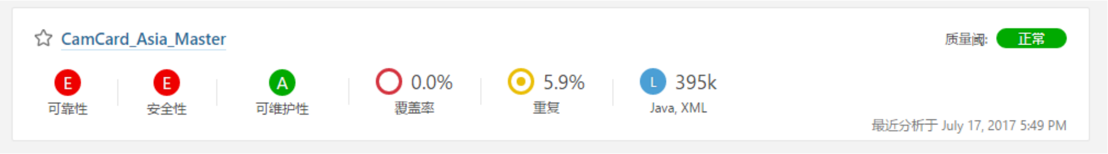
基于 SonarQube，CC 代码分析结果

207-7-17

1. CC 情况总览：



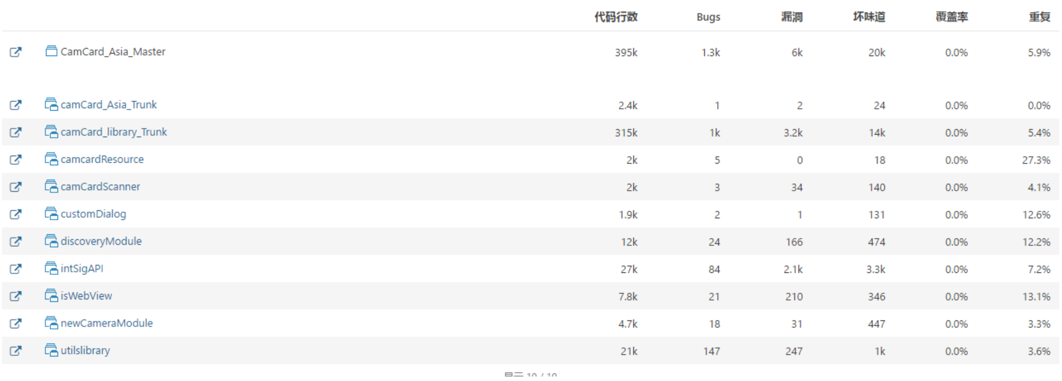
☆ CamCard_Asia_Master

质量阈: 正常

E	E	A	0.0%	5.9%	395k
可靠性	安全性	可维护性	覆盖率	重复	Java, XML

最近分析于 July 17, 2017 5:49 PM

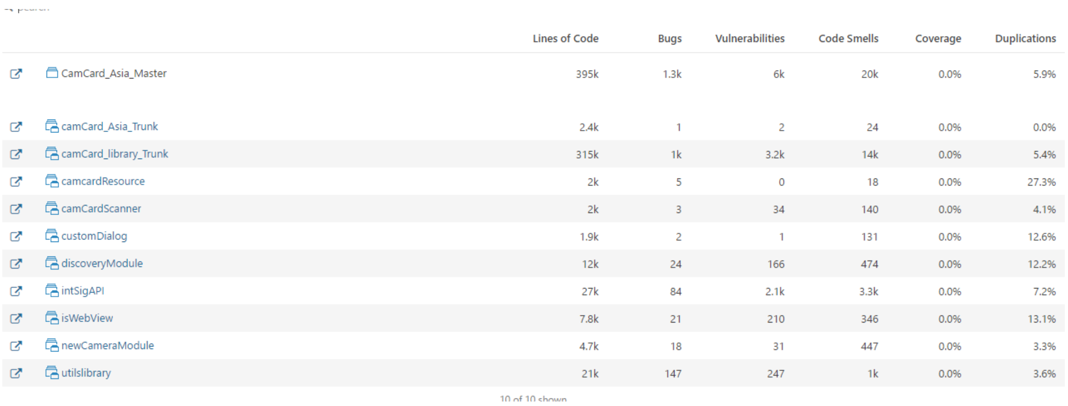
2. CC 各模块总览：



	代码行数	Bugs	漏洞	坏味道	覆盖率	重复
CamCard_Asia_Master	395k	1.3k	6k	20k	0.0%	5.9%
camCard_Asia_Trunk	2.4k	1	2	24	0.0%	0.0%
camCard_library_Trunk	315k	1k	3.2k	14k	0.0%	5.4%
camcardResource	2k	5	0	18	0.0%	27.3%
camCardScanner	2k	3	34	140	0.0%	4.1%
customDialog	1.9k	2	1	131	0.0%	12.6%
discoveryModule	12k	24	166	474	0.0%	12.2%
intSigAPI	27k	84	2.1k	3.3k	0.0%	7.2%
isWebView	7.8k	21	210	346	0.0%	13.1%
newCameraModule	4.7k	18	31	447	0.0%	3.3%
utilslibrary	21k	147	247	1k	0.0%	3.6%

显示 10 / 10

英文版：



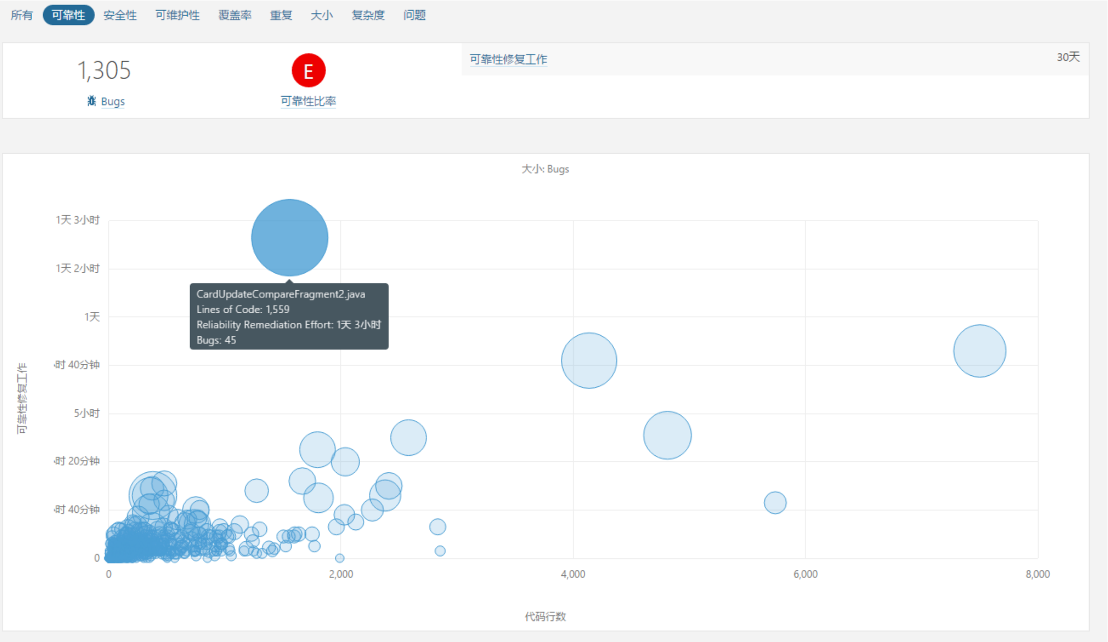
Search

	Lines of Code	Bugs	Vulnerabilities	Code Smells	Coverage	Duplications
CamCard_Asia_Master	395k	1.3k	6k	20k	0.0%	5.9%
camCard_Asia_Trunk	2.4k	1	2	24	0.0%	0.0%
camCard_library_Trunk	315k	1k	3.2k	14k	0.0%	5.4%
camcardResource	2k	5	0	18	0.0%	27.3%
camCardScanner	2k	3	34	140	0.0%	4.1%
customDialog	1.9k	2	1	131	0.0%	12.6%
discoveryModule	12k	24	166	474	0.0%	12.2%
intSigAPI	27k	84	2.1k	3.3k	0.0%	7.2%
isWebView	7.8k	21	210	346	0.0%	13.1%
newCameraModule	4.7k	18	31	447	0.0%	3.3%
utilslibrary	21k	147	247	1k	0.0%	3.6%

10 of 10 shown

3. CC 可靠性

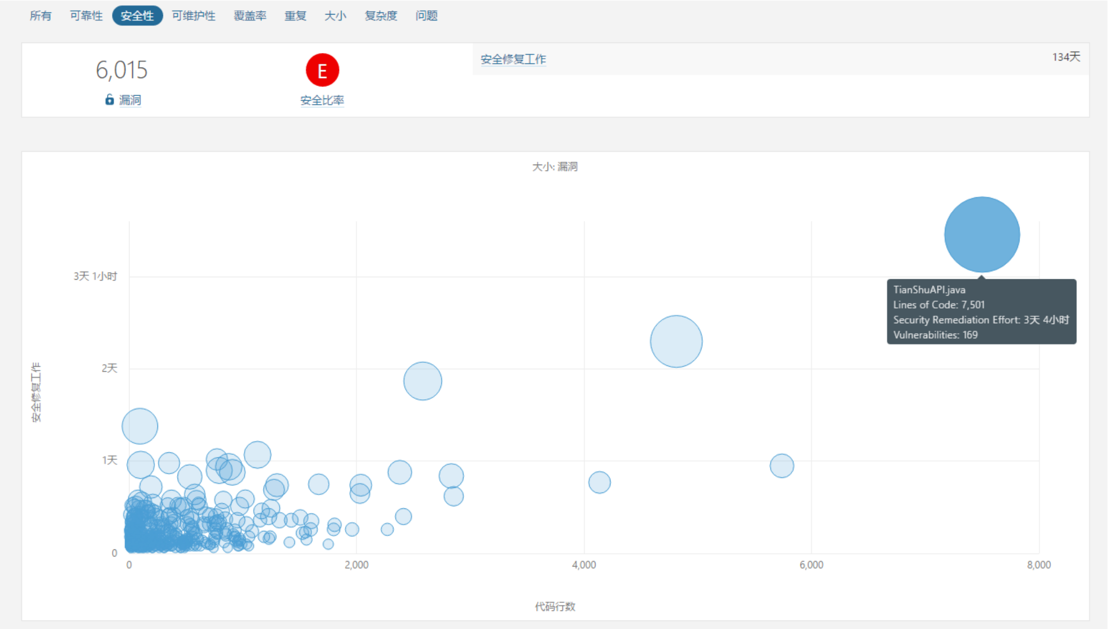
一个圈表示一个文件，横轴表示该文件代码行数，纵轴表示该文件可靠性修复需要耗费的时间。



CardUpdateCompareFragment2.java
Lines of Code: 1,559
Reliability Remediation Effort: 1天 3小时
Bugs: 45

