

Android Programming In Kotlin Starting With An App

Learn Reactive Programming in Kotlin with RxJava! The popularity of reactive programming continues to grow on an ever-increasing number of platforms and languages. Rx lets developers easily and quickly build apps with code that can be understood by other Rx developers—even over different platforms. Not only will you learn how to use RxJava to create complex reactive applications on Android, you'll also see how to solve common application design issues by using RxJava. Finally, you'll discover how to exercise full control over the library and leverage the full power of reactive programming in your apps.

Who This Book Is For This book is for Android developers who already feel comfortable with the Android SDK and Kotlin, and want to dive deep into development with RxJava, RxKotlin, and RxAndroid.

Topics Covered in Reactive Programming with Kotlin:

- Getting Started:** Get an introduction to the reactive programming paradigm, learn the terminology involved, and see how to begin using RxJava in your projects.
- Event Management:** Learn how to handle asynchronous event sequences via two key concepts in Rx—Observables and Observers.
- Being Selective:** See how to work with various events using tools such as filtering, transforming, combining, and timing operators.
- UI Development:** RxJava and companion libraries make it easy to work with the UI of your apps, providing a reactive approach to handling user events.
- Intermediate Topics:** Level up your RxJava knowledge with chapters on reactive networking, error handling, and schedulers.
- Advanced Topics:** Round out your RxJava education by learning about app architecture, repositories, and integrating RxJava with Android Jetpack.

And much, much more! By the end of the book, you'll have hands-on experience solving common issues in a reactive paradigm—and you'll be well on your way to coming up with your own Rx patterns and solutions!

Start building native Android apps the modern way in Kotlin with Jetpack's expansive set of tools, libraries, and best practices. Learn how to create efficient, resilient views with Fragments and share data between the views with ViewModels. Use Room to persist valuable data quickly, and avoid NullPointerExceptions and Java's verbose expressions with Kotlin. You can even handle asynchronous web service calls elegantly with Kotlin coroutines. Achieve all of this and much more while building two full-featured apps, following detailed, step-by-step instructions. With Kotlin and Jetpack, Android development is now smoother and more enjoyable than ever before. Dive right in by developing two complete Android apps. With the first app, Penny Drop, you create a full game complete with random die rolls, customizable rules, and AI opponents. Build lightweight Fragment views with data binding, quickly and safely update data with ViewModel classes, and handle all app navigation in a single location. Use Kotlin with Android-specific Kotlin extensions to efficiently write null-safe code without all the normal boilerplate required for pre-Jetpack + Kotlin apps. Persist and retrieve data as full objects with the Room library, then display that data with ViewModels and list records in a RecyclerView. Next, you create the official app for the Android Baseball League. It's a fake league but a real app, where you use what you learn in Penny Drop and build up from there. Navigate all over the app via a Navigation Drawer, including specific locations via Android App Links. Handle asynchronous and web service calls with Kotlin Coroutines, display that data smoothly with the Paging library, and send notifications to a user's phone from your app. Come build Android apps the modern way with Kotlin and Jetpack!

What You Need: You'll need the Android SDK, a text editor, and either a real Android device or emulator for testing. While not strictly required, it's assumed you're using Android Studio, which comes with the Android SDK and simplifies creating an emulator. Also, a few examples require JDK 1.8 or later, though all of these pieces can be completed in other ways when using JDK 1.6.

Build Android apps and learn the essentials of the popular Kotlin programming language and APIs. This book will teach you the key Kotlin skills and techniques important for creating your very own Android apps. Apart from introducing Kotlin programming, *Learn Kotlin for Android Development* stresses clean code principles and introduces object-oriented and functional programming as a starting point for developing Android apps. After reading and using this book, you'll have a foundation to take away and apply to your own Kotlin-based Android app development. You'll be able to write useful and efficient Kotlin-based apps for Android, using most of the features Kotlin as a language has to offer.

