



# Code Quality Tools in Java

by Peter Karussell · May. 25, 09 · Java Zone · Not set

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There are several tools to measure the code quality. The ones I have tried with a lot of success are:

- FindBugs (latest version 1.3.8) – *uses static analysis to look for bugs in Java code.* This is a great tool, it discovered possible NullPointerExceptions and a lot more bugs in my projects. Sometimes I asked myself how this program could have discovered this ‘complicated’ bug. With the maven plugin you can do:

```
mvn findbugs:findbugs
```

which will use version 1.3.8 out of the box

- PMD (latest version 4.2.5) – *scans Java source code and looks for potential problems.* The rules are configurable, but at the beginning you will only need the provided one (and spend a lot of time to choose your favourites 😊) In NetBeans 6.5 this tool is well integrated and works like a charme (CTRL+ALT+P).

With the maven plugin you can do:

```
mvn pmd:pmd
```

after you specified the following in the pom.xml under <reporting> <plugins> :

```
<plugin>
  <groupId>org.apache.maven.plugins</groupId>
  <artifactId>maven-pmd-plugin</artifactId>
  <version>2.3</version>
  <configuration>
    <targetJdk>1.5</targetJdk>
  </configuration>
</plugin>
```

Other tools to consider



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- JarAnalyzer – *Is a dependency management utility for jar files. It's primary purpose is to create a directory, parse each of the jar files in that directory, and identify the dependencies between the jar files.*

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- **HammurAPI – a code quality governance platform**

but I haven't tried them so far.

For Findbugs and pmd there is a NetBeans plugin (SQE ... software quality environment) which looks promising, but fails with a NullPointerException after I installed it via the update center and tried it on my project. Maybe I should use one of the snapshots. (BTW: I successfully used the pmd-plugin and findbugs in the standalone version).

Sonar is another interesting approach to use several code quality tools at a time. With Sonar it is possible to see the violations or possible bugs over days or weeks – so, you are looking at the improvements and you will not get lost in the mass of bugs at the beginning. Another “multi-tooling” project is XRadars.

A little bit offtopic, but a great tool is proguard, which shrinks, optimizes, obfuscates and preverifies Java class files. There is even a maven plugin for that.

From <http://karussell.wordpress.com/>

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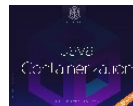
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