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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 **578**

Vulnerability **13**

Bug **111**

Security Hotspot **18**

Code Smell **436**

Quick Fix **68**

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

Assigning to an optional should directly target the optional

Bug

Result of the standard remove algorithms should not be ignored

Bug

"std::scoped\_lock" should be created with constructor arguments

Bug

Objects should not be sliced

Bug

Immediately dangling references should not be created

Bug

"pthread\_mutex\_t" should be unlocked in the reverse order they were locked

Bug

"pthread\_mutex\_t" should be properly

The name "main" should not be used for any function other than the global "main" function

Analyze your code

Code Smell **1** Blocker **?** misra-c++2008 pitfall

A global function named `main` is the entry point to the program, and is the only identifier which must be in the global namespace. The use of `main` for other functions may not meet developer expectations.

### Noncompliant Code Example

```
int main() {           // Compliant
}

namespace {
    int main() {        // Noncompliant
    }
}

namespace NS {
    int main() {        // Noncompliant
    }
}
```

### See

- MISRA C++:2008, 7-3-2 - The identifier `main` shall not be used for a function other than global function `main`.

Available in:

sonarlint sonarcloud sonarqube Developer Edition

initialized and destroyed

 Bug

"pthread\_mutex\_t" should not be  
consecutively locked or unlocked  
twice

 Bug

"std::move" and "std::forward" should  
not be confused

 Bug

A call to "wait()" on a  
"std::condition\_variable" should have a