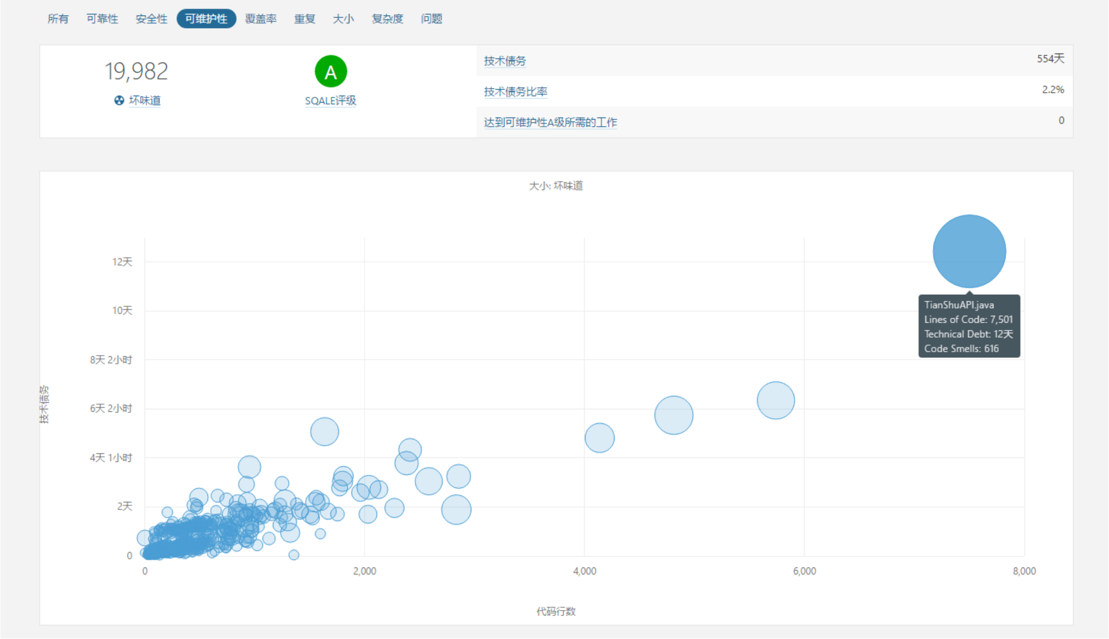
4. CC 安全性

一个圈表示一个文件，横轴表示该文件代码行数，纵轴表示该文件安全性修复需要耗费的时间。



TianShuAPI.java
Lines of Code: 7,501
Security Remediation Effort: 3天 4小时
Vulnerabilities: 169

5. CC 可维护性



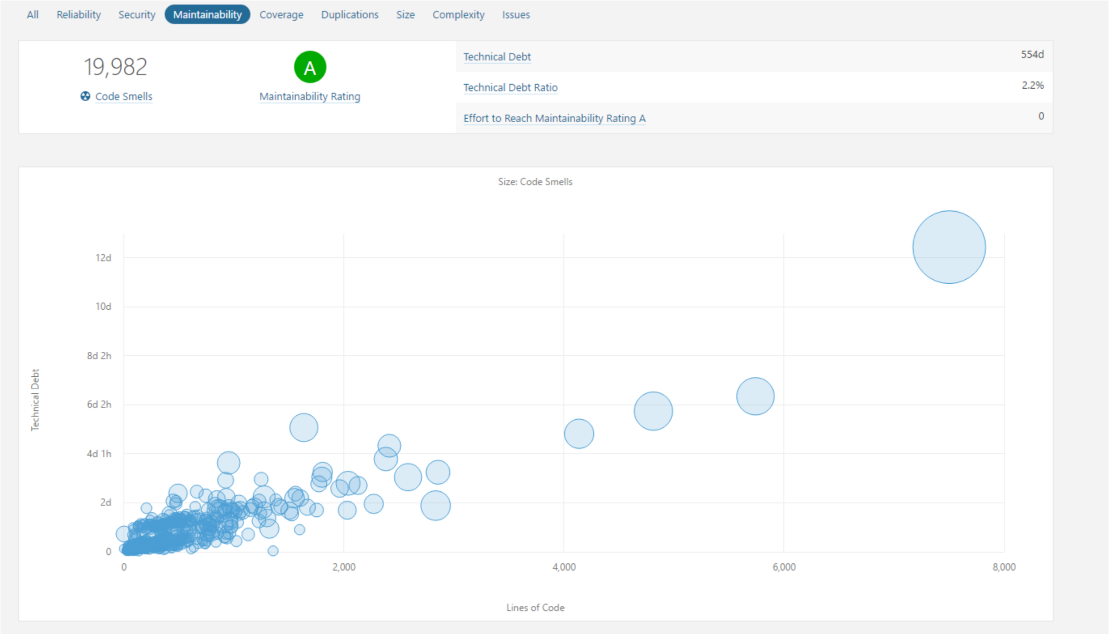
19,982 坏味道

A SQALE评级

技术债务	554天
技术债务比率	2.2%
达到可维护性A级所需的工作	0

TianShuAPI.java
Lines of Code: 7,501
Technical Debt: 12天
Code Smells: 616

英文版：

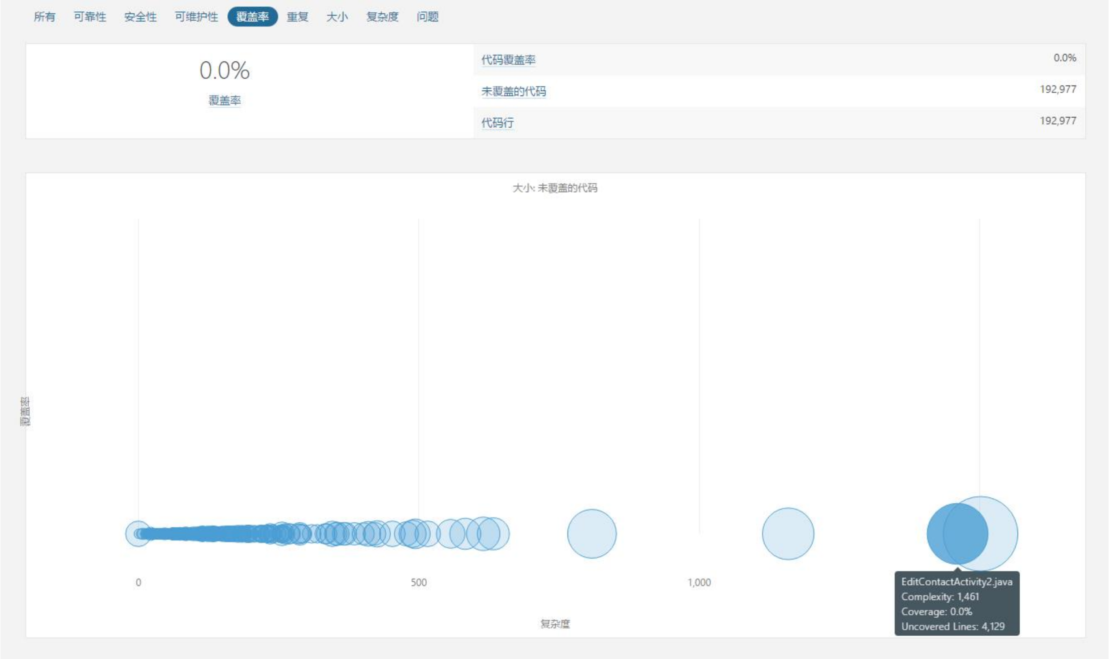


19,982 Code Smells

A Maintainability Rating

Technical Debt	554d
Technical Debt Ratio	2.2%
Effort to Reach Maintainability Rating A	0

6. CC 覆盖率



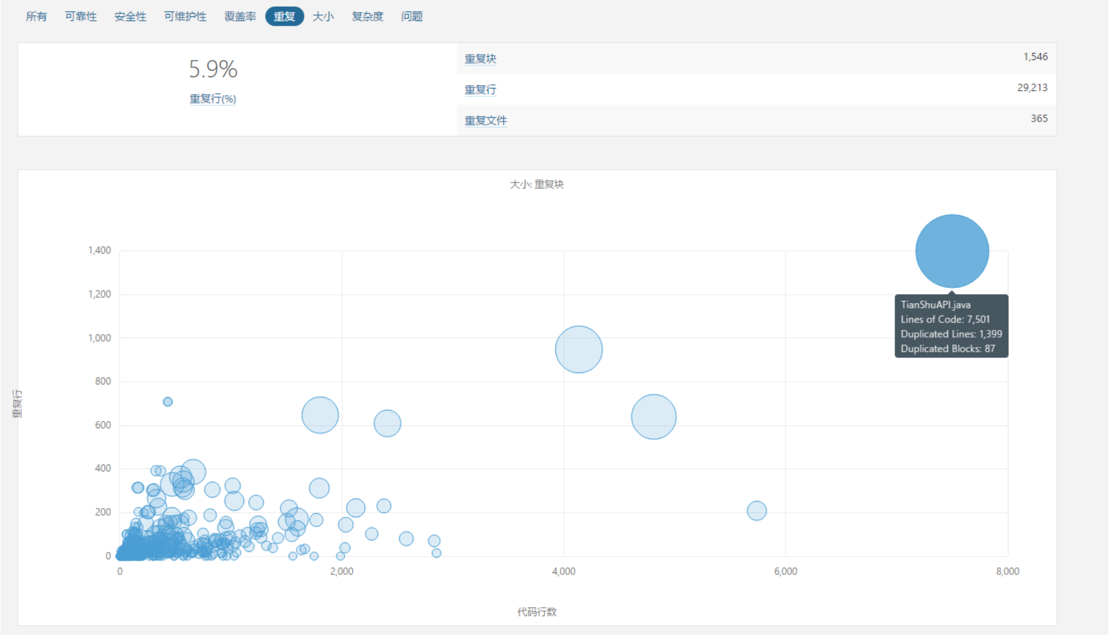
0.0%

覆盖率

代码覆盖率	0.0%
未覆盖的代码	192,977
代码行	192,977

7. CC 重复性

一个圈表示一个文件，横轴表示该文件代码行数，纵轴表示该文件复制的行数

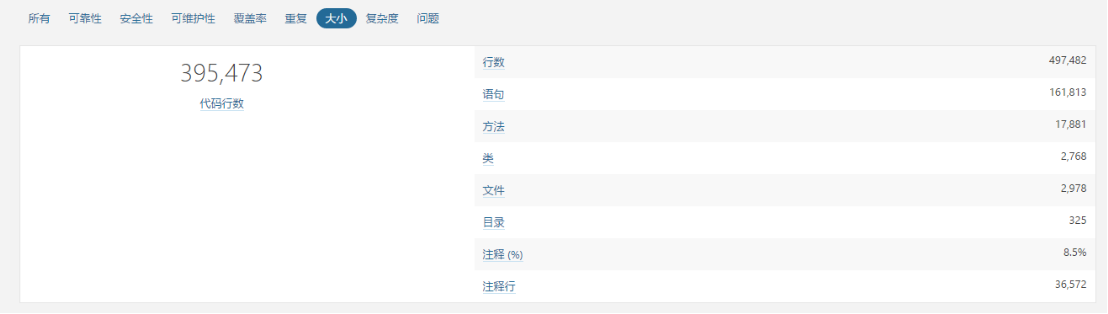


5.9%

重复行(%)

