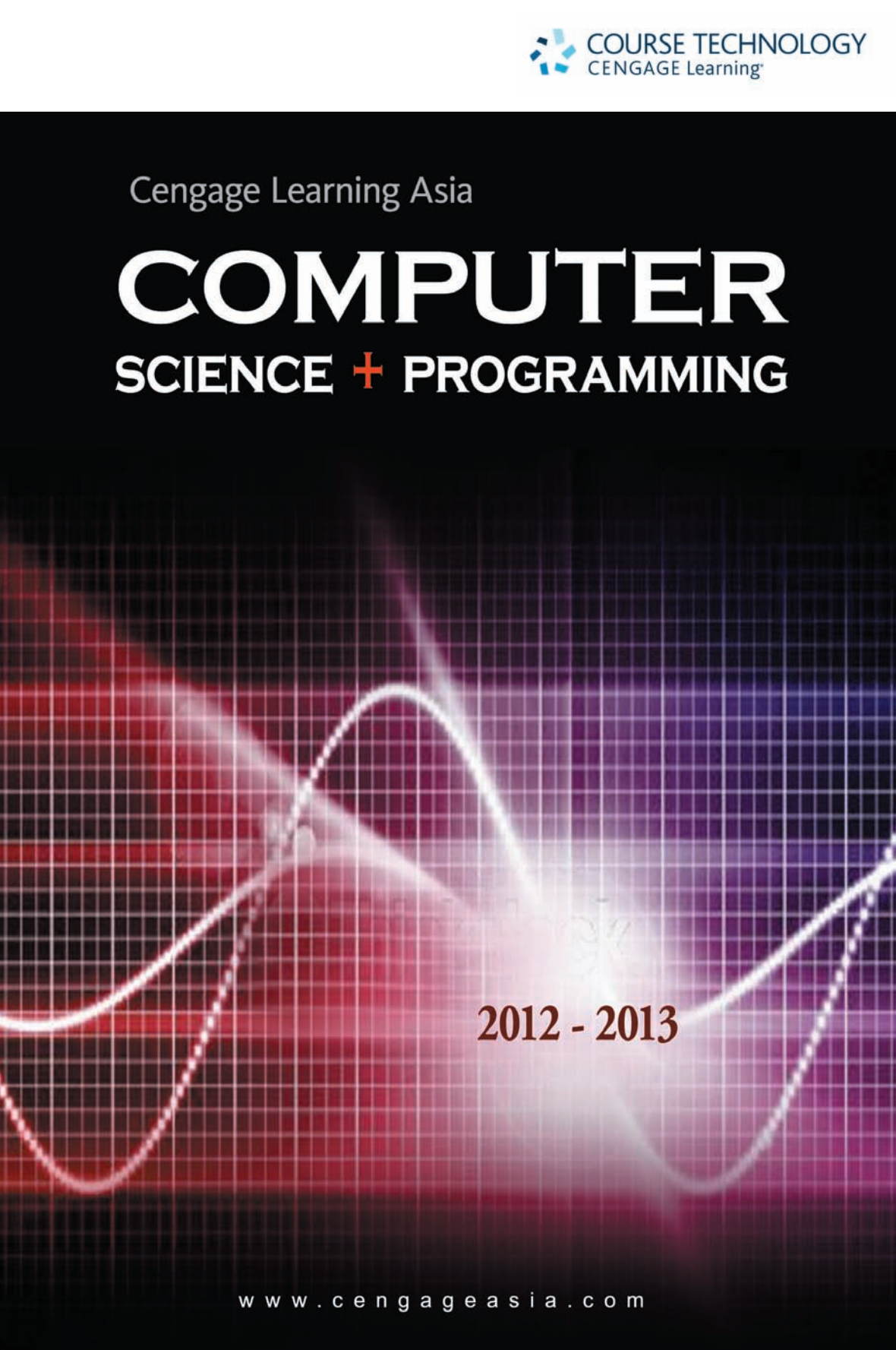


Cengage Learning Asia

# COMPUTER SCIENCE + PROGRAMMING



2012 - 2013

A Digital Solutions Product from Cengage Learning



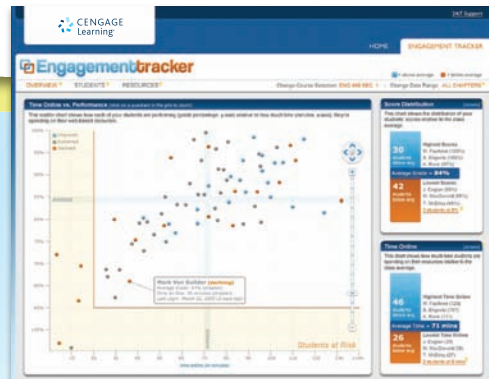
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- Schneider/Gersting, *Invitation to Computer Science, International Edition, 6e* (see p.3)
- Malik, *C++ Programming: From Problem Analysis to Program Design, International Edition, 6e* (see p.11)
- Malik, *C++ Programming: Program Design Including Data Structures, International Edition, 6e* (see p. 12)
- Farrell, *A Beginner's Guide to Programming Logic and Design Comprehensive, International Edition, 7e* (see p.27)
- Farrell, *A Beginner's Guide to Programming Logic and Design Introductory, International Edition, 7e* (see p.28)

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# Invitation to Computer Science, International Edition, Sixth Edition

G. Michael Schneider & Judith L. Gersting

*New Edition!*



ISBN: 978-1-133-19108-7

©2013

744 pages

INVITATION TO COMPUTER SCIENCE, 6E, International Edition is a well-respected text that provides an overview of the computer science field. Using a flexible, non-language specific model, it offers a solid foundation for the first course in a Computer Science curriculum. This new edition maintains its bestselling, algorithm-driven approach and includes expanded chapter exercises and practice problems, as well as new boxes dedicated to mobile applications and current issues throughout. Online language modules are available in C++, Java, Python, C#, and Ada, allowing the option of incorporating a programming language to expand concepts from the text.

## KEY FEATURES

- Features added on mobile applications and current issues.
- Expanded End of Chapter Exercises and Practice Problems.
- Revamped Ethics chapter (Chapter 17).
- Presents a language-independent, breadth-first introduction to computer science that includes coverage of hardware, software, applications and a modern view of ethics.
- Highlights mobile applications and other current issues with lively feature boxes.
- Includes expanded exercise sets and practice problems that allow opportunity for concept application.
- Provides the option to incorporate one or more programming languages with online modules for Java, C++, Python, C# and Ada.
- Provides hands-on experience via optional online Lab Manual and accompanying software containing 20 laboratory projects that map directly to the main text.
- Optional CourseMate for INVITATION FOR COMPUTER SCIENCE brings course concepts to life with interactive learning, study, and exam preparation tools that support the printed textbook.

## CONTENTS

1. An Introduction to Computer Science.2. Algorithm Discovery and Design.3. The Efficiency of Algorithms.4. The Building Blocks: Binary Numbers, Boolean Logic, and Gates.5. Computer Systems Organization.6. An Introduction to System Software and Virtual Machines.7. Computer Networks, the Internet, and the World Wide Web.8. Information Security.9. Introduction to High-Level Language Programming.10. The Tower of Babel: Multiple Programming Voices.11. Compilers and Language Translation.12. Models of Computation.13. Simulation and Modeling.14. Electronic Commerce and Databases.15. Artificial Intelligence.16. Computer Graphics and Entertainment: Movies, Games, and Virtual Communities.17. Making Ethical Decisions.

## SUPPLEMENTS

Instructor Resources  
CourseMate

## ABOUT THE AUTHORS

### G. Michael Schneider

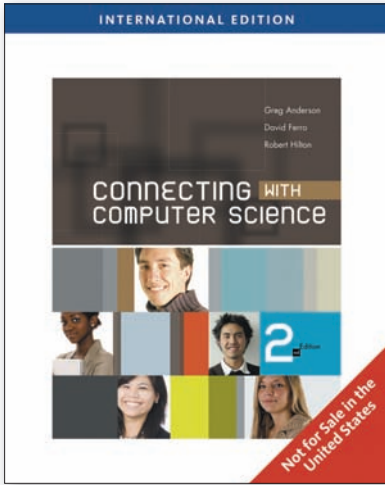
G. Michael Schneider is a Professor Emeritus of Mathematics and Computer Science at Macalester College in St. Paul, Minnesota and a Visiting Professor of Computer Science at Columbia University in New York. His interests include parallel processing, computer networks, and computer science education. He has written textbooks on software development, data structures, computer organization, and a breadth-first overview of computer science. Schneider was a member of the committee that authored the ACM/IEEE Computing Curriculum 2001. He has received Fulbright Grants to teach computer science curriculum development in Mauritius, Malaysia, Nepal and Mongolia.

### Judith Gersting

Judith Gersting is a Professor Emeritus of Computer Science at the University of Hawaii at Hilo and at Indiana University-Purdue University at Indianapolis, where she now teaches part-time. Gersting has written a number of college textbooks. Her areas of specialization include theoretical computer science and computer science education.

# Connecting with Computer Science, International Edition, Second Edition

Greg Anderson, David Ferro & Robert Hilton



ISBN: 978-0-538-47573-0

January 2010

640 pages

Written for the beginning computing student, this text engages readers by relating core computer science topics to their industry application. The book is written in a comfortable, informal manner, and light humor is used throughout the text to maintain interest and enhance learning. All chapters contain a multitude of exercises, quizzes, and other opportunities for skill application.

## KEY FEATURES

- Intended for an introductory course in computer science for majors and non-majors.
- Introduces students to real-world material that will be useful both in academic and industry environments.
- Features two new chapters that cover user interface design and problem solving.
- Includes a thoroughly revised Programming chapter that discusses the latest version of Java and now contains coverage of C++.
- Offers many new exercises and examples in every chapter.

## ABOUT THE AUTHORS

### Greg Anderson

Greg Anderson has over 23 years of industry software engineering experience and provided educational seminars across North America for over 12 years.

### David Ferro

David is an Associate Professor in Computer Science at Weber State University and has also taught in History, Honors, and IS&T departments there.

### Robert Hilton

Robert Hilton is a faculty member in the Computer Science department at Weber State University.

## CONTENTS

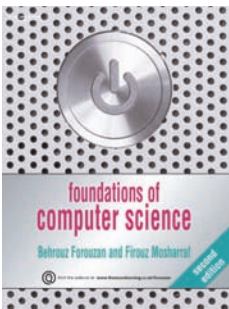
History and Social Implications of Computing. Computing Security and Ethics. Computer Architecture. Networks. The Internet. Database Fundamentals. Numbering Systems and Data Representations. Data Structures. Operating Systems. File Structures. Human-Computer Interface. Problem Solving. Software Engineering. Programming I. Programming II. Appendices A: Answers to Test Yourself Exercises. B: ASCII Table. C: Java Reserved Words.

## SUPPLEMENTS

Instructor Resources

# Foundations of Computer Science, Second Edition

Behrouz A. Forouzan & Firouz Mosharraf



ISBN: 978-1-84480-700-0

©2008

450 pages

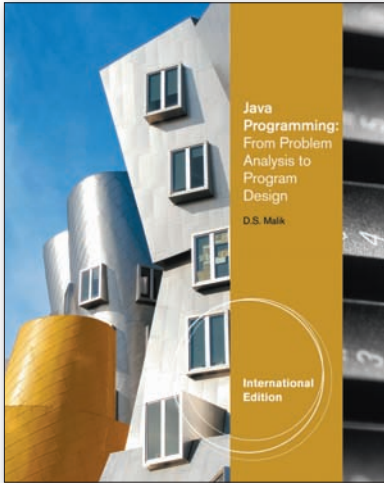
## KEY FEATURES

- all new material on Computer Ethics and Computer Crimes
- new chapter on Artificial Intelligence, including computer graphics and virtual reality
- coverage of the LINUX operating system
- revised chapter on security with sections on steganography
- pedagogical features include: improved and augmented figures and screenshots, improved and augmented exercises, selection solutions at the end, key terms provided by page numbers, a test bank, augmented PowerPoint™ presentations on the companion Web site which includes lesson plans for lecturers

# Java Programming: From Problem Analysis to Program Design, International Edition, Fifth Edition

D.S. Malik

*New Edition!*



## ABOUT THE AUTHOR

**D.S. Malik**

D. S. Malik is a professor of Mathematics and Computer Science at Creighton University. He received his Ph.D. from Ohio University in 1985. He has published more than 45 papers and 18 books on abstract algebra, applied mathematics, fuzzy automata theory and languages, fuzzy logic and its applications, programming, data structures, and discrete mathematics.

ISBN: 978-1-1115-7764-3

©2012

1088 pages

Designed for a first Computer Science (CS1) Java course, JAVA PROGRAMMING: FROM PROBLEM ANALYSIS TO PROGRAM DESIGN, 5e motivates students while building a cornerstone for the Computer Science curriculum. This text approaches programming using the latest version of Java, and includes updated programming exercises and programs. The engaging and clear-cut writing style will help students learn key concepts through concise explanations and practice in this complex and powerful language.

## KEY FEATURES

- **VISUAL DIAGRAMS:** More than 240 visual diagrams help readers comprehension by clearly illustrating difficult concepts.
- **PROGRAMMING CODE WITH DESCRIPTIONS:** Programming code used in examples is accompanied by a description of what each line in the code does, leading readers step-by-step through the programming process.
- **PROGRAMMING EXAMPLES:** Extensive programming examples demonstrate the accurate, concrete stages of Input, Output, Program Analysis and Algorithm Design, and a Complete Program Listing, which challenge readers to write Java programs with a specified outcome.
- **NEW:** New debugging sections have been added, and many of the older ones have been rewritten. These sections are indicated with a debugging icon.
- **NEW:** Contains more than 120 exercises, 25 new programming exercises, and numerous new examples spread throughout the book.
- **NEW:** In Chapters 6 and 12 the GUI figures have been captured and replaced in Windows 7 Professional environment.

## CONTENTS

1. An Overview of Computers and Programming Languages. 2. Basic Elements of Java. 3. Introduction to Objects and Input/Output. 4. Control Structures I: Selection. 5. Control Structures II: Repetition. 6. Graphical User Interface (GUI) and Object-Oriented Design (OOD). 7. User-Defined Methods. 8. User-Defined Classes. 9. Arrays. 10. Inheritance and Polymorphism. 11. Handling Exceptions and Events. 12. Advanced GUIs and Graphics. 13. Recursion. 14. Applications of Arrays (Searching and Sorting) and Strings. APPENDICES. A: Java Reserved Words. B: Operator Precedence. C: Character Sets. D: Additional Java Topics. E: Enumeration Types. F: Answers to Odd Numbered Exercises.

## SUPPLEMENTS

**Instructor Resources**



## Java Programming: Guided Learning with Early Objects

D.S. Malik & Robert P. Burton

ISBN: 978-1-4239-0162-4

February 2008

824 pages



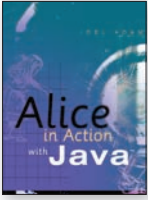
## Java Programming: Program Design Including Data Structures

D.S. Malik

ISBN: 978-1-4188-3540-8

December 2005

1016 pages



## Alice in Action with Java

Joel Adams

ISBN: 978-1-4239-0096-2

January 2007

605 pages



# Fundamentals of Python: First Programs, International Edition

Kenneth A. Lambert

*New Title!*



ISBN: 978-1-1118-2446-4

©2012

496 pages

## KEY FEATURES

- Early emphasis on problem solving and algorithm development.
- Covers multiple design strategies, including top-down design and recursive design with functions, object-based programming, and object-oriented design.
- Engages students' interest with modern applications such as graphics, graphical user interfaces (GUIs), networks, and image processing.
- Walks student's through the development of complete programs in numerous case studies.
- Provides exercises at the end of each section to reinforce students' understanding of each concept.
- Includes sets of programming projects to give students practice in problem solving.
- Offers complete source code for all program examples at the publisher's Web site.

