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Advanced Swift takes you through Swift's features, from low-level programming to high-level abstractions. In this book, we'll write about advanced concepts in Swift programming. If you have read the Swift Programming Guide, and want to explore more, this book is for you. Swift is a great language for systems programming, but also lends itself for very high-level programming. We'll explore both high-level topics (for example, programming with generics and protocols), as well as low-level

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topics (for example, wrapping a C library and string internals).

Offers twenty-four lessons teaching how to build next-generation OS X and iOS apps using Apple's new programming language, with step-by-step instructions for such common tasks as using operators, iterating code with loops, and introducing generics.

Programming Language Explorations is a tour of several modern programming languages in use today. The book teaches fundamental language concepts using a language-by-language approach. As each language is presented, the authors introduce new concepts as they appear, and revisit familiar ones,

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comparing their implementation with those from languages seen in prior chapters. The goal is to present and explain common theoretical concepts of language design and usage, illustrated in the context of practical language overviews. Twelve languages have been carefully chosen to illustrate a wide range of programming styles and paradigms. The book introduces each language with a common trio of example programs, and continues with a brief tour of its basic elements, type system, functional forms, scoping rules, concurrency patterns, and sometimes, metaprogramming facilities. Each language chapter ends with a summary, pointers to open source

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projects, references to materials for further study, and a collection of exercises, designed as further explorations. Following the twelve featured language chapters, the authors provide a brief tour of over two dozen additional languages, and a summary chapter bringing together many of the questions explored throughout the text. Targeted to both professionals and advanced college undergraduates looking to expand the range of languages and programming patterns they can apply in their work and studies, the book pays attention to modern programming practice, covers cutting-edge languages and patterns, and provides many runnable examples, all of which can be found

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in an online GitHub repository. The exploration style places this book between a tutorial and a reference, with a focus on the concepts and practices underlying programming language design and usage.

Instructors looking for material to supplement a programming languages or software engineering course may find the approach unconventional, but hopefully, a lot more fun.

Get to grips with Apple's new SwiftUI framework for creating robust UIs for iOS and iPadOS using Swift programming Key Features Use SwiftUI for building dynamic apps for Apple devices from scratch Understand declarative syntax in cross-platform development and

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how states work within SwiftUI Learn to develop watchOS apps by reusing SwiftUI code
Book Description
SwiftUI is the new and powerful interface toolkit that lets you design and build iOS, iPadOS, and macOS apps using declarative syntax. It is a powerful way to develop the UI elements of applications, which would normally be tightly coupled to application logic. Learn SwiftUI will get you up to speed with the framework and cross-device UI development in no time. Complete with detailed explanations and practical examples, this easy-to-follow guide will teach you the fundamentals of the SwiftUI toolkit. You'll learn how to build a powerful

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iOS and iPadOS application that can be reused for deployment on watchOS. As you progress, you'll delve into UI and unit testing in iOS apps, along with learning how to test your SwiftUI code for multiple devices. The book will also show you how to integrate SwiftUI features such as data binding and network requests into your current application logic. By the end of this book, you will have learned how to build a cross-device application using the SwiftUI framework and Swift programming. What you will learn

Explore the fundamentals of SwiftUI and compare it with existing UI frameworks

Write SwiftUI syntax and understand what should and shouldn't

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be included in SwiftUI's layerAdd text and images to a SwiftUI view and decorate them using SwiftUI's modifiersCreate basic forms, and use camera and photo library functions to add images to themUnderstand the core concepts of Maps in iOS apps and add a MapView in SwiftUIDesign extensions within your existing apps to run them on watchOSHandle networking calls in SwiftUI to retrieve data from external sourcesWho this book is for This SwiftUI book helps any mobile app developer looking to understand the fundamentals of the new SwiftUI framework along with the benefits of cross-device development. A solid understanding of iOS and macOS app

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development, along with some knowledge of the Swift programming language, will be beneficial. Basic programming knowledge is essential to grasp the concepts covered in the book effectively.

