

C# static code analysis

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

1.	HTTP responses should not be vulnerable to session fixation <u>Vulnerability</u>
2.	Extracting archives should not lead to zip slip vulnerabilities <u>Vulnerability</u>
3.	Dynamic code execution should not be vulnerable to injection attacks <u>Vulnerability</u>
4.	HTTP request redirections should not be open to forging attacks <u>Vulnerability</u>
5.	Deserialization should not be vulnerable to injection attacks <u>Vulnerability</u>
6.	Endpoints should not be vulnerable to reflected cross-site scripting (XSS) attacks <u>Vulnerability</u>
7.	"CoSetProxyBlanket" and "ColInitializeSecurity" should not be used <u>Vulnerability</u>
8.	Database queries should not be vulnerable to injection attacks <u>Vulnerability</u>
9.	XML parsers should not be vulnerable to XXE attacks <u>Vulnerability</u>
10.	A secure password should be used when connecting to a database <u>Vulnerability</u>
11.	XPath expressions should not be vulnerable to injection attacks <u>Vulnerability</u>
12.	I/O function calls should not be vulnerable to path injection attacks <u>Vulnerability</u>
13.	LDAP queries should not be vulnerable to injection attacks <u>Vulnerability</u>
14.	OS commands should not be vulnerable to command injection attacks <u>Vulnerability</u>
15.	Classes should implement their "ExportAttribute" interfaces <u>Bug</u>
16.	

	Neither "Thread.Resume" nor "Thread.Suspend" should be used Bug
17.	"SafeHandle.DangerousGetHandle" should not be called Bug
18.	Type inheritance should not be recursive Bug
19.	"IDisposable" should be disposed Bug
20.	SQL keywords should be delimited by whitespace Bug
21.	Composite format strings should not lead to unexpected behavior at runtime Bug
22.	Recursion should not be infinite Bug
23.	Destructors should not throw exceptions Bug
24.	Hard-coded credentials are security-sensitive Security Hotspot
25.	Exceptions should not be thrown from unexpected methods Code Smell
26.	"operator==" should not be overloaded on reference types Code Smell
27.	Type should not be examined on "System.Type" instances Code Smell
28.	Test method signatures should be correct Code Smell
29.	Method overloads with default parameter values should not overlap Code Smell
30.	"value" parameters should be used Code Smell
31.	"is" should not be used with "this" Code Smell
32.	Methods named "Dispose" should implement "IDisposable.Dispose" Code Smell
33.	

	Tests should include assertions Code Smell
34.	
	Silly bit operations should not be performed Code Smell
35.	
	Public methods should not have multidimensional array parameters Code Smell
36.	
	"async" and "await" should not be used as identifiers Code Smell
37.	
	TestCases should contain tests Code Smell
38.	
	Short-circuit logic should be used in boolean contexts Code Smell
39.	
	JWT should be signed and verified with strong cipher algorithms Vulnerability
40.	
	Cipher algorithms should be robust Vulnerability
41.	
	Encryption algorithms should be used with secure mode and padding scheme Vulnerability
42.	
	Insecure temporary file creation methods should not be used Vulnerability
43.	
	Server certificates should be verified during SSL/TLS connections Vulnerability
44.	
	LDAP connections should be authenticated Vulnerability
45.	
	Cryptographic keys should be robust Vulnerability
46.	
	Weak SSL/TLS protocols should not be used Vulnerability
47.	
	Cipher Block Chaining IVs should be unpredictable Vulnerability
48.	
	Regular expressions should not be vulnerable to Denial of Service attacks Vulnerability
49.	
	Hashes should include an unpredictable salt Vulnerability
50.	

	Non-async "Task/Task<T>" methods should not return null Bug
51.	
	Calls to delegate's method "BeginInvoke" should be paired with calls to "EndInvoke" Bug
52.	
	"Shared" parts should not be created with "new" Bug
53.	
	Getters and setters should access the expected fields Bug
54.	
	Right operands of shift operators should be integers Bug
55.	
	Shared resources should not be used for locking Bug
56.	
	Locks should be released Bug
57.	
	Using publicly writable directories is security-sensitive Security Hotspot
58.	
	Using clear-text protocols is security-sensitive Security Hotspot
59.	
	Expanding archive files without controlling resource consumption is security-sensitive Security Hotspot
60.	
	Configuring loggers is security-sensitive Security Hotspot
61.	
	Using weak hashing algorithms is security-sensitive Security Hotspot
62.	
	Disabling CSRF protections is security-sensitive Security Hotspot
63.	
	Using non-standard cryptographic algorithms is security-sensitive Security Hotspot
64.	
	Using pseudorandom number generators (PRNGs) is security-sensitive Security Hotspot
65.	
	Parameter names should match base declaration and other partial definitions Code Smell
66.	
	"ValueTask" should be consumed correctly Code Smell
67.	

