

C# Tutorial

C# tutorial provides basic and advanced concepts of C#. Our C# tutorial is designed for beginners and professionals.

C# is a programming language of .Net Framework.

Our C# tutorial includes all topics of C# such as first example, control statements, objects and classes, inheritance, constructor, destructor, this, static, sealed, polymorphism, abstraction, abstract class, interface, namespace, encapsulation, properties, indexer, arrays, strings, regex, exception handling, multithreading, File IO, Collections etc.



What is C#

C# is pronounced as "C-Sharp". It is an object-oriented programming language provided by Microsoft that runs on .Net Framework.

By the help of C# programming language, we can develop different types of secured and robust applications:

- Window applications
- Web applications
- Distributed applications
- Web service applications
- Database applications etc.

C# is approved as a standard by ECMA and ISO. C# is designed for CLI (Common Language Infrastructure). CLI is a specification that describes executable code and runtime environment.

C# programming language is influenced by C++, Java, Eiffel, Modula-3, Pascal etc. languages.

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.Net Framework

- .NET Framework
- CLR

C# String Functions

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- String Compare()

C# Multithreading

- C# Multithreading
- C# Thread Life Cycle

- FCL

C#

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- Java vs C#
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- C# Data Types
- C# Operators
- C# Keywords

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- C# While Loop
- C# Do-While Loop
- C# Break
- C# Continue
- C# Goto
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C# Functions

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- C# Call By Reference
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- C# Thread class
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C# Synchronization

- C# Synchronization

C# New Features

- C# New Features

C# 2.0

- Partial types
- Iterators
- Nullable types
- Delegate Covariance
- Delegate inference
- Static classes
- Method group conversions (delegates)

C# 3.0

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- Extension methods
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- C# Properties

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- C# Inheritance
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C# Polymorphism

- C# Member Overloading

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- String ToCharArray()
- String ToLower()
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- String Trim()
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- C# Exception Handling
- C# try/catch
- C# finally
- C# Custom Exception
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- C# SystemException

C# File I/O

- C# FileStream
- C# StreamWriter
- C# StreamReader
- C# TextWriter
- C# TextReader
- C# BinaryWriter

- Implicitly typed local variables
- Object and collection initializers
- Auto-Implemented properties
- Lambda expression
- Expression trees

C# 4.0

- Dynamic binding
- Named and optional arguments
- Generic co and contravariance
- Embedded interop types ("NoPIA")

C# 5.0

- Asynchronous methods
- Caller info attributes

C# 6.0

- Using static directive
- Exception filters
- Await in catch/finally blocks
- Auto property initializers
- Default values for getter-only properties
- Expression-bodied members

- C# Method Overriding
- C# Base
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- C# Sealed

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- C# Namespaces
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C# Strings

- C# Strings

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- C# StringReader
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- C# System.IO

C# Collections

- C# Collections
- C# List<T>
- C# HashSet<T>
- C# SortedSet<T>
- C# Stack<T>
- C# Queue<T>
- C# LinkedList<T>
- C# Dictionary<K,V>
- C# SortedDictionary<K,V>
- C# SortedList<K,V>

C# Generics

- C# Generics

C# Delegates

- C# Delegates

C# Reflection

- C# Reflection

- Null propagator
- String interpolation
- Nameof operator
- Dictionary initializer
- Compiler-as-a-service (Roslyn)

C# 7.0

- Pattern matching
- Tuples
- Deconstruction
- Local functions
- Digit separator
- Binary literals
- Ref returns and locals
- Expression bodied constructors and finalizers
- Expression bodied getters and setters
- Out variables
- Generalized async return types

C# 7.1

- Async main
- Default expressions

C# Programs List

- C# Programs
- Fibonacci Series
- Prime Number

C# Anonymous Functions

- Anonymous Function

- Palindrome Number
- Factorial
- Armstrong Number
- Sum of digits
- Reverse Number
- Swap Number
- Decimal to Binary
- Number in Characters
- Alphabet Triangle
- Number Triangle
- Fibonacci Triangle

Prerequisite

Before learning C#, you must have the basic knowledge of C Programming Language.

Audience

Our C# tutorial is designed to help beginners and professionals.

Problem

We assure that you will not find any problem in this C# tutorial. But if there is any mistake, please post the problem in contact form.

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