Deep Dive Into Swift! Swift is a rich language with a plethora of features to offer. Reading the official documentation or entry-level books is important, but it's not enough to grasp the true power of the language. Expert Swift is here to help, by showing you how to harness the full power of Swift. You'll learn about advanced usages of protocols, generics, functional reactive programming, API design and more. Who This Book is For This book is for intermediate

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Swift developers who already know the basics of Swift and are looking to deepen their knowledge and understanding of the language. Topics Covered in Expert Swift

Protocols and Generics: Learn how protocols and generics work, and how you can leverage them in your code to produce clean, long-lasting and easy-to-refactor APIs.

Sequences and Collections: Learn how to use Sequences and Collections to write generic algorithms that operate across type families.

Unsafe: Understand the memory layout of types and how to use typed and untyped pointers.

Functional Reactive Programming: Explore the most important and refined concepts of

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functional reactive programming and how you can apply these concepts to your apps. Objective-C

Interoperability: Learn how to expose Objective-C code to Swift and vice versa. Library and API Design:

Enhancing your skill set and intuition for designing great APIs. One thing you can count on: after reading this book, you'll be prepared to use the advanced features of Swift and improve your existing code with the knowledge you'll acquire.

*Swift Functional Programming
IOS 15 Programming Fundamentals
with Swift*

Real World OCaml

*Master the fundamentals of
programming in Swift 4*

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*Explore Swift programming through
iOS app development*

*Deep dive into the latest edition of the
Swift programming language, 5th
Edition*

Expert Swift (First Edition)

What will you learn from this book? Swift is best known as Apple's programming language of choice for developing apps on iOS, iPadOS, macOS, watchOS, and tvOS. But it's far more versatile than that. Open source Swift is also gaining ground as a language for systems programming and server-side code, and it runs on Linux and Windows. So where do you start? With Head First Swift, you'll explore from the ground

up: from collecting and controlling data to reusing code, producing custom data types, and structuring programs and user interfaces with SwiftUI by building safe, protocol-driven code. With Swift under your belt, you'll be ready to build everything from mobile and web apps to games, frameworks, command-line tools, and beyond. What's so special about this book? If you've read a Head First book, you know what to expect--a visually rich format designed for the way your brain works. If you haven't, you're in for a treat. With this book, you'll learn Swift through a multisensory experience that

engages your mind rather than a text-heavy approach that puts you to sleep.

Develop highly efficient and appealing iOS applications by using the Swift language About This Book Develop a series of applications with Swift using the development kits and new/updated APIs Use the new features of iOS 8 to add new flavor to your applications A hands-on guide with detailed code snippets to aid you in developing powerful Swift applications Who This Book Is For If you are an iOS developer with experience in Objective-C, and wish to develop applications with Swift, then this book is ideal

for you. Familiarity with the fundamentals of Swift is an added advantage but not a necessity. What You Will Learn Use playgrounds in Xcode to make the writing of Swift code productive and easy Get acquainted with the advanced features of Swift and make complete use of them in your code Add a new method for authentication to your app using Touch ID Develop health-related apps using HealthKit Take your apps to the next level of performance and capability using Metal Develop applications for wearables using WatchKit Use Notification Center to easily access all your notifications

Make your users devices more stylish by using Apple's built-in Quick Type keyboard, instead of the native one In Detail After years of using Objective-C for developing apps for iOS/Mac OS, Apple now offers a new, creative, easy, and innovative programming language for application development, called Swift. Swift makes iOS application development a breeze by offering speed, security and power to your application development process. Swift is easy to learn and has awesome features such as being open source, debugging, interactive playgrounds, error handling

model, and so on. Swift has simplified its memory management with Automatic Reference Counting (ARC) and it is compatible with Objective-C. This book has been created to provide you with the information and skills you need to use the new programming language Swift. The book starts with an introduction to Swift and code structure. Following this, you will use playgrounds to become familiar with the language in no time. Then the book takes you through the advanced features offered by Swift and how to use them with your old Objective-C code or projects. You will then learn to use Swift in real projects

by covering APIs such as HealthKit, Metal, WatchKit, and Touch ID in each chapter. The book's easy to follow structure ensures you get the best start to developing applications with Swift. Style and approach The book achieves its end goal by dividing its content into two parts. Part 1 will take the readers, who are new to Swift, through its architecture and basics. Part 2 of the book will cover content on application development with Swift.