What You Will Learn

- Build your first Kotlin app that runs on Android
- Work with Kotlin classes and objects for Android
- Use constructs, loops, decisions, and scopes
- Carry out operations on data
- Master data containers, arrays, and collections
- Handle exceptions and access external libraries

Who This Book Is For Very little programming experience is required: no prior knowledge of Kotlin needed.

Fully updated for Android Studio 4.0, Android 10 (Q), Android Jetpack and the modern architectural guidelines and components, the goal of this book is to teach the skills necessary to develop Android-based applications using the Kotlin programming language. Beginning with the basics, this book provides an outline of the steps necessary to set up an Android development and testing environment followed by an introduction to programming in Kotlin including data types, flow control, functions, lambdas, coroutines and object-oriented programming. An overview of Android Studio is included covering areas such as tool windows, the code editor and the Layout Editor tool. An introduction to the architecture of Android is followed by an in-depth look at the design of Android applications and user interfaces using the Android Studio environment. Chapters are also included covering the Android Architecture Components including view models, lifecycle management, Room databases, app navigation, live data and data binding. More advanced topics such as intents are also covered, as are touch screen handling, gesture recognition and the playback and recording of audio. This edition of the book also covers printing, transitions, cloud-based file storage and foldable device support. The concepts of material design are also covered in detail, including the use of floating action buttons, Snackbars, tabbed interfaces, card views, navigation drawers and collapsing toolbars. In addition to covering general Android development techniques, the book also includes Google Play specific topics such as implementing maps using the Google Maps Android API, and submitting apps to the Google Play Developer Console. Other key features of Android Studio 4.0 and the Android SDK are also covered in detail including the Layout Editor, the ConstraintLayout and ConstraintSet classes, MotionLayout animation, constraint chains and barriers, view binding, direct reply notifications and multi-window support. Chapters also cover advanced features of Android Studio such as App Links, Dynamic Feature Modules, the Android Studio Profiler and Gradle build configuration. Assuming you already have some programming experience, are ready to download Android Studio and the Android SDK, have access to a Windows, Mac or Linux system and ideas for some apps to develop, you are ready to get started.

Programmers don't just use Kotlin, they love it. Even Google has adopted it as a first-class language for Android development. With Kotlin, you can intermix imperative, functional, and object-oriented styles of programming and benefit from the approach that's most suitable for the problem at hand. Learn to use the many features of this highly concise, fluent, elegant, and