## CONTENTS

1. Introduction.
2. Data Types and Expressions.
3. Control Statements.
4. Strings and Text Files.
5. Lists and Dictionaries.
6. Design with Functions.
7. Simple Graphics and Image Processing.
8. Design with Classes.
9. Graphical User Interfaces.
10. Multithreading, Networks, and Client/Server Programming.
11. Searching, Sorting, and Complexity. (Online only)

## SUPPLEMENTS

Instructor Resources

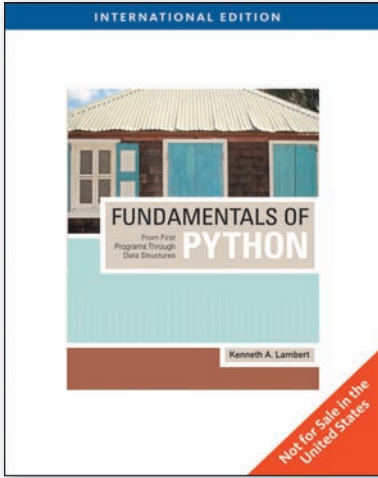
## ABOUT THE AUTHOR

### Kenneth A. Lambert

Kenneth A. Lambert is Professor of Computer Science and Head of the Department at Washington and Lee University. He has taught introductory courses for 25 years and has been an active researcher in computer science education. Lambert has co-authored a series of introductory C++ textbooks with Douglas Nance and Thomas Naps and a series of introductory Java textbooks with Martin Osborne.

# Fundamentals of Python: From First Programs Through Data Structures, International Edition

Kenneth A. Lambert



## ABOUT THE AUTHOR

### Kenneth A. Lambert

Kenneth A. Lambert is Professor of Computer Science and Head of the Department at Washington and Lee University. He has taught introductory courses for 25 years and has been an active researcher in computer science education. Lambert has co-authored a series of introductory C++ textbooks with Douglas Nance and Thomas Naps and a series of introductory Java textbooks with Martin Osborne.

ISBN: 978-0-538-74278-8

January 2009

827 pages

In *Fundamentals of Python: From First Programs Through Data Structures*, Washington and Lee University professor Kenneth A. Lambert presents all of the important topics in CS1 and CS2 in one volume. This economical format provides instructors with a consistent approach to teaching introductory programming and data structures over a standard two-term course sequence. The book uses the Python programming language, which is both easy to learn for beginners and scales well to advanced applications.

## KEY FEATURES

- Uses a just-in-time approach, with no new concept introduced before it is needed to solve a problem.
- Early emphasis on problem solving and algorithm development.
- Covers multiple design strategies, including top-down design and recursive design with functions, object-based programming, and object-oriented design.
- Engages students' interest with modern applications such as graphics, graphical user interfaces (GUIs), networks, and image processing.
- Walks students through the development of complete programs in numerous case studies.
- Covers basic software development tools for design, testing, and documentation.
- Provides exercises at the end of each section to reinforce students' understanding of each concept.
- Includes sets of programming projects to give students practice in problem solving.
- Offers complete source code for all program examples at the publisher's Web site.

## CONTENTS

Introduction. Data Types and Expressions. Control Statements. Strings and Text Files. Lists and Dictionaries. Design With Functions. Simple Graphics and Image Processing. Design with Classes. Graphical User Interfaces. Multithreading, Networks, and Client/Server Programming. Searching, Sorting, and Complexity. Tools for Design, Documentation, and Testing. Collections, Arrays, and Linked Structures. Stacks. Queues. Linked Lists. Recursion. Hierarchical Collections: Trees. Unordered Collections: Sets and Dictionaries. Graphs. Appendices.

## SUPPLEMENTS

Instructor Resources

# A First Book of C++, International Edition, Fourth Edition

Gary J. Bronson

*New Edition!*



ISBN: 978-1-1115-3259-8

©2012

816 pages

Gary Bronson's A FIRST BOOK OF C++, 4e, International Edition takes a hands-on, applied approach to the first programming language course for students studying computer science. The book begins with procedural programming in C, and then gradually introduces object-oriented programming features and the C++ language syntax that enables first-time programmers to use them.

## KEY FEATURES

- Gives introductory programming students a solid foundation in the C++ programming language.
- Guides students through the syntax and semantics of C++ before introducing classes.
- Offers a variety of end-of-section problems, including skill-building and programming exercises.
- The ANSI/ISO C++ iostream library and namespace mechanism are used in all programs.
- NEW! Part I has been restructured to include arrays, files, and pointers, so it can be used as the basis for a complete introductory semester course in C++.
- NEW! The four chapters covering object-oriented programming have been revised and moved to Part II so that they form a logical continuation from structured programming to object-oriented programming.
- NEW! More than 50 new exercises have been added, and each exercise is labeled to indicate its function (Practice, Program, Modify, Debug, Desk check, or For thought).
- NEW! Three new Chapter Supplements have been added to introduce the fundamentals of object-oriented design and the Unified Modeling Language (UML).

## CONTENTS

Part I: FUNDAMENTALS OF C++ PROGRAMMING.

1. Getting Started.
2. Data Types, Declarations, and Displays.
3. Assignment and Interactive Input.
4. Selection.
5. Repetition.
6. Modularity Using Functions.
7. Arrays.
8. Arrays and Pointers.
9. I/O Streams and Data Files.

Part II: OBJECT-ORIENTED PROGRAMMING.

10. Introduction to Classes.
11. Adding Functionality to Your Classes.
12. Extending Your Classes.
13. The Standard Template Library.

Part III: ADDITIONAL TOPICS.

14. The string Class and Exception Handling.
15. Strings as Character Arrays.
16. Data Structures.

## SUPPLEMENTS

Instructor Resources

## ABOUT THE AUTHOR

**Gary J. Bronson**

Dr. Gary J. Bronson is a Professor of Information Systems at Fairleigh Dickinson University (FDU), where he was twice voted Teacher of the Year. He has worked as a senior project engineer at Lockheed Electronics, was an invited instructor and consultant to Bell Laboratories, and served as a software consultant to a number of Wall Street financial firms.

# Programming with Visual C++: Concepts and Projects

James Allert

ISBN: 978-1-4239-0186-0

February 2008

704 pages



## KEY FEATURES

- Intended for a CS1 (Introduction to Programming) course in the C++ language.
- Creative projects like orbiting planets, fractal images, and a maze use GUIs to illustrate important points and processes such as sorting, pointers, and linked lists.
- Concepts are presented first and then followed by tutorials, encouraging readers to understand the basic concept on its own and then apply it.
- Tutorials walk readers step-by-step through the various processes, allowing them to easily achieve results and master key concepts.
- Use of GUI matches today's users' experiences with Web pages, entertainment software, and other day-to-day technology, immediately providing readers with a context for the information they are learning.
- Visual C++ is available with this text as an optional bundle.

## CONTENTS

Introduction. Reading, Processing, and Displaying Data. Integral Data, Type Conversion and Strings. Selection Control Structures. Instance Methods and Parameters. Repetition. Arrays. Sorting. Binary Search. Recursion. Pointers. Classes – The Linked List. Multiple Classes. Appendices.

# C++ Programming: From Problem Analysis to Program Design, International Edition, Sixth Edition

New Edition!

D.S. Malik



ISBN: 978-1-133-52634-6

©2013

1392 pages

C++ PROGRAMMING: FROM PROBLEM ANALYSIS TO PROGRAM DESIGN, 6E, International Edition remains the definitive text for a first programming language course. D.S. Malik's time-tested, student-centered methodology uses a strong focus on problem-solving and full-code examples to vividly demonstrate the how and why of applying programming concepts and utilizing C++ to work through a problem. This new edition includes updated end-of-chapter exercises, new debugging exercises, an earlier introduction to variables and a streamlined discussion of user-discussion of user-defined functions to best meet the needs of the modern CS1 course.

## KEY FEATURES

- NEW Reorganized content introduces variables earlier and streamlines user-defined functions in response to instructor demand.
- NEW Updated end-of-chapter exercises emphasize timely and relevant problems, providing ample opportunities for practice.
- NEW Optional CourseMate brings course concepts to life with digital Lab Manual activities, engaging videos, interactive quizzes, flashcards, and study games tied directly to the text.
- A full-color interior precisely displays syntax highlighting, emphasizing C++ keywords and comments for beginning programmers. More than 300 visual diagrams illuminate difficult concepts.
- Numbered full-code examples throughout walk students through the stages of Input, Output, Problem Analysis, and Algorithm Design to illustrate key topics in each chapter. Every programming example includes a full explanation and sample run.

## CONTENTS

1. An Overview of Computers and Programming Languages.2. Basic Elements of C++.3. Input/Output.4. Control Structures I (Selection).5. Control Structures II (Repetition).6. User-Defined Function.7. Namespaces, the Class String, and User-Defined Simple Data Types.8. Arrays.9. Records (Structs).10. Classes and Data Abstraction.11. Inheritance and Composition.12. Pointers, Classes, Virtual Functions, and Abstract Classes.13. Operator Overloading and Templates.14. Exception Handling.15. Recursion.16. Searching and Sorting.17. Linked Lists.18. Stacks and Queues.

## SUPPLEMENTS

Instructor Resources  
CourseMate

## ABOUT THE AUTHOR

D.S. Malik

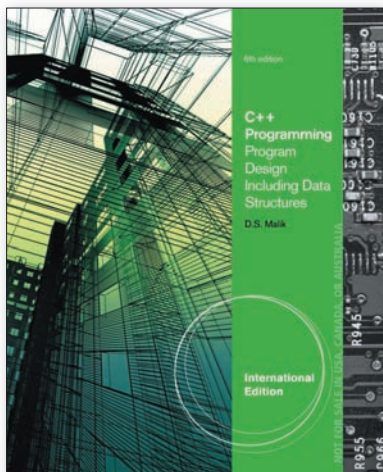
Dr. D.S. Malik teaches Mathematics and Computer Science at Creighton University. He received his Ph.D. from Ohio University in 1985. He has published more than 45 papers and 15 books on abstract algebra, fuzzy automata theory and languages, fuzzy logic and its applications, information science, and programming.



# C++ Programming: Program Design Including Data Structures, International Edition, Sixth Edition

D.S. Malik

New Edition!



ISBN: 978-1-133-52635-3

©2013

1616 pages

*C++ PROGRAMMING: PROGRAM DESIGN INCLUDING DATA STRUCTURES, 6E*, International Edition remains the definitive text for the CS1/CS2 course sequence. D.S. Malik's time-tested, student-centered methodology uses a strong focus on problem-solving and full-code examples to vividly demonstrate the how and why of applying programming concepts and utilizing C++ to work through a problem. This new edition includes updated end-of-chapter exercises, new debugging exercises, an earlier introduction to variables and a streamlined discussion of user-defined functions.

## KEY FEATURES

- NEW Reorganized content introduces variables earlier and streamlines user-defined functions in response to instructor demand.
- NEW Updated end-of-chapter exercises emphasize timely and relevant problems, providing ample opportunities for practice.
- NEW Optional CourseMate brings course concepts to life with digital Lab Manual activities, engaging videos, interactive quizzes, flashcards, and study games tied directly to the text.
- A full-color interior precisely displays syntax highlighting, emphasizing C++ keywords and comments for beginning programmers. More than 300 visual diagrams illuminate difficult concepts.
- Numbered full-code examples throughout walk students through the stages of Input, Output, Problem Analysis, and Algorithm Design to illustrate key topics in each chapter. Every programming example includes a full explanation and sample run.

## ABOUT THE AUTHOR

D.S. Malik

Dr. D.S. Malik teaches Mathematics and Computer Science at Creighton University. He received his Ph.D. from Ohio University in 1985. He has published more than 45 papers and 15 books on abstract algebra, fuzzy automata theory and languages, fuzzy logic and its applications, information science, and programming.

## CONTENTS

1. An Overview of Computers and Programming Languages. 2. Basic Elements of C++. 3. Input/Output. 4. Control Structures I (Selection). 5. Control Structures II (Repetition). 6. User-Defined Function. 7. Namespaces, the Class String, and User-Defined Simple Data Types. 8. Arrays. 9. Records (Structs). 10. Classes and Data Abstraction. 11. Inheritance and Composition. 12. Pointers, Classes, Virtual Functions, and Abstract Classes. 13. Operator Overloading and Templates. 14. Exception Handling. 15. Recursion. 16. Linked Lists. 17. Stacks and Queue. 18. Searching and Sorting Algorithms. 19. Binary Trees. 20. Graph Algorithms. 21. Standard Template Library.

## SUPPLEMENTS

Instructor Resources  
CourseMate

# C++ Programming: Principles and Practices for Scientists and Engineers, International Edition, Fourth Edition

Gary Bronson

New Edition!



ISBN: 978-1-133-18861-2

©2013

752 pages

This proven, pragmatic text is designed specifically for today's first- and second-year engineering and science students with a wealth of new applications and examples taken from real situations involving electrical and structural engineering, fluid mechanics, mathematics, power generation, and heat transfer challenges. The book starts with a solid foundation in procedural programming before moving into a reorganized, clear presentation of object-oriented concepts. Dynamic case studies, career spotlights and engineering-driven applications showcase the relevance of concepts students are learning to their careers. Helpful tips demonstrate how to avoid common C++ programming errors, while updates ensure that students are learning the most recent C++ code standards.

## ABOUT THE AUTHOR

### Gary J. Bronson

Dr. Gary J. Bronson is a Professor of Information Systems at Fairleigh Dickinson University, where he has twice been voted Teacher of the Year. Dr. Bronson has worked as a senior project engineer at Lockheed Electronics, has been an invited instructor and consultant to Bell Laboratories, and has served as a software consultant to a number of Wall Street financial firms. He has also authored several successful programming textbooks on C, C++, and Java™ as well as articles on teaching Excel® using incrementally reinforcing case studies.

## KEY FEATURES

- Completely reorganized Part II provides additional clarity with timely updates of object-oriented concepts.
- Expanded, revised exercises throughout this edition reflect today's latest engineering-based challenges.
- Coverage starts with solid introduction to procedural programming before introducing object-oriented design.
- Foundational coverage offers both procedural and object-oriented viewpoints.
- Clear presentation interweaves thorough explanations and frequent examples.
- Engaging, interactive applications and features showcase engineering topics.
- Important coverage of ANSI/ISO standards demonstrates their influence on programming and business today.
- The latest coverage includes the most recent C++ code standards as well as the standard template library.

## CONTENTS

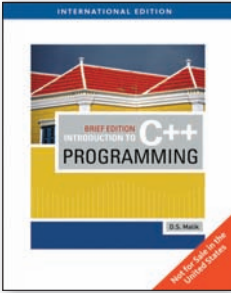
PART I: FUNDAMENTALS. 1. Basic Concepts. 2. Getting Started in C++. 3. Assignment, Input, and Output. 4. Selection. 5. Repetition. 6. Functions. 7. Arrays. 8. Data Files and File Streams. 9. Additional Features. 10. Pointers. PART II: OBJECT-ORIENTED PROGRAMMING. 11. Classes – I. 12. Classes – II. PART III ADDITIONAL TOPICS. 13. Structures. 14. Numerical.

## SUPPLEMENTS

Instructor Resource

## Introduction to C++ Programming: Brief Edition, International Edition

D.S. Malik



ISBN: 978-0-538-75243-5

August 2008

736 pages

### KEY FEATURES

- Intended for a one-semester class in the C++ language, containing only those topics typically covered in a CS1 course.
- Thorough pedagogy includes extensive visual diagrams, examples, and end-of-chapter exercise sets.
- *Programming Examples* accurately outline the concrete stages of Input, Output, Problem Analysis, and Algorithm Design, and include a Complete Program Listing.