Learn Reactive Programming in Swift with RxSwift!The popularity of reactive programming continues to grow on an every-increasing number of platforms

and languages. Rx lets developers easily and quickly build apps with code that can be understood by other Rx developers - even over different platforms. Not only will you learn how to use the RxSwift port to create complex reactive applications on iOS, you'll also see how to easily solve common application design issues by using RxSwift. Finally you'll discover how to exercise full control over the library and leverage the full power of reactive programming in your apps. This book is for iOS developers who already feel comfortable with iOS and Swift, and want to dive deep into

development with RxSwift. Topics Covered in RxSwift:- Getting Started: Get an introduction to the reactive programming paradigm, learn the terminology involved and see how to begin using RxSwift in your projects.- Event Management: Learn how to handle asynchronous event sequences via two key concepts in Rx - Observables and Observers.- Being Selective: See how to work with various events using concepts such as filtering, transforming, combining, and time operators.- UI Development: RxSwift makes it easy to work with UI of your apps using RxCocoa, which provides integration of both UIKit and

***Cocoa.- Intermediate Topics:
Level up your RxSwift knowledge
with chapters on reactive
networking, multi-threading, and
error handling. And much, much
more! By the end of this book,
you'll have hands-on experience
solving common issues in a
reactive paradigm - and you'll be
well on your way to coming up
with your own Rx patterns and
solutions!***

***This fast-moving tutorial
introduces you to OCaml, an
industrial-strength programming
language designed for
expressiveness, safety, and
speed. Through the book's many
examples, you'll quickly learn
how OCaml stands out as a tool***

for writing fast, succinct, and readable systems code. Real World OCaml takes you through the concepts of the language at a brisk pace, and then helps you explore the tools and techniques that make OCaml an effective and practical tool. In the book's third section, you'll delve deep into the details of the compiler toolchain and OCaml's simple and efficient runtime system. Learn the foundations of the language, such as higher-order functions, algebraic data types, and modules Explore advanced features such as functors, first-class modules, and objects Leverage Core, a comprehensive general-purpose standard library

for OCaml Design effective and reusable libraries, making the most of OCaml's approach to abstraction and modularity Tackle practical programming problems from command-line parsing to asynchronous network programming Examine profiling and interactive debugging techniques with tools such as GNU gdb Move into iOS development by getting a firm grasp of its fundamentals, including the Xcode 13 IDE, Cocoa Touch, and the latest version of Apple's acclaimed programming language, Swift 5.5. With this thoroughly updated guide, you'll learn the Swift language,

***understand Apple's Xcode
development tools, and discover
the Cocoa framework. Explore
Swift's object-oriented concepts
Become familiar with built-in
Swift types Dive deep into Swift
objects, protocols, and generics
Tour the life cycle of an Xcode
project Learn how nibs are
loaded Understand Cocoa's
event-driven design
Communicate with C and
Objective-C In this edition, catch
up on the latest iOS
programming features:
Structured concurrency:
async/await, tasks, and actors
Swift native formatters and
attributed strings Lazy locals and
throwing getters Enhanced***

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***collections with the Swift
Algorithms and Collections
packages Xcode tweaks: column
breakpoints, package
collections, and Info.plist build
settings Improvements in Git
integration, localization, unit
testing, documentation, and
distribution And more!
An In-Depth Guide for
Programmers
Exploring Clojure, Elixir, Haskell,
Scala, and Swift
Speaking JavaScript
Functional Programming in Java
iOS app programming for kids
and other beginners
Learn Functional Programming
with Elixir
App Architecture***

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Develop the skills required to create compelling, maintainable, and robust iOS and OS X apps with Swift

About This Book Write expressive, understandable, and maintainable Swift 2 code with this hands-on tutorial Unveil the complex underpinnings of Swift to turn your app ideas into reality This book is packed with real-life examples to help you implement concepts as you learn Who This Book Is For If you are looking to build iOS or OS X apps using the most modern technology, this book is ideal

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for you. You will find this book especially useful if you are new to programming or if you are yet to develop for iOS or OS X. No prior programming exposure is required. What You Will Learn Form a solid understanding of the Swift 2 language Get to know the practical aspects of how a computer program actually works Understand the paradigms used by Apple's frameworks so you are not intimidated by them Utilize the vast resources written in Objective-C to better inform your Swift programming