expressive statically typed language with easy-to-understand examples. Learn to write easy-to-maintain, high-performing JVM and Android applications, create DSLs, program asynchrony, and much more. Kotlin is a highly concise, elegant, fluent, and expressive statically typed multi-paradigm language. It is one of the few languages that compiles down to both Java bytecode and JavaScript. You can use it to build server-side, front-end, and Android applications. With Kotlin, you need less code to accomplish your tasks, while keeping the code type-safe and less prone to error. If you want to learn the essentials of Kotlin, from the fundamentals to more advanced concepts, you've picked the right book. Fire up your favorite IDE and practice hundreds of examples and exercises to sharpen your Kotlin skills. Learn to build standalone small programs to run as scripts, create type safe code, and then carry that knowledge forward to create fully object-oriented and functional style code that's easier to extend. Learn how to program with elegance but without compromising efficiency or performance, and how to use metaprogramming to build highly expressive code and create internal DSLs that exploit the fluency of the language. Explore coroutines, program asynchrony, run automated tests, and intermix Kotlin with Java in your enterprise applications. This book will help you master one of the few languages that you can use for the entire full stack - from the server to mobile devices - to create performant, concise, and easy to maintain applications. What You Need: To try out the examples in the book you'll need a computer with Kotlin SDK, JDK, and a text editor or a Kotlin IDE installed in it. Learn all the Java and Android skills you need to start making powerful mobile applications with practical and actionable steps Key Features Kick-start your Android programming career, or just have fun publishing apps to the Google Play marketplace A first-principles introduction to Java, via Android, which means you'll be able to start building your own applications from scratch Learn by example and build four real-world apps and dozens of mini-apps throughout the book Book Description Are you trying to start a career in programming, but haven't found the right way in? Do you have a great idea for an app, but don't know how to make it a reality? Or maybe you're just frustrated that in order to learn Android, you must know Java. If so, then this book is for you. This new and expanded second edition of Android Programming for Beginners will be your companion to create Android Pie applications from scratch. We will introduce you to all the fundamental concepts of programming in an Android context, from the basics of Java to working with the Android API. All examples use the up-to-date API classes, and are created from within Android Studio, the official Android development environment that helps supercharge your application development process. After this crash course, we'll dive deeper into Android programming and you'll learn how to create applications with a professional-standard UI through fragments and store your user's data with SQLite. In addition, you'll see how to make your apps multilingual, draw to the screen with a finger, and work with graphics, sound, and animations too. By the end of this book, you'll be ready to start building your own custom applications in Android and Java. What you will learn Master the fundamentals of coding Java for Android Pie Install and set up your Android development environment Build functional user interfaces with the Android Studio visual designer Add user interaction, data captures, sound, and animation to your apps Manage your apps' data using the built-in Android SQLite database Find out about the design patterns used by professionals to make top-grade applications Build, deploy, and publish real Android applications to the Google Play marketplace Who this book is for This book is for you if you are completely new to Java, Android, or programming and want to make Android applications. This book also acts as a refresher for those who already have experience of using Java on Android to advance their knowledge and make fast progress through the early projects.

Build smart looking Kotlin apps with UI and functionality for the Android platform Key Features Start your Android programming career, or just have fun publishing apps on Google Play marketplace The first-principle introduction to Kotlin through Android, to start building easy-to-use apps Learn by example and build four real-world apps and dozens of mini-apps Book Description Android is the most popular mobile operating system in the world and Kotlin has been declared by Google as a first-class programming language to build Android apps. With the imminent arrival of the most anticipated Android update, Android 10 (Q), this book gets you started building apps compatible with the latest version of Android. It adopts a project-style approach, where we focus on teaching the fundamentals of Android app development and the essentials of Kotlin by building three real-world apps and more than a dozen mini-apps. The book begins by giving you a strong grasp of how Kotlin and Android work together before gradually moving onto exploring the various Android APIs for building stunning apps for Android with ease. You will learn to make your apps more presentable using different layouts. You will dive deep into Kotlin programming concepts such as variables, functions, data structures, Object-Oriented code, and how to connect your Kotlin code to the UI. You will learn to add multilingual text so that your app is accessible to millions of more potential users. You will learn how animation, graphics, and sound effects work and are implemented in your Android app. By the end of the book, you will have sound knowledge about significant Kotlin programming concepts and start building your own fully featured Android apps. What you will learn Learn how Kotlin and Android work together Build a graphical drawing app using Object-Oriented Programming (OOP) principles Build beautiful, practical layouts using ScrollView, RecyclerView, NavigationView, ViewPager and CardView Write Kotlin code to manage an apps' data using different strategies including JSON and the built-in Android SQLite database Add user interaction, data captures, sound, and animation to your apps Implement dialog boxes to capture input from the user Build a simple database app that sorts and stores the user's data Who this book is for This book is for people who are new to Kotlin, Android and want to develop Android apps. It also acts as a refresher for those who have some experience in programming with Android and Kotlin.

