

Preface

C# is not only a general purpose modern programming language, but also an excellent choice for developing front office software. There are lots of C# books on the market today. Clearly there is no need for another book to explain basic C# syntax and features for developing general purpose applications. This book focuses on introducing C# as the language of choice for front office software development. All the techniques described in this book can be directly used to solve those problems that many front office technologists face every day. In fact, the choice of topics comes from real front office experience.

This book is written by a front office technologist for front office technologists. However those readers who are working in other environments may also find some of the topics interesting. For example, Excel add-in is widely used. Therefore writing Excel add-ins (and by easy extension, Word add-ins, Outlook add-ins and so on) in C# may be interesting and relevant to some readers. Another example is distributed computing. Technology advance has made distributed computing not only possible but also affordable today. It is appealing to many businesses as they demand more and more computational power in order to succeed in today's increasingly competitive market place.

Almost all chapters in this book are relatively independent. Each chapter covers a specific topic. Readers can cherry pick topics that interest them most and read them first. Most chapters share a roughly same structure. A chapter typically starts with a brief description of the problem that we want to solve and why C# is a better choice than other technologies. It will then have a detailed description of how to solve such problems using C#. In many cases, debugging techniques and deployment issues will be discussed as well. This is because, in practice, they both can be as important as developing the software itself.

Throughout the book, both C++ and VB/VBA will be frequently mentioned. There is even a chapter which is dedicated to C# and C++ integration. The reason is simple. Today, C++ and VB/VBA are indisputably the dominant programming languages that are used in a typical front office environment. Many front office technologists, even some business users such as traders, are experts in using these languages to solve their problems. There is no reason to introduce a new programming language just for the sake of introducing a new programming language. C# must offer superior benefits than these existing technologies do in order to justify the efforts of introducing a new language. In fact, C# indeed has lots of superior advantages in developing front office software. This is what this book will show you. There are still some areas that existing technologies are better choices. Even in such cases, C# may still be able to offer some superior complimentary functionality to existing technologies in meeting business' increasing demand. Therefore we need to understand relative competitiveness between C# and C++/VB/VBA in solving different problems and how they can fit together.

Finally, I need to point out that this book is not an introductory C# book. Readers should be familiar with basic C# syntax and concept, or have strong background in some other relevant programming languages (such as C++, VB or VBA). It will be extremely useful if readers have some front office development experience. Understanding of the pains in dealing with those practical problems using existing technology is a magic touch to appreciate the power of the C#.

Equally, this is not a pure technical book either. C# has many advanced technical features and it itself is continuously evolving. There are many excellent books focusing on the pure technical side on the market already. The emphasis of this book is how to use C# to improve front office software development. It takes business needs and requirements very seriously. This book is not to discuss those most advanced technical features that may be

less relevant to today's front office software development need.

Many of my colleagues and friends have given me extremely positive feedback after trying those simple but effective C# techniques that I have shared with them. One of the best traders I have ever known in person even has decided to rewrite his entire core financial pricing engine that he uses every day in C# completely. Such success stories have convinced me that C# indeed is an excellent choice for developing front office software. This is the reason that I decide to write this book and share these wonderful experience so that more people can benefit from them.

I hope you enjoy reading this book and find it useful.

Author