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C static code analysis

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

All rules 311

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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

XML parsers should not be vulnerable to XXE attacks

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

Control structures should use curly braces

Analyze your code

Code Smell Critical based-on-misra cert pitfall

While not technically incorrect, the omission of curly braces can be misleading, and may lead to the introduction of errors during maintenance.

Noncompliant Code Example

```
if (condition) // Noncompliant
    executeSomething();
```

Compliant Solution

```
if (condition) {
    executeSomething();
}
```

See

- MISRA C:2004, 14.8 - The statement forming the body of a switch, while, do ... while or for statement shall be a compound statement
- MISRA C:2004, 14.9 - An if (expression) construct shall be followed by a compound statement. The else keyword shall be followed by either a compound statement, or another if statement
- MISRA C++:2008, 6-3-1 - The statement forming the body of a switch, while, do ... while or for statement shall be a compound statement
- MISRA C++:2008, 6-4-1 - An if (condition) construct shall be followed by a compound statement. The else keyword shall be followed by either a compound statement, or another if statement
- MISRA C:2012, 15.6 - The body of an iteration-statement or a selection-statement shall be a compound-statement
- [CERT, EXP19-C](#) - Use braces for the body of an if, for, or while statement
- [CERT, EXP52-J](#) - Use braces for the body of an if, for, or while statement

Available In:

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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

Freed memory should not be used