

Sr No.	Parameters	C	C#
1.	Language Type	C is a Procedure Oriented programming language (POP).	C# is an Object-Oriented Programming Language (OOP). Also, one of the languages which support Component-Oriented programming
2.	Developer	Dennis Ritchie	C# is developed by Microsoft Co. (led by Andres Hejlsberg) in 2000
3.	Evolution	C is evolved from B, BCPL languages. It is s super set of B.	C# take references from C,C++ and Java too.
4.	Extension	C files have extension .c	C# flies have extension .cs
5.	Execution Approach	C used top-down approach.	C# uses bottom-up approach.
6.	Execution Speed		C# execution is slower than C.
7.	Where Used	C is mostly used to develop software.	It is mostly used to modal real life problem into program and use to develop web, mobile and desktop application.
8.	Proximity to Hardware	C is more nearer to hardware than C#	Does not have close interaction with the hardware.
9.	Basic Building Block	Functions (C is function-driven)	Objects (C# is Object driven)
10.	Header file	Supported in C	Not supported by C#
11.	Keywords & Contextual keywords	C contains 32 keywords	There are 78 keywords and 31 contextual keywords in C#
12.	Use of keyword as identifiers	Not Allowed	C# permits use of keywords as identifier when they are prefixed with '@' character.
13.	Data Types	Support primitive data type	All C# involves 2 integral types in it.
14.	Size of Data Types	Varied according to the machine	Data Types have fix size that are machine independent.
15.	Integral Data Type	There is only one integral type available in C	C# involves 2 integral types in it.
16.	Data Security	Data is not secured.	Data is secured.
17.	Data Visibility modes	C does not provide any data visibility mode	C# provides different data visibility modes : Public, Private, Protected, Internal, Internal Protected.
18.	Declaration Flexibility	Inflexible, all variable declarations within a scope occur at the beginning of that scope	Flexible, allow the declaration of a variable anywhere in the scope.
19.	Variable Name (identifier) length	32 characters	No such limit.
20.	Dynamic Initialization of Variables	Does not support, a variable must be initialized using a constant expression.	Support, variable can be initialized at runtime using expression at the place of destination.
21.	Dealing with uninitialized Variables	Uninitialized variable remain undetected in C & thus gives unpredictable output.	C# checks for Uninitialized variable & gives error messages at compile time.
22.	Automatic Coercions	Yes, with no warnings if loss could occur	Not at all if loss could, must cast explicitly.
23.	Test Expression Outcome (return value)	Test expressions for control flow constructs return an integer value (0/1) in C	Test expressions for control flow constructs return an integer value (true/false) in C#
24.	Iteration statements (loop)	C has 3 iteration statements (loop) for, while, do-while.	C# has 4 iteration statements (loop) for, while, do-while, foreach.
25.	Silent Fall-Through in switch statements (free flow case to case)	Allowed in C	Does not allow in C#, explicit jump statement is required
26.	Switch applicability	Switch can be applied to integers & characters in C	Switch can be applied to integers, characters & on string values too in C#
27.	Arrays	In C, arrays are the collection of elements of the same data type. Arrays are of value type.	In C#, arrays are classes. Arrays are of reference types.
28.	Array Bound Checking	An array in C is not bound checked	An array in C# is bound checked
29.	Runtime Error handling (Exception Handling)	C does not formally support Exception Handling	C# Supports Exception handling
30.	Memory Management	Manual	Managed, using an automatic garbage collector
31.	Macros	Supported in C	Not supported in C#
32.	Pointers	Supported in C	Not supported in C#
33.	Global Variables	Supported in C	Not supported in C#
34.	Typedef statement	Supported in C	Not supported in C#
35.	Versioning support	Not supported in C	Supported in C#
36.	Support for metadata	Not supported in C	Supported in C#