

[PDF] Rxswift Reactive Programming With Swift Second Edition

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RxSwift-Florent Pillet 2017-03-14 Learn reactive programming in Swift with RxSwift! The popularity of reactive programming continues to grow on an ever-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. Who This Book Is For 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 the UI of your apps using RxCocoa, which provides an integration of both UIKit and Cocoa. Intermediate Topics Level up your RxSwift knowledge with chapters on reactive networking, multi-threading, and error handling. Advanced Topics Round out your RxSwift education by learning about MVVM app

architecture, scene-based navigation, and exposing data via services. 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!

Beginning Reactive Programming with Swift-Jesse Feiler 2018-09-10 Learn the basics of reactive programming and how it makes apps more responsive. This book shows you how to incorporate reactive programming into existing development products and cycles using RxSwift and RxCocoa on iOS and Mac. As we move away from the traditional paradigm of typing or touching one step at a time to interact with programs, users expect apps to adapt and not need constant hand-holding. People today expect their devices to do much more than just follow commands. They expect devices to react and adapt. Reactive programming, a new term for asynchronous processing, requires new app architectures, and you'll learn how these are already built into iOS and macOS in many places. As part of this more complex environment, you'll move beyond Cocoa and Cocoa Touch to incorporate data from Amazon Web Services (AWS), JavaScript Object Notation (JSON), and other formats, and standards. Together with the concepts of reactive programming and RxSwift, these tools help you build more powerful and useful apps that have wide appeal and use. What You'll Learn Work with tools such as Darwin microkernel, RxSwift, and RxCocoa Use Git repositories and other resources to get into coding Create apps that adapt to gestures and UI interaction as well as what's happening in and

around the environment of the app itself. Who This Book Is For This book is for Swift programmers interested in learning to create reactive apps with RxSwift.

Reactive Programming with Swift 4-Navdeep Singh 2018-02-27 Learn how to solve blocking user experience and build event based reactive applications with Swift. Key Features Build fast and scalable apps with RxSwift Apply reactive programming to solve complex problems and build efficient programs with reactive user interfaces Take expressiveness, scalability, and maintainability of your Swift code to the next level with this practical guide Book Description RxSwift belongs to a large family of Rx implementations in different programming languages that share almost identical syntax and semantics. Reactive approach will help you to write clean, cohesive, resilient, scalable, and maintainable code with highly configurable behavior. This book will introduce you to the world of reactive programming, primarily focusing on mobile platforms. It will tell how you can benefit from using RxSwift in your projects, existing or new. Further on, the book will demonstrate the unbelievable ease of configuring asynchronous behavior and other aspects of the app that are traditionally considered to be hard to implement and maintain. It will explain what Rx is made of, and how to switch to reactive way of thinking to get the most out of it. Also, test production code using RxTest and the red/ green approach. Finally, the book will dive into real-world recipes and show you how to build a real-world app by applying the reactive paradigm. By the end of the book, you'll be able to build a reactive swift application by leveraging all the concepts this book takes you through. What you will learn Understand the practical benefits of Rx on a mobile platform Explore the building blocks of Rx, and Rx data flows with marble diagrams Learn how to convert an existing code base into RxSwift code base Learn how to debug and test your Rx Code Work with Playgrounds to transform sequences by filtering them using map, flatmap and other operators Learn how to combine different operators to work with Events in a more controlled manner. Discover Rx Cocoa and convert your simple UI elements to Reactive components Build a complete RxSwift app using MVVM as design pattern Who this book is for This book is for the developers who are familiar with Swift and iOS application development and are looking out to reduce the complexity of their

apps. Prior experience of reactive programming is not necessary.

Combine: Asynchronous Programming with Swift (First Edition)-Scott Gardner 2019-12-05 Dive into Combine! Writing asynchronous code can be challenging, with a variety of possible interfaces to represent, perform, and consume asynchronous work - delegates, notification center, KVO, closures, etc. Juggling all of these different mechanisms can be somewhat overwhelming. Does it have to be this hard? Not anymore! In this book, you'll learn about Combine - Apple's framework to work with asynchronous events in a unified and reactive way that ensures your app is always up to date based on the latest state of its data. Who This Book Is For This book is for intermediate iOS developers who already know the basics of iOS and Swift development but are interested in learning declarative/reactive programming and take their app and state management to the next level. You'll also find this book interesting if you're interested in SwiftUI - as many of the reactive capabilities keeping your SwiftUI views up-to-date are built on top of Combine. Topics Covered in Combine: Asynchronous Programming with Swift What & Why: Learn what is Combine and reactive programming and the problems they solve, and how you can unify all of your asynchronous piece of work. Operators: Learn how to compose, transform, filter and otherwise manipulate different pieces of asynchronous work using operators. In Practice: You'll gain knowledge on various topics and techniques you'll leverage when writing your own real-life apps, as well as practice these techniques with actual hands-on apps and projects. SwiftUI: You'll learn about how Combine is deeply rooted within SwiftUI and provides it with the ability to reactively update its views based on the state of your app. Advanced Combine: Once you've got a handle on the basics, you'll dive into advanced Combine topics such as Error Handling, Schedulers, and Custom Publishers. By the end of this book, you'll be a pro in building full-fledged applications using Combine's various abilities.

