

The Swift Programming Language Ibook Apple Inc

Build fast and powerful applications by exploiting the power of protocol-oriented programming in Swift

About This Book

- The only book that shows how to harness the power of Protocol-Oriented Programming in Swift to build real-world applications,
- Get familiar with the protocol focused approach of application development,
- Increase the overall productivity and performance of applications with Protocol Oriented Programming.

Who This Book Is For

This book is for Swift developers who want to learn and implement protocol oriented programming in their real world applications.

What You Will Learn

- The difference between Object-Oriented programming and Protocol-Oriented programming
- The difference between reference and value types and when to use each
- How we can leverage tuples to reduce the complexity of our code
- What are protocols and how to use them
- How to implement protocol extensions to create a very flexible code base
- How to implement several design patterns in a Protocol-Oriented approach
- How to solve real world design issue with protocol oriented programming

In Detail

At the heart of Swift's design is an incredibly powerful idea: protocol-oriented programming. Its many benefits include better code maintainability, increased developer productivity and superior application performance. The book will teach the reader how to apply the ideas behind the protocol oriented programming paradigm to improve the code they write. This book will introduce the readers to the world of protocol-oriented programming in Swift and will demonstrate the ideas behind this new programming paradigm with real world examples. In addition to learning the concepts of Protocol Oriented programming, it also shows the reader how to reduce the complexity of their codebase using protocol extensions. Beginning with how to create simple protocols, readers will learn how to extend protocols and also to assign behaviors to them. By the end of this book readers will be able to harness the power of protocol-oriented programming to build real world applications.

Style and approach

In its latest release of Swift, Apple has introduced Protocol Extensions as a new feature at the heart of Swifts design making Swift 2 a protocol-oriented language. Protocol oriented programming being a less explored OOP paradigm, there is little guidance on how to take advantage of protocol extensions in real-world applications. In addition to offering an in-depth coverage of protocol oriented programming and its concepts, this book also explains how a developer can leverage these features to build powerful, real-world applications

From the bestselling author of *Blink* and *The Tipping Point*, Malcolm Gladwell's *Outliers: The Story of Success* overturns conventional wisdom about genius to show us what makes an ordinary person an extreme overachiever. Why do some people achieve so much more than others? Can they lie so far out of the ordinary? In this provocative and inspiring book, Malcolm Gladwell looks at everyone from rock stars to professional athletes, software billionaires to scientific geniuses, to show that the story of success is far more surprising, and far more fascinating, than we could ever have imagined. He reveals that it's as much about where we're from and what we do, as who we are - and that no one, not even a genius, ever makes it alone. *Outliers* will change the way you think about your own life story, and about what makes us all unique. 'Gladwell is not only a brilliant storyteller; he can see what those stories tell us, the lessons they contain' *Guardian* 'Malcolm Gladwell is a global phenomenon ... he has a genius for making everything he writes seem like an impossible adventure' *Observer* 'He is the best kind of writer - the kind who makes you feel like you're a genius, rather than he's a genius' *The Times*

Chronicles the best and the worst of Apple Computer's remarkable story.

One day Sophie comes home from school to find two questions in her mail: "Who are you?" and "Where does the world come from?" Before she knows it she is enrolled in a correspondence course with a mysterious philosopher. Thus begins Jostein Gaarder's unique novel, which is not only a mystery, but also a complete and entertaining history of philosophy.

Learn how to program iOS applications with Swift. After reading this guide, you will know how to program in Swift, how to define functions and objects, and how to write code using the Swift paradigm.

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This guide assumes that you have a basic knowledge of app development. For a complete course on app development for iOS, read our book *iOS Apps for Masterminds*. This guide is a collection of excerpts from the book *iOS Apps for Masterminds*. The information included in this guide will help you understand a particular aspect of app development in iOS, but it will not teach you everything you need to know to develop an app for Apple devices. If you need a complete course on app development for iOS, read our book *iOS Apps for Masterminds*. For more information, visit our website at www.formasterminds.com.

Get started fast with Swift programming for iOS and OS X

Learning Swift Programming is a fast-paced, hands-on introduction to writing production-quality iOS and OS X apps with Apple's new programming language. Written for developers with previous experience in any other modern language, this book explains Swift simply and clearly, using

relevant examples that solve realistic problems. Author Jacob Schatz's popular Skip Wilson video tutorials on YouTube have already helped thousands of Apple developers get started with Swift. Now, he helps you take full advantage of Swift's advanced design, remarkable performance, and streamlined development techniques. Step-by-step, you'll move from basic syntax through advanced features such as closures and generics—discovering helpful tips and tricks along the way. After you've mastered Swift's building blocks and learned about its key innovations, a full section of case studies walks you through building complete apps from scratch. Compare Swift with Objective-C, JavaScript, Python, Ruby, and C

Collect data with arrays and dictionaries, and store it with variables and constants
Group commonly-used code into functions for easy reuse
Structure your code with enums, structs, and classes
Use generics to get more done with less code
Write closures to share small blocks of functionality
Use optionals to write more robust, crash-resistant, and cleaner code
Integrate existing Objective-C code into new Swift apps
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Create animated 2D games with SpriteKit, and 3D games with SceneKit

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A guide to app development with iOS 8 using Swift, an Apple programming language, covering such topics as storyboards, view controllers, game templates, animation graphics, user defaults, motion event handling, and app pricing.