Practical Software Architecture Solutions from the Legendary Robert C. Martin ("Uncle Bob") By applying universal rules of software architecture, you can dramatically improve developer productivity throughout the life of any software system. Now, building upon the success of his best-selling books Clean Code and The Clean Coder, legendary software craftsman Robert C. Martin ("Uncle Bob") reveals those rules and helps you apply them. Martin's Clean Architecture doesn't merely present options. Drawing on over a half-century of experience in software environments of every imaginable type, Martin tells you what choices to make and why they are critical to your success. As you've come to expect from Uncle Bob, this book is packed with direct, no-nonsense solutions for the real challenges you'll face—the ones that will make or break your projects. Learn what software architects need to achieve—and core disciplines and practices for achieving it Master essential software design principles for addressing function, component separation, and data management See how programming paradigms impose discipline by restricting what developers can do Understand what's critically important and what's merely a "detail" Implement optimal, high-level structures for web, database, thick-client, console, and embedded applications Define appropriate boundaries and layers, and organize components and services See why designs and architectures go wrong, and how to prevent (or fix) these failures Clean Architecture is essential reading for every current or aspiring software architect, systems analyst, system designer, and software manager—and for every programmer

who must execute someone else's designs. Register your product for convenient access to downloads, updates, and/or corrections as they become available.

Learn programming in Kotlin including data types, flow control, lambdas, object-oriented, and functional programming while building 3 Android Apps Key Features Experience the gentle learning curve of Kotlin as you develop your own applications Learn how to integrate Kotlin into Android Studio 3 and use it in your projects Build real-world applications such as Googly Eyes and games using Kotlin Book Description Today Kotlin is an official programming language for Android development and is widely adopted. Kotlin is expressive, concise, and powerful. It also ensures seamless interoperability with existing Android languages like JAVA and C++, which means that it's even easier for developers to use. This book adopts a project-style approach, where we focus on teaching Android development by building three different Android Application: a Tic-Tac-Toe application, a location-based alarm and a To-Do list application. The book begins by giving you a strong grasp of the Kotlin language and its APIs as a preliminary to building stunning applications for Android. You'll learn to set up an environment and as you progress through the chapters and the building of the different applications, the difficulty level will steadily grow. The book also introduces you to the Android Studio IDE, which plays an integral role in Android Development. It covers Kotlin's basic programming concepts such as functions, lambdas, properties, object-oriented code, safety aspects and type parameterization, testing, and concurrency, and helps you write Kotlin code to production. Finally, you'll be taken through the process of releasing your app on the Google Play Store. You will also be introduced to other app distribution channels such as Amazon App Store. As a bonus chapter, you will also learn how to use the Google Faces API to detect faces and add fun functionalities. What you will learn Learn the basics of using the Android Studio IDE and a number of basic programming concepts in Kotlin Discover Android development by building Android apps with Kotlin Uncover some amazing features of Kotlin that give it the upper hand over Java Learn about Kotlin interoperability with Java Integrate Crashlytics for crash reporting and beta testing. Use Google Location services and understand various APIs available for getting user location updates Understand the principles of networking and communication. Learn about the usage of third-party libraries for loading of data Automate your build process with continuous integration tools Who this book is for If you are completely new to Kotlin or the Android platform and need to publish Android applications for fun or for business purposes, but you have no clue where to start, then this book is for you. This book is also for advanced Android developers who want to learn to use Kotlin instead of/alongside Java for Android development, although having some programming experience would be helpful.

This book will equip you to create high-quality, visually appealing Android 11 apps from scratch with Kotlin. You'll discover a wide range of real-world development challenges faced by developers and explore various techniques to overcome them.

Want to build apps for Android devices? This book is the perfect way to master the fundamentals. Written by experts who have taught this mobile platform to hundreds of developers in large organizations and startups alike, this gentle introduction shows experienced object-oriented programmers how to use Android's basic building blocks to create user interfaces, store data, connect to the network, and more. Throughout the book, you'll build a Twitter-like application, adding new features with each chapter. You'll also create your own toolbox of code patterns to help you program any type of Android application with ease. Become familiar with the Android platform and how it fits into the mobile ecosystem Dive into the Android stack, including its application framework and the APK application package Learn Android's building blocks: Activities, Intents, Services, Content Providers, and Broadcast Receivers Create basic Android user interfaces and organize UI elements in Views and Layouts Build a service that uses a background process to update data in your application

