

Exercise Sheet 7

November 30: OO-Principles II

Preparation:

1. You need to install Eclipse and the following Eclipse Plug-Ins:
 - (a) JDepend from the Eclipse Marketplace, see <http://andrei.gmxhome.de/jdepend4eclipse>
 - (b) Eclipse Metrics Plugin, see <http://sf.net/projects/metrics> for download and documentation. Hint: If you want to run metrics on any project, you must first tick the “Enable” metrics box in the project dependencies!
2. Get the sources for JUnit 3.8.1, see <http://sf.net/projects/junit/files/junit/3.8.1>
3. Get the sources for JHotDraw, see <http://sf.net/projects/jhotdraw/files/JHotDraw> and <http://softarch.cis.strath.ac.uk/PLJHD/Patterns/JHDDomainOverview.html>
4. Get the sources for Tomcat 7, see <http://tomcat.apache.org/download-70.cgi>

Exercise 1

A toy example!

1. Read the documentation and figure out how to install JDepends and Metrics.
2. Run both on the HeadFirst examples (project).

Exercise 2

Analyze JUnit!

1. Install and compile JUnit sources!
2. Run JDepends on the all JUnit packages and interpret the results! Are there any “bad” packages and why?
3. Run JDepends on the subset of all JUnit packages, namely `junit.framework`, `junit.runner`, and `junit.extensions`, and interpret the results! Any changes?
4. Run Metrics! What parameters are red and how can you interpret these?

Exercise 3

Analyze Tomcat!

1. Install and compile the Tomcat 7 source code sources!
2. Run JDepends on the all Tomcat `catalina` packages and interpret the results! Are there any “bad” packages and why (Hint: watch `util`!)?
3. Run Metrics! Are there any “bad” packages and why?

Exercise 4

Analyze JHotDraw!

1. Install and compile the JHotDraw sources!
2. Run JDepends on the all JHotDraw `draw` packages and interpret the results! Are there any “bad” packages and why?
3. Run JDepends on the *all* JHotDraw packages and interpret the results! Any changes and why?
4. Run Metrics! Are there any “bad” packages and why?

Hints

- Consult the literature!
- You can work in pairs, if you want!
- If you want to learn a Java API, look into the java docs!
- Always use the same familiar IDE (suggestion Eclipse)!