Apple's new programming language, Swift, is fast, safe, accessible—the perfect choice for game development! Packed with best practices and easy-to-use examples, this book leads you step by step through the development of your first Swift game. The book starts by introducing Swift's best features for game development. Then, you will learn how to animate sprites and textures. Along the way, you will master the physics framework, add the player character and NPCs, and implement controls. Towards the end of the book, you will polish your game with fun menus, integrate with Apple Game Center for leaderboards and achievements, and then finally, learn how to publish your finished games to the App Store. By the end of this book, you will be able to create your own iOS games using Swift and SpriteKit.

In just 24 sessions of one hour each, learn how to build powerful applications for today's hottest handheld devices: the iPhone and iPad! Using this book's straightforward, step-by-step approach, you'll master every skill and technology you need, from setting up your iOS development environment to building great user interfaces, sensing motion to writing multitasking applications. Each 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 iOS development tasks. Quizzes and Exercises help you test your knowledge. By the Way notes present interesting information related to the discussion. Did You Know? tips show you easier ways to perform tasks. Watch Out! cautions alert you to possible problems and give you advice on how to avoid them. John Ray is currently serving as the Director of the Office of Research Information Systems at the Ohio State University. His many books include Using TCP/IP: Special Edition, Maximum Mac OS X Security, Mac OS X Unleashed, Teach Yourself Dreamweaver MX in 21 Days, and Sams Teach Yourself iOS 7 Application Development in 24 Hours. Printed in full color—figures and code appear as they do in Xcode Covers iOS 8 and up Learn to navigate the Xcode 6.x development environment Prepare your system and iDevice for efficient development Get started quickly with Apple's new language: Swift Test code using the new iOS Playground Understand the Model-View-Controller (MVC) development pattern Visually design and code interfaces using Xcode Storyboards, Segues, Exits, Image Slicing, and the iOS Object Library Use Auto Layout and Size Classes to adapt to different screen sizes and orientations Build advanced UIs with Tables, Split Views, Navigation Controllers, and more Read and write preferences and data, and create System Settings plug-ins Use the iOS media playback and recording capabilities Take photos and manipulate graphics with Core Image Sense motion, orientation, and location with the accelerometer, gyroscope, and GPS Integrate online services using Twitter, Facebook, Email, Web Views, and Apple Maps Create universal applications that run on both the iPhone and iPad Write background-aware multitasking applications Trace, debug, and monitor your applications as they run

What if we could unlock the potential in every child? As it turns out, we can. Apple's iconic cofounder Steve Jobs had a powerful vision for education: employing technology to make an enormous impact on the lives of millions of students. To realize this vision, Jobs tapped John D. Couch, a trusted engineer and executive with a passion for education. Couch believed the real purpose of education was to help children discover their unique potential and empower them to reach beyond their perceived limitations. Today, technology is increasingly integrated into every aspect of our lives, rewiring our homes, our jobs, and even our brains. Most important, it presents an opportunity to rewire education to enrich and strengthen our schools, children, and society In Rewiring Education, Couch shares the professional lessons he's learned during his 50-plus years in education and technology. He takes us behind Apple's major research study, Apple Classrooms of Tomorrow (ACOT), and its follow-up (ACOT 2), highlighting the powerful effects of the Challenge-Based Learning framework. Going beyond Apple's walls, he also introduces us to some of the most extraordinary parents, educators, and entrepreneurs from around the world who have ignored the failed promises of memorization and, instead, utilize new science-backed methods and technologies that benefit all children, from those who struggle to honor students. Rewiring Education presents a bold vision for the future of education, looking at promising

emerging technologies and how we—as parents, teachers, and voters—can ensure children are provided with opportunities and access to the relevant, creative, collaborative, and challenging learning environments they need to succeed.

