

Functional Swift: Updated For Swift 4

Summary iOS Development with Swift is a hands-on guide to creating apps for iPhone and iPad using the Swift language. Inside, you'll be guided through every step of the process for building an app, from first idea to App Store. This book fully covers Swift 4, Xcode 9, and iOS 11. Our video course, iOS Development with Swift in Motion, is the perfect companion to this book, featuring even more projects and examples for you to dig into in the exciting world of iOS development. Find out more at our website: www.manning.com/livevideo/ios-development-with-swift-iv Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology One billion iPhone users are waiting for the next amazing app. It's time for you to build it! Apple's Swift language makes iOS development easier than ever, offering modern language features, seamless integration with all iOS libraries, and the top-notch Xcode development environment. And with this book, you'll get started fast. About the Book iOS Development with Swift is a hands-on guide to creating iOS apps. It takes you through the experience of building an app—from idea to App Store. After setting up your dev environment, you'll learn the basics by experimenting in Swift playgrounds. Then you'll build a simple app layout, adding features like animations and UI widgets. Along the way, you'll retrieve, format, and display data; interact with the camera and other device features; and touch on cloud and networking basics. What's Inside Create adaptive layouts Store and manage data Learn to write and debug Swift code Publish to the App Store Covers Swift 4, Xcode 9, and iOS 11 About the Reader Written for intermediate web or mobile developers. No prior experience with Swift assumed. About the Author Craig Grummitt is a successful developer, instructor, and mentor. His iOS apps have had over 100,000 downloads combined! Table of Contents PART 1 - INTRODUCING XCODE AND SWIFT Your first iOS application Introduction to Swift playgrounds Swift objects PART 2 - BUILDING YOUR INTERFACE View controllers, views, and outlets User interaction Adaptive layout More adaptive layout Keyboard notifications, animation, and scrolling PART 3 - BUILDING YOUR APP Tables and navigation Collections, searching, sorting, and tab bars Local data persistence Data persistence in iCloud Graphics and media Networking Debugging and testing PART 4 - FINALIZING YOUR APP Distributing your app What's next?

In just 24 lessons of one hour or less, Sams Teach Yourself Swift in 24 Hours, Second Edition helps you build next-generation OS X and iOS apps with Apple's the Swift 2.x programming language. This book's straightforward, step-by-step approach helps you quickly master Swift's core concepts, structure, and syntax and use Swift to write safe, powerful, modern code. In just a few hours you'll be applying advanced features such as extensions, closures, protocols, and generics. Every lesson builds on what you've already learned, giving you a rock-solid foundation for real-world success. Step-by-step instructions carefully walk you through the most common Swift development tasks. Practical, hands-on examples show you how to apply what you learn. Quizzes and exercises help you test your knowledge and stretch your skills. Notes and tips point out shortcuts and solutions. Learn how to... Set up your Swift development environment Master Swift's fundamental data types and operators Make the most of arrays and dictionaries Control program flow, modify execution paths, and iterate code Perform complex actions with functions Work with higher-order functions and closures Harness the power of structs, enums, classes, and class inheritance Customize initializers of classes, structs, and enums Implement instance methods, type methods, and advanced type functionality Take full advantage of Swift's advanced memory allocation Extend type functionality with protocols and extensions Leverage the power of generics, chaining, and other advanced features Interoperate with Objective-C code Interact with user interfaces Take advantage of Swift's Standard Library features and functions

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 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 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 system you are ready to get started. SwiftUI is radically different from UIKit. So in this short book, we will help you build a mental model of how SwiftUI works. We explain the most important concepts in detail, and we follow them up with exercises to give you hands-on experience. SwiftUI is 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.

Bring the power of Swift functional programming to iOS, Web, macOS, watchOS and tvOS application development and

build clean, smart, scalable and reliable applications

About This Book- Written for Swift 3 -Developers Preview version, this is a comprehensive guide that introduces iOS and OS X developers to the all-new world of functional programming that has so far been alien to them- Learn about first-class functions and how imperative-style patterns can be converted into functional code using some simple techniques- The book will get you familiar with using functional programming alongside existing OOP techniques so you can get the best of both worlds and develop clean, robust code

Who This Book Is For The book is for developers with a basic knowledge of Swift programming aiming to incorporate functional programming paradigms in their day-to-day application development

What You Will Learn- First-class, higher-order, and pure functions- Closures and capturing values- Custom operators, recursion, and memoization- Value and reference types in Swift- Enumerations, algebraic data types, patterns, and pattern matching- Generics and associated type protocols- Higher-order functions such as map, flatMap filter, and reduce- Dealing with optionals, fmap, and apply for multiple functional mapping- Functional data structures such as Semigroup, Monoid, Binary Search Tree, Linked List, Stack, and Lazy List- Immutability, copy constructors, and lenses- Combining FP paradigms with OOP, FRP, and POP in your day-to-day development activities- Developing a backend application with Swift- Developing an iOS application with FP, OOP, FRP, and POP paradigms

