[**Which is the best tool for finding bugs in the Java code?**](http://stackoverflow.com/questions/7321282/which-is-the-best-tool-for-finding-bugs-in-the-java-code)

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| up vote 5 down vote [favorite](http://stackoverflow.com/questions/7321282/which-is-the-best-tool-for-finding-bugs-in-the-java-code)  **4** | I would like to know which tool is best for finding any kind of bugs in my code. I know this may be some what theoretical or never ending question so I would like to modify it in terms of the efficiency of bug reporting (including the naming convention as well). So you can say which tool reports and maximum bugs and if effectively used in the industry? I heard about findbug is it really good?  [java](http://stackoverflow.com/questions/tagged/java) [bug-reporting](http://stackoverflow.com/questions/tagged/bug-reporting)   |  |  |  | | --- | --- | --- | | [share](http://stackoverflow.com/q/7321282)|[improve this question](http://stackoverflow.com/posts/7321282/edit) | [edited Sep 6 '11 at 14:16](http://stackoverflow.com/posts/7321282/revisions)  [[https://www.gravatar.com/avatar/99e100243aaa8b1469b1ed4e8bbecb06?s=32&d=identicon&r=PG](http://stackoverflow.com/users/276052/aioobe)](http://stackoverflow.com/users/276052/aioobe)  [aioobe](http://stackoverflow.com/users/276052/aioobe) 141k19291423 | asked Sep 6 '11 at 14:09  [[http://i.stack.imgur.com/xc3ip.jpg?s=32&g=1](http://stackoverflow.com/users/789214/amod0017)](http://stackoverflow.com/users/789214/amod0017)  [amod0017](http://stackoverflow.com/users/789214/amod0017) 1,06221133 | |
|  | |  |  |  |  | | --- | --- | --- | --- | | |  |  | | --- | --- | | 2 |  | | Use the one situated between your ears, that's the most potent one and is not replaceable by any machine tools ;-) –  [Péter Török](http://stackoverflow.com/users/265143/peter-torok) [Sep 6 '11 at 14:18](http://stackoverflow.com/questions/7321282/which-is-the-best-tool-for-finding-bugs-in-the-java-code#comment8825907_7321282) | | |  |  | | --- | --- | |  |  | | @Peter nice comment... but sometime it dont seems practical specially when you are just a starter... these tool will help you to increase your database of tool named as brain which can be used later.... findbug improved my coding practice a lot. –  [amod0017](http://stackoverflow.com/users/789214/amod0017) [Sep 6 '11 at 14:23](http://stackoverflow.com/questions/7321282/which-is-the-best-tool-for-finding-bugs-in-the-java-code#comment8826024_7321282) | | |  |  | | --- | --- | | 2 |  | | Indeed. But unless you actually learn *why* the specific FindBugs warnings are issued and how to avoid them, i.e. how to write better code (for which you must use your brains), you won't become a better developer, no matter how many code analysis tools you use. –  [Péter Török](http://stackoverflow.com/users/265143/peter-torok) [Sep 6 '11 at 14:45](http://stackoverflow.com/questions/7321282/which-is-the-best-tool-for-finding-bugs-in-the-java-code#comment8826476_7321282) | | |  |  | | --- | --- | |  |  | | @peter i do agree to that peter and respect your comment –  [amod0017](http://stackoverflow.com/users/789214/amod0017) [Sep 6 '11 at 17:33](http://stackoverflow.com/questions/7321282/which-is-the-best-tool-for-finding-bugs-in-the-java-code#comment8829439_7321282) |   add comment |

**5 Answers**

[active](http://stackoverflow.com/questions/7321282/which-is-the-best-tool-for-finding-bugs-in-the-java-code?answertab=active#tab-top) [oldest](http://stackoverflow.com/questions/7321282/which-is-the-best-tool-for-finding-bugs-in-the-java-code?answertab=oldest#tab-top) [votes](http://stackoverflow.com/questions/7321282/which-is-the-best-tool-for-finding-bugs-in-the-java-code?answertab=votes#tab-top)