### CONTENTS

An Introduction to Computers and Programming Languages. Basic Elements of C++. Input/Output. Control Structures I (Selection). Control Structures II (Repetition). User-Defined Functions. Arrays and Pointers. Classes and Data. Namespaces, the Class String, and User-Defined Simple Data Types. Applications of Arrays and the Class Vector. Recursion. Appendices: A. Reserved Words. B. Operator Precedence. C. Character Sets. D. Additional C++ Topics. Binary (Base 2) Representation of a Nonnegative Integer. Additional Input/Output Tools. More on File Input/Output. E. Header Files. F. Answers to Odd-Numbered Exercises.

### SUPPLEMENTS

Instructor Resources



## Computer Science: A Structured Approach Using C, Third Edition

Behrouz A. Forouzan & Richard F. Gilberg

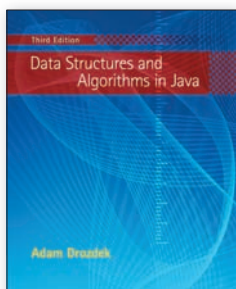
ISBN: 978-0-534-49132-1

February 2006

1184 pages

# Data Structures and Algorithms in Java, Third Edition

Adam Drozdek



ISBN: 978-981-4239-23-3

© 2009

790 pages

Using the Java programming language, Drozdek highlights three important aspects of data structures and algorithms. First, the book places special emphasis on the connection between data structures and their algorithms, including an analysis of the algorithms' complexity. Second, the book presents data structures in the context of object-oriented program design. Finally, the book closely examines data structure implementation.

## ABOUT THE AUTHOR

**Adam Drozdek** a graduate of Wright State University, is an Associate Professor of Computer Science at Duquesne University. He is the author of several books, including Elements of Data Compression.

Overall, this practical and theoretical book provides students with a solid foundation in data structures for future courses and work in design, implementation, testing, and maintenance of virtually any software system.

## KEY FEATURES

- Updated! This new edition contains updated Java code to reflect the inclusion of generic classes in Java 5.
- Updated! Tables that list methods from `java.util` packages have been updated to reflect modifications and additions introduced in Java 5 and Java 6.
- New! Coverage of two new sorting methods.
- New! Coverage of a new hashing technique.
- Case Studies. Most chapters include a case study that illustrates a complete context in which algorithms and data structures can be used.
- Java code examples. Brief examples of Java code are included to illustrate the practical importance of data structures.
- Theoretical analysis. Presentation of algorithms are integrated with analyses of efficiency.
- Recursion topics. Clarifies recursion topics through their presentation in context of the run-time stack.

## CONTENTS

1. Object-Oriented Programming Using Java. 2. Complexity Analysis. 3. Linked Lists. 4. Stacks and Queues. 5. Recursion. 6. Binary Trees. 7. Multiway Trees. 8. Graphs. 9. Sorting. 10. Hashing. 11. Data Compression. 12. Memory Management. 13. String Matching. Appendix A: Computing Big-O. Appendix B: NP-Completeness.

## Data Structures Using C++, International Edition, Second Edition

D.S. Malik

*New Edition  
in Oct 2012!*



ISBN: 978-1-4390-4023-2

July 2009

976 pages

### KEY FEATURES

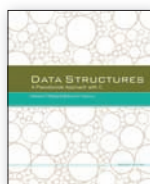
- Designed for a CS2 one-semester course focused on data structures.
- Reinforces concepts through extensive diagrams and examples.
- Features complete *Programming Examples* throughout that outline the critical steps to writing a program for a case study including Input/Output, Algorithm Design, Main Algorithm, and Complete Program.
- Offers robust end-of-chapter exercises that provide ample opportunity for practice.

### CONTENTS

Software Engineering Principles and C++ Classes. Object-Oriented Design (OOD) and C++. Pointers and Array-Based Lists. Standard Template Library (STL) I. Linked Lists. Recursion. Stacks. Queues. Search Algorithms. Sorting Algorithms. Binary Trees. Graphs Algorithms. Standard Template Library (STL) II. Appendices: A. Reserved Words. B. Operator Precedence. C. Character Sets. D. Operator Overloading. E. Header Files. F. Additional C++ Topics (Inheritance, Pointers, and Virtual Functions). G. Problem Solving Using Object Oriented Methodology. H. C++ for Java Programmers. I. References for Further Study. J. Answers to Odd-Numbered Exercises.

### SUPPLEMENTS

Instructor Resources



## Data Structures: A Pseudocode Approach Using C, Second Edition

Richard F. Gilberg & Behrouz A. Forouzan

ISBN: 978-0-534-39080-8

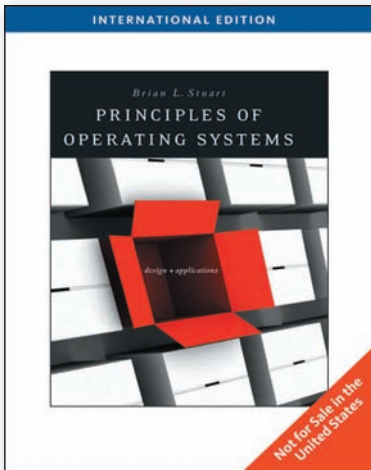
October 2004

672 pages



# Principles of Operating Systems: Design and Applications, International Edition

Brian L. Stuart



ISBN: 978-0-538-74953-4

January 2008

600 pages

*Principles of Operating Systems: Design and Applications* is an ideal resource for anyone who wants to gain a basic understanding of operating systems in the context of the applications in which they are used. The main focus of this text is to foster an understanding of operating system fundamentals: what types of services they provide, how various applications interface with them, and the restrictions they have on those applications. Making this book unique in its approach is the inclusion of a wide range of example systems and detailed case studies of the Linux and Inferno operating systems. By combining a traditional set of topics with this real-life contextual background, readers will achieve an enriched understanding of the material, which they can immediately apply to the world of operating systems.

## ABOUT THE AUTHOR

### Brian Stuart

Brian Stuart is an Adjunct Professor at the University of Memphis. Previously, he taught at Rhodes College and has worked in the telecommunications, automotive electronics and wireless telemetry industries. His consulting activities have ranged from medical instrumentation to agriculture. Dr. Stuart received his BS degree from the Rose-Hulman Institute of Technology, his MS from the University of Notre Dame and his PhD from Purdue University.

## KEY FEATURES

- Rich illustrations provide clear, visual explanations of hard-to-grasp concepts.
- Selected code fragments from real systems are incorporated throughout the book, allowing readers to see first-hand how pieces fit together.
- Coverage of the wide variety of operating systems that goes beyond Windows and Linux, addressing the reality that there are many other valuable operating systems in existence.
- End-of-chapter exercises reinforce key concepts and provide the opportunity to apply what has been learned.
- PowerPoint slides and an Instructor's Manual are available under Instructor Downloads on [www.cengage.com](http://www.cengage.com).

## CONTENTS

Introduction to Operating Systems. Some Example Operating Systems. Inferno Structure and Initialization. Linux Structure and Initialization. Principles of Process Management. Some Examples of Process Management. Process Management in Inferno. Process Management in Linux. Principles of Memory Management. Some Examples of Memory Management. Memory Management in Inferno. Memory Management in Linux. Principles of I/O Device Management. Some examples of I/O Device Management. I/O Devices in Inferno. I/O Devices in Linux. Principles of File Systems. Some Examples of File Systems. File Systems in Inferno. File Systems in Linux. Principles of Operating System Security. Principles of Distributed Systems. Appendices: A. Compiling Hosted Inferno. B. Compiling Native Inferno. Suggested Readings.

## SUPPLEMENTS

Instructor Resources

# Understanding Operating Systems, International Edition, Sixth Edition

Ann McIver McHoes & Ida M. Flynn



ISBN: 978-0-538-47004-9

February 2010

600 pages

Now in its Sixth Edition, *Understanding Operating Systems* continues to provide a clear and straightforward explanation of operating theory and practice. As in previous editions, the book's highly-regarded structure begins with a discussion of fundamentals before moving on to specific operating systems. This edition has been updated and modernized; now included are enhanced discussions of the latest innovation evolutions (multi-core processing, wireless technologies, PDA and telephone operating systems, and Blu-ray optical storage) and how they affect operating systems. Revised Research Topics in the exercise section encourage independent research among students. Content in the final four chapters has been updated to include information about a few of the latest versions of UNIX (including specific mention of the latest Macintosh OS), Linux, and Windows.

## ABOUT THE AUTHOR

### Ann McIver McHoes

Ann McIver McHoes has been writing about computers for 25 years including, with the late Ida M. Flynn, the first four editions of *Understanding Operating Systems*, two of which won awards from the Text and Academic Authors Association. On an adjunct basis, her teaching assignments have included graduate courses at Chatham University and undergraduate classes at Carlow University.

## KEY FEATURES

- Exercises throughout the text have been expanded and updated.
- New exercises have been added to all the four specific OS chapters (UNIX, MS-DOS, Windows, and Linux) to help users apply the concepts discussed in Part I of the text.
- A new feature in each chapter, "Interesting Search Topics," spurs individual research to explore the most current technologies discussed in each chapter.
- Coverage includes the fundamentals of operating systems: what they are, what they do, how they function, how they can be evaluated, and how they compare to one another.
- Technical topics are discussed in a not-so-technical manner, allowing students to grasp the complexities of standalone vs. networked computing systems.

## CONTENTS

Part I – Operating Systems Theory. Introducing Operating Systems. Memory Management: Early Systems. Memory Management: Virtual Memory. Processor Management. Process Management. Concurrent Processes. Device Management. File Management. Network Organization Concepts. Management of Network Functions. Security and Ethics. System Management. Part II – Operating Systems in Practice. UNIX Operating System. MS-DOS Operating System. Windows Operating Systems. Linux Operating System. Appendices: A. Command Translation Table. B. Guide to Microsoft Acronyms. C. Guide to Graphical User Interfaces. D. ACM Code of Ethics and Professional Conduct.

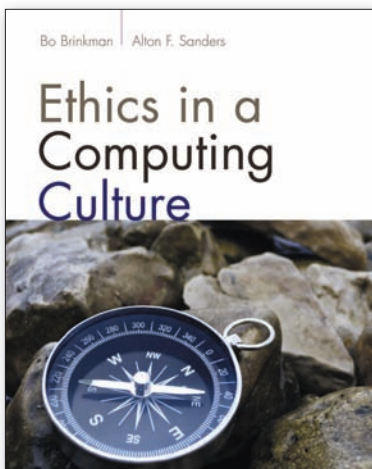
## SUPPLEMENTS

### Instructor Resources

# Ethics in a Computing Culture

William 'Bo' John Brinkman & Alton 'Al' F. Sanders

*New Title!*



ISBN: 978-1-111-53110-2

©2013

512 pages

ETHICS IN A COMPUTING CULTURE introduces key ideas in moral theory and professionalism to explore the hottest topics in computer ethics. With a unique blend of theory, application, and critical thinking exercises, each chapter underscores the interdisciplinary links between computing and diverse areas of study. Abundant multicultural cases are presented throughout to highlight contrasts and conflicts in ethical perspectives across the globe.

## KEY FEATURES

- Focus on reflection - Decades of educational research show that critical reflection, through both reading and writing, are key to student cognitive development. ETHICS IN A COMPUTING CULTURE allows instructors to easily put this approach into practice.
- Question types relate directly to critical thinking rubrics (e.g. the WSU critical thinking rubric) - Research questions focus on evidence (WSU level 5), Position questions focus on formulating positions (WSU level 2), and Context questions focus on the effects of changing context (WSU level 6). Instructors can easily map our questions onto existing evaluation frameworks, making data collection for ABET evaluations simpler.
- Diverse perspectives in every chapter - Many universities are requiring global topics in general education courses. ETHICS IN A COMPUTING CULTURE contains diversity-oriented or multicultural cases in every chapter.
- Interdisciplinary perspectives in every chapter- Computing is inherently interdisciplinary. Every chapter includes interdisciplinary cases to illustrate the links between computing and other disciplines.

## ABOUT THE AUTHORS

### William 'Bo' John Brinkman, II

Bo Brinkman is an Associate Professor of Computer Science and Software Engineering at Miami University in Oxford, Ohio. He has received best paper awards for his work in computer ethics and algorithms and was published in the prestigious Journal of the ACM. His recent work on the ethical implications of augmented reality has been featured on the blogs of the Chronicle of Higher Education, Fast Company, and Read Write Web. Follow Bo on Twitter @EiaCC for the latest updates

### Alton 'Al' F. Sanders

Alton F. Sanders began his computer career in 1963. He has worked as a software developer, software consultant, system manager, and university professor. Sanders has received numerous teaching awards, and in addition to his technical publications, has published papers exploring computer ethics and software engineering issues with an ethical impact. He is now Professor Emeritus of Computer Science and Software Engineering at Miami University in Oxford, Ohio.

## CONTENTS

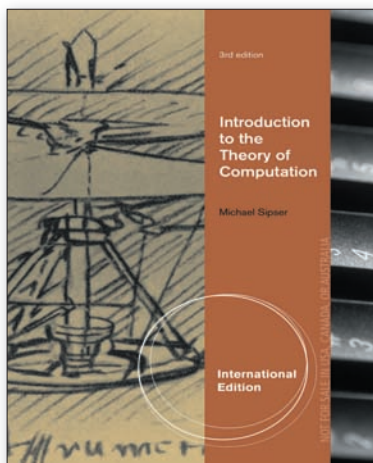
1. Moral Philosophy and Critical Thought. 2. Applied Ethics: Computing Professions and Professional Ethics. 3. Privacy. 4. Intangible Property. 5. Trust and Trustworthy Computing. 6. Human Relationships, Identity, and the Epistemology of Cyberspace. 7. Freedom of Speech and of the Press. 8. Social Justice. 9. Autonomous Computing. Management. Part II – Operating Systems in Practice. UNIX Operating System. MS-DOS Operating System. Windows Operating Systems. Linux Operating System. Appendices: A. Command Translation Table. B. Guide to Microsoft Acronyms. C. Guide to Graphical User Interfaces. D. ACM Code of Ethics and Professional Conduct.

## SUPPLEMENTS

Instructor Resources

# Introduction to the Theory of Computation, International Edition, Third Edition

Michael Sipser



ISBN: 978-1-133-18781-3

©2013

504 pages

The number one choice for today's computational theory course, this revision continues the book's well-known, approachable style with timely revisions, additional practice, and more memorable examples in key areas. A new first-of-its-kind theoretical treatment of deterministic context-free languages is ideal for a better understanding of parsing and LR grammars. You gain a solid understanding of the fundamental mathematical properties of computer hardware, software, and applications with a blend of practical and philosophical coverage and mathematical treatments, including advanced theorems and proofs.

## KEY FEATURES

- Current revisions reflect the latest industry developments with new examples and exercises to ensure comprehension.
- Additional exercises, problems and examples emphasize the practical application of theory.
- Expanded math topics offers support for readers who need review.
- New coverage of deterministic context-free languages provides unique, clear and thorough explanation.
- This edition's exceptional treatment of challenging topics incorporates both formal and informal definitions and descriptions of methods to ensure student retention and prepare readers for more advanced study.
- Worked-out examples encourage reader understanding.
- Reader-friendly approach makes even the most complex topics approachable for students at all levels.

## ABOUT THE AUTHORS

### Michael Sipser

Michael Sipser has taught theoretical computer science and mathematics at the Massachusetts Institute of Technology for the past 32 years. He is a Professor of Applied Mathematics, a member of the Computer Science and Artificial Intelligence Laboratory (CSAIL), and the current head of the mathematics department. He enjoys teaching and pondering the many mysteries of complexity theory.

