

Course Outline | Microsoft Visual Basic for Existing Developers

5 day(s)

Overview

You can program in another language but you are a beginner to VB.NET programming. With VB.NET for Existing Developers, you have made a great choice! Whether you have come from FORTRAN or Visual Basic 6, you will find that this course quickly gets you up to speed on what you need to know to get the most from Visual Basic.NET.

Prerequisites

Previous knowledge and experience of developing applications with a programming language.

Course Outline

WELCOME TO VISUAL BASIC

- Event-Driven Programming
- The Visual Studio IDE
- Creating a Simple Application
- Modified Hungarian Notation
- The Code Editor
- Using the Help System

THE MICROSOFT .NET FRAMEWORK

- The .NET Vision
- Writing Software for Windows
- The .NET Framework Classes
- Executing Code
- Common Language Runtime
- The Common Type System and Common Language Specification

WRITING SOFTWARE

- Working with Variables
- Comments and Whitespace
- Data Types
- Working with Numbers
- Working with Strings
- Using Dates
- Boolean
- Storing Variables
- Converting Values
- Methods
- Choosing Method Names
- Scope

CONTROLLING THE FLOW

- Making Decisions
- The If Statement
- The Else Statement
- Allowing Multiple Alternatives with Elseif
- Nested If Statements
- The And and Or Operators
- String Comparison
- Select Case
- Loops
- Nested Loops
- Quitting Early

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- Infinite Loops

WORKING WITH DATA STRUCTURES

- Understanding Arrays
- Defining and Using Arrays
- Using For Each ... Next
- Passing Arrays As Parameters
- Initializing Arrays with Values
- Using Enumerations
- Using Constants
- Structures
- Building Structures
- Using an ArrayList
- Working with Collections
- Advanced Array Manipulation
- Dynamic Arrays

BUILDING WINDOWS APPLICATIONS

- Responding to Events
- Building a Simple Application
- Building the Form
- Using Multiple Forms

DISPLAYING DIALOG BOXES

- The MessageBox
- The Show Method Syntax
- The OpenFileDialog Control
- The SaveDialog Control
- The FontDialog Control
- The ColorDialog Control
- The PrintDialog Control
- The FolderBrowserDialog

CREATING MENUS

- Understanding Menu Features
- Images
- Access Keys
- Shortcut Keys
- Creating Menus
- Designing the Menus
- Adding Toolbars and Controls
- Coding Menus
- Context Menus

DEBUGGING AND ERROR HANDLING

- Major Error Types
- Syntax Errors
- Execution Errors
- Logic Errors
- Debugging
- Using Structured Error Handling

BUILDING OBJECTS

- Understanding Objects
- Encapsulation

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- Methods and Properties
- Events
- Visibility
- What Is a Class?
- Building Classes
- Designing an Object
- Constructors
- Inheritance
- Polymorphism
- Inheriting from the Object Class
- Objects and Structures
- The Framework Classes
- Namespaces
- The Imports Statement

ADVANCED OBJECT-ORIENTED TECHNIQUES

- Using Classes
- Using Shared Properties and Methods
- Understanding Object-Oriented
- Programming and Memory
- Management
- Garbage Collection

BUILDING CLASS LIBRARIES

- Understanding Class Libraries
- Creating a Class Library
- Using Strong Names
- Signing Assemblies
- Registering Assemblies
- Designing Class Libraries
- Using Third-Party Class Libraries
- Viewing Classes with the Object Browser

CREATING WINDOWS FORMS USER CONTROLS

- Windows Forms Controls
- Creating and Testing a User Control
- Exposing Properties from User Controls
- Exposing Methods from User Controls
- Exposing Events from User Controls

ACCESSING DATABASES

- Data Access Components and Controls
- DataSet
- DataGridView
- BindingSource
- BindingNavigator
- TableAdapter
- Data Binding

DATABASE PROGRAMMING WITH SQL SERVER AND ADO.NET

- ADO.NET
- ADO.NET Data Namespaces
- The SqlConnection Class
- The SqlCommand Class
- Using Command Builders to Create the Other Commands
- The DataSet Class

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- The DataView Class

VISUAL BASIC AND XML

- Understanding XML
- The SerializableData Class
- Loading the XML File
- Changing the Data

DEPLOYING YOUR APPLICATION

- What Is Deployment?
- ClickOnce Deployment
- XCOPY Deployment
- Creating a Visual Studio Setup Application