

## Android Sdk Samples Documentation

Covering all the essentials of modern Android development, an updated, real-world guide to creating robust, commercial-grade Android apps offers expert insights for the entire app development lifecycle, from concept to market. Original.

Summary Android in Action, Third Edition is a comprehensive tutorial for Android developers. This fast-paced book puts you in the driver's seat -- you'll master the SDK, build WebKit apps using HTML 5, and even learn to extend or replace Android's built-in features by building useful and intriguing examples. About the Technology When it comes to mobile apps, Android can do almost anything, and with this book, so can you! Android, Google's popular mobile operating system and SDK for tablets and smart phones, is the broadest mobile platform available. It is Java-based, HTML5-aware, and loaded with the features today's mobile users demand. About this Book Android in Action, Third Edition takes you far beyond "Hello Android." You'll master the SDK, build WebKit apps using HTML 5, and even learn to extend or replace Android's built-in features. You'll find interesting examples on every page as you explore cross-platform graphics with RenderScript, the updated notification system, and the Native Development Kit. This book also introduces important tablet concepts like drag-and-drop, fragments, and the Action Bar, all new in Android 3. Purchase of the print book comes with an offer of a free PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book. What's Inside Covers Android 3.x SDK and WebKit development from the ground up Driving a robot with Bluetooth and sensors Image processing with Native C code This book is written for hobbyists and developers. A background in Java is helpful. No prior experience with Android is assumed. ===== Table of Contents

PART 1 WHAT IS ANDROID? THE BIG PICTURE Introducing Android Android's development environment PART 2 EXERCISING THE ANDROID SDK User interfaces Intents and Services Storing and retrieving data Networking and web services Telephony Notifications and alarms Graphics and animation Multimedia 1Location, location, location PART 3 ANDROID APPLICATIONS Putting Android to work in a field service application Building Android applications in C PART 4 THE MATURING PLATFORM Bluetooth and sensors Integration Android web development AppWidgets Localization Android Native Development Kit Activity fragments Android 3.0 action bar Drag-and-drop

Android Programming: The Big Nerd Ranch Guide: is an introductory Android book for programmers with Java experience. Based on Big Nerd Ranch's popular Android Bootcamp course, this guide will lead you through the wilderness using hands-on example apps combined with clear explanations of key concepts and APIs. This book focuses on practical techniques for developing apps compatible with all versions of Android widely used today (Android 2.2 - 4.2). Write and run code every step of the way – creating apps that catalog crime scenes, browse photos, track your jogging route, and more. Each chapter and app has been designed and tested to provide the knowledge and experience you need to get started in Android development. Write and run code every step of the way — creating apps that catalog crime scenes, browse photos, track your jogging route, and more. Each chapter and app has been designed and tested to provide the knowledge and experience you need to get started in Android development. "Big Nerd Ranch provided the training we needed to get hundreds of engineers building skillfully on Android. This book is a great distillation of that training and will be a huge help to anyone looking to ramp up as well." – Mike Shaver, Director of Mobile Engineering, Facebook "...a must-have for the developer just starting in Android or ready for more advanced techniques. I was impressed with this book's content and clarity of presentation. The authors explain simple and complex Android topics with equal ease." – James Steele, author of The Android Developer's Cookbook

Understand Android OS for both smartphone and tablet programming This fast-paced introduction to the newest release of Android OS gives aspiring mobile app developers what they need to know to program for today's hottest Android smartphones and tablets. Android 4 OS is, for the first time, a single solution for both smartphones and tablets, so if you master the information in this helpful guide, you'll be well on your way to successful development for both devices. From using activities and intents and creating rich user interfaces to working with SMS, messaging APIs, and the Android SDK, what you need is here. Provides clear instructions backed by real-world programming examples Begins with the basics and covers everything Android 4 developers need to know for both smartphones and tablets Explains how to customize activities and intents, create rich user interfaces, and manage data Helps you work with SMS and messaging APIs, the Android SDK, and using location-based services Details how to package and publish your applications to the Android Market Beginning Android 4 Application Development pares down the most essential steps you need to know so you can start creating Android applications today. Eclipse is the most adopted integrated development environment (IDE) for Java programmers. And, now, Eclipse seems to be the preferred IDE for Android apps developers. Android Apps with Eclipse provides a detailed overview of Eclipse, including steps and the screenshots to help Android developers to quickly get up to speed on Eclipse and to streamline their day-to-day software development. This book includes the following: Overview of Eclipse fundamentals for both Java and C/C++ Development. Using Eclipse Android Development Toolkit (ADT) to develop, debug, and troubleshoot Android applications. Using Eclipse C/C++ Development Toolkit (CDT) in conjunction with Android Native Development Kit (NDK) to integrate, develop and troubleshoot native Android components through Eclipse.

Presents instructions for creating Android applications for mobile devices using Java.

