

C# .NET Training: C# Programming with .NET - Face-to-Face Training

Objectives

After attending the C# .NET Training, you will be able to program C# code and are familiar with the .NET framework. You can write basic applications with C# in Visual Studio .NET.

Participants

The C# .NET training addresses software developers and software architects.

Requirements

Basic knowledge of object-oriented programming as well as experience in programming with C or another programming languages.

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Content

.NET Overview

- Introduction in .NET
- Key concepts of .NET

Structure of .NET Programs

- Introduction - C# program
- Comments
- Examples

Overview of Standard Data Types

- Integers, floating point numbers, text
- Type conversion
- Arrays
- Enumeration types (enums)
- Own data types
- Type inference (var)
- Examples

Formatted Output

- Formatting types
- Own formats
- String interpolation
- Exercise: Working with data types and formatted output in a simple program

Operators

- Overview of operators
- Arithmetic, relational and logical operators, bit operators
- Examples

Control Statements

- Branching
- Jumps
- Looping
- Exercise: Working with control statements

Classes

- Structure of classes

- Object creation
- Fields, methods and properties
- Access modifier
- Constructors and destructors
- Overloading of methods
- Namespaces
- Exercise: Creating classes with properties and methods

Operator Overload

- Overloading operators
- Explicit and implicit conversion operators
- Indexer
- Examples

Inheritance

- Derivation from a basic class
- Impact of access modifiers
- Calling the basic class constructor
- Hiding and overriding methods
- Virtual methods
- Type checking and conversion rules
- Abstract and sealed classes
- Creating, using and implementing interfaces
- Exercise: Inheritance and virtual methods

Structures

- Difference to classes
- Passing by reference
- Boxing and unboxing
- Examples

Exception Handling

- Which errors result in exceptions?
- Exception handling
- Information about exceptions
- Throwing exceptions in own code
- Exercise: Error handling with exception handling

Generic Data Types and Collections

- What are generic data types?
- Advantages of generic collections
- Overview of the most common collection classes
- Optional exercise: Using a generic list

Delegates and Events

- Pointer to methods in C#
- Use of callbacks
- Use of events
- Lambda expressions
- Expression bodied function members
- Examples

Assemblies

- Structure of assemblies
- Use of DLLs
- Differences between private and shared assemblies
- Examples

Exercises in the C# .NET Training

- Use of data types and formatted output in a simple program
- Use of control structures
- Creation of classes with properties and methods
- Inheritance and virtual methods
- Error handling with exception handling
- Optional: Using a generic list

- The practical exercises are carried out after working through the related topics

MicroConsult PLUS

- We will provide you with a download link for your exercises and the solutions from this workshop.

FACE-TO-FACE TRAINING**Price * Duration**

- 4 days

Training code: E-C#-PRG

* Price per attendee, in Euro plus VAT

Live Online - English**Duration**

4 days

Face-To-Face - German**Date Duration**

15.09. – 18.09.2025 4 days

16.03. – 19.03.2026 4 days

Live Online - German**Date Duration**

10.11. – 13.11.2025 4 days

Coaching

Our coaching services offer a major advantage: our specialists introduce their expertise and experience directly in your solution process, thus contributing to the success of your projects.

We will be happy to provide you with further information or submit a quotation tailored to your requirements.