LAB4 Dynamic Verification Techniques

Integrációs és ellenőrzési technikák (VIMIAC04)

1 Test Desgin

Design at least 5 test cases for the `fireTorpedos` method of the `GT4500` based on the specification in the JavaDoc comment of the method.

2 Tesztesetek implementációja

1. Implement your test cases using JUnit! Use mocks for `TorpedoStore` in your test cases! Try to verify state and interaction also (see here)!
2. Design and implement one more new test case based on the source code.

3 Measure code coverage

We will use JaCoCo tool, which is available as a Maven plugin. To use it, add the following to the `pom.xml` file:

In the dependencies:

```
<dependency>
    <groupId>org.jacoco</groupId>
    <artifactId>jacoco-maven-plugin</artifactId>
    <version>0.7.9</version>
</dependency>
```

In the `build/plugins` tag:

```
<plugin>
    <groupId>org.jacoco</groupId>
    <artifactId>jacoco-maven-plugin</artifactId>
    <version>0.7.9</version>
    <executions>
        <execution>
            <id>default-prepare-agent</id>
```

```
            <goals>
                <goal>prepare-agent</goal>
            </goals>
        </execution>
        <execution>
            <id>default-report</id>
            <phase>prepare-package</phase>
            <goals>
                <goal>report</goal>
            </goals>
        </execution>
        <execution>
            <id>default-check</id>
            <goals>
                <goal>check</goal>
            </goals>
            <configuration>
                <rules>
                    <rule implementation="org.jacoco.maven.RuleConfiguration">
                        <element>BUNDLE</element>
                        <limits>
                            <limit implementation="org.jacoco.report.check.Limit">
                                <counter>COMPLEXITY</counter>
                                <value>COVEREDRATIO</value>
                                <minimum>0.00</minimum>
                            </limit>
                        </limits>
                    </rule>
                </rules>
            </configuration>
        </execution>
    </executions>
</plugin>
```

1. Measure the code coverage of your existing tests! Run your tests with `mvn verify` to have code coverage results.
2. The report can be found id `/target/site/jacoco` folder.
3. Extend your tests if they have less than 100% code coverage.