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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 rules 315 | Vulnerability 10 | Bug 75 | Security Hotspot 18 | Code Smell 212 | Quick Fix 13

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

"memcmp" 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

"errno" should not be used

Analyze your code

Code Smell | Critical | based-on-misra | suspicious

`errno` is a facility of C++ which should in theory be useful, but which in practice is poorly defined by ISO/IEC 14882:2003. A non-zero value may or may not indicate that a problem has occurred; therefore `errno` shall not be used.

Even for those functions for which the behaviour of `errno` is well defined, it is preferable to check the values of inputs before calling the function rather than relying on using `errno` to trap errors.

Noncompliant Code Example

```
#include <cstdlib>
#include <cerrno>

void f1 (const char * str)
{
  errno = 0; // Noncompliant
  int i = atoi(str);
  if ( 0 != errno ) // Noncompliant
  {
    // handle error case???
  }
}
```

See

- MISRA C:2004, 20.5 - The error indicator errno shall not be used.
- MISRA C++:2008, 19-3-1 - The error indicator errno shall not be used.

See Also

- ISO/IEC 14882:2003

Available In:

sonarcloud | sonarqube Developer Edition

Freed memory should not be used

Bug

Memory locations should not be 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

Code Smell