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Java static code analysis

Unique rules to find Bugs, Vulnerabilities, Security Hotspots, and Code Smells in your JAVA code

All rules 632 | Vulnerability 53 | Bug 154 | Security Hotspot 36 | Code Smell 389 | Quick Fix 42

Tags | Search by name...

Abstract class names should comply with a naming convention
Code Smell

Strings literals should be placed on the left side when checking for equality
Code Smell

Files should contain an empty newline at the end
Code Smell

Source code should be indented consistently
Code Smell

A close curly brace should be located at the beginning of a line
Code Smell

Close curly brace and the next "else", "catch" and "finally" keywords should be on two different lines
Code Smell

Close curly brace and the next "else", "catch" and "finally" keywords should be located on the same line
Code Smell

An open curly brace should be located at the beginning of a line
Code Smell

An open curly brace should be located at the end of a line
Code Smell

Tabulation characters should not be used
Code Smell

Functions should not be defined with a variable number of arguments
Code Smell

Public constants and fields initialized at declaration should be "static final" rather than merely "final"

Analyze your code

Code Smell | Minor | convention

Making a `public` constant just `final` as opposed to `static final` leads to duplicating its value for every instance of the class, uselessly increasing the amount of memory required to execute the application.

Further, when a non-`public`, `final` field isn't also `static`, it implies that different instances can have different values. However, initializing a non-`static final` field in its declaration forces every instance to have the same value. So such fields should either be made `static` or initialized in the constructor.

Noncompliant Code Example

```
public class Myclass {
  public final int THRESHOLD = 3;
}
```

Compliant Solution

```
public class Myclass {
  public static final int THRESHOLD = 3;    // Compliant
}
```

Exceptions

No issues are reported on final fields of inner classes whose type is not a primitive or a String. Indeed according to the Java specification:

> An inner class is a nested class that is not explicitly or implicitly declared static. Inner classes may not declare static initializers (§8.7) or member interfaces. Inner classes may not declare static members, unless they are compile-time constant fields (§15.28).

Available In:

sonarlint | sonarcloud | sonarqube

Local-Variable Type Inference should be used

Code Smell

Migrate your tests from JUnit4 to the new JUnit5 annotations

Code Smell

Track uses of disallowed classes

Code Smell

Track uses of "@SuppressWarnings" annotations

Code Smell