

NET 3.0 introduced the important new technologies of Windows Presentation Foundation (WPF), Windows Communication Foundation (WCF) and Windows Workflow Foundation (WF). Although there were extensions for Visual Studio 2005, there was not yet full-blown tool support. Visual Studio 2008 brings this tool support along with a further update to the .NET Framework, .NET 3.5. This newest version of the Framework also introduces the important data access technology, Language-Integrated Query (LINQ) along with significant enhancements to the C# language, largely intended to support LINQ.

This three-day hands-on course introduces these new technologies to the experienced developer who has a good working knowledge of .NET and Visual Studio 2005. Numerous programming examples and exercises are provided.

Course Objectives:

- Become familiar with the Visual Studio 2008 development environment and understand which version is appropriate for specific tasks.
- Gain a working knowledge of implicitly typed variables, lambda expressions, query keywords, and other new features of C# 3.0.
- Use LINQ to access data from collections, databases, and XML.
- Implement distributed applications using WCF.
- Implement workflow applications using WF.
- Use WPF and Extensible Markup Language (XAML) to create Windows applications.

Audience: Experienced developers interested in effectively utilizing the new features offered in Visual Studio 2008 and .NET 3.5.

Prerequisites: Programming experience in C# and version 2.0 of the .NET Framework and familiarity with the Visual Studio 2005 development environment.

Number of Days: 3 days

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| <p>1. Visual Studio 2008
 .NET 3.0 Block Diagram
 .NET Framework 3.5
 Visual Studio 2008
 Visual Studio 2008 Versions
 Visual Studio 2008 Team System
 Plan for this Course
 A Tour of Visual Studio 2008
 New WPF Project Templates
 Creating a New WPF Application
 XAML
 Navigating XAML and Design View
 Editing XAML
 Sizing the Window</p> | <p>Adding an Event Handler
 Solutions with Multiple Projects
 Referencing the Class Library
 Project Dependencies
 Build Order
 Using the Class Library
 New Web Project Templates
 Reporting Project Templates
 WCF Project Templates
 Workflow Project Templates
 Workflow Designer
 Object/Relational Designer</p> |
| <p>2. New Features in C# 3.0
 Auto-Implemented Properties</p> | |

- Implicitly Typed Variables
- Object Initializers
- Collection Initializers
- Anonymous Types
- Partial Methods
- Partial Method Definition
- Partial Method Implementation
- Main Program
- Running the Example
- Extension Methods
- Lambda Expressions
- Named Method
- Anonymous Method
- Language-Integrated Query (LINQ)
- Using IEnumerable<T>
- 3. Language-Integrated Query (LINQ)**
- What Is LINQ?
- Bridging Objects and Data
- Object Relational Designer
- IntelliSense
- Basic LINQ Query Operators
- Obtaining a Data Source
- Commands
- Projection
- Filtering
- Ordering
- Grouping
- Aggregation
- Obtaining Lists and Arrays
- Deferred Execution
- Inserts
- Deletes and Updates
- LINQ Data Stores
- LINQ to Objects
- LINQ to ADO.NET
- Creating the Object Model
- DataContext
- Performing Inserts via LINQ to SQL
- Performing Deletes via LINQ to SQL
- Performing Updates via LINQ to SQL
- LINQ to DataSet
- Using the Typed DataSet
- LINQ to XML
- Creating an XML Document
- Querying and Modifying
- Removing and Updating

- 4. Windows Communication Foundation (WCF)**
- What Is WCF?
- WCF Services
- Service Orientation
- WCF and Web Services
- WCF = ABC
- Address, Binding, Contract
- Hosting Services
- Testing the Service
- Implementing the Host
- A Client Program
- Data Contracts
- Testing the Service Library
- Host
- Client
- Adding a Service Reference
- WCF Architecture
- Addresses
- Transports
- Bindings
- Message Exchange Patterns (MEPs)
- Security
- 5. Windows Workflow Foundation (WF)**
- What Is Workflow?
- Windows Workflow Foundation
- Workflows
- Activities
- Standard Activities
- Runtime Services
- Workflow Business Scenario
- High Level Workflow
- Details of While Activity
- Orders Folder
- Manual Step in the Verification
- Main Console Display
- Issues Folder
- Invoices Folder
- Learning Microsoft's WF
- Hello Workflow
- Hello Workflow Demo
- IfElseActivity
- Implementing a Branch
- While Activity

High-Level Workflow
 Sequence Activity
 Condition in While Activity
 Parallel Activity

6. Windows Presentation Foundation (WPF)

WPF and .NET Framework 3.5
 Core Types and Infrastructures
 XAML
 Controls
 Data Binding
 Appearance
 Layout and Panels
 Graphics
 Media
 Documents and Printing
 Application and Window
 Using a Button
 Device-Independent Pixels
 Class Hierarchy
 Content Property
 Handling an Event
 What Is XAML?
 Default Namespace
 Elements and Attributes
 XAML in Visual Studio 2008
 Layout in WPF
 Controlling Size
 Margin and Padding
 Thickness Structure
 Children of Panels
 TwoControls – XAML
 Automatic Sizing
 TwoControls – Code
 Orientation
 Items Controls
 Selector Controls
 Using a ListBox
 Storing Objects in List Controls
 Grid
 Customizing a Grid
 GroupBox and RadioButton Controls
 Menus in WPF
 Menu Controls
 File Menu
 The Menu Using XAML

Handling the Click Event
 Closing a Form
 Other Controls on Menus
 Dialog Boxes in WPF
 MessageBox
 MessageBox Show Method
 Common Dialog Boxes
 Custom Dialogs
 Modal Dialogs
 XAML for New Item Dialog
 Code for New Item Dialog
 Bringing up the Dialog

7. Appendix A – Learning Resources