Swift is an excellent way of writing software if it's running code for tablets, desktops, servers, or any other devices. It's a simple, fast, and collaborative programming language that blends the best of modern language thought process with the knowledge of the broader culture of Apple engineering and the dynamic contributions of its open-source community. The compiler is performance-optimized, and the language is designed for growth, without compromising. Swift is perfect for fresh programmers. It's said to be a programming language of industrial standard, which is as concise and exciting as a scripting language. Swift blends powerful inferences and patterns matching with new, lightweight syntax, enabling simple and succinct expression of complex ideas. Code is, therefore, not only easier to write but also useful to read and manage. Swift has been in development phases for years, and it keeps growing with new features and functionality. Swift code enables users to experiment.

Embrace the mobile gaming revolution by creating popular iOS games with Swift 4.2 Key Features Learn to create games for iPhone and iPad with the latest Swift Programming language Understand the fundamental concepts of game development like game physics, camera action, sprites, controls, among others Build Augmented reality games using ARKit for true performance Book Description Swift is the perfect choice for game development. Developers are intrigued by Swift and want to make use of new features to develop their best games yet. Packed with best practices and easy-to-use examples, this book leads you step by step through the development of your first Swift game. The book starts by introducing Swift's best features – including its new ones for game development. Using SpriteKit, you will learn how to animate sprites and textures. Along the way, you will master physics, animations, and collision effects and how to build the UI aspects of a game. You will then work on creating a 3D game using the SceneKit framework. Further, we will look at how to add monetization and integrate Game Center. With iOS 12, we see the introduction of ARKit 2.0. This new version allows us to integrate shared experiences such as multiplayer augmented reality and persistent AR that is tied to a specific location so that the same information can be replicated on all connected devices. In the next section, we will dive into creating Augmented Reality games using SpriteKit and SceneKit. Then, finally, we will see how to create a Multipeer AR project to connect two devices, and send and receive data back and forth between those devices in real time. By the end of this book, you will be able to create your own iOS games using Swift and publish them on the iOS App Store. What you will learn Deliver powerful graphics, physics, and sound in your game by using SpriteKit and SceneKit Set up a scene using the new capabilities of the scene editor and custom classes Maximize gameplay with little-known tips and strategies for fun, repeatable action Make use of animations, graphics, and particles to polish your game Understand the current mobile monetization landscape Integrate your game with Game Center Develop 2D and 3D Augmented Reality games using Apple's new ARKit framework Publish your game to the App Store Who this book is for If you wish to create and publish iOS games using Swift, then this book is for you. No prior game development or experience with Apple ecosystem is needed.

Swift FundamentalsThe Language of IOS DevelopmentLearntoprogram, Incorporated

The Apple-Certified Way to Learn macOS Support Essentials 11 , the official book for macOS support, is a top-notch primer for anyone who needs to support, troubleshoot, or optimize macOS Big Sur, such as IT professionals, technicians, help desk specialists, and ardent Mac users. This is the only Apple Pro Training Series book that covers Big Sur. You'll find in-depth, step-by-step instructions on everything from upgrading, updating, reinstalling and configuring macOS Big Sur to setting-up network services like the Content Caching service. This book covers updated system utilities and new features in macOS Big Sur, including security and privacy enhancements, Control Center and Notification Center, Safari, system extensions, macOS Recovery, Startup Security Utility, and the Signed System Volume (SSV). This book includes the following content: Authoritative explanations of underlying technologies, troubleshooting, system administration, and much more Focused lessons that take you step by step through practical, real-world tasks A Web Edition that provides the full text of the book online The Apple Pro Training Series is Apples official self-paced learning resource. Books in this series offer downloadable lesson files and an online version of the book. Additional information on this and other books in this series can be found at www.peachpit.com/apple . For more on certification, visit training.apple.com .

Move into iOS development by getting a firm grasp of its fundamentals, including the Xcode 12 IDE, Cocoa Touch, and the latest version of Apple's acclaimed programming language, Swift 5.3. With this thoroughly updated guide, you'll learn the Swift language, understand Apple's Xcode development tools, and discover the Cocoa framework. 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: Multiple trailing closures Code editor document tabs New Simulator features Resources in Swift packages Logging and testing improvements And more! Once you master the fundamentals, you'll be ready to tackle the details of iOS app development with author Matt Neuburg's companion guide, Programming iOS 14.

When you're under pressure to produce a well designed, easy-to-navigate mobile app, there's no time to reinvent the wheel. This concise book provides a handy reference to 70 mobile app design patterns, illustrated by more than 400 screenshots from current iOS, Android, BlackBerry, WebOS, Windows Mobile, and Symbian apps. User experience professional Theresa Neil (Designing Web Interfaces) walks you through design patterns in 10 separate categories, including anti-patterns. Whether you're designing a simple iPhone application or one that's meant to work for every popular mobile OS on the market, these patterns provide solutions to common design challenges. This print edition is in full color. Pattern categories include: Navigation: get patterns for primary and secondary navigation Forms: break the industry-wide habits of bad form design Tables and lists: display only the most important information Search, sort, and filter: make these functions easy to use Tools: create the illusion of direct interaction Charts: learn best practices for basic chart design Invitations: invite users to get started and discover features Help: integrate help pages into a smaller form factor "It's a super handy catalog that I can flip to for ideas." —Bill Scott, Senior Director of Web Development at PayPal "Looks fantastic." —Erin Malone, Partner at Tangible UX "Just a quick thanks to express my sheer gratitude for this pub, it has been a guide for me reworking a design for an app already in production!" —Agatha June, UX designer

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.

