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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

#include directives in a file should only be preceded by other preprocessor directives or comments

Analyze your code

Code Smell

Major

misra-c++2008 misra-c2004 confusing misra-c2012

To aid code readability, all the #include directives in a particular code file should be grouped together near the top of the file. The only items which may precede an #include in a file are other preprocessor directives or comments.

Additionally, an #include may appear within an extern "C" block, this can be used for instance to include a C file from a C++ file.

Noncompliant Code Example

```
#include <h1.h> /* Compliant */
int32_t i;
#include <f2.h> /* Noncompliant */
```

Compliant Solution

```
#include <h1.h>
#include <f2.h>
extern "C" {
#include <f3.h>
}
```

```
int32_t i;
```

See

- MISRA C:2004, 19.1 - #include statements in a file should only be preceded by other preprocessor directives or comments.
- MISRA C++:2008, 16-0-1 - #include directives in a file shall only be preceded by other preprocessor directives or comments.
- MISRA C:2012, 20.1 - #include directives should only be preceded by preprocessor directives or comments

Available In:

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<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>