The number of Android devices running on Intel processors has increased since Intel and Google announced, in late 2011, that they would be working together to optimize future versions of Android for Intel Atom processors. Today, Intel processors can be found in Android smartphones and tablets made by some of the top manufacturers of Android devices, such as Samsung, Lenovo, and Asus. The increase in Android devices featuring Intel processors has created a demand for Android applications optimized for Intel Architecture: Android Application Development for the Intel® Platform is the perfect introduction for software engineers and mobile app developers. Through well-designed app samples, code samples and case studies, the book teaches Android application development based on the Intel platform—including for smartphones, tablets, and embedded devices—covering performance tuning, debugging and optimization. This book is jointly developed for individual learning by Intel Software College and China Shanghai JiaoTong University.

Want to get started building applications for Android, the world's hottest, fast-growing mobile platform? Already building Android applications and want to get better at it? This book brings together all the expert guidance—and code—you'll need! Completely up-to-date to reflect the newest and most widely used Android SDKs, The Android Developer's Cookbook is the essential resource for developers building apps for any Android device, from phones to tablets. Proven, modular recipes take you from the absolute basics to advanced location-based services, security techniques, and performance optimization. You'll learn how to write apps from scratch, ensure interoperability, choose the best solutions for common problems, and avoid development pitfalls. Coverage includes: Implementing threads, services, receivers, and other background tasks Providing user alerts Organizing user interface layouts and views Managing user-initiated events such as touches and gestures Recording and playing audio and video Using hardware APIs available on Android devices Interacting with other devices via SMS, web browsing, and social networking Storing data efficiently with SQLite and its alternatives Accessing location data via GPS Using location-related services such as the Google Maps API Building faster applications with native code Providing backup and restore with the Android

Backup Manager Testing and debugging apps throughout the development cycle Turn to The Android Developer's Cookbook for proven, expert answers—and the code you need to implement them. It's all you need to jumpstart any Android project, and create high-value, feature-rich apps that sell!

Pro Android 2 shows how to build real-world and fun mobile applications using Google's latest Android software development kit. This new edition is updated for Android 2, covering everything from the fundamentals of building applications for embedded devices to advanced concepts such as custom 3D components, OpenGL, and touchscreens including gestures. While other Android development guides simply discuss topics, Pro Android 2 offers the combination of expert insight and real sample applications that work. Discover the design and architecture of the Android SDK through practical examples, and how to build mobile applications using the Android SDK. Explore and use the Android APIs, including those for media and Wi-Fi. Learn about Android 2's integrated local and web search, handwriting gesture UI, Google Translate, and text-to-speech features. Pro Android 2 dives deep, providing you with all the knowledge and techniques you need to build mobile applications ranging from games to Google apps, including add-ons to Google Docs. You'll be able to extend and run the new Google Chrome APIs on the G1, the G2, and other next-generation Google phones and Android-enabled devices.

The comprehensive developer guide to the latest Android features and capabilities Professional Android, 4th Edition shows developers how to leverage the latest features of Android to create robust and compelling mobile apps. This hands-on approach provides in-depth coverage through a series of projects, each introducing a new Android platform feature and highlighting the techniques and best practices that exploit its utmost functionality. The exercises begin simply, and gradually build into advanced Android development. Clear, concise examples show you how to quickly construct real-world mobile applications. This book is your guide to smart, efficient, effective Android development. Learn the best practices that get more out of Android Understand the anatomy, lifecycle, and UI metaphor of Android apps Design for all mobile platforms, including tablets Utilize both the Android framework and Google Play services

Take a practical approach to becoming a leading-edge Android developer, learning by example while combining the many technologies needed to create a successful, up-to-date web app. Practical Android Projects introduces the Android software development kit and development tools of the trade, and then dives into building cool-looking and fun apps that put Android's amazing capabilities to work. Android is the powerful, full-featured, open source mobile platform that powers phones like Google Nexus, Motorola Droid, Samsung Galaxy S, and a variety of HTC phones and tablet computers. This book helps you quickly get Android projects up and running with the free and open source Eclipse, NetBeans, and IntelliJ IDEA IDEs. Then you build and extend mobile applications using the Android SDK, Java, Scripting

Layer for Android (SL4A), and languages such as Python, Ruby, Javascript/HTML, Flex/AIR, and Lua. Android Wireless Application Development has earned a reputation as the most useful real-world guide to building robust, commercial-grade Android apps. Now, authors Lauren Darcey and Shane Conder have systematically revised and updated this guide for the latest Android SDK 4.0. To accommodate their extensive new coverage, they've split the book into two volumes. Volume I focuses on Android essentials, including setting up your development environment, understanding the application lifecycle, designing effective user interfaces, developing for diverse devices, and optimizing your mobile app development process--from design through publishing. Every chapter has been thoroughly updated for the newest APIs, tools, utilities, and hardware. All sample code has been overhauled and tested on leading devices from multiple companies, and many new examples have been added. Drawing on decades of in-the-trenches experience as professional mobile developers, Darcey and Conder provide valuable new best practices--including powerful techniques for constructing more portable apps. This new edition contains full chapters on Android manifest files, content providers, effective app design, and testing; an all-new chapter on tackling compatibility issues; coverage of today's most valuable new Android tools and utilities; and even more exclusive tips and tricks. An indispensable resource for every Android development team member.

