

Introduction

E-commerce is one of the major concerns playing on the minds of corporate executives the world over. In interview after interview, senior managers say one of the biggest challenges facing their organizations is how to effectively leverage the Internet, to give them a competitive advantage (or make sure they're not left behind!).

But e-commerce isn't just for the big multi-nationals - one of beauties of the Web is that anybody can establish themselves with a Web site that can be accessed by a world-wide consumer base. Increasingly, small and medium enterprises are realizing that, with a reasonable amount of computing skill, common sense, and the entrepreneurial enterprise that has kept them going in business they too can take part in this new marketing paradigm.

This book is aimed squarely at those who are wishing to become acquainted with e-business at the grass roots level, who do not have IT departments and computing gurus sitting at their elbows (and the spare cash to invest in serious consultancy). Through a book-long case study, we lead you through the steps needed to put a small, one-shop specialist retailer, up onto the Web with a site that can turn them from a retailer into an e-tailer.

During the study we'll show you the underlying computing models you need to understand to design an Internet based application, we'll give you a grasp of the software concepts we employ during the full coding of the solution. The software we develop in this book will be flexible enough to act as a basis for your own solutions. As a natural course of the project we'll discuss some of the marketing strategies you may wish to implement as part of your solution.

At the end of this book, you'll be in a position to know how to get your business on the Web and available to a world-wide audience.

Who Should Read this Book

This book is a *Beginning....* series book and we aim to take you gently from knowing nothing about e-commerce, to a point where you'll be able to put up a Web site that will make money for your business. That's a tall order and we don't pretend that there aren't points in the book where you'll have to take some professional advice (after all we're going to show you how to take credit card orders so there's some pretty serious stuff in here!). We do signpost those points clearly though, and a careful reading of this book will help you to understand the questions you need to ask(and the answers you get.

To start this book we would expect you to have a certain knowledge of Visual Basic programming (say familiarity with the level reached by the end of *Beginning Visual Basic 6*, ISBN 1861001053). An acquaintance with ASP will help (if you've read *Beginning Active Server Pages 2.0*, ISBN 1861001347 you'll be absolutely on top of the material), although if you haven't we have an ASP quick reference in Appendix C.

Apart from that the book is aimed at people who are looking to provide Web based e-commerce solutions for small and medium enterprises, who are not in a position to use high end Web solutions based on Microsoft Site Server.

How to Get the Most from this Book

The detailed software requirements for building the project are outlined in Chapter 2, but as a short list you'll need:

- Windows NT 4.0 Workstation is the suggested platform for this book. You'll also need the Windows NT Option Pack which can be ordered (or downloaded free) from Microsoft's web site at <http://www.microsoft.com/ntserver/nts/downloads/recommended/NT4OptPk/default.asp>.
- Microsoft Visual Basic 6.0
- Microsoft Visual InterDev 6.0

- Microsoft SQL Server (Desktop version)

What's Covered in this Book

The following is a brief roadmap of where this book is going to take us:

Chapter 1 gets you started off on the e-commerce road. We'll be looking at what e-commerce is and why it's going to be a big thing in business - as such we consider how offline and online business's differ. We also introduce Jo's Coffee; the small single-shop business that we're going to convert from being a retailer to becoming an e-tailer over the course of the book.

Chapter 2 opens up with a look at the underlying concepts behind designing software solutions for the Internet. We look at the benefits of 3-tier development including the separation of business logic from presentation and data logic, and the flexibility and scalability such an approach offers. This is where we start out on the Jo's Coffee project by creating a database and opening the Visual InterDev project we'll use.

Chapter 3 is where we get stuck into the business tier of the application. Before we start coding the ActiveX DLL which will power the site, we firstly run through a quick overview of the software programming paradigms we'll be using (object and component-oriented programming). Secondly, we set about designing the object model, which we implement when we code the `WroxCommerce` project.

Presenting the online store is the focus of **Chapter 4**. We step back from the business tier and look at the aesthetics of web site design. We discuss how to use include files to produce reusable code, how to design an easily navigable site, and how to create a consistent style through the site.

In **Chapter 5** we consider how to structure the store. This involves addressing database and presentation tier issues to allow us to present information to the customer in a logical and engaging manner. Additionally, this is the point at which we start to construct the administration tools that will enable us to manage our site and keep the information it holds up-to-date.

Moving into **Chapter 6** we'll deal with all three tiers of the development architecture as we expand the database to store product information. Following on from this, we have to enhance the functionality of the object model to allow us to deal with these new tables and, of course, we have to modify our ASP pages to allow us to access the information.