## CONTENTS

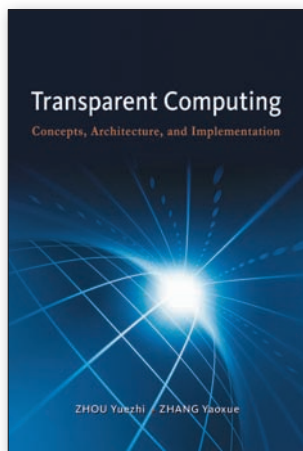
PART 1: AUTOMATA AND LANGUAGES. 1. Regular Languages. 2. Context-Free Languages. PART 2: COMPUTABILITY THEORY. 3. The Church-Turing Thesis. 4. Decidability. 5. Reducibility. 6. Advanced Topics in Computability Theory. PART 3: COMPLEXITY THEORY. 7. Time Complexity. 8. Space Complexity 9. Intractability. 10. Advanced Topics in Complexity Theory.

## SUPPLEMENTS

Instructor Resources

# Transparent Computing: Concepts, Architecture, and Implementation

Yuezhi ZHOU and Yaoxue ZHANG



ISBN: 978-981-265-859-3

©2010

376 pages

With the rapid development of computers, the computing paradigms also witness continuous evolutions which have fundamentally changed our work and lifestyles. Today's computer systems still demand too much "attention" from people and thus keep the vision of "disappearance of technology" only a dream. Reasons for such problems should be analyzed and new computing architectures and paradigms developed. Transparent computing, based on recent developments of computer and network technologies, introduces new ideas and solutions to the blueprint of service-sharing computing.

This book offers a systematic discussion on the ideas and concept behind transparent computing based on the analysis of computer evolution and computing paradigms, their problems and related causes of traditional computing paradigms, and the underlying von Neumann architecture. It then proceeds to propose a new spatio-temporally extended von Neumann architecture based upon "network thinking," and a new computing paradigm based on such new architecture—transparent computing. It also further elaborates on the meta operating system (e.g., 4VP+), the method to realize transparent computing in local area network environments.

## ABOUT THE AUTHORS

**Yuezhi ZHOU** is currently an associate professor at the Department of Computer Science and Technology in Tsinghua University. He obtained his BEng in Computer Science from North China University of Technology and his MS and PhD in Computer Science from Tsinghua University. Dr. Zhou's research interests include distributed system, ubiquitous/pervasive computing, and transparent computing. He has published over thirty technical papers in international journals and conferences. He is also the patentee of seven Chinese and one U.S. patents.

**Yaoxue ZHANG** is currently a member of the Chinese Academy of Engineering, a professor at Tsinghua University, and Director General of the Higher Education Department of the Ministry of Education (MOE) in China. Prof. Zhang obtained his BEng in Electronic Engineering from Northwest Institute of Telecommunication Engineering and his PhD in Computer Science from Tohoku University. His major research areas include computer networking, operating systems, and ubiquitous/pervasive computing, specializing in transparent computing and active services. Prof. Zhang has published over 170 technical papers in international journals and conferences, as well as eight monographs and textbooks.

## KEY FEATURES

- Presents and summarizes the work of the authors, who have researched in ubiquitous/pervasive computing and transparent computing since 2000.
- Proposes "transparent computing", a new computing paradigm which decouples software from the underlying hardware, and lets users freely select and run various operating systems on demand as services from any computing devices at any time.
- Introduces the meta operating system, and its implementation through 4VP+, the interactive protocols and virtualization layers to implement the functions of meta operating system.
- Provides application examples of transparent computing system, and discusses the future development of this new concept in the last two chapters.

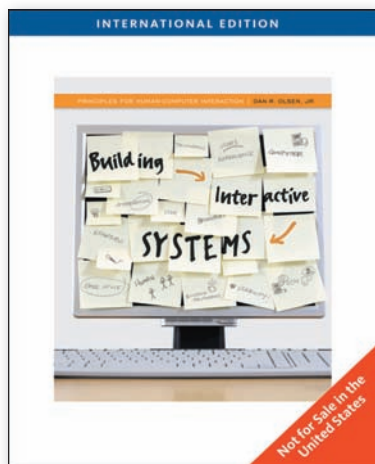
## CONTENTS

1. Introduction.
2. Ubiquitous/Pervasive Computing and Transparent Computing.
3. Transparent Computing System and Architecture.
4. Meta Operating System.
5. Multi-OS Remote Booting Protocol.
6. Network Service Access Protocol.
7. Virtual Device Management and Virtual I/O Management.
8. Virtual User Management and Virtual File Management.
9. Transparent Clients.
10. Examples of Realization of Transparent Computing.
11. Future Development.



# Building Interactive Systems: Principles for Human-Computer Interaction, International Edition

Dan R. Olsen, Jr.



ISBN: 978-0-538-75460-6

January 2009

672 pages

This innovative text focuses on the architectures, mathematics, and algorithms that are integral to creating reliable user interfaces. The first sixteen chapters cover the concepts required for current graphical user interfaces, including specific emphasis on the Model-View-Controller architecture. The second part of the book provides an overview of key research areas in interactive systems, with a focus on the algorithms required to implement these systems. Using clear descriptions, equations, and pseudocode, this text simplifies and demystifies the development and application of a variety of user interfaces.

## KEY FEATURES

- Intended for an upper-division or graduate course in computer graphics.
- Offers coverage of event-handling techniques and how they integrate with modern development environments.
- Discusses architectures for implementing both simple and complex interactive components.
- Includes an extensive appendix that covers many of the algorithms and mathematics referenced in the text.
- Provides various techniques for text entry and discusses their comparative advantages in different situations.

## CONTENTS

Introduction to Interactive Systems. Drawing. Event Handling. Widgets. Layout and Constraints. Multi-View Models. Abstract Model Widgets. Look and Feel. Interface Development Environments. Internationalization. Dialog Design. 2D Geometry. Geometric Transformations. Interacting with Geometry. Cut, Copy, Paste. Undo. Distributed Interaction. Functional Design. Text Input. Digital Ink. Selection and Fitts Law. Display Space Management. Presentation Architecture. Physical Interaction. Web Interaction. Evaluation. Appendix: Math and Algorithms.

## ABOUT THE AUTHOR

### Dr. Dan Olsen

Dr. Dan Olsen has been researching in interactive technologies for 30 years. He has done work in generating interactive systems, network-based interaction, human-robot interaction, and portable devices. He is the founding editor of ACM's Transactions on Computer Human Interaction and has received a number of awards for his service and research in the field. He was the Director of the Human-Computer Interaction Institute at Carnegie Mellon University and is currently a Professor of Computer Science at Brigham Young University.

# Programming Languages: Principles and Practices, International Edition, Third Edition

Kenneth C. Louden and Kenneth A. Lambert



ISBN: 978-1-1115-7763-6

©2012

704 pages

This book gives advanced undergraduate students an overview of programming languages through general principles combined with details about many modern languages. Major languages used in this edition include C, C++, Smalltalk, Java, Ada, ML, Haskell, Scheme, and Prolog; many other languages are discussed more briefly. The text also contains extensive coverage of implementation issues, the theoretical foundations of programming languages, and a large number of exercises, making it the perfect bridge to compiler courses and to the theoretical study of programming languages.

## KEY FEATURES

- Overview of the history of programming languages, and introduces the idea of abstraction and the concept of different language paradigms.
- Covers syntax in some detail, including the use of BNF, EBNF, and syntax diagrams.
- Covers the central semantic issues of programming languages.
- Overview of modules and abstract data types, including language mechanisms for equational, or algebraic, specification.
- Introduces the three principal methods of formal semantics: operational, denotational, and axiomatic.
- NEW! The chapter on object-oriented programming is now the last of the three chapters on programming paradigms instead of the first one. The order of these chapters now reflects the increasing complexity of the underlying models of computation of each programming paradigm (functions, logic, objects).
- NEW! Object-oriented programming in Chapter 5 is now introduced with Smalltalk rather than Java.

## ABOUT THE AUTHORS

### Kenneth C. Louden

Kenneth C. Louden is Emeritus Professor of Computer Science and a past chair of the Department of Computer Science at San Jose State University, Silicon Valley's primary supplier of graduates to the tech industry. He has written several texts and articles on advanced topics in computer science.

### Kenneth A. Lambert

Kenneth A. Lambert is Professor of Computer Science and Head of the Department at Washington and Lee University. He has taught programming language design for 25 years and has been an active researcher in computer science education.

## CONTENTS

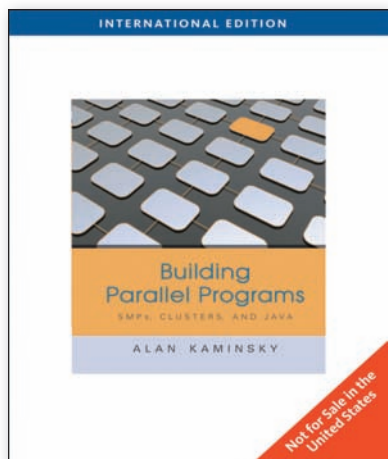
1. Introduction.
2. Language Design Criteria.
3. Functional Programming.
4. Logic Programming.
5. Object-Oriented Programming.
6. Syntax.
7. Basic Semantics.
8. Data Types.
9. Control I – Expressions and Statements.
10. Control II – Procedures and Environments.
11. Abstract Data Types and Modules.
12. Formal Semantics.
13. Parallel Programming.

## SUPPLEMENTS

Instructor Resources

# Building Parallel Programs: SMPs, Clusters, and Java, International Edition

Alan Kaminsky



ISBN: 978-0-538-78605-8

February 2009

632 pages

## KEY FEATURES

- Clear, contemporary approach that emphasizes the leading programming language, Java. Students learn how to create complete, working parallel programs that enable them to run programs across several computers and test many versions of one problem simultaneously.
- Covers the key techniques for successful parallel programming on SMPs and clusters, today's primary categories of parallel computers. No other text leaves students as well prepared for parallel programming success in today's modern computing environment.
- Gives students hands-on practice with programs written in Java as they use the author-developed Java class library, Parallel Java. This tool is ideal for Java programmers just beginning to program in parallel.

## CONTENTS

Part I – Preliminaries: Parallel Computing. Parallel Computers. How to Write Parallel Programs. A First Parallel Program. Part I Exercises. Part II – SMPs: Massively Parallel Problems. SMP Parallel Programming. Massively Parallel Problems, Part 2. Measuring Speedup. Cache Interference. Measuring Sizeup. Parallel Image File Generation. Load Balancing. Reduction.

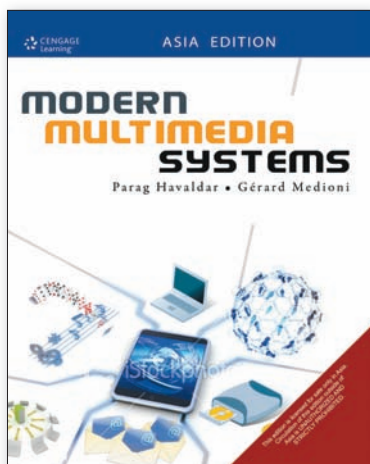
Parallel Random Number Generation. Reduction, Part 2. Sequential Dependencies. Barrier Actions. Overlapping. Part II Exercises. Part III – Clusters: A First Cluster Program. Parallel Message Passing. Massively Parallel Problems, Part 3. Data Slicing. Load Balancing, Part 2. Measuring Communication Overhead. Broadcast. Reduction, Part 3. All-Gather. Pipelining. Overlapping, Part 2. All-Reduce. All-to-All. Part III Exercises. Part IV – Hybrid SMP Clusters: Massively Parallel Problems, Part 4. Load Balancing, Part 3. Partitioning and Broadcast, Part 2. Parallel Datastore Querying. Part IV Exercises. Part V – Applications: MRI Spin Relaxometry. DNA Sequence Querying. Phylogenetic Tree Construction. Appendices: A. Parallel Programming Projects. B. Numerical Methods. C. OpenMP. D. Message Passing Interface (MPI). E. Lock-Free Concurrent Programming.

## SUPPLEMENTS

Instructor Resources

# Modern Multimedia Systems

Parag Havaladar & Gerard Medioni



ISBN: 978-981-435-260-4

©2011, June 2011

*Modern Multimedia Systems* brings together the different aspects of a modern multimedia pipeline from content creation, compression, distribution and digital rights management. Drawing on their experience in industry, Havaladar and Medioni discuss the issues involved in engineering an end-to-end multimedia pipeline and give plenty of real-world examples including digital television, IPTV, mobile deployments, and digital cinema pipelines. The text also contains up-to-date coverage of current issues in multimedia, including a discussion of MPEG-4 and the current progress in MPEG-21 to create a framework where seamless data exchange will be possible.

## KEY FEATURES

- Suitable for use in an upper-level undergraduate course or in a graduate level Multimedia course.
- Synthesizes key areas of multimedia, such as networks, databases, graphics, video, audio, and compression, into one book.
- Organized in four parts, each with many visual figures, exercises, and programming assignments.

## CONTENTS

Introduction. Digital Data Acquisition. Media Representation and Formats. Color. Authoring. Compression Overview. Media Compression Images. Media Compression Video. Media Compression Audio. Media Compression Graphics. Networking. Wireless Networking. Digital Rights Management. MPEG-4. Multimedia Databases. Multimedia Frameworks. Concluding Chapter.

## SUPPLEMENTS

### Instructor Resources

## ABOUT THE AUTHORS

### Parag Havaladar

Parag Havaladar received a PhD in Computer Vision and Graphics from the University of Southern California in 1996. Since then he has been working in the media industry to design/architect software solutions for the multimedia pipeline from authoring, compression, distribution, digital rights management. Currently, Dr. Havaladar is a software supervisor at SONY Pictures Imageworks, where he leads SONY's proprietary efforts in the area of performance capture. The technology developed by him and his group has been used to create stylized and realistic character animations in a variety of movies including *Alice in Wonderland* (2010 release), *Monster House*, *Hancock*, and *Spiderman*. Dr. Havaladar also serves as a part time faculty member in the Computer Science Department at the University of Southern California teaching a graduate course on multimedia.

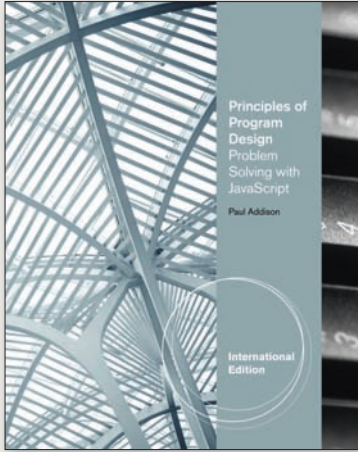
### Gerard Medioni

Professor Gérard Medioni received the Diplôme d'Ingenieur from ENST, Paris in 1977, a M.S. and Ph.D. from the University of Southern California in 1980 and 1983 respectively. He has been at USC since then, and is currently Professor of Computer Science and Electrical Engineering, co-director of the Institute for Robotics and Intelligent Systems (IRIS), and co-director of the USC Games Institute. His research covers a broad spectrum of the field, such as edge detection, stereo and motion analysis, shape inference and description, and system integration. Medioni has published three books, over 50 journal papers and 150 conference articles.