Two complete e-books covering Java and Android application development for one low price! This unique value-priced e-book set brings together two bestselling For Dummies books in a single e-book file. Including a comprehensive table of contents and the full text of each book, complete with cover, this e-book set gives you in-depth information on using the Java language to create powerful Android applications for mobile devices. Best of all, you'll pay less than the cost of each book purchased separately. You'll get the complete text of: Java For Dummies, 5th Edition, which shows you how to Master object-oriented programming and use J2SE 7.0 and JDK 7 Work with new libraries, closure, parallel frameworks, and other new features Create basic Java objects and reuse code Handle exceptions and events and work with variables, arrays, and collections Android Application Development For Dummies, 2nd Edition, which covers Creating amazing apps for the latest Android smartphones and tablets How to download and install the SDK and start working with the JDK tools Directions for adapting your existing phone apps for use on Android tablets Steps for publishing your apps to the Google Play Store About the authors Barry Burd, PhD, author of Java For Dummies, is a professor of mathematics and computer science and a frequent contributor to online technology resources. Michael Burton is a Groupon software engineer and the creator of Groupon, Digg, Triplt, OpenTable, and many other Android apps. Donn Felker is an Android programmer, Microsoft ASP Insider, and MCTS in Web Client Development for .NET 2.0 and 3.5. They are coauthors of Android Application Development For Dummies, 2nd Edition.

Learn Android Studio covers Android Studio and its rich tools ecosystem, including Git and Gradle: this book covers how Android Studio works seamlessly with Git, for source control, and Gradle, a build and test tool. In addition, this book demonstrates how to develop/collaborate with remote Git web-hosting services such as GitHub and Bitbucket. Four complete Android projects accompany this volume and are available for download from a public Git repository. With this book, you learn the latest and most productive tools in the Android tools ecosystem, and the best practices for Android app development. You will be able to take away the labs' code as templates or frameworks to re-use and customize for your own similar apps. Android Studio is an intuitive, feature-rich, and extremely forgiving Integrated Development Environment (IDE). This IDE is more productive and easier to use for your Android app creations than Eclipse. With this book you will quickly master Android Studio and maximize your Android development time. Source code on the remote web-hosting service is targeted to the latest Android Studio release, version 1.2.

As part of the best selling Pocket Primer series, this book provides an overview of the major aspects and the source code to use the latest versions of Android. It has coverage of the fundamental aspects of Android that are illustrated via code samples for versions 4.x through 7.x and features the Google Pixel phone. This Pocket Primer is primarily for self-directed learners who want to learn Android programming and it serves as a starting point for deeper exploration of its numerous applications. Companion disc (also available for downloading from the publisher) with source code, images, and appendices. Features: •Contains latest material on Android VR, graphics/animation, apps, and features the new Google Pixel phone •Includes companion files with all of the source code, appendices, and images from the book •Provides coverage of the fundamental aspects of Android that are illustrated via code samples for versions 4.x through 7.x On the Companion Files: • Source code samples • All images from the text (including 4-color) • Appendices (see Table of Contents)

Brings together expert guidance and the code users need to start building apps for the Android platform.

Organizations face many challenges in managing ever-increasing documents that they need to conduct their businesses. IBM® content management and imaging solutions can capture, store, manage, integrate, and deliver various forms of content throughout an enterprise. These tools can help reduce costs associated with content management and help organizations deliver improved customer service. The advanced document capture capabilities are provided through IBM Datacap software. This IBM Redbooks® publication focuses on Datacap components, system architecture, functions, and capabilities. It explains how Datacap works, how to design a document image capture solution, and how to implement the solution using Datacap Developer Tools, such as Datacap FastDoc (Admin). FastDoc is the development tool that designers use to create rules and rule sets, configure a document hierarchy and task profiles, and set up a verification panel for image verification. A loan application example explains the advanced

technologies of IBM Datacap Version 9. This scenario shows how to develop a versatile capture solution that is able to handle both structured and unstructured documents. Information about high availability, scalability, performance, backup and recovery options, preferable practices, and suggestions for designing and implementing an imaging solution is also included. This book is intended for IT architects and professionals who are responsible for creating, improving, designing, and implementing document imaging solutions for their organizations.