重复块	1,546
重复行	29,213
重复文件	365

8. CC 大小

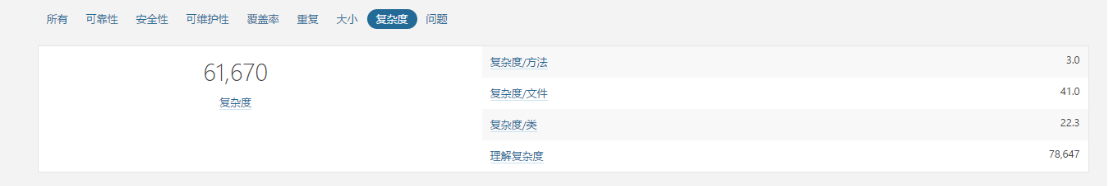


395,473

代码行数

行数	497,482
语句	161,813
方法	17,881
类	2,768
文件	2,978
目录	325
注释 (%)	8.5%
注释行	36,572

9. CC 复杂度

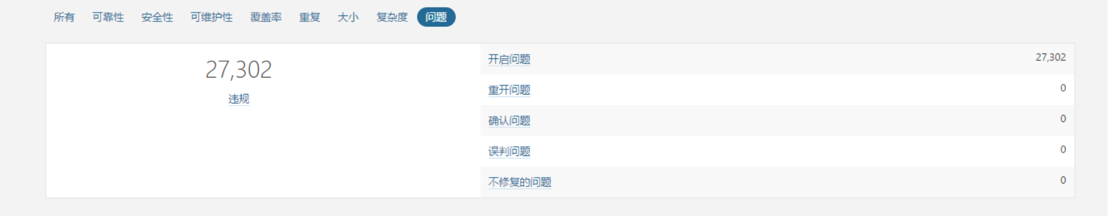


61,670

复杂度

复杂度/方法	3.0
复杂度/文件	41.0
复杂度/类	22.3
理解复杂度	78,647

10. CC 存在的问题

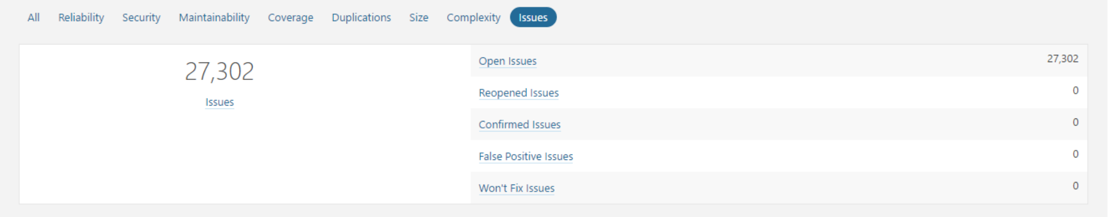


27,302

违规

开启问题	27,302
重开问题	0
确认问题	0
误判问题	0
不修复的问题	0

英文版：



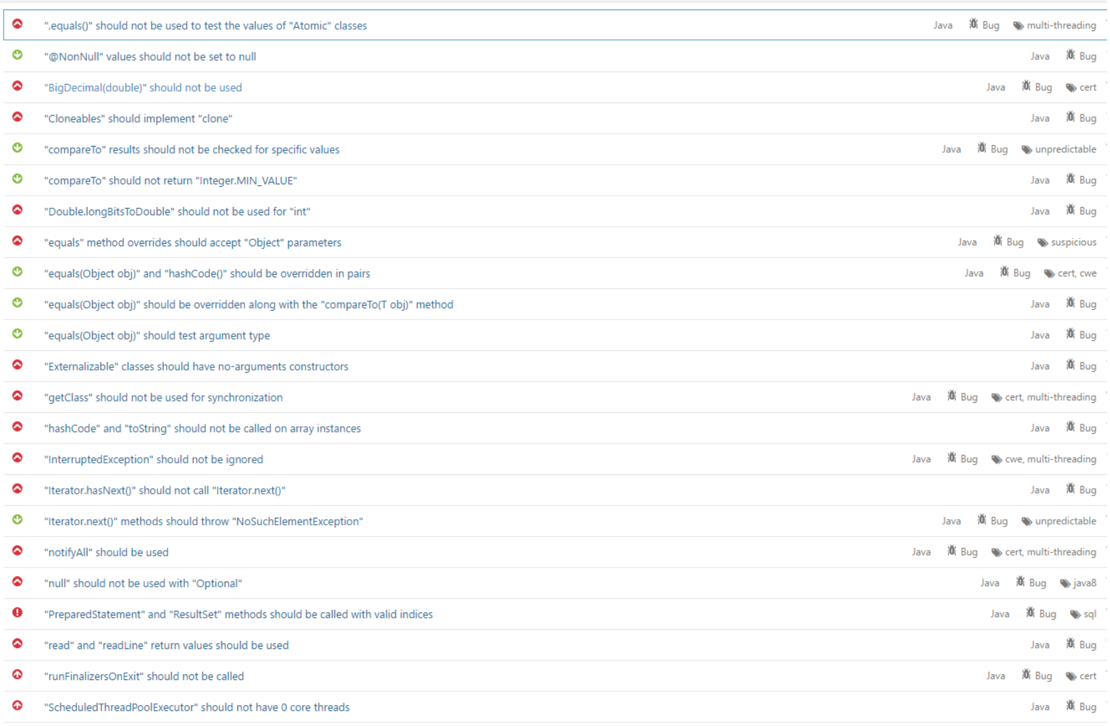
27,302

Issues

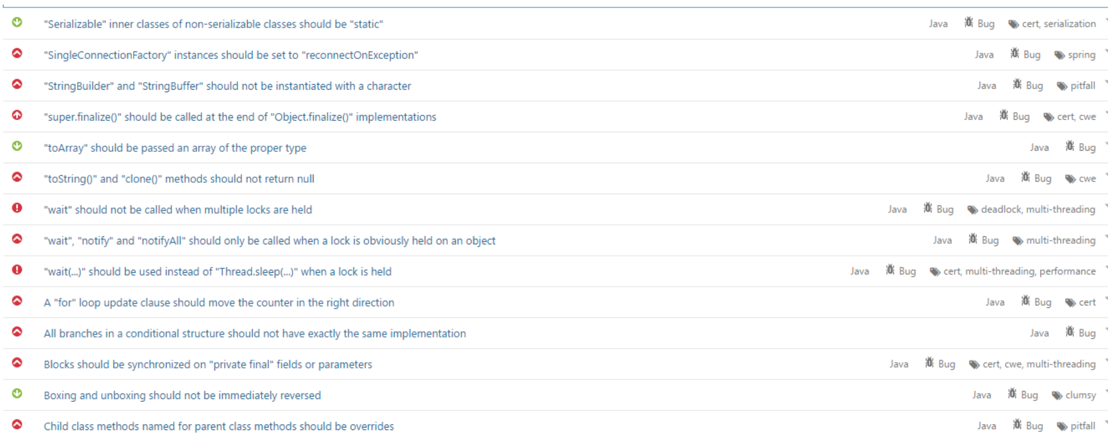
Open Issues	27,302
Reopened Issues	0
Confirmed Issues	0
False Positive Issues	0
Won't Fix Issues	0

此次代码分析基于以下规则：

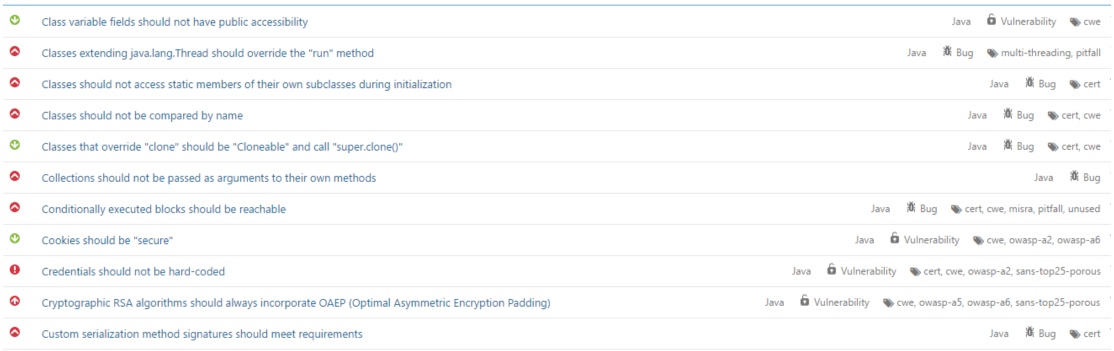
1. 被分析为 Bugs 的规则如下



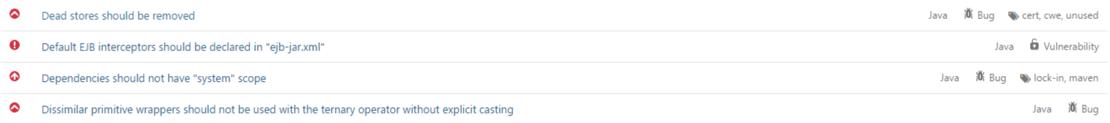
".equals()" should not be used to test the values of "Atomic" classes	Java	Bug	multi-threading
"@NonNull" values should not be set to null	Java	Bug	
"BigDecimal(double)" should not be used	Java	Bug	cert
"Cloneables" should implement "clone"	Java	Bug	
"compareTo" results should not be checked for specific values	Java	Bug	unpredictable
"compareTo" should not return "Integer.MIN_VALUE"	Java	Bug	
"Double.longBitsToDouble" should not be used for "int"	Java	Bug	
"equals" method overrides should accept "Object" parameters	Java	Bug	suspicious
"equals(Object obj)" and "hashCode()" should be overridden in pairs	Java	Bug	cert, cwe
"equals(Object obj)" should be overridden along with the "compareTo(T obj)" method	Java	Bug	
"equals(Object obj)" should test argument type	Java	Bug	
"Externalizable" classes should have no-arguments constructors	Java	Bug	
"getClass" should not be used for synchronization	Java	Bug	cert, multi-threading
"hashCode" and "toString" should not be called on array instances	Java	Bug	
"InterruptedException" should not be ignored	Java	Bug	cwe, multi-threading
"Iterator.hasNext()" should not call "Iterator.next()"	Java	Bug	
"Iterator.next()" methods should throw "NoSuchElementException"	Java	Bug	unpredictable
"notifyAll" should be used	Java	Bug	cert, multi-threading
"null" should not be used with "Optional"	Java	Bug	java8
"PreparedStatement" and "ResultSet" methods should be called with valid indices	Java	Bug	sql
"read" and "readLine" return values should be used	Java	Bug	
"runFinalizersOnExit" should not be called	Java	Bug	cert
"ScheduledThreadPoolExecutor" should not have 0 core threads	Java	Bug	