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Develop a basic portfolio of Swift code by learning the critical concepts Experience both object-oriented and functional programming Get to know the new coding techniques made available by Swift 2 Discover resources to ensure you never stop becoming a better developer In Detail Swift is Apple's new programming language and the future of iOS and OS X app development. It is a high-performance language that feels like a modern scripting language. On the surface, Swift is easy to jump into,

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but it has complex underpinnings that are critical to becoming proficient at turning an idea into reality. This book is an approachable, step-by-step introduction into programming with Swift for everyone. It begins by giving you an overview of the key features through practical examples and progresses to more advanced topics that help differentiate the proficient developers from the mediocre ones. It covers important concepts such as Variables, Optionals, Closures, Generics, and

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Memory Management. Mixed in with those concepts, it also helps you learn the art of programming such as maintainability, useful design patterns, and resources to further your knowledge. This all culminates in writing a basic iOS app that will get you well on your way to turning your own app ideas into reality. Style and approach This is an approachable, step-by-step guide to programming in Swift 2. Each topic is separated into compressible sections that are full of practical examples and easy-

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to-understand explanations. Each section builds on the previous topics so you can develop a proficient and comprehensive understanding of app development in Swift 2. Develop UI-heavy applications more easily, faster, and error-free. Based on several enhancements to the Swift language, SwiftUI takes a declarative approach to building UIs. Instead of imperatively coding the UI, this book will show you how to describe how you want your UI to look. SwiftUI treats the UI as a function of its

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state, thereby making managing your app's state a lot easier. Change the underlying data model to redraw all parts of the UI that are connected to that particular slice of data. Likewise, easily update the underlying data structures UI elements are bound to. Combine is Apple's Functional Reactive Programming framework. It complements SwiftUI and other frameworks, such as the networking APIs, in a natural way. Using Combine, you can subscribe to events and describe data processing

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In a way free of side effects. This allows for an easier implementation of event-driven applications. Using SwiftUI and Combine build more error-free apps in a shorter amount of time, targeting all of Apple's platforms (iOS, iPadOS, watchOS, macOS, tvOS) with little to no overhead. What You'll Learn Architect and structure modern applications on Apple platforms using SwiftUI and Combine Build simple and complex UIs using SwiftUI Simplify complex and error-prone code and build more

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reliable and error-free apps with Combine Who This Book Is For Developers wanting to dig deeper into building applications for Apple's platforms with SwiftUI and Combine. Previous experience developing applications for iOS or Apple's other platforms is helpful. Working knowledge of the Swift programming language is required.

NOTE: This edition is now out of date, and does not conform with the current version of Swift. Please check out the newer edition instead, which is ISBN

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9780134289779. LEARNING A NEW PROGRAMMING LANGUAGE can be daunting. With Swift, Apple has lowered the barrier of entry for developing iOS and OS X apps by giving developers an innovative new programming language for Cocoa and Cocoa Touch. If you are new to Swift, this book is for you. If you have never used C, C++, or Objective-C, this book is definitely for you. With this hands-on guide, you'll quickly be writing Swift code, using Playgrounds to instantly see the results of your work. Author Boisy G.

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Pitre gives you a solid grounding in key Swift language concepts—including variables, constants, types, arrays, and dictionaries—before he shows you how to use Swift's innovative Xcode integrated development environment to create apps for iOS and OS X. THIS BOOK INCLUDES: Detailed instruction, ample illustrations, and clear examples Real-world guidance and advice Best practices from an experienced Mac and iOS developer Emphasis on how to use Xcode, Playgrounds,

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and the REPL COMPANION
WEBSITE: www.peachpit.com/swiftbeginners includes additional resources.

