COMPLETE COMPUTING, INC.

Core Visual Basic Programming with Visual Studio 2008

Five days – Instructor Led

Overview

This five-day course focuses on core syntax and software development using Microsoft Visual Basic with emphasis on building maintainable, adaptable, real-world code.

Audience

This course is intended for programmers who are new to .NET programming and the Visual Basic language. Some software development experience is helpful but not required.

Course Highlights

- .NET Framework Overview
- Using Variables
- Decision Structures
- Looping
- Interacting with the User
- Working with Variables
- Creating Procedures
- Types in .NET
- Creating Properties, Methods and Events
- Overloading Methods
- Inheritance and Polymorphism
- Debugging
- Structured Exception Handling
- Introduction to Language Integrated Query (LINQ)
- Introduction to ADO.NET
- Creating Windows Forms Applications
- Creating Windows Presentation Framework (WPF) Applications
- Creating ASP.NET Applications
- Creating Service Applications with Windows Communication Framework (WCF)
- Deploying .NET Applications

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Outline

Part 1: Programming in the .NET Framework

- .NET Framework Overview
  - Common Language Runtime
  - Common Intermediate Language
  - Common Type System
  - Benefits of a Managed Execution Environment
  - Framework Class Library
- Coding in .NET
  - Introduction to Object Oriented Programming
  - Writing Basic Code
    - Structure of a Visual Basic Application
    - Visual Basic Statements
    - Visual Basic Operators
    - Using Variables
    - Declaring Constants
    - Enumerated Constants
    - Visual Basic Standards
      - Casing
      - Comments
      - XML Documentation
    - Working with Strings
    - Creating and Using Arrays
    - Converting Datatypes
    - Making Decisions
      - If Statements
      - If-Then-Else (Else If)
    - Looping
      - Do/While Loop
      - For Loop
      - For Each Loop
    - Working with Collections and Generics
      - Overview of the System.Collections Namespace
      - Introduction to .NET Generics
    - Creating Types
      - Classes and Structures
      - Declaring Fields
      - Declaring Property Procedures
      - Declaring Methods
      - Creating and Using Delegates
      - Declaring and Using Events

- Creating Constructors
- Finalization

Applied Object Oriented Programming
- Inheritance
- Overriding Members of a Base Class
- Abstract Members
- Overriding Constructors

Errors / Debugging / Structured Exception Handling
- Syntax Errors in the IDE
- Using the Debugger
  - Stepping through Code
  - Watch Expressions / Conditional Breakpoints
  - Edit-and-Continue Debugging
- Structured Exception Handling
  - Using Try/Catch/Finally
  - Using Global Exception Handling
    - Creating a Routine
    - In Windows Forms
    - In ASP.NET
- System.Diagnostics.Debug and Tracing
  - Using Debug.Assert
  - Implementing Tracing
- Conditional Compilation in VB.NET
  - Debug and Release Configuration Settings
  - Using #if, #else, #endif

Part 2: Applied .NET Programming

Introduction to using Data in Applications

ADO.NET
- The Connected Model
  - Using the Connection Object
  - Using the Command Object
  - Using the DataReader Object
- The Disconnected Model
  - Declaring and Using Datasets
  - Using TableAdapters
- Language Integrated Query (LINQ)
  - LINQ with Objects
  - LINQ to SQL / Entity Framework
  - LINQ to XML

Creating Windows Forms Applications
- Common Controls
- Settings

- The "My" Namespace
- Multi-Form Applications
- Validating Input
- Using Data in Windows Forms Applications

Introduction to ASP.NET Web Applications

- The HTTP Post-Back Model and ASP.NET
- Creating Web Forms
- Using Controls
- ASP.NET Validation
- ASP.NET Databinding
- ASP.NET Configuration
- State Management

Creating Services with Windows Communication Framework (WCF)

- Introduction to Service Oriented Applications and Web Services
- Creating a Simple Service with WCF
- Creating a Client Application to Use Your Service

Deploying .NET Applications

- No Touch Deployment
- Creating an MSI File for Windows Applications
- Deployment Issues and Web Applications