

Deitel & Deitel, Prentice Hall 978-9702605317

Instruction Manual: How to Program in C, C++ and Java

Fourth Edition by Harvey M. Deitel and Paul J. Deitel

INTRODUCTION

This manual provides guidance for effectively utilizing the textbook *How to Program in C, C++ and Java, Fourth Edition*. This comprehensive and authoritative introduction to C, featuring active Deitel code, includes an extensive introduction to C++ and Java. This fourth edition, recognized as one of the most widely used C books globally, clearly and simply explains the C language and presents important topics in C++ and Java.

In this edition, the Deitels detail five popular programming paradigms: procedural, object-based, object-oriented, generic, and event-driven programming.

Key topics covered in this book include:

- Control instructions and functions in C
- Arrays, pointers, and linked data structures in C
- Character and string processing in C
- Structures, unions, and bit manipulation in C
- Formatted input/output and files in C
- Enumerations in C and the preprocessor
- Procedural programming (in C)
- Classes and objects (in C++ and Java)
- Inheritance and polymorphism (in C++ and Java)
- Generic programming (C++ templates)
- Graphics, GUI, and multimedia (in Java)
- Event-driven programming (in Java)

The book also includes pedagogical aids to enhance the learning experience:

- Hundreds of complete programs demonstrating exact screen outputs.
- Numerous exercises (some with answers) accompanying each chapter.
- Highlighted code emphasizing new elements in each program.

- Hundreds of tips, recommended practices, and precautions, identified by specific icons.

SETUP: PREPARING FOR LEARNING

To begin your programming journey with this book, ensure you have the necessary tools:

1. **CD-ROM Content:** The accompanying CD-ROM includes Microsoft Visual C++ 6.0 Introductory Edition and all source code used in the book's exercises. Install these components as needed.
2. **Development Environment:** Install a suitable Integrated Development Environment (IDE) for C, C++, and Java. Popular choices include Visual Studio (for C/C++), Eclipse or IntelliJ IDEA (for Java), or Code::Blocks (for C/C++). Ensure your chosen IDE is compatible with the code examples provided.
3. **System Requirements:** Verify your computer meets the minimum system requirements for the chosen IDEs and compilers.

It is recommended to set up your development environment before diving into the programming exercises.

OPERATING: EFFECTIVE USE OF THE BOOK

To maximize your learning experience:

- **Read Chapters Thoroughly:** Pay close attention to the explanations of concepts and syntax.
- **Analyze Code Examples:** The book provides hundreds of complete programs. Type them out, compile them, and observe their output. Experiment by modifying the code to understand its behavior.
- **Complete Exercises:** Engage with the numerous exercises at the end of each chapter. Some exercises include answers, which can be used for self-assessment.
- **Utilize Pedagogical Aids:** Look for the icons indicating "Good programming practices," "Software engineering observations," "Performance tips," "Portability tips," "Visual difference observation," "Error prevention tips," and "Common programming errors." These insights are crucial for developing robust programming skills.
- **Practice Regularly:** Consistent practice is key to mastering programming concepts.

MAINTENANCE: UPDATES AND ADDITIONAL RESOURCES

To stay current and access supplementary materials:

- **Publisher Website:** Visit the official Pearson Education website for Deitel resources at www.pearsoneducacion.net/deitel. This site offers information for teachers, students, and professionals.
- **Errata and Updates:** Periodically check the publisher's website for any errata or updates related to this edition.

TROUBLESHOOTING: COMMON PROGRAMMING CHALLENGES

Learning to program often involves encountering errors. Here are common issues and general approaches to resolve them:

- **Syntax Errors:** These occur when your code violates the language's grammar rules. The compiler will typically provide error messages indicating the line number and type of error. Carefully review the

indicated line and surrounding code for missing semicolons, incorrect keywords, or mismatched parentheses/braces.

