

Programming Logic And Design Second Edition Introductory

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.

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.

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.

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.

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

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.

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.

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.

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.

Teach your students how to use Visual Basic to transform program logic and design concepts into working programs with Smith's MICROSOFT VISUAL BASIC 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 Visual Basic with the language-independent, logical approach of the PROGRAMMING LOGIC AND DESIGN text. Together, the two books provide the perfect opportunity for those who want to learn the fundamentals of programming, while also learning an actual leading programming language. This guide combines clear explanations of concepts and syntax with pseudocode, complete programming examples, numerous visuals, and actual every day and business Visual Basic code examples. Students practice concepts with both lab exercises and additional handwritten practice opportunities in each section. With MICROSOFT VISUAL BASIC PROGRAMS TO ACCOMPANY PROGRAMMING LOGIC AND DESIGN, 8E, readers discover how real Visual Basic code functions while still mastering concepts and taking advantage of the strengths of a 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.

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.

This book constitutes the proceedings of the 15th International Symposium on Functional and Logic Programming, FLOPS 2020, held in Akita, Japan*, in September 2020. The 12 papers presented in this volume were carefully reviewed and selected from 25 submissions. They cover all aspects of the design, semantics, theory, applications, implementations, and teaching of declarative programming focusing on topics such as functional programming, logic programming, declarative programming, constraint programming, formal method, model checking, program transformation, program refinement, and type theory. *The conference was held virtually due to the COVID-19 pandemic.

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.

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.

If you want to learn about computer programming at warp speed then this is the book for you. This is a fun, hands-on text that uses free Python software to teach you programming. This introductory text was written for students new to programming and those who want to start writing code fast. It is a hands-on book and uses Python as the primary vehicle to teach you how to program. With the hands-on sections you can stop and complete a knowledge building activity to reinforce what you have just learned. In this way you get to "learn and use" your new knowledge as you read instead of only at the end of each chapter. Python is not just a teaching and learning language, but a professional, powerful, and modern language that is used around the world everyday on many computer platforms. Learning Python is not an academic chore that you will never use again but a technology skill that will serve you well over and over. Indeed the design skills alone are worth your effort. Suffice to say if you never write another line of

code again after reading this book, the information will serve you well in all your future computing endeavors!

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.

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.

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.

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.

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.

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.

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.

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.

For courses on digital design in an Electrical Engineering, Computer Engineering, or Computer Science department. Digital Design, fifth edition is a modern update of the classic authoritative text on digital design. This book teaches the basic concepts of digital design in a clear, accessible manner. The book presents the basic tools for the design of digital circuits and provides procedures suitable for a variety of digital 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.

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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.

Don't simply show your data—tell a story with it! Storytelling with Data teaches you the fundamentals of data visualization and how to communicate effectively with data. You'll discover the power of storytelling and the way to make data a pivotal point in your story. The lessons in this illuminative text are grounded in theory, but made accessible through numerous real-world examples—ready for immediate application to your next graph or presentation. Storytelling is not an inherent skill, especially when it comes to data visualization, and the tools at our disposal don't make it any easier. This book demonstrates how to go beyond conventional tools to reach the root of your data, and how to use your data to create an engaging, informative, compelling story. Specifically, you'll learn how to: Understand the importance of context

and audience Determine the appropriate type of graph for your situation Recognize and eliminate the clutter clouding your information Direct your audience's attention to the most important parts of your data Think like a designer and utilize concepts of design in data visualization Leverage the power of storytelling to help your message resonate with your audience Together, the lessons in this book will help you turn your data into high impact visual stories that stick with your audience. Rid your world of ineffective graphs, one exploding 3D pie chart at a time. There is a story in your data—Storytelling with Data will give you the skills and power to tell it!

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.

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. 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.

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.

Microsoft Visual Basic .NET Programs to Accompany Programming Logic and Design is designed to be paired with the Third 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 .NET code behaves, while remaining within the context of the traditional language-independent logic and design course. Get your start in programming with the companion text you have been waiting for - Microsoft Visual Basic .NET Programs to Accompany Programming Logic and Design!

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.

