

Beginning OS X Lion Apps Development



Michael Privat
Robert Warner

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To my loving wife, Kelly, and our children, Matthieu and Chloé.

—Michael Privat

*To my beautiful wife, Sherry, and our wonderful children,
Tyson, Jacob, Mallory, Camie, and Leila.*

—Rob Warner

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About the Authors



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About the Technical Reviewer



James Bucanek has spent the past 30 years programming and developing microcomputer systems. He has experience with a broad range of technologies, from embedded consumer products to industrial robotics. James is currently focused on Macintosh and iPhone software development. When not programming, James indulges in his love of the arts. He earned an associate's degree from the Royal Academy of Dance in classical ballet and occasionally teaches at Adams Ballet Academy.

Acknowledgments

When I was first presented with the opportunity to coauthor this book with Rob Warner, I was both excited and nervous. I was excited because our previous book on Core Data has been a success and Rob is a great partner to work with. But I was nervous because of the time investment we would both have to pour into this. In the end, we pulled and pushed each other to the finish line to produce this new book, and, once again, it was all worth it.

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Michael Privat

Although writing can be easy, writing well never is, at least for me. I agonize over word choices, sentence constructs, and flow. Never does writing become more difficult, however, than in this section, as we try to thank those who helped create this book, whether directly or indirectly. The danger of omitting someone who merits thanks lurks behind every paragraph, and the peril of sounding trite or rote looms in every sentence. If you've been overlooked or unfairly treated, I blame the editors!

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Juggling two book projects while holding down a full-time job and raising a family can cut into one's sleep schedule. Tyson has now dubbed me "Sleepyhead Codesauce," and my other children roll their eyes at my "nerd books" and "nerd meetings." Thanks, Tyson, Jacob, Mallory, Camie, and Leila for letting me have my fun and for putting up with my crankiness.

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Finally, I thank my parents and my siblings for the love of learning and writing that we share. Thanks for your support and your interest.

Rob Warner

Introduction

Mac OS X offers an amazing development environment for scores of technologies. It seems that developers from numerous camps are migrating to Mac en masse. Scan the room at any Ruby or Rails conference, for example, and you'll see programmers coding on Macs almost exclusively. As developers move to Mac, almost inevitably they eventually discover the itch to write native tools on the Mac platform. We've written this book to help those of you who hear the siren call of Xcode and just need a little guidance through the rocky waters of Objective-C and Cocoa to be able to develop your own apps.

The Premise

We based this book on a simple premise: the best way to learn to program in a new language or environment is to build something real, something finished, something that's actually useful. Too many books on programming leave out things like error handling or help files or other programming topics that might be considered on the periphery of teaching programming principles or language topics so they can focus on the core of what they're trying to teach. While this focus can be useful, it leaves a gap between building an almost-product and building a finished product, leaving readers to seek information elsewhere for crossing that chasm. Our pledge is to bridge that gap in this book. By taking you from project creation through adding features to finishing the project to publishing it in the Mac App Store, we hope to give you the information you need to finish projects, not just start them.

It's been an interesting premise. It's brought challenges and discussions about what to include, what to leave out, and how best to illustrate certain aspects of Mac OS X development. As we've developed this application, assumptions we made early about topics that would be essential proved trivial, and topics we deemed unimportant reared up as integral to the product. We've had to adjust as we went, including as many topics as made sense in the context of the app, a graphing calculator called Graphique.

Developing a complete application as part of a beginning book presented its own challenges as well. Getting a real application to "done" often involves some deeper topics or code that doesn't seem strictly a beginner's domain. We've tried to balance completeness, correctness, and simplicity in the code base for the application we develop and hope we've succeeded.

We believe the final app, available in the Mac App Store, is useful. We also believe that its source code and the text of this book can help you learn to develop complete apps fit for publishing.

The Audience

You have a Mac, and you want to develop apps for it. That's our audience. We target more specifically folks who want to publish those apps in the Mac App Store and devote a detailed

chapter to doing so. You can ignore that chapter if you don't want to publish through the Mac App Store.

This is a beginner's book, but we don't teach the basics of programming here, so if you don't know what a for loop is or shy from a command prompt, you might struggle. We do teach the basics of programming in Objective-C and Cocoa for Mac OS X, so if you understand programming basics, even if you know nothing about programming for the Mac, you'll do fine in this book. Advanced programmers moving from other languages or platforms will find this book useful, as will iOS developers looking to leverage their Cocoa skills to the Mac OS X platform.

How This Book Is Organized

This book begins with preparing your computer to build OS X Lion apps by walking you through the installation of Xcode, the development tool for building OS X apps. You then create the project for Graphique, the graphing calculator you build throughout this book. By the time you finish the first chapter, you'll be able to build and run the fledgling Graphique.

Each subsequent chapter adds more functionality to Graphique, building on the project from the previous chapter. The downloadable source code captures the state of the project at the end of each chapter, so if you insist on skipping a chapter, you can. To get the most from the book, though, work through it from the first page to the last, typing in the code, building the project, and running it as you go. After your initial read, keep this book handy for reference, so you can jump to specific topics as you build your own applications.

The final chapter walks you through the sometimes-confusing process of submitting your app to the Mac App Store. Though you won't submit your copy of Graphique, since we already submitted the app and it's already available, you'll follow the same steps when you submit your own applications.

Source Code and Errata

The complete source code for Graphique, divided into chapters, can be downloaded from the Apress web site at www.apress.com. Download it, learn from it, and use it in your own applications. As we uncover bugs or typos in the book or code, we'll update the errata section on the Apress web site.

How to Contact Us

We'd love to hear from you, whether it's questions, concerns, better ways of doing things, or triumphant announcements of your apps landing on the Mac App Store. You can find us here:

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