In Detail This book is based on Swift 3 Developer preview version and aims at simplifying the functional programming (FP) paradigms making it easily usable, by showing you how to solve many of your day-to-day development problems. Whether you are new to functional programming and Swift or experienced, this book will strengthen the skills you need to design and develop high-quality, scalable, and efficient applications. The book starts with functional programming concepts, the basics of Swift 3, and essential concepts such as functions, closures, optionals, enumerations, immutability, and generics in detail with coding examples. Furthermore, this book introduces more advanced topics such as function composition, monads, functors, applicative functors, memoization, lenses, algebraic data types, functional data structures, functional reactive programming (FRP), protocol-oriented programming (POP) and mixing object-oriented programming (OOP) with functional programming (FP) paradigms. Finally, this book provides a working code example of a front-end application developed with these techniques and its corresponding back-end application developed with Swift.

Style and approach This is an easy-to-follow guide full of hands-on coding examples of real-world applications. Each topic is explained sequentially and placed in context, and for the more inquisitive, there are more details of the concepts used. It introduces the Swift language basics and functional programming techniques in simple, non-mathematical vocabulary with examples in Swift.

Swift Programming

Learning Functional Programming with Swift

iOS 10 in Swift 3

Protocol Oriented Programming with Swift

Professional Swift

App Architecture

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 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

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, 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 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-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.

Unleash your child's developer potential through fun projects and help them learn how to create iOS apps in Swift

About This Book Children can express their creativity while learning through interactive Swift Playgrounds

Empower children to think critically about problems

Learning programming basics can help children gain confidence in problem solving

Help children put their imagination into action building their first iOS app

Who This Book Is For Children who are curious about the technology we use in our daily lives and want to know how it works can use this book to learn about programming and building their first iOS app. No prior programming experience is necessary.

What You Will Learn Basic programming and coding fundamentals

Write code using the fun and interactive Swift Playgrounds app

Make animations, including creating your own starry night

Utilise functions by making pizza in code

Create an interactive toy bin

Learn how to use control flow statements to further enhance your toy bin

Build a simple movie night app working with 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 approach This is a project-based guide with an engaging tone that uses a visually rich format. It explains the concepts

in clear language and uses lots of pictures, cartoons, and examples. There is a set of practical exercises to be completed.

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 about advanced concepts in Swift programming.

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

Swift in 24 Hours, Sams Teach Yourself

Application Development with Swift

Swift by Tutorials

Swift in Depth

Master Swift best practices to build modular applications for mobile, desktop, and server platforms

Over 60 proven recipes for developing better iOS applications with Swift 5.3, 2nd Edition

Learn How to Program with Swift 5.5! Swift is the easiest way to get started developing on Apple's platforms: iOS, iPadOS, macOS, watchOS and tvOS. In this book, you'll learn the basics of Swift from getting started with playgrounds to simple operations to building your own types. Everything you'll learn is platform-neutral; you'll have a firm understanding of Swift by the end of this book, and you'll be ready to move on to whichever app platform you're interested in.
Who This Book Is For: This book is for complete beginners to Swift. No prior programming experience is necessary!
Topics Covered in The Swift Apprentice
Playground basics: Learn about the coding environment where you can quickly and easily try out your code as you learn.
Basic types: Numbers and strings are the basic kinds of data in any app - learn how to use them in Swift.
Flow control: Your code doesn't always run straight through - learn how to use conditions and decide what to do.
Functions: Group your code together into reusable chunks to run and pass around.
Collection types: Discover the many ways Swift offers to store and organize data into collections.
Protocols & protocol-oriented programming: Define protocols to make your code more interface-based and compositional.
Advanced topics: Learn how to create custom operators, organize your code, write tests, manage memory, serialize your types, concurrency and so much more.
After reading this book and completing your Swift apprenticeship by working through the included exercises and challenges, you'll be ready to take on app development on the platform of your choice!

Learn how to write more robust and maintainable Swift code by making the switch to functional programming.

Ready to build mobile apps that out-perform the rest? If you're an iOS developer with app-building experience, this practical guide provides tips and best practices to help you solve many common performance issues. You'll learn how to design and optimize iOS apps that deliver a smooth experience even when the network is poor and memory is low. Today's picky users want fast and responsive apps that don't hog resources. In this book, author Gaurav Vaish demonstrates methods for writing optimal code from an engineering perspective, using reusable Objective-C code that you can use right away. Up your game and create high-performance native iOS apps that truly stand out from the crowd. Measure key performance indicators—attributes that constitute and affect app performance Write efficient apps by minimizing memory and power consumption, and explore options for using available CPU cores Optimize your app's lifecycle and UI, as well as its networking, data sharing, and security features Learn about application testing, debugging and analysis tools, and monitoring your app in the wild Collect data from real users to analyze app usage, identify bottlenecks, and provide fixes Use iOS 9 upgrades to improve your app's performance

