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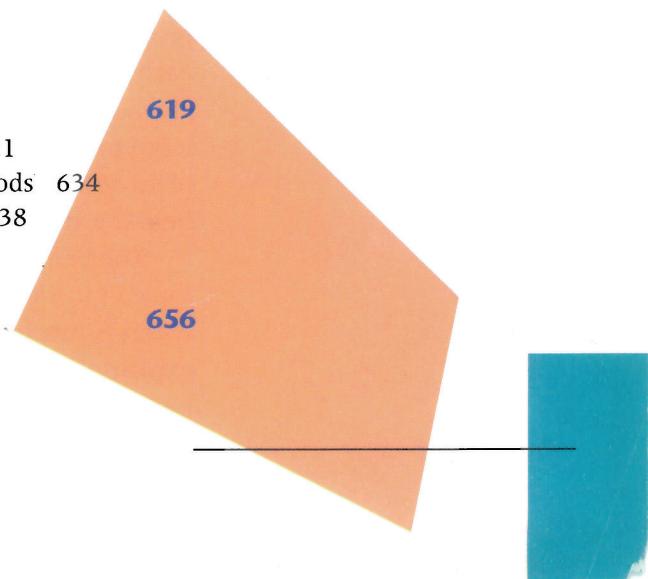
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Preface

BASIC (Beginner's All-purpose Symbolic Instruction Code) has a long history as a popular programming language for computer novices, but has suffered from the perception that it isn't suitable for teaching or professional programming. Visual Basic has changed all that. Because of the way it combines a well-known and easily understood syntax with a visual interface and event-driven environment, Visual Basic has become a popular language among both professional programmers and teachers.

Using Visual Basic brings this exciting language to the classroom with an approach that focuses on practical applications over dry programming theory. It addresses Visual Basic programming from the standpoint of the advanced high school or junior college curriculum. The ease with which professional-looking applications are written will impress teachers and excite their students.

Using Visual Basic is divided into fifteen chapters, presented in a sequence and at a pace that makes sense for a beginning programmer. Each chapter uses sample programs to teach the syntax and structure of Visual Basic. Many sections contain a focus program with explanatory text. The student uses the text to work through the focus program. Each focus program covers a new topic, and many are programs students can use in their course work. In addition, focus programs manipulate database information through Visual Basic's ability to interact with other Microsoft applications, including Access and Excel.

Sidebars with additional information, demonstration programs or discussions of programming techniques and syntax are also included. Each chapter concludes with programming problems drawn from the content of high school courses.

A Hands-On Approach

The core of this book's structure is its hands-on approach to teaching programming concepts. The text guides students step-by-step through each sample program. As they build forms and write code, students are given the thought process used to produce each program, to help them learn to think through the development of their own programs. A complete description and explanation of each section of code is included to help the students understand what they're doing.

The benefit of this hands-on approach is that new concepts are reinforced by their context. *Using Visual Basic* introduces new Visual Basic controls just in time for the student to use them in a program. The text explains each new control as it is used, with a complete description of how to use it.

The process comes to fruition when students are asked to write their own programs at the end of each chapter. Each technique needed to solve the problems has already been used by the student while working through the sample programs. For many, the real learning comes when they apply their knowledge to these problems.

Features of the Text

- The learning goals are clearly stated at the beginning of each chapter.
- Each chapter's overview discusses the topics covered and why they are important.
- Each section guides the student through the step-by-step hands-on process of entering, debugging and running a sample program.
Each element of the program is explained as it is entered.
- Each chapter concludes with a comprehensive summary covering the topics discussed in the chapter.
- Questions at the end of each section not only test recall and ask students to analyze material presented, many questions call for the student to modify or enhance the sample program.
- Programming problems at the end of the chapter reinforce the concepts presented. The problems are interesting to students and cover a number of topics connected to high school course work or to practical application areas like home finance and management.
- Topics are introduced and used immediately in programs.
- Highlighted text boxes provide useful additional information about important points in the text and supplement the text about related topics of interest.
- Introductions to Windows 3.1 and 95 are included to help students master the Windows environment.
- Important data structures and algorithms relating to the Advanced Placement course, such as searching, sorting, and the stack, are covered. This makes the book a good conceptual introduction to the AP course.
- Programming in WordBasic and Visual Basic for Applications is covered, allowing students to write applications in Microsoft Office.
- Most sections are designed to be used in a lab setting. The material is paced so that one section fills a lab period.
- The disk accompanying the book has data files necessary to complete sample programs, as well as the complete code and form definitions for each program.

problems in the text and the Study Guide; supplementary lessons in QBasic; and blackline transparency masters.

- The Study Guide includes additional practice exercises and activities to reinforce Visual Basic concepts from the text.
- The Template Disk includes code and form definitions as well as data files for the sample programs developed in the text.
- The Testing Disk includes an electronic test bank containing an extensive database of questions and problems for composing tests and quizzes.

Acknowledgments

If you've ever watched the credits roll by at the end of a movie, you've probably been surprised at just how many people were involved in the project from beginning to end. The production of a textbook is no different.

Thanks must first go to Janie Schwark and Angela McDonald of South-Western, who had the editorial vision to support this project. There would be no book at all if John Thompson and Matt Lusher of Jennings and Keefe had not given an untried author a chance. The developmental editors, Elizabeth Collins and Janet Andrews, and the technical editor, Brian O'Neill, have had a tremendous impact on the finished product. In many ways what you have before you is a joint project of myself, Matt, Elizabeth, and Brian. Thanks for your hard work.

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The production staff at Jennings and Keefe have done a wonderful job producing illustrations and designing an attractive and readable text.

Thanks to Microsoft for writing the most exciting and fun computer language ever.

Finally, thanks to my family and friends, without whose encouragement and prayers, this book would never have been written.

An Effective Teaching Tool

As a computer science teacher at the high school level for more than ten years, I have taught PDP 11 assembler, BASIC, FORTRAN, Forth, and Pascal. Never have I taught a language that students could do as much with in so short a time. Students love to write programs in Visual Basic. Even when working through a sample program in the text, there is a lot of room for creativity and individualizing programs.

Visual Basic is just plain fun to program. Students who catch on quickly often enhance sample programs far beyond their original form and function. While the book adheres to accepted standards concerning user interface, naming variables and programming techniques, thus providing a good example for students to follow, students are encouraged to find ways to make their programs uniquely their own. Placement and shapes of controls, colors, properties of fonts used, and background images can all be used to individualize a program.

This book's content has been extensively tested in the classroom. Each time students have gone above and beyond the course content, creating programs that meet their special needs. Visual Basic's help system has enabled many students to add features to their programs that quickly engage the interest of others. That interest leads to more students learning more about the language.

Real-World Programming

Another advantage of Visual Basic to students is its ever-increasing professional popularity. Business and industry have adopted Visual Basic as an easy-to-use alternative to C++. Its ability to create Windows applications with such ease and speed has made it a natural for the work environment.

Visual Basic's wide acceptance in the work world means students will be learning a language they will actually use on the job. Whether writing a quick application or interacting with other Windows applications, programmers are making Visual Basic the most popular new language for developing new business programs.

Supplements

Using Visual Basic forms the centerpiece of an integrated system of instruction. The supplements available for this text provide both teachers and students with valuable additional resources for teaching and learning:

- The Teacher's Guide provides teaching tips, class activities, and key words for each chapter; answers to the questions, exercises, and

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