

Programming Logic And Design Second Edition Introductory

This fully revised eighth edition of Joyce Farrell's PROGRAMMING LOGIC AND DESIGN: COMPREHENSIVE prepares student programmers for success by teaching them the fundamental principles of developing structured program logic. Widely used in foundational Programming courses, this popular text takes a unique, language-independent approach to programming, with a distinctive emphasis on modern conventions. Noted for its clear, concise writing style, the book eliminates highly technical jargon while introducing universal programming concepts and encouraging a strong programming style and logical thinking. This edition's comprehensive approach prepares students for all programming situations with introductions to object-oriented concepts, UML diagrams, and databases. Quick Reference boxes, a feature new to this edition, provide concise explanations of important programming concepts. Each chapter now also contains a Maintenance Exercise, in which the student is presented with working logic that can be improved. In addition to each chapter's text-based Debugging Exercises, this edition now includes Flowchart Debugging Exercises as well. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Intelligent readers who want to build their own embedded computer systems-- installed in everything from cell phones to cars to handheld organizers to refrigerators-- will find this book to be the most in-depth, practical, and up-to-date guide on the market. Designing Embedded Hardware carefully steers between the practical and philosophical aspects, so developers can both create their own devices and gadgets and customize and extend off-the-shelf systems. There are hundreds of books to choose from if you need to learn programming, but only a few are available if you want to learn to create hardware. Designing Embedded Hardware provides software and hardware engineers with no prior experience in embedded systems with the necessary conceptual and design building blocks to understand the architectures of embedded systems. Written to provide the depth of coverage and real-world examples developers need, Designing Embedded Hardware also provides a road-map to the pitfalls and traps to avoid in designing embedded systems. Designing Embedded Hardware covers such essential topics as: The principles of developing computer hardware Core hardware designs Assembly language concepts Parallel I/O Analog-digital conversion Timers (internal and external) UART Serial Peripheral Interface Inter-Integrated Circuit Bus Controller Area Network (CAN) Data Converter Interface (DCI) Low-power operation This invaluable and eminently useful book gives you the practical tools and skills to develop, build, and program your own application-specific computers.

JUST ENOUGH JAVA(tm) PROGRAMS TO ACCOMPANY JUST ENOUGH

PROGRAMMING LOGIC AND DESIGN is specifically designed to be paired with Farrell's concise JUST ENOUGH PROGRAMMING LOGIC AND DESIGN. Together, the two books provide an ideal opportunity for students who want to learn the fundamentals of programming, while gaining exposure to an actual programming language. Readers discover how real Java code functions while still learning within the context of a traditional language-independent logic and design course.

C++ is a powerful, highly flexible, and adaptable programming language that allows software engineers to organize and process information quickly and effectively. But this high-level language is relatively difficult to master, even if you already know the C programming language. The new second edition of "Practical C++ Programming is a complete introduction to the C++ language for programmers who are learning C++. Reflecting the latest changes to the C++ standard, this new edition takes a useful down-to-earth approach, placing a strong emphasis on how to design clean, elegant code. In short, to-the-point chapters, all aspects of programming are covered including style, software engineering, programming design, object-oriented design, and debugging. It also covers common mistakes and how to find (and avoid) them. End of chapter exercises help you ensure you've mastered the material. Steve Oualline's clear, easy-going writing style and hands-on approach to learning make "Practical C++ Programming a nearly painless way to master this complex but powerful programming language.

Visual Basic Programs to Accompany Programming Logic and Design, Second Edition is designed to be paired with the Fifth Edition of the highly successful Programming Logic and Design by Joyce Farrell. The two books together provide the perfect opportunity for those who want to learn the fundamentals of programming and also get a taste of an actual programming language. Users can discover how real Visual Basic code behaves while remaining within the context of the traditional language-independent logic and design course. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Long ago, when Alexander the Great asked the mathematician Menaechmus for a crash course in geometry, he got the famous reply ``There is no royal road to mathematics." Where there was no shortcut for Alexander, there is no shortcut for us. Still, the fact that we have access to computers and mature programming languages means that there are avenues for us that were denied to the kings and emperors of yore. The purpose of this book is to teach logic and mathematical reasoning in practice, and to connect logical reasoning with computer programming in Haskell. Haskell emerged in the 1990s as a standard for lazy functional programming, a programming style where arguments are evaluated only when the value is actually needed. Haskell is a marvelous demonstration tool for logic and maths because its functional character allows implementations to remain very close to the concepts that get implemented, while the laziness