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).

Get ahead of everyone else and learn the latest technologies introduced by Apple. This is the first book to teach you how to work with Swift 3, Xcode 8, iOS 10 and the new APIs. iOS Apps for Masterminds leads the reader step by step to master the complex subjects required to create applications for iPhones and iPads. After reading this book, you will know how to program in Swift, how to design user interfaces, and how to work with the most powerful frameworks available for the construction of modern applications. This book is a complete course that will teach you how to build insanely great applications from scratch. Every chapter explores both basic and complicated concepts of computer programming, the Swift language, and app development. The information is supported by fully functional examples to guide beginners and experts through every single framework included in the iOS SDK. The examples are distributed throughout the book in a specific order to gradually introduce complex topics and make them accessible to everyone. The goal of iOS Apps for Masterminds is to make you familiar with the most advanced technologies for app development. It was designed to prepare you for the future and was written for the genius inside you, for Masterminds. This book includes: Introduction to Swift 3 Swift Paradigm Foundation Framework UIKit Framework Auto Layout Size Classes Navigation Controllers Scroll Views Table Views Collection Views Split View Controller Alert Views Notifications Files Archiving Core Data iCloud Core Graphics and Quartz 2D Core Animation AVFoundation Camera and Photo Library Web Views Contacts Sensors MapKit Gesture Recognizers Timers Operation Queues Error Handling Image and Video Internationalization ...and more! iOS app development with iOS 10, Xcode 8 and Swift 3 App development, Swift programming, Create apps, Create app, iPhone apps, Build app, Swift language, develop application, Objective-C, Apple development, iOS development, iOS Apps, Program apps.

Have you been wanting to develop Apps for iOS but don't have the prerequisite language skills? Have you tried other iOS books and the code just went over your head? Do you feel like you need a little more coding experience before tackling mobile? Do you want to get a head start on iOS8 development? There is no mobile platform that has proved more dominant-- or more lucrative than iOS! If you're planning on creating native iOS apps, you must know Swift. Swift is an easy-to-learn and powerful language that is used to create iOS8 and OSX apps in the very near future. Companies are scrambling to hire Swift developers and those with aspirations to create iOS apps are learning it as fast as they can. Author Mark Lassoff is a master-instructor with years of teaching experience. You'll master the Swift programming language as you complete the multiple lab exercises that are both interesting and engaging. Dozens and dozens of code examples are available for you to load up and study. Over 150,000 people have learned programming from Mark Lassoff-- this book is one of his best. If you want to learn Swift and become an iOS8 developer, this is your book.

Historically, grief and spirituality have been jealously guarded as uniquely human experiences. Although non-human animal grief has been acknowledged in recent times, its potency has not been recognised as equal to human grief. Anthropocentric philosophical questions still underpin both academic and popular discussions. In Enter the Animal, Teya Brooks Pribac examines what we do and don't know about grief and spirituality. She explores the growing body of knowledge about attachment and loss and how they shape the lives of both human and non-human animals. A valuable addition to the vibrant interdisciplinary conversation about animal subjectivity, Enter the Animal identifies conceptual and methodological approaches that have contributed to the prejudice against nonhuman animals. It offers a compelling theoretical base for the consideration of grief and spirituality across species and highlights important ethical implications for how humans treat other animals.

Learn iPhone and iPad Programming via Tutorials! If you're new to iOS or Swift, or to programming in general, learning how to write an app can seem incredibly overwhelming. That's why you need a book that: Shows you how to write an app step-by-step. Has tons of illustrations and screenshots to make everything clear. Is written in a fun and easygoing manner! In this book, you will learn how to make your own iPhone and iPad apps, through four engaging, epic-length tutorials. These hands-on tutorials describe in full detail how to build a new app from scratch. Five tutorials, five apps. Each new app will be a little more advanced than the one before, and together they cover everything you need to know to make your own apps. By the end of the series you'll be experienced enough to turn your ideas into real apps that you can sell on the App Store.

