

Introduction to Programming with C#.NET Training

Duration: 5 Days

Description

C# is a programming language developed by Microsoft for the .NET platform. This introductory course is suitable for participants who have not previously studied programming. Starting with the fundamentals of C# and .NET, participants learn universal programming concepts step by step through examples developed in Microsoft Visual Studio.

What Will You Learn?

- Concepts shared by programming languages
- The logic of programming
- Designing algorithms and translating them into code

Who Should Attend?

Anyone who wants to learn software development.

Outline

The C# Language and .NET Platform

- CLR and IL
- Just-in-time compilation (JIT)
- Assemblies in .NET

Microsoft Visual Studio

- Selecting themes and templates
- Using windows
- Customizing the development environment and practical tips

C# Syntax and Fundamentals

- References
- The using keyword and namespaces

- Scope
- Your first application

Windows Forms Fundamentals

- Form interfaces
- The Toolbox and controls
- Control properties, events and methods

Variables and Data Types

- Variable declaration syntax
- Primitive data types
- The object type and memory management
- Type conversion
- Implicit and explicit conversion
- Boxing and unboxing
- The Convert class
- Arithmetic and compound operators

Errors and Troubleshooting

- Exceptions
- Try-catch and finally blocks

Decision Structures

- Conditional expressions and if statements
- Logical propositions and operators
- Else-if conditions
- Compound AND and OR expressions
- Switch-case statements
- Conditional and null-coalescing operators (? and ??)

Arrays, Collections and Generic Lists

- Declaring arrays
- Indexes
- Basic collections with ArrayList
- Using List<T> and its advantages

Loops

- For loops

- Continue and break
- While, do-while and foreach loops

Methods

- Method types and signatures
- Parameter types: out, ref and params
- Overloading
- Recursive methods

String, Math and DateTime

- The string type and its methods
- The Math class and its methods
- The DateTime type and its methods

Object-Oriented Programming

- Objects and classes
- Properties and methods
- Access modifiers: private and public
- Constructors
- Inheritance
- Polymorphism
- Abstract classes
- Interfaces
- Using built-in interfaces

Prerequisites

There are no prerequisites.