permits smooth handling of infinite data structures. This book does not assume the reader to have previous experience with either programming or construction of formal proofs, but acquaintance with mathematical notation, at the level of secondary school mathematics is presumed. Everything one needs to know about mathematical reasoning or programming is explained as we go along. After proper digestion of the material in this book, the reader will be able to write interesting programs, reason about their correctness, and document them in a clear fashion. The reader will also have learned how to set up mathematical proofs in a structured way, and how to read and digest mathematical proofs written by others. This is the updated, expanded, and corrected second edition of a much-acclaimed textbook. Praise for the first edition: 'Doets and van Eijck's ``The Haskell Road to Logic, Maths and Programming'' is an astonishingly extensive and accessible textbook on logic, maths, and Haskell.' Ralf Laemmel, Professor of Computer Science, University of Koblenz-Landau

This book is suitable for use in a university-level first course in computing (CS1), as well as the increasingly popular course known as CS0. It is difficult for many students to master basic concepts in computer science and programming. A large portion of the confusion can be blamed on the complexity of the tools and materials that are traditionally used to teach CS1 and CS2. This textbook was written with a single overarching goal: to present the core concepts of computer science as simply as possible without being simplistic.

Just Enough Programming Logic and Design Cengage Learning

Learn how to use Java to transform program logic and design into working programs with Smith's JAVA™ PROGRAMS TO ACCOMPANY PROGRAMMING LOGIC AND DESIGN, 8E. Specifically designed to be paired with the latest edition of Farrell's highly successful PROGRAMMING LOGIC AND DESIGN, this guide combines the power of Java with the popular, language-independent, logical approach of the PROGRAMMING LOGIC AND DESIGN text. Together, the two books provide the perfect opportunity for readers to learn the fundamentals of programming, while also learning an actual leading programming language. This text develops a comprehensive theory of programming languages based on type systems and structural operational semantics. Language concepts are precisely defined by their static and dynamic semantics, presenting the essential tools both intuitively and rigorously while relying on only elementary mathematics. These tools are used to analyze and prove properties of languages and provide the framework for combining and comparing language features. The broad range of concepts includes fundamental data types such as sums and products, polymorphic and abstract types, dynamic typing, dynamic dispatch, subtyping and refinement types, symbols and dynamic classification, parallelism and cost semantics, and concurrency and distribution. The methods are directly applicable to language implementation, to the development of logics for reasoning about programs, and to the formal verification language properties such as type safety. This thoroughly revised second edition includes exercises at the end of nearly every chapter and a new chapter on type refinements.

Helps you discover the power of Java for developing applications. This book incorporates the latest version of Java with a reader-friendly presentation and meaningful real-world exercises that highlight new Java strengths.

An Object-Oriented Approach to Programming Logic and Design, 3e, International Edition provides the beginning programmer with a guide to developing object-oriented program logic.

Bookmark File PDF Programming Logic And Design Second Edition Introductory

This textbook assumes no programming language experience. The writing is nontechnical and emphasizes good programming practices. The examples are business examples; they do not assume mathematical background beyond high school business math. Additionally, the examples illustrate one or two major points; they do not contain so many features that students become lost following irrelevant and extraneous details.

Recent years have seen the development of powerful tools for verifying hardware and software systems, as companies worldwide realise the need for improved means of validating their products. There is increasing demand for training in basic methods in formal reasoning so that students can gain proficiency in logic-based verification methods. The second edition of this successful textbook addresses both those requirements, by continuing to provide a clear introduction to formal reasoning which is both relevant to the needs of modern computer science and rigorous enough for practical application. Improvements to the first edition have been made throughout, with extra and expanded sections on SAT solvers, existential/universal second-order logic, micro-models, programming by contract and total correctness. The coverage of model-checking has been substantially updated. Further exercises have been added. Internet support for the book includes worked solutions for all exercises for teachers, and model solutions to some exercises for students.

Authored by two of the leading authorities in the field, this guide offers readers the knowledge and skills needed to achieve proficiency with embedded software.