What will you learn from this book? Head First Kotlin is a complete introduction to coding in Kotlin. This hands-on book helps you learn the Kotlin language with a unique method that goes beyond syntax and how-to manuals and teaches you how to think like a great Kotlin developer. You'll learn everything from language fundamentals to collections, generics, lambdas, and higher-order functions. Along the way, you'll get to play with both object-oriented and functional programming. If you want to really understand Kotlin, this is the book for you. Why does this book look so different? Based on the latest research in cognitive science and learning theory, Head First Kotlin uses a visually rich format to engage your mind rather than a text-heavy approach that puts you to sleep. Why waste your time struggling with new concepts? This multisensory learning experience is designed for the way your brain really works.

Unless you've been living on Mars (lucky you!) cut off from all forms of communication, you've heard of a new programming language, named Kotlin, that is considered the heir apparent to Java. Developed and perfected over a five-year period by JetBrains (the company behind IntelliJ IDEA), Kotlin has taken the Java development community by storm. The new language is described as "concise," "safe," and "100% interoperable" with Java, and it runs on the Java Virtual Machine (JVM). Kotlin has already been adopted by some big companies-including Uber, Netflix, Pinterest, and Square-as their primary language for developing Android apps. And in May of 2017, Google announced Kotlin was now a "first-class language" for writing Android apps, subsequently conducting all of its developers' conferences in it. The message is clear. So, what's keeping you from checking out Kotlin for yourself and seeing what it can do? What you will learn Run a Kotlin application and understand the integration with Android Studio Incorporate Kotlin into new/existing Android Java based project Learn about Kotlin type system to deal with null safety and immutability Define various types of classes and deal with properties Define collections and transform them in functional way Define extensions, new behaviours to existing libraries and Android framework classes Use generic type variance modifiers to define subtyping relationship between generic types Build a sample application Model data using interfaces, classes, and data classes Grapple with practical interoperability challenges and solutions with Java Build parallel apps using concurrency solutions such as coroutines Explore functional, reactive, and imperative programming to build flexible apps

Discover how to build your own domain-specific language Embrace functional programming using the standard library and Arrow Delve into the use of Kotlin for frontend JavaScript development Build server-side services using Kotlin and Ktor Java isn't the only language you can use to build Android apps. The most strongly supported JVM language in the Android ecosystem—aside from Java—is Kotlin, an open-source, statically typed language developed by JetBrains. JetBrains created one of the most popular IDEs, IntelliJ IDEA, as well as Android Studio, which Google crowned as the standard IDE for Android development. It understood the pain developers face in day-to-day development workflow, and with Kotlin it has attempted to address those. JetBrains uses Kotlin in production to develop its own products, so it is unlikely that the language will suddenly be abandoned. Kotlin takes a pragmatic approach by not including features such as having its own build system or package manager because open source tools such as Gradle and Maven already handle this well. Having its own build system would have broken projects that already use Gradle and Maven. Another pragmatic approach for Kotlin was to not re-implement the entire Java collections framework. That would have been easy, but the creators also wanted Kotlin to be compatible with the JDK collection interfaces without breaking any existing project implementations. One other huge benefit of Kotlin is that most of its language design decisions focused on maintaining backward compatibility with many Java and Android projects. For example, Kotlin still supports Java 6 bytecode because more than half Android devices still run on it. Kotlin is 100% interoperable with Java