	String offset-based methods should be preferred for finding substrings from offsets Code Smell
68.	"default" clauses should be first or last Code Smell
69.	Unread "private" fields should be removed Code Smell
70.	Base class methods should not be hidden Code Smell
71.	Inherited member visibility should not be decreased Code Smell
72.	Threads should not lock on objects with weak identity Code Smell
73.	A conditionally executed single line should be denoted by indentation Code Smell
74.	Conditionals should start on new lines Code Smell
75.	Assemblies should have version information Code Smell
76.	Exception types should be "public" Code Smell
77.	Cognitive Complexity of methods should not be too high Code Smell
78.	"params" should not be introduced on overrides Code Smell
79.	"[DefaultValue]" should not be used when "[DefaultParameterValue]" is meant Code Smell
80.	"[Optional]" should not be used on "ref" or "out" parameters Code Smell
81.	Non-flags enums should not be used in bitwise operations Code Smell
82.	Inner class members should not shadow outer class "static" or type members Code Smell
83.	"Explicit" conversions of "foreach" loops should not be used Code Smell
84.	

	Instance members should not write to "static" fields Code Smell
85.	"IndexOf" checks should not be for positive numbers Code Smell
86.	Whitespace and control characters in string literals should be explicit Code Smell
87.	Properties should not make collection or array copies Code Smell
88.	Flags enumerations zero-value members should be named "None" Code Smell
89.	Overflow checking should not be disabled for "Enumerable.Sum" Code Smell
90.	Field-like events should not be virtual Code Smell
91.	Non-constant static fields should not be visible Code Smell
92.	Inappropriate casts should not be made Code Smell
93.	Constructors should only call non-overridable methods Code Smell
94.	"GC.Collect" should not be called Code Smell
95.	Methods should not be empty Code Smell
96.	Exceptions should not be thrown in finally blocks Code Smell
97.	Method overrides should not change parameter defaults Code Smell
98.	Types allowed to be deserialized should be restricted Vulnerability
99.	Server-side requests should not be vulnerable to forging attacks Vulnerability
100.	Members should not have conflicting transparency annotations Vulnerability
101.	

	"PartCreationPolicyAttribute" should be used with "ExportAttribute"
	Bug
102.	
	"ConstructorArgument" parameters should exist in constructors
	Bug
103.	
	Windows Forms entry points should be marked with STAThread
	Bug
104.	
	Collection elements should not be replaced unconditionally
	Bug
105.	
	Exceptions should not be created without being thrown
	Bug
106.	
	Collection sizes and array length comparisons should make sense
	Bug
107.	
	Serialization event handlers should be implemented correctly
	Bug
108.	
	Deserialization methods should be provided for "OptionalField" members
	Bug
109.	
	All branches in a conditional structure should not have exactly the same implementation
	Bug
110.	
	Types should be defined in named namespaces
	Bug
111.	
	Empty nullable value should not be accessed
	Bug
112.	
	Nullable type comparison should not be redundant
	Bug
113.	
	Methods with "Pure" attribute should return a value
	Bug
114.	
	One-way "OperationContract" methods should have "void" return type
	Bug
115.	
	Optional parameters should be passed to "base" calls
	Bug
116.	
	Classes should not have only "private" constructors
	Bug
117.	
	Expressions used in "Debug.Assert" should not produce side effects
	Bug
118.	

	Caller information parameters should come at the end of the parameter list Bug
119.	Static fields should appear in the order they must be initialized Bug
120.	Classes directly extending "object" should not call "base" in "GetHashCode" or "Equals" Bug
121.	Anonymous delegates should not be used to unsubscribe from Events Bug
122.	Delegates should not be subtracted Bug
123.	"async" methods should not return "void" Bug
124.	"ThreadStatic" should not be used on non-static fields Bug
125.	"IDisposable" created in a "using" statement should not be returned Bug
126.	"ThreadStatic" fields should not be initialized Bug
127.	"Object.ReferenceEquals" should not be used for value types Bug
128.	Doubled prefix operators "!!" and "~~" should not be used Bug
129.	"=+" should not be used instead of "+=" Bug
130.	"NaN" should not be used in comparisons Bug
131.	Conditionally executed code should be reachable Bug
132.	Null pointers should not be dereferenced Bug
133.	For-loop conditions should be true at least once Bug
134.	A "for" loop update clause should move the counter in the right direction Bug
135.	