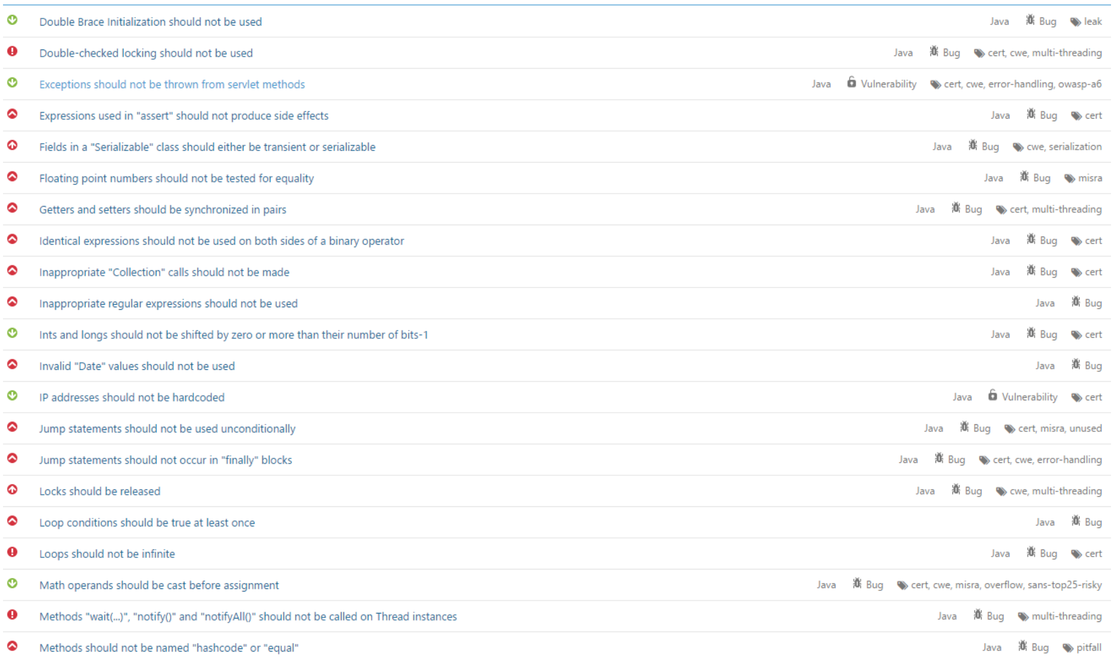
"Serializable" inner classes of non-serializable classes should be "static"	Java	Bug	cert, serialization
"SingleConnectionFactory" instances should be set to "reconnectOnException"	Java	Bug	spring
"StringBuilder" and "StringBuffer" should not be instantiated with a character	Java	Bug	pitfall
"super.finalize()" should be called at the end of "Object.finalize()" implementations	Java	Bug	cert, cwe
"toArray" should be passed an array of the proper type	Java	Bug	
"toString()" and "clone()" methods should not return null	Java	Bug	cwe
"wait" should not be called when multiple locks are held	Java	Bug	deadlock, multi-threading
"wait", "notify" and "notifyAll" should only be called when a lock is obviously held on an object	Java	Bug	multi-threading
"wait(...)" should be used instead of "Thread.sleep(...)" when a lock is held	Java	Bug	cert, multi-threading, performance
A "for" loop update clause should move the counter in the right direction	Java	Bug	cert
All branches in a conditional structure should not have exactly the same implementation	Java	Bug	
Blocks should be synchronized on "private final" fields or parameters	Java	Bug	cert, cwe, multi-threading
Boxing and unboxing should not be immediately reversed	Java	Bug	clumsy
Child class methods named for parent class methods should be overrides	Java	Bug	pitfall



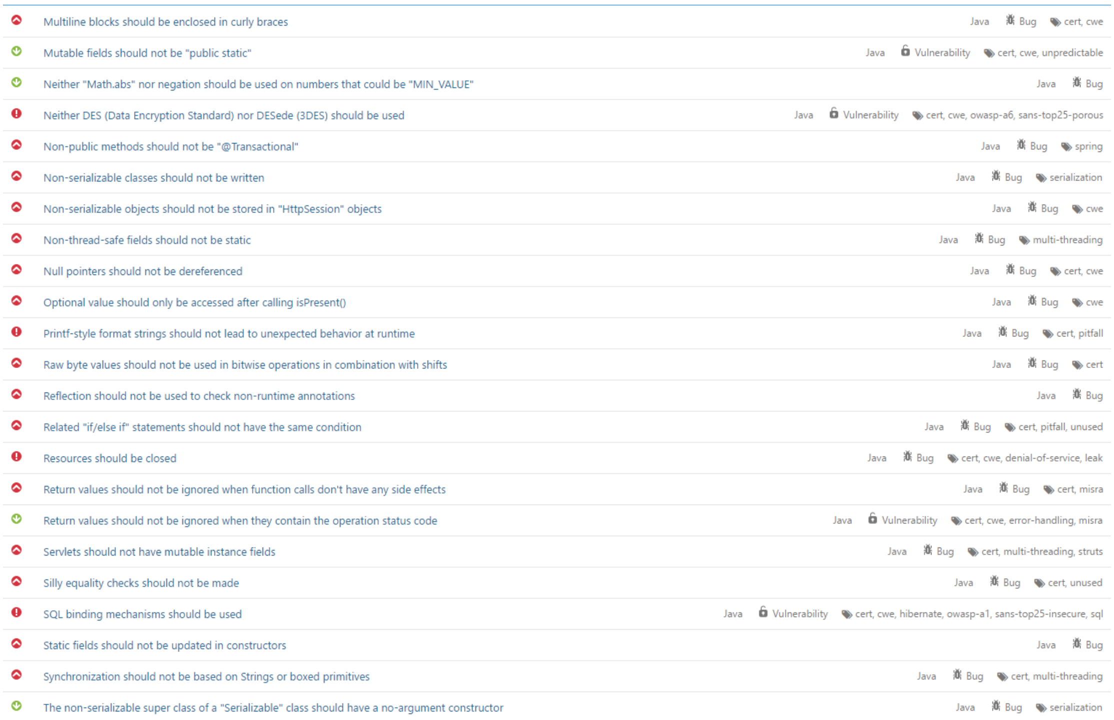
Class variable fields should not have public accessibility	Java	Vulnerability	cwe
Classes extending java.lang.Thread should override the "run" method	Java	Bug	multi-threading, pitfall
Classes should not access static members of their own subclasses during initialization	Java	Bug	cert
Classes should not be compared by name	Java	Bug	cert, cwe
Classes that override "clone" should be "Cloneable" and call "super.clone()"	Java	Bug	cert, cwe
Collections should not be passed as arguments to their own methods	Java	Bug	
Conditionally executed blocks should be reachable	Java	Bug	cert, cwe, misra, pitfall, unused
Cookies should be "secure"	Java	Vulnerability	cwe, owasp-a2, owasp-a6
Credentials should not be hard-coded	Java	Vulnerability	cert, cwe, owasp-a2, sans-top25-porous
Cryptographic RSA algorithms should always incorporate OAEP (Optimal Asymmetric Encryption Padding)	Java	Vulnerability	cwe, owasp-a5, owasp-a6, sans-top25-porous
Custom serialization method signatures should meet requirements	Java	Bug	cert



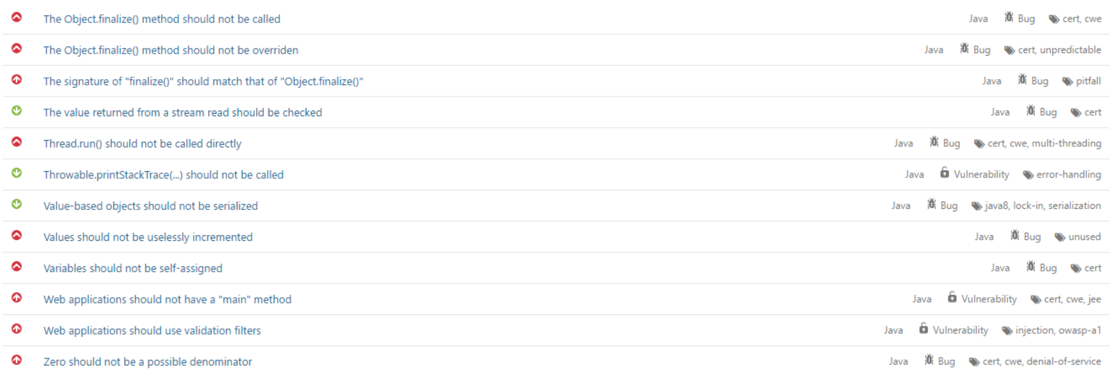
Dead stores should be removed	Java	Bug	cert, cwe, unused
Default EJB interceptors should be declared in "ejb-jar.xml"	Java	Vulnerability	
Dependencies should not have "system" scope	Java	Bug	lock-in, maven
Dissimilar primitive wrappers should not be used with the ternary operator without explicit casting	Java	Bug	



⬇	Double Brace Initialization should not be used	Java	Bug	leak
❗	Double-checked locking should not be used	Java	Bug	cert, cwe, multi-threading
⬇	Exceptions should not be thrown from servlet methods	Java	Vulnerability	cert, cwe, error-handling, owasp-a6
⌃	Expressions used in "assert" should not produce side effects	Java	Bug	cert
⬆	Fields in a "Serializable" class should either be transient or serializable	Java	Bug	cwe, serialization
⌃	Floating point numbers should not be tested for equality	Java	Bug	misra
⌃	Getters and setters should be synchronized in pairs	Java	Bug	cert, multi-threading
⌃	Identical expressions should not be used on both sides of a binary operator	Java	Bug	cert
⌃	Inappropriate "Collection" calls should not be made	Java	Bug	cert
⌃	Inappropriate regular expressions should not be used	Java	Bug	
⬇	Ints and longs should not be shifted by zero or more than their number of bits-1	Java	Bug	cert
⌃	Invalid "Date" values should not be used	Java	Bug	
⬇	IP addresses should not be hardcoded	Java	Vulnerability	cert
⌃	Jump statements should not be used unconditionally	Java	Bug	cert, misra, unused
⌃	Jump statements should not occur in "finally" blocks	Java	Bug	cert, cwe, error-handling
⬆	Locks should be released	Java	Bug	cwe, multi-threading
⌃	Loop conditions should be true at least once	Java	Bug	
❗	Loops should not be infinite	Java	Bug	cert
⬇	Math operands should be cast before assignment	Java	Bug	cert, cwe, misra, overflow, sans-top25-risky
❗	Methods "wait(...)", "notify()" and "notifyAll()" should not be called on Thread instances	Java	Bug	multi-threading
⌃	Methods should not be named "hashcode" or "equal"	Java	Bug	pitfall

