

.NET Framework Using Visual Basic (4 Days)

Custom Training Institute

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.NET Framework Using Visual Basic (CTI 4212)

This course provides a sound introduction to the .NET Framework for programmers who already know the VB.NET language and the fundamentals of Windows Forms.

Prerequisites: The student should be an experienced application developer or architect with a working knowledge of Visual Basic.NET., including building simple GUIs with Windows Forms.

Minimum software requirements: Microsoft Visual Studio 2008 or higher on Windows XP, SQL Server 2005 Express Edition, bundled with Visual Studio 2005.

Minimum hardware requirements for all machines: Pentium PC running at 2 GHz; 512 MB RAM; 4 GB free hard disk space before installation; Internet access; machines must be networked.

Microsoft PowerPoint and Internet access on instructor's workstation for presentation purposes.

Module 1: .NET Fundamentals

- What is Microsoft .NET?
- Common Language Runtime
- Attribute Based Programming
- Interface Based Programming
- Metadata
- Common Type System
- Framework Class Library
- Language Interoperability
- Managed Code
- Assemblies and Deployment
- Web Services
- ASP.NET

Module 2: Class Libraries

- Components in .NET
- Building Class Libraries at the Command Line
- Class Libraries Using Visual Studio 2005
- Using References

Module 3: Assemblies, Deployment and Configuration

- Assemblies
- Private Assembly Deployment
- Shared Assembly Deployment
- Configuration Overview
- Configuration Files
- Programmatic Access to Configuration
- Using SDK Tools for Signing and Deployment
- Application Settings with .NET 2.0

Module 4: Metadata and Reflection

- Metadata
- Reflection
- Late Binding

Module 5: I/O and Serialization

- Directories
- Files
- Serialization
- Attributes

Module 6: .NET Programming Model

- Memory Management and Garbage Collection
- Threading and Synchronization
- Asynchronous Delegates
- .NET 2.0 BackgroundWorker
- Application Domains
- Marshal By Value
- Marshal By Reference
- .NET Remoting

Module 7: .NET Security

- Authentication and Authorization
- Configuring Security
- Code Access Security
- Code Groups
- Evidence
- Permissions
- Role-Based Security
- Principals and Identities

Module 8: Interoperating with COM and Win32

- .NET Client Calling a COM Server
- PInvoke

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Module 9: Database Programming Using

ADO.NET

- ADO.NET Overview
- .NET Data Providers
- Connections
- Commands
- DataReaders and Connected Access
- DataSets and Disconnected Access
- Language Integrated Query

Module 10: Debugging Fundamentals

- Compile-time Errors and Run-time Errors
- Configuring Debug, Release, and Special Builds
- Visual Studio 2005 Debugger
- Just-In-Time Debugging

Module 11: Tracing

- Tracing
- Event Logs

Module 12: More About Tracing

- Using the BooleanSwitch and TraceSwitch Classes
- Print Debugging Information with the Debug Class
- Instrumenting Release Builds with the Trace Class
- Using Listeners
- Implementing Custom Listeners