Find exactly what you need to introduce your students to the fundamentals of programming logic with Farrell's direct, efficient JUST ENOUGH PROGRAMMING LOGIC AND DESIGN, 2E. This unique, language-independent approach to logic provides seven chapters focused on key programming and logic content in a concise format that helps readers progress through the subject matter quickly. Students study introductory concepts, structure, decision-making, looping, array manipulation, and calling methods as well as an introduction to object-oriented programming. Everyday examples and clear explanations in this edition's streamlined presentation make this a perfect choice for students with no prior programming experience. Twenty-five brief new videos from the author expand upon and clarify topics, while new Debugging Exercises and a wealth of review and programming exercises in each chapter help students hone their coding and programming skills. Use this concise approach alone or as a companion text in any programming language course. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Starting Out with Programming Logic and Design, Second Edition, is a language-independent introductory programming book that orients students to programming concepts and logic without assuming any previous programming experience. In the successful, accessible style of Tony Gaddis' best-selling texts, useful examples and detail-oriented explanations allow students to become comfortable with fundamental concepts and logical thought processes used in programming without the complication of language syntax. Students gain confidence in their program design skills to transition into more comprehensive programming courses. The book is ideal for a programming logic course taught as a precursor to a language-specific introductory programming course, or for the first part of an introductory programming course. This textbook offers an understanding of the essential concepts of programming languages. The text uses interpreters, written in Scheme, to express the semantics of many essential language elements in a way that is both clear and directly executable. The real challenge of programming isn't learning a language's syntax—it's learning to creatively solve problems so you can build something great. In this one-of-a-kind text, author V. Anton Spraul breaks down the ways that programmers solve problems and teaches you what other introductory books often ignore: how to Think Like a

Programmer. Each chapter tackles a single programming concept, like classes, pointers, and recursion, and open-ended exercises throughout challenge you to apply your knowledge. You'll also learn how to: –Split problems into discrete components to make them easier to solve –Make the most of code reuse with functions, classes, and libraries –Pick the perfect data structure for a particular job –Master more advanced programming tools like recursion and dynamic memory –Organize your thoughts and develop strategies to tackle particular types of problems Although the book's examples are written in C++, the creative problem-solving concepts they illustrate go beyond any particular language; in fact, they often reach outside the realm of computer science. As the most skillful programmers know, writing great code is a creative art—and the first step in creating your masterpiece is learning to Think Like a Programmer.

Provides an introduction to category theory whilst retaining a level of mathematical correctness, thus appealing to students of both computer science and mathematics.

Looking for a reliable way to learn how to program on your own, without being overwhelmed by confusing concepts? Head First Programming introduces the core concepts of writing computer programs -- variables, decisions, loops, functions, and objects -- which apply regardless of the programming language. This book offers concrete examples and exercises in the dynamic and versatile Python language to demonstrate and reinforce these concepts. Learn the basic tools to start writing the programs that interest you, and get a better understanding of what software can (and cannot) do. When you're finished, you'll have the necessary foundation to learn any programming language or tackle any software project you choose. With a focus on programming concepts, this book teaches you how to: Understand the core features of all programming languages, including: variables, statements, decisions, loops, expressions, and operators Reuse code with functions Use library code to save time and effort Select the best data structure to manage complex data Write programs that talk to the Web Share your data with other programs Write programs that test themselves and help you avoid embarrassing coding errors We think your time is too valuable to waste struggling with new concepts. Using the latest research in cognitive science and learning theory to craft a multi-sensory learning experience, Head First Programming uses a visually rich format designed for the way your brain works, not a text-heavy approach that puts you to sleep.

This text concentrates on the development of application software, using a structured and modular approach and emphasizing specific design tools such as structured flowcharts, pseudo code, decision tables, and action diagrams. Applications cover the full range of programming concepts both for batch and on-line interactive programming, along with three chapters that explore table/array handling.

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Digital Design and Computer Architecture: ARM Edition covers the fundamentals of digital logic design and reinforces logic concepts through the design of an ARM microprocessor. Combining an engaging and humorous writing style with an updated and hands-on approach to digital design, this book takes the reader from the fundamentals of digital logic to the actual design of an ARM processor. By the end of this book, readers will be able to build their own microprocessor and will have a top-to-bottom understanding of how it works. Beginning with digital logic gates and progressing to the design of combinational and sequential circuits, this book uses these

fundamental building blocks as the basis for designing an ARM processor. SystemVerilog and VHDL are integrated throughout the text in examples illustrating the methods and techniques for CAD-based circuit design. The companion website includes a chapter on I/O systems with practical examples that show how to use the Raspberry Pi computer to communicate with peripheral devices such as LCDs, Bluetooth radios, and motors. This book will be a valuable resource for students taking a course that combines digital logic and computer architecture or students taking a two-quarter sequence in digital logic and computer organization/architecture. Covers the fundamentals of digital logic design and reinforces logic concepts through the design of an ARM microprocessor. Features side-by-side examples of the two most prominent Hardware Description Languages (HDLs)—SystemVerilog and VHDL—which illustrate and compare the ways each can be used in the design of digital systems. Includes examples throughout the text that enhance the reader's understanding and retention of key concepts and techniques. The Companion website includes a chapter on I/O systems with practical examples that show how to use the Raspberry Pi computer to communicate with peripheral devices such as LCDs, Bluetooth radios, and motors. The Companion website also includes appendices covering practical digital design issues and C programming as well as links to CAD tools, lecture slides, laboratory projects, and solutions to exercises.

