

Migrating to Swift from Android



Sean Liao

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About the Author



Sean Liao (PMP®) started his first mobile app on a PalmOS PDA app in 2000. He hasn't missed any major mobile evolutions. He has written mobile code for PalmOS, JavaME, Microsoft .NET CF, and BlackBerry, and he also has some Nokia Symbian experience. He has been a seasoned Java solution architect since 1998.

In 2009, Sean started programming in iOS, and then began programming in Android the same year by following the same porting strategy, based on years of hands-on mobile programming experience. Currently, Sean is primarily engaged in creating iOS apps and porting them to Android as a bonus.

About the Technical Reviewer



Alex Decker is a mobile application developer specializing in enterprise applications. He graduated from the University of Illinois and currently lives with his wife in California.

Acknowledgments

Looking back on the journey of this book-writing experience, I realize clearly now that I never would have started it without the encouragement from my lovely wife, Lily, and I never would have completed it without her support. My two little princesses, Megan and Melanie, also really motivated me. As I was writing the book they would come by repeatedly to ask me silly questions, like, “Can I help you, Daddy? Daddy, will the book be this thick? Daddy, can your book be my bedtime story? Will you play with me more after you finish it?”

I knew I would never give up.

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Introduction

In 2000, I started my first PalmOS mobile app for an inventory-tracking project. The initial project was a full-staffed team effort that consisted of mobile developers, SAP consultants, supply-chain subject matter experts, middleware developers, QA testers, architects, business sponsors, and so forth. JavaME came up strong in 2002, followed by Pocket PC/Windows Mobile. I did several mobile projects in which I converted mobile apps to the Pocket PC platform by blindly translating JavaME code to C# .NETCF mobile code. These “translation” efforts prolonged the whole product life cycle. The project achieved higher ROI as the product life extended, because the extra cost of translating mobile code was surprisingly low. Ever since then, I have been translating front-end mobile apps among JavaME, BlackBerry, and Windows Mobile platforms.

In early 2009, by repeating the same porting process, I created my first iOS app by translating a Windows mobile app. That started my iOS programming journey, and later it was a no-brainer for me to try porting to Android. Most mobile apps are platform agnostic. When you have the whole solution completed for either iOS or Android, all the business and technical issues have been verified and the other deliverables and project artifacts are already reusable. It would be a waste not to port it to the other platform. Earlier this year, I wrote my first book, *Migrating to Android for iOS Developers*, to share my beliefs and experiences. After Swift was introduced at Worldwide Developers Conference (WWDC) 2014, I decided to write this book because the similarity between Java and Swift makes the porting method even easier while the same ROI analysis remains true.

The primary objective of this book is to help experienced Android developers leap into native iOS–Swift mobile development. It is easier than you think, and this book will make it even easier with Android analogies and mapping guidelines. You can immediately translate common mobile use cases to iOS.

Who Is This Book For?

This book is specifically written for Android developers who want to take advantage of their mobile knowledge and make mobile applications available on the iOS mobile platform. The book will show you the common iOS programming subjects and frameworks using your familiar Android vocabularies without lengthy explanations, because you already know these mobile subjects from being an Android developer.

How This Book Is Organized

In Part I, you will get the iOS Xcode integrated development environment (IDE) up and running in no time. You will be guided in creating tutorial projects that will become your porting sample projects. I believe this is the best way for you to get hands-on experience while learning programming topics.

Part II of this book shows you how to plan and structure your iOS apps: by creating a storyboard and breaking the app into model-view-controller (MVC) classes. You will be able to reuse most of the existing software artifacts and design the rest from their Android counterparts. The common mobile topics are followed, including user interface, managing data, and networking with remote services. After you finish Part II, you will be able to create simple but meaningful iOS apps with rich UI components, and to handle common CRUD (create, read, update, delete) operations locally and remotely.

Last, Part III walks you through a case study that ports a complete iOS app to Android. It recaps how to use mapping guidelines from the topics in Part II. You can also use the book's table of contents to help find the porting guidelines as needed.

When you complete this journey, you will be able to use Xcode and Swift to effectively port your existing Android apps to iOS.