

# The Visual C++ 使用手册 Handbook

**Chris N. Pappas**  
**William H. Murray, III**

Everything You Need to Know About

- The Compiler and Linker
- C and C++
- Microsoft Foundation Classes
- Windows and Windows NT

Covers All Visual C++ Releases Through 2



学苑出版社

微机新软件系列丛书

# Visual C++ 2.0 使用手册

(中国大陆版)

Chris H. Pappas

William H. Murray, III

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### 内 容 提 要

本书全面地介绍了 Visual C++ (2.0 以内的所有版本)软件包的编程环境及特点, C 和 C++ 语言编程基础, C++ 面向对象的程序设计, 库函数和混合语言接口, Windows 和 Windows NT 编程, Wizards 的使用, 对象链接与嵌入 (OLE), DOS 中断及动态链接库 (DLL)。本书对从事计算机软件应用与开发的科技人员是一本难得的好书。

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██████  
*Dedicated to our fathers  
William H. Murray, Jr.*

*Chris Pappas  
who have quietly, with their faith, support, and integrity,  
committed their lives to our development*

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## About the Authors...

Chris H. Pappas and Dr. William H. Murray, III are professors of computer science at the S.U.N.Y. system in Binghamton, New York. They are the authors of more than two dozen highly acclaimed computer books, including **Windows 3.1 Programming**, **Application Programming for Windows NT**, and the best-selling **Borland C++ Handbook**, now in its fourth edition.

Pappas and Murray are the chief executive officers of Nineveh National Research, a New York-based company committed to software research and instructional materials. Chris Pappas holds a master's degree in computer science from S.U.N.Y. Binghamton. William Murray holds advanced degrees in engineering and secondary education.

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# Acknowledgments



First and foremost, we would like to thank Jeff Pepper, editor-in-chief at Osborne/McGraw-Hill, for his continued help and support during the preparation of this book. We would like to thank, in print, the Osborne people that worked on this book: Mark Karmendy and Janet Walden, project editors; Kathy Krause, copy editor; Pat Mannion, proofreader; Roberta Steele, computer designer; and Lance Ravella and Leslee Bassin, illustrators. Osborne professionals have always been excellent people to work with on a project.

We would like to thank the people at Microsoft Corporation for the outstanding job they have done in developing a top-notch C/C++ compiler. Special recognition must go to the developers of the Foundation Class Library, who have set a new standard for Windows application development.

Microsoft is shipping thousands of pages of documentation with the Microsoft Visual C++ compiler. We would like to give credit to those responsible for preparing that documentation; you have done an outstanding job. Your efforts will make learning C, C++, and Windows programming much easier.



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# Introduction



This book was written with two main goals: to help you become more familiar with the Microsoft Visual C++ compiler, package, and to help people with different programming backgrounds become proficient in C, C++, and Windows programming. This is quite a task, even for a book containing hundreds of pages, but it was written with you in mind.

Our two major goals encompass a number of specific aims:

- ◆ This book introduces you to the powerful programming tools provided in your Microsoft Visual compiler package. These include the Visual C++ compiler, Debugger, and various Windows development tools. This book compliments your Microsoft reference manuals and helps you get a quick start with each of the components of the compiler package.
- ◆ Programmers need a thorough understanding of each programming language they intend to use. You will find that this book covers all the important programming concepts in the C, C++, and Windows languages, including the Foundation Class Library. If you are a novice programmer, early chapters will help you build the solid foundation you need to write more sophisticated programs. For advanced programmers, early chapters will serve as a reference source and will introduce you to exciting C++ concepts.
- ◆ You will learn how to debug program code and write programs that are free of syntax and logical programming errors.
- ◆ You will gain an understanding of how procedural programming differs from object-oriented programming and how to develop simple OOP programs.
- ◆ You will explore the exciting world of Microsoft Windows programming. Chapters are devoted to helping you understand Windows concepts and write simple to intermediate programs.

We believe in teaching by example. We have made every effort to make each example in this book simple, complete, and bug-free. You can study these examples, alter them, and expand them into programs tailored to fit your needs.

This book will serve as a lasting reference to the Microsoft Visual C++ compiler and the tools it supports.

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## How This Book Is Organized

Chapters 1 through 4 introduce you to the programming tools contained in the Microsoft Visual C++ compiler package.

Chapters 5 through 14 teach the foundational programming concepts needed for the C and C++ languages. These are procedure-oriented chapters that teach traditional C and C++ programming concepts.

Chapters 15 through 18 give you a complete introduction to object-oriented programming with C++. Here you will find terminology, definitions, and complete programming examples to help you with your development of object-oriented programs.

Chapters 19 and 20 teach you how to build applications for DOS and how to tap into important library functions. Chapter 19 includes a detailed discussion of C and C++ library functions, and Chapter 20 gives tips for interfacing C, C++, and assembly language code. In Chapter 20 you will learn how to combine C, C++, and assembly language routines, pass arguments, and even interface with external hardware circuits.

Chapters 21 and 22 introduce you to Microsoft Windows concepts and show you how to use the Microsoft Visual C++ compiler to develop applications that include GDI primitives, cursors, icons, menus, and dialog boxes. The applications in these chapters are traditional message-based programs.

Chapters 23 and 24 are devoted to programming with the Microsoft Foundation Class Library. By using the power of C++ classes, the Microsoft Foundation Class Library will shorten both your Windows application development cycle and your program length.

Chapters 25 and 26 deal with Win32 programming. These two chapters will teach you how to develop Windows NT applications and take advantage of 32-bit features.

Chapter 27 discusses important Object Linking and Embedding (OLE) features and terms. You'll also learn how to develop applications using the MFC library.

Dynamic Link Libraries (DLL) are discussed in Appendix C.



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## How the Book's Material Was Developed

■ The material in this book was developed on two Dell 450DE computers running at 50 MHz. These 80486 machines contained 8MB of RAM. C, C++, and Windows programs were also tested on two Toshiba T5200 (color) computers running at 20 MHz. These 80386 machines contained 6MB of RAM.

The computers were operated under DOS 6.1, Windows 3.1, and Windows NT. The entire manuscript was prepared with Microsoft Word for Windows. All screen shots were taken with Collage, a Windows and DOS screen capture utility.

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## A 3 1/2-inch High-density Disk Offer

■ A 3 1/2-inch high-density floppy disk is available containing all of the program listings in this book. To use the disk, you need a computer capable of using a 3 1/2-inch high-density (1.44MB) disk, with the Microsoft Visual C++ compiler properly installed and running.

To order the disk, send a bank check, money order, or personal check for \$30.00 in U.S. currency to the address below. Please allow three weeks for personal checks to clear. **No purchase orders can be accepted.** For all foreign orders, outside North America, please include a check drawn on a U.S. bank (U.S. currency) for \$35.00. Foreign orders will be sent via Air Mail.

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