



Beginning Swift Games Development for iOS

Develop 2D and 3D games Using Apple's
SceneKit and SpriteKit

Second Edition

James Goodwill
Wesley Matlock

Apress®

Beginning Swift Games Development For Ios

Chris Language



Beginning Swift Games Development For Ios:

Beginning Swift Games Development for iOS James Goodwill, Wesley Matlock, 2017-05-24 Learn the fundamental elements of the new Swift 3 programming language as applied to game development for new iOS 10 In Part 1 of this book you ll start with a basic 2D game idea and build the game throughout the book introducing each SpriteKit topic as you add new functionality to the game By the end of the book you ll have experience with all the important SpriteKit topics and have a fully functional game as a result In Part 2 you ll learn 3D game development using Apple s SceneKit framework and the Swift programming language following the same pattern used for Part 1 Game apps are one of the most popular categories in the Apple iTunes App Store In response James Goodwill and Wesley Matlock bring you Beginning Swift Games Development for iOS Third Edition an update to their best selling work After reading and using this book you ll have the skills and the code to build your first 2D and then 3D game app that you can run on any iOS enabled device What you ll learn Discover what s in the new Swift 3 programming language Apply Swift 3 to iOS 10 and 9 game development Build a 2D game app using SpriteKit and Swift Build a 3D game from 2D using SceneKit and Swift Who this book is for iOS app developers new to Swift or for those thinking of trying iOS game app development for the very first time

Beginning Swift Games Development for iOS James Goodwill, Wesley Matlock, 2015-03-31 Game apps are one of the most popular categories in the Apple iTunes App Store Well the introduction of the new Swift programming language will make game development even more appealing and easier to existing and future iOS app developers In response James Goodwill Wesley Matlock and Apress introduce you to this book Beginning Swift Games Development for iOS In this book you ll learn the fundamental elements of the new Swift language as applied to game development for iOS In part 1 you ll start with a basic 2D game idea and build the game throughout the book introducing each SpriteKit topic as we add new functionality to the game By the end of the book you ll have experience with all the important SpriteKit topics and have a fully functional game as a result In part 2 of this book you ll learn 3D game development using Apple s SceneKit framework and the Swift programming language And you ll follow the same pattern we used for part 1 After reading and using this book you ll have the skills and the code to build your first 2D and then 3D game app that you can run on any iOS enabled device and perhaps sell in the Apple iTunes App Store

iOS Games by Tutorials Ray Wenderlich, Mike Berg, Tom Bradley, PH., 2015-04-24 Updated for Swift 1 2 Learn how to make iOS games 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 iOS Games by Tutorials covers the following topics 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 Sprite Kit actions Scenes and Transitions Make multiple screens in your app and move between them 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

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Digital Games eBook GURMEET SINGH DANG, **IOS Apprentice (Eighth Edition): Beginning IOS Development with Swift and UIKit** Joey Devilla, Eli Ganem, Matthijs Hollemans, 2019-12-12 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 *Beginner's Guide to IOS 14 App Development Using Swift 5, SwiftUI and UIKit* Serhan Yamacli, 2020-10-30 This book covers iOS 14 app design fundamentals using the latest Swift 5 programming language Xcode 12 and iOS 14 SDK The author assumes you have no experience in app development The book starts with the installation of the required programming environment and setting up the simulators Then the simplest Hello World app is developed step by step In the next chapter basics of the Swift 5 programming language are given with practical examples Screenshots and code snippets are clearly given in the book to guide the reader After the Swift lecture 8 complete apps including a 2D game in SpriteKit and a 3D game in SceneKit are developed in separate chapters Both the mature UIKit and the newest SwiftUI frameworks are used for developing these apps As the reader follows the development of the example apps he/she will learn designing user interfaces connecting interface objects to code developing efficient Swift code and testing the app on simulators and real devices Chapters of the book and the contents of these chapters are as follows Chapter 1 Introduction General info and the steps of developing an iOS app Chapter 2 Setting up your development environment Installing Xcode setting up signing identities viewing adding simulators and real devices Chapter 3 Test drive the Hello World app Creating a new Xcode project adding and positioning user interface objects building the project running the developed app on the simulator and on the real device Chapter 4 Swift programming