The free book "Fundamentals of Computer Programming with C#" is a comprehensive computer programming tutorial that teaches programming, logical thinking, data structures and algorithms, problem solving and high quality code with lots of examples in C#. It starts with the first steps in programming and software development like variables, data types, conditional statements, loops and arrays and continues with other basic topics like methods, numeral systems, strings and string processing, exceptions, classes and objects. After the basics this fundamental programming book enters into more advanced programming topics like recursion, data structures (lists, trees, hash-tables and graphs), high-quality code, unit testing and refactoring, object-oriented principles (inheritance, abstraction, encapsulation and polymorphism) and their implementation the C# language. It also covers fundamental topics that each good developer should know like algorithm design, complexity of algorithms and problem solving. The book uses C# language and Visual Studio to illustrate the programming concepts and explains some C# / .NET specific technologies like lambda expressions, extension methods and LINQ. The book is written by a team of developers lead by Svetlin Nakov who has 20+ years practical software development experience. It teaches the major programming concepts and way of thinking needed to become a good software engineer and the C# language in the meantime. It is a great start for anyone who wants to become a skillful software engineer. The books does not teach technologies like databases, mobile and web development, but shows the true way to master the basics of programming regardless of the languages, technologies and tools. It is good for beginners and intermediate developers who want to put a solid base for a successful career in the software engineering industry. The book is accompanied by free video lessons, presentation slides and mind maps, as well as hundreds of exercises and live examples. Download the free C# programming book, videos, presentations and other resources from <http://introprogramming.info>. Title: Fundamentals of Computer Programming with C# (The Bulgarian C# Programming

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Book) ISBN: 9789544007737 ISBN-13: 978-954-400-773-7 (9789544007737) ISBN-10: 954-400-773-3 (9544007733) Author: Svetlin Nakov & Co. Pages: 1132 Language: English Published: Sofia, 2013 Publisher: Faber Publishing, Bulgaria Web site: <http://www.introprogramming.info> License: CC-Attribution-Share-Alike Tags: free, programming, book, computer programming, programming fundamentals, ebook, book programming, C#, CSharp, C# book, tutorial, C# tutorial; programming concepts, programming fundamentals, compiler, Visual Studio, .NET, .NET Framework, data types, variables, expressions, statements, console, conditional statements, control-flow logic, loops, arrays, numeral systems, methods, strings, text processing, StringBuilder, exceptions, exception handling, stack trace, streams, files, text files, linear data structures, list, linked list, stack, queue, tree, balanced tree, graph, depth-first search, DFS, breadth-first search, BFS, dictionaries, hash tables, associative arrays, sets, algorithms, sorting algorithm, searching algorithms, recursion, combinatorial algorithms, algorithm complexity, OOP, object-oriented programming, classes, objects, constructors, fields, properties, static members, abstraction, interfaces, encapsulation, inheritance, virtual methods, polymorphism, cohesion, coupling, enumerations, generics, namespaces, UML, design patterns, extension methods, anonymous types, lambda expressions, LINQ, code quality, high-quality code, high-quality classes, high-quality methods, code formatting, self-documenting code, code refactoring, problem solving, problem solving methodology, 9789544007737, 9544007733

Starting Out with Programming Logic and Design, Third Edition, is a language-independent introductory programming book that orients students to programming concepts and logic without assuming any previous programming experience. In the successful, accessible style of Tony Gaddis' best-selling texts, useful examples and detail-oriented explanations allow students to become comfortable with fundamental concepts and logical thought processes used in programming without the complication of language syntax. Students gain confidence in their program design skills to transition into more comprehensive programming courses. The book is ideal for a programming logic course taught as a precursor to a language-specific introductory programming course, or for the first part of an introductory programming course.