The Android Developer's Collection includes two highly successful Android application development eBooks: " The Android Developer's Cookbook: Building Applications with the Android SDK " "Android Wireless Application Development," Second Edition This collection is an indispensable resource for every member of the Android development team: software developers with all levels of mobile experience, team leaders and project managers, testers and QA specialists, software architects, and even marketers. Completely up-to-date to reflect the newest and most widely used Android SDKs, "The Android Developer's Cookbook "is the essential resource for developers building apps for any Android device, from phones to tablets. Proven, modular recipes take you from the absolute basics to advanced location-based services, security techniques, and performance optimization. You'll learn how to write apps from scratch, ensure interoperability, choose the best solutions for common problems, and avoid development pitfalls. "Android Wireless Application Development, " Second Edition, delivers all the up-to-date information, tested code, and best practices you need to create and market successful mobile apps with the latest versions of Android. Drawing on their extensive experience with mobile and wireless development, Lauren Darcey and Shane Conder cover every step: concept, design, coding, testing, packaging, and delivery. Every chapter of this edition has been updated for the newest Android SDKs, tools, utilities, and hardware. All sample code has been overhauled and tested on leading devices from multiple companies, including HTC, Motorola, and ARCHOS. Many new examples have been added, including complete new applications. In this collection, coverage includes Implementing threads, services, receivers, and other background tasks Providing user alerts Organizing user interface layouts and views Managing user-initiated events such as touches and gestures Recording and playing audio and video Using hardware APIs available on Android devices Interacting with other devices via SMS, Web browsing, and social networking Storing data efficiently with SQLite and its alternatives Accessing location data via GPS Using location-related services such as the Google Maps API Building faster applications with native code Providing backup and restore with the Android Backup Manager Testing and debugging apps throughout the development cycle Using Web APIs, using the Android NDK, extending application reach, managing users, synchronizing data, managing backups, and handling advanced user input Editing Android manifest files, registering content providers, and designing and testing apps Working with Bluetooth, voice recognition, App Widgets, live folders, live wallpapers, and global search Programming 3D graphics with OpenGL ES 2.0

Android continues to be one of the leading mobile OS and development platforms driving today's mobile innovations and the apps ecosystem. Android appears complex, but offers a variety of organized development kits to those coming into Android with differing programming language skill sets. Android Recipes: A Problem-Solution Approach guides you step-by-step through a wide

range of useful topics using complete and real-world working code examples. In this book, you'll start off with a recap of Android architecture and app fundamentals, and then get down to business and build an app with Google's Android SDK at the command line and Eclipse. Next, you'll learn how to accomplish practical tasks pertaining to the user interface, communications with the cloud, device hardware, data persistence, communications between applications, and interacting with Android itself. Finally, you'll learn how to leverage various libraries and Scripting Layer for Android (SL4A) to help you perform tasks more quickly, how to use the Android NDK to boost app performance, and how to design apps for performance, responsiveness, seamlessness, and more. Instead of abstract descriptions of complex concepts, in *Android Recipes*, you'll find live code examples. When you start a new project, you can consider copying and pasting the code and configuration files from this book, then modifying them for your own customization needs. This can save you a great deal of work over creating a project from scratch!

Android development can be challenging, but through the effective use of Android Developer Tools (ADT), you can make the process easier and improve the quality of your code. This concise guide demonstrates how to build apps with ADT for a device family that features several screen sizes, different hardware capabilities, and a varying number of resources. With examples in Windows, Linux, and Mac OS X, you'll learn how to set up an Android development environment and use ADT with the Eclipse IDE. Also, contributor Donn Felker introduces Android Studio, a Google IDE that will eventually replace Eclipse. Learn how to use Eclipse and ADT together to develop Android code Create emulators of various sizes and configurations to test your code Master Eclipse tools, or explore the new Android Studio Use Logcat, Lint, and other ADT tools to test and debug your code Simulate real-world events, including location, sensors, and telephony Create dynamic and efficient UIs, using Graphical Layout tools Monitor and optimize you application performance using DDMS, HierarchyViewer, and the Android Monitor tool Use Wizards and shortcuts to generate code and image assets Compile and package Android code with Ant and Gradle

Android Wireless Application Development has earned a reputation as the most useful real-world guide to building robust, commercial-grade Android apps. To accommodate their extensive new coverage, the authors have split the book into two leaner, cleaner volumes. This Volume II focuses on advanced techniques for the entire app development cycle, covers hot topics ranging from tablet development to protecting against piracy, and demonstrates advanced techniques for everything from data integration and UI development to in-app billing. Every chapter has been thoroughly updated to reflect the latest SDKs, tools, and devices. The sample code has been completely overhauled and is available on the CD. Drawing on decades of in-the-trenches experience as professional mobile developers, the authors also provide even more tips and best practices for highly efficient development. This new edition covers Advanced app design with async processing, services, SQLite databases, content providers, intents, and notifications Sophisticated UI development, including input gathering via gestures and voice recognition Developing accessible and internationalized mobile apps Maximizing integrated search, cloud-based services, and other exclusive Android features Leveraging Android 4.0 APIs for networking, web, location services, the camera, telephony, and hardware sensors Building richer apps with 2D/3D graphics (OpenGL ES and RenderScript), animation, and the Android NDK Tracking app usage patterns with

Google Analytics Streamlining testing with the Android Debug Bridge This book is an indispensable resource for every intermediate- to advanced-level Java developer now participating in Android development and for every seasoned mobile developer who wants to take full advantage of the newest Android platform and hardware. This book includes a fully functional application and two exclusive appendices: a rundown of the Java syntax commonly used in Android and a walkthrough of the application. About the CD-ROM: The accompanying CD-ROM contains all the sample code that is presented in the book, organized by chapter.