In **Chapter 7** is where we start to build in the components that allow us to move from a display site to a commerce site. Here we'll build the code (in all 3 logical tiers) that gives us the functionality of a shopping basket on our site.

Once our customers have a full shopping basket the next step is the checkout, which is what we construct in **Chapter 8** after we discuss how to keep track of the customers carrying that basket.

Chapter 9 involves some theory, as we consider the various steps along the order-processing route and develop the concept of a pipeline. Once we have our pipeline planned, we start a new project (`WroxProcessing`) that will enable us to take advantage of the transactional management capabilities of MTS. In this chapter, we discuss who to carry out online credit card transactions.

Chapter 10 moves slightly away from our project, but gives you important information on secure communications. Since you'll want sensitive credit card information from your customers - you need to make sure they are confident in dealing with you. This is one of the areas where you'll need professional advice to build on the content of the chapter.

With **Chapter 11** it's back once more to our project, as we see how we can add simple search functionality to the site to complement the existing navigation for moving around the store's departments.

Chapter 12, again strays away from coding and discusses deployment. Firstly, we examine the issues surrounding finding a suitable host for your site and secondly we look at how, practically, we move our code from our development server to the ISP production server.

Customer confidence in your site is built by a number of things (security we alluded to earlier), in **Chapter 13** we consider the issue of privacy, and our attitude to the data we collect on our customers while they shop with us.

In **Chapter 14** we move on to discuss the customer support strategies we want to put in place to enhance our reputation as a good organization to deal with.

This theme is continued in **Chapter 15** when we look at how we can set up a forum, where people can use the Web site to chat to each other about topics of mutual interest related to the theme of coffee (which coincidentally is being sold on a page only a click away).

This move to more sophisticated online marketing also involves advertising related items to those your customers have

already selected, and showing featured items - a topic area that is covered in **Chapter 16**.

In **Chapter 17** we really expand our horizons and look at how we may set ourselves up for data interchange with our suppliers - to this end we're going to look at the technology of XML, and how it can be used in our site.

Finally, in **Chapter 18** we look at marketing our site so we can attract more people to Jo's Coffee.

Conventions Used

You are going to encounter different styles as you are reading through this book. This has been done to help you easily identify different types of information and to help you keep from missing any key points. These styles are:

Important information, key points, and additional explanations are displayed like this to make them stand out. Be sure to pay attention to these when you find them.

General notes, background information, and brief asides look like this.

- Keys that you press on the keyboard, like Ctrl and Delete, are displayed in italics
- If you see something like, **BackupDB**, you'll know that it is a filename, object name or function name
- The first time you encounter an **important word**, it is displayed in bold text
- Words that appear on the screen, such as menu options, are in a similar font to the one used on screen, for example, the *File* menu

This is how code samples look the first time they are introduced:

```
Private Sub Command_Click

    MsgBox "Don't touch me"

End Sub
```

Whereas code that you've already seen or that doesn't relate directly to the point being made, looks like this:

```
Private Sub Command_Click

    MsgBox "Don't touch me"

End Sub
```

Customer Support

We want to know what you think about this book; what you liked, what you didn't like, and what you think we can do better next time. You can send your comments, either by returning the reply card in the back of the book, or by e-mail (to feedback@wrox.com). Please be sure to mention the book title in your message.

- **Source Code** - Source code for the examples used in this book, as well as the example source database script, can be downloaded from Wrox's web site at: <http://www.wrox.com>.

- **Errata** - We've made every effort to make sure that there are no errors in the text or the code. However, to err is human and as such we recognize the need to keep you informed of any mistakes as they're spotted and corrected. Errata sheets are available for all our books at www.wrox.com. If you find an error that hasn't already been reported, please let us know.

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- **ASP ECommerce** - Heavily moderated list containing only queries dealing with E-commerce and ASP. This list deals with both general queries about E-commerce (concerning topics like personalization, security, and creation of shopping baskets) and specific queries relating to the Beginning E-Commerce book. Off topic queries will be directed to either How To? or Beginning ASP.
- **How To?** - A general discussion of ASP topics. If there's something ASP related you'd just like to know more about, or a completely baffling problem with no solution, then this is your forum.
- **Beginning ASP** - A heavily moderated list to make sure that questions that can stop you dead in your tracks at an early stage of learning are answered quickly.
- **Code Clinic** - For readers of Professional ASP and ASP Programmer's Reference who've read the books, and are developing their own applications.
- **ASP Databases** - A heavily moderated list containing only queries dealing with ASP and Databases.
- **ASP CDO** - A heavily moderated list containing only queries dealing with ASP and e-mail integration.

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Any queries about joining, leaving lists, or any query about the list itself should be sent to moderatorecommerce@wrox.com.