Function literals, Monads,
Lazy evaluation, Currying,
and more About This Book

Write concise and
maintainable code with
streams and high-order
functions Understand the
benefits of currying your
Golang functions Learn the
most effective design
patterns for functional
programming and learn
when to apply each of them
Build distributed MapReduce
solutions using Go Who This

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Book Is For This book is for Golang developers comfortable with OOP and interested in learning how to apply the functional paradigm to create robust and testable apps. Prior programming experience with Go would be helpful, but not mandatory. What You Will Learn Learn how to compose reliable applications using high-order functions Explore techniques to eliminate side-effects using FP techniques such as currying Use first-class functions to implement pure functions Understand how to

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Implement a lambda expression in Go Compose a working application using the decorator pattern Create faster programs using lazy evaluation Use Go concurrency constructs to compose a functionality pipeline Understand category theory and what it has to do with FP In Detail Functional programming is a popular programming paradigm that is used to simplify many tasks and will help you write flexible and succinct code. It allows you to decompose your programs into smaller, highly reusable

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components, without applying conceptual restraints on how the software should be modularized. This book bridges the language gap for Golang developers by showing you how to create and consume functional constructs in Golang. The book is divided into four modules. The first module explains the functional style of programming; pure functional programming (FP), manipulating collections, and using high-order functions. In the second module, you will learn design patterns that

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you can use to build FP-style applications. In the next module, you will learn FP techniques that you can use to improve your API signatures, to increase performance, and to build better Cloud-native applications. The last module delves into the underpinnings of FP with an introduction to category theory for software developers to give you a real understanding of what pure functional programming is all about, along with applicable code examples. By the end of the book, you will be

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adept at building applications the functional way. Style and approach This book takes a pragmatic approach and shows you techniques to write better functional constructs in Golang. We'll also show you how use these concepts to build robust and testable apps.

Elixir's straightforward syntax and this guided tour give you a clean, simple path to learn modern functional programming techniques. No previous functional programming experience required! This book walks

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you through the right concepts at the right pace, as you explore immutable values and explicit data transformation, functions, modules, recursive functions, pattern matching, high-order functions, polymorphism, and failure handling, all while avoiding side effects. Don't board the Elixir train with an imperative mindset! To get the most out of functional languages, you need to think functionally. This book will get you there. Functional programming offers useful techniques for building maintainable and scalable

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software that solves today's difficult problems. The demand for software written in this way is increasing - you don't want to miss out. In this book, you'll not only learn Elixir and its features, you'll also learn the mindset required to program functionally. Elixir's clean syntax is excellent for exploring the critical skills of using functions and concurrency. Start with the basic techniques of the functional way: working with immutable data, transforming data in discrete steps, and avoiding side

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effects. Next, take a deep look at values, expressions, functions, and modules.

Then extend your programming with pattern matching and flow control with case, if, cond, and functions. Use recursive functions to create iterations. Work with data types such as lists, tuples, and maps. Improve code reusability and readability with Elixir's most common high-order functions. Explore how to use lazy computation with streams, design your data, and take advantage of polymorphism with

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protocols. Combine functions and handle failures in a maintainable way using Elixir features and libraries. Learn techniques that matter to make code that lives harmoniously with the language. What You Need: You'll need a computer and Elixir 1.4 or newer version installed. No previous functional programming or Elixir experience is required. Some experience with any programming language is recommended.

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Programming Language
Pragmatics

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Harnessing the Power Of
Java 8 Lambda Expressions
Learn to Develop iOS Apps
Using SwiftUI, Swift 5 and
Xcode 12

Recipes for Object-Oriented
and Functional Programming
Swift iOS Programming for
Kids

Beginning iPhone and iPad
programming

**This book explains a range of
application design patterns and their
implementation techniques using a
single example app, fully implemented
in five design patterns. Instead of
advocating for any particular pattern,
we lay out the problems all
architectures are trying to address:**

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constructing the app's components, communicating between the view and the model, and handling non-model state. We show high-level solutions to these problems and break them down to the level of implementation for five different design patterns - two commonly used and three more experimental. The common architectures are Model-View-Controller and Model-View-ViewModel + Coordinator. In addition to explaining these patterns conceptually and on the implementation level, we discuss solutions to commonly encountered problems, like massive view controllers. On the experimental side we explain View-State-Driven Model-View-Controller, ModelAdapter-

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ViewBinder, and The Elm Architecture. By examining these experimental patterns, we extract valuable lessons that can be applied to other patterns and to existing code bases.