Get thoroughly up to speed on Android programming, and learn how to create up-to-date user experiences for both handsets and tablets. With this book's extensively revised second edition, you'll focus on Android tools and programming essentials, including best practices for using Android 4 APIs. If you're experienced with Java or Objective-C, you'll gain the knowledge necessary for building well-engineered applications. Programming Android is organized into four parts: Part One helps programmers with some Java or iOS experience get off to a fast start with the Android SDK and Android programming basics. Part Two delves into the Android framework, focusing on user interface and graphics class hierarchies, concurrency, and databases. It's a solid foundation for understanding of how the most important parts of an Android application work. Part Three features code skeletons and patterns for accelerating the development of apps that use web data and Android 4 user interface conventions and APIs. Part Four delivers practical coverage of Android's multimedia, search, location, sensor, and account APIs, plus the Native Development Kit, enabling developers to add advanced capabilities. This updated edition of Programming Android focuses on the knowledge and developer priorities that are essential for successful Android development projects.

Get a practical introduction to React Native, the JavaScript framework for writing and deploying fully featured mobile apps that render natively. The second edition of this hands-on guide shows you how to build applications that target iOS, Android, and other mobile platforms instead of browsers—apps that can access platform features such as the camera, user location, and local storage. Through code examples and step-by-step instructions, web developers and frontend engineers familiar with React will learn how to build and style interfaces, use mobile components, and debug and deploy apps. You'll learn how to extend React Native using third-party libraries or your own Java and Objective-C libraries. Understand how React Native works under the hood with native UI components Examine how React Native's mobile-based components compare to basic HTML elements Create and style your own React Native components and applications Take advantage of platform-specific APIs, as well as modules from the framework's community Incorporate platform-specific components into cross-platform apps Learn common pitfalls of React Native development, and tools for dealing with them Combine a large application's many screens into a cohesive UX Handle state management in a large app with the Redux library

A practical, real-world introduction to AWS tools and concepts Amazon Web Services for Mobile Developers: Building Apps with AWS presents a professional view of cloud computing and AWS for experienced iOS/Android developers and technical/solution architects. Cloud computing is a rapidly expanding ecosystem, and working professionals need a practical resource to bring them

up-to-date on tools that are rapidly becoming indispensable; this book helps expand your skill set by introducing you to AWS offerings that can make your job easier, with a focus on real-world application. Author and mobile applications developer Abhishek Mishra shows you how to create IAM accounts and try out some of the most popular services, including EC2, Lambda, Mobile Analytics, Device Farm, and more. You'll build a chat application in both Swift (iOS) and Java (Android), running completely off AWS Infrastructure to explore SDK installation, Xcode, Cognito authentication, DynamoDB, Amazon SNS Notifications, and other useful tools. By actually using the tools as you learn about them, you develop a more intuitive understanding that feels less like a shift and more like a streamlined integration. If you have prior experience with Swift or Java and a solid knowledge of web services, this book can help you quickly take your skills to the next level with a practical approach to learning that translates easily into real-world use. Understand the key concepts of AWS as applied to both iOS and Android developers Explore major AWS offerings for mobile developers, including DynamoDB, RDS, EC2, SNS, Cognito, and more Learn what people are talking about when they use buzzwords like PaaS, IaaS, SaaS, and APaaS Work through explanations by building apps that tie into the AWS ecosystem Any job is easier with the right tools, and Amazon Web Services for Mobile Developers: Building Apps with AWS gets you acquainted with an ever-expanding toolkit for mobile app development.

A practical guide to developing and deploying Near Field Communication (NFC) applications There has been little practical guidance available on NFC programming, until now. If you're a programmer or developer, get this unique and detailed book and start creating apps for this exciting technology. NFC enables contactless mobile communication between two NFC-compatible devices. It's what allows customers to pay for purchases by swiping their smartphones with Google Wallet, for example. This book shows you how to develop NFC applications for Android, for all NFC operating modes: reader/writer, peer-to-peer, and card emulation. The book starts with the basics of NFC technology, an overview of the Android OS, and what you need to know about the SDK tools. It then walks you through all aspects of NFC app development, including SE programming. You'll find all you need to create an app, including functioning, downloadable code and a companion website with additional content. Valuable case studies help you understand each operating mode in clear, practical detail. Shows programmers and developers how to develop Near Field Communication (NFC) applications for Android, including Secure Element (SE) programming Expert authors are NFC researchers who have a deep knowledge of the subject Covers app development in all NFC operating modes: reader/writer, peer-to-peer, and card emulation Includes valuable case studies that showcase several system design and analysis methods, such as activity diagram, class diagram, UML, and others Professional NFC Application Development for Android offers the clear, concise advice you need to create great applications for this emerging and exciting technology.

