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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 315 6 Vulnerability 10 rules

R Bug 75

o Security Hotspot

⊗ Code (212)

O Quick 13 Fix

Tags

Search by name...

symbolic-execution unpredictable

"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

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

🖷 Bug

Stack allocated memory and nonowned memory should not be freed

📆 Bug

Closed resources should not be accessed

📆 Bug

Dynamically allocated memory should be released

📆 Bug

Stack allocated memory and nonowned memory should not be freed

Analyze your code

Stack allocated memory, like memory allocated with the functions alloca, _alloca, _malloca, __builtin_alloca, is automatically released at the end of the function, and should not be released with free. Explicitly free-ing such memory

This rule raises issues when trying to release pointers to memory which is not owned, like stack allocated memory and function pointers.

Noncompliant Code Example

results in undefined behavior.

🙀 Bug 🕕 Blocker 🕝

```
void fun() {
  char *name = (char *) alloca(size);
  free(name); // Noncompliant, memory allocated on the stack
  char *name2 = "name";
  free(name2); // Noncompliant, memory allocated on the stack
```

Compliant Solution

```
void fun() {
  char *name = (char *) alloca(size);
  char *name2 = "name";
```

Available In:

sonarcloud 🚳 | sonarqube | Developer Edition

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