Updated for Swift 1.2. Learn Apple's brand new programming language, Swift, the quick and easy way: via hands-on tutorials! Through a series of real-world, practical examples you will bring your Swift knowledge from beginner to master. Swift by Tutorials covers the following topics:
Language Basics: Variables, constants, types, equality, strings, optionals, collections, and more: get off the ground with the language essentials.
Classes & Structs: Data structures like classes and structs are at the heart of any object-oriented language. This is the first chapter where you'll build a full-featured iOS app.
Generics: In C++ it's called templates; in Swift it's called generics: Generic programming allows you to write an algorithm once and reuse it for multiple types.
Functions & Closures: It's hard to write code without using functions! Closures are a related topic. (Spoiler alert-in Swift, they're just unnamed functions!)
Enums & Switch Statements: Swift introduces extremely powerful enum types. Switch statements are crucial to unlocking their potential.
Functional Programming: Functional programming is a popular topic right now-quite

a departure from more traditional, imperative programming. Swift builds this paradigm right into the core of the language. Swift & Cocoa: 90% of iOS development is interfacing with Cocoa frameworks-this remains true with Swift. This chapter illustrates how you will work with Cocoa in Swift; you'll also see how bridging headers work so you can continue to use Objective-C code and libraries in Swift. Swift vs. Objective-C: Existing Objective-C developers will be wondering what's different with Swift, or how to do their favorite things using Swift. In this chapter, you'll re-implement an Objective-C app in Swift to compare and contrast the two languages. Language Quick Reference: As you're coding your own Swift applications, you can refer back to this reference to remind yourself how something works. The iOS Tutorial Team takes pride in making sure each tutorial we write holds to the highest standards of quality. We want our tutorials to be well written, easy to follow, and fun. And we don't want to just skim the surface of a subject - we want to really dig into it, so you can truly understand how it works and apply the knowledge directly in your own apps.

This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. Through the authors' carefully constructed explanations and examples, you will develop an understanding of Swift grammar and the elements of effective Swift style. This book is written for Swift 3.0 and will also show you how to navigate Xcode 8 and get the most out of Apple's documentation. Throughout the book, the authors 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.

Swift 2 Functional Programming

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

Beginning Objective C

Data Structures & Algorithms in Swift (Fourth Edition)

The Swift Developer's Cookbook (includes Content Update Program)

Swift Protocol-Oriented Programming

Learn Data Structures & Algorithms in Swift! Data structures and algorithms form the basis of computer programming and are the starting point for anyone looking to become a software engineer. Choosing the proper data structure and algorithm involves understanding the many details and trade-offs of using them, which can be time-consuming to learn - and confusing. This is where this book, *Data Structures & Algorithms in Swift*, comes to the rescue! In this book, you'll learn the nuts and bolts of how fundamental data structures and algorithms work by using easy-to-follow tutorials loaded with illustrations; you'll also learn by working in Swift playground code. *Who This Book Is For* This book is for developers who know the basics of Swift syntax and want a better theoretical understanding of what data structures and algorithms are to build more complex programs or ace a whiteboard interview. *Topics Covered in Data Structures & Algorithms in Swift* *Basic data structures and algorithms, including stacks, queues and linked lists. *How protocols can be used to generalize algorithms. *How to leverage the algorithms of the Swift standard library with your own data structures. *Trees, tries and graphs. *Building algorithms on top of other primitives. *A complete spectrum of sorting algorithms from simple to advanced. *How to think about algorithmic complexity. *Finding shortest paths, traversals, subgraphs and much more. *After reading this book, you'll have a solid foundation on data structures and algorithms and be ready to solve more complex problems in your apps elegantly.*

iOS 10 in Swift 3 will take you from absolute beginner to functional iOS developer learning the concepts, techniques, and tools needed to build professional iOS applications using Xcode 8, iOS 10, and Swift 3. After completing this book, you will have the skills and confidence you need to to build and design your own iOS apps and apply for jr. iOS development jobs. This book is patterned after the widely popular & fun hands-on training that Devslopes has provided to over 100,000 students worldwide. Unlike other books and training, this book teaches you through real-world app development - projects you would actually build in a job or startup, including learning UI/UX & app design with Sketch. You'll get different insights from each member of Team Devslopes that will help you become a lifelong programmer and amazing iOS app designer & developer.

