.NET Core Training Overview

Course ID #: 1409-004-02-W
Hours: 14
CEU's: 1.4

Course Content

Course Description:

Our .NET Framework Class Library Fundamentals training gives attendees a thorough introduction to .NET Core for programmers who already know the C# language. Students learn core portions of the .NET Framework including architecture and key concepts of .NET, including class libraries, packages, frameworks, memory management, processes, threads, and much more.

This course is current to Visual Studio 2017 and .NET Core 2.x

At Course Completion:

After completing this course, student will be able to:

- Gain a thorough understanding of the philosophy and architecture of .NET Core
- Understand packages, metapackages, and frameworks
- Acquire a working knowledge of the .NET programming model
- Implement multi-threading effectively in .NET applications

Prerequisites:

Attendees should be experienced application developers or architects with a working knowledge of C#.

Topics:

Introduction

.NET Fundamentals

- What is Microsoft .NET?
- Common Language Runtime
- Framework Class Library
- Language Interoperability
- Managed Code
- .NET Core and Cross-Platform Development

Class Libraries

- Components in .NET
- Class Libraries Using Visual Studio
- Using References

Packages and Frameworks

- NuGet Packages and Gallery
- Metapackages and Frameworks
- Packages in .NET Core
- Porting from Classical .NET to .NET Core
- Visual Studio Package Manager
- Installing Packages
- Creating Packages

I/O and Serialization

- Directories
- Files and Streams
- XML Serialization

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Delegates and Events

- Delegates
- Random Number Generation
- Anonymous Methods
- Lambda Expressions
- Events

NET Programming Model

- Garbage Collection
- Finalize and Dispose
- Processes
- Command-Line Arguments
- Threads

.NET Threading

- Threading Fundamentals
- ThreadPool
- Foreground and Background Threads
- Synchronization
- Task Parallel Library

Conclusion