

Updated 08/02/2024

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# C# 12 training with .NET 8 preliminary version

2 days (14 hours)

## Presentation

New versions of [C#](#) and [.NET](#) have just been released in November 2022. These are preliminary versions that are not in production, which means they are not guaranteed long-term support (LTS).

During this course, you'll learn about all the differences between C# 11 and C# 12, with the aim of creating two perspectives on these different versions.

You'll discover all the new features added in this unstable version of C# 12, such as interceptors.

If you'd like to learn C# on a stable version, you can take our [C# 12](#) training course.

As always, we'll be teaching you the latest version of the tool, i.e. [C# 12](#) with [.NET 7](#).

## Objectives

- Discover the new features and latest developments in C# 12 and .NET 8
- Learn about the major changes between C# 11 and C# 12
- Use all the new features introduced in the preliminary version
- Building a durable, robust application

## Target audience

- Developers
- Project managers

## Prerequisites

- Basic knowledge of the .NET Framework
- Knowledge of the C# language

## Program for our C# 12 with .NET 8 preliminary version training course

### A quick introduction to .NET

- Introduction to .NET
- Performance
- Minimum APIs
- Installation and updates
- Architecture
- Other functions

### C# 11 features

- List templates
- Raw string literals
- Interaction with reference types Nullable
- Generic attributes
- New lines in string interpolations
- File types
- Check null parameters with the
- Improving the conversion of method groups into delegated instances
- Events
- Digital IntPtr and UIntPtr
- ReadOnlySpan<char> pattern matching on a string constant
- Warning wave 7

### Introducing C# 12

- What is C#?
- Installation and configuration
- Installing and configuring Visual Studio Code
- Creating a project
  - Creating robust, durable applications
- Key language concepts

### New features in C# 12

- Primary constructors
- Expressions collection
- Inline arrays
- Optional parameters in lambda expressions

- ref readonly parameters
- Alias any type
- Experimental attribute
- Interceptors

## Companies concerned

This training course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

## Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

## Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

## Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

## Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

## Sanction

A certificate will be issued to each trainee who completes the course.