	"ToString()" method should not return null Bug
136.	Return values from functions without side effects should not be ignored Bug
137.	Values should not be uselessly incremented Bug
138.	Collections should not be passed as arguments to their own methods Bug
139.	Related "if/else if" statements should not have the same condition Bug
140.	Objects should not be created to be dropped immediately without being used Bug
141.	Identical expressions should not be used on both sides of a binary operator Bug
142.	Loops with at most one iteration should be refactored Bug
143.	Variables should not be self-assigned Bug
144.	Constructing arguments of system commands from user input is security-sensitive Security Hotspot
145.	Deserializing objects without performing data validation is security-sensitive Security Hotspot
146.	Disabling ASP.NET "Request Validation" feature is security-sensitive Security Hotspot
147.	Allowing requests with excessive content length is security-sensitive Security Hotspot
148.	Setting loose file permissions is security-sensitive Security Hotspot
149.	Formatting SQL queries is security-sensitive Security Hotspot
150.	Using hardcoded IP addresses is security-sensitive Security Hotspot
151.	"goto" statement should not be used Code Smell
152.	

	"new Guid()" should not be used Code Smell
153.	Parameter validation in "async"/"await" methods should be wrapped Code Smell
154.	Parameter validation in yielding methods should be wrapped Code Smell
155.	Events should have proper arguments Code Smell
156.	"P/Invoke" methods should not be visible Code Smell
157.	Native methods should be wrapped Code Smell
158.	Methods should not have identical implementations Code Smell
159.	Non-flags enums should not be marked with "FlagsAttribute" Code Smell
160.	Classes implementing "IEquatable<T>" should be sealed Code Smell
161.	"GC.SuppressFinalize" should not be called Code Smell
162.	Objects should not be disposed more than once Code Smell
163.	Parameter names used into ArgumentException constructors should match an existing one Code Smell
164.	"ISerializable" should be implemented correctly Code Smell
165.	"Assembly.Load" should be used Code Smell
166.	"IDisposable" should be implemented correctly Code Smell
167.	"ServiceContract" and "OperationContract" attributes should be used together Code Smell
168.	Composite format strings should be used correctly Code Smell

169.	Exceptions should not be explicitly rethrown Code Smell
170.	"abstract" classes should not have "public" constructors Code Smell
171.	Assertion arguments should be passed in the correct order Code Smell
172.	Ternary operators should not be nested Code Smell
173.	Events should be invoked Code Smell
174.	"params" should be used on overrides Code Smell
175.	Generic type parameters should be co/contravariant when possible Code Smell
176.	Multiple "OrderBy" calls should not be used Code Smell
177.	Reflection should not be used to increase accessibility of classes, methods, or fields Code Smell
178.	Static fields should not be updated in constructors Code Smell
179.	"IEnumerable" LINQs should be simplified Code Smell
180.	Fields that are only assigned in the constructor should be "readonly" Code Smell
181.	Static fields should not be used in generic types Code Smell
182.	Multiline blocks should be enclosed in curly braces Code Smell
183.	Boolean expressions should not be gratuitous Code Smell
184.	Types and methods should not have too many generic parameters Code Smell
185.	Write-only properties should not be used Code Smell

186.	Exceptions should not be thrown from property getters Code Smell
187.	Unused type parameters should be removed Code Smell
188.	Parameters should be passed in the correct order Code Smell
189.	Two branches in a conditional structure should not have exactly the same implementation Code Smell
190.	Unused assignments should be removed Code Smell
191.	Tests should not be ignored Code Smell
192.	"switch" statements should not have too many "case" clauses Code Smell
193.	Sections of code should not be commented out Code Smell
194.	Unused method parameters should be removed Code Smell
195.	Empty arrays and collections should be returned instead of null Code Smell
196.	Unused private types or members should be removed Code Smell
197.	Track uses of "FIXME" tags Code Smell
198.	"Obsolete" attributes should include explanations Code Smell
199.	Assignments should not be made from within sub-expressions Code Smell
200.	General exceptions should never be thrown Code Smell
201.	Utility classes should not have public constructors Code Smell
202.	Local variables should not shadow class fields