# Principles of Program Design: Problem-Solving with JavaScript, International Edition

Paul Addison

*New Title!*



ISBN: 978-1-1118-2556-0

©2012

416 pages

From the respected instructor and author Paul Addison, *PRINCIPLES OF PROGRAM DESIGN: PROBLEM SOLVING WITH JAVASCRIPT, International Edition* gives your students the fundamental concepts of good program design, illustrated and reinforced by hands-on examples using JavaScript. Why JavaScript? It simply illustrates the programming concepts explained in the book, requires no special editor or compiler, and runs in any browser. Little or no experience is needed because the emphasis is on learning by doing. There are examples of coding exercises throughout every chapter, varying in length and representing simple to complex problems. Students are encouraged to think in terms of the logical steps needed to solve a problem and can take these skills with them to any programming language in the future. To help reinforce concepts for your students, each chapter has a chapter summary, review questions, hand-on activities, and a running case study that students build on in each chapter.

## KEY FEATURES

- Early OOP and GUI introduction: This book presents object-oriented programming and graphical user interfaces, with hands-on examples, in Chapter 3. An optional project, called the Object Lesson, is included at the end of each subsequent chapter, which applies traditional programming concepts from the chapter to OOP and GUI applications.
- Direct application of concepts: Problem solutions are developed in pseudo code and converted to JavaScript in each chapter, so that students get to see programming concepts put into action.
- Good programming practices: Students are encouraged to develop good techniques and habits, and follow prescribed conventions and styles, including program documentation, comments in code, and consistent indentation and naming procedures.

## CONTENTS

1. The Craft of Programming.
2. The JavaScript Language.
3. Objects, Events, and Graphical User Interfaces.
4. The Sequence Structure.
5. The Selection Structure.
6. The Repetition Structure.
7. Complex Conditions.
8. Modules and Functions.
9. Menus and Data Validation.
10. Arrays.
11. Building Programs.
12. Sorting Data.
13. Recursion.

## SUPPLEMENTS

Instructor Resources



# A Beginner's Guide to Programming Logic and Design Comprehensive, International Edition, Seventh Edition

Joyce Farrell



## ABOUT THE AUTHOR

### Joyce Farrell

Joyce Farrell is the author of a wide variety of programming textbooks in addition to Java Programming. Farrell is also the author of Microsoft Visual C#, Programming Logic and Design, Just Enough Programming Logic and Design, An Object-Oriented Approach to Programming Logic and Design, and Object-Oriented Programming Using C++, all of which are published by Course Technology. Joyce has taught Computer Information Systems full time at Harper College in Palatine, Illinois, the University of Wisconsin – Stevens Point, and McHenry County College in Crystal Lake, Illinois.

ISBN: 978-1-133-52636-0

©2013

720 pages

This popular text takes a unique, language-independent approach to programming with a distinctive emphasis on modern conventions. The book's clear, concise writing style eliminates highly technical jargon while introducing universal programming concepts and encouraging a strong programming style and logical thinking. Clear revised explanations utilize flowcharts, pseudocode, and diagrams to ensure even readers with no prior programming experience fully understand modern programming and design concepts. Farrell's proven learning features help students gain a better understanding of the scope of programming today while common business examples help illustrate key points. Readers can use this proven book alone or paired with a language-specific companion text that emphasizes C++, Java or Visual Basic.

## KEY FEATURES

- Carefully revised explanations clearly guide readers with no prior programming experience.
- Additional flowcharting and pseudocode-based exercises in every chapter provide diverse practice opportunities.
- Unique language-independent approach provides a solid foundation in programming logic.
- Business-based examples clearly illustrate key points.
- Wealth of proven practice opportunities keeps students engaged and actively learning.
- Comprehensive approach explores all topics students need for logical programming success.
- Flexible text approach makes it ideal for using the book alone or paired with a language-specific companion text.
- Optional CourseMate online resources
- CourseMate brings programming concepts to life with a wealth of learning resources and study aids, including an eBook with note-taking capabilities, interactive quizzing, flashcards, and study games. At least three Video Lessons for each chapter, created by the text author, expand on key concepts. Engagement Tracker, a first-of-its-kind tool, helps monitor student engagement in your course. For more information visit [www.cengage.com/coursemate](http://www.cengage.com/coursemate).

## CONTENTS

1. An Introduction to Programming.
2. Program Design Elements.
3. Structured Programming.
4. Decision-Making.
5. Creating Loops.
6. Using Arrays.
7. Using Files.
8. Handling Data.
9. Modularization.
10. An Introduction to Object-Oriented Programming.
11. Advanced Object-Oriented Programming.
12. Events, Threads, and Animation.
13. The UML.
14. Using Databases.

## SUPPLEMENTS

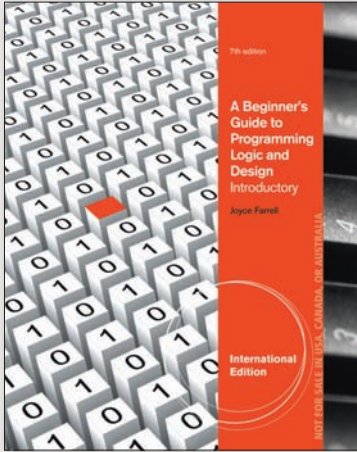
Instructor Resources  
CourseMate

*New Edition!*

# A Beginner's Guide to Programming Logic and Design Introductory, International Edition, Seventh Edition

Joyce Farrell

New Edition!



ISBN: 978-1-133-52637-7

©2013

384 pages

Prepare beginning programmers with the most important principles for developing structured program logic with Farrell's highly effective *A BEGINNER'S GUIDE TO PROGRAMMING LOGIC AND DESIGN, INTRODUCTORY, 7E, International Edition*. This popular text takes a unique, language-independent approach to programming with a distinctive emphasis on modern conventions. The book's clear, concise writing style eliminates highly technical jargon while introducing universal programming concepts and encouraging a strong programming style and logical thinking. This edition's clearer, revised explanations utilize flowcharts, pseudocode, and diagrams to ensure even readers with no prior programming experience fully understand programming and design concepts. Farrell's proven learning features help students gain a better understanding of the scope of programming today while common business examples help illustrate key points. New optional CourseMate online learning and study tools offer a complete eBook and Video Lessons by the author to expand on key concepts. Use this proven book alone or with a language-specific companion text that emphasizes C++, Java or Visual Basic for the introduction your students need for solid logic and programming success.

## KEY FEATURES

- New Explanations Clarify Processes For Those With No Prior Programming Experience.
- New Additional Flowcharting And Pseudocode-Based Exercises In Every Chapter Provide Diverse Practice Opportunities.
- Optional Coursemate Online Resources Provide Interactive Learning, Study And Exam Preparation Tools.
- Book's Unique Language-Independent Approach Provides A Solid Foundation In Programming Logic.
- Business-Based Examples Clearly Illustrate Key Points And The Significance Of Concept You Are Learning.
- Appealing, Full-Color Presentation Visually Reinforces Concepts With Helpful Charts And Diagrams.
- Wealth Of Proven Practice Opportunities Ensures You Are Actively Learning.
- Flexible Text Approach Is Allows Options For Using The Book Alone Or Paired With A Language-Specific Companion Text.
- Optional Visual Logic Software Offers A Powerful, Hands-On Resource For Perfecting Logic And Program Design Skills.

## CONTENTS

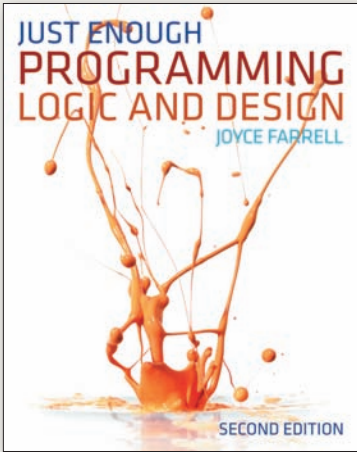
1. An Introduction to Programming. 2. Program Design Elements. 3. Structured Programming. 4. Decision-Making. 5. Creating Loops. 6. Using Arrays. 7. Using Files.

## SUPPLEMENTS

Instructor Resources  
CourseMate

# Just Enough Programming Logic and Design, Second Edition

Joyce Farrell



ISBN: 978-1-111-82595-9

©2013

312 pages

Find exactly what you need to master the fundamentals of programming logic with the concise JUST ENOUGH PROGRAMMING LOGIC AND DESIGN, 2E. This unique, language-independent introduction to programming logic provides seven chapters focused on key programming and logic content in a direct, efficient format that helps you progress through the subject matter quickly. Every-day examples and clear explanations in a streamlined presentation make this a perfect choice even if you have no prior programming experience. Twenty-five brief new videos from the author expand on and clarify topics, while new Debugging Exercises and a wealth of review and programming exercises in each chapter help you hone your skills.

## CONTENTS

1. An Overview of Computers and Logic. 2. Understanding Structure. 3. Making Decisions. 4. Looping. 5. Arrays. 6. Using Methods. 7. Object-Oriented Programming.

## SUPPLEMENTS

Instructor Resources

*New Edition!*

# An Object-Oriented Approach to Programming Logic and Design, International Edition, Fourth Edition

Joyce Farrell



ISBN: 978-1-133-18823-0

©2013

560 pages

This book takes a unique, language-independent approach to ensure readers develop a strong foundation in traditional programming principles and object-oriented concepts before learning the details of a specific programming language. The author presents object-oriented programming terminology without highly technical language, making the book understandable even for readers with no previous programming experience. Common business examples and carefully revised chapters clearly illustrate key points. A wealth of updated programming exercises in every chapter provide diverse practice opportunities, while new Video Lessons expand on key topics. Use this book alone or with a language-specific companion that emphasizes C++, Java or Visual Basic.

## CONTENTS

An Overview of Computers and Logic. Understanding Structure. Making Decisions. Looping. Using Arrays. Using Methods and Parameters. Object-Oriented Programming Concepts – Classes, Objects, Behaviors, Attributes. Event-Driven Programming With Graphical User Interfaces. Object Concepts: Polymorphism and Inheritance. Understanding Exception Handling. System Modeling With the UML. Advanced Array Concepts.

## SUPPLEMENTS

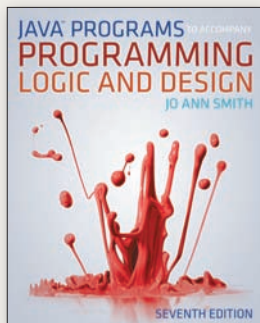
Instructor Resources

*New Edition!*

# Java Programs to Accompany Programming Logic and Design, Seventh Edition

*New Edition!*

Jo Ann Smith



ISBN: 978-1-133-52606-3

©2013

224 pages

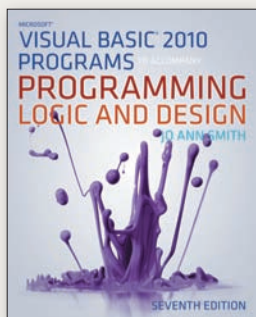
## CONTENTS

1. An Introduction to Java and the Java Programming Environment.
2. Variables, Constants, Operators, and Writing Programs Using Sequential Statements.
3. Writing Structures Java Programs.
4. Writing Programs That Make Decisions.
5. Writing Programs Using Loops.
6. Using Arrays in Java Programs.
7. File Handling and Applications.
8. Advanced Array Techniques.
9. Advanced Modularization Techniques.
10. Additional Topics.

# Microsoft® Visual Basic® Programs to Accompany Programming Logic and Design, Seventh Edition

*New Edition!*

Jo Ann Smith



ISBN: 978-1-133-52608-7

©2013

224 pages

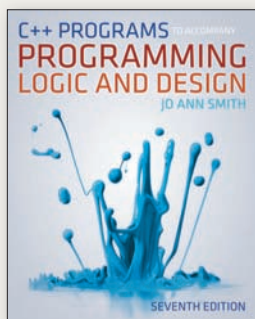
## CONTENTS

1. An Introduction to Visual Basic and the Visual Basic Programming Environment.
2. Variables, Constants, Operators, and Writing Programs Using Sequential Statements.
3. Writing Structured Visual Basic Programs.
4. Writing Programs That Make Decisions.
5. Writing Programs Using Loops.
6. Using Arrays in Visual Basic Programs.
7. File Handling and Applications.
8. Advanced Array Techniques.
9. Advanced Modularization Techniques.
10. Creating a Graphics User Interface (GUI) Using the Visual Studio Integrated Development Environment (IDE).

# C++ Programs to Accompany Programming Logic and Design, Seventh Edition

*New Edition!*

Jo Ann Smith



ISBN: 978-1-133-52580-6

©2013

224 pages

## CONTENTS

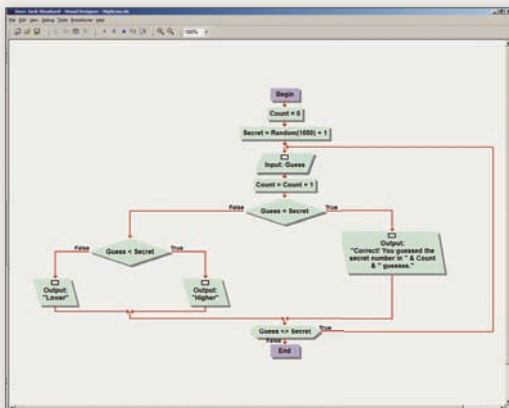
1. An Introduction to C++ and the C++ Programming Environment.
2. Variables, Constants, Operators, and Writing Programs Using Sequential Statements.
3. Writing Structured C++ Programs.
4. Writing Programs That Make Decisions.
5. Writing Programs Using Loops.
6. Using Arrays in C++ Programs.
7. File Handling and Applications.
8. Advanced Array Techniques.
9. Advanced Modularization Techniques.
10. Object-Oriented C++.

Bundle these supplements with Farrell's Programming Logic and Design, Comprehensive or Introductory editions

# Visual Logic

## Vanguard

Most customers bundle the Visual Logic programming tool with a Farrell Programming Logic and Design text.



Visual Logic flowchart solution to High-Low Game

ISBN: 978-1-4188-3773-0

March 2006

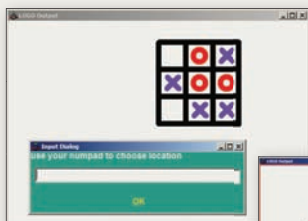
Pin Code

## Help Your Students Understand The Logic Of Programming

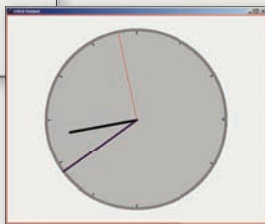
*Visual Logic* is a simple but powerful tool for teaching programming logic and design without traditional high-level programming language syntax. It uses flowcharts to explain essential programming concepts, including variables, input, assignment, output, conditions, loops, procedures, graphics, arrays, and files.

### KEY FEATURES

- Offers the ability to interpret and execute flowcharts, providing students with immediate and accurate feedback about their solutions.
- Combines the power of a high-level language with the ease and simplicity of flowcharts.
- Can be used with a number of Course Technology programming books, particularly those designed for an early course in programming in which students are learning concepts and fundamentals, using flowcharts.