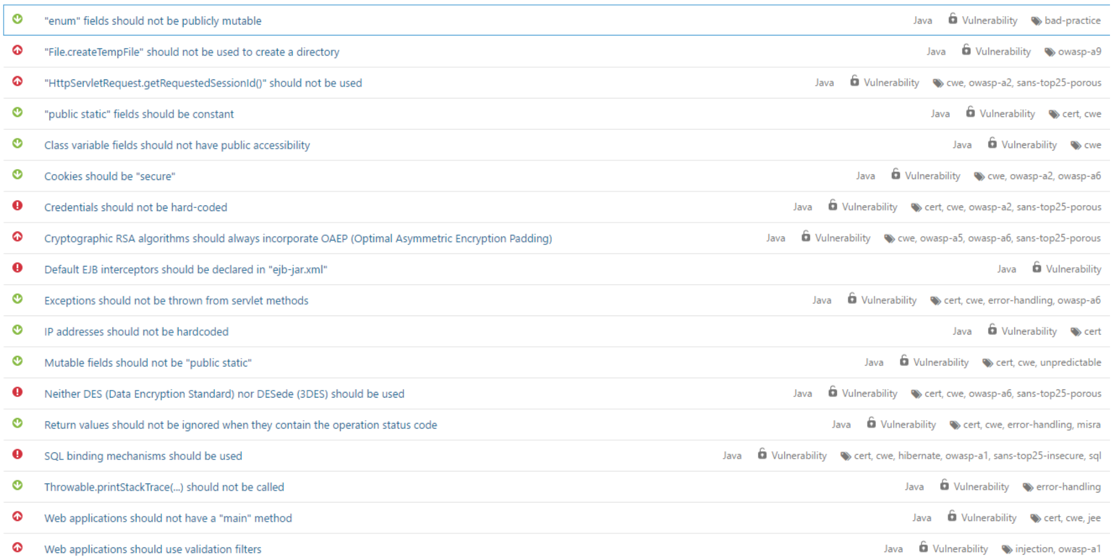


⌃	Multiline blocks should be enclosed in curly braces	Java	Bug	cert, cwe
⬇	Mutable fields should not be "public static"	Java	Vulnerability	cert, cwe, unpredictable
⬇	Neither "Math.abs" nor negation should be used on numbers that could be "MIN_VALUE"	Java	Bug	
❗	Neither DES (Data Encryption Standard) nor DESede (3DES) should be used	Java	Vulnerability	cert, cwe, owasp-a6, sans-top25-porous
⌃	Non-public methods should not be "@Transactional"	Java	Bug	spring
⌃	Non-serializable classes should not be written	Java	Bug	serialization
⌃	Non-serializable objects should not be stored in "HttpSession" objects	Java	Bug	cwe
⌃	Non-thread-safe fields should not be static	Java	Bug	multi-threading
⌃	Null pointers should not be dereferenced	Java	Bug	cert, cwe
⌃	Optional value should only be accessed after calling isPresent()	Java	Bug	cwe
❗	Printf-style format strings should not lead to unexpected behavior at runtime	Java	Bug	cert, pitfall
⌃	Raw byte values should not be used in bitwise operations in combination with shifts	Java	Bug	cert
⌃	Reflection should not be used to check non-runtime annotations	Java	Bug	
⌃	Related "if/else if" statements should not have the same condition	Java	Bug	cert, pitfall, unused
❗	Resources should be closed	Java	Bug	cert, cwe, denial-of-service, leak
⌃	Return values should not be ignored when function calls don't have any side effects	Java	Bug	cert, misra
⬇	Return values should not be ignored when they contain the operation status code	Java	Vulnerability	cert, cwe, error-handling, misra
⌃	Servlets should not have mutable instance fields	Java	Bug	cert, multi-threading, struts
⌃	Silly equality checks should not be made	Java	Bug	cert, unused
❗	SQL binding mechanisms should be used	Java	Vulnerability	cert, cwe, hibernate, owasp-a1, sans-top25-insecure, sql
⌃	Static fields should not be updated in constructors	Java	Bug	
⌃	Synchronization should not be based on Strings or boxed primitives	Java	Bug	cert, multi-threading
⬇	The non-serializable super class of a "Serializable" class should have a no-argument constructor	Java	Bug	serialization



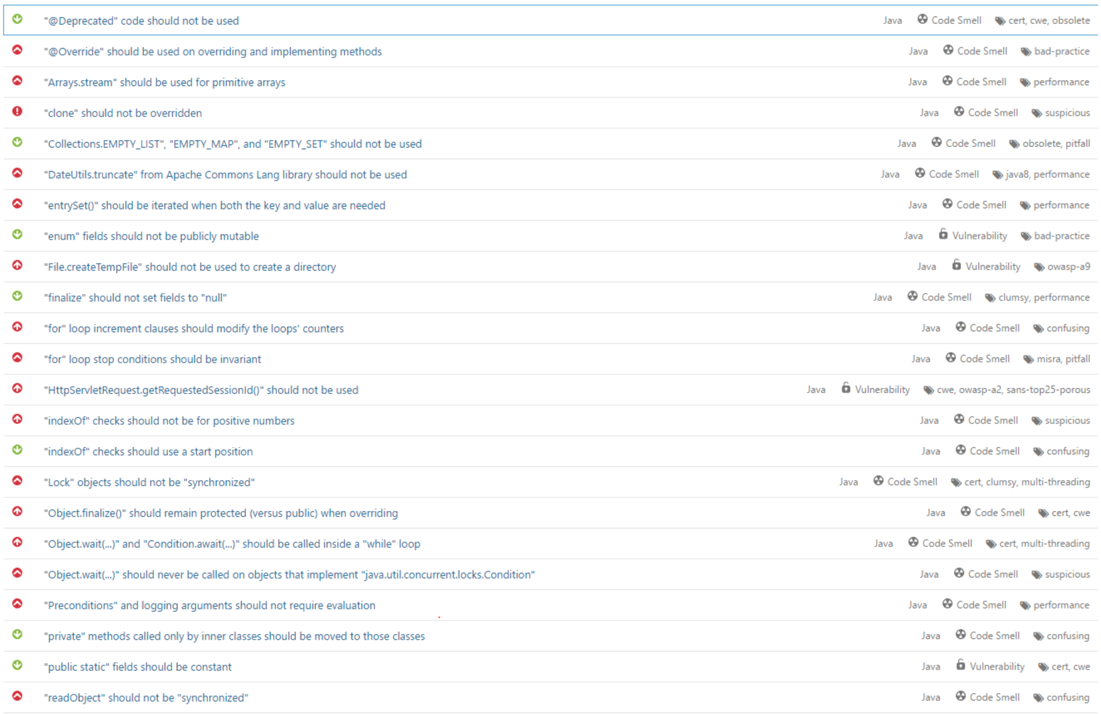
⌃	The Object.finalize() method should not be called	Java	Bug	cert, cwe
⌃	The Object.finalize() method should not be overriden	Java	Bug	cert, unpredictable
⬆	The signature of "finalize()" should match that of "Object.finalize()"	Java	Bug	pitfall
⬇	The value returned from a stream read should be checked	Java	Bug	cert
⌃	Thread.run() should not be called directly	Java	Bug	cert, cwe, multi-threading
⬇	Throwable.printStackTrace(...) should not be called	Java	Vulnerability	error-handling
⬇	Value-based objects should not be serialized	Java	Bug	java8, lock-in, serialization
⌃	Values should not be uselessly incremented	Java	Bug	unused
⌃	Variables should not be self-assigned	Java	Bug	cert
⬆	Web applications should not have a "main" method	Java	Vulnerability	cert, cwe, jee
⬆	Web applications should use validation filters	Java	Vulnerability	injection, owasp-a1
⬆	Zero should not be a possible denominator	Java	Bug	cert, cwe, denial-of-service

2. 被分析为 Vulnerabilities 的规则如下

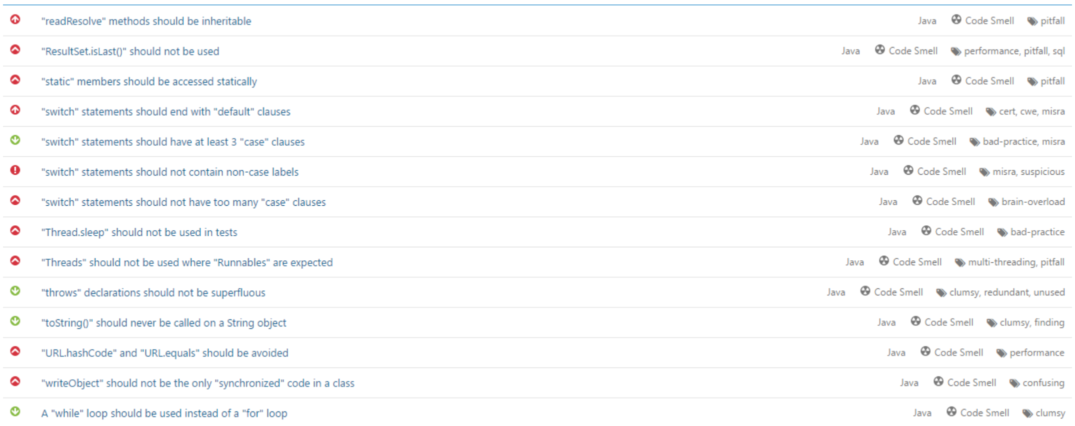


"enum" fields should not be publicly mutable	Java	Vulnerability	bad-practice
"File.createTempFile" should not be used to create a directory	Java	Vulnerability	owasp-a9
"HttpServletRequest.getRequestedSessionId()" should not be used	Java	Vulnerability	cwe, owasp-a2, sans-top25-porous
"public static" fields should be constant	Java	Vulnerability	cert, cwe
Class variable fields should not have public accessibility	Java	Vulnerability	cwe
Cookies should be "secure"	Java	Vulnerability	cwe, owasp-a2, owasp-a6
Credentials should not be hard-coded	Java	Vulnerability	cert, cwe, owasp-a2, sans-top25-porous
Cryptographic RSA algorithms should always incorporate OAEP (Optimal Asymmetric Encryption Padding)	Java	Vulnerability	cwe, owasp-a5, owasp-a6, sans-top25-porous
Default EJB interceptors should be declared in "ejb-jar.xml"	Java	Vulnerability	
Exceptions should not be thrown from servlet methods	Java	Vulnerability	cert, cwe, error-handling, owasp-a6
IP addresses should not be hardcoded	Java	Vulnerability	cert
Mutable fields should not be "public static"	Java	Vulnerability	cert, cwe, unpredictable
Neither DES (Data Encryption Standard) nor DESede (3DES) should be used	Java	Vulnerability	cert, cwe, owasp-a6, sans-top25-porous
Return values should not be ignored when they contain the operation status code	Java	Vulnerability	cert, cwe, error-handling, misra
SQL binding mechanisms should be used	Java	Vulnerability	cert, cwe, hibernate, owasp-a1, sans-top25-insecure, sql
Throwable.printStackTrace(...) should not be called	Java	Vulnerability	error-handling
Web applications should not have a "main" method	Java	Vulnerability	cert, cwe, jee
Web applications should use validation filters	Java	Vulnerability	injection, owasp-a1

