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Objective C static code analysis

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

All rules315

Vulnerability10

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Tags

Search by name...

"memset" should not be used to delete sensitive data

Vulnerability

POSIX functions should not be called with arguments that trigger buffer overflows

Vulnerability

Function-like macros should not be invoked without all of their arguments

Bug

The address of an automatic object should not be assigned to another object that may persist after the first object has ceased to exist

Bug

"pthread_mutex_t" should be unlocked in the reverse order they were locked

Bug

"pthread_mutex_t" should be properly initialized and destroyed

Bug

"pthread_mutex_t" should not be consecutively locked or unlocked twice

Bug

Functions with "noreturn" attribute should not return

Bug

"memcpy" should only be called with pointers to trivially copyable types with no padding

Bug

Stack allocated memory and non-owned memory should not be freed

Bug

Closed resources should not be accessed

Bug

Dynamically allocated memory should be released

Bug

Size of bit fields should not exceed the size of their types

Analyze your code

Code SmellMajorbad-practice

Bit fields allow the developers to declare a class member with a specific size.

However, the size of a bit field is also constrained by its type: even if the specified size is greater than the size of the type, the value of the bit field will not exceed the maximum value of this type. The extra bits will just create unused padding.

The incompatibility of the size of the type with the specified size can have two causes: either the specified size is a typo error (that is the most probable cause) or the developer did not realize the size of the type he chose was too small.

Noncompliant Code Example

```
class A {
    unsigned int b : 55; // Noncompliant, specified size is gre
};
```

Compliant Solution

```
class A {
    unsigned int b : 32;
};
```

Or

```
class A {
    unsigned long long int b : 55;
};
```

Available In:

sonarcloud | sonarqube Developer Edition

<div>Freed memory should not be used</div> <div> Bug</div>
<div>Memory locations should not be released more than once</div> <div> Bug</div>
<div>Memory access should be explicitly bounded to prevent buffer overflows</div> <div> Bug</div>
<div>Printf-style format strings should not lead to unexpected behavior at runtime</div> <div> Bug</div>
<div>Recursion should not be infinite</div> <div> Bug</div>
<div>Resources should be closed</div> <div> Bug</div>
<div>Hard-coded credentials are security-sensitive</div> <div> Security Hotspot</div>
<div>"goto" should jump to labels declared later in the same function</div> <div> Code Smell</div>
<div>Only standard forms of the "defined" directive should be used</div> <div> Code Smell</div>
<div>Switch labels should not be nested inside non-switch blocks</div> <div> Code Smell</div>