Reactive Programming with Swift-Cecil Costa 2016-04-28 Leverage the power of the Functional Reactive Programming paradigm with Swift to develop robust iOS applications About This Book Build highly responsive applications with this

practical introduction to Reactive programming
This book uses ReactiveCocoa, the most popular solution for Reactive Programming on iOS to install, debug, and develop a framework with Swift Switch from the traditional programming style to the reactive paradigm to code your first reactive applications with ease Who This Book Is For Reactive Programming with Swift is for Swift developers who want to start making more powerful and efficient applications. You need a basic understanding of Swift to follow along. This book takes a first-principles approach to what Reactive Programming is and how you can start implementing it in your next iOS applications. What You Will Learn Switch your programming concepts from imperative to Functional reactive programming Improve your app's maintenance by developing with a different paradigm Create unit tests and automation tests using the ReactiveCocoa framework Create clear code that is very easy to read Get accustomed to migrating mobile apps to the Reactive way of programming Perform asynchronous calls and join them later In Detail Reactive programming helps you write applications that are more powerful and efficient. You can write more software, help more people, and create applications that scale. Reactive programming is a growing paradigm that we will help you set to work in Swift. Reactive Programming with Swift guides you through migrating from the traditional way of developing to the new ReactiveCocoa framework, which uses Swift as its main programming language. You will learn how to develop with this framework, debug code, create unit tests, use additional frameworks, and convert a traditional framework into a ReactiveCocoa one. Starting with a crash course on the fundamental concepts of Reactive programming, we'll set you up so you're ready to create reactive applications. We'll then move on to topics such as Graphical events, Streaming, and Core data, which will help you dive deeper with advanced programming. The concept of switching your programming concepts from imperative to functional reactive programming will also be covered. By the end of this book, you will be able to successfully create highly functional apps using Swift. Style and approach This book is a fast-paced, practical guide compiled with ample images and screenshots that explain how to create apps and demonstrate their logic.

Hands-On Design Patterns with Swift-Florent Vilmart 2018-12-24 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.

App Architecture-Chris Eidhof 2018-05-13 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.

Mastering MVVM with Swift: Updated for Xcode 9 and Swift 4-Bart Jacobs 2017-07-17 "I don't feel in control of my project's architecture." - You "MVC simply doesn't cut it. There must be a better solution." - Yours Truly Despite its widespread, the Model-View-Controller pattern just doesn't cut it for most Swift projects. Take control of your Swift projects with the Model-View-ViewModel pattern. Massive View Controller Syndrome Firing up Xcode and starting a new project is a great feeling. The first few days or weeks don't feel like work. Everything goes according to plan. But as the code base of your project grows, it becomes harder and harder to manage the project. The view controllers of your project start to put on weight ... a lot of weight. They become more than view controllers. They take on responsibilities they didn't sign up for. Don't they? Yet you've done everything right. You've stuck to the rules of the Model-View-Controller pattern. Why have you coded yourself in a corner? And why is it frustrating or downright scary to add features or refactor existing functionality? It's Time to Cure MVC If your project is suffering from Massive View Controller syndrome, then the Model-View-ViewModel pattern is the cure to your problem.

The Model-View-ViewModel pattern has been around for many, many years, but it only recently gained traction in the Cocoa community. MVVM extends MVC by resolving common issues. The result is a robust application architecture with lean view controllers, improved testability, and a better separation of concerns. How does that sound? Take Control of Your Project With MVVM In Mastering MVVM With Swift, we refactor an existing application built with MVC to use MVVM instead. The results are dramatic and the MVVM pattern is surprisingly easy to adopt in your own projects. You learn the differences between Model-View-Controller and Model-View-ViewModel, highlighting the benefits Model-View-ViewModel has over Model-View-Controller. After a short introduction, we take an application built with Model-View-Controller and refactor it to use Model-View-ViewModel instead. Along the way, you learn about the anatomy of view models, how to create them, and how to test them. Last but not least, we add protocols and protocol-oriented programming to the mix to further simplify the view controllers in the project. At the end of this course, you have the knowledge and, more importantly, the hands-on experience to apply Model-View-ViewModel in your own projects. Ready for Xcode 9 and Swift 4 In Mastering MVVM With Swift, you learn everything you need to know to integrate MVVM in a new or an existing Swift project. We focus on the key aspects of the pattern and refactor an application that takes advantage of the core features of MVVM. We use the latest and greatest to build an application, which means we use Xcode 9 and Swift 4. Battling Massive View Controller Syndrome Are the view controllers of your projects suffering from Massive View Controller syndrome? You've carefully crafted the architecture of your application using the Model-View-Controller pattern and, yet, the view controllers of your project are ready to burst and they're impossible to test. Adding a feature forces you to wade through hundreds of lines of code. You hope you don't break anything while you carefully add a few lines of code. Don't get me wrong. Your code isn't bad. But there's just so much of it. You've applied the Model-View-Controller pattern like you were told to and you still end up with an architecture you aren't quite happy with. Does this sound familiar? It's Not You. It's MVC. Because Apple's frameworks are impregnated with the Model-View-Controller pattern we think it's the right or only tool for the job. Don't make the same mistake. There's nothing wrong with the Model-View-Controller

pattern, but there are better alternatives, especially if you're using Swift.

