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C# static code analysis

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

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"protected" members
Code Smell

Underscores should be used to make large numbers readable
Code Smell

"ToString()" calls should not be redundant
Code Smell

"==" should not be used when "Equals" is overridden
Code Smell

An abstract class should have both abstract and concrete methods
Code Smell

Multiple variables should not be declared on the same line
Code Smell

Culture should be specified for "string" operations
Code Smell

"switch" statements should have at least 3 "case" clauses
Code Smell

break statements should not be used except for switch cases
Code Smell

String literals should not be duplicated
Code Smell

Files should contain an empty newline at the end
Code Smell

Unused "using" should be removed
Code Smell

Declarations and initializations should be as concise as possible

Analyze your code

Code Smell | Minor | Quick Fix | finding clumsy

Unnecessarily verbose declarations and initializations make it harder to read the code, and should be simplified.

Specifically the following should be omitted when they can be inferred:

- array element type
- array size
- `new DelegateType`
- `new Nullable<Type>`
- object or collection initializers ({})
- type of lambda expression parameters
- parameter declarations of anonymous methods when the parameters are not used.

Noncompliant Code Example

```
var l = new List<int>() {}; // Noncompliant, {} can be remov
var o = new object() {}; // Noncompliant, {} can be removed

var ints = new int[] {1, 2, 3}; // Noncompliant, int can be
ints = new int[3] {1, 2, 3}; // Noncompliant, the size speci

int? i = new int?(5); // Noncompliant new int? could be omit
var j = new int?(5);

Func<int, int> f1 = (int i) => 1; //Noncompliant, can be sim

class Class
{
    private event EventHandler MyEvent;

    public Class()
    {
        MyEvent += new EventHandler((a,b)=>{ }); // Noncompl
    }
}
```

Compliant Solution

```
var l = new List<int>();
var o = new object();

var ints = new [] {1, 2, 3};
ints = new [] {1, 2, 3};

int? i = 5;
var j = new int?(5);

Func<int, int> f1 = (i) => 1;
```

A close curly brace should be located at the beginning of a line

Code Smell

Tabulation characters should not be used

Code Smell

Methods and properties should be named in PascalCase

Code Smell

Track uses of in-source issue suppressions

Code Smell

```
class Class
{
    private event EventHandler MyEvent;

    public Class()
    {
        MyEvent += (a,b)=>{ };
    }
}
```

Available In:

sonarlint | sonarcloud | sonarqube