	Code Smell
203.	Redundant pairs of parentheses should be removed Code Smell
204.	Inheritance tree of classes should not be too deep Code Smell
205.	Nested blocks of code should not be left empty Code Smell
206.	Methods should not have too many parameters Code Smell
207.	Collapsible "if" statements should be merged Code Smell
208.	OS commands should not be vulnerable to argument injection attacks Vulnerability
209.	Logging should not be vulnerable to injection attacks Vulnerability
210.	Empty collections should not be accessed or iterated Bug
211.	Mutable, non-private fields should not be "readonly" Bug
212.	"string.ToCharArray()" should not be called redundantly Bug
213.	"base.Equals" should not be used to check for reference equality in "Equals" if "base" is not "object" Bug
214.	Property assignments should not be made for "readonly" fields not constrained to reference types Bug
215.	Flags enumerations should explicitly initialize all their members Bug
216.	"GetHashCode" should not reference mutable fields Bug
217.	Results of integer division should not be assigned to floating point variables Bug
218.	Integral numbers should not be shifted by zero or more than their number of bits-1 Bug

219.	"Equals(Object)" and "GetHashCode()" should be overridden in pairs Bug
220.	Having a permissive Cross-Origin Resource Sharing policy is security-sensitive Security Hotspot
221.	Delivering code in production with debug features activated is security-sensitive Security Hotspot
222.	Searching OS commands in PATH is security-sensitive Security Hotspot
223.	Creating cookies without the "HttpOnly" flag is security-sensitive Security Hotspot
224.	Creating cookies without the "secure" flag is security-sensitive Security Hotspot
225.	Literal suffixes should be upper case Code Smell
226.	Null checks should not be used with "is" Code Smell
227.	Method overloads should be grouped together Code Smell
228.	"params" should be used instead of "varargs" Code Smell
229.	"static" fields should be initialized inline Code Smell
230.	Classes that provide "Equals(<T>)" should implement "IEquatable<T>" Code Smell
231.	Jump statements should not be redundant Code Smell
232.	Member initializer values should not be redundant Code Smell
233.	Unassigned members should be removed Code Smell
234.	Empty "case" clauses that fall through to the "default" should be omitted Code Smell
235.	Parameters with "[DefaultParameterValue]" attributes should also be marked "[Optional]" Code Smell

236.	Interfaces should not simply inherit from base interfaces with colliding members Code Smell
237.	Variables should not be checked against the values they're about to be assigned Code Smell
238.	Methods should not return constants Code Smell
239.	Attribute, EventArgs, and Exception type names should end with the type being extended Code Smell
240.	Loops should be simplified with "LINQ" expressions Code Smell
241.	Namespaces should not be empty Code Smell
242.	Non-derived "private" classes and records should be "sealed" Code Smell
243.	"string.IsNullOrEmpty" should be used Code Smell
244.	Implementations should be provided for "partial" methods Code Smell
245.	Duplicate casts should not be made Code Smell
246.	Methods should not return values that are never used Code Smell
247.	Caller information arguments should not be provided explicitly Code Smell
248.	Method calls should not resolve ambiguously to overloads with "params" Code Smell
249.	"catch" clauses should do more than rethrow Code Smell
250.	Generic exceptions should not be ignored Code Smell
251.	Mutable fields should not be "public static" Code Smell
252.	Enumeration type names should not have "Flags" or "Enum" suffixes Code Smell

253.	Enumeration types should comply with a naming convention Code Smell
254.	Trivial properties should be auto-implemented Code Smell
255.	Runtime type checking should be simplified Code Smell
256.	Boolean checks should not be inverted Code Smell
257.	Inheritance list should not be redundant Code Smell
258.	Redundant casts should not be used Code Smell
259.	Strings should not be concatenated using '+' in a loop Code Smell
260.	Unused local variables should be removed Code Smell
261.	Private fields only used as local variables in methods should become local variables Code Smell
262.	A "while" loop should be used instead of a "for" loop Code Smell
263.	"Equals" and the comparison operators should be overridden when implementing "Comparable" Code Smell
264.	Nested code blocks should not be used Code Smell
265.	Overriding members should do more than simply call the same member in the base class Code Smell
266.	"Any()" should be used to test for emptiness Code Smell
267.	Boolean literals should not be redundant Code Smell
268.	Empty statements should be removed Code Smell
269.	Fields should not have public accessibility

