Design Patterns and Frameworks	Exercise Sheet No. 10
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Frameworks

In this exercise we will look at a few frameworks and analyse them for template hook patterns.

Task 10.1: Hook Fundamentals

1a)

What framework hook patterns do you know?

1b)

Which of these patterns are typical for black-box reuse? Which are typical for white-box reuse?

Task 10.2: Log4J

Log4J is a framework supporting powerful logging statements in Java programs. Check out the framework at http://logging.apache.org/log4j/1.2/ and understand the core principles.

2a)

Look at the classes `Appender` and `Layout` and their relationship. What template–hook pattern can you find here?

2b)

Look at the classes `Logger` and `Appender` and their relationship. What template–hook pattern can you find here?

2c)

From the hooks you found: What kind of framework is Log4J? Is it rather black-box or white-box?

Task 10.3: JUnit

JUnit is a framework for unit-testing Java programs in a manner supporting regression tests. While JUnit 4 uses Java annotations for marking specific classes as Test cases, earlier versions of the framework employed various template–hook patterns. Check out version 3.8.1 of the framework at http://junit.org and understand the core principles.

3a)

Look at the `TestCase` class. What template–hook pattern can you find here?

3b)

Look at the classes `TestSuite` and `Test` and their relationship. What template–hook pattern can you find here?

3c)

Look at the classes `TestCase` and `TestResult` and their relationship. What template–hook pattern can you find here?

3d)

From the hooks you found: What kind of framework is JUnit? Is it rather black-box or white-box?