Learning RxJava-Thomas Nield 2017-06-20
Reactive Programming with Java and ReactiveX
About This Book Explore the essential tools and operators RxJava provides, and know which situations to use them in Delve into Observables and Subscribers, the core components of RxJava used for building scalable and performant reactive applications Delve into the practical implementation of tools to effectively take on complex tasks such as concurrency and backpressure Who This Book Is For The primary audience for this book is developers with at least a fundamental mastery of Java. Some readers will likely be interested in RxJava to make programs more resilient, concurrent, and scalable. Others may be checking out reactive programming just to see what it is all about, and to judge whether it can solve any problems they may have. What You Will Learn Learn the features of RxJava 2 that bring about many significant changes, including new reactive types such as Flowable, Single, Maybe, and Completable Understand how reactive programming works and the mindset to "think reactively" Demystify the Observable and how it quickly expresses data and events as sequences Learn the various Rx operators that transform, filter, and combine data and event sequences Leverage multicasting to push data to multiple destinations, and cache and replay them Discover how concurrency and parallelization work in RxJava, and how it makes these traditionally complex tasks trivial to implement Apply RxJava and Retrolambda to the Android domain to create responsive Android apps with better user experiences Use RxJava with the Kotlin language to express RxJava more idiomatically with extension functions, data classes, and other Kotlin features In Detail RxJava is a library for composing asynchronous and event-based programs using Observable sequences for the JVM, allowing developers to build robust applications in less time. Learning RxJava addresses all the fundamentals of reactive programming to help readers write reactive code, as well as teach them an effective approach to designing and implementing reactive libraries and applications. Starting with a brief introduction to reactive programming concepts, there is an overview of Observables and Observers, the core components of RxJava, and how to combine different streams of data and events together. You will also learn simpler ways

to achieve concurrency and remain highly performant, with no need for synchronization. Later on, we will leverage backpressure and other strategies to cope with rapidly-producing sources to prevent bottlenecks in your application. After covering custom operators, testing, and debugging, the book dives into hands-on examples using RxJava on Android as well as Kotlin. Style and approach This book will be different from other Rx books, taking an approach that comprehensively covers Rx concepts and practical applications.

IOS Core Animation-Nick Lockwood 2013-08-12
Core Animation is the technology underlying Apple's iOS user interface. By unleashing the full power of Core Animation, you can enhance your app with impressive 2D and 3D visual effects and create exciting and unique new interfaces. In this in-depth guide, iOS developer Nick Lockwood takes you step-by-step through the Core Animation framework, building up your understanding through sample code and diagrams together with comprehensive explanations and helpful tips. Lockwood demystifies the Core Animation APIs, and teaches you how to make use of Layers and views, software drawing and hardware compositing Layer geometry, hit testing and clipping Layer effects, transforms and 3D interfaces Video playback, text, tiled images, OpenGL, particles and reflections Implicit and explicit animations Property animations, keyframes and transitions Easing, frame-by-frame animation and physics Performance tuning and much, much more! Approximately 356 pages.

Practical Swift-Eric Downey 2016-12-01
Take a firsthand tour of Xcode and all the latest features Swift 3 has to offer. If you have picked up this book, chances are you know a little bit about Swift Programming. With Practical Swift you'll develop an advanced understanding of the language that will enable you to create a reference guide using Xcode Playgrounds, one you can continue to grow throughout your iOS career. This book not only shows you how to code in a clean and concise manner, but also the why behind the code. Understanding why will be instrumental in your advancement as a Swift developer. What You'll learn: Review the evolution of Swift and the latest features in Swift 3 Study architecture and design patterns Examine Protocol Oriented Programming

Understand Swift generics Test Swift code Build an iOS App with core data from scratch Who This Book Is For: The primary audience for this book is developers who have started learning iOS and Swift and want to learn more of the intermediate to advanced topics available in Swift. The secondary audience is developers who have experience in iOS and Swift and want a good reference book for concepts they might already know, but are looking to re-enforce.