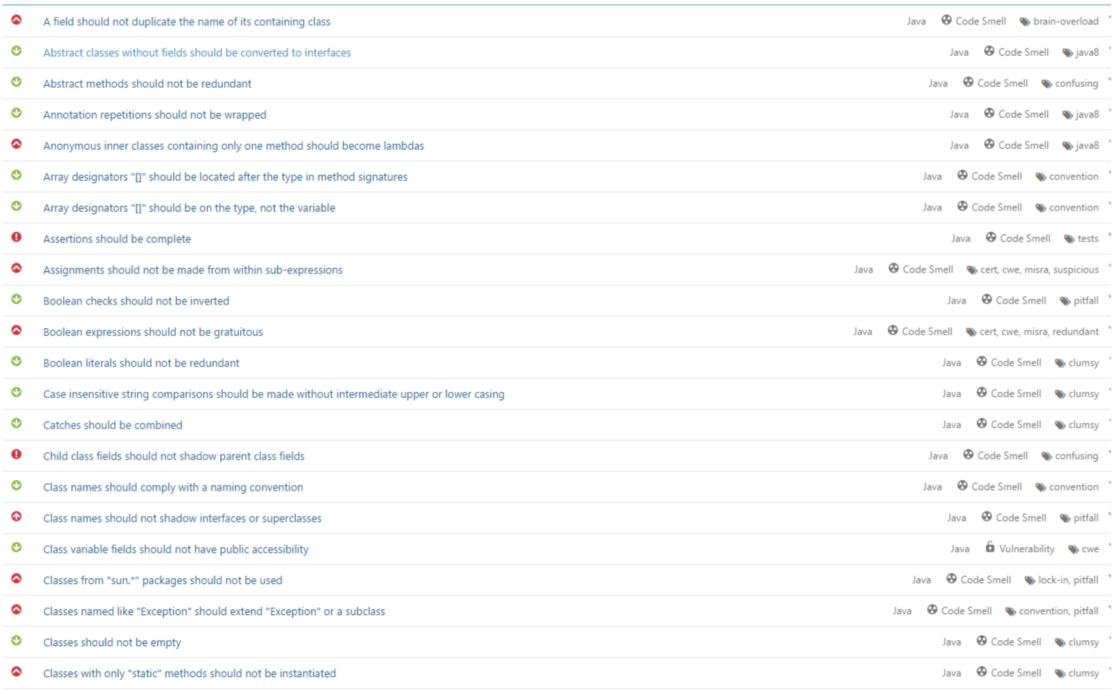
3. 被分析为 Code Smells 的规则如下



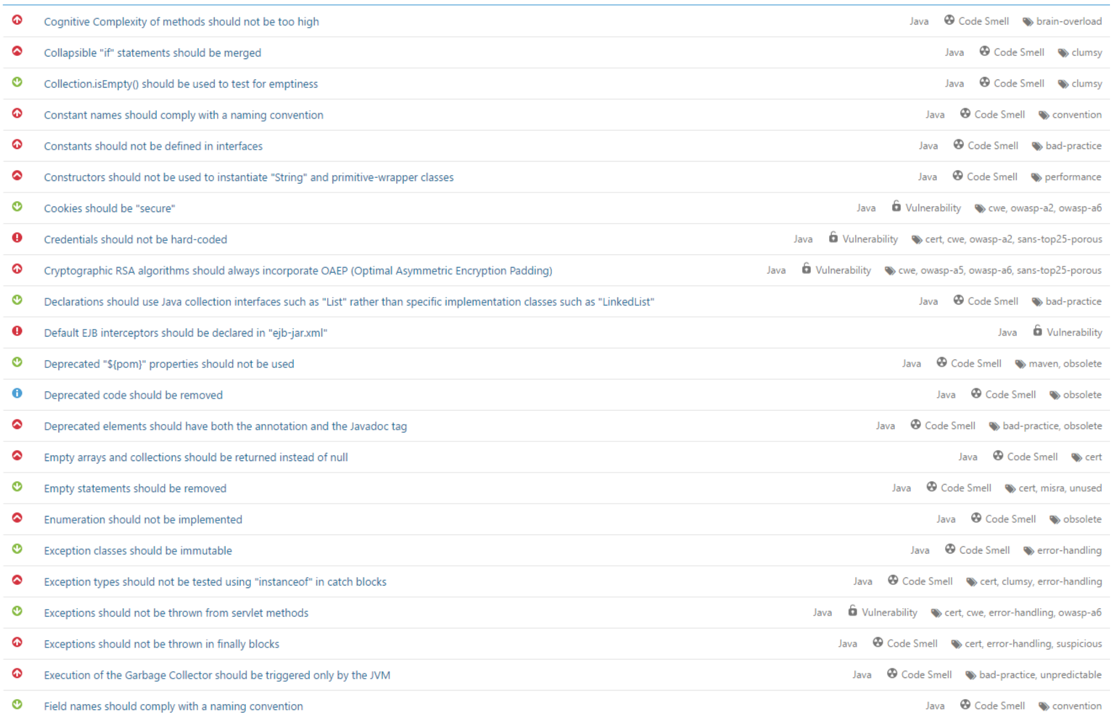
"@Deprecated" code should not be used	Java	Code Smell	cert, cwe, obsolete
"@Override" should be used on overriding and implementing methods	Java	Code Smell	bad-practice
"Arrays.stream" should be used for primitive arrays	Java	Code Smell	performance
"clone" should not be overridden	Java	Code Smell	suspicious
"Collections.EMPTY_LIST", "EMPTY_MAP", and "EMPTY_SET" should not be used	Java	Code Smell	obsolete, pitfall
"DateUtils.truncate" from Apache Commons Lang library should not be used	Java	Code Smell	java8, performance
"entrySet()" should be iterated when both the key and value are needed	Java	Code Smell	performance
"enum" fields should not be publicly mutable	Java	Vulnerability	bad-practice
"File.createTempFile" should not be used to create a directory	Java	Vulnerability	owasp-a9
"finalize" should not set fields to "null"	Java	Code Smell	clumsy, performance
"for" loop increment clauses should modify the loops' counters	Java	Code Smell	confusing
"for" loop stop conditions should be invariant	Java	Code Smell	misra, pitfall
"HttpServletRequest.getRequestedSessionId()" should not be used	Java	Vulnerability	cwe, owasp-a2, sans-top25-porous
"indexOf" checks should not be for positive numbers	Java	Code Smell	suspicious
"indexOf" checks should use a start position	Java	Code Smell	confusing
"Lock" objects should not be "synchronized"	Java	Code Smell	cert, clumsy, multi-threading
"Object.finalize()" should remain protected (versus public) when overriding	Java	Code Smell	cert, cwe
"Object.wait(...)" and "Condition.await(...)" should be called inside a "while" loop	Java	Code Smell	cert, multi-threading
"Object.wait(...)" should never be called on objects that implement "java.util.concurrent.locks.Condition"	Java	Code Smell	suspicious
"Preconditions" and logging arguments should not require evaluation	Java	Code Smell	performance
"private" methods called only by inner classes should be moved to those classes	Java	Code Smell	confusing
"public static" fields should be constant	Java	Vulnerability	cert, cwe
"readObject" should not be "synchronized"	Java	Code Smell	confusing



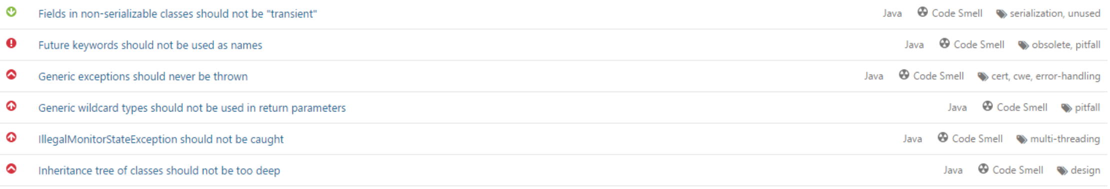
"readResolve" methods should be inheritable	Java	Code Smell	pitfall
"ResultSet.isLast()" should not be used	Java	Code Smell	performance, pitfall, sql
"static" members should be accessed statically	Java	Code Smell	pitfall
"switch" statements should end with "default" clauses	Java	Code Smell	cert, cwe, misra
"switch" statements should have at least 3 "case" clauses	Java	Code Smell	bad-practice, misra
"switch" statements should not contain non-case labels	Java	Code Smell	misra, suspicious
"switch" statements should not have too many "case" clauses	Java	Code Smell	brain-overload
"Thread.sleep" should not be used in tests	Java	Code Smell	bad-practice
"Threads" should not be used where "Runnables" are expected	Java	Code Smell	multi-threading, pitfall
"throws" declarations should not be superfluous	Java	Code Smell	clumsy, redundant, unused
"toString()" should never be called on a String object	Java	Code Smell	clumsy, finding
"URL.hashCode" and "URL.equals" should be avoided	Java	Code Smell	performance
"writeObject" should not be the only "synchronized" code in a class	Java	Code Smell	confusing
A "while" loop should be used instead of a "for" loop	Java	Code Smell	clumsy



