Lecture 6: Software architecture patterns 2

Purpose and motivation

The purpose of this lecture is to continue the discussion on patterns, how patterns are described and what characterizes patterns as well as give some examples of patterns.

We will also discuss how software architectures can be evaluated from an analytical point of view before we, in the next lecture, will discuss how software architectures can be evaluated from an empirical point of view.

Furthermore we will continue the work with the exercises.

Before Class

- Read the literature
- Review the exercises from last lecture and prepare to ask any questions you may have

Reading

Read the following before class:

- Design Patterns[3, pp. 81–87, 137–139, 221–223, 331–337]
- Service Mesh Patterns[2]
- Evaluating Software Architectures [1, pp. 19–42]

(Find the material at the library, on itslearning, or in online databases.

In class

Lecture

1. Follow-up on last week's exercise
2. Patterns II
3. Evaluating software architectures
4. Exercises

Exercises

1. Patterns and evaluating software architecture exercise

References

[1] Paul Clements, Rick Kazman, and Mark Klein. *Evaluating Software Architectures: Methods and Case Studies*. Addison-Wesley Professional, 2001.

[2] João Tiago Duarte Maia and Filipe Figueiredo Correia. "Service Mesh Patterns". In: *Proceedings of the 27th European Conference on Pattern Languages of Programs*. EuroPLop '22. Irsee, Germany: Association for Computing Machinery, 2023. ISBN: 9781450395946. DOI: 10.1145/3551902.3551962. URL: https://doi-org.proxy1-bib.sdu.dk/10.1145/3551902.3551962.

[3] Eric Gamma et al. *Design Patterns. Elements of reuseable Object-Oriented Software*. Addison-Wesley Publishing Company, Inc., 1995. ISBN: 0-201-63361-2.