From learning about the most sought-after design patterns to a comprehensive coverage of architectural patterns and code testing, this book is all you need to write clean, reusable code *Key Features* Write clean, reusable and maintainable code, and make the most of the latest Swift version. Analyze case studies of some of the popular open source projects and give your workflow a huge boost Choose patterns such as MVP, MVC, and MVVM depending on the application being built *Book Description* Swift keeps gaining traction not only amongst Apple developers but also as a server-side language. This book demonstrates how to apply design patterns and best practices in real-life situations, whether that's for new or already existing projects. You'll begin with a quick refresher on Swift, the compiler, the standard library, and the foundation, followed by the Cocoa design patterns – the ones at the core of many cocoa libraries – to follow up with the creational, structural, and behavioral patterns as defined by the GoF. You'll get acquainted with application architecture, as well as the most popular architectural design patterns, such as MVC and MVVM, and learn to use them in the context of Swift. In addition, you'll walk through dependency injection and functional reactive programming. Special emphasis will be given to techniques to handle concurrency, including callbacks, futures and promises, and reactive programming. These techniques will help you adopt a test-driven approach to your workflow in order to use Swift Package Manager and integrate the framework into the original code base, along with Unit and UI testing. By the end of the book, you'll be able to build applications that are scalable, faster, and easier to maintain. What you will learn *Work efficiently with Foundation and Swift Standard library* Understand the most critical GoF patterns and use them efficiently *Use Swift 4.2 and its unique capabilities (and limitations) to implement and improve GoF patterns* Improve your application architecture and optimize for maintainability and performance *Write efficient and clean concurrent programs using futures and promises, or reactive programming techniques* Use Swift Package Manager to refactor your program into reusable components *Leverage testing and other techniques for writing robust code* *Who this book is for* This book is for intermediate developers who want to apply design patterns with Swift to structure and scale their applications. You are expected to have basic

knowledge of iOS and Swift.

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 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 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 surprised. The goal of exploration is always discovery. What You Need: Familiarity with one or more programming languages.

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 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 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.

Advanced Swift

Reactive Programming with Swift

Master the fundamentals of programming in Swift 4

Updated for Swift 3

SwiftUI Essentials - iOS 14 Edition

The Big Nerd Ranch Guide

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: 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-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.

Leverage Swift and enhance your code to take your applications to the next level About This Book Build solid, high performance applications in Swift Increase your efficiency by getting to grips with concurrency and parallel programming Use Swift to design performance-oriented solutions Who This Book Is For This book is aimed at experienced Swift developers wanting to optimize their programs on Apple platforms to optimize application performance. What You Will Learn Build solid, stable, and reliable applications using Swift Use REPL and PL to manage and configure relational databases Explore Swift's features including its static type system, value objects, and functional programming Design reusable code for high performance in Swift Use to Xcode LLBD and REPL to debug commands Avoid sharing resources by using concurrency and parallel programming Understand the lazy loading pattern, lazy sequences, and lazy evolution. In Detail Swift is one of the most popular and powerful programming languages for building iOS and Mac OS applications, and continues to evolve with new features and capabilities. Swift is considered a replacement to Objective-C and has performance advantages over Objective-C and Python. Swift adopts safe programming patterns and adds modern features to make programming easier, more flexible, and more fun. Develop Swift and discover best practices that allow you to build solid applications and optimize their performance. First, a few of performance characteristics of Swift will be explained. You will implement new tools available in Swift, including Playgrounds and REPL. These will improve your code efficiency, enable you to analyse Swift code, and enhance performance. Next, the importance of building solid applications using multithreading concurrency and multi-core device architecture is covered, before moving on

to best practices and techniques that you should utilize when building high performance applications, such as concurrency and lazy-loading. Finally, you will explore the underlying structure of Swift further, and learn how to disassemble and compile Swift code. Style and approach This is a comprehensive guide to enhancing Swift programming techniques and methodology to enable faster application development.

Bring the power of functional programming to Swift to develop clean, smart, scalable and reliable applications. About This Book Written for the latest version of Swift, this is a comprehensive guide that introduces iOS, Web and macOS developers to the all-new world of functional programming that has so far been alien to them Get familiar with using functional programming alongside existing OOP techniques so you can get the best of both worlds and develop clean, robust, and scalable code Develop a case study on example backend API with Swift and Vapor Framework and an iOS application with Functional Programming, Protocol-Oriented Programming, Functional Reactive Programming, and Object-Oriented Programming techniques Who This Book Is For Meant for a reader who knows object-oriented programming, has some experience with Objective-C/Swift programming languages and wants to further enhance his skills with functional programming techniques with Swift 3.x. What You Will Learn Understand what functional programming is and why it matters Understand custom operators, function composition, currying, recursion, and memoization Explore algebraic data types, pattern matching, generics, associated type protocols, and type erasure Get acquainted with higher-kinded types and higher-order functions using practical examples Get familiar with functional and non-functional ways to deal with optionals Make use of functional data structures such as semigroup, monoid, binary search tree, linked list, stack, and lazy list Understand the importance of immutability, copy constructors, and lenses Develop a backend API with Vapor Create an iOS app by combining FP, OOP, FRP, and POP paradigms In Detail Swift is a multi-paradigm programming language enabling you to tackle different problems in various ways. Understanding each paradigm and knowing when and how to utilize and combine them can lead to a better code base. Functional programming (FP) is an important paradigm that empowers us with declarative development and makes applications more suitable for testing, as well as performant and elegant. This book aims to simplify the FP paradigms, making them easily understandable and usable, by showing you how to solve many of your day-to-day development problems using Swift FP. It starts with the basics of FP, and you will go through all the core concepts of Swift and the building blocks of FP. You will also go through important aspects, such as function composition and currying, custom operator definition, monads, functors, applicative functors, memoization, lenses, algebraic data types, type erasure, functional data structures, functional reactive programming (FRP), and protocol-oriented programming (POP). You will then learn to combine those techniques to develop a fully functional iOS application from scratch Style and approach An easy-to-follow guide that is full of hands-on coding examples of real-world applications. Each topic is explained sequentially and placed in context, and for the more inquisitive, there are more details of the concepts used. It introduces the Swift language basics and functional programming techniques in simple, non-mathematical vocabulary with examples in Swift.

