

.NET 3.5 New Features Course Summary

Description

A hands-on course covering the new features of .NET 3.5, including language features, LINQ, Ajax, WCF and WPF.

Objectives

At the end of this course, students will be able to:

- Know the purpose of, and use, the major new language features in VB and C#, including:
 - Implicit (inferred) variable typing
 - Nullable value-type variables
 - Anonymous types
 - Automatic properties of classes
 - Class and collection initializers
 - Anonymous methods
 - Lambda expressions
 - Extension methods
- Use LINQ queries to retrieve data from arrays, lists, XML files, collections of objects, relational database tables and stored procedures, and DataSets; write joins, subqueries, summarizing queries, and updates with LINQ
- Use Ajax to create more-interactive web applications, including using browser and server-side features
- Use Windows Communication Foundation (WCF) to create services that can be used by any .NET or non-.NET application
- Familiarize themselves with Windows Presentation Foundation (WPF) for creating standalone and browser-based applications, and its relation to Silverlight
- Familiarize themselves with the purpose of Windows Workflow Foundation (WF)

Topics

- Introduction
- New language features in .NET 3.5
- LINQ (Language Integrated Query)
- Ajax in ASP.NET
- Windows Communication Foundation (WCF)
- Windows Presentation Foundation (WPF)
- Windows Workflow Foundation (WF)
- Final Lab

Audience

This course is designed for developers already familiar with .NET 2.0 or an earlier release.

Prerequisites

- Prior training and/or experience in the .NET Framework, VB and/or C#, and Visual Studio .NET, in any version up to .NET 2.0
- Familiarity with relational databases

Duration

Five days

.NET 3.5 New Features Course Outline

- I. Introduction**
 - A. .NET Overview
 - B. Installing the course files
 - C. Starting your solution and project
- II. New language features in .NET 3.5**
 - A. Overview
 - B. Implicit variable typing
 - C. Nullable value-type variables
 - D. Anonymous types (classes)
 - E. Automatic properties of classes
 - F. Class and collection initializers
 - G. Anonymous methods
 - H. Lambda expressions
 - I. Extension methods
- III. LINQ (Language Integrated Query)**
 - A. Basic LINQ queries
 - B. LINQ on objects
 - C. LINQ to XML
 - D. LINQ to SQL
 - E. LINQ to DataSets
 - F. LINQ joins
 - G. LINQ subqueries
 - H. LINQ summarization
 - I. Updating with LINQ
- IV. Ajax in ASP.NET**
 - A. Overview of Ajax
 - B. Server-side Ajax features
 - C. Browser-side Ajax calls to inline methods
 - D. Ajax calls to web services
 - E. Additional considerations: remote and stateful web services, history points
- V. Windows Communication Foundation (WCF)**
 - A. WCF Overview
 - B. Creating a service
 - C. Handling collections
 - D. Returning data objects
 - E. Handling complex types of objects
 - F. WCF Sessions
 - G. Other considerations: asynchronous calls, transactions, etc
- VI. Windows Presentation Foundation (WPF)**
 - A. WPF Overview
 - B. WPF Standalone applications
 - C. WPF Browser applications
 - D. WPF deployment
 - E. Silverlight
- VII. Windows Workflow Foundation (WF)**
 - A. Overview of workflows
 - B. Workflow implementation in .NET
- VIII. Final Lab**
 - A. Description of the Lab
 - B. Using LINQ, Ajax, WCF