language Variables constants optionals arrays dictionaries sets if else and switch case decision making statements for and while loops functions classes objects and inheritance in Swift 5 Each concept is clearly explained step by step with code examples and screenshots Chapter 5 Disco lights app Using buttons and connecting actions to buttons in the code Chapter 6 Body mass index BMI calculator app Using input boxes performing calculations and displaying the results on the screen Chapter 7 Simple die roller app Using random number generator functions including image sets in your project displaying images on the screen and changing the displayed image using Swift code Chapter 8 Exercise calorie calculator app Using global variables creating tabbed apps and utilizing segmented controls Chapter 9 Show my location app Adding a map object to your app setting required permissions accessing GPS device and showing real time location on the map Chapter 10 S O S sender app Adding SMS functionality setting required permissions and sending real time location using SMS Chapter 11 Bounce the ball game Basics of SpriteKit that is used to develop 2D iOS games adding objects to the game sensing screen touches moving game objects according to touches combining all these and more to develop a complete 2D game Chapter 12 Blue Capsule Hunter game Basics of SceneKit that is used to develop 3D iOS games adding objects to the game moving objects sensing screen touches using score text and combining these concepts for developing a 3D game This book includes 218 figures and 108 code snippets that are used to explain app development concepts clearly Full resolution colour figures and project files can be viewed and downloaded from the book's companion website www.yamaclis.com/ios14

Beginner's Guide to iOS 13 App Development Using Swift 5. 1 Serhan Yamacli, 2019-10-27 This book covers iOS 13 app design fundamentals using the latest Swift 5.1 programming language Xcode 11 and iOS 13.1 SDK The author assumes you have no experience in app development The book starts with the installation of the required programming environment and setting up the simulators Then the simplest Hello World app is developed step by step In the next chapter basics of the Swift 5 programming language are given with practical examples Screenshots and code snippets are clearly given in the book to guide the reader After the Swift lecture 7 complete apps including a 2D game are developed in separate chapters As the reader follows the development of the example apps he/she will learn designing user interfaces connecting interface objects to code developing efficient Swift code and testing the app on simulators and real devices Chapters of the book and the contents of these chapters are as follows Chapter 1 Introduction General info and the steps of developing an iOS app Chapter 2 Setting up your development environment Installing Xcode setting up signing identities viewing adding simulators and real devices Chapter 3 Test drive the Hello World Creating a new Xcode project adding and positioning user interface objects building the project running the developed app on the simulator and on the real device Chapter 4 Swift programming language Variables constants optionals arrays dictionaries sets if else and switch case decision making statements for and while loops functions classes objects and inheritance in Swift 5 Each concept is clearly explained step by step with code examples and screenshots Chapter 5 Disco lights app Using buttons and connecting actions to buttons in the code Chapter 6

Body mass index BMI calculator app Using input boxes performing calculations and displaying the results on the screen

Chapter 7 Simple die roller app Using random number generator functions including image sets in your project displaying images on the screen and changing the displayed image using Swift code

Chapter 8 Exercise calorie calculator app Using global variables creating tabbed apps and utilizing segmented controls

Chapter 9 Show my location app Adding a map object to your app setting required permissions accessing GPS device and showing real time location on the map

Chapter 10 S O S sender app Adding SMS functionality setting required permissions and sending real time location using SMS

Chapter 11 Bounce the ball game Basics of SpriteKit that is used to develop 2D iOS games adding objects to the game sensing screen touches moving game objects according to touches combining all these and more to develop a complete 2D game

This book includes 212 figures and 101 code snippets that are used to explain app development concepts clearly Full resolution colour figures and project files can be viewed and downloaded from the book's companion website www.yamaclis.com/ios13swift5

, *Beginner's Guide to IOS 12 App Development Using Swift 4* Serhan Yamacli, 2018-10-02 This book covers iOS 12 app design fundamentals using the latest Swift 4.2 programming language Xcode 10 and iOS 12 SDK The author assumes you have no experience in app development The book starts with the installation of the required programming environment and setting up the simulators Then the simplest Hello World app is developed step by step In the next chapter basics of the Swift 4.2 programming language are given with practical examples Screenshots and code snippets are clearly given in the book to guide the reader After the Swift lecture 7 real world apps are developed again by step by step instructions Each code line is explained As the reader follows the development of the example apps he/she will learn designing user interfaces connecting interface objects to code developing efficient Swift code and testing the app in simulators and real devices

Sample apps developed in this book are as follows

- 1 Disco lights app Learn the basics of app development and use buttons in your code
- 2 Body mass index BMI calculator app Using input boxes performing calculations and displaying the results on the screen
- 3 Simple die roller app Using random number generator functions including image sets in your project displaying images on the screen and changing the displayed image using Swift code
- 4 Exercise calorie calculator app Using global variables creating tabbed apps and utilizing segmented controls
- 5 Show my location app Adding a map object to your app setting required permissions accessing GPS device and showing real time location on the map
- 6 SOS sender app Adding SMS functionality setting required permissions and sending real time location using SMS
- 7 Bounce the ball game Basics of SpriteKit that is used to develop 2D iOS games adding objects to the game sensing screen touches moving game objects according to touches combining all these and more to develop a complete ball bouncing game