Hands-On Reactive Programming in Spring 5-Oleh Dokuka 2018-10-08 Explore the reactive system and create efficient microservices with Spring Boot 2.1 and Spring Cloud Key Features Understand the kind of system modern businesses require with Spring Gain deeper insights into reactive programming with Reactor and Spring Cloud Get in-depth knowledge on asynchronous and nonblocking communication with Spring 5 WebFlux Book Description These days, businesses need a new type of system that can remain responsive at all times. This is achievable with reactive programming; however, the development of these kinds of systems is a complex task, requiring a deep understanding of the domain. In order to develop highly responsive systems, the developers of the Spring Framework came up with Project Reactor. Hands-On Reactive Programming in Spring 5 begins with the fundamentals of Spring Reactive programming. You'll explore the endless possibilities of building efficient reactive systems with the Spring 5 Framework along with other tools such as WebFlux and Spring Boot. Further on, you'll study reactive programming techniques and apply them to databases and cross-server communication. You will advance your skills in scaling up Spring Cloud Streams and run independent, high-performant reactive microservices. By the end of the book, you will be able to put your skills to use and get on board with the reactive revolution in Spring 5.1! What you will learn Discover the difference between a reactive system and reactive programming Explore the benefits of a reactive system and understand its applications Get to grips with using reactive programming in Spring 5 Gain an understanding of Project Reactor Build a reactive system using Spring 5 and Project Reactor Create a highly efficient reactive microservice with Spring Cloud Test, monitor, and release reactive applications Who this book is for This book is for Java developers who use Spring to develop their applications and want to build

robust and reactive applications that can scale in the cloud. Basic knowledge of distributed systems and asynchronous programming will help you understand the concepts covered in this book.

Clean Architecture-Robert C. Martin 2017-09-12 Practical Software Architecture Solutions from the Legendary Robert C. Martin ("Uncle Bob") By applying universal rules of software architecture, you can dramatically improve developer productivity throughout the life of any software system. Now, building upon the success of his best-selling books Clean Code and The Clean Coder, legendary software craftsman Robert C. Martin ("Uncle Bob") reveals those rules and helps you apply them. Martin's Clean Architecture doesn't merely present options. Drawing on over a half-century of experience in software environments of every imaginable type, Martin tells you what choices to make and why they are critical to your success. As you've come to expect from Uncle Bob, this book is packed with direct, no-nonsense solutions for the real challenges you'll face-the ones that will make or break your projects. Learn what software architects need to achieve-and core disciplines and practices for achieving it Master essential software design principles for addressing function, component separation, and data management See how programming paradigms impose discipline by restricting what developers can do Understand what's critically important and what's merely a "detail" Implement optimal, high-level structures for web, database, thick-client, console, and embedded applications Define appropriate boundaries and layers, and organize components and services See why designs and architectures go wrong, and how to prevent (or fix) these failures Clean Architecture is essential reading for every current or aspiring software architect, systems analyst, system designer, and software manager-and for every programmer who must execute someone else's designs. Register your product for convenient access to downloads, updates, and/or corrections as they become available.

Advanced iOS App Architecture (Second Edition): Real-World App Architecture in Swift-Rene Cacheaux 2019-12-02 Apply Different Architectures to Your Codebase! Advanced iOS App Architecture guides you through building

one real-world app written in different architectures to give you hands-on and practical experience working in different architectures. This book will also guide you through the theory you need to gain a solid foundation of architecture concepts so that you can make your own informed decisions on how to use them in your codebase. Who This Book Is For This book is for intermediate iOS developers who already know the basics of iOS and are looking to build apps using defined architectures, making apps cleaner and easier to maintain. Topics Covered in Advanced iOS App Architecture Navigating Architecture Topics: Learn the theory behind various architectures to help inform which works best for you in different situations you may face. Managing Dependencies: Learn how to manage dependencies both internally and externally within your app. MVVM Architecture: Explore the history of the MVVM architecture and begin building KOOBER - the book's project app - using MVVM principles. Redux Architecture: Explore the history of the Redux architecture and continue building KOOBER using Redux principles. Elements Architecture: Explore the history of the Elements architecture and continue building KOOBER using Elements principles. After reading this book, you'll have the knowledge to decide which types of architecture components suit your apps and you'll have a deep understanding of the covered architectures. About the iOS Architecture Team The architecture team is a group of seasoned developers who work for large multi-national companies who deal with large and diverse code bases on a daily basis. The knowledge procured over years of development is now being transferred to you through book. We hope you enjoy the book and, hopefully, you'll apply some of the architectures you've learned to your own apps!

The iOS Interview Guide-Alex Bush 2017-05-31

iOS 14 Programming Fundamentals with Swift-Matt Neuburg 2020-09-23 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.

Data Structures & Algorithms in Swift (Third Edition): Implementing Practical Data

Structures with Swift-Kelvin Lau 2019-12-12 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 right 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 in order to build more complex programs or ace a whiteboard interview. Topics Covered in Data Structures & Algorithms in Swift Basic data structures and algorithm 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 elegantly solve more complex problems in your apps.

Beginning JSON-Ben Smith 2015-02-27

Beginning JSON is the definitive guide to JSON - JavaScript Object Notation - today's standard in data formatting for the web. The book starts with the basics, and walks you through all aspects of using the JSON format. Beginning JSON covers all areas of JSON from the basics of data formats to creating your own server to store and retrieve persistent data. Beginning JSON provides you with the skill set required for reading and writing properly validated JSON data. The first two brief chapters of the book contain the foundations of JavaScript as it relates to JSON, and provide the necessary understandings for later chapters. Chapters 3 through 12 reveal what data is, how to convert that data into a transmittable/storable format, how to use AJAX to send and receive JSON, and, lastly, how to reassemble that data back into a proper JavaScript object to be used by your program. The final chapters put everything you learned into practice.