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 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 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.

Functional Programming in Swift

IOS Application Design Patterns in Swift

Thinking in SwiftUI

Learn to Develop iOS Apps Using SwiftUI, Swift 5 and Xcode 12

Beginning Swift Programming

An introductory guide to creating intuitive cross-platform user interfaces using Swift 5

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! Discover recipes for building feature-rich, reliable iOS native apps and explore the latest features in Swift 5.3 with the help of proven industry standard recipes, modern design techniques, and popular strategies **Key Features** Understand how closures work and make use of generics with protocols to write flexible code Discover the fundamentals of Swift and build apps with frameworks such as Foundation, Networking, and UIKit Get to grips with the new features of Swift 5.3, including

SwiftUI, CoreML and the Vision Framework
Book Description Swift is an exciting, multi-platform, general-purpose programming language, and with this book, you'll explore the features of its latest version, Swift 5.3. The book begins with an introduction to the basic building blocks of Swift 5.3, its syntax, and the functionalities of Swift constructs. You'll then discover how Swift Playgrounds provide an ideal platform to write, execute, and debug your Swift code. As you advance through the chapters, the book will show you how to bundle variables into tuples or sets, order your data with an array, store key-value pairs with dictionaries, and use property observers. You'll also get to grips with the decision-making and control structures in Swift, examine advanced features such as generics and operators, and explore functionalities outside of the standard library. Once you've learned how to build iOS applications using UIKit, you'll find out how to use Swift for server-side programming, run Swift on Linux, and investigate Vapor. Finally, you'll discover some of the newest features of Swift 5.3 using SwiftUI and Combine to build adaptive and reactive applications, and find out how to use Swift to build and integrate machine learning models along with Apple's Vision Framework. By the end of this Swift book, you'll have discovered solutions to boost your productivity while developing code using Swift 5.3. What you will learn

- Explore basic to advanced concepts in Swift 5.3 programming
- Understand conditional statements, loops, and how to handle errors in Swift
- Define flexible classes and structs using generics
- Use advanced operators and create custom ones
- Build iOS apps using the powerful features of UIKit or the new SwiftUI framework
- Import your own custom functionality into Swift Playgrounds
- Run Swift on Linux and investigate server-side programming with the server-side framework Vapor
- Use Swift to implement machine learning models using CoreML and Vision

Who this book is for This book is for experienced iOS developers looking to learn about the diverse features offered by Swift 5.3, along with tips and tricks to efficiently code and build applications. Knowledge of general programming concepts will assist in understanding key concepts.

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

In The Swift Developer's Cookbook, renowned author Erica Sadun joins powerful strategies with ready-to-use Swift code for solving everyday development challenges. As in all of Sadun's programming best-sellers, *The Swift Developer's Cookbook* translates modern best practices into dozens of well-tested, easy-to-apply solutions. This book's code examples were created in response to real-world questions from working developers to reflect Swift's newest capabilities and best practices. Each chapter groups related tasks together. You can jump straight to your solution without having to identify the right class or framework first. Sadun covers key Swift development concepts, shows you how to write robust and efficient code, and helps you avoid common pitfalls other developers struggle with. She offers expert strategies for working with this immensely powerful language, taking into account Swift's rapid evolution and its migration tools. Whether you're moving to modern Swift from Objective-C, from older versions of the Swift language, or from the world of non-Apple languages, this guide will help you master both the "how" and "why" of effective Swift development. Industry recruiters are scrambling to find Swift developers who can solve real problems and produce effective working code. Get this book, and you'll be ready. Coverage includes

- Writing effective Swift code that communicates clearly and coherently to the compiler, your team, and to "future you," who will be maintaining this code
- Using Xcode to handle changes in Swift's language constructs as the language evolves
- Building feedback, documentation, and output to meet your development and debugging needs
- Making the most of optionals and their supporting constructs
- Using closures to encapsulate state and functionality and treat actions as variables for later execution
- Leveraging control flow with innovative Swift-specific statements
- Working with all Swift types: classes, enumerations, and structures
- Using generics and protocols to build robust code that expands functionality beyond single types
- Making the most of the powerful Swift error system
- Working with innovative features such as array indexing, general subscripting, statement labels, custom operators, and more

This book is part of the Pearson Content Update Program (CUP). As the technology changes, sections of this book will be updated or new sections will be added. The updates will be delivered to you via a free Web Edition of this book, which can be accessed with any Internet connection.