Based on Big Nerd Ranch's popular iPhone Bootcamp class, iPhone Programming: The Big Nerd Ranch Guide leads you through the essential tools and techniques for developing applications for the iPhone, iPad, and iPod Touch. In each chapter, you will learn programming concepts and apply them immediately as you build an application or enhance one from a previous chapter. These applications have been carefully designed and tested to teach the associated concepts and to provide practice working with the standard development tools Xcode, Interface Builder, and Instruments. The guide's learn-while-doing approach delivers the practical knowledge and experience you need to design and build real-world applications. Here are some of the topics covered: Dynamic interfaces with animation Using the camera and photo library User location and mapping services Accessing accelerometer data Handling multi-touch gestures Navigation and tabbed applications Tables and creating custom rows Multiple ways of storing and loading data: archiving, Core Data, SQLite Communicating with web services ALocalization/Internationalization "After many 'false starts' with other iPhone development books, these

clear and concise tutorials made the concepts gel for me. This book is a definite must have for any budding iPhone developer." –Peter Watling, New Zealand, Developer of BubbleWrap

For anyone who has ever wondered how computers solve problems, an engagingly written guide for nonexperts to the basics of computer algorithms. Have you ever wondered how your GPS can find the fastest way to your destination, selecting one route from seemingly countless possibilities in mere seconds? How your credit card account number is protected when you make a purchase over the Internet? The answer is algorithms. And how do these mathematical formulations translate themselves into your GPS, your laptop, or your smart phone? This book offers an engagingly written guide to the basics of computer algorithms. In Algorithms Unlocked, Thomas Cormen—coauthor of the leading college textbook on the subject—provides a general explanation, with limited mathematics, of how algorithms enable computers to solve problems. Readers will learn what computer algorithms are, how to describe them, and how to evaluate them. They will discover simple ways to search for information in a computer; methods for rearranging information in a computer into a prescribed order (“sorting”); how to solve basic problems that can be modeled in a computer with a mathematical structure called a “graph” (useful for modeling road networks, dependencies among tasks, and financial relationships); how to solve problems that ask questions about strings of characters such as DNA structures; the basic principles behind cryptography; fundamentals of data compression; and even that there are some problems that no one has figured out how to solve on a computer in a reasonable amount of time.

Apple Swift is a programming language that was developed for Apple Inc. for use in some of their devices. It is built on an open source framework which makes it open to changes from all users and it also allows many different coding languages to be compiled and ran in a single program. It was made to be a resilient programming language that is safer than other languages and very concise. It was made to prevent some common issues in programming such as null pointer issues and other errors that coders usually experience. The Swift language was first introduced at Apple’s 2014 conference. Since then, it went under multiple upgrades to be fully functional to users. This book will seek to cover all the features of the Apple Swift Playground which facilitates the user to generate Swift code as they need.

Bigger in size, longer in length, broader in scope, and even more useful than our original Mac OS X Hacks, the new Big Book of Apple Hacks offers a grab bag of tips, tricks and hacks to get the most out of Mac OS X Leopard, as well as the new line of iPods, iPhone, and Apple TV. With 125 entirely new hacks presented in step-by-step fashion, this practical book is for serious Apple computer and gadget users who really want to take control of these systems. Many of the hacks take you under the hood and show you how to tweak system preferences, alter or add keyboard shortcuts, mount drives and devices, and generally do things with your operating system and gadgets that Apple doesn't expect you to do. The Big Book of Apple Hacks gives you: Hacks for both Mac OS X Leopard and Tiger, their related applications, and the hardware they run on or connect to Expanded tutorials and lots of background material, including informative sidebars "Quick Hacks" for tweaking system and gadget settings in minutes Full-blown hacks for adjusting Mac OS X applications such as Mail, Safari, iCal, Front Row, or the iLife suite Plenty of hacks and tips for the Mac mini, the MacBook laptops, and new Intel desktops Tricks for running Windows on the Mac, under emulation in Parallels or as a standalone OS with Bootcamp The Big Book of Apple Hacks is not only perfect for Mac fans and power users, but also for recent -- and aspiring -- "switchers" new to the Apple experience. Hacks are arranged by topic for quick and easy lookup, and each one stands on its own so you can jump around and tweak whatever system or gadget strikes your fancy. Pick up this book and take control of Mac OS X and your favorite Apple gadget today!