Realm-Raywenderlich Com Team 2018-07-17 Learn Realm Database and Realm Cloud! Realm finds the sweet spot between the simplicity of storing data as JSON on disk and using heavy, slow ORMs like Core Data or similar that are built on top of SQLite. And although the Realm documentation is pretty complete, you need a more detailed approach to help you learn how to leverage Realm properly in your app. Realm: Building Modern Swift Apps with Realm Database is here to help! This book is the easiest and fastest way to get hands-on experience with using Realm Database in your apps. Who This Book Is For This book is for anyone who would like to leverage the power of Realm Database or Realm Cloud in their apps. The book starts with a gentle introduction, then moves on to more complicated scenarios, including migrations, real-time sync and more. Topics Covered in Realm: Building Modern Swift Apps with Realm Database - Getting Started: Dive right into creating an iOS app that uses Realm to persist data on disk while following this tutorial-style chapter. - Object Basics and Data Types: Go deeper into Realm's Swift API and discover the available classes and their methods to understand Realm's superpowers. - Schema Relationships: Learn all about building powerful and efficient relationships between objects. - Notifications and Reactive Apps: See how to leverage Realm's built-in notification APIs to deliver notifications to any observers. - Multiple Realms / Shared Realms: Use multiple configurations, read and write data, and explore

new topics like sharing data in your app. - Dependency Injection and Testing: Learn how to use dependency injection, and how to write both synchronous and asynchronous tests in your app. - Schema Migrations: See how you can migrate the schema of a Realm file as it evolves alongside your app. - Real-Time Sync: Get started with Realm Cloud and learn how to apply your existing Realm Database skills to Realm Cloud. One thing you can count on: After reading this book, you'll be well-prepared to use Realm in your own apps!

2D Apple Games by Tutorials-Raywenderlich Com Team 2016-12-14 Learn How to Make 2D Games for iOS, tvOS, watchOS and macOS! Learn how to make games for all the major Apple platforms in Swift, using Apple's built-in 2D game framework: Sprite Kit. Through a series of mini-games and challenges, you will go from beginner to advanced and learn everything you need to make your own game! By the time you're finished reading this book, you will have made 6 complete mini-games, from an action game to a puzzle game to a tower defense game! Topics Covered in 2D Apple Games by Tutorials Sprites: Get started quickly and get your images onto your screen. Manual Movement: Move sprites manually with a crash course on 2D math. Actions: Learn how to move sprites the "easy way" using SpriteKit actions. Scenes and Transitions: Make multiple screens in your app and move between them. Camera: Use Sprite Kit's built-in camera to control your view. Labels: Learn how to display text for lives, scores and more in your game. Physics: Add realistic physics behavior into your games. Beyond Sprites: Add video nodes, core image filters, and custom shapes. Particle Systems: Add explosions, star fields, and other special effects. Adding "Juice" Take your game from good to great by polishing it until it shines. Online Gaming: Add multiplayer features to your game with Apple's Game Center. Tile Maps: Make games that use tile maps with obstacles, power-ups, and more. tvOS: Learn how to port your game to the Apple TV and work with the remote. watchOS: Take advantage of the unique features of the Apple Watch. macOS: Learn how to bring 2D gaming to the desktop. And much more, including a bonus chapter on creating your own 2D game art!

Core Data by Tutorials (Sixth Edition): Persisting iOS App Data with Core Data in

Swift-Aaron Douglas 2019-11-25 Learn Core Data with Swift! Take control of your data in iOS apps using Core Data, through a series of high quality hands-on tutorials. Start with the basics like setting up your own Core Data Stack all the way to advanced topics like syncing with iCloud, migration, performance, multithreading, and more! By the end of this book, you'll have hands-on experience with Core Data and will be ready to use it in your own apps. Who This Book Is For: This book is for intermediate iOS developers who already know the basics of iOS and Swift development but want to learn how to use Core Data to save data in their apps. Topics Covered in Core Data by Tutorials: Your First Core Data App: You'll click File\New Project and write a Core Data app from scratch! NSManagedObjectContext Subclasses: Learn how to create your own subclasses of NSManagedObjectContext - the base data storage class in Core Data. The Core Data Stack: Learn how the main objects in Core Data work together, so you can move from the starter Xcode template to your own system. Intermediate Fetching: This chapter covers how to fetch data with Core Data - fetch requests, predicates, sorting and asynchronous fetching. NSFetchedResultsController: Learn how to make Core Data play nicely with table views using NSFetchedResultsController! Versioning and Migration: In this chapter, you'll learn how to migrate your user's data as they upgrade through different versions of your data model. Synchronize with iCloud: Learn how to make your apps synchronize across devices, using the power of iCloud! Unit Tests: In this chapter, you'll learn how to set up a test environment for Core Data and see examples of how to test your models. Measuring and Boosting Performance: Learn how to measure your app's performance with various Xcode tools and deal with slow spots in your code. Multiple Managed Object Contexts: Learn how multiple managed object contexts can improve performance and make for cleaner code. 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.