Implement object-oriented programming paradigms with Swift 3.0 and mix them with modern functional programming techniques to build powerful real-world applications

About This Book Leverage the most efficient object-oriented design patterns in your Swift applications

Write robust, safer, and better code using the blueprints that generate objects

Build a platform with object-oriented code using real-world elements and represent them in your apps

Who This Book Is For This book is for iOS and macOS developers who want to get a detailed practical understanding of object-oriented programming with the latest version of Swift: 3.0.

What You Will Learn Write high-quality and easy-to-maintain reusable object-oriented code to build applications for iOS, macOS, and Linux

- Work with encapsulation, abstraction, and polymorphism using Swift 3.0
- Work with classes, instances, properties, and methods in Swift 3.0
- Take advantage of inheritance, specialization, and the possibility to overload or override members
- Implement encapsulation, abstraction, and polymorphism
- Explore functional programming techniques mixed with object-oriented code in Swift 3.0
- Understand the differences between Swift 3.0, previous Swift versions, and Objective-C code

In Detail Swift has quickly become one of the most-liked languages and developers' de-facto choice when building applications that target iOS and macOS. In the new version, the Swift team wants to take its adoption to the next level by making it available for new platforms and audiences. This book introduces the object-oriented paradigm and its implementation in the Swift 3 programming language to help you understand how real-world objects can become part of fundamental reusable elements in the code. This book is developed with XCode 8.x and covers all the enhancements included in Swift 3.0. In addition, we teach you to run most of the examples with the Swift REPL available on macOS and Linux, and with a Web-based Swift sandbox developed by IBM capable of running on any web browser, including Windows and mobile devices. You will organize data in blueprints that generate instances. You'll work with

examples so you understand how to encapsulate and hide data by working with properties and access control. Then, you'll get to grips with complex scenarios where you use instances that belong to more than one blueprint. You'll discover the power of contract programming and parametric polymorphism. You'll combine generic code with inheritance and multiple inheritance. Later, you'll see how to combine functional programming with object-oriented programming and find out how to refactor your existing code for easy maintenance. Style and approach This simple guide is packed with practical examples of solutions to common problems. Each chapter includes exercises and the possibility for you to test your progress by answering a quiz

Implementing Practical Data Structures with Swift

This Is Our Song

An Advanced Exploration of the Swift Language

Taylor Swift

Hands-On Design Patterns with Swift

Updated for Swift 4

Get to grips with Apple's new SwiftUI framework for creating robust UIs for iOS and iPadOS using Swift programming. Features Use SwiftUI for building dynamic apps for Apple devices from scratch Understand declarative syntax in cross-device development and 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, detailed explanations and practical examples, this easy-to-follow guide will teach you the fundamentals of the SwiftUI framework. You'll learn how to build a powerful 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. What you will learn Explore the fundamentals of SwiftUI and compare it with existing UI frameworks Understand SwiftUI syntax and understand what should and shouldn't be included in SwiftUI's layer Add text and images to a SwiftUI view and decorate them using SwiftUI's modifiers Create basic forms, and use camera and photo library functions to add images to your apps Understand the core concepts of Maps in iOS apps and add a MapView in SwiftUI Design extensions within your SwiftUI apps to run them on watchOS Handle networking calls in SwiftUI to retrieve data from external sources Who this book is for This SwiftUI book helps any mobile app developer looking to understand the fundamentals of the new SwiftUI framework and the benefits of cross-device development. A solid understanding of iOS and macOS app development, along with some knowledge of the Swift programming language, will be beneficial. Basic programming knowledge is essential to grasp the concepts discussed in the book effectively.

Summary Now updated for Swift 5! Swift is more than just a fun language to build iOS applications with. It features powerful tools that, if effectively used, can help you create even better apps with clean, crystal-clear code and awesome performance. Swift in Depth is designed to help you unlock these tools and quirks and get developing next-gen apps, web services, and more. 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 create your first toy iOS or Mac app in Swift. Writing secure, reliable, professional-grade software is a different animal altogether. The Swift language includes an amazing set of high-powered features, and it supports a variety of programming styles and techniques. You just have to roll up your sleeves and learn Swift in depth. About the Book Swift in Depth guides you concept by concept through the skills you need to build professional software for Apple platforms, such as iOS and Mac; also on the server with Linux. By following the numerous concrete examples, enlightening explanations, and end-of-chapter exercises, you'll finally grok powerful techniques like generics, efficient error handling, protocol-oriented programming, and advanced Swift patterns. Author Tjeerd in 't Veen reveals the high-value, difficult-to-discover Swift techniques he's learned through his own hard-won experience. What's inside Covers Swift 5 Writing reusable code with generics Iterators, sequences, and collections Protocol-oriented programming Understanding map, flatMap, and compactMap Asynchronous error handling with Result Best practices in Swift About the Reader Written for advanced-beginner and intermediate-level Swift programmers. About the Author Tjeerd in 't Veen is a senior software engineer and architect in the mobile division of a large international firm. Table of Contents Introducing Swift in depth Modeling data with enums Writing cleaner properties Making optional types second nature Demystifying initializers Effortless error handling Generics Putting the pro in protocol-oriented programming Iterators, sequences, and collections Understanding map, flatMap, and compactMap Asynchronous error handling with Result Protocol extensions Swift patterns Delivering quality Swift code Where to Swift from here

