C# .NET Training: C# Programming with .NET - Live Online 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.

Live-Online-Training

* Price per attendee, in Euro plus VAT

Training code: LE-C#-PRG

Face-To-Face - English

Duration
4 days

Live Online - German

Duration
4 days

Face-To-Face - German

Date	Duration
16.03. – 19.03.2026	4 days

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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.