	Code Smell
270.	URLs should not be hardcoded Code Smell
271.	Types should be named in PascalCase Code Smell
272.	Track uses of "TODO" tags Code Smell
273.	Classes with "IDisposable" members should implement "IDisposable" Bug
274.	Calls to "async" methods should not be blocking Code Smell
275.	Child class fields should not shadow parent class fields Code Smell
276.	Track lack of copyright and license headers Code Smell
277.	Exit methods should not be called Code Smell
278.	Classes should "Dispose" of members from the classes' own "Dispose" methods Bug
279.	Reading the Standard Input is security-sensitive Security Hotspot
280.	Using command line arguments is security-sensitive Security Hotspot
281.	Using Sockets is security-sensitive Security Hotspot
282.	Encrypting data is security-sensitive Security Hotspot
283.	Using regular expressions is security-sensitive Security Hotspot
284.	Interface methods should be callable by derived types Code Smell
285.	Child class fields should not differ from parent class fields only by capitalization Code Smell
286.	Pointers to unmanaged memory should not be visible

	Code Smell
287.	Number patterns should be regular Code Smell
288.	"out" and "ref" parameters should not be used Code Smell
289.	Unchanged local variables should be "const" Code Smell
290.	"ConfigureAwait(false)" should be used Code Smell
291.	"interface" instances should not be cast to concrete types Code Smell
292.	Literal boolean values should not be used in assertions Code Smell
293.	Optional parameters should not be used Code Smell
294.	Public constant members should not be used Code Smell
295.	Array covariance should not be used Code Smell
296.	"nameof" should be used Code Smell
297.	Modulus results should not be checked for direct equality Code Smell
298.	"for" loop increment clauses should modify the loops' counters Code Smell
299.	"switch" statements should not be nested Code Smell
300.	Methods and properties should not be too complex Code Smell
301.	Control flow statements "if", "switch", "for", "foreach", "while", "do" and "try" should not be nested too deeply Code Smell
302.	"switch/Select" statements should contain a "default/Case Else" clauses Code Smell
303.	

	"if ... else if" constructs should end with "else" clauses Code Smell
304.	Control structures should use curly braces Code Smell
305.	Expressions should not be too complex Code Smell
306.	ASP.NET HTTP request validation feature should not be disabled Vulnerability
307.	Serialization constructors should be secured Vulnerability
308.	Calculations should not overflow Bug
309.	Floating point numbers should not be tested for equality Bug
310.	Increment (++) and decrement (--) operators should not be used in a method call or mixed with other operators in an expression Code Smell
311.	Use a testable date/time provider. Code Smell
312.	Property names should not match get methods Code Smell
313.	Locales should be set for data types Code Smell
314.	Literals should not be passed as localized parameters Code Smell
315.	Operators should be overloaded consistently Code Smell
316.	Method signatures should not contain nested generic types Code Smell
317.	Enumeration members should not be named "Reserved" Code Smell
318.	"System.Uri" arguments should be used instead of strings Code Smell
319.	Collection properties should be readonly Code Smell

320.	Disposable types should declare finalizers Code Smell
321.	String URI overloads should call "System.Uri" overloads Code Smell
322.	URI properties should not be strings Code Smell
323.	URI return values should not be strings Code Smell
324.	URI Parameters should not be strings Code Smell
325.	Custom attributes should be marked with "System.AttributeUsageAttribute" Code Smell
326.	Assemblies should explicitly specify COM visibility Code Smell
327.	Assemblies should be marked as CLS compliant Code Smell
328.	"Generic.List" instances should not be part of public APIs Code Smell
329.	Collections should implement the generic interface Code Smell
330.	Generic event handlers should be used Code Smell
331.	Event Handlers should have the correct signature Code Smell
332.	"Assembly.GetExecutingAssembly" should not be called Code Smell
333.	Arguments of public methods should be validated against null Code Smell
334.	Value types should implement "IEquatable<T>" Code Smell
335.	Finalizers should not be empty Code Smell
336.	"[ExpectedException]" should not be used Code Smell