In just 24 sessions of one hour each, learn how to build powerful applications for today's hottest handheld devices: the iPhone and iPad! Using this book's straightforward, step-by-step approach, you'll master every skill and technology you need, from setting up your iOS development environment to building great user interfaces, sensing motion to writing multitasking applications. Each 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 iOS development tasks. Quizzes and Exercises help you test your knowledge. By the Way notes present interesting information related to the discussion. Did You Know? tips show you easier ways to perform tasks. Watch Out! cautions alert you to possible problems and give you advice on how to avoid them. John Ray is currently serving as the Director of the Office of Research Information Systems at the Ohio State University. His many books include Using TCP/IP: Special Edition, Maximum Mac OS X Security, Mac OS X Unleashed, Teach Yourself Dreamweaver MX in 21 Days, and Sams Teach Yourself iOS 7 Application Development in 24 Hours. Printed in full color-figures and code appear as they do in Xcode Covers iOS 8 and up Learn to navigate the Xcode 6.x development environment Prepare your system and iDevice for efficient development Get started quickly with Apple's new language: Swift Test code using the new iOS Playground Understand the Model-View-Controller (MVC) development pattern Visually design and code interfaces using Xcode Storyboards, Segues, Exits, Image Slicing, and the iOS Object Library Use Auto Layout and Size Classes to adapt to different screen sizes and orientations Build advanced UIs with Tables, Split Views, Navigation Controllers, and more Read and write preferences and data, and create System Settings plug-ins Use the iOS media playback and recording capabilities Take photos and manipulate graphics with Core Image Sense motion, orientation, and location with the accelerometer, gyroscope, and GPS Integrate online services using Twitter, Facebook, Email, Web Views, and Apple Maps Create universal applications that run on both the iPhone and iPad Write background-aware multitasking applications Trace, debug, and monitor your applications as they run

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-developmen?t-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?

Learn how to build playgrounds so you can test your code, syntax, and ideas quickly. You can even learn from playgrounds built by others or build playgrounds to teach. And the playgrounds you build and use on your Mac and on your iPad are automatically shared using your Apple ID. Exploring Swift Playgrounds shows you how to use playgrounds to try out your basic app design ideas to see what they look like and how they behave. It doesn't matter if you can't remember a pesky little bit of syntax. Rather than look it up, you can try it out in a playground. More and more of the APIs are now available through playgrounds, so that you can do more than ever before. Going beyond print, the Swift Playgrounds book tool allows for immersive experiences for users learning code, organization processes, and anything else that can be described in the rich (and free) authoring tools provided by Apple. All of which you can learn how to use in Exploring Swift Playgrounds. What You'll Learn: Build Swift playgrounds for others to use Teach yourself and others with Swift playgrounds Use Swift playgrounds in your development process Who This Book Is For: Students with no prior coding knowledge and experienced developers. Take a deep dive into web development using the Go programming language to build web apps and RESTful services to create reliable and efficient software. Web Development with Go provides Go language fundamentals and then moves on to advanced web development concepts and successful deployment of Go web apps to the cloud. Web Development with Go will teach you how to develop scalable real-world web apps, RESTful services, and backend systems with Go. The book starts off by covering Go programming language fundamentals as a prerequisite for web development. After a thorough understanding of the basics, the book delves into web development using the built-in package, net/http. With each chapter you'll be introduced to new concepts for gradually building a real-world web system. The book further shows you how to integrate Go with other technologies. For example, it provides an overview of using MongoDB as a means of persistent storage, and provides an end-to-end REST API sample as well. The book then moves on to demonstrate how to deploy web apps to the cloud using the Google Cloud platform. Web Development with Go provides: Fundamentals for building real-world web apps in Go Thorough coverage of prerequisites and practical code examples Demo web apps for attaining a deeper understanding of web development A reference REST API app which can be used to build scalable real-world backend services in Go A thorough demonstration of deploying web apps to the Cloud using the Google Cloud platform Go is a high-performance language while providing greater level of developer productivity, therefore Web Development with Go equips you with the necessary skills and knowledge required for effectively building robust and efficient web apps by leveraging the features of Go.

Create Breakthrough Apple Watch Apps with the WatchKit Framework With its Apple Watch and WatchKit framework, Apple is challenging developers to build exciting and innovative apps for Apple Watch. iOS developers who master Apple Watch programming now will have the same huge "early mover" advantage that early iPhone developers enjoyed. Learning WatchKit Programming is a complete, hands-on tutorial for all iOS developers who are ready to design and build tomorrow's hottest new wearable apps. Leading iOS development trainer and author Wei-Meng Lee covers all of the fundamentals of Apple Watch development and the WatchKit API, from application architecture and design to navigation, notification, and glances. Using practical Swift code examples designed for clarity and simplicity, Lee guides you through building apps from the ground up and shows you how to integrate those apps with the iPhone for expanded capabilities. The perfect companion to other mobile development books in the Learning Series, this guide helps you extend your iOS skills to a whole new environment, build apps that solve a new set of problems, and reach millions of people in the new Apple Watch marketplace Coverage includes Getting started quickly with WatchKit and Apple Watch development Storyboarding apps and testing them on the Apple Watch Simulator Mastering Apple Watch's multiple-screen navigation Building highly efficient interfaces with Apple Watch UI controls Customizing each screen's look and feel, and passing data between them Responding to user interactions via buttons, switches, sliders, or Force Touch Displaying information via labels, images, or tables Communicating between an Apple Watch app and its containing iOS app Calling web services from Apple Watch Displaying short- and long-look notifications Customizing notifications to display your message's essence more quickly Implementing glances to give users a faster way to gather information Localizing your Apple Watch apps All of this book's sample Swift code is available for download at informit.com/title/9780134195445.