Swift greatly simplifies the process of developing applications for Apple devices. This book provides you with the essential skills to help you get started with developing applications using Swift. Key Features Teaches you how to correctly structure and architect software using Swift Uses real-world examples to connect the theory to a professional setting Imparts expertise in the core Swift standard library Book Description Take your first foray into programming for Apple devices with Swift. Swift is fundamentally different

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from Objective-C, as it is a protocol-oriented language. While you can still write normal object-oriented code in Swift, it requires a new way of thinking to take advantage of its powerful features and a solid understanding of the basics to become productive. What you will learn Explore the fundamental Swift programming concepts, language structure, and the Swift programming syntax Learn how Swift compares to other computer languages and how to transform your thinking to leverage new concepts such as optionals and protocols Master how to use key language elements, such as strings and collections Grasp how Swift supports modern application development using advanced features, such as built-in Unicode support and higher-order

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functions Who this book is for If you are seeking fundamental Swift programming skills, in preparation for learning to develop native applications for iOS or macOS, this book is the best for you. You don't need to have any prior Swift knowledge; however, object-oriented programming experience is desired.

Programming Language Pragmatics, Fourth Edition, is the most comprehensive programming language textbook available today. It is distinguished and acclaimed for its integrated treatment of language design and implementation, with an emphasis on the fundamental tradeoffs that continue to drive software development. The book provides readers with a solid foundation in the

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syntax, semantics, and pragmatics of the full range of programming languages, from traditional languages like C to the latest in functional, scripting, and object-oriented programming. This fourth edition has been heavily revised throughout, with expanded coverage of type systems and functional programming, a unified treatment of polymorphism, highlights of the newest language standards, and examples featuring the ARM and x86 64-bit architectures. Updated coverage of the latest developments in programming language design, including C & C++11, Java 8, C# 5, Scala, Go, Swift, Python 3, and HTML 5 Updated treatment of functional programming, with extensive coverage of OCaml New chapters devoted to

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type systems and composite types
Unified and updated treatment of
polymorphism in all its forms New
examples featuring the ARM and x86
64-bit architectures

The goal of this book is to teach the
skills necessary to build iOS 14
applications using SwiftUI, Xcode 12
and the Swift 5.3 programming
language. Beginning with the basics,
this book provides an outline of the
steps necessary to set up an iOS
development environment together
with an introduction to the use of Swift
Playgrounds to learn and experiment
with Swift. The book also includes in-
depth chapters introducing the Swift
5.3 programming language including
data types, control flow, functions,
object-oriented programming, property

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wrappers and error handling. An introduction to the key concepts of SwiftUI and project architecture is followed by a guided tour of Xcode in SwiftUI development mode. The book also covers the creation of custom SwiftUI views and explains how these views are combined to create user interface layouts including the use of stacks, frames and forms. Other topics covered include data handling using state properties in addition to observable, state and environment objects, as are key user interface design concepts such as modifiers, lists, tabbed views, context menus, user interface navigation, and outline groups. The book also includes chapters covering graphics drawing, user interface animation, view

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transitions and gesture handling, WidgetKit, document-based apps and SiriKit integration. Chapters are also provided explaining how to integrate SwiftUI views into existing UIKit-based projects and explains the integration of UIKit code into SwiftUI. Finally, the book explains how to package up a completed app and upload it to the App Store for publication. Along the way, the topics covered in the book are put into practice through detailed tutorials, the source code for which is also available for download. The aim of this book, therefore, is to teach you the skills necessary to build your own apps for iOS 14 using SwiftUI. Assuming you are ready to download the iOS 14 SDK and Xcode 12 and have an Apple Mac

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system you are ready to get started. This book will teach you how to use Swift to apply functional programming techniques to your iOS or OS X projects. These techniques complement object-oriented programming that most Objective-C developers will already be familiar with, providing you with a valuable new tool in your developer's toolbox. We will start by taking a look at Swift's new language features, such as higher-order functions, generics, optionals, enumerations, and pattern matching. Mastering these new features will enable you to write functional code effectively. After that, we will provide several examples of how to use functional programming patterns to solve real-world problems. These examples include a compositional and

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type-safe API around Core Image, a library for diagrams built on Core Graphics, and a small spreadsheet application built from scratch.

