



Community Experience Distilled

Learning iOS 8 for Enterprise

Design and develop stunning iOS applications for
business environments

Mayank Birani

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About the Author

Mayank Birani has 3 years of experience in the software industry and a strong association with the technical industry. After several years of programming experience in different programming languages, he started developing applications for iOS devices. He started software development while he was pursuing his graduation and was really interested in learning new technologies. He then joined a software company and started developing iOS applications for them, focusing on real content-based iOS applications.

I would like to send a special thanks to my mom, Neelu Birani, and dad, Prakash Birani, for their relentless efforts in assisting me in every way imaginable as well as for helping me keep my life together. Finally, I would like to thank all my friends for sharing my happiness when I started working on this project and encouraging me when it seemed too difficult to be completed.

About the Reviewers

Nguyen Thai Duong is 29 years old. He lives in Hanoi with his wife and daughter. He likes computers and reads fairy tales, mystery science, and natural science. He started studying computer programming when he was 13 years old. He has a Bachelor's degree in Information Technology from Vietnam National University, Hanoi. He worked for DeNA, Vietnam (earlier Punch Entertainment), a mobile game development and distribution company, for 5 years. Currently, he is working for a start up, Gigatum. The company's product is Clingme – a location-based mobile application. You can download Clingme from the Apple Store or Play Store. Clingme is a kind of consumer social networking site such as Yelp or Dianping, but for Vietnam. Some of the company's other products include Vi-Chat (a Yahoo! instant-messenger client for MIDlet devices), Jacos2D-X (an open source game engine based on Cocos2d-x with V8 JavaScript integration), V8 JavaScript library for iOS (open source MIT), and the SpriteBuilder library for Cocos2d-x (open source MIT). With a large population (about 92 million people in 2013) and more than 20 million people using smartphones, Nguyen hopes his business will be successful in Vietnam.

This is his first book.

I would like to thank Paushali Desai and Venitha Cutinho who trusted in me and introduced me to this project.

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Shuichi Tsutsumi is a freelancer and an iOS developer since 2009 and has developed more than 30 iOS apps. Some of the apps that he developed includes the following:

- Bound Monsters, which he developed as a lead programmer and recorded over 2 million downloads in Japan.
- TAP NINJA, for which he was responsible for all of the implementation. This app was awarded Best of App Store 2012.
- Domino's App, for which he was the lead programmer. This app received various awards, including Bronze Lion at Cannes Lions 2011, Direct Lotus (Bronze), at ADFEST 2011, and was a Bronze Winner at London International Awards 2010.

He worked as an image processing engineer at Canon Inc. (2007 to 2009) where he designed image processing functions and invented patents for printers.

He also worked at NTT DATA Corporation (2003 to 2007) where he was involved in the R&D on speech recognition interface.

He completed his MS in Communications and Computer Engineering from the Graduate School of Informations, Kyoto University (2001 to 2003) and his BS in Computer Science, Kyoto University (1997 to 2001).

He has also worked on a book on iOS (*iOS Expert Recipes 100, Hidekazu system*) that can be found at <http://www.amazon.co.jp/dp/4798038180>.

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I would like to dedicate this book to my family, who gave me the courage and confidence to write this book and supported me throughout the process.

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Preface

This book will help you get started and understand the development of an enterprise application for iOS. It serves as a step-by-step guide to help you to understand the core concepts of iOS application development. It provides a deeper understanding of the way to develop and deploy your apps. It has seamlessly organized content that will help you learn, in an incremental way, how to enhance your conceptual and programming skills.

This book will also help you build fundamental logic skills and teach you ways to handle architecture-related problems for big enterprise applications. The book also includes API integration, social media integration, and integration of third-party frameworks. This will enable you to understand how to make your app easily customizable using other third-party frameworks. Such content is the heart of this book and makes it rich in content.

The main focus is on making you read and implement the details of this book. Throughout this book, you will find activities and minor projects that teach you the core concepts and logic. This technique of teaching makes this book special for you and will help you find it interesting, as there is always something to play with. At the end of the book, you will have some beautiful working applications with their implied logic.