Learn how to program iOS applications with Swift. After reading this guide, you will know how to program in Swift, how to define functions and objects, and how to write code using the Swift paradigm. Table of Contents INTRODUCTION TO SWIFT Computer Programs Playground Variables Memory Primitive Types Declaration and Initialization Arithmetic Operators Constants Data Types Characters Strings Booleans Optionals Tuples Collections Arrays Sets Dictionaries Conditionals and Loops If and Else Switch While and Repeat While For In Control Transfer Statements SWIFT PARADIGM Programming Paradigms Functions Declaration of Functions Generic Functions Standard Functions Scopes Closures Structures Definition of Structures Methods Initialization Property Keywords Computed Properties Type Properties and Methods Primitive Type Structures and Casting String Structures Array Structures Set Structures Dictionary Structures Range Structures Enumerations Associated Values Methods Objects Definition of Objects Property Observers Type Properties and Methods Optional Chaining Reference Types Memory Management Inheritance Type Casting Any and AnyObject Initialization Deinitialization Protocols Definition of Protocols Extensions Delegates QUICK REFERENCE Primitive Data Types Control Transfer Statements Standard Functions Primitive Type Structures String Array Set Dictionary Range Casting This guide assumes that you have a basic knowledge of app development. If you need to know the requirements to develop iOS applications, download our free guide App Development. For a complete course on app development for iOS, read our book iOS Apps for Masterminds. This guide is a collection of excerpts from the book iOS Apps for Masterminds. The information included in this guide will help you understand a particular aspect of app development in iOS, but it will not teach you everything you need to know to develop an app for Apple devices. If you need a complete course on app development for iOS, read our book iOS Apps for Masterminds. For more information, visit our website at www.formasterminds.com.

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 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 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 Crystal-clear explanations anyone can understand Kid-friendly examples, including games and puzzles Learn by doing—you'll build dozens of small apps Exercises that encourage critical thinking About the Reader Written for kids who want to learn how to program. (Psst! 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 now the youngest IBM Champion, a Cloud Advisor,

Watson Developer, TED Speaker, and Manning author! Table of Contents Get ready to build apps with Swift! Create your first app Your first real Swift code using variables I/O laboratory Computers make decisions, too! Let computers do repetitive work Knitting variables into arrays and dictionaries Reuse your code: Clean it with function detergent Reduce your code: Use less, do more with class detergent Reading and writing files Frameworks: Bookshelves of classes SpriteKit: Fun animation time Time to watch your WatchKit code Continuing your journey with Swift A story of magic, family, a mysterious stranger . . . and a band of marauding raccoons. Otter Lake is a sleepy Anishnawbe community where little happens. Until the day a handsome stranger pulls up astride a 1953 Indian Chief motorcycle – and turns Otter Lake completely upside down. Maggie, the Reserve’s chief, is swept off her feet, but Virgil, her teenage son, is less than enchanted. Suspicious of the stranger’s intentions, he teams up with his uncle Wayne – a master of aboriginal martial arts – to drive the stranger from the Reserve. And it turns out that the raccoons are willing to lend a hand.

This is the Scala edition of Category Theory for Programmers by Bartosz Milewski. This book contains code snippets in both Haskell and Scala.

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.

Covers iOS 9.1 and up, Xcode 7.x, iPhone, iPad, and More! In just 24 sessions of one hour each, learn how to build powerful applications for today’s hottest handheld devices: the iPhone and iPad! Using this book’s straightforward, step-by-step approach, you’ll master every skill and technology you need, from setting up your iOS development environment to building great user interfaces, sensing motion to writing multitasking applications. Each 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 iOS development tasks. Quizzes and Exercises help you test your knowledge. Notes present interesting information related to the discussion. Tips show you easier ways to perform tasks. Cautions alert you to possible problems and give you advice on how to avoid them. Printed in full color—figures and code appear as they do in Xcode 7.x • Learn to navigate the Xcode 7.x development environment and install apps on your iDevice • Get started quickly with Apple’s Open Source language: Swift 2.0 • Test code and application logic using the iOS Playground • Understand the Model-View-Controller (MVC) development pattern • Visually design and code interfaces using Xcode Storyboards, Segues, Exits, Image Slicing, and the iOS Object Library • Use Auto Layout and Size Classes to adapt to different screen sizes and orientations • Build advanced UIs with Tables, Split Views, Navigation Controllers, and more • Read and write preferences and data, and create System Settings plug-ins • Use iOS media playback and recording capabilities • Take photos and manipulate graphics with Core Image • Sense motion, orientation, and location with the accelerometer, gyroscope, and GPS • Use 3D touch to add Peek, Pop, and Quick Actions to your apps • Integrate online services using Twitter, Facebook, Email, Web Views, and Apple Maps • Create universal applications that run on both the iPhone and iPad • Write background-aware multitasking applications • Trace, debug, and monitor applications as they run • Additional files and updates available online