SwiftUI Essentials - iOS 14 Edition

IOS Application Design Patterns in Swift

Asynchronous Programming with SwiftUI and Combine

Swift, Xcode, and Cocoa Basics

Beginning Swift

Swift Protocol-Oriented Programming

Functional programming for the masses

Enter the Swift future of iOS and OS X programming Beginning Swift

Programming is your ideal starting point for creating Mac, iPhone, and iPad apps using Apple's new Swift programming language. Written by an experienced Apple developer and trainer, this

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comprehensive guide explains everything you need to know to jumpstart the creation of your app idea. Coverage includes data types, strings and characters, operators and functions, arrays and dictionaries, control flow, and looping, with expert guidance on classes, objects, class inheritance, closures, protocols, and generics. This succinct — yet complete — overview provides a detailed introduction to the core features of Swift. Apple developed Swift to address the limitations of Objective-C, and add features found in more complex languages like Python. The results is simpler, cleaner, more expressive code with automatic memory management, functional programming patterns, and more, including built-in features that make Swift apps faster, scalable, and more secure. This book explains it all, helping developers master Apple's new

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language. Become fluent with syntax that's easier to read and maintain Understand inferred types for cleaner, less mistake-prone code Learn the key features that make Swift more expressive than Objective-C Learn the new optional types in Swift that make your code more resilient Understand the key design patterns in iOS and Mac OS programming using protocols and delegates Learn how to use generics to create highly reusable code Learn the new access controls mechanism in Swift Get up to speed quickly to remain relevant and ahead of the curve.

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Summary Hello Swift! is a how-to guide to programming iOS Apps with the Swift language, written from a kid's perspective. This approachable, well-illustrated, step-by-step guide takes you

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from beginning programming concepts all the way through developing complete apps. (Adults will like it too!) Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology It's fun to play games and explore new things on your iPhone. How amazing would it be to create your own apps? With a little practice, you can! Apple's Swift language, along with special coding playgrounds and an easy-to-use programming environment, make it easier than ever. Take it from author Tanmay Bakshi, who started programming when he was just five years old. About the Book His book, Hello Swift! iOS app programming for kids and other beginners, teaches you how to write apps for iPhones and iOS devices step by step, starting with your first line of Swift code. Packed with dozens of apps and

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oriented programming to write flexible and easier-to-manage code. You will also see how to add the copy-on-write feature to your custom value types and how to avoid memory management issues caused by strong reference cycles. What you will learn

Understand core Swift components, including operators, collections, control flows, and functions

Learn how and when to use classes, structures, and enumerations

Understand how to use protocol-oriented design with extensions to write easier-to-manage code

Use design patterns with Swift, to solve commonly occurring design problems

Implement copy-on-write for you custom value types to improve performance

Add concurrency to your applications using Grand Central Dispatch and Operation Queues

Implement generics to write flexible and reusable code

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Functions; Function

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Value; Void Return Type
and Parameters; Function
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Overloading; Default
Parameter Values; Variadic
Parameters; Ignored
Parameters; Modifiable
Parameters; Function In
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Function As Value;
Anonymous Functions;
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Function; Closure Setting
a Captured Variable;
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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

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Summary Do you have a fantastic idea for an iPhone app but no idea how to bring it to life? Great news! With the right tools and a little practice, anyone can create an app. This book will get you started, even if you've never written a line of computer code. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from

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Not (Lion) app By the end, you'll be able to create and run your own apps, and you'll have the confidence to learn more on your own. The book is updated for Swift 3. About the Reader This book is written especially for non programmers - no experience needed! About the Author Wendy Wise has an extensive background in mobile and application development and has worked with several Fortune 500 companies. In her 17-year technical career, Wendy has served as a senior director of software

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development, a senior product manager for international mobile applications, and a hands-on developer for web and mobile technologies, among many other technical roles. Wendy fully embraces her nerd/geek side, as you'll find out as you read this book. In her spare time, she enjoys beer, coffee, photography, camping, and being outdoors.