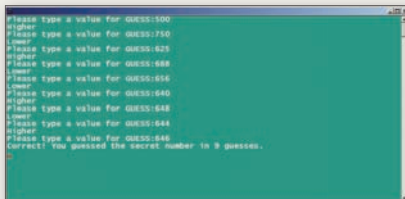


Visual Logic graphic output (Tic Tac Toe)

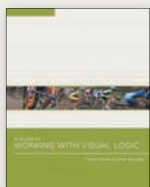


Visual Logic graphic output (Ticking Clock)

For a demonstration and FAQs, visit [www.visuallogic.org](http://www.visuallogic.org)



Visual Logic execution output for High-Low Game



## A Guide to Working with Visual Logic

Thad Crews

ISBN: 978-0-324-60119-0

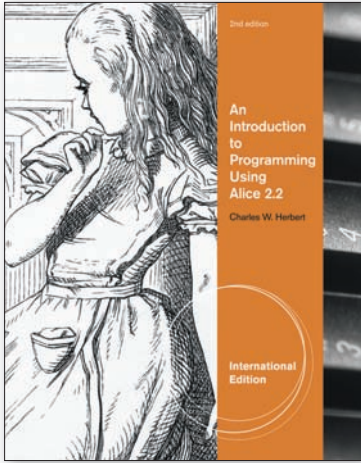
August 2008

140 pages



# An Introduction to Programming Using Alice 2.2, International Edition, Second Edition

Charles W. Herbert



ISBN: 978-1-1112-2210-9

©2011

304 pages

*AN INTRODUCTION TO PROGRAMMING USING ALICE 2.2, 2e*, International Edition provides students with a solid introduction to concepts of programming, logic, and related mathematics through the use of Alice, a proven tool for motivating beginning programmers. This new edition has been fully updated to take advantage of the new movie making, virtual reality, and gaming capabilities of Alice 2.2. All chapters are supported with robust exercise sets and visual diagrams.

## KEY FEATURES

- Motivates beginning programmers through a highly visual method, allowing students to see their work come to life.
- Includes colorful graphics, screen shots, and examples that illuminate programming concepts.
- Presents an approachable step-by-step pedagogy with numerous accompanying screenshots, creating the ideal learning experience for new programmers.
- New! Fully updated for the latest release of Alice, version 2.2.
- New! Includes two new chapters on Gaming and Movies.
- New! Coverage of recursion and data structures has been simplified and integrated into a single chapter.

## ABOUT THE AUTHOR

### Charles W. Herbert

Charles W. Herbert has been teaching Computer Science and Computer Information Systems at Community College of Philadelphia since 1984, where he has served as the Chair of the CIS Department, Director of Computer Science, and Director of Technical Education. He has worked extensively as a professional programmer. Using his background in curriculum development, he is currently a Principal Investigator for an NSF funded team exploring the use of virtual reality programming in community college computing courses. He is the co-author of Alice 2.0: Introductory Concepts and Techniques.

## CONTENTS

1. Introduction.
2. Methods.
3. Events.
4. Algorithms.
5. Boolean Logic.
6. Text, Sound, and Graphics.
7. Movies.
8. Games.
9. Advanced Programming Techniques.

## SUPPLEMENTS

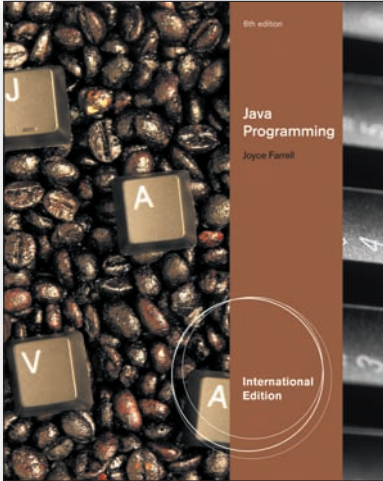
Instructor Resources



# Java Programming, International Edition, Sixth Edition

Joyce Farrell

*New Edition!*



## ABOUT THE AUTHOR

Joyce Farrell

Joyce Farrell is the author of a wide variety of programming textbooks in addition to Java Programming. Farrell is also the author of Microsoft Visual C#, Programming Logic and Design, Just Enough Programming Logic and Design, An Object-Oriented Approach to Programming Logic and Design, and Object-Oriented Programming Using C++, all of which are published by Course Technology. Joyce has taught Computer Information Systems full time at Harper College in Palatine, Illinois, the University of Wisconsin – Stevens Point, and McHenry County College in Crystal Lake, Illinois

ISBN: 978-1-1115-7835-0

©2012

912 pages

JAVA PROGRAMMING, 6th Edition, International Edition provides the beginning programmer with a guide to developing applications using the Java programming language. Java is popular among professional programmers because it can be used to build visually interesting GUI and Web-based applications. Java also provides an excellent environment for the beginning programmer – students can quickly build useful programs while learning the basics of structured and object-oriented programming techniques.

## KEY FEATURES

- Uses clear language and easy-to-understand business examples for comprehensive coverage of Java and object-oriented programming techniques.
- Builds applications from the bottom up, facilitating a deeper understanding of concepts used in object-oriented programming.
- “Game Zone” exercises provide appealing gaming programming experiences while reinforcing learning objectives.
- NEW! In this edition array coverage has been split into two chapters, providing a gentler introduction to this important and sometimes.
- NEW! The book has been updated to reflect new features in Java 7, the latest version of the programming language.
- NEW! Fifty-three short videos created and narrated by the author, accompany and illuminate major topics in the text.

## CONTENTS

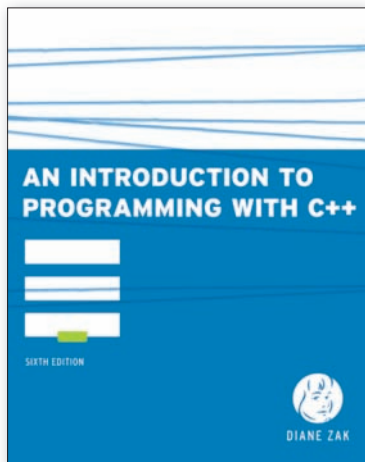
1. Creating Your First Java Classes.
  2. Using Data.
  3. Using Methods, Classes and Objects.
  4. More Object Concepts.
  5. Making Decisions.
  6. Looping.
  7. Characters, Strings and the StringBuilder.
  8. Introduction to Arrays.
  9. Advanced Array Concepts.
  10. Introduction to Inheritance.
  11. Advanced Inheritance Concepts.
  12. Exception Handling.
  13. File Input and Output.
  14. Introduction to Swing Components.
  15. Advanced GUI Topics.
  16. Graphics.
  17. Applets, Images, and Sound.
- Appendices.
- A: Working with the Java Platform.  
B: Learning about ASCII and Unicode.  
C: Formatting Output.  
D: Generating Random Numbers.  
E: Javadoc.

## SUPPLEMENTS

Instructor Resources

# An Introduction to Programming with C++, Sixth Edition

Diane Zak



## ABOUT THE AUTHOR

**Diane Zak**

Diane Zak holds a Bachelor of Science degree in Computer Information Systems, a Bachelor of Science degree in Accounting, and a Master of Arts degree in Adult and Continuing Education. She has taught at various computer training centers and was most recently a professor at College of DuPage in Illinois.

ISBN: 978-0-538-46652-3

January 2010

944 pages

*An Introduction to Programming with C++, Sixth Edition* is the latest C++ offering from Diane Zak. This book is distinct from other textbooks because of its unique approach, which motivates students by demonstrating why they need to learn the concepts and skills presented. Each chapter contains *Mini-Quizzes*, *Labs*, and *Try This* features to help readers practice and absorb the content as they go along. This edition also includes completely new applications and exercises, more IPO charts and flowcharts, and a brand new interior design.

## KEY FEATURES

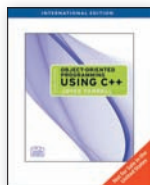
- *Concept and Application Lessons* have been streamlined and exercises are all at the end of the chapter.
- New exercises, labs, mini-quizzes, and examples throughout the book.
- Programs now include the using namespace std; directive rather than individual directives, such as using std::cout; and using std::cin;
- More IPO charts included in the chapters, with flowcharts available for many of them. Flowcharts can also be found online.
- Two appendices show students how to create and run C++ programs using Microsoft Visual Studio 2010 and Dev C++.
- All exercises are now marked using one of the following designations: *Try This*, *Modify This*, *Introductory*, *Intermediate*, *Advanced*, or *Swat the Bugs*. Answers to *Try This* exercises are provided at the end of each chapter.
- Can be purchased with Visual Studio 2008. Contact your sales representative for more information.

## CONTENTS

An Introduction to Control Structures. Beginning the Problem-Solving Process. Completing the Problem-Solving Process and Getting Started with C++. Variables, Constants, and Arithmetic Operators. The Selection Structure. More on the Selection Structure. The Repetition Structure. More on the Repetition Structure. Value-Returning Functions. Void Functions. Arrays. String Manipulation. Sequential Access Files. Classes and Objects.

## SUPPLEMENTS

Instructor Resources



# Object-Oriented Programming Using C++, International Edition, Fourth Edition

Joyce Farrell

ISBN: 978-0-538-74709-7

June 2008

752 pages



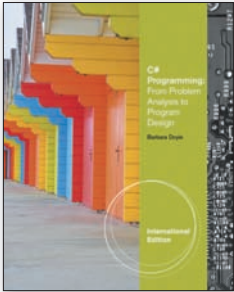
# C# Programming: From Problem Analysis to Program Design, International Edition, Third Edition

Barbara Doyle

ISBN: 978-1-1118-2168-5

September 2010

832 pages



*C# PROGRAMMING: FROM PROBLEM ANALYSIS TO PROGRAM DESIGN, THIRD EDITION* has been thoroughly revised for Visual Studio 2010. As in previous editions of the text, Barbara Doyle introduces a variety of basic programming concepts, from data types and expressions to arrays and collections, all using C# as the programming language. Every chapter begins with an identification of objectives and ends with a case study solidifying concepts presented in the chapter. Ideal for both novices and programmers with experience in other languages, this book goes beyond traditional programming books by including new, advanced software topics such as an introductions to LINQ (Language Integrated Query), WPF (Windows Presentation Foundation, and WCF (Windows Communication Foundation).

## KEY FEATURES

- Updated for Visual Studio 2010, available with this text as an optional bundle.
- Provides a new chapter feature, Coding Standards, that provides a summary of acceptable conventions or style guidelines pertaining to the chapter's topics.
- Includes new advanced topics such as the integration of applications with data from databases and the design and deployment of ASP.NET web sites.
- Focuses on the needs of instructors teaching both introductory and advanced courses using C#, yet assumes no prior programming knowledge on the part of the student.
- Offers a large selection of numbered examples that clearly illustrate conceptual concepts.
- Includes a minimum of ten programming projects in each chapter which can be assigned along with objective-style review questions.

## CONTENTS

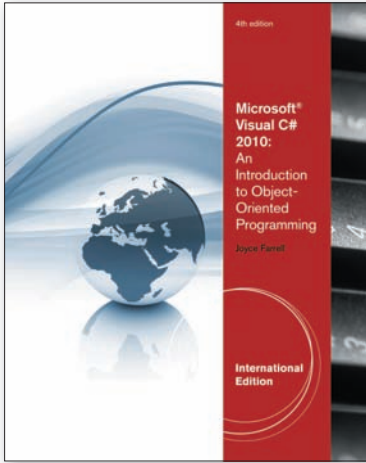
1. Introduction to Computing and Programming. 2. Data Types and Expressions. 3. Methods and Behaviors. 4. Creating Your Own Classes. 5. Making Decisions. 6. Repeating Instructions. 7. Arrays. 8. Advanced Collections. 9. Windows Programming. 10. Programming Based on Events. 11. Advanced Object-Oriented Programming Features. 12. Debugging and Handling Exceptions. 13. Working with Files. 14. Database Access Using LINQ and ADO.NET. 15. Web-Based Applications. Appendix A: Visual Studio Configuration. Appendix B: Code Editor Tools. Appendix C: Character Sets. Appendix D: Operator Precedence. Appendix E: C# Keywords. Glossary. Configuration. D. Character Sets. E. Operator Precedence. F. C# Keywords.

## SUPPLEMENTS

Instructor Resources

# Microsoft® Visual C#® 2010: An Introduction to Object-Oriented Programming, International Edition, Fourth Edition

Thomas J. Duffy



ISBN: 978-1-1115-2975-8

©2011

768 pages

Using engaging examples and a clear, straightforward approach, MICROSOFT VISUAL C# 2010: AN INTRODUCTION TO OBJECT-ORIENTED PROGRAMMING, 4e, International Edition guides beginning programmers through developing programs in the C# language. The book provides readers with a strong background knowledge of structured programming, method calling, and parameter passing, all of which are important concepts easily transferable to other programming languages. The Fourth Edition has been written and tested using the latest version of C#, Visual C# 2010, and now offers supplementary video lessons, expanded coverage of methods, and the option to study GUI applications earlier in the text.

## ABOUT THE AUTHOR

### Joyce Farrell

Joyce Farrell is the author of a wide variety of programming textbooks in addition to Java Programming. Farrell is also the author of Microsoft Visual C#, Programming Logic and Design, Just Enough Programming Logic and Design, An Object-Oriented Approach to Programming Logic and Design, and Object-Oriented Programming Using C++, all of which are published by Course Technology. Joyce has taught Computer Information Systems full time at Harper College in Palatine, Illinois, the University of Wisconsin – Stevens Point, and McHenry County College in Crystal Lake, Illinois.

## KEY FEATURES

- Offers concise program examples and program files for every complete program, allowing readers to experiment with the the C# language.
- Includes detailed step-by-step programming exercises so readers may analyze, test, and modify code written by others.
- This edition is written and tested using the latest edition of C#, Visual C# 2010.
- New! Each chapter is now supplemented by three or more video lessons produced by the author, available for free download from the book's companion site.
- New! Instruction on using methods has been expanded and divided into two chapters.
- New! Many chapters have additional exercises that employ string manipulation and enumerations, and gaming exercises have been added to many chapters.

## CONTENTS

- 1: A First Program Using C#.
- 2: Using Data.
- 3: Using GUI Objects and the Visual Studio IDE.
- 4: Making Decisions.
- 5: Looping.
- 6: Using Arrays.
- 7: Introduction to Methods.
- 8: Advanced Method Concepts.
- 9: Using Classes and Objects.
- 10: Introduction to Inheritance.
- 11: Exception Handling.
- 12: Using Controls.
- 13: Handling Events.
- 14: Files and Streams.
- 15: Data Queries and LINQ

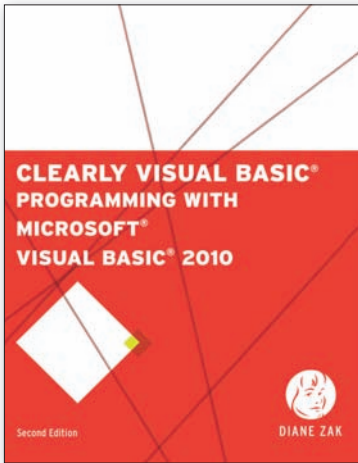
## SUPPLEMENTS

Instructor Resources

# Clearly Visual Basic®: Programming with Visual Basic® 2010, Second Edition

Diane Zak

*New Edition!*



ISBN: 978-1-1115-3015-0

©2012

672 pages

This innovative text by the best-selling author Diane Zak is designed for a first course in programming teaching the basics through visualization and application. Using the most recent version of the software, Visual Basic 2010, beginners will learn solid programming principles and knowledge that is easily transferable to other languages.

## KEY FEATURES

- Mini-quizzes encourage readers to master fundamental topics before progressing into more advanced topics, and the answers are provided to give immediate feedback and more opportunity for learning.
- Each chapter contains a wide variety of exercises, offering several different types of exercises at various levels of difficulty, so every kind of learner has an opportunity to practice his or her skills.
- Each chapter has one or more videos that demonstrate and explain the concepts covered in the chapter. The videos, which include self-review quizzes, are available online under Student Downloads

## ABOUT THE AUTHOR

### Diane Zak

Diane Zak's programming textbooks are known for their friendly and readable style, providing a pleasant, uncomplicated learning experience. She crafts each of her textbooks carefully, always with the student in mind. Diane Zak holds a Bachelor of Science degree in Computer Information Systems, a Bachelor of Science degree in Accounting, and a Master of Arts degree in Adult and Continuing Education. She has taught at various computer training centers and was most recently a professor at College of DuPage in Illinois.

