

VB.NET Essentials

Course No.

9421

Description

Microsoft .NET is an advance in programming technology that greatly simplifies application development, both for traditional, proprietary applications and for the emerging paradigm of Web-based services. .NET is a complete restructuring of Microsoft's entire system infrastructure and represents a major learning challenge for programmers developing applications on Microsoft platforms. There is substantial change to the Visual Basic language, and VB6 code will not run unmodified in the .NET environment. Also, the new version of the language, Visual Basic .NET, or just VB.NET, is now a fully object-oriented language with features such as interfaces, inheritance, and polymorphism. The result is that there is a definite learning curve for moving to VB.NET.

This two-day course is designed for the experienced programmer to help you quickly come up to speed on the VB.NET language and to learn the fundamentals of GUI programming using Windows Forms.

The course concisely covers the essentials of Windows programming using Microsoft's VB.NET programming language. It starts with a very brief chapter, "What You Need To Know," which gets you up and running in the .NET environment with a minimum of fuss. The next two chapters cover VB.NET language essentials and object-oriented programming in VB.NET. The next chapter discusses how VB.NET relates to the .NET Framework. Finally, user interface programming in VB.NET is examined. The .NET Framework introduces a robust, stable windowing platform with a class library (Windows Forms) that is used by multiple languages. Programmers familiar with previous versions of VB will notice that this significantly changes the programming model, yet also introduces flexibility not previously available.

The course is practical, with many example programs. The goal is to bring you up to speed quickly in writing VB.NET programs, including GUI applications. The student will receive a comprehensive set of materials, including course notes, and all the programming examples. The book *Application Development Using Visual Basic and .NET* is recommended as a supplement to the course.

Prerequisites

The student should be an experienced application developer or architect. Some background in object-oriented programming would be helpful.

Objectives

- Acquire a working knowledge of VB.NET programming
- Learn how to implement user interfaces using Windows Forms and .NET

Duration

2 days

Format

Lecture and hands-on workshops

System Requirements

Course exercises require Microsoft .NET and Microsoft Visual Studio .NET on Windows 2000. See the appropriate course Setup Guide for details.

A good minimal hardware profile for this course would have a Pentium 500-MHz or equivalent CPU, 256 MB of RAM, and at least 500 MB of free disk space for tools installation and courseware.



Table of Contents

1. .NET: What You Need To Know

- .NET Executables and the CLR
- A .NET Testbed for VB.NET Programming

2. VB.NET for the Sophisticated Programmer

- First VB.NET Console Application
- Namespaces
- Data Types
- Control Structures
- Subroutines and Functions
- Conversions
- Console I/O
- Exception Handling

3. Object-Oriented Programming in VB.NET

- Classes
- Access Control
- Methods and Properties
- Shared Data and Methods
- Inheritance
- Overriding Methods
- Polymorphism

4. VB.NET and the .NET Framework

- Interfaces
- Collections
- Copy Semantics
- Generic .NET Interfaces
- Delegates
- Events

5. Introduction to Windows Forms

- First VB.NET Windows Application
- Windows Forms
- Controls
- Windows Events
- Menus
- Dialogs

6. Appendix A. Using Visual Studio .NET

- Overview of Visual Studio .NET
- Creating a Console Application
- Project Configurations
- Debugging

