

Visual Basic .NET with an ASP.NET Focus

Length: 5 Days

Summary: This course provides students with hands on experience using Visual Studio to create dynamic web applications with the ASP.NET 3.5 Framework using VB.NET. This class provides a thorough introduction to the VB.NET programming language, including coverage of the essentials of the VB.NET programming language, built in data types, operators, control structures, classes and methods.

COURSE CONTENT

INTRODUCTION TO .NET

- Overview of the .NET Framework
- How .NET is Different from Traditional Programming
- Common Language Runtime (CLR)
- Common Language Specification (CLS)
- Common Type System (CTS)
- .NET Assemblies
- Microsoft Intermediate Language (CIL)
- .NET Namespaces
- .NET Framework Class Library

INTRODUCTION TO VISUAL STUDIO

- Setting Profiles
- Creating a Project
- Using the Code Editor
- Setting Project Properties
- Adding References
- Compiling a Program
- Running a Program
- Debugging a Program
- Using the MSDN (Help)

LANGUAGE FUNDAMENTALS

- VB.NET Program Structure
- Defining Namespaces
- Using VB.NET's My Namespace
- Understanding VB.NET Data Types
- Defining Variables and Constants
- Comparing Value Types versus Reference Types
- Working with Operators and Expressions
- Performing Type Conversions
- Using Console I/O
- Formatting Numbers, Date and Times

CONDITIONALS AND LOOPING

- If
- If/Else
- If/Elseif/Else
- Select Case
- Do/Loop
- While
- For/Next
- For Each/Next

EXCEPTION HANDLING

- What are Exceptions?
- .NET Exception Hierarchy
- Catching Exceptions
- Throwing Exceptions
- Managing Resources with Finally
- Defining Custom Exception Types

COLLECTIONS

- Defining and Using Arrays
- Understanding System.Array
- Using .NET Collections
- Working with ArrayLists and Hashtables
- Using .NET Generic Collections
- Working with Lists and Dictionaries
- Introducing LINQ

OBJECT-ORIENTED PROGRAMMING

- Overview of Object-Oriented Programming
- Defining and using Structures
- Defining and using Enumerations
- Understanding System.Enum

- Defining and Using Classes
- Extending .NET Classes via Inheritance
- Defining and Implementing Interfaces
- Understanding the Role of Interfaces in .NET

ASP.NET 3.5 FEATURES

- Overview of ASP.NET 3.5
- Understanding Client-Side vs. Server-Side Execution
- Working with Web Forms
- Understanding ASP.NET Application Folders
- Using Web.config

CREATING ASP.NET PAGES

- Building ASP.NET Pages
- Using Page Directives
- Working with the Code-Behind Model
- Understanding the Life-cycle of a Web Form
- Handling Page Events

USING CONTROLS

- Working with HTML Controls
- Working with Web Controls
- Creating Controls at Runtime
- Defining and Using Custom User Controls

HANDLING EVENTS

- Understanding the Event Driven Programming Model
- Writing Event Handlers
- UnderstandingPostBack versus Non-PostBack Events
- Sharing Event Handlers between Events
- Using Global.asax

VALIDATION

- Understanding the ASP.NET Validation Controls
- Performing Client-Side Validation
- Performing Server-Side Validation
- Using the Regular Expression Validator
- Customizing Validation
- Working with Validation Groups

MASTER PAGES

- Understanding the Master Page Architecture
- Designing a Master Page
- Designing Content Pages

MAINTAINING STATE

- Understanding why the Web is Stateless
- Maintaining State within ASP.NET Applications
- Using the Application Object
- Using the Session Object
- Using the ViewState Object
- Reading and Writing Cookies
- Using the Query String

ADO.NET

- Understanding the ADO.NET Object Model
- Connected vs. Disconnected Access
- Using a Connection to Connect to a Data Source
- Using a Command to Execute Queries and Stored Procedures
- Using a DataReader to Work with Cursors
- Using the DataSet with Disconnected Data
- Using DataAdapters with DataSets

USING XML

- Understanding XML and XML Schemas
- Reading XML Data with a DataSet
- Writing XML Data with a DataSet

DATA BINDING IN ASP.NET 3.5

- Understanding ASP.NET Data Binding
- Examining ASP.NET Data Bound Controls
- Using the ListBox Control
- Using the GridView Control
- Using the DetailsView Control
- Using the FormView Control
- Using the ListView Control

SECURING ASP.NET APPLICATIONS

- Understanding the ASP.NET 3.5 Security Model
- Authenticating Users
- Authorization User Request
- Using the ASP.NET Login Controls
- Using the ASP.NET Web Site Administration Tool