Beginning Java 7 guides you through version 7 of the Java language and a wide assortment of platform APIs. New Java 7 language features that are discussed include switch-on-string and try-with-resources. APIs that are discussed include Threading, the Collections Framework, the Concurrency Utilities, Swing, Java 2D, networking, JDBC, SAX, DOM, StAX, XPath, JAX-WS, and SAAJ. This book also presents an introduction to Android app development so that you can apply some of its knowledge to the

exciting world of Android app development. This book presents the following table of contents: Chapter 1 introduces you to Java and begins to cover the Java language by focusing on fundamental concepts such as comments, identifiers, variables, expressions, and statements. Chapter 2 continues to explore this language by presenting all of its features for working with classes and objects. You learn about features related to class declaration and object creation, encapsulation, information hiding, inheritance, polymorphism, interfaces, and garbage collection. Chapter 3 focuses on the more advanced language features related to nested classes, packages, static imports, exceptions, assertions, annotations, generics, and enums. Additional chapters introduce you to the few features not covered in Chapters 1 through 3. Chapter 4 largely moves away from covering language features (although it does introduce class literals and `strictfp`) while focusing on language-oriented APIs. You learn about `Math`, `StrictMath`, `Package`, `Primitive Type Wrapper Classes`, `Reference`, `Reflection`, `String`, `StringBuffer` and `StringBuilder`, `Threading`, `BigDecimal`, and `BigInteger` in this chapter. Chapter 5 begins to explore Java's utility APIs by focusing largely on the `Collections Framework`. However, it also discusses legacy collection-oriented APIs and how to create your own collections. Chapter 6 continues to focus on utility APIs by presenting the concurrency utilities along with the `Objects` and `Random` classes. Chapter 7 moves you away from the command-line user interfaces that appear in previous chapters and toward graphical user interfaces. You first learn about the `Abstract Window Toolkit` foundation, and then explore the `Java Foundation Classes` in terms of `Swing` and `Java 2D`. Appendix C explores `Accessibility` and `Drag and Drop`. Chapter 8 explores filesystem-oriented I/O in terms of the `File`, `RandomAccessFile`, `stream`, and `writer/reader` classes. Chapter 9 introduces you to Java's network APIs (e.g., sockets). It also introduces you to the `JDBC API` for interacting with databases along with the `Java DB` database product. Chapter 10 dives into Java's XML support by first presenting an introduction to XML (including DTDs and schemas). It next explores the `SAX`, `DOM`, `StAX`, `XPath`, and `XSLT` APIs. It even briefly touches on the `Validation API`. While exploring `XPath`, you encounter namespace contexts, extension functions and function resolvers, and variables and variable resolvers. Chapter 11 introduces you to Java's support for SOAP-based and RESTful web services. As well as providing you with the basics of these web service categories, Chapter 11 presents some advanced topics, such as working with the `SAAJ API` to communicate with a SOAP-based web service without having to rely on `JAX-WS`. You will appreciate having learned about XML in Chapter 10 before diving into this chapter. Chapter 12 helps you put to use some of the knowledge you've gathered in previous chapters by showing you how to use Java to write an Android app's source code. This chapter introduces you to Android, discusses its architecture, shows you how to install necessary tools, and develops a simple app. Appendix A presents the solutions to the programming exercises that appear near the end of Chapters 1 through 12. Appendix B introduces you to Java's `Scripting API` along with Java 7's support for dynamically typed languages. Appendix C introduces you to additional APIs and architecture topics. Examples include `Accessibility`, `classloaders`, `Console`, `Drag and Drop`, `Java Native Interface`, and `System Tray`. Appendix D presents a gallery of significant applications that demonstrate various aspects of Java. Unfortunately, there are limits to how much knowledge can be crammed into a print book. For this reason, Appendixes A, B, C, and D are not included in this book's pages. Instead, these appendixes are

freely distributed as PDF files. Appendixes A and B are bundled with the book's associated code file at the Apress website (<http://www.apress.com/9781430239093>). Appendixes C and D are bundled with their respective code files at my TutorTutor.ca website (<http://tutortutor.ca/cgi-bin/makepage.cgi?/books/bj7>).

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. *Android Programming: The Big Nerd Ranch Guide, 3/e* is an introductory Android book for programmers with Java experience. Based on Big Nerd Ranch's popular Android bootcamps, this guide will lead you through the wilderness using hands-on example apps combined with clear explanations of key concepts and APIs. This book focuses on practical techniques for developing apps compatible with Android 4.4 (KitKat) through Android 7.0 (Nougat) and beyond. Write and run code every step of the way, using Android Studio to create apps that integrate with other apps, download and display pictures from the web, play sounds, and more. Each chapter and app has been designed and tested to provide the knowledge and experience you need to get started in Android development.

