

Exercise 2: Implementing Patterns

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The Blackboard pattern

In this exercise you will get to know the “Blackboard pattern”.

1) Learn about the pattern

There are numerous resources on the Internet describing the Blackboard pattern. One of them can be found here: <http://www.vico.org/pages/PatronsDisseny/Pattern%20Blackboard>.

We encourage you to read a couple of articles about the pattern and study some example implementations of it in other programming languages.

2) Find an example use of the pattern

The pattern needs to be applied to a specific problem. Think of an example problem that could be solved using the Blackboard pattern and explain why the choice of the Blackboard pattern is adequate. Please try to come up with a new problem that can not be found in the examples in the Internet.

3) Implementation

Model a set of classes implementing the Blackboard using Design by Contract. Please, do not forget to contract the classes well and then use them to solve the example application you developed in 2.

4) Without the pattern

Imagine you would not know about the Blackboard pattern. Describe a second way to solve the problem described in 2 that does not make use of this pattern. What are the advantages and disadvantages you this solution compared to the solution provided in 3?

Please provide us with a short, written report.