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Kotlin static code analysis

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

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Tags

Search by name...

Hard-coded credentials are security-sensitive
Security Hotspot

Cipher algorithms should be robust
Vulnerability

Encryption algorithms should be used with secure mode and padding scheme
Vulnerability

Server hostnames should be verified during SSL/TLS connections
Vulnerability

Server certificates should be verified during SSL/TLS connections
Vulnerability

Cryptographic keys should be robust
Vulnerability

Weak SSL/TLS protocols should not be used
Vulnerability

"SecureRandom" seeds should not be predictable
Vulnerability

Cipher Block Chaining IVs should be unpredictable
Vulnerability

Hashes should include an unpredictable salt
Vulnerability

Regular expressions should be syntactically valid
Bug

"runFinalizersOnExit" should not be called
Bug

"runFinalizersOnExit" should not be called

Analyze your code

Bug Critical

Running finalizers on JVM exit is disabled by default. It can be enabled with `System.runFinalizersOnExit` and `Runtime.runFinalizersOnExit`, but both methods are deprecated because they are inherently unsafe.

According to the Oracle Javadoc:

> It may result in finalizers being called on live objects while other threads are concurrently manipulating those objects, resulting in erratic behavior or deadlock.

If you really want to execute something when the virtual machine begins its shutdown sequence, you should attach a shutdown hook.

Noncompliant Code Example

```
fun main() {
  ...
  System.runFinalizersOnExit(true)  // Noncompliant
  ...
}
```

Compliant Solution

```
fun main() {
    Runtime.getRuntime().addShutdownHook(object : Thread
        override fun run() {
            doSomething()
        }
    })
}
```

See

- CERT, MET12-J. - Do not use finalizers. Although this resource talks about Java, the underlying information concerning the JVM are just as relevant for Kotlin.

Available In:

sonarlint | sonarcloud | sonarqube

"ScheduledThreadPoolExecutor" should not have 0 core threads

Bug

Jump statements should not occur in "finally" blocks

Bug

Using clear-text protocols is security-sensitive

Security Hotspot

Accessing Android external storage is security-sensitive

Security Hotspot

Receiving intents is security-sensitive

Security Hotspot

Broadcasting intents is security-sensitive

Security Hotspot

Using weak hashing algorithms is security-sensitive

Security Hotspot

Using pseudorandom number generators (PRNGs) is security-sensitive

Security Hotspot

Empty lines should not be tested with regex MULTILINE flag

Code Smell

Cognitive Complexity of functions should not be too high

Code Smell