## CONTENTS

1. I am Not a Control Freak! (Control Structures).
2. First You Need to Plan the Party (Problem-Solving Process).
3. I Need a Tour Guide (Introduction to Visual Basic 2010).
4. Do It Yourself Designing (Designing Interfaces).
5. The Secret Code (Assignment Statements).
6. Where Can I Store This? (Variables and Constants).
7. What's Wrong With It? (Syntax and Logic Errors).
8. Decisions, Decisions, Decisions (Selection Structure).
9. Time to Leave the Nest (Nested Selection Structures).
10. So Many Paths...So Little Time (Multiple-Path Selection Structures).
11. Testing, Testing...1, 2, 3 (Selecting Test Data).
12. How Long Can This Go On? (Pretest Loops).
13. Do It, Then Ask Permission (Posttest Loops).
14. Let Me Count the Ways (Counter Loops).
15. I'm On the Inside; You're On the Outside (Nested Loops).
16. I Hear You Are Breaking Up (Sub Procedures).
17. Talk to Me (Function Procedures).
18. A Ray of Sunshine (One-Dimensional Arrays).
19. Parallel and Dynamic Universes (More on One-Dimensional Arrays).
20. Table Tennis, Anyone? (Two-Dimensional Arrays).
21. Building Your Own Structure (Structures).
22. I'm Saving For the Future (Sequential Access Files).
23. The String Section (String Manipulation).
24. I'm Suffering from Information Overload (Access Databases).
25. This Missing "LINQ" (Querying a Database).
26. I Love This Class (Creating a Class).
27. Getting Web-ified (Web Applications).

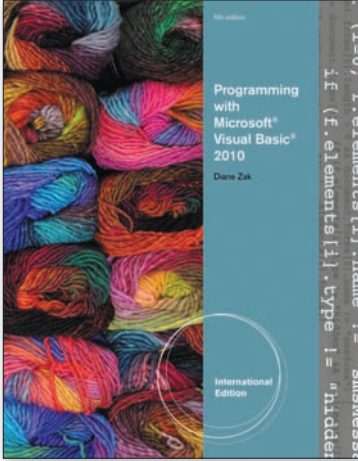
## SUPPLEMENTS

Instructor Resources

# Programming with Microsoft® Visual Basic® 2010, International Edition, Fifth Edition

*New Edition!*

Diane Zak



## ABOUT THE AUTHOR

**Diane Zak**

Diane Zak's programming textbooks are known for their friendly and readable style, providing a pleasant, uncomplicated learning experience. She crafts each of her textbooks carefully, always with the student in mind. Diane Zak holds a Bachelor of Science degree in Computer Information Systems, a Bachelor of Science degree in Accounting, and a Master of Arts degree in Adult and Continuing Education. She has taught at various computer training centers and was most recently a professor at College of DuPage in Illinois.

ISBN: 978-1-1115-7761-2

©2012

840 pages

PROGRAMMING WITH MICROSOFT VISUAL BASIC 2010, 5e, International Edition by the best-selling author, Diane Zak, is designed for a first course in programming. Using the most recent version of the software, Visual Basic 2010, this book teaches individuals how to use Visual Basic applications as they would in a real world setting. Students with no previous programming experience learn how to plan and create their own interactive Windows applications. GUI design skills and object-oriented programming concepts are emphasized throughout the book.

## KEY FEATURES

- Exercises identified as Introductory, Intermediate, Advanced, Discovery, and Swat The Bugs.
- Designed for the different learning styles: videos for visual and auditory learners, and tutorial sections and YOU DO IT boxes for kinesthetic learners.
- Now includes two chapters on Databases and LINQ.
- Updated to reflect the new Microsoft Visual Studio 2010

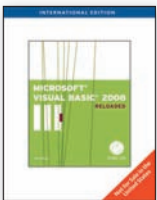
## CONTENTS

An Overview of Programming.

1. An Introduction to Visual Basic 2010.
2. Designing Applications.
3. Using Variables and Constants.
4. The Selection Structure.
5. More on the Selection Structure.
6. The Repetition Structure.
7. Sub and Function Procedures.
8. Manipulating Strings.
9. Arrays.
10. Structures and Sequential Access Files.
11. Classes and Objects.
12. Databases and LINQ.
13. More on Databases.
14. Web Applications.

## SUPPLEMENTS

Instructor Resources



## Microsoft® Visual Basic® 2008: RELOADED, International Edition, Third Edition

Diane Zak

ISBN: 978-0-538-75789-8

July 2008

776 pages



## Programming with Microsoft® Visual Basic® 2008: An Object-Oriented Approach, International Edition, Third Edition

Michael Ekedahl

ISBN: 978-1-4390-4020-1

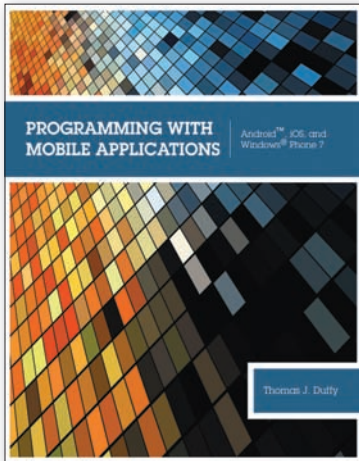
April 2009

819 pages



# Programming with Mobile Applications: Android™, iOS, and Windows® Phone 7

Thomas J Duffy



## ABOUT THE AUTHOR

### Thomas J. Duffy

Professor Tom Duffy currently serves as Chair of the Computer Science Department and Program Coordinator for the computer science degree program at Norwalk Community College in Norwalk, Connecticut. In addition to his teaching, he owns and manages Bright Moments Software, a software development company that specializes in today's most effective Web technologies and design solutions. In addition to this book, Professor Duffy has written a successful book on JavaScript and numerous professional articles.

ISBN: 978-1-133-62813-2

©2013

416 pages

This unique, hands-on tutorial approach combines clear presentations with numerous screenshots and step-by-step instructions to guide readers in developing applications for Google™ Android™, Apple® iOS, and Windows® Phone 7. Readers learn to create identical native and Web apps for each platform, which allows comparing each platform's development processes. The book's complete coverage ranges from platform architecture to native app life cycle management with an emphasis on fundamental programming concepts. This book's unique coverage of multiple platforms not only demonstrates the portability of apps that readers create, but also ensures an solid understanding of programming principles that benefits readers throughout any career.

## KEY FEATURES

- Unique approach teaches how to create native apps for three major smartphone platforms
- Up-to-the-minute coverage addresses fundamental programming concepts.
- Modular approach allows maximum flexibility in instruction.
- Well-organized presentation allows clear platform comparisons.
- Hands-on, tutorial-based instruction offers step-by-step guidance with helpful screenshots.
- Thought-provoking discussion topics encourage critical examination of today's issues.

## CONTENTS

1. The Computer of the Future Is in Your Hand.
2. Developing for Small Devices.
3. Best Practices for Small Device Programming.
4. Google Android: App Inventor.
5. Google Android: Motorola MOTODEV Studio.
6. Apple iOS.
7. Microsoft Windows Phone 7.
8. Web Applications.
9. Cross-Platform Development with PhoneGap.

## SUPPLEMENTS

### Instructor Resources

New Title!

# Android Boot Camp for Developers using Java™, Comprehensive: A Beginner's Guide to Creating Your First Android Apps

New Title!

Corinne Hoisington



## ABOUT THE AUTHOR

### Corinne Hoisington

Corinne Hoisington is a professor at Central Virginia Community College in Lynchburg, VA with over 20 years of teaching experience. Professor Hoisington is the 2004 recipient of the Microsoft Most Valuable Professional in Computer Programming award. A dynamic speaker, she regularly presents on new technology and education trends to instructors across the United States.

ISBN: 978-1-133-59720-9

©2013

480 pages

Gain a strong foundation in Java programming with the confidence and technical skills to build actual, successful mobile applications with ANDROID BOOT CAMP FOR DEVELOPERS USING JAVA™, COMPREHENSIVE: A BEGINNER'S GUIDE TO CREATING YOUR FIRST ANDROID APPS. Written by award-winning technology author Corinne Hoisington, this book prepares readers with a thorough introduction to both Java™ and the secrets to creating effective mobile applications. It's the ideal choice for readers who already have a little programming experience or are new to Java. The book offers a hands-on tutorial approach with clear, step-by-step instruction and numerous screen shots to guide readers through tasks efficiently. Learners gain a solid understanding of programming logic and Java tools for Android today and into the future.

## KEY FEATURES

- Insightful new mobile applications text addresses today's demands and tomorrow's emerging technology needs.
- Award-winning author brings trusted, practical expertise to book's presentation.
- Solid introduction to Java and building mobile applications emphasizes strong programming logic and critical java tools.
- Helpful callouts offer quick, practical tips invaluable both now and on-the-job.
- Practical learning features and exercises extend learning beyond the classroom.
- Precise case projects and leveled assignments ensure a variety of hands-on practice and learning opportunities.
- Hands-on tutorial approach provides step-by-step instruction.
- Valuable instructor support provides time-saving tools for your dynamic learning environment.

## CONTENTS

1. Voila! Meeting the Android. 2. Simplify! The Android User Interface. 3. Engage! Android User Input, Variables, & Operations. 4. Explore! Icons & Decision Making Controls. 5. Investigate! Android Menus & Loop Structures. 6. Dazzle! Working with Media. 7. Reveal! Displaying Pictures & Menus with Views. 8. Amaze! Using ListView Controls with Arrays. 9. Jam! Implementing Audio in Android Apps. 10. Discover! Incorporating Google Maps & GPS. 11. Move! Creating Animation and Graphics. 12. Finale! Publishing Your App.

## SUPPLEMENTS

Instructor Resources

# Android Boot Camp for Developers using Java, Introductory: A Beginner's Guide to Creating Your First Android Apps

Corinne Hoisington

*New Title!*

ISBN: 978-1-133-59439-0

©2013

240 pages



## ABOUT THE AUTHOR

### Corinne Hoisington

Corinne Hoisington is a professor at Central Virginia Community College in Lynchburg, VA with over 20 years of teaching experience. Professor Hoisington is the 2004 recipient of the Microsoft Most Valuable Professional in Computer Programming award. A dynamic speaker, she regularly presents on new technology and education trends to instructors across the United States.

Gain a strong foundation in Java programming with the confidence and technical skills to build actual, successful mobile applications with **ANDROID BOOT CAMP FOR DEVELOPERS USING JAVA™, INTRODUCTORY: A BEGINNER'S GUIDE TO CREATING YOUR FIRST ANDROID APPS**. Written by award-winning technology author Corinne Hoisington, this book prepares readers with a thorough introduction to both Java™ and the secrets to creating effective mobile applications. It's the ideal choice for readers who already have a little programming experience or are new to Java. The book offers a hands-on tutorial approach with clear, step-by-step instruction and numerous screen shots to guide readers through tasks efficiently. Learners gain a solid understanding of programming logic and Java tools for Android today and into the future.

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1. Voila! Meeting the Android.
2. Simplify! The Android User Interface.
3. Engage! Android User Input, Variables, & Operations.
4. Explore! Icons & Decision Making Controls.
5. Investigate! Android Menus & Loop Structures.
6. Dazzle! Working with Media.

## SUPPLEMENTS

Instructor Resources

# Web Design Principles, International Edition, Fifth Edition

Joel Sklar



## ABOUT THE AUTHOR

### Joel Sklar

Joel Sklar is an instructional designer and technical trainer specializing in HTML, XML, and Web technologies. He has taught markup languages and Web design to thousands of technical professionals in the New England area. Joel's consulting business offers a range of technical and design classes as well as customized courseware and e-learning development. Known for his lively hands-on demonstrations, Joel has presented at Web and technical conferences throughout the United States.

ISBN: 978-1-1115-3139-3

©2012

496 pages

**New Edition!**

Now updated to include the latest Web design technologies and trends, this Fifth Edition features all-new sections on HTML5, CSS3, CSS page layouts, and enhanced navigation as well as technical updates and new screen shots throughout. Beginning with the Web design environment and the principles of sound Web design, students will continue to planning site layout and navigation, and progress to Web typography, colors and images, working with CSS, and more.

## KEY FEATURES

- NEW! Updated discussion and exploration of Web 2.0 topics.
- NEW! An introduction of brand new design techniques.
- NEW! A new chapter on creating Floating Layouts replaces the old chapter on Framed Layouts.
- NEW! End of chapter material has been updated.
- NEW! illustrations and screen shots throughout reflect current browsers and relevant visualizations of key concepts.
- NEW! sections on HTML5 and CSS3 describe the benefits and use of these new coding standards
- NEW! "Page Layouts" chapter describes how to build both flexible and fixed page designs using CSS

## CONTENTS

1. Writing HTML for the Modern Web.
2. Designing the Site.
3. Planning the Site.
4. Introducing Cascading Style Sheets.
5. Creating Web Typography.
6. Using the CSS Box Model.
7. Designing Page Layouts.
8. Incorporating Graphics and Color.
9. Planning Site Navigation.
10. Working with Data Tables.
11. Creating User Input Forms.
12. Putting It All Together.

## SUPPLEMENTS

### Instructor Resources

# JavaScript, International Edition, Fifth Edition

Don Gosselin



## ABOUT THE AUTHOR

### Don Gosselin

Don Gosselin is a technical communications expert with more than 20 years experience. His extensive technology experience includes application development, technical writing, training, and curriculum development. In addition to JavaScript, he has written or contributed to textbooks on Java programming, Microsoft Visual C++ , Web design technologies, Web programming languages, XHTML, and PHP programming with MySQL.

ISBN: 978-0-538-46813-8

February 2010

720 pages

Now in its fifth edition, *JavaScript* guides beginning programmers through Web application development using the JavaScript programming language. As with previous editions of this book, Don Gosselin introduces key Web authoring techniques with a strong focus on industry application. A real-world project, similar to what students would encounter in a professional setting, is developed throughout each chapter. Since professional Web development jobs often require programmers to add features to an existing site, each chapter project uses a professionally designed Web site. After completing the course, students will be able to use JavaScript to build professional quality, dynamic Web sites.

## KEY FEATURES

- Teaches Web page authoring techniques to students with little to no prior programming experience using the JavaScript language.
- Includes a new *Short Quiz* element that tests students to prove that they understand the concept or technique for each major section.
- Includes *Pointers and Facts* in each chapter that provide students with practical advice and proven strategies related to the concept being discussed.
- Provides plenty of opportunities for skill application through updated end-of-chapter *Reinforcement Exercises* and *Discovery* projects.

## CONTENTS

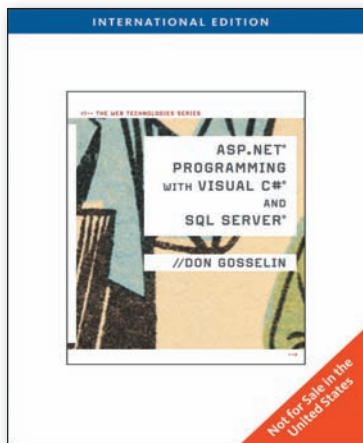
Introduction to JavaScript. Working with Data Types and Operators. Working with Functions, Events, and Control Structures. Manipulating the Browser Object Model. Validating Form Data with JavaScript. Using Object-Oriented JavaScript. Manipulating Data in Strings and Arrays. Debugging and Error Handling. Managing State Information and Security. Introduction to the Dynamic Object Model (DOM). Creating Dynamic HTML (DHTML). Updating Web Pages with AJAX. Appendices: A. Building a Web Development Environment. B. Introduction to PHP. C. Processing XML.