- **Logical Errors:** Your code compiles and runs, but it doesn't produce the expected output. This means your program's logic is flawed. Use a debugger to step through your code line by line, inspect variable values, and understand the program's execution flow.
- **Runtime Errors:** These errors occur while the program is running, such as division by zero or attempting to access memory that doesn't belong to the program. Debugging tools and careful input validation can help identify and prevent these.
- **Understanding Error Messages:** While sometimes cryptic, compiler and runtime error messages provide valuable clues. Learn to interpret them.
- **Consult the Book:** The book's detailed explanations and examples are your primary resource for understanding correct syntax and logic. Refer to the "Common programming errors" tips.

SPECIFICATIONS

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SUPPORT AND CONTACT

For additional information, resources, or to contact the authors:

- **Publisher Website:** www.pearsoneducacion.net/deitel
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WARRANTY INFORMATION

As a textbook, this product does not come with a traditional warranty. For any content-related inquiries, errata, or support regarding the book's material, please utilize the publisher's and authors' contact information provided in the Support and Contact section.

PRODUCT IMAGES

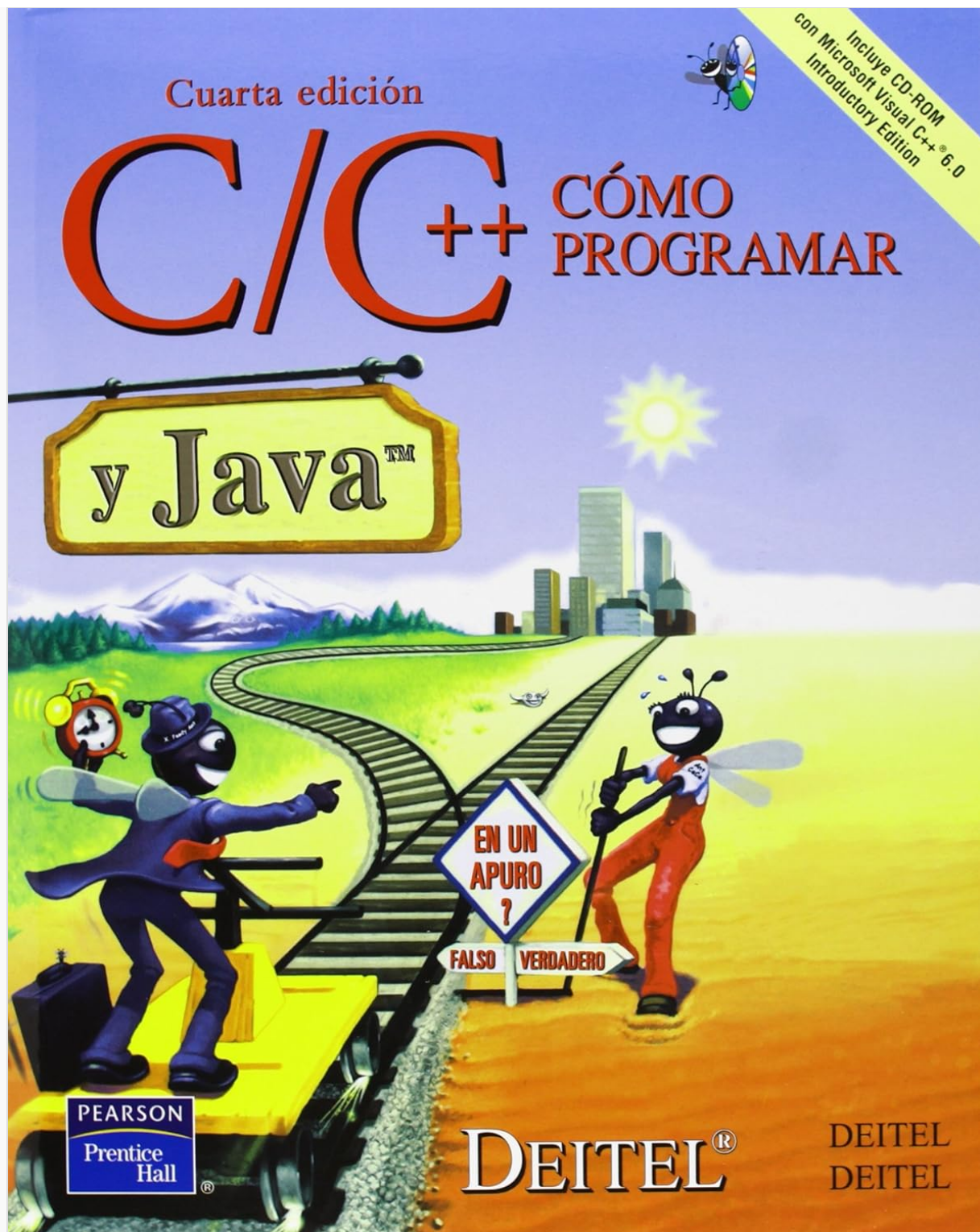


Image Description: Front cover of the textbook 'How to Program in C, C++ and Java, Fourth Edition'. The cover features a vibrant illustration with characters on a path, symbolizing a journey through programming. The title 'C/C++ Cómo Programar y Java' is prominently displayed, along with 'Cuarta edición' (Fourth Edition) and mentions of the included CD-ROM with Microsoft Visual C++ 6.0 Introductory Edition. The Deitel and Pearson Prentice Hall logos are visible at the bottom.

Cuarta edición

C/C++ CÓMO PROGRAMAR

DEITEL • DEITEL

y Java

Una introducción completa y autorizada a C, con código activo de Deitel,
con una amplia introducción a C++ y a Java

Esta *cuarta edición* del libro de C más utilizado a nivel mundial, explica de manera clara y sencilla el lenguaje C, y presenta temas importantes de C++ y Java.

