

## VB Development for .NET 4.0

(5 days hands-on)

VB has undergone several enhancements over the years, and VB 2010 offers some great productivity features. This course provides comprehensive and exhaustive coverage of the language, including all the latest language features such as LINQ, extension methods, and lambda expressions, and dynamic variables.

### Contents:

- **Introduction to VB and .NET:** .NET Framework building blocks; Hello world in VB; Using Visual Studio 2010; Namespaces and assemblies
- **Core VB Programming Constructs:** Variables, operators, and statements; Reference types vs. value types; Conversions; Nullable types; Using the Console and String classes; Flow-of-control; Using implicit types
- **More VB Programming Constructs:** Defining methods; Method overloading; Arrays; Defining and using structures
- **Defining and Using Classes:** Defining classes; Defining instance variables and instance methods; Defining constructors and finalizers; Defining properties; Creating and disposing objects; Defining constants and read-only fields; Shared members; Partial classes; Partial methods
- **Inheritance and Polymorphism:** Defining base classes and derived classes; Overriding methods; Abstract classes; Interfaces
- **Exception Handling:** Defining Try/Catch/Finally blocks; Throwing exceptions; Defining new exception classes; Defining Using blocks
- **Creating Collections of Objects:** The need for collections; Overview of generics; Using List collections; Using Dictionary collections; Defining custom comparison and comparable objects
- **Delegates, Events, and Lambdas:** Overview; Defining simple delegates; Defining and handling events; Using lambda expressions
- **Additional Language Features:** Operator overloading; Extension methods; Object initializers; Anonymous types
- **Introduction to LINQ:** The role of LINQ; Simple LINQ query expressions; Using LINQ with collections; LINQ query operators
- **File Handling:** Using the DriveInfo, DirectoryInfo, and FileInfo classes; Using the Directory and File classes; Using stream readers and writers
- **Introduction to Data Access:** .NET data providers; Connecting to a database; Executing a query; Result sets; DataSets
- **ADO.NET Entity Framework:** Introduction to EF; Creating an EF data model; EF queries
- **Introduction to WPF:** Overview of Windows Presentation Foundation; Getting started with XAML; Implementing event handlers
- **Introduction to WCF:** Overview of Windows Communication Foundation; Creating a service; Hosting a service; Creating a client
- **Multithreading:** Invoking methods asynchronously via delegates; Creating threads programmatically; Synchronization; Parallel programming; PLINQ
- **Dynamic Programming:** The dynamic keyword; The DLR

### Who Should Attend:

Developers who want to develop solutions for the .NET 4.0 platform using VB.

### Prerequisites:

Experience using any contemporary OO language and/or familiarity with VB 6.