

## **Java by Comparison Kata**

github.com/javabycomparison/kata

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1. Start Cleaning Up	5. Prepare for Things Going Wrong
<ul> <li>□ Avoid Unnecessary Comparisons</li> <li>□ Avoid Negations</li> <li>□ Return Boolean Expressions Directly</li> <li>□ Simplify Boolean Expressions</li> <li>□ Avoid NullPointerException in Conditionals</li> <li>□ Avoid Switch Fallthrough</li> <li>□ Always Use Braces</li> <li>□ Ensure Code Symmetry</li> </ul>	☐ Fail Fast ☐ Always Catch Most Specific Exception ☐ Explain Cause in Message ☐ Avoid Breaking the Cause Chain ☐ Expose Cause in Variable ☐ Always Check Type Before Cast ☐ Always Close Resources ☐ Always Close Multiple Resources ☐ Explain Empty Catch
2. Level Up Your Code Style	6. Assert Things Going Right
<ul> <li>□ Replace Magic Numbers with Constants</li> <li>□ Favor Enums Over Integer Constants</li> <li>□ Favor For-Each Over For Loops</li> <li>□ Avoid Collection Modification During Iteration</li> <li>□ Avoid Compute-Intense Operations</li> <li>□ During Iteration</li> <li>□ Group with New Lines</li> <li>□ Favor Format Over Concatenation</li> <li>□ Favor Java API Over DIY</li> </ul>	<ul> <li>□ Structure Tests Into Given-When-Then</li> <li>□ Use Meaningful Assertions</li> <li>□ Expected Before Actual Value</li> <li>□ Use Reasonable Tolerance Values</li> <li>□ Let JUnit Handle Exceptions</li> <li>□ Describe Your Tests</li> <li>□ Favor Standalone Tests</li> <li>□ Parametrize Your Tests</li> <li>□ Cover the Edge Cases</li> </ul>
3. Use Comments Wisely	7. Design Your Objects
Remove Superfluous Comments Remove Commented-Out Code Replace Comments with Constants Replace Comments with Utility Methods Document Implementation Decisions Document Using Examples Structure JavaDoc of Packages Structure JavaDoc of Classes and Interfaces	☐ Split Method with Boolean Parameters ☐ Split Method with Optional Parameters ☐ Favor Abstract Over Concrete Types ☐ Favor Immutable Over Mutable State ☐ Combine State and Behavior ☐ Avoid Leaking References ☐ Avoid Returning Null
<ul><li>Structure JavaDoc of Methods</li><li>Structure JavaDoc of Constructors</li></ul>	8. Let Your Data Flow
<ul><li>4. Name Things Right</li><li>Use Java Naming Conventions</li></ul>	<ul><li>☐ Favor Lambdas Over Anonymous Classes</li><li>☐ Favor Functional Over Imperative Style</li><li>☐ Favor Method References Over Lambdas</li><li>☐ Avoid Side Effects</li></ul>
☐ Follow Getter/Setter Conventions for Frameworks ☐ Avoid Single-Letter Names ☐ Avoid Abbreviations ☐ Avoid Meaningless Terms ☐ Use Domain Terminology	<ul> <li>Use Collect for Terminating Complex Streams</li> <li>Avoid Exceptions in Streams</li> <li>Favor Optional Over Null</li> <li>Avoid Optional Fields or Parameters</li> <li>Use Optionals as Streams</li> </ul>