En esta nueva edición de *Cómo programar en C/C++ y Java*, los Deitel explican cinco de los modelos más populares de la programación: por procedimientos, basada en objetos, orientada a objetos, genérica y controlada por eventos.

Entre los temas clave que se tratan en este libro se encuentran:

- Instrucciones y funciones de control en C
- Arreglos, apuntadores y estructuras de datos ligadas en C
- Procesamiento de caracteres y cadenas en C
- Estructuras, uniones y manipulación de bits en C
- Entrada/salida con formato y archivos en C
- Enumeraciones en C y el preprocesador
- Programación por procedimientos (en C)
- Clases y objetos (en C++ y Java)
- Herencia y polimorfismo (en C++ y Java)
- Programación genérica (plantillas de C++)
- Gráficos, GUI y multimedia (en Java)
- Programación controlada por eventos (en Java)

Cómo programar en C/C++ y Java, cuarta edición, ayuda a los estudiantes a crear aplicaciones en C, C++ y Java. Además, incluye extensas ayudas pedagógicas:

- Cientos de programas completos que muestran las salidas exactas en pantalla
- Gran cantidad de ejercicios (algunos con respuestas) que acompañan a cada uno de los capítulos
- Código resaltado, el cual enfatiza los nuevos elementos en cada programa
- Cientos de tips, prácticas recomendadas y precauciones, todos identificados con sus respectivos iconos:



Quienes utilicen este libro como texto en un curso, pueden visitar el sitio Web:

www.pearsoneducacion.net/deitel

donde encontrarán información para docentes, estudiantes y profesionales; además, podrán ponerse en contacto directamente con los autores en la siguiente dirección de correo electrónico: deitel@deitel.com.

El CD-ROM que acompaña a este libro incluye:

- Microsoft Visual C++ 6.0 Introductory Edition
- Todo el código fuente utilizado en los ejercicios del libro



Visítenos en:
www.pearsoneducacion.net



Image Description: Back cover of the textbook 'How to Program in C, C++ and Java, Fourth Edition'. This image provides a detailed summary of the book's content, including key topics covered in C, C++, and Java, and a list of pedagogical aids such as complete programs, exercises, highlighted code, and various tips (e.g., good programming practices, error prevention). It also includes information about the accompanying CD-ROM, the publisher's website, author contact email, and the ISBN-10 and ISBN-13 numbers.