



☎ +44 7989 401397

✉ info@olsensoft.com

C#13 Development

(5 days)

Course overview

C#13 is the latest evolution of Microsoft's primary programming language. This course covers the new language features introduced in C, plus the key features from earlier versions of the language. The course is based on .NET 9 (previously known as .NET Core) and shows how to create contemporary solutions using REST, Entity Framework, asynchronous techniques, and so on.

What you'll learn

- Essential C# syntax
- Implementing object-oriented designs in C#
- Using common .NET APIs
- Using LINQ and EF
- Introduction to asynchronous programming
- Creating REST services using Web API

Prerequisites

- At least 6 months programming experience
- Familiarity with OO concepts would be an advantage

Course details

- **Introduction to .NET:** Overview of .NET; Creating a .NET App at the Command Line; Creating a .NET App by using Visual Studio; Understanding Top-Level Statements
- **Core C# Language Features:** Language Essentials; Operators; Conditional Statements; Loops
- **Control Flow Techniques:** Conditional Logic Techniques; Loop Techniques
- **Defining Types:** .NET Language Essentials; Classes and Objects; Arrays; Value Types
- **Defining Nullable Types:** Nullable Reference Types; Nullable Value Types; Null Coalescing Operators
- **Defining Members:** A Closer Look at Parameters; Additional Function Techniques; Construction and Finalization; Properties; Required members
- **Going Further with Types and Members:** Static Members; Operators; Partial Types; Partial Methods
- **Inheritance:** Introduction to Inheritance; Additional Inheritance Techniques
- **Interfaces:** Introduction to Interfaces; Object Disposal; Additional Interface Techniques

- [Delegates, Lambdas, and Events](#): Delegates; Lambdas; Standard Delegate Types; Events
- [Using .NET APIs](#): Exception Handling; Collections; Regular Expressions
- [Additional C# Language Features](#): Initialization; Primary Constructors; Anonymous Types; Extension Methods
- [LINQ](#): Introduction to LINQ; Using LINQ with Arrays; Using LINQ with Collections; LINQ Techniques
- [ADO.NET Entity Framework](#): Introduction to the Entity Framework; Understanding the Sample Database; Defining an EF Data Model; Using EF to Access Data
- [Tuples and Records](#): Tuples; Improved Pattern Matching; Record Types
- [Parallelization and Asynchronous Methods](#): Parallelization; Async Methods
- [Creating REST Services](#): Overview of REST Services; Creating REST Services in .NET; Implementing Industrial-Strength Actions