Summary Kotlin in Action guides experienced Java developers from the language basics of Kotlin all the way through building applications to run on the JVM and Android devices. Foreword by Andrey Breslav, Lead Designer of Kotlin. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Developers want to get work done - and the less hassle, the better. Coding with Kotlin means less hassle. The Kotlin programming language offers an expressive syntax, a strong intuitive type system, and great tooling support along with seamless interoperability with existing Java code, libraries, and frameworks. Kotlin can be compiled to Java bytecode, so you can use it everywhere Java is used, including Android. And with an efficient compiler and a small standard library, Kotlin imposes virtually no runtime overhead. About the Book Kotlin in Action teaches you to use the Kotlin language for production-quality applications. Written for experienced Java developers, this example-rich book goes further than most language books, covering interesting topics like building DSLs with natural language syntax. The authors are core Kotlin developers, so you can trust that even the gnarly details are dead accurate. What's Inside Functional programming on the JVM Writing clean and idiomatic code Combining Kotlin and Java Domain-specific languages About the Reader This book is for experienced Java developers. About the Author Dmitry Jemerov and Svetlana Isakova are core Kotlin developers at JetBrains. Table of Contents PART 1 - INTRODUCING KOTLIN Kotlin: what and why Kotlin basics Defining and calling functions Classes, objects, and interfaces Programming with lambdas The Kotlin type system PART 2 - EMBRACING KOTLIN Operator overloading and other conventions Higher-order functions: lambdas as parameters and return values Generics Annotations and reflection DSL construction

Learn all the Java and Android skills you need to start making powerful mobile applications About This Book Kick-start your Android programming career, or just have fun publishing apps to the Google Play marketplace A first-principles introduction to Java, via Android, which means you'll be able to start building your own applications from scratch Learn by example and build three real-world apps and over 40 mini apps throughout the book Who This Book Is For Are you trying to start a career in programming, but haven't found the right way in? Do you have a great idea for an app, but don't know how to make it a reality? Or maybe you're just frustrated that “to learn Android, you must know java.” If so, Android Programming for Beginners is for you. You don't need any programming experience to follow along with this book, just a computer and a sense of adventure. What You Will Learn Master the fundamentals of coding Java for Android Install and set up your Android development environment Build functional user interfaces with the Android Studio visual designer Add user interaction, data captures, sound, and animation to your apps Manage your apps' data using the built-in Android SQLite database Find out about the design patterns used by professionals to make top-grade applications Build, deploy, and publish real Android applications to the Google Play marketplace In Detail Android is the most popular OS in the world. There are millions of devices accessing tens of thousands of applications. It is many people's entry point into the world of technology; it is an operating system for everyone. Despite this, the entry-fee to actually make Android applications is usually a computer science degree, or five years' worth of Java experience. Android Programming for Beginners will be your companion to create Android applications from scratch—whether you're looking to start your programming career, make an application for work, be reintroduced to mobile development, or are just looking to program for fun. We will introduce you to all the fundamental concepts of programming in an Android context, from the Java basics to working with the Android API. All examples are created from within Android Studio, the official Android development environment that helps supercharge your application development process. After this crash-course, we'll dive deeper into Android programming and you'll learn how to create applications with a professional-standard UI through fragments, make location-aware apps with Google Maps integration, and store your user's data with SQLite. In addition, you'll see how to make your apps multilingual, capture images from a device's camera, and work with graphics, sound, and animations too. By the end of this book, you'll be ready to start building your own custom applications in Android and Java. Style and approach With more than 40 mini apps to code and run, Android Programming for Beginners is a hands-on guide to learning Android and Java. Each example application demonstrates a different aspect of Android programming. Alongside these mini apps, we push your abilities by building three larger applications to demonstrate Android application development in context.

Explore popular language features, Java to Kotlin interoperability, advanced topics, and practical applications by building a variety of sample projects Key Features Understand

