how you worked and give examples of how you reasoned when creating the design.
- In the **Result** chapter of your report, include and briefly explain interaction diagram(s) (that is, either communication or sequence diagrams) of the entire design. There must be interaction diagram(s) describing all functionality of the *Process Sale* scenario, both the basic and alternative flows, and also the main method. The chapter must also contain, and briefly explain, a class diagram showing all classes in the interaction diagram(s).
- In the **Discussion** chapter of your report, evaluate your design using applicable assessment criteria from the document `assessment-criteria-seminar2.pdf`, which is available on the **Assignments** page of the course web