Outside of the world of enterprise computing, there is one database that enables a huge range of software and hardware to flex relational database capabilities, without the baggage and cost of traditional database management systems. That database is SQLite—an embeddable database with an amazingly small footprint, yet able to handle databases of enormous size. SQLite comes equipped with an array of powerful features available through a host of programming and development environments. It is supported by languages such as C, Java, Perl, PHP, Python, Ruby, TCL, and more. *The Definitive Guide to SQLite, Second Edition* is devoted to complete coverage of the latest version of this powerful database. It offers a thorough overview of SQLite's capabilities and APIs. The book also uses SQLite as the basis for helping newcomers make their first foray into database development. In only a short time you can be writing programs as diverse as a server-side browser plug-in or the next great iPhone or Android application! Learn about SQLite extensions for C, Java, Perl, PHP, Python, Ruby, and Tcl. Get solid coverage of SQLite internals. Explore developing iOS (iPhone) and Android applications with SQLite. SQLite is the solution chosen for thousands of products around the world, from mobile phones and GPS devices to set-top boxes and web browsers. You almost certainly use SQLite every day without even realizing it!

The complete, start-to-finish guide to Android development -- from concept to market -- completely updated for the latest Android SDK! • At least one market research firm has predicted that by 2012 there will be more Android phones than iPhones. • Covers application design, development, debugging, packaging, distribution, and much more. • Includes invaluable real-world tips from experienced mobile developers. • This book covers multiple Android SDK versions, which is how developers must work with Android. Android is rapidly gaining traction as an exciting alternative to Apple's iPhone platform, and thousands of developers are eagerly seeking the information they need to begin creating Android applications. Drawing on their experience in mobile and wireless software development, the authors walk through the entire process of developing successful Android applications, from concept through coding, testing through distribution. The only book developers will need, *Android Wireless Application*

Development 2/e is the comprehensive resource for developers who are new to Android - or to wireless development in general. Conder and Darcey cover:

- Mastering the Android development environment.
- Understanding the entire Android application lifecycle.
- Building effective user interfaces.
- Using Android's APIs for networking, location-based services, data, storage, multimedia, telephony, graphics, and more
- Working with Android's optional hardware-specific APIs
- Designing more effective applications using Notifications and Services
- Developing and testing bulletproof Android applications

The book also provides valuable appendices on Android's Emulator, DDMS, Debug Bridge, and SQLite database, as well as a convenient glossary that demystifies the terminology of mobile development.

Build machine learning (ML) solutions for Java development. This book shows you that when designing ML apps, data is the key driver and must be considered throughout all phases of the project life cycle. Practical Java Machine Learning helps you understand the importance of data and how to organize it for use within your ML project. You will be introduced to tools which can help you identify and manage your data including JSON, visualization, NoSQL databases, and cloud platforms including Google Cloud Platform and Amazon Web Services. Practical Java Machine Learning includes multiple projects, with particular focus on the Android mobile platform and features such as sensors, camera, and connectivity, each of which produce data that can power unique machine learning solutions. You will learn to build a variety of applications that demonstrate the capabilities of the Google Cloud Platform machine learning API, including data visualization for Java; document classification using the Weka ML environment; audio file classification for Android using ML with spectrogram voice data; and machine learning using device sensor data. After reading this book, you will come away with case study examples and projects that you can take away as templates for re-use and exploration for your own machine learning programming projects with Java.

What You Will Learn

- Identify, organize, and architect the data required for ML projects
- Deploy ML solutions in conjunction with cloud providers such as Google and Amazon
- Determine which algorithm is the most appropriate for a specific ML problem
- Implement Java ML solutions on Android mobile devices
- Create Java ML solutions to work with sensor data
- Build Java streaming based solutions

Who This Book Is For

Experienced Java developers who have not implemented machine learning techniques before.

A hands-on guide to building mobile applications, Professional Android Application Development features concise and compelling examples that show you how to quickly construct real-world mobile applications for Android phones. Fully up-to-date for version 1.0 of the Android software development kit, it covers all the essential features, and explores the advanced capabilities of Android (including GPS, accelerometers, and background Services) to help you construct increasingly complex, useful, and innovative mobile applications for Android phones. What this book includes

- An introduction to mobile development, Android, and how to get started.
- An in-depth look at Android applications and their life cycle, the application manifest, Intents, and using external resources.
- Details for creating complex and compelling user interfaces by using, extending, and creating your own layouts and Views and using Menus.
- A detailed look at data storage, retrieval, and sharing using preferences, files, databases, and Content Providers.
- Instructions for making the most of mobile portability by creating rich map-based applications as well as using location-

based services and the geocoder. A look at the power of background Services, using threads, and a detailed look at Notifications. Coverage of Android's communication abilities including SMS, the telephony APIs, network management, and a guide to using Internet resources Details for using Android hardware, including media recording and playback, using the camera, accelerometers, and compass sensors. Advanced development topics including security, IPC, advanced 2D / 3D graphics techniques, and user–hardware interaction. Who this book is for This book is for anyone interested in creating applications for the Android mobile phone platform. It includes information that will be valuable whether you're an experienced mobile developer or making your first foray, via Android, into writing mobile applications. It will give the grounding and knowledge you need to write applications using the current SDK, along with the flexibility to quickly adapt to future enhancements.