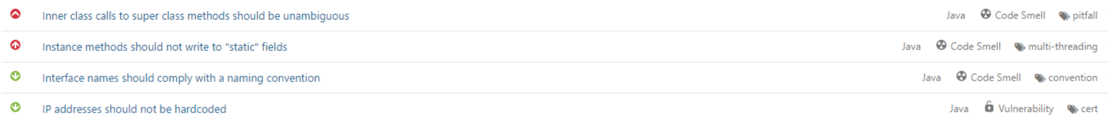
▲	A field should not duplicate the name of its containing class	Java	Code Smell	brain-overload
↓	Abstract classes without fields should be converted to interfaces	Java	Code Smell	java8
↓	Abstract methods should not be redundant	Java	Code Smell	confusing
↓	Annotation repetitions should not be wrapped	Java	Code Smell	java8
▲	Anonymous inner classes containing only one method should become lambdas	Java	Code Smell	java8
↓	Array designators "[]" should be located after the type in method signatures	Java	Code Smell	convention
↓	Array designators "[]" should be on the type, not the variable	Java	Code Smell	convention
!	Assertions should be complete	Java	Code Smell	tests
▲	Assignments should not be made from within sub-expressions	Java	Code Smell	cert, cwe, misra, suspicious
↓	Boolean checks should not be inverted	Java	Code Smell	pitfall
▲	Boolean expressions should not be gratuitous	Java	Code Smell	cert, cwe, misra, redundant
↓	Boolean literals should not be redundant	Java	Code Smell	clumsy
↓	Case insensitive string comparisons should be made without intermediate upper or lower casing	Java	Code Smell	clumsy
↓	Catches should be combined	Java	Code Smell	clumsy
!	Child class fields should not shadow parent class fields	Java	Code Smell	confusing
↓	Class names should comply with a naming convention	Java	Code Smell	convention
↑	Class names should not shadow interfaces or superclasses	Java	Code Smell	pitfall
↓	Class variable fields should not have public accessibility	Java	Vulnerability	cwe
▲	Classes from "sun.*" packages should not be used	Java	Code Smell	lock-in, pitfall
▲	Classes named like "Exception" should extend "Exception" or a subclass	Java	Code Smell	convention, pitfall
↓	Classes should not be empty	Java	Code Smell	clumsy
▲	Classes with only "static" methods should not be instantiated	Java	Code Smell	clumsy



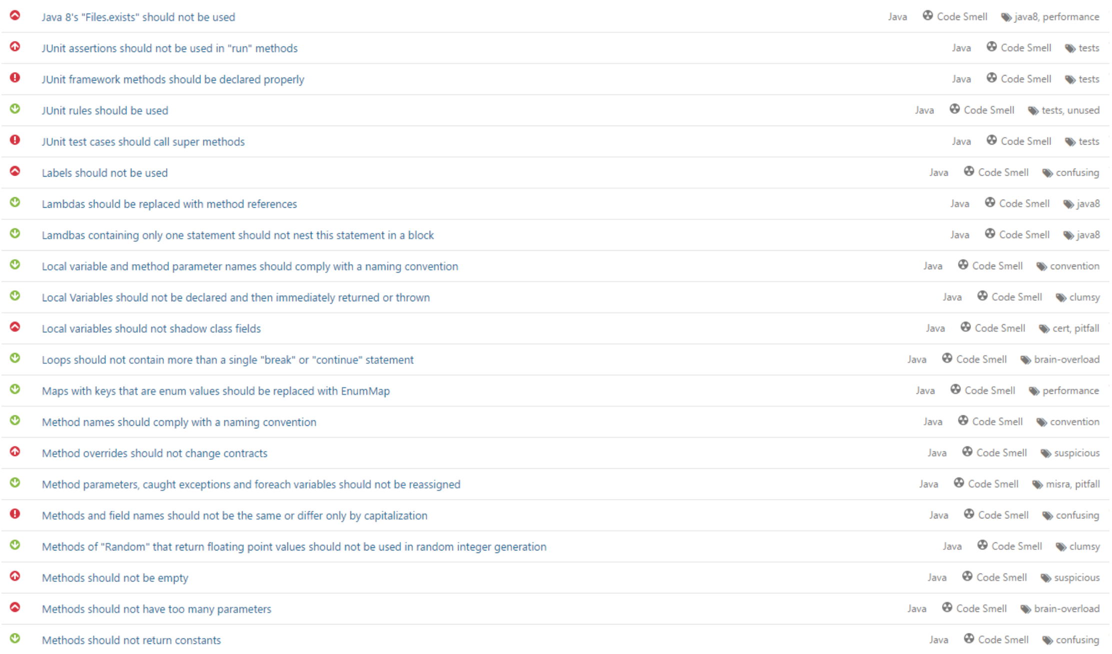
↑	Cognitive Complexity of methods should not be too high	Java	Code Smell	brain-overload
▲	Collapsible "if" statements should be merged	Java	Code Smell	clumsy
↓	Collection.isEmpty() should be used to test for emptiness	Java	Code Smell	clumsy
↑	Constant names should comply with a naming convention	Java	Code Smell	convention
↑	Constants should not be defined in interfaces	Java	Code Smell	bad-practice
▲	Constructors should not be used to instantiate "String" and primitive-wrapper classes	Java	Code Smell	performance
↓	Cookies should be "secure"	Java	Vulnerability	cwe, owasp-a2, owasp-a6
!	Credentials should not be hard-coded	Java	Vulnerability	cert, cwe, owasp-a2, sans-top25-porous
↑	Cryptographic RSA algorithms should always incorporate OAEP (Optimal Asymmetric Encryption Padding)	Java	Vulnerability	cwe, owasp-a5, owasp-a6, sans-top25-porous
↓	Declarations should use Java collection interfaces such as "List" rather than specific implementation classes such as "LinkedList"	Java	Code Smell	bad-practice
!	Default EJB interceptors should be declared in "ejb-jar.xml"	Java	Vulnerability	
↓	Deprecated "${pom}" properties should not be used	Java	Code Smell	maven, obsolete
i	Deprecated code should be removed	Java	Code Smell	obsolete
▲	Deprecated elements should have both the annotation and the Javadoc tag	Java	Code Smell	bad-practice, obsolete
▲	Empty arrays and collections should be returned instead of null	Java	Code Smell	cert
↓	Empty statements should be removed	Java	Code Smell	cert, misra, unused
▲	Enumeration should not be implemented	Java	Code Smell	obsolete
↓	Exception classes should be immutable	Java	Code Smell	error-handling
▲	Exception types should not be tested using "instanceof" in catch blocks	Java	Code Smell	cert, clumsy, error-handling
↓	Exceptions should not be thrown from servlet methods	Java	Vulnerability	cert, cwe, error-handling, owasp-a6
↑	Exceptions should not be thrown in finally blocks	Java	Code Smell	cert, error-handling, suspicious
↑	Execution of the Garbage Collector should be triggered only by the JVM	Java	Code Smell	bad-practice, unpredictable
↓	Field names should comply with a naming convention	Java	Code Smell	convention



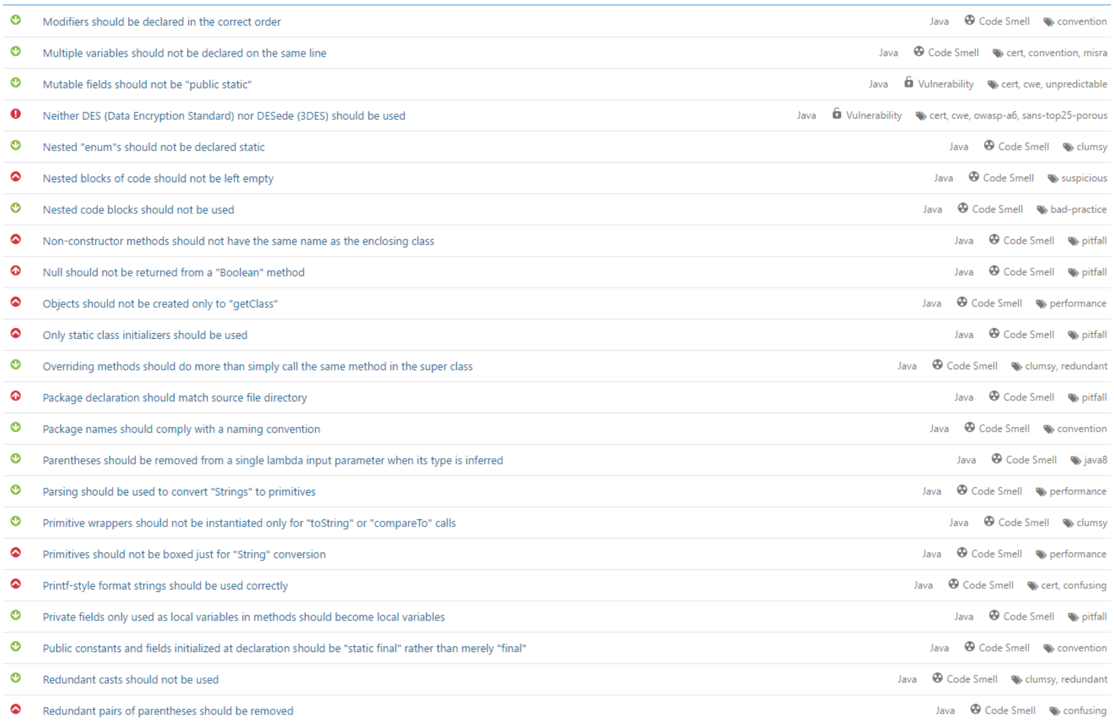
↓	Fields in non-serializable classes should not be "transient"	Java	Code Smell	serialization, unused
!	Future keywords should not be used as names	Java	Code Smell	obsolete, pitfall
▲	Generic exceptions should never be thrown	Java	Code Smell	cert, cwe, error-handling
↑	Generic wildcard types should not be used in return parameters	Java	Code Smell	pitfall
↑	IllegalMonitorStateException should not be caught	Java	Code Smell	multi-threading
▲	Inheritance tree of classes should not be too deep	Java	Code Smell	design



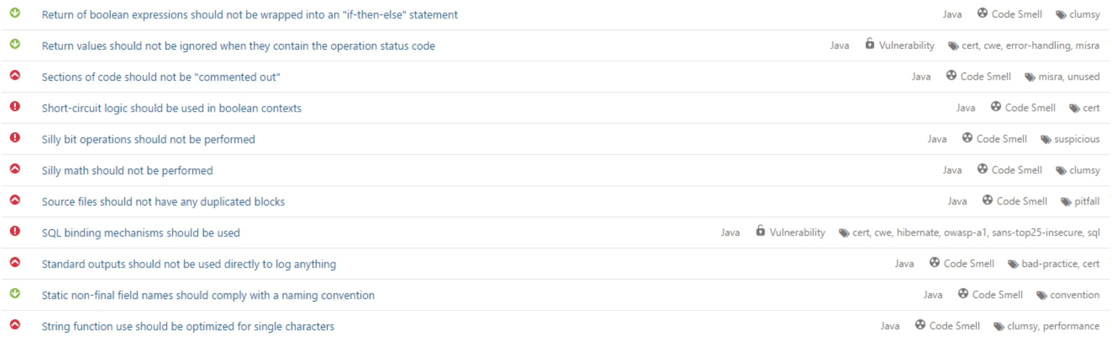
▲	Inner class calls to super class methods should be unambiguous	Java	Code Smell	pitfall
↑	Instance methods should not write to "static" fields	Java	Code Smell	multi-threading
↓	Interface names should comply with a naming convention	Java	Code Smell	convention
↓	IP addresses should not be hardcoded	Java	Vulnerability	cert