## SUPPLEMENTS

Instructor Resources

# ASP.NET Programming with C# and SQL Server, International Edition

Don Gosselin



## ABOUT THE AUTHOR

### Don Gosselin

Don Gosselin is a technical communications expert with more than 20 years experience. His extensive technology experience includes application development, technical writing, training, and curriculum development. In addition to JavaScript, he has written or contributed to textbooks on Java programming, Microsoft Visual C++ , Web design technologies, Web programming languages, XHTML, and PHP programming with MySQL.

ISBN: 978-0-840-03125-9

July 2009

704 pages

*ASP.NET Programming with C# and SQL Server* covers the basics of ASP.NET, C#, and SQL Server along with advanced topics including object-oriented programming and how to build Web sites that incorporate authentication and security. After completing this text, you will be able to use ASP.NET to build professional quality, database-driven Web sites.

## KEY FEATURES

- Goals at the beginning of each chapter provide students with a quick reference to the contents of the chapter, as well as a useful study aid.
- Help features assist students in finding more information on a concept or technique.
- *Short Quizzes* throughout the chapter help students test their knowledge of a concept or technique.
- Pointers provide students with practical advice and proven strategies related to the concept being discussed. They also contain cross-references to other sections in the book or to related Web sites.
- Facts contain notes and comments that provide additional helpful information on specific techniques and concepts.
- Careful features point out troublesome issues students need to watch out for with a particular technique or concept.
- This book can be purchased with Microsoft® Visual Studio 2008 software. Contact your sales representative for more information.

## CONTENTS

Overview of ASP.NET and C#. Working with C# Data Types and Operators. Using C# Functions and Control Structures. Working with Web Forms and Controls. Manipulating Data in C# with Strings and Arrays. Debugging and Error Handling. Working with Databases and SQL Server Express. Manipulating SQL Server Databases with ASP.NET. Managing State Information and Security. Designing a Web Site. Developing Object-Oriented C#. Building AJAX Applications.

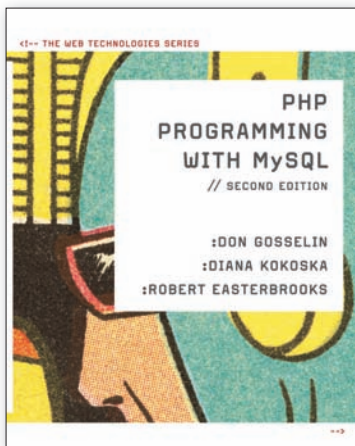
## SUPPLEMENTS

Instructor Resources



# PHP Programming with MySQL, International Edition, Second Edition

Don Gosselin, Diana Kokoska  
& Robert Easterbrooks



ISBN: 978-0-538-46814-5

January 2010

712 pages

This book covers the basics of PHP and MySQL along with introductions to advanced topics including object-oriented programming and how to build Web sites that incorporate authentication and security. After you complete this course, you will be able to use PHP and MySQL to build professional quality, database-driven Web sites.

## KEY FEATURES

- Enables users to utilize PHP and MySQL to build professional quality, database-driven Web sites, all with open source software.
- Covers the basics of PHP and MySQL along with advanced topics including object-oriented programming and how to build Web sites that incorporate authentication and security.
- Short *Careful* warnings called point out troublesome issues that you need to watch out for when writing PHP scripts.
- Short *Quizzes* serve as quick comprehension checks at the end of each major topic assess understanding of the section material.
- *Reinforcement Exercises* include both guided and free-form exercises that reinforce the skills learned in the chapter and build on your learning experience by providing additional ways to apply your knowledge in new situations.
- *Discovery Activities* apply the skills learned in the chapter to expand the functionality of an ongoing comprehensive Web site project.

## CONTENTS

Getting Started with PHP. Using Functions and Control Structures. Manipulating Strings. Handling User Input. Working with Files and Directories. Manipulating Arrays. Working with Databases and MySQL. Manipulating MySQL Databases with PHP. Managing State Information. Developing Object-Oriented PHP. Appendices: A. Working with XHTML. B. Building a Web Development Environment. C. Formatting Strings. D. Secure Coding with PHP. E. Advanced Debugging Techniques. F. Connecting to SQL Server and Oracle Databases. G. Secure Coding with PHP.

## SUPPLEMENTS

Instructor Resources

## ABOUT THE AUTHORS

### Don Gosselin

Don Gosselin is a technical communications expert with more than 20 years experience. His extensive technology experience includes application development, technical writing, training, and curriculum development. In addition to JavaScript, he has written or contributed to textbooks on Java programming, Microsoft Visual C++ , Web design technologies, Web programming languages, XHTML, and PHP programming with MySQL.

### Diana Kokoska

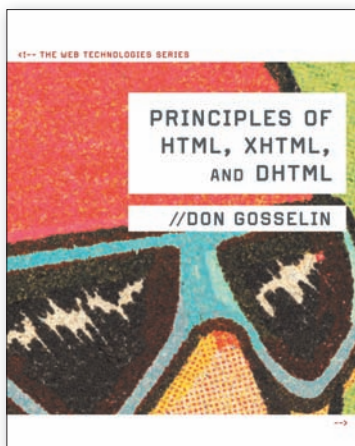
Diana Kokoska, a member of the Computer Information Systems program at the University of Maine at Augusta, has taught computer education at the postsecondary level for more than 20 years. She holds an MS in Business Administration from Husson College and a BS in Business Education from the University of Maine. She has received multiple teaching recognitions, including the national Teacher of Excellence (NISOD) award.

### Robert Easterbrooks

Robert Easterbrooks has been a software developer for nearly 20 years, with experience in C/C++, Java, PHP and more. He is currently employed as an applications and database developer for the Maine Office of Information Technology, primarily supporting the Department of Environmental Protection. He has a BS in Computer Science from Westfield State College in Westfield, MA and a BS in Computer Information Systems from the University of Maine at Augusta.

# Principles of HTML, XHTML, and DHTML: The Web Technologies Series

Don Gosselin



ISBN: 978-0-538-47461-0

©2011

700 pages

PRINCIPLES OF HTML, XHTML, AND DHTML teaches students the basics of building structured Web pages with HTML and XHTML, how to add text and images to Web pages, how to create frames, tables, and forms, and how to format and design Web pages using Cascading Style Sheets (or CSS). This text gives equal treatment to both HTML and XHTML, covering all new HTML 5 features while highlighting the differences between the languages. The book will also include enhanced coverage of DHTML, as HTML, X/HTML, and DHTML are commonly taught in the same course. Each chapter provides clear, non-technical explanations of the important concepts and techniques of a particular language or tool. The focus, however, is on learning-by-doing as students complete typical Web authoring tasks, such as adding tables to Web pages.

## ABOUT THE AUTHORS

### Don Gosselin

Don Gosselin is a technical communications expert with more than 20 years experience. His extensive technology experience includes application development, technical writing, training, and curriculum development. In addition to JavaScript, he has written or contributed to textbooks on Java programming, Microsoft Visual C++, Web design technologies, Web programming languages, XHTML, and PHP programming with MySQL.

## KEY FEATURES

- Assumes no prior knowledge of HTML, XHTML, or CSS; this text is ideal for the beginning Web programmer.
- Offers extensive diagrams and tables that help readers to visualize common components and relationships.
- Displays code examples in a consistent format, including brief code snippets as well as more complete code listings.
- Provides extensive end-of-chapter material such as Reinforcement Exercises, Comprehension Checks, and Discovery Projects.
- Includes coverage of advanced topics such as the use of JavaScript, how to incorporate multimedia and executable content into a Web page, how to organize and define XML, and how to use Extensible Stylesheet Language (XSL).

## CONTENTS

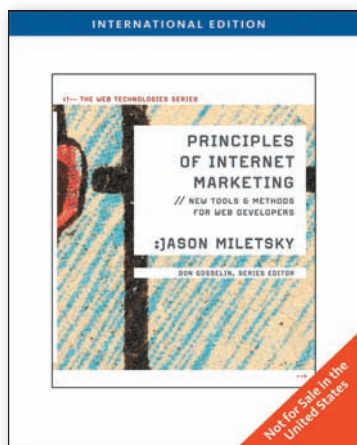
1. Introduction to Web Page Development.
2. Building, Linking, Publishing Basic Web Pages.
3. Working with Text and Images.
4. Formatting with Cascading Style Sheets.
5. Building Tables and Lists.
6. Gathering Data with Forms.
7. Incorporating Multimedia and Executable Content.
8. Introduction to JavaScript.
9. Building Arrays and Control Structures.
10. Manipulating the Browser Object Model.
11. Validating Form Data with JavaScript.
12. Overview of the Document Object Model (DOM).
13. Creating Dynamic HTML (DHTML).
14. Developing Web Pages for Mobile Devices.

## SUPPLEMENTS

### Instructor Resources

# Principles of Internet Marketing: New Tools and Methods for Web Developers, International Edition

Jason Miletsky



ISBN: 978-0-538-74527-7

February 2009

644 pages

*Principles of Internet Marketing: New Tools and Methods for Web Developers* helps readers understand the “why” behind the “how” of Web site development. It teaches the importance of the brand and how that relates to Web site development, the reasons sites are developed, how they build an audience, and most importantly, how companies use the Web to earn revenue and build recognition among their desired market. You will learn the strategies used to drive traffic to a site, the tools that are available to keep audiences coming back (with a focus on social media tools), and the role marketing plays in the building a successful Web site.

## KEY FEATURES

- Interviews featuring high-profile individuals (such as Ward Cunningham, and Konstantin Guericke, of LinkedIn) discussing industry-related topics.
- Screen shots demonstrating different types of Web marketing from numerous companies and organizations.
- Tables and statistics illustrating how the Web has changed and continues to change at a rapid pace.
- *Key Terms* with definitions at the end of each chapter.
- *Review Questions* and *Projects* to assess one's retention of the concepts and gain some hands-on practice on the Web.

## CONTENTS

An Overview Of The Web. Types Of Web Sites. Social Media And Social Networking Sites. Blogging. Web-Based Video. Wikis, RSS, Mash-Ups And Virtual Worlds. Understanding The Brand. Planning And Developing The Site. E-Commerce Sites. Programs And Languages. Driving Traffic: Marketing Strategies. Capturing And Keeping And Audience. Traffic Analysis And Measuring For Success.

## SUPPLEMENTS

Instructor Resources

## ABOUT THE AUTHOR

### Jason Miletsky

Jason Miletsky is CEO and executive creative director of Mango (formerly PFS Marketwyse), a leading marketing communications agency in the New York Metro area. His marketing work has included successful consultation and campaigns for companies including Hershey's, AmerisourceBergen, Emerson Electric, JVC, The Michael C. Fina Company, and more. Miletsky is a featured speaker for numerous companies and seminars as well as a guest lecturer for universities. He is the author of 10 books, including *Perspectives on Marketing* and *Perspectives on Branding*, and he blogs regularly at [jaimiletsky.com](http://jaimiletsky.com) and [getperspectives.com](http://getperspectives.com). You can follow him on Twitter at <http://twitter.com/jaimiletsky>.

# A Guide to Computer User Support for Help Desk and Support Specialists, International Edition, Fifth Edition

*New Edition!*

Fred Beisse



ISBN: 978-1-133-18860-5

©2013

674 pages

This useful guide focuses on the informational resources and technical tools needed most to function effectively in a support position. Readers learn to handle troubleshooting and problem solving, successfully communicate with clients, determine a client's specific needs, train end-users and even handle budgeting and other management priorities. This edition prepares readers to work with the latest developments, from Web and e-mail-based support to Windows® 7 and cloud computing. Leading HelpSTAR® and Microsoft® Office Project Professional 2010 software accompanying the text further reinforce user-support knowledge and skills.

## KEY FEATURES

- New coverage addresses areas of emerging importance, including cloud computing and the utility software toolkit.
- Updates throughout this edition reflect the latest in support industry trends.
- New ongoing case project demonstrates how specific chapter concepts work together to provide overall effective support.
- Increased coverage of budgeting and other help desk management concepts better prepare students for today's business challenges.
- New coverage prepares students to support Windows® 7.
- Practical, straightforward approach to technical issues helps students build critical skills with confidence.
- Compelling role-playing scenarios spur dynamic class discussion.
- Numerous case studies illustrate troubleshooting and problem solving skills at work in real situations.
- Professional software enables hands-on, real business practice.

## ABOUT THE AUTHOR

**Fred Beisse**

Fred Beisse teaches Computer Information Technology at Lane Community College in Eugene, Oregon, where he has designed and led courses in user support, information analysis and visualization, project management, and geographical information systems. Beisse builds on more than 30 years of experience in computer management positions, where he has been responsible for end-user support, computer services, computer facilities planning, and operations management.

## CONTENTS

1. Introduction to Computer User Support. 2. Customer Service Skills for User Support Agents. 3. Writing for End Users. 4. Skills for Troubleshooting Computer Problems. 5. Common Support Problems. 6. Help Desk Operation. 7. User Support Management. 8. Product Evaluation Strategies and Support Standards. 9. User Needs Assessment Projects. 10. Installing and Managing end-User Computers. 11. Training Computer Users. 12. A User Support Utility Tool Kit.

## SUPPLEMENTS

**Instructor Resources**

# A Guide to Service Desk Concepts, International Edition, Third Edition

Donna Knapp



ISBN: 978-1-4390-4022-5

March 2009

368 pages

*A Guide to Service Desk Concepts, Third Edition* discusses the different types of service desks that exist, how they are measured by the organizations they support, the varying roles and skills required within a typical service desk, and the processes and technologies commonly used to ensure the service desk is operating efficiently and effectively. In this edition, the author also includes references to ITIL® V3 best practices, leading quality and IT service management frameworks and standards, up-to-date research, trends, case studies and resources, and the latest information regarding the role of outsourcing and certification in the service desk.

## KEY FEATURES

- Notes provide additional helpful information on specific terms and topics in each chapter.
- Figures and screen shots illustrate real-world examples of key service desk concepts
- Interviews with professionals working in the service desk industry in various capacities provide students with a real-world look into the field.
- *Review Questions, Hands-On Projects, and Case Projects* assess student retention and provide reinforcement of the concepts.

## CONTENTS

Introduction to Help Desk Concepts. Service Desk Operations. The People Component: Service Desk Roles and Responsibilities. The Process Component: Service Desk Processes and Procedures. The Technology Component: Service Desk Tools and Technologies. The Information Component: Service Desk Performance Measures. The Service Desk Setting. Customer Support as a Profession. Appendices: A. Job Descriptions for the Service Desk. B. Service Desk Resources.

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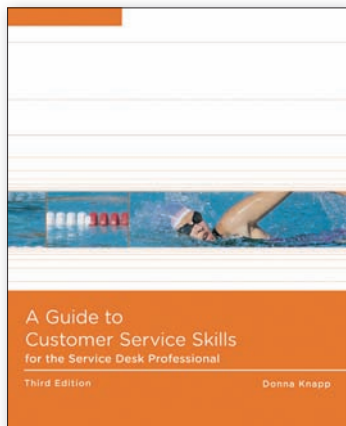
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### Donna Knapp

Donna Knapp has over twenty years experience in the IT industry and holds multiple IT Service Management (ITSM) certifications including: ITIL® V2 Service Manager and ITIL® Expert™. She holds numerous ITIL® V2 practitioner and ITIL® V3 Intermediate certifications, the ISO/IEC 20000 and MOF Foundation certifications and she is a Certified Process Design Engineer (CPDE)®. Donna serves as ITSM Academy's Curriculum Development Manager, sits on the ITIL® V3 International Examination Panel, and is the author of two college textbooks, *A Guide to Service Desk Concepts, Third Edition* and *A Guide to Customer Service Skills for Help Desk Professionals, Second Edition*. Donna has worked as an ITSM practitioner, consultant and trainer and is known as an entertaining and informative speaker.

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Donna Knapp



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