Swift Functional Programming-Dr. Fatih Nayebi 2017-04-26 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.

Practical Android-Mark Wickham 2018-01-02 Choose the best approach for your app and implement your solution quickly by leveraging complete projects. This book is a collection of practical projects that use advanced Android techniques and approaches, written by Android instructor Mark Wickham. Mark has taught a series of popular classes at Android development conferences since 2013 and Practical Android covers content from his most popular classes. Each chapter covers an important concept and provides you with a deep dive into the implementation. The book is an ideal resource for developers who have some development experience, but may not be Android or mobile development experts. Each chapter includes at least one complete project to show the reader how to implement the concepts. What You'll Learn Apply JSON in Android Work with connectivity, which covers all aspects of HTTP in Android Determine if your server is reachable Use lazy loading, a common pattern for most apps and which is not trivial to implement Take advantage of remote crashlogs to implement a solution for your apps so you know when they crash and can provide timely fixes Implement push messaging to take your app to the next level Develop with Android Audio, which provides complete coverage of all the Android audio APIs and synthesis engines Who This Book Is For Those with prior experience with using Android and have a strong Java background.

iOS Animations by Tutorials Second Edition-Marin Todorov 2016-04-07 Updated for Xcode 7.3 and Swift 2.3 Make Delightful Animations with Swift! There's no denying it: creating animations is one of the most enjoyable parts of iOS development. Animations are fun to create, they breathe life into your user interface, and

they make your app a delight to use. In this book, you'll learn about iOS animation in Swift from beginning to advanced through a series of hands-on tutorials and challenges, that make your app look and feel great. Up to date with iOS 9, Xcode 7.3, and Swift 2.3. Who This Book Is For: This book is for intermediate to advanced developers, who already know the basics of iOS and Swift development and want to dive deep into animations. Topics Covered in iOS Animations by Tutorials: View Animations: Start with the basics by learning how to animate views: size, position, color, and more. Springs: Make your animations bounce with realistic spring behavior. Transitions: Add subtle transitions when you add or remove subviews. Keyframe Animations: Learn how to make complex animations with precise multi-stage timing. Animation and Auto Layout: Learn how to animate with Auto Layout by animating constraints. Layer Animations: Dive deeper and use layer animation for more advanced techniques. Shapes and Masks: Learn how to use shapes and layer masks for cool effects. Gradient Animations: Make moving gradients like the "slide to unlock" screen. Stroke and Path Animations: Animate lines moving over time along a path. 3D Animations: Rotate, translate, and scale your layers over time in three dimensions. And much more, including: Particle emitters, frame animations, and third-party animation libraries! 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.

Functional Kotlin-Mario Arias 2018-02-23 Learn how to apply Functional Programming with Kotlin to real-life projects with popular libraries like Arrow. Key Features Focus on the functional aspects of Kotlin and identify the advantages that functional programming brings to the table and the associated coding benefits. Implement common functional programming design patterns and techniques. Learn to combine OOP and Reactive Programming with Functional Programming and how RxKotlin and funkTionale can help you implementing Functional Programming in Kotlin Book Description Functional programming makes your application faster, improves performance, and

increases your productivity. Kotlin supports many of the popular and advanced functional features of functional languages. This book will cover the A-Z of functional programming in Kotlin. This book bridges the language gap for Kotlin developers by showing you how to create and consume functional constructs in Kotlin. We also bridge the domain gap by showing how functional constructs can be applied in business scenarios. We'll take you through lambdas, pattern matching, immutability, and help you develop a deep understanding of the concepts and practices of functional programming. If you want learn to address problems using Recursion, Kotlin has support for it as well. You'll also learn how to use the funKTionale library to perform currying and lazy programming and more. Finally, you'll learn functional design patterns and techniques that will make you a better programmer. By the end of the book, you will be more confident in your functional programming skills and will be able to apply them while programming in Kotlin. What you will learn

Learn the Concepts of Functional Programming with Kotlin
Discover the Coroutines in Kotlin
Uncover Using funKTionale plugin
Learn Monads, Functors and Applicatives
Combine Functional Programming with OOP and Reactive Programming
Uncover Using Monads with funKTionale
Discover Stream Processing
Who this book is for
Kotlin developers who have no functional programming experience, will benefit from this book.