This book includes 214 figures and 101 code snippets that are used to explain app development concepts clearly Full resolution colour figures and complete project files can be viewed and downloaded from the book's website www.yamaclis.com/ios12

[iOS Swift Game Development Cookbook](#) Jonathon Manning, Paris Buttfield-Addison, 2018-10-02 Ready to make amazing games for the iPhone

and iPad With Apple's Swift programming language it's never been easier This updated cookbook provides detailed recipes for managing a wide range of common iOS game development issues ranging from 2D and 3D math SpriteKit and OpenGL to augmented reality with ARKit You get simple direct solutions to common problems found in iOS game programming Need to figure out how to give objects physical motion or want a refresher on gaming related math problems This book provides sample projects and straightforward answers All you need to get started is some familiarity with iOS development in Swift

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Beginning 2D iOS game development with Swift Page 1 of cover **3D iOS Games by Tutorials** Chris Language, 2016-02-26 Learn how to make 3D games in Swift using Apple's built in 3D game framework Scene 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 3D game By the time you're finished reading this book you will have made 4 complete mini games including games similar to Fruit Ninja Breakout Marble Madness and Crossy Road Back cover **Swift 3 Game Development** Stephen

Haney, 2017-02-07 Embrace the mobile gaming revolution by creating popular iOS games with Swift 3.0 About This Book Create and design games for iPhone and iPad using SpriteKit and Swift 3.0 Learn the core fundamentals of SpriteKit game development and mix and match techniques to customize your game This step by step practical guide will teach you to build games from scratch using little known tips and strategies for maximum fun Who This Book Is For If you wish to create and

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iOS 10 Programming for Beginners Craig Clayton, 2016-12-27 Begin your iOS mobile application development journey with this accessible practical guide About This Book Use Swift 3 and latest iOS 10 features to build awesome apps for iPhone and iPad Explore and use a wide range of Apple development tools to become a confident iOS developer From prototype to App Store find out how to build an app from start to finish Who This Book Is For This book is for beginners who want to be able to create iOS applications If you have some programming experience this book is a great way to get a full understanding of how to create an iOS application from scratch and submit it to the App Store You do not need any knowledge of Swift or any prior programming experience What You Will Learn Get to grips with Swift 3 and Xcode the building blocks of Apple development Get to know the fundamentals of Swift including variables constants and control flow Discover the distinctive design principles that define the iOS user experience See how to prototype your app with Swift s Playgrounds feature Build a responsive UI that looks great on a range of devices Find out how to use CoreLocation to add location services to your app Add push notifications to your app Make your app able to be used on both iPhone and iPad In

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Bakshi,2019-04-19 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

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Scene Editor Conceptualizing a game is a dream for both young and old Sprite Kit is an exciting framework supported by Apple within the iOS development environment With Sprite Kit creating stunning games has become an easy avenue Starting with the basics of game development and swift language this book will guide you to create your own fully functional game Dive in and learn how to build and deploy a game on your iOS platform using Sprite Kit game engine Go on a detailed journey of game development on the iOS platform using the Sprite Kit game engine Learn about various features implemented in iOS 8 that further increase the essence of game development using Sprite Kit Build an endless runner game and implement features like physics bodies character animations scoring and other essential elements in a game You will successfully conceive a 2D game along with discovering the path to reach the pinnacle of iOS game development By the end of the book you will not only have created an endless runner game but also have in depth knowledge of creating larger games on the iOS platform Style and approach An easy to follow comprehensive guide that makes your learning experience more intriguing by gradually developing a Sprite Kit game This book discusses each topic in detail making sure you attain a clear vision of the subject

3D Apple Games by Tutorials Second Edition Raywenderlich Com Team, Chris Language, 2017-11-16 Learn how to make 3D games in Swift using Apple's built in 3D game framework SceneKit Through a series of mini games and challenges you will go from beginner to advanced and learn everything you need to make your own 3D game By the time you're finished reading this book you will have made 4 complete mini games including games similar to Fruit Ninja Marble Madness and Crossy Road Back cover

Swift Game Development Siddharth Shekar, Stephen Haney, 2018-09-28 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

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