With a clear writing style that is stripped of highly technical jargon, Programming Logic and Design, Introductory, Sixth Edition provides beginning programmers with a guide to developing structured program logic. The book's main goal is to introduce universal programming concepts, while enforcing good style and logical thinking along the way. The Sixth Edition will offer clearer explanations, reorganization to better reflect how programming languages are taught, increased emphasis on modularity, and two new appendices Flowchart Symbols and Structures. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

The Java PAL is designed to be paired with the Sixth Edition of Joyce Farrell's Programming Logic and Design text. Together, the two books provide the perfect opportunity for those who want to learn the fundamentals of programming and gain exposure to an actual programming language. Readers can discover how real Java code behaves within the context of the traditional language-independent logic and design course. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

There are several theories of programming. The first usable theory, often called "Hoare's Logic", is still probably the most widely known. In it, a specification is a pair of predicates: a precondition and postcondition (these and all technical terms will be defined in due course). Another popular and closely related theory by Dijkstra uses the weakest precondition predicate transformer, which is a function from programs and postconditions to preconditions. Jones's Vienna Development Method has been used to advantage in some industries; in it, a specification is a pair of predicates (as in Hoare's Logic), but the second predicate is a relation. Temporal Logic is yet another formalism that introduces some special operators and quantifiers to describe some aspects of computation. The theory in this book is simpler than any of those just mentioned. In it, a specification is just a boolean expression. Refinement is just ordinary implication. This theory is also more general than those just mentioned, applying to both terminating and nonterminating computation, to both sequential and parallel computation, to both stand-alone and interactive computation. And it includes time bounds, both for algorithm classification and for tightly constrained real-time applications.

With a clear writing style that is stripped of highly technical jargon, *Programming Logic and Design, Introductory, Sixth Edition* provides beginning programmers with a guide to developing structured program logic. The book's main goal is to introduce universal programming concepts, while enforcing good style and logical thinking along the way. The Sixth Edition will offer clearer explanations, reorganization to better reflect how programming languages are taught, increased emphasis on modularity, and two new appendices - Flowchart Symbols and Structures.

A new edition of a book, written in a humorous question-and-answer style, that shows how to implement and use an elegant little programming language for logic programming. The goal of this book is to show the beauty and elegance of relational programming, which captures the essence of logic programming. The book shows how to implement a relational programming language in Scheme, or in any other functional language, and demonstrates the remarkable flexibility of the resulting relational programs. As in the first edition, the pedagogical method is a series of questions and answers, which proceed with the characteristic humor that marked *The Little Schemer* and *The Seasoned Schemer*. Familiarity with a functional language or with the first five chapters of *The Little Schemer* is assumed. For this second edition, the authors have greatly simplified the programming language used in the book, as well as the implementation of the language. In addition to revising the text extensively, and simplifying and revising the "Laws" and "Commandments," they have added explicit "Translation" rules to ease translation of Scheme functions into relations.

Provide beginning programmers with a guide to developing object-oriented program logic with Farrell's *AN OBJECT-ORIENTED APPROACH TO PROGRAMMING LOGIC AND DESIGN, 4E*. This text takes a unique, language-independent approach to ensure students 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 ideal for students with no previous programming experience. Common business examples clearly illustrate key points. The book begins with a strong object-oriented focus in updated chapters that make even the most challenging programming concepts accessible. A wealth of updated programming

exercises in every chapter provide diverse practice opportunities, while new Video Lessons by the author clarify and expand on key topics. Use this text alone or with a language-specific companion text that emphasizes C++, Java or Visual Basic for the solid introduction to object-oriented programming logic your students need for success. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Learn how to program with C++ using today's definitive choice for your first programming language experience -- C++ PROGRAMMING: FROM PROBLEM ANALYSIS TO PROGRAM DESIGN, 8E. D.S. Malik's time-tested, user-centered methodology incorporates a strong focus on problem-solving with full-code examples that vividly demonstrate the hows and whys of applying programming concepts and utilizing C++ to work through a problem. Thoroughly updated end-of-chapter exercises, more than 20 extensive new programming exercises, and numerous new examples drawn from Dr. Malik's experience further strengthen the reader's understanding of problem solving and program design in this new edition. This book highlights the most important features of C++ 14 Standard with timely discussions that ensure this edition equips you to succeed in your first programming experience and well beyond. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Learn how to transform program logic and design concepts into working programs with the outstanding supplemental handbook, C++ PROGRAMS TO ACCOMPANY PROGRAMMING LOGIC AND DESIGN, 8E. Specifically designed to be paired with the latest edition of Joyce Farrell's highly successful and widely used textbook, PROGRAMMING LOGIC AND DESIGN, this innovative guide, developed by experienced industry practitioner Jo Ann Smith, combines the power of C++ with the popular, language-independent, logical approach of Farrell's text. The guide combines clear explanations of concepts and syntax with pseudocode, complete programming examples, numerous visuals, and real-world, business-related C++ code examples. Students practice concepts with both lab exercises and revised practice opportunities in each section. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

This second edition contains revised chapters taking into account recent research advances. More advanced exercises have been included, and "Part II The Prolog Language" has been modified to be compatible with the new Prolog standard. This is a graduate level text that can be used for self-study.