337.	"this" should not be exposed from constructors Code Smell
338.	Types should not have members with visibility set higher than the type's visibility Code Smell
339.	Fields should be private Code Smell
340.	"try" statements with identical "catch" and/or "finally" blocks should be merged Code Smell
341.	NullPointerException should not be caught Code Smell
342.	Functions should not have too many lines of code Code Smell
343.	"for" loop stop conditions should be invariant Code Smell
344.	Statements should be on separate lines Code Smell
345.	Classes should not be coupled to too many other classes (Single Responsibility Principle) Code Smell
346.	"switch case" clauses should not have too many lines of code Code Smell
347.	Magic numbers should not be used Code Smell
348.	Standard outputs should not be used directly to log anything Code Smell
349.	Files should not have too many lines of code Code Smell
350.	Lines should not be too long Code Smell
351.	HTTP response headers should not be vulnerable to injection attacks Vulnerability
352.	Console logging should not be used Vulnerability
353.	Generic parameters not constrained to reference types should not be compared to "null" Bug

354.	The length returned from a stream read should be checked Bug
355.	Method parameters, caught exceptions and foreach variables' initial values should not be ignored Bug
356.	Controlling permissions is security-sensitive Security Hotspot
357.	Writing cookies is security-sensitive Security Hotspot
358.	Methods should be named according to their synchronicities Code Smell
359.	Extensions should be in separate namespaces Code Smell
360.	Extension methods should not extend "object" Code Smell
361.	Operator overloads should have named alternatives Code Smell
362.	Non-abstract attributes should be sealed Code Smell
363.	Overloads with a "StringComparison" parameter should be used Code Smell
364.	Overloads with a "CultureInfo" or an "IFormatProvider" parameter should be used Code Smell
365.	Types should not extend outdated base types Code Smell
366.	Properties should be preferred Code Smell
367.	Generics should be used when appropriate Code Smell
368.	Type names should not match namespaces Code Smell
369.	Strings should be normalized to uppercase Code Smell
370.	Exceptions should provide standard constructors

	Code Smell
371.	Assemblies should be marked with "NeutralResourcesLanguageAttribute" Code Smell
372.	Interfaces should not be empty Code Smell
373.	Enumerations should have "Int32" storage Code Smell
374.	Generic methods should provide type parameters Code Smell
375.	Multidimensional arrays should not be used Code Smell
376.	"static readonly" constants should be "const" instead Code Smell
377.	Strings or integral types should be used for indexers Code Smell
378.	Parameter names should not duplicate the names of their methods Code Smell
379.	Track use of "NotImplementedException" Code Smell
380.	Empty "default" clauses should be removed Code Smell
381.	Redundant property names should be omitted in anonymous classes Code Smell
382.	Declarations and initializations should be as concise as possible Code Smell
383.	Default parameter values should not be passed as arguments Code Smell
384.	Constructor and destructor declarations should not be redundant Code Smell
385.	Method parameters should be declared with base types Code Smell
386.	The simplest possible condition syntax should be used Code Smell
387.	Redundant parentheses should not be used

	Code Smell
388.	"GC.SuppressFinalize" should not be invoked for types without destructors Code Smell
389.	Members should not be initialized to default values Code Smell
390.	Sequential tests should not check the same condition Code Smell
391.	Redundant modifiers should not be used Code Smell
392.	Methods and properties that don't access instance data should be static Code Smell
393.	"Exception" should not be caught when not required by called methods Code Smell
394.	"sealed" classes should not have "protected" members Code Smell
395.	Underscores should be used to make large numbers readable Code Smell
396.	"ToString()" calls should not be redundant Code Smell
397.	"==" should not be used when "Equals" is overridden Code Smell
398.	An abstract class should have both abstract and concrete methods Code Smell
399.	Multiple variables should not be declared on the same line Code Smell
400.	Culture should be specified for "string" operations Code Smell
401.	"switch" statements should have at least 3 "case" clauses Code Smell
402.	break statements should not be used except for switch cases Code Smell
403.	String literals should not be duplicated Code Smell
404.	Files should contain an empty newline at the end

	<u>Code Smell</u>
405.	
	Unused "using" should be removed
	<u>Code Smell</u>
406.	
	A close curly brace should be located at the beginning of a line
	<u>Code Smell</u>
407.	
	Tabulation characters should not be used
	<u>Code Smell</u>
408.	
	Methods and properties should be named in PascalCase
	<u>Code Smell</u>
409.	
	Track uses of in-source issue suppressions
	<u>Code Smell</u>