Android Wireless Application Development Pearson Education

Developers, build mobile Android apps using Android 4 The fast-growing popularity of Android smartphones and tablets creates a huge opportunities for developers. If you're an experienced developer, you can start creating robust mobile Android apps right away with this professional guide to Android 4 application development. Written by one of Google's lead Android developer advocates, this practical book walks you through a series of hands-on projects that illustrate the features of the Android SDK. That includes all the new APIs introduced in Android 3 and 4, including building for tablets, using the Action Bar, Wi-Fi Direct, NFC Beam, and more. Shows experienced developers how to create mobile

applications for Android smartphones and tablets Revised and expanded to cover all the Android SDK releases including Android 4.0 (Ice Cream Sandwich), including all updated APIs, and the latest changes to the Android platform. Explains new and enhanced features such as drag and drop, fragments, the action bar, enhanced multitouch support, new environmental sensor support, major improvements to the animation framework, and a range of new communications techniques including NFC and Wi-Fi direct. Provides practical guidance on publishing and marketing your applications, best practices for user experience, and more This book helps you learn to master the design, lifecycle, and UI of an Android app through practical exercises, which you can then use as a basis for developing your own Android apps.

GUI Design for Android Apps is the perfect—and concise—introduction for mobile app developers and designers. Through easy-to-follow tutorials, code samples, and case studies, the book shows the must-know principles for user-interface design for Android apps running on the Intel platform, including smartphones, tablets and embedded devices. This book is jointly developed for individual learning by Intel Software College and China Shanghai JiaoTong University, and is excerpted from Android Application Development for the Intel® Platform.

Android is a movement that has transferred data from laptop to hand-held devices like mobiles. Though there are alternate technologies that compete with Android, but it is the front runner in mobile technology by a long distance. Good

knowledge in basic Java will help you to understand and develop Android technology and apps. Many universities in India and across the world are now teaching Android in their syllabus, which shows the importance of this subject. This book can be read by anyone who knows Java and XML concepts. It includes a lot of diagrams along with explanations to facilitate better understanding by students. This book aptly concludes with a project that uses Android, which will greatly benefit students in learning the practical aspects of Android. Key Features • Instructions in designing different Android user interfaces • Thorough explanations of all activities • JSON • Android-based project to aid practical understanding

Mobile Applications Development with Android: Technologies and Algorithms presents advanced techniques for mobile app development, and addresses recent developments in mobile technologies and wireless networks. The book covers advanced algorithms, embedded systems, novel mobile app architecture, and mobile cloud computing paradigms. Divided into three sections, the book explores three major dimensions in the current mobile app development domain. The first section describes mobile app design and development skills, including a quick start on using Java to run an Android application on a real phone. It also introduces 2D graphics and UI design, as well as multimedia in Android mobile apps. The second part of the book delves into advanced mobile app optimization, including an overview of mobile embedded systems and architecture. Data storage in Android, mobile optimization by dynamic programming, and mobile optimization by loop scheduling are also covered. The last section of the book looks at emerging technologies, including mobile cloud computing, advanced techniques using Big Data, and mobile Big Data storage.

About the Authors Meikang Qiu is an Associate Professor of Computer Science at Pace University, and an adjunct professor at Columbia University. He is an IEEE/ACM Senior Member, as well as Chair of the IEEE STC (Special Technical Community) on Smart Computing. He is an Associate Editor of a dozen of journals including IEEE Transactions on Computers and IEEE Transactions on Cloud Computing. He has published 320+ peer-reviewed journal/conference papers and won 10+ Best Paper Awards. Wenyun Dai is pursuing his PhD at Pace University. His research interests include high performance computing, mobile data privacy, resource management optimization, cloud computing, and mobile networking. His paper about mobile app privacy has been published in IEEE Transactions on Computers. Keke Gai is pursuing his PhD at Pace University. He has published over 60 peer-reviewed journal or conference papers, and has received three IEEE Best Paper Awards. His research interests include cloud computing, cyber security, combinatorial optimization, business process modeling, enterprise architecture, and Internet computing. .

his book is a collection of notes and sample codes written by the author while he was learning Android system. Topics include Installing of Android SDK R24 on Windows, Creating and running Android emulators, Developing First Android Application - HelloAndroid, Creating Android Project with 'android' Command, Building, Installing and Running the Debug

Binary Package, Inspecting Android Application Package (APK) Files, Using Android Debug Bridge (adb) Tool, Copying files from and to Android device, Understanding Android File Systems, Using Android Java class libraries, Using 'adb logcat' Command for Debugging, Understanding Android application build process. Updated in 2021 (Version v3.03): minor updates. For latest updates and free sample chapters, visit <http://www.herongyang.com/Android>.

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