

Intermediate/Advanced VB.NET 2005

(5 Days)

Custom Training Institute

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Intermediate/Advanced VB.NET 2005 (CTI 243)

This course builds upon the concepts in CTI 242, "Introduction to VB.NET 2005" to teach students advanced topics such as working with databases through ADO.NET, creating and working with remote objects, building Web forms and creating Web services. Students will also learn how to design and work with the sophisticated security mechanisms that are built into .NET.

Required Prerequisites: *Two years experience with programming languages; one year of experience with VB.NET programming language, or completion of CTI 242, "Introduction to VB.NET 2005," or equivalent.*

Minimum hardware requirements: *PC at 512 MHz; 2 GB free hard disk space (before installation); machines should be networked and should have Internet access.*

Software requirements: *Microsoft Windows XP or 2000 or later; Visual Studio .NET (including VB.NET compiler) 2005 or later. Microsoft SQL Server 2005 (preferable) or Microsoft Access.*

Microsoft PowerPoint and Internet connection installed *at instructor's workstation for presentation purposes.*

Module 1: Programming XML

- XML Classes
- Using XmlReader with Read Helpers
- Using XmlWriter
- XML Traversal
- Loading/Serializing Documents
- Navigating DOM Trees
- Using XPath

Module 2: ADO.NET

- The .NET Data Architecture
- Migrating to .NET-Style RecordSets
- OleDb and SQL Managed Providers
- Streaming Data Access with Connection, Command and Reader
- Using Stored Procedures
- Disconnected Data in ADO.NET

Module 3: .NET Remoting

- Overview
- .NET Remoting as a Replacement for DCOM
- Creating a Remote Server
- Creating a Remote Client
- Callbacks
- Accessing Remote Objects Through Interfaces
- Retrieving Database Rows Using a Remote Object
- Windows Management Instrumentation (WMI)

Module 4: ASP.NET Web Services

- Overview
- Web Services Protocols
- SOAP Request/Response Overview
- XML Schema
- WSDL
- .NET Web Services Architecture
- Proxies
- Processing SOAP
- Web Service Discovery

Module 5: ASP.NET Architecture

- ASP and ASP.NET
- Compilation vs. Interpretation
- ASP.NET Basics
- Code Behind
- ASP.NET Directives

Module 6: Web Forms

- Control-Based Programming
- Server-Side Controls
- Server-Side Control State Management
- Events
- Identifying Server-Side Events
- Page Event Sequencing
- Web Form and Code-Behind
- HtmlControls
- WebControls
- Web Form Generation in VS.NET
- Code-Behind for VS.NET WebForm

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continued**

Module 7: ASP.NET Security

- Accessing Authenticated Client Information
- Client Authentication Modes in ASP.NET
- Forcing Authentication
- Authorization
- Fine-Grained Authorization
- Forms Authentication
- Password Storage
- Role-Based Authentication

Module 8: Performance Comparison

- When to Use ASP.NET Web Services
- When to Use .NET Remoting
- Performance Comparison of Each Platform

Module 9: What's New in 2005?

- Yukon – SQL Server 2003
- Whidbey – VB.NET 2005
- Longhorn – Windows 2005/2006

Module 10: Review and Summary