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| up vote 8 down vote accepted | | [FindBugs](http://findbugs.sourceforge.net/) is probably one of the most prominent ones and well worth a try.  For naming conventions etc, I'd suggest you have a look at [CheckStyle](http://checkstyle.sourceforge.net/).   |  |  | | --- | --- | | [share](http://stackoverflow.com/a/7321287)|[improve this answer](http://stackoverflow.com/posts/7321287/edit) | answered Sep 6 '11 at 14:09  [[https://www.gravatar.com/avatar/99e100243aaa8b1469b1ed4e8bbecb06?s=32&d=identicon&r=PG](http://stackoverflow.com/users/276052/aioobe)](http://stackoverflow.com/users/276052/aioobe)  [aioobe](http://stackoverflow.com/users/276052/aioobe) 141k19291423 | |
|  | | |  |  |  |  | | --- | --- | --- | --- | | |  |  | | --- | --- | |  |  | | Yes I have used find bugs but we dont have any bug for style. Going through check style let me try that as well. –  [amod0017](http://stackoverflow.com/users/789214/amod0017) [Sep 6 '11 at 14:15](http://stackoverflow.com/questions/7321282/which-is-the-best-tool-for-finding-bugs-in-the-java-code#comment8825848_7321287) |   add comment |
| up vote 2 down vote | Findbugs is quite good. However, I would recommend using sonar to maintain code quality. <http://www.sonarsource.org/> It integrates well with maven (sonar:sonar). Other than this I believe the use of maven site to create checkstyle, pmd, findbugs et-all report also helps keep the developers on toes.   |  |  |  | | --- | --- | --- | | [share](http://stackoverflow.com/a/7321299)|[improve this answer](http://stackoverflow.com/posts/7321299/edit) | [edited Sep 6 '11 at 14:17](http://stackoverflow.com/posts/7321299/revisions) | answered Sep 6 '11 at 14:10  [[https://www.gravatar.com/avatar/0387e657fb93500d92de9fc8fbb60384?s=32&d=identicon&r=PG](http://stackoverflow.com/users/788109/scorpion)](http://stackoverflow.com/users/788109/scorpion)  [Scorpion](http://stackoverflow.com/users/788109/scorpion) 2,235520 | | |
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| up vote 2 down vote | It depends on what you are looking for. Personally, I use a combination of [FindBugs](http://findbugs.sourceforge.net/) and [PMD](http://pmd.sourceforge.net/) for performing static analysis of Java code. However, I recently discovered an [Eclipse plugin called CodePro Analytix by Google](http://code.google.com/javadevtools/codepro/doc/index.html).  There are two types of analysis for Java code - source code analysis and byte code analysis. PMD looks at the source code to find possible bugs, unused code, suboptimal code, complicated expressions, and duplicated code. FindBugs looks at the generated byte code to find possible errors. Both are essential when analyzing an application.  However, when it comes to finding defects, nothing beats a good testing framework and (if necessary) a mocking library. I've had good successes with [JUnit](http://junit.org/) and [Mockito](http://code.google.com/p/mockito). This will enable you to write unit tests for your modules. Writing code system, integration, and smoke tests, either using automated tools or test procedures is also important so that you can cover core functionality and quickly see when something is broken.   |  |  | | --- | --- | | [share](http://stackoverflow.com/a/7321462)|[improve this answer](http://stackoverflow.com/posts/7321462/edit) | answered Sep 6 '11 at 14:22  [[http://i.stack.imgur.com/n1zbw.jpg?s=32&g=1](http://stackoverflow.com/users/572/thomas-owens)](http://stackoverflow.com/users/572/thomas-owens)  [Thomas Owens](http://stackoverflow.com/users/572/thomas-owens) 42.6k44198345 | | |
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| up vote 1 down vote | | use a compiler to find syntax 'bugs'  use test cases to find usability 'bugs'  use test harnesses in the code to find regression issues with code modifications.   |  |  | | --- | --- | | [share](http://stackoverflow.com/a/7321325)|[improve this answer](http://stackoverflow.com/posts/7321325/edit) | answered Sep 6 '11 at 14:12  [[https://www.gravatar.com/avatar/a4a2d6f3a15a81df3d64ee4f631d02bf?s=32&d=identicon&r=PG](http://stackoverflow.com/users/318749/randy)](http://stackoverflow.com/users/318749/randy)  [Randy](http://stackoverflow.com/users/318749/randy) 11.9k1026 | |
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| up vote 1 down vote | I prefer to use the Code Analysis in IntelliJ. It not only finds many probable bugs and improvement but has quick fixes for a lot them which makes it practical to fix large amounts of code.   |  |  | | --- | --- | | [share](http://stackoverflow.com/a/7321333)|[improve this answer](http://stackoverflow.com/posts/7321333/edit) | answered Sep 6 '11 at 14:12  [[https://www.gravatar.com/avatar/53ee9941b3fefef67175daf212e62d41?s=32&d=identicon&r=PG](http://stackoverflow.com/users/57695/peter-lawrey)](http://stackoverflow.com/users/57695/peter-lawrey)  [Peter Lawrey](http://stackoverflow.com/users/57695/peter-lawrey) 205k21164360 | |
|  | |  |  |  |  | | --- | --- | --- | --- | | |  |  | | --- | --- | |  |  | | does it also shows standard naming convention as well? –  [amod0017](http://stackoverflow.com/users/789214/amod0017) [Sep 6 '11 at 14:17](http://stackoverflow.com/questions/7321282/which-is-the-best-tool-for-finding-bugs-in-the-java-code#comment8825889_7321333) | | |  |  | | --- | --- | | 1 |  | | Standard naming conversions with quick fixes as well. i.e. if a public static final is in camelCase, it highlights (or it appears in a report) and gives you the option to rename it to UPPER\_CASE changing all the references (even in comments, String and files) –  [Peter Lawrey](http://stackoverflow.com/users/57695/peter-lawrey) [Sep 6 '11 at 14:24](http://stackoverflow.com/questions/7321282/which-is-the-best-tool-for-finding-bugs-in-the-java-code#comment8826047_7321333) | |