

# About This Book

THIS BOOK IS A COMPREHENSIVE, hands-on guide to the Visual Basic .NET programming language addressed to readers with some programming background. No background in Visual Basic is required, however.

While I show you the syntax of VB .NET, this book is not designed to teach you syntax. I have taken this approach because trying to force VB .NET into the framework of older versions of VB is ultimately self-defeating—you cannot take advantage of its power if you continue to think within an older paradigm.

First off, I have tried to give you a complete treatment of object-oriented programming in the context of the VB .NET language. I feel pretty strongly that without a firm foundation here, it is *impossible* to take full advantage of the power that VB .NET can bring to you.

Also, I have tried to cover at the least the fundamentals of *every* technique that a professional VB .NET developer will need to master. This includes topics like multithreading, which are too often skimmed on in most books. This does not mean that I cover all the possible (or even the majority of) applications of VB .NET to the .NET platform; that would take a book two or three times the size of this one. This is a book about the techniques you need to master, not the applications themselves. (I have tried to make most of the examples realistic, avoiding toy code as much as possible.)

Finally, since most people reading this book will have programmed with some version of Visual Basic before, I have also tried to be as clear about the differences between VB .NET and earlier versions of VB as I could. However, I want to stress that this book does not assume any knowledge of earlier versions of VB, just some programming experience.

## How This Book Is Organized

**Chapter 1, “Introduction,”** explains what is so different about VB .NET. Experienced VB programmers will benefit from reading this chapter.

**Chapter 2, “The VB .NET IDE: Visual Studio .NET,”** introduces you to the Visual Studio .NET Integrated Development Environment (IDE).

**Chapter 3, “Expressions, Operators, and Control Flow,”** covers what I like to call the “vocabulary” of VB .NET. This is the basic syntax for code including variables, loops, and operators.

**Chapter 4, “Classes and Objects (with a Very Short Introduction to Object-Oriented Programming),”** is the first of the core object-oriented programming chapters. It shows you how to construct objects and use them.

**Chapter 5, “Inheritance and Interfaces,”** covers the other key parts of object-oriented programming in VB .NET: *inheritance* and *interfaces*. This chapter also contains an

introduction to the useful .NET collection classes which allow you to efficiently manage data inside a program.

**Chapter 6, “Event Handling and Delegates,”** takes up events and the new .NET notion of a *delegate*. Event-driven programming is still the key to good user interface design, and .NET depends on it just as much as Windows did.

**Chapter 7, “Error Handling the VB .NET Way: Living with Exceptions,”** covers *exceptions*, the modern way of dealing with errors that lets you banish the archaic `On Error GoTo` syntax that has plagued VB since its start.

**Chapter 8, “Windows Forms, Drawing, and Printing,”** takes up building Windows user interfaces, graphics and printing. Although the browser is obviously becoming more important as a delivery platform, traditional Windows-based clients aren’t going away, and this chapter gives you a firm foundation to build them under .NET.

**Chapter 9, “Input/Output,”** presents I/O, with a complete treatment of *streams*, which are at the root of .NET’s way of handling I/O.

**Chapter 10, “Multithreading,”** is a concise treatment of the fundamentals of multithreading. Multithreading is an amazingly powerful technique of programming that is nonetheless fraught with peril. I hope this chapter does not just teach you enough “to be dangerous,” but rather, enough so that you can use this powerful technique safely and effectively in your programs.

**Chapter 11, “A Brief Introduction to Database Access with VB .NET,”** and **Chapter 12, “A Brief Overview of ASP .NET,”** are very brief introductions to two of the most important applications of .NET: ASP .NET and ADO .NET. Please note these chapters are designed to give you just a taste, and you will have to look at more detailed books to learn how to use ASP .NET or ADO .NET in production-level code.

**Chapter 13, “.NET Assemblies, Deployment, and COM Interop,”** is a brief introduction to what goes on under the hood in .NET that includes a look the idea of assemblies and COM Interop. While I have tried to give you a flavor of these important topics, you will also need to consult a more advanced book to learn more about the topics.

## Contacting Me

I would love to hear about your experiences with this book, suggestions for improvements, and any errata you may find. (The current list of errata may be found at the Apress Web site at [www.apress.com](http://www.apress.com)). You can contact me at [gary@thecornells.com](mailto:gary@thecornells.com).

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