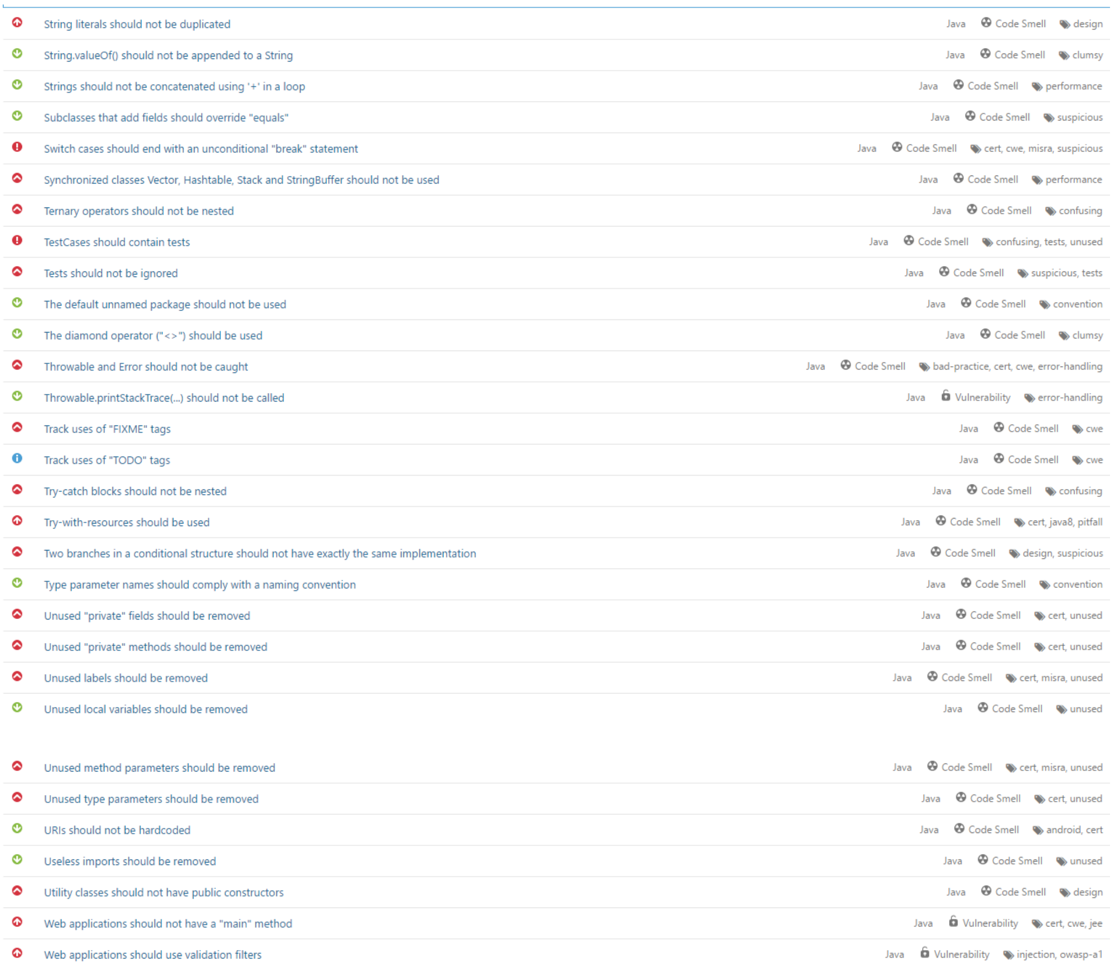
⌃	Java 8's "Files.exists" should not be used	Java	Code Smell	java8, performance
⬆	JUnit assertions should not be used in "run" methods	Java	Code Smell	tests
❗	JUnit framework methods should be declared properly	Java	Code Smell	tests
⬇	JUnit rules should be used	Java	Code Smell	tests, unused
❗	JUnit test cases should call super methods	Java	Code Smell	tests
⌃	Labels should not be used	Java	Code Smell	confusing
⬇	Lambdas should be replaced with method references	Java	Code Smell	java8
⬇	Lamdbas containing only one statement should not nest this statement in a block	Java	Code Smell	java8
⬇	Local variable and method parameter names should comply with a naming convention	Java	Code Smell	convention
⬇	Local Variables should not be declared and then immediately returned or thrown	Java	Code Smell	clumsy
⌃	Local variables should not shadow class fields	Java	Code Smell	cert, pitfall
⬇	Loops should not contain more than a single "break" or "continue" statement	Java	Code Smell	brain-overload
⬇	Maps with keys that are enum values should be replaced with EnumMap	Java	Code Smell	performance
⬇	Method names should comply with a naming convention	Java	Code Smell	convention
⬆	Method overrides should not change contracts	Java	Code Smell	suspicious
⬇	Method parameters, caught exceptions and foreach variables should not be reassigned	Java	Code Smell	misra, pitfall
❗	Methods and field names should not be the same or differ only by capitalization	Java	Code Smell	confusing
⬇	Methods of "Random" that return floating point values should not be used in random integer generation	Java	Code Smell	clumsy
⬆	Methods should not be empty	Java	Code Smell	suspicious
⌃	Methods should not have too many parameters	Java	Code Smell	brain-overload
⬇	Methods should not return constants	Java	Code Smell	confusing



⬇	Modifiers should be declared in the correct order	Java	Code Smell	convention
⬇	Multiple variables should not be declared on the same line	Java	Code Smell	cert, convention, misra
⬇	Mutable fields should not be "public static"	Java	Vulnerability	cert, cwe, unpredictable
❗	Neither DES (Data Encryption Standard) nor DESede (3DES) should be used	Java	Vulnerability	cert, cwe, owasp-a6, sans-top25-porous
⬇	Nested "enum"s should not be declared static	Java	Code Smell	clumsy
⌃	Nested blocks of code should not be left empty	Java	Code Smell	suspicious
⬇	Nested code blocks should not be used	Java	Code Smell	bad-practice
⌃	Non-constructor methods should not have the same name as the enclosing class	Java	Code Smell	pitfall
⬆	Null should not be returned from a "Boolean" method	Java	Code Smell	pitfall
⌃	Objects should not be created only to "getClass"	Java	Code Smell	performance
⌃	Only static class initializers should be used	Java	Code Smell	pitfall
⬇	Overriding methods should do more than simply call the same method in the super class	Java	Code Smell	clumsy, redundant
⬆	Package declaration should match source file directory	Java	Code Smell	pitfall
⬇	Package names should comply with a naming convention	Java	Code Smell	convention
⬇	Parentheses should be removed from a single lambda input parameter when its type is inferred	Java	Code Smell	java8
⬇	Parsing should be used to convert "Strings" to primitives	Java	Code Smell	performance
⬇	Primitive wrappers should not be instantiated only for "toString" or "compareTo" calls	Java	Code Smell	clumsy
⌃	Primitives should not be boxed just for "String" conversion	Java	Code Smell	performance
⌃	Printf-style format strings should be used correctly	Java	Code Smell	cert, confusing
⬇	Private fields only used as local variables in methods should become local variables	Java	Code Smell	pitfall
⬇	Public constants and fields initialized at declaration should be "static final" rather than merely "final"	Java	Code Smell	convention
⬇	Redundant casts should not be used	Java	Code Smell	clumsy, redundant
⌃	Redundant pairs of parentheses should be removed	Java	Code Smell	confusing



⬇	Return of boolean expressions should not be wrapped into an "if-then-else" statement	Java	Code Smell	clumsy
⬇	Return values should not be ignored when they contain the operation status code	Java	Vulnerability	cert, cwe, error-handling, misra
⌃	Sections of code should not be "commented out"	Java	Code Smell	misra, unused
❗	Short-circuit logic should be used in boolean contexts	Java	Code Smell	cert
❗	Silly bit operations should not be performed	Java	Code Smell	suspicious
⌃	Silly math should not be performed	Java	Code Smell	clumsy
⌃	Source files should not have any duplicated blocks	Java	Code Smell	pitfall
❗	SQL binding mechanisms should be used	Java	Vulnerability	cert, cwe, hibernate, owasp-a1, sans-top25-insecure, sql
⌃	Standard outputs should not be used directly to log anything	Java	Code Smell	bad-practice, cert
⬇	Static non-final field names should comply with a naming convention	Java	Code Smell	convention
⌃	String function use should be optimized for single characters	Java	Code Smell	clumsy, performance



String literals should not be duplicated	Java	Code Smell	design
String.valueOf() should not be appended to a String	Java	Code Smell	clumsy
Strings should not be concatenated using '+' in a loop	Java	Code Smell	performance
Subclasses that add fields should override "equals"	Java	Code Smell	suspicious
Switch cases should end with an unconditional "break" statement	Java	Code Smell	cert, cwe, misra, suspicious
Synchronized classes Vector, Hashtable, Stack and StringBuffer should not be used	Java	Code Smell	performance
Ternary operators should not be nested	Java	Code Smell	confusing
TestCases should contain tests	Java	Code Smell	confusing, tests, unused
Tests should not be ignored	Java	Code Smell	suspicious, tests
The default unnamed package should not be used	Java	Code Smell	convention
The diamond operator ("<>") should be used	Java	Code Smell	clumsy
Throwable and Error should not be caught	Java	Code Smell	bad-practice, cert, cwe, error-handling
Throwable.printStackTrace(...) should not be called	Java	Vulnerability	error-handling
Track uses of "FIXME" tags	Java	Code Smell	cwe
Track uses of "TODO" tags	Java	Code Smell	cwe
Try-catch blocks should not be nested	Java	Code Smell	confusing
Try-with-resources should be used	Java	Code Smell	cert, java8, pitfall
Two branches in a conditional structure should not have exactly the same implementation	Java	Code Smell	design, suspicious
Type parameter names should comply with a naming convention	Java	Code Smell	convention
Unused "private" fields should be removed	Java	Code Smell	cert, unused
Unused "private" methods should be removed	Java	Code Smell	cert, unused
Unused labels should be removed	Java	Code Smell	cert, misra, unused
Unused local variables should be removed	Java	Code Smell	unused
Unused method parameters should be removed	Java	Code Smell	cert, misra, unused
Unused type parameters should be removed	Java	Code Smell	cert, unused
URIs should not be hardcoded	Java	Code Smell	android, cert
Useless imports should be removed	Java	Code Smell	unused
Utility classes should not have public constructors	Java	Code Smell	design
Web applications should not have a "main" method	Java	Vulnerability	cert, cwe, jee
Web applications should use validation filters	Java	Vulnerability	injection, owasp-a1