Vert.x in Action-Julien Ponge 2020-12-01 As enterprise applications become larger and more distributed, new architectural approaches like reactive designs, microservices, and event streams are required knowledge. Vert.x in Action teaches you to build highly-scalable reactive enterprise applications using the mature, rock-solid Vert.x framework. Vert.x in Action gets you up to speed in the basics of asynchronous programming as you learn to design and code reactive applications. Using the Vert.x asynchronous APIs, you'll build services including web stack, messaging, authentication, and access control. You'll also dive into deployment of container-native components with Docker, Kubernetes, and OpenShift. Along the way, you'll check your app's health and learn to test its resilience to external service failures. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

Rx.NET in Action-Tamir Dresher 2017 Rx.NET in Action teaches developers how to build event-driven applications using the Reactive Extensions (Rx) library. About the Technology Modern applications must react to streams of data such as user and system events, internal messages, and sensor input. Reactive Extensions (Rx) is a .NET library containing more than 600 operators that you can compose together to build reactive client- and server-side applications to handle events asynchronously in a way that maximizes responsiveness, resiliency, and elasticity. About the Book Rx.NET in Action teaches developers how to build event-driven applications using the Rx library. Starting with an overview of the design and architecture of Rx-based reactive applications, you'll get hands-on with in-depth code examples to discover firsthand how to exploit the rich query capabilities that Rx provides and the Rx concurrency model that allows you to control both the asynchronicity of your code and the processing of event handlers. You'll also learn about consuming event streams, using schedulers to manage time, and working with Rx operators to filter, transform, and group events. What's Inside Introduction to Rx in C# Creating and consuming streams of data and events Building complex queries on event streams Error handling and testing Rx code About the Reader Readers should understand OOP concepts and be comfortable coding in C#. About the Author Tamir Dresher is a senior software architect at CodeValue and a prominent member of Israel's Microsoft programming community.

The Swift Apprentice-Janie Clayton 2015-10-21 Learn How To Program with Swift 2! Swift is the easiest way to get started developing on Apple's platforms: iOS, OS X, watchOS and tvOS. With the release of Swift 2 in 2015, the Swift language is packed with even more features and enhancements. 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 2. 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. Numbers and strings: These are the basic kinds of data in any app -learn how to use them in Swift. Making Decisions: 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. Building Your Own Types: Learn how to model elements in your app using classes, structures and enumerations. Protocols & Protocol-Oriented Programming: Define protocols to make your code more interface-based and compositional. Error Handling: Make your code more robust and flexible by signaling and handling error conditions gracefully. Functional Programming: Learn how to use Swift in a functional style and how this can make your code clearer and easier to reason about. 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!"

Advanced Apple Debugging & Reverse Engineering-Raywenderlich Com Team

2017-03-14 Learn to find software bugs faster and discover how other developers have solved similar problems. For intermediate to advanced iOS/macOS developers already familiar with either Swift or Objective-C who want to take their debugging skills to the next level, this book includes topics such as: LLDB and its subcommands and options; low-level components used to extract information from a program; LLDB's Python module; and DTrace and how to write D scripts.

Core Data iOS Essentials-B. M. Harwani
2011-04-26 A fast-paced, example-driven guide guide to data-drive iPhone, iPad, and iPod Touch applications.

Functional Reactive Programming-Stephen Blackheath 2016-06-28 Most software applications must handle user or system-generated events. The most widely-accepted event handling model is the Observer pattern, in which an object "listens" for changes in the application's state and then reacts by executing a

unit of code the problems is that this approach is prone to bugs. Functional Reactive Programming (FRP) is an alternative to the Observer pattern. It's designed to deal with events as a stream of values over time rather than as a series of unique responses to discrete changes in state, keeping logic tidy and eliminating the bugs that plague event handling code with no loss of expressiveness. FRP is useful anywhere the Observer pattern is common, including user interfaces, video games, networking, and industrial applications. "Functional Reactive Programming" teaches the concepts and applications of FRP. It begins with a careful walk-through of the FRP core operations and introduces the concepts and techniques needed to use FRP in any language. Following easy-to-understand examples, readers will learn how to use FRP in greenfield applications and how to refactor existing applications. Along the way, the book introduces the basics of functional programming in a just-in-time style, so readers never learn anything before they need to use it. By the end of the book, readers will be able to use FRP to spend more time adding features and less time fixing problems. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications."

IOS Games by Tutorials-Ray Wenderlich
2013-09 "Learn to program games using Apple's new framework: Sprite Kit!"--Cover.

Beginning ARKit for iPhone and iPad-Wallace Wang 2018-11-05 Explore how to use ARKit to create iOS apps and learn the basics of augmented reality while diving into ARKit specific topics. This book reveals how augmented reality allows you to view the screen on an iOS device, aim the camera at a nearby scene, and view both the real items in that scene as well as a graphic image overlaid on to that scene. You'll start by accessing the camera and teaching your app to track the world around its device. You'll then see how to position nodes and create augmented reality shapes and textures. Next you'll have your creations interact with their environment by programming workable physics, detecting planes, measuring distance, and applying virtual force. Finally you'll learn how to hit test and troubleshoot your applications to ensure they interact with the real world around them seamlessly. ARKit is Apple's software framework for creating augmented reality apps

on iOS devices such as the iPhone and iPad. Unlike virtual reality that creates an entirely artificial world for the user to view and explore, Beginning ARKit for iPhone and iPad will show you how augmented reality places artificial items in an actual scene displayed by an iOS device's camera. What You'll Learn Access the camera Use ARKit's hit testing for tracked geometry Apply and combine real world and virtual physics Who This Book Is For Programmers familiar with the basics of Swift programming who want to dive into developing iOS applications with Swift.