Learn how to create apps for iOS 12 before anyone else. This is the first book to teach you how to work with Swift 4.2, Xcode 10, iOS 12 and the new APIs introduced by Apple iOS Apps for Masterminds leads the reader step by step to master the complex subjects required to create applications for iPhones and iPads. After reading this book, you will know how to program in Swift, how to design user interfaces, and how to work with the most powerful frameworks available for the construction of modern applications. This book is a complete course that will teach you how to build insanely great applications from scratch. Every chapter explores both basic and complicated concepts of computer programming, the Swift language, and app development. The information is supported by functional examples that guide beginners and experts through the most fundamental frameworks included in the iOS SDK. The examples are distributed throughout the book in a specific order to gradually introduce complex topics and make them accessible to everyone. The goal of iOS Apps for Masterminds is to make you familiar with the most advanced technologies for app development. It was designed to prepare you for the future and was written for the genius inside you, for Masterminds. This book includes: Introduction to Swift 4.2 Swift Paradigm Foundation Framework UIKit Framework Auto Layout Size Classes Navigation Controllers Scroll Views Stack Views Table Views Collection Views Split View Controller Alert Views Notifications Files Archiving Core Data iCloud CloudKit Core Graphics and Quartz 2D Core Animation AVFoundation Camera and Photos Library Web Kit Views Gesture Recognizers Timers Operation Queues Error Handling Image and Video Internationalization ...and more! iOS app development with iOS 12, Xcode 10 and Swift 4.2 App development, Swift programming, Create apps, Create app, iPhone apps, Build app, Swift language, develop application, Objective-C, Apple development, iOS development, iOS Apps, Program apps.

In just 24 lessons of one hour or less, Sams Teach Yourself Swift in 24 Hours, Second Edition, will teach you how to build next-generation OS X and iOS apps with Apple’s Swift 2 programming language. This book’s straightforward, step-by-step approach helps you quickly master Swift 2’s core concepts, structure, and syntax and use Swift to write safe, powerful, modern code. In just a few hours you’ll be applying 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 2 programming 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... Get started with Swift 2.0’s Xcode 7 development environment Master Swift’s fundamental data types Use operators to change, assign, combine, check, or verify values Retain data and preferences in memory with arrays, sets, and dictionaries Control program flow, modify execution paths, and iterate code Perform complex actions concisely with Swift 2.0’s improved functions Work with higher-order functions and closures Harness the power of structs, enums, classes, and class inheritance Take advantage of Swift’s advanced memory allocation and references Use protocols to define behavior and explore Protocol-Oriented Programming Add type functionality with extensions Smoothly handle errors Leverage the power of generics to create flexible and reusable code

Interoperate with Objective-C code Get started with Functional Programming approaches and thinking functionally

If you create, manage, operate, or configure systems running in the cloud, you're a cloud engineer--even if you work as a system administrator, software developer, data scientist, or site reliability engineer. With this book, professionals from around the world provide valuable insight into today's cloud engineering role. These concise articles explore the entire cloud computing experience, including fundamentals, architecture, and migration. You'll delve into security and compliance, operations and reliability, and software development. And examine networking, organizational culture, and more. You're sure to find 1, 2, or 97 things that inspire you to dig deeper and expand your own career. "Three Keys to Making the Right Multicloud Decisions," Brendan O'Leary "Serverless Bad Practices," Manases Jesus Galindo Bello "Failing a Cloud Migration," Lee Atchison "Treat Your Cloud Environment as If It Were On Premises," Iyana Garry "What Is Toil, and Why Are SREs Obsessed with It?", Zachary Nickens "Lean QA: The QA Evolving in the DevOps World," Theresa Neate "How Economies of Scale Work in the Cloud," Jon Moore "The Cloud Is Not About the Cloud," Ken Corless "Data Gravity: The Importance of Data Management in the Cloud," Geoff Hughes "Even in the Cloud, the Network Is the Foundation," David Murray "Cloud Engineering Is About Culture, Not Containers," Holly Cummins

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