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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 409

Vulnerability 34

Bug 76

Security Hotspot 28

Code Smell 271

Quick Fix 52

Tags ▾

Search by name...

Nested blocks of code should not be left empty

Code Smell

Methods should not have too many parameters

Code Smell

Collapsible "if" statements should be merged

Code Smell

OS commands should not be vulnerable to argument injection attacks

Vulnerability

Logging should not be vulnerable to injection attacks

Vulnerability

Empty collections should not be accessed or iterated

Bug

Mutable, non-private fields should not be "readonly"

Bug

"string.ToArray()" should not be called redundantly

Bug

"base.Equals" should not be used to check for reference equality in "Equals" if "base" is not "object"

Bug

Property assignments should not be made for "readonly" fields not constrained to reference types

Bug

Flags enumerations should explicitly initialize all their members

Bug

### Classes should not have only "private" constructors

Analyze your code

Bug Major ? design

A class with only `private` constructors can't be instantiated, thus, it seems to be pointless code.

#### Noncompliant Code Example

```
public class MyClass // Noncompliant
{
    private MyClass() { ... }
}
```

#### Compliant Solution

```
public class MyClass
{
    public MyClass() { ... }
}
```

#### Exceptions

Classes that themselves access their private constructors (singletons or smart enums) are ignored. Classes with only `static` members are also ignored because they are covered by Rule `{rule:csharpsquid:S1118}`.

Available In:

sonarlint sonarcloud sonarqube

"GetHashCode" should not reference mutable fields



Results of integer division should not be assigned to floating point variables



Integral numbers should not be shifted by zero or more than their number of bits-1



"Equals(Object)" and "GetHashCode()" should be overridden in pairs