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tableviews and arrays In Detail This book starts at the beginning by introducing programming through easy to use examples with the Swift Playgrounds app. Kids are regularly encouraged to explore and play with new concepts to support knowledge acquisition and retention – these newly learned skills can then be used to express their own unique ideas. Children will be shown how to create their first iOS application and build their very own movie night application. Style and

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Oriented Programming paradigm, for better code maintainability and increased performance, with Swift programming. Key Features Leverage the power of Protocol-Oriented Programming in your applications Leverage generics to create very flexible frameworks Learn how to implement common design patterns in a protocol-oriented way Book Description Protocol-oriented programming is an incredibly powerful concept at the heart of Swift's design. Swift's standard library was

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developed using POP techniques, generics, and first-class value semantics; therefore, it is important for every Swift developer to understand these core concepts and take advantage of them. The fourth edition of this book is improved and updated to the latest version of the Swift programming language. This book will help you understand what protocol-oriented programming is all about and how it is different from other programming paradigms such

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as object-oriented programming. This book covers topics such as generics, Copy-On-Write, extensions, and of course protocols. It also demonstrates how to use protocol-oriented programming techniques via real-world use cases. By the end of this book, you will know how to use protocol-oriented programming techniques to build powerful and practical applications. What you will learn Learn the differences between object-oriented programming and protocol-

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oriented

programming Understand why
value types should be
prioritized over reference
types Delve into protocols,
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On-Write) within your
custom value

types Understand how memory
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and how to avoid common
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applications by starting
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this book is for This book
is intended for Swift

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developers who have, at minimum an introductory knowledge of the Swift programming language and would like to understand how they can use Protocol-Oriented Programming techniques in their applications.

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through learning how to build iOS apps. You will learn all about basic variables, if clauses, functions, loops, and other core concepts; then structures, classes, and inheritance will be discussed. Next, you'll dive into developing a weather app that consumes data from the internet and presents information to the user. The final project is more complex, involving creating an Instagram like app that integrates different external libraries. The app also uses CocoaPods as

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still a young framework, and as such, we don't believe it's appropriate to write a complete reference. Instead, this book focuses on transitioning your way of thinking from the object-oriented style of UIKit to the declarative style of SwiftUI. Thinking in SwiftUI is geared toward readers who are familiar with Swift and who have experience building apps in frameworks like UIKit. Leverage Swift and enhance your code to take your applications to the next level

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share their insights into Swift to ensure that you understand the hows and whys of Swift and can put that understanding to use in different contexts. After working through the book, you will have the knowledge and confidence to develop your own solutions to a wide range of programming challenges using Swift.

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Explore functional programming and discover new ways of thinking about code. You know you need to master functional programming, but learning one functional language is only the start. In this book, through articles drawn from PragPub magazine and articles written specifically for this book, you'll explore functional thinking and functional style and idioms across languages. Led by expert guides, you'll discover the distinct strengths and approaches of Clojure, Elixir, Haskell, Scala, and Swift and learn which best suits your needs. Contributing authors: Rich Hickey, Stuart Halloway, Aaron Bedra, Michael Bevilacqua-Linn, Venkat Subramaniam, Paul Callaghan, Jose Valim, Dave Thomas, Natasha Murashev, Tony

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Hillerson, Josh Chisholm, and Bruce Tate. Functional programming is on the rise because it lets you write simpler, cleaner code, and its emphasis on immutability makes it ideal for maximizing the benefits of multiple cores and distributed solutions. So far nobody's invented the perfect functional language - each has its unique strengths. In *Functional Programming: A PragPub Anthology*, you'll investigate the philosophies, tools, and idioms of five different functional programming languages. See how Swift, the development language for iOS, encourages you to build highly scalable apps using functional techniques like map and reduce. Discover how Scala allows you to transition gently but deeply into

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functional programming without losing the benefits of the JVM, while with Lisp-based Clojure, you can plunge fully into the functional style. Learn about advanced functional concepts in Haskell, a pure functional language making powerful use of the type system with type inference and type classes. And see how functional programming is becoming more elegant and friendly with Elixir, a new functional language built on the powerful Erlang base. The industry has been embracing functional programming more and more, driven by the need for concurrency and parallelism. This collection of articles will lead you to mastering the functional approach to problem solving. So put on your explorer's hat and prepare to be

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surprised. The goal of exploration is always discovery. What You Need:

Familiarity with one or more programming languages.

Increase productivity and build faster applications with Swift 5, 4th Edition

Change the way you approach your applications using functional programming in Go

Functional Programming in Swift

Anyone Can Create an App

Sams Teach Yourself Swift in 24 Hours

Swift for Beginners

Learn Swift by Building

Applications