A catalog of solutions to commonly occurring design problems, presenting 23 patterns that allow designers to create flexible and reusable designs for object-oriented software. Describes the circumstances in which each pattern is applicable, and discusses the consequences and trade-offs of using the pattern within a larger design. Patterns are compiled from real systems, and include code for implementation in object-oriented programming languages like C++ and Smalltalk. Includes a bibliography. Annotation copyright by Book News, Inc., Portland, OR

Take advantage of JavaScript's power to build robust web-scale or enterprise applications that are easy to extend and maintain. By applying the design patterns outlined in this practical book, experienced JavaScript developers will learn how to write flexible and resilient code that's easier—yes, easier—to work with as your code base grows. JavaScript may be the most essential web programming language, but in the real world, JavaScript applications often break when you make changes. With this book, author Eric Elliott shows you how to add client- and server-side features to a large JavaScript application without negatively affecting the rest of your code. Examine the anatomy of a large-scale JavaScript application Build modern web apps with the capabilities of desktop applications Learn best practices for code organization, modularity, and reuse Separate your application into different layers of responsibility Build efficient, self-describing hypermedia APIs with Node.js Test, integrate, and deploy software updates in rapid cycles Control resource access with user authentication and authorization Expand your application's reach through internationalization Investigating meta-programming within the logic programming paradigm, Meta-Logics and Logic Programming presents original research on an important extension of logic programming that makes it more amenable for knowledge representation and programming in general. The 12 contributions, many written especially for this book, explore the foundations, language design issues, and applications of meta-programming in logic programming. Meta-programming -- the process of writing computer programs that can manipulate representations of other programs -- has been key both in the foundations of computer science and in its practical developments. Examples of meta-programs include compilers, interpreters, program analyzers, and partial evaluators. The choice of logic programming as a basis for meta-programming offers several practical and theoretical advantages: among them, the possibility of tackling critical foundational problems of meta-programming within a strong theoretical framework, and the surprising ease of programming. The usual framework of logic programming (and more generally first-order logic), however, has to be modified and extended to formally deal with meta-programs, extensions the editors call "meta-logics." Along with an exploration of meta-programming in logic programming, the definitions, formal properties, and use of these extensions constitute one of the book's main themes. The first part of the book, Foundations, focuses on the representation problem -- how object programs are represented within meta-programs. The second part, Language Support for Meta-Logics, is concerned with language extensions that make meta-programming easier and more elegant. The third part, Meta-Logics for Knowledge Management, deals with the use of meta-logic for advanced knowledge representation purposes. When programmers list their favorite books, Jon Bentley's collection of programming pearls is commonly included among the classics. Just as natural pearls grow from grains of sand that irritate oysters, programming pearls have grown from real problems that have irritated real programmers. With origins

beyond solid engineering, in the realm of insight and creativity, Bentley's pearls offer unique and clever solutions to those nagging problems. Illustrated by programs designed as much for fun as for instruction, the book is filled with lucid and witty descriptions of practical programming techniques and fundamental design principles. It is not at all surprising that Programming Pearls has been so highly valued by programmers at every level of experience. In this revision, the first in 14 years, Bentley has substantially updated his essays to reflect current programming methods and environments. In addition, there are three new essays on testing, debugging, and timing set representations string problems All the original programs have been rewritten, and an equal amount of new code has been generated. Implementations of all the programs, in C or C++, are now available on the Web. What remains the same in this new edition is Bentley's focus on the hard core of programming problems and his delivery of workable solutions to those problems. Whether you are new to Bentley's classic or are revisiting his work for some fresh insight, the book is sure to make your own list of favorites.

Programming Fundamentals - A Modular Structured Approach using C++ is written by Kenneth Leroy Busbee, a faculty member at Houston Community College in Houston, Texas. The materials used in this textbook/collection were developed by the author and others as independent modules for publication within the Connexions environment. Programming fundamentals are often divided into three college courses: Modular/Structured, Object Oriented and Data Structures. This textbook/collection covers the rest of those three courses.

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