Essential Software Architecture-Ian Gorton 2011-04-27 Job titles like "Technical Architect" and "Chief Architect" nowadays abound in software industry, yet many people suspect that "architecture" is one of the most overused and least understood terms in professional software development. Gorton's book tries to resolve this dilemma. It concisely describes the essential elements of knowledge and key skills required to be a software architect. The explanations encompass the essentials of architecture thinking, practices, and supporting technologies. They range from a general understanding of structure and quality attributes through technical issues like middleware components and service-oriented architectures to recent technologies like model-driven architecture, software product lines, aspect-oriented design, and the Semantic Web, which will presumably influence future software systems. This second edition contains new material covering enterprise architecture, agile development, enterprise service bus technologies, RESTful Web services, and a case study on how to use the MeDICi integration framework. All approaches are illustrated by an ongoing real-world example. So if you work as an architect or senior designer (or want to someday), or if you are a student in software engineering, here is a valuable and yet approachable knowledge source for you.

Swift Programming-Matthew Mathias 2016-11-23 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.

Classic Computer Science Problems in Swift-David Kopec 2018-01-28 Apple's Swift language is the de-facto standard for iOS and Mac development, and it's rapidly becoming a great choice for any general-purpose programming task. Classic Computer Science Problems in Swift invites readers to invest their energy in some foundational techniques that have been proven to stand the test of time. Along the way they'll learn intermediate and advanced features of the Swift programming language, a worthwhile skill in its own right. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

Effective Debugging-Diomidis Spinellis 2016-06-29 Every software developer and IT professional understands the crucial importance of effective debugging. Often, debugging consumes most of a developer's workday, and mastering the required techniques and skills can take a lifetime. In Effective Debugging, Diomidis Spinellis helps experienced programmers accelerate their journey to mastery, by systematically categorizing, explaining, and illustrating the most useful debugging methods, strategies, techniques, and tools. Drawing on more than thirty-five years of experience, Spinellis expands your arsenal of debugging techniques, helping you choose the best approaches for each challenge. He presents vendor-neutral, example-rich advice on general principles, high-level strategies, concrete techniques, high-efficiency tools, creative tricks, and the behavioral traits associated with effective debugging. Spinellis's 66 expert techniques address every facet of debugging and are illustrated with step-by-step instructions and actual code. He addresses the full spectrum of problems that can arise in modern software systems, especially problems caused by complex interactions among components and services running on hosts scattered around the planet. Whether you're debugging isolated runtime

errors or catastrophic enterprise system failures, this guide will help you get the job done—more quickly, and with less pain. Key features include High-level strategies and methods for addressing diverse software failures Specific techniques to apply when programming, compiling, and running code Better ways to make the most of your debugger General-purpose skills and tools worth investing in Advanced ideas and techniques for escaping dead-ends and the maze of complexity Advice for making programs easier to debug Specialized approaches for debugging multithreaded, asynchronous, and embedded code Bug avoidance through improved software design, construction, and management

Mastering Swift 5-Jon Hoffman 2019-04-30

Swift is the definitive language for Apple development today and it's a vital part of any iOS and macOS developer's skill set. The Mastering Swift book over the years has established itself as one of the popular choices for an in-depth and practical guide on Swift programming language amongst developers. The latest fifth edition is fully ...

IOS UICollectionView-Ash Furrow 2014

Learn Spring for Android Application

Development-S. M. Mohi Us Sunnat 2019-01-31

A hands-on guide to Android programming with Spring MVC, Spring Boot, and Spring Security Key Features Build native Android applications with Spring for Android Explore Reactive programming, concurrency, and multithreading paradigms for building fast and efficient applications Write more expressive and robust code with Kotlin using its coroutines and other latest features Book Description As the new official language for Android, Kotlin is attracting

new as well as existing Android developers. As most developers are still working with Java and want to switch to Kotlin, they find a combination of these two appealing. This book addresses this interest by bringing together Spring, a widely used Java SE framework for building enterprise-grade applications, and Kotlin. Learn Spring for Android Application Development will guide you in leveraging some of the powerful modules of the Spring Framework to build lightweight and robust Android apps using Kotlin. You will work with various modules, such as Spring AOP, Dependency Injection, and Inversion of Control, to develop applications with better dependency management. You'll also explore other modules of the Spring Framework, such as Spring MVC, Spring Boot, and Spring Security. Each chapter has practice exercises at the end for you to assess your learning. By the end of the book, you will be fully equipped to develop Android applications with Spring technologies. What you will learn Get to grips with the basics of the Spring Framework Write web applications using the Spring Framework with Kotlin Develop Android apps with Kotlin Connect a RESTful web service with your app using Retrofit Understand JDBC, JPA, MySQL for Spring and SQLite Room for Android Explore Spring Security fundamentals, Basic Authentication, and OAuth2 Delve into Concurrency and Reactive programming using Kotlin Develop testable applications with Spring and Android Who this book is for If you're an aspiring Android developer or an existing developer who wants to learn how to use Spring to build robust Android applications in Kotlin, this book is for you. Though not necessary, basic knowledge of Spring will assist with understanding key concepts covered in this book.