

C# Essentials

Course No.

9411

Description

This two-day course is designed for the experienced programmer to help you quickly come up to speed on the C# language. The five-day course 9410, "Object Oriented Programming in C#," covers the C# language thoroughly and is suitable for less experienced programmers without a background in object-oriented programming.

This course concisely covers the essentials of programming using Microsoft's new C# programming language. It starts with a brief chapter, "What You Need To Know," which gets you up and running in the .NET environment with a minimum of fuss. The next two chapters cover C# language essentials and object-oriented programming in C#. The next chapter discusses how C# relates to the .NET Framework. The final chapter provides a succinct introduction to creating GUI programs using Windows Forms. An appendix explains the fundamentals of working with the Visual Studio .NET development environment.

The course is practical, with many example programs. The goal is to quickly bring you up to speed in writing C# programs. The student will receive a comprehensive set of materials, including course notes and all the programming examples. The book *Application Development Using C# and .NET* is recommended as a supplement to the course.

Prerequisites

The student should be an experienced application developer or architect. Some background in object-oriented programming would be helpful.

Objectives

- Acquire a working knowledge of C# programming
- Learn about important interactions between C# and the .NET Framework
- Learn how to implement simple GUI programs using Windows Forms

Format

Lecture and hands-on workshops

System Requirements

Course exercises require Microsoft .NET 1.1 and Microsoft Visual Studio .NET 2003 on Windows 2000. See the appropriate course Setup Guide for details.

A good minimal hardware profile for this course would have a Pentium 500MHz or equivalent CPU, 256 Meg of RAM and at least 2 GB of free disk space for tools installation and courseware.

Duration

2 days

Course Contents

1. NET: What You Need To Know

- .NET Executables and the CLR
- A .NET Testbed for C# Programming

2. C# for the Sophisticated Programmer

- First C# Console Application
- Namespaces
- Data Types
- Control Structures
- Subroutines and Functions
- Console I/O
- Exception Handling

3. Object-Oriented Programming in C#

- Classes
- Access Control
- Methods and Properties
- Static Data and Methods
- Inheritance
- Overriding Methods
- Interfaces

4. C# and the .NET Framework

- Class Hierarchies
- .NET Interfaces
- Using Generic Interfaces: ICloneable and IComparable
- System.Array
- Collections
- Delegates
- Events

5. Introduction to Windows Forms

- Creating Windows Applications Using Visual Studio .NET
- Handling Events
- Listbox Controls

Appendix A. Using Visual Studio .NET

- Overview of Visual Studio .NET
- Creating a Console Application
- Project Configurations
- Debugging

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