An introduction to the engineering principles of embedded systems, with a focus on modeling, design, and analysis of cyber-physical systems. The most visible use of computers and software is processing information for human consumption. The vast majority of computers in use, however, are much less visible. They run the engine, brakes, seatbelts, airbag, and audio system in your car. They digitally encode your voice and construct a radio signal to send it from your cell phone to a base station. They command robots on a factory floor, power generation in a power plant, processes in a chemical plant, and traffic lights in a city. These less visible computers are called embedded systems, and the software they run is called embedded software. The principal challenges in designing and analyzing embedded systems stem from their interaction with physical processes. This book takes a cyber-physical approach to embedded systems, introducing the engineering concepts underlying embedded systems as a technology and as a subject of study. The focus is on modeling, design, and analysis of cyber-physical systems, which integrate computation, networking, and physical processes. The second edition offers two new chapters, several new exercises, and other improvements. The book can be used as a textbook at the advanced undergraduate or introductory graduate level and as a professional reference for practicing engineers and computer scientists. Readers should have some familiarity with machine structures, computer programming, basic discrete mathematics and algorithms, and signals and systems.

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.

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 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

Discover the do's and don'ts involved in crafting readable Swift code as you explore common Swift coding challenges and the best practices that address them. From spacing, bracing, and semicolons to proper API style, discover the whys behind each recommendation, and add to or establish your own house style guidelines. This practical, powerful, and opinionated guide offers the best practices you need to know to work successfully in this equally opinionated programming language. Apple's Swift programming language has finally reached stability, and developers are demanding to know how to program the language properly. Swift Style guides you through the ins and outs of Swift programming best practices. This is the first best practices book for serious, professional Swift programmers and for programmers who want to shine their skills to be hired in this demanding market. A style guide offers a consistent experience of well-crafted code that lets you focus on the code's underlying meaning, intent, and implementation. This book doesn't offer canonical answers on Swift coding style. It explores the areas of Swift where structure comes into play. Whether you're developing a personal style or a house style, there are always ways to enhance your code choices. You'll find here the ideas and principles to establish or enhance your own best style practices. Begin with simple syntactical styling. Strengthen code bracing for easy readability. Style your closures for safety and resilience. Perfect spacing and layout. Master literal initialization and typing. Optimize control flow layout and improve conditional style choices. Transition from Objective-C and move code into Swift the right way. Boost API design using proper naming and labeling. Elevate defaulted arguments and variadics to their right places. Finally, Erica offers her own broad recommendations on good coding practice. What You Need: Recent version of the Swift programming language

A multi-user game, web site, cloud application, or networked database can have thousands of users all interacting at the same time. You need a powerful, industrial-strength tool to handle the really hard problems inherent in parallel, concurrent environments. You need Erlang. In this second edition of the bestselling Programming Erlang, you'll learn how to write parallel programs that scale effortlessly on multicore systems. Using Erlang, you'll be surprised at how easy it becomes to deal with parallel problems, and how much faster and more efficiently your programs run. That's because Erlang uses sets of parallel processes-not a single sequential process, as found in most programming languages. Joe Armstrong, creator of Erlang, introduces this powerful language in small steps, giving you a complete overview of Erlang and how to use it in common scenarios. You'll start with sequential programming, move to parallel programming and handling errors in parallel programs, and learn to work confidently with distributed programming and the standard Erlang/Open Telecom Platform (OTP) frameworks. You need no previous knowledge of functional or parallel programming. The chapters are packed with hands-on, real-world tutorial examples and insider tips and advice, and finish with exercises for both beginning and advanced users. The second edition has been extensively rewritten. New to this edition are seven chapters covering the latest Erlang features: maps, the type system and the Dialyzer, WebSockets, programming idioms, and a new stand-alone execution environment. You'll write programs that dynamically detect and correct errors, and that can be upgraded without stopping the system. There's also coverage of rebar (the de facto Erlang build system), and information on how to share and use Erlang projects on github, illustrated with examples from cowboy and bitcask. Erlang will change your view of the world, and of how you program. What You Need The Erlang/OTP system. Download it from erlang.org.

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