What this book covers

Chapter 1, Getting Started with iOS, teaches you the basics of iOS, such as methods, arrays, properties, delegates, and so on. After going through this chapter, you will be able to use Xcode and create simple apps using the UI component.

Chapter 2, Exploring More UI Components, teaches you about components and how to create them programmatically. It will give you an understanding about the concept of table views and teach you how to use them. Also, we will make a simple application using the Navigation Controller.

Chapter 3, Exploring Various Frameworks, provides some more details on the UI and teach you how to integrate frameworks in your projects. We will also create a simple Student Registration app by exploring each section. By the end of the chapter, you will have created a fully loaded app with UI and functionality. You will also learn about databases with social media integration.

Chapter 4, APIs Introduced in iOS 7, comprises a lot of fun stuff, including games, putting an image between text, and sharing with AirDrop. All these APIs are introduced in iOS 7. After this chapter, you should try to extend all the activities mentioned in it; this will make these concepts more clear for you.

Chapter 5, Frameworks Introduced with iOS 8, discusses the new iOS 8 APIs and a little code snippet of Swift. In this chapter, you will learn about the PhotoKit framework and Handoff, with some more code snippets.

Chapter 6, Using iCloud and Security Services, teaches you how to push your data to iCloud and save your private data, such as passwords, account numbers, and ATM pins, to Keychain. We will also focus on the Touch ID API, which was introduced in iOS 8.

Chapter 7, The App-distribution Program, teaches you to set up and understand your Developer account. You will also learn how to set up a provisioning profile to publish your app on the Store, and discuss the anatomy of an enterprise-level distribution using the Apple Enterprise account.

What you need for this book

You'll need the following things to get started with writing applications for iOS devices:

- An Intel-based Macintosh running Mavericks (OS X 10.9.5 or later)
- Xcode
- You must be enrolled as an iPhone developer in order to test the example projects on your device
- An iOS device running iOS 7.0 and above

Who this book is for

If you are an iPhone application developer or even if you are a beginner, this book will help you explore your technical skills. The phrases and code are written in such a manner that even beginners will understand them. This book will be very helpful for those who want to learn about the new frameworks of iOS 7 and iOS 8, along with their activities and uses. This book will be an aid for students and also for experienced iOS developers.

Conventions

In this book, you will find a number of text styles that distinguish between different kinds of information. Here are some examples of these styles and an explanation of their meaning.

Code words in text, database table names, folder names, filenames, file extensions, pathnames, dummy URLs, user input, and Twitter handles are shown as follows: "In the `AppDelegate.h` file, find the `application:didFinishLaunchingWithOptions:` method."



A block of code is set as follows:



```
- (BOOL)application:(UIApplication *)application
    didFinishLaunchingWithOptions:(NSDictionary *)launchOptions {
    ...
    // Register for push notifications
    [application registerForRemoteNotificationTypes:
        UIApplicationRemoteNotificationTypeBadge |
        UIApplicationRemoteNotificationTypeAlert |
        UIApplicationRemoteNotificationTypeSound];
    ...
}
```

Any command-line input or output is written as follows:

```
curl -s https://www.parse.com/downloads/cloud_code/installer.sh | sudo /
bin/bash
```

New terms and **important words** are shown in bold. Words that you see on the screen, for example, in menus or dialog boxes, appear in the text like this: "Start your Xcode. Navigate to **File** | **New** | **Project**."

 Warnings or important notes appear in a box like this. 

 Tips and tricks appear like this. 

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1

Getting Started with iOS

The mobile industry is the fastest growing domain among other IT domains. iOS plays a key role in the mobile industry; nowadays, even the key IT players are incorporating mobility in the enterprise way. This title will help you understand the basics of iOS development and its implementation from the perspective of enterprises.

To get started with iOS development, we will need the following things:

- A Mac system
- Xcode
- The iOS SDK

Basically, iOS development is based on the Objective-C language. Objective-C is an extension of the C programming language; this includes the **OOP (object-oriented programming)** concept and adds small-talk style messaging to C. Xcode is built to help you build great apps for iPad, iPhone, and Mac. Xcode is an **IDE (Integrated Development Environment)** for iOS.