and leverage the syntax, tools, and patterns by writing code in Kotlin Explore practical topics such as Java interop, concurrency with coroutines, and functional programming Discover how to use Kotlin for build targets like Android, iOS, JavaScript, and backend service Book Description Using Kotlin without taking advantage of its power and interoperability is like owning a sports car and never taking it out of the garage. While documentation and introductory resources can help you learn the basics of Kotlin, the fact that it's a new language means that there are limited learning resources and code bases available in comparison to Java and other established languages. This Kotlin book will show you how to leverage software designs and concepts that have made Java the most dominant enterprise programming language. You'll understand how Kotlin is a modern approach to object-oriented programming (OOP). This book will take you through the vast array of features that Kotlin provides over other languages. These features include seamless interoperability with Java, efficient syntax, built-in functional programming constructs, and support for creating your own DSL. Finally, you will gain an understanding of implementing practical design patterns and best practices to help you master the Kotlin language. By the end of the book, you'll have obtained an advanced understanding of Kotlin in order to be able to build production-grade applications. What you will learn Model data using interfaces, classes, and data classes Grapple with practical interoperability challenges and solutions with Java Build parallel apps using concurrency solutions such as coroutines Explore functional, reactive, and imperative programming to build flexible apps Discover how to build your own domain-specific language Embrace functional programming using the standard library and Arrow Delve into the use of Kotlin for frontend JavaScript development Build server-side services using Kotlin and Ktor Who this book is for If you're a Kotlin developer looking to further their skills or a professional Java developer looking for better or professional resources in order to make a switch to Kotlin, this book is for you. Familiarity with Kotlin programming will assist with understanding key concepts covered in the book.

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 Android 4.1 (Jelly Bean) and up, including coverage of Lollipop and material design. Write and run code every step of the way, creating apps that integrate with other Android 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. Big Nerd Ranch specializes in developing and designing innovative applications for clients around the world. Our experts teach others through our books, bootcamps, and onsite training. Whether it's Android, iOS, Ruby and Ruby on Rails, Cocoa, Mac OS X, JavaScript, HTML5 or UX/UI, we've got you covered. The Android team is constantly improving and updating Android Studio and other tools. As a result, some of the instructions we provide in the book are no longer correct. You can find an addendum addressing breaking changes at: <https://github.com/bignerdranch/AndroidCourseResources/raw/master/2ndEdition/Errata/2eAddendum.pdf>.

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.

Android Programming with Kotlin for Beginners Build Android apps starting from zero programming experience with the new Kotlin programming language Packt Publishing Ltd Programming an Android app is an attractive proposition. Android increasingly dominates the global smartphone market, meaning many potential users. The devices are relatively cheap, making it suitable for implementing small scale projects. The tools you need to create an app are free to download and use and you don't need anyone's permission to get started. The only difficulty is that the Android is a tough system to master. It is easy enough to get started as Android Studio will build you a Hello World app in a few minutes, but what you do next is more difficult and create a good app you need a feel for how the system works and its limitations. Android Programming: Starting With An App not only shows you how common tasks are done in Android, but also explains why they are done in a particular way. Although Android development seems confusing at first, it has patterns which mean that having done something once you can generalize the approach to components you haven't previously encountered. There are plenty of examples in this book but they are deliberately simple, stripped down to their bare minimum to let you see what is essential. It isn't a complete treatment of everything Android. Instead it focuses on the things you need to know to write an app, in particular creating the user interface (UI) because this is what you spend most of your time working on even if the app in question is sophisticated. In this book you will find out how to build an app with a single Activity and a UI, a good foundation for further Android programming. This second edition covers the ConstraintLayout and Android Studio 2.3

Master Android development using a variety of Kotlin features About This Book Leverage specific features of Kotlin to ease Android application development An illustrative guide that will help you write code based Kotlin language to build robust Android applications Filled with various practical examples build amazing Android project using Kotlin so you can easily apply your knowledge to real world scenarios Who This Book Is For The book is for developers who want to build amazing Android applications in an easy and effective way. Basic knowledge of Kotlin is assumed, but you do not need any familiarity with Android development. What You Will Learn Understand the basics of Android development with Kotlin Get to know the key concepts in Android development See how to create modern mobile applications for the Android platform Adjust your application's look and feel Know how to persist and share application database Work with Services and other concurrency mechanisms Write effective tests Migrate an existing Java-based project to Kotlin In Detail Kotlin is a programming language intended to be a better Java,

