.NET 3.5 Using VB
Course Summary

Description
This class has been specially tailored for the experienced .NET 2.0 VB programmers who are ready to learn about the new features and capabilities in .NET 3.5 as well as to enhance his .NET programming skills and understanding. Students will spend at least 50% of the class time in labs learning how to apply the many new features in VB, use LINQ, AJAX, and several other major additions to the .NET Framework. The course includes features released in Service Pack 1 such as the Entity Framework.

Objectives
After successful completion of this course, the student will be able to:
- Know the purpose of, and use, the major new language features in VB and C#
- 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 the Entity Framework with either LINQ or Entity SQL to create database applications, including ADO.NET Data Services
- 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
- Understand Windows Presentation Foundation (WPF) for creating standalone and browser-based applications, and its relation to Silverlight
- Understand the purpose of Windows Workflow Foundation (WF)

Topics
- New .NET 3.5 VB language features, including anonymous types, lambda expressions, and extension methods
- LINQ (Language Integrated Query)
- AJAX in ASP.NET
- WCF (Windows Communication Foundation)
- WPF (Windows Presentation Foundation) and Silverlight
- WF (Windows Workflow Foundation)
- ASP.NET MVC Framework

Audience
This class is designed for experienced .NET 2.0 programmers who will be making the transition to .NET 3.5

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 (10 half days)

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Course Summary

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. The Entity Framework
A. Overview
B. Creating an Entity Data Model (EDM)
C. Using LINQ to Entities
D. Using Entity SQL
E. Joins (associations)
F. EntityDataReaders
G. ADO.NET Data Services

V. 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

VI. 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

VII. Windows Presentation Foundation (WPF)
A. WPF Overview
B. WPF Standalone applications
C. WPF Browser applications
D. WPF deployment
E. Silverlight

VIII. Windows Workflow Foundation (WF)
A. Overview of workflows
B. Workflow implementation in .NET

IX. Additional Topics
A. Writing secure code; validating input; preventing SQL injections and cross-site scripting