

Visual C++ 6.0 Desktop And Distributed Application Development

5 day course

Overview

Students will learn how to develop advanced applications and distributed applications using Visual C++ and the Microsoft Component Object Model (COM). This course meets the Microsoft Proficiency Guidelines for Visual C++ 6.0 at the Expert level.

Prerequisites

To gain the most from this course, the student should be able to Use the Windows user interface Preferably use the user interface of the Visual C++ 6.0 integrated development environment Use the basic features of the C++ programming language

Target Student

Visual Basic, C++, and Java programmers with at least one year of practical experience who want to learn C# programming.

Course Content:

Introduction to COM

- Introduction to COM
- Addressing Component Software Development Issues with COM
- Separating Interface Definition from its Implementation
- Understanding COM Objects and VTBLs
- When COM Should Be Used

COM Clients

- Registering a COM Component
- Initializing and De-initializing COM Libraries
- Creating Instances of COM Objects
- The Methods of IUnknown and IClassFactory
- Using Smart Pointers to Access COM Interfaces
- Understanding COM Error Handling
- Understanding the COM String Data Type
- In-process COM Servers

Interface Definition Language, Marshaling, and Type Libraries

- Defining Interfaces Using IDL
- Apartments and Marshaling
- Type Libraries

Out-of-process COM Servers

- Building an EXE Server The Low-level Approach
- Building an EXE COM Server The ATL Approach

Using Types in C#

- Automation and the IDispatch Interface
- Dual Interfaces and ATL Automation Server Support
- Implementing Automation Servers Using MFC
- Implementing Automation Object Models Using Collections

ActiveX Controls and Connection Points

- Understanding ActiveX Controls and Related Concepts
- Implementing ActiveX Controls with ATL
- Using ActiveX Controls in Containers
- COM Code Reuse Techniques

COM Threading Models

- Thread Re-entrance and Apartments
- Comparing Free- and Both-threading Models

Distributed COM Applications

- Distributed COM (DCOM)
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