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 from beginning programming concepts all the way through to 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, makes it 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 beginners, teaches you how to write apps for iPhones and iOS devices step by step, starting with your first line of code. Packed with dozens of apps and special exercises, the book will teach you how to program by writing games, solving puzzles, and exploring what your iPhone can do. Hello Swift! gets you started. Where you go next is up to you! What's inside Cry for help—clear explanations anyone can understand Kid-friendly examples, including games and puzzles Learn by doing—you'll build confidence

small apps Exercises that encourage critical thinking About the Reader Written for kids who want to learn how to p
Adults like it, too.) About the Author Tanmay Bakshi had his first app on the iOS App Store at the age of nine. He's n
youngest IBM Champion, a Cloud Advisor, Watson Developer, TED Speaker, and Manning author! Table of Contents Ge
to build apps with Swift! Create your first app Your first real Swift code using variables I/O laboratory Computers m
too! Let computers do repetitive work Knitting variables into arrays and dictionaries Reuse your code: Clean it with
detergent Reduce your code: Use less, do more with class detergent Reading and writing files Frameworks: Bookshe
SpriteKit: Fun animation time Time to watch your WatchKit code Continuing your journey with Swift
Core Data best practices by example: from simple persistency to multithreading and syncing This book strives to giv
guidelines for how to get the most out of Core Data while avoiding the pitfalls of this flexible and powerful framewo
with a simple example app and extend it step by step as we talk about relationships, advanced data types, concurre
and many other topics. Later on, we go well beyond what's needed for the basic example app. We'll discuss in depth
Data works behind the scenes, how to get great performance, the trade-offs between different Core Data setups, a
and profile your Core Data code. All code samples in this book are written in Swift. We show how you can leverage
language features to write elegant and safe Core Data code. We expect that you're already familiar with Swift and i
newcomers and experienced Core Data developers will find a trove of applicable information and useful patterns.
Build fast and powerful applications by exploiting the power of protocol-oriented programming in SwiftAbout This Bo
only book that shows how to harness the power of Protocol-Oriented Programming in Swift to build real-world appl
familiar with the protocol focused approach of application development, • Increase the overall productivity and perfo
applications with Protocol Oriented Programming.Who This Book Is ForThis book is for Swift developers who want to
implement protocol oriented programming in their real world applications.What You Will Learn• The difference betwe
Oriented programming and Protocol-Oriented programming• The difference between reference and value types and v
each• How we can leverage tuples to reduce the complexity of our code• What are protocols and how to use them
implement protocol extensions to create a very flexible code base• How to implement several design patterns in a P
Oriented approach• How to solve real world design issue with protocol oriented programmingIn DetailAt the heart o
design is an incredibly powerful idea: protocol-oriented programming.Its many benefits include better code maintain
increased developer productivity and superior application performance. The book will teach the reader how to apply
behind the protocol oriented programing paradigm to improve the code they write.This book will introduce the read
world of protocol-oriented programming in Swift and will demonstrate the ideas behind this new programming para
world examples. In addition to learning the concepts of Protocol Oriented programming, it also shows the reader ho
the complexity of their codebase using protocol extensions. Beginning with how to create simple protocols, readers
to extend protocols and also to assign behaviors to them.By the end of this book readers will be able to harness th
protocol-oriented programming to build real world applications.Style and approachIn its latest release of Swift, Apple
introduced Protocol Extensions as a new feature at the heart of Swifts design making Swift 2 a protocol-oriented l
Protocol oriented programming being a less explored OOP paradigm, there is little guidance on hot to take advantag
extensions in real-world applications. In addition to offering an in-depth coverage of protocol oriented programming
concepts, this book also explains how a developer can leverage these features to build powerful, real-world applicat
Swift for Beginners

Expert Swift (First Edition)

Functional Programming in Swift

RxSwift (Fourth Edition)

Beginning Swift

Swift 3 Object-Oriented Programming

Transition from Objective-C to the cleaner, more functionalSwift quickly and easily Professional Swift shows you how to create Mac and
iPhoneapplications using Apple's new programming language. Thiscode-intensive, practical guide walks you through Swift bestpractices as
you learn the language, build an application, andrefine it using advanced concepts and techniques. Organized foreasy navigation, this book
can be read end-to-end for a self-pacedtutorial, or used as an on-demand desk reference as unfamiliarsituations arise. The first section of
the book guides you throughthe basics of Swift programming, with clear instruction oneverything from writing code to storing data, and
Section II addsadvanced data types, advanced debugging, extending classes, andmore. You'll learn everything you need to know to make
thetransition from Objective-C to Swift smooth and painless, so youcan begin building faster, more secure apps than ever before. Get
acquainted with the Swift language and syntax Write, deploy, and debug Swift programs Store data and interface with web services Master
advanced usage, and bridge Swift and Objective-C Professional Swift is your guide to the future of OS Xand iOS development.

