

2.5.2 Regarding solving the exercise

Be sure to read the exercise so you solve the right exercise...

These exercises are typically of type “identify the pattern that can solve this problem.” If you do not immediately see which one it is, then do not panic. It is better to use the 3-1-2 process and compositional design principles to come up with a flexible compositional solution to the exercise and then we can probably discuss our way towards a concrete pattern during the examination.

Remember to demonstrate your ability to express the theory in concrete code by developing code fragments and diagrams.

2.6 Regarding Compositional design

2.6.1 Regarding the theory

The central topics are FRS Chapter 16, 3-1-2 and the compositional design principles, and Chapter 15, behaviour, responsibility, roles, and protocol.

It will be natural to connect to the themes of design patterns, frameworks, and variability management.

2.6.2 Regarding solving the exercise

The typical exercises require you to identify variability points in the problem, and use 3-1-2 and compositional design to provide as flexible solution.

2.7 Regarding Frameworks

2.7.1 Regarding the theory

Framework theory is basically the 3-1-2 process and compositional design principles but with some additional/supplementary terminology. So, be sure to include concepts like *hotspot*, *frozen spot*, and *inversion of control*, as well as understand the characteristics of frameworks. The TEMPLATE METHOD is a central pattern to understand, in both its two variants - *separation and unification*.

Time permitting in your exam planning, have a look at the source code for MiniDraw (guided by the slides and FRS 30) and review how the concepts are applied in practice.

It will be natural to connect to the themes of design patterns, compositional design principles, and variability management.