

The C# Programming Language

Duration: 5 Days · **Training format:** Virtual Classroom / Online

Description

Microsoft's .NET Framework presents developers with unprecedented opportunities. From web applications to desktop and mobile platform applications - all can be built with equal ease, using substantially the same skill-set. But to make the most of this potential, developers must have a thorough grasp of core language skills and OO programming concepts.

This course concentrates on the C# programming language itself, to prepare delegates fully in readiness for exploring the .NET Framework. No Object-Orientated knowledge is assumed the course provides a suitable OO primer. From basic procedural syntax to sophisticated object-oriented programming techniques, delegates will learn how to write .NET applications with code that is robust and maintainable.

The course is presented as a mixture of lectures, demos and hands-on exercises. Practical sessions follow all main topics, designed to reinforce the points covered. Additional information is provided in appendices to extend the learning experience after the course has been completed.

Delegates will learn how to

- Write code that includes sequence, selection and iteration constructs
- Create and use classes and structures (types), including fields, properties and methods
- Use private, internal, protected and public visibility modifiers
- Use exception-handling to create robust applications
- Create derived classes that inherit from custom-written or .NET Framework classes
- Create interfaces and apply techniques of polymorphism effectively and appropriately
- Work with generic types
- Leverage the power of C# features
- Use delegates
- Understand the event handling paradigm
- Use lambda expressions in C# code
- Use LINQ (Language Integrated Query)
- Efficiently manage resources

Outline

C# Basic Programming

- Introduction
- .NET Framework Components
- Console Application Development Environment with Basic C#
- Variables and Constants
- Exception Class and Error Management
- Type Conversion Operations
- Operators
- Decision Structures
- Loops
- Code Tracking
- String Manipulations Operations
- Arrays
- Methods

C# Object Oriented Programming

- Introduction
- Class Concept and Features
- Class Library
- Methods
- Inheritance
- Abstraction in Object Oriented Programming
- Polymorphism
- Windows Filing Processes
- User Defined Types
- Generic Structures
- Collections
- Delegates
- Design Patterns
- Attribute
- Reflection
- Extension Method to Write and Use
- Asynchronous operations with task, async, await
- Linq To Objects

Prerequisites

There is no prerequisite