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 ForThis book is for intermediate 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 SwiftProtocols 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 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.

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

A book about Taylor. Made with love. By fans. For fans. “ Delightful...A rich and exhaustive production...Swifties have gotten their bible. ” —The New Yorker Ten years ago, an unknown sixteen-year-old released a self-titled debut country album. A decade later, Taylor Swift has reached record-breaking, chart-topping heights. A ten-time Grammy winner, Swift has been hailed for her songwriting talent, crossed effortlessly from country to pop, and established herself as a musician who can surprise, delight, and inspire, all while connecting with her fans in a way that only she can. Amazingly, after all these years, there is no great, comprehensive book about Swift for her fans. Until now. This book, a fan-generated celebration of Swift ’ s first decade as an artist, collects the best writing and images from the past ten years in one gorgeous volume. From pre-fame interviews with Swift in local Pennsylvania newspapers to major profiles in The New Yorker and Rolling Stone; from album reviews by top critics such as Robert Christgau, Sasha Frere-Jones, and Ann Powers to essays by beloved novelists like Maggie Shipstead; from Tavi Gevinson ’ s classic ode to Swift in The Believer to Q&As with Chuck Klosterman and humorous analysis from McSweeney ’ s and The Hairpin; from album-themed crossword puzzles and adult coloring pages to profiles of Taylor ’ s biggest fans; from an excerpt of the soon-to-be-published novel Taylor Swift: Girl Detective to a “ book within a book ” of Swift ’ s most inspiring quotations titled (naturally) The Tao of Tay, this book is the vital collection of all things Taylor. Here, finally, is the must-have book for every Swiftie and every music lover. For, as Klosterman wrote in GQ, “ If you don ’ t take Swift seriously, you don ’ t take contemporary music seriously. ” * This book is a tribute to Taylor Swift, but she was not involved in its creation. *

Embrace the Protocol-Oriented Programming paradigm, for better code maintainability and increased performance, with Swift programming. Key FeaturesLeverage the power of Protocol-Oriented Programming in your applications Leverage generics to create very flexible frameworksLearn how to implement common design patterns in a protocol-oriented wayBook Description Protocol-oriented programming is an incredibly powerful concept at the heart of Swift's design. Swift's standard library was 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 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 learnLearn the differences between object-oriented programming and protocol-oriented programmingUnderstand why value types should be prioritized over reference typesDelve into protocols, protocol inheritance, protocol composition, and protocol extensionsLearn how to implement COW (Copy-On-Write) within your custom value typesUnderstand how memory management works in Swift and how to avoid common pitfallsDesign applications by starting with the protocol rather than the implementationWho this book is for This book is intended for Swift 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.

Beginning Programming with Swift

iOS app programming for kids and other beginners

High Performance IOS Apps

Develop and Design

Swift Functional Programming

Swift Cookbook

Objective-C is today's fastest growing programming language, at least in part due to the popularity of Apple's Mac, iPhone and iPad. Beginning Objective-C is for you if you have some programming experience, but you're new to the Objective-C programming language and you want a modern—and fast—way forwards to your own coding projects. Beginning Objective-C offers you a modern programmer's perspective on Objective-C courtesy of two of the best iOS and Mac developers in the field today, and gets you programming to the best of your ability in this important language. It gets you rolling fast into the sound fundamentals and idioms of Objective-C on the Mac and iOS, in order to learn how best to construct your applications and libraries, making the best use of the tools it provides— no matter what projects you plan to build. The book offers thorough introductions to the core tenets of the language itself and its primary toolkits: the Foundation and AppKit frameworks. Within its pages you will encounter a mine of information on many topics, including use of the file system and network APIs, concurrency and multi-core programming, the user interface system architecture, data modeling, and more. You'll soon find yourself building a fairly complex Objective-C based application, and mastering the language ready for your own projects. If you're new to programming altogether, then Apress has other Objective-C books for you such as our Learning and Absolute Beginner titles—otherwise, let your existing skills ramp you fast forwards in Objective-C with Beginning Objective-C so that you can start building your own applications quickly.

Exploring Clojure, Elixir, Haskell, Scala, and Swift

Swift High Performance

iOS Development with Swift

Swift iOS Programming for Kids
Swift Apprentice (Seventh Edition)
Optimize Your Code for Better Apps