and it's designed to be usable and readable across large teams with different levels of knowledge. As a language, it helps developers build amazing Android applications in an easy and effective way. This book begins by giving you a strong grasp of Kotlin's features in the context of Android development and its APIs. Moving on, you'll take steps toward building stunning applications for Android. The book will show you how to set up the environment, and the difficulty level will grow steadily with the applications covered in the upcoming chapters. Later on, the book will introduce you to the Android Studio IDE, which plays an integral role in Android development. We'll use Kotlin's basic programming concepts such as functions, lambdas, properties, object-oriented code, safety aspects, type parameterization, testing, and concurrency, which will guide you through writing Kotlin code into production. We'll also show you how to integrate Kotlin into any existing Android project. **Style and approach** In this book, you'll master Android development using Kotlin through real application examples. We'll introduce you to basic Android concepts and offer guidance from the first steps to the final project. In each chapter, we'll develop one important application functionality as a development milestone. As we progress, you'll become more experienced in Android and our application will progress toward a real-world product. Finally, when we complete the application's development, we'll write proper tests to ensure it's production ready.

Real-World Android by Tutorials guides you through building one professional Android app using the most important architectures and libraries. Along the way, you'll get a solid foundation in Android development concepts so you can make informed decisions about how to apply them in your own codebase. **Learn how to implement a real-world Android app** When developing a professional Android app, there are hundreds of options for libraries and possible architectures. Finding documentation is easy, but you might end up with an app structure that isn't ideal for your project. **Real-World Android** by Tutorials helps you implement a real-world app from scratch, addressing critical problems like finding the right architecture, making the UI responsive and appealing and implementing efficient animations. **Who this book is for** This book is for intermediate Android developers who already know the basics of the Android platform and the Kotlin language, and who are looking to build modern and professional apps using the most important libraries. If you want to create a reactive and good-looking UI and are determined not to ignore important aspects like security, this book will help. **Topics covered in Real-World Android** by Tutorials By reading this book, you'll learn about the following topics: **Choosing the right architecture:** Pick the right app architecture to achieve a good separation between domain and data layers, making your app easy to build and maintain. **Building features:** Learn how to structure your code to make it more testable. **Modularization:** Split your code into different modules, improving the build time and reusability of your code. **Animations:** Use the new Motion Editor to implement animations that make your app's UI more appealing. **Custom Views:** Go beyond the basics by creating a View that's specific to your app's needs. **Security:** Protect your app's data and code. **Tooling:** Mastering the right tool is a fundamental skill when creating a professional app. Learn how to use the tools to analyze your code and fix some tricky bugs. **After reading this book,** you'll be prepared to implement your own, professional Android app.

Write More Robust and Maintainable Android Apps with Kotlin "Peter Sommerhoff takes a practical approach to teaching Kotlin by providing a larger set of code listings that demonstrate language features and by guiding readers through the development of two Android apps step by step. . . . Peter finds a good balance between what is essential and what can be left to readers, so this book is an efficient yet comprehensible source for starting programming with Kotlin." –Bernhard Rumpe, Professor of Software Engineering, RWTH Aachen University **The Kotlin language** brings state-of-the-art programming techniques and constructs to Android development. **Kotlin for Android App Development** will help you rapidly understand Kotlin's principles and techniques, apply Kotlin in production app development, integrate Kotlin with existing Java code, and plan a migration to Kotlin, if you choose. If you have at least basic programming experience (with any language), Peter Sommerhoff's well-crafted overview and examples will help you get quickly up-to-speed with the Kotlin language, its constructs, and its advanced functional and object-oriented capabilities. Once you've mastered these foundations, Sommerhoff walks you through two complete app development projects, introducing best practices and emerging patterns for writing code that's robust, concise, readable, and highly performant. **Understand Kotlin's goals, principles, advantages, design, and constructs** Take full advantage of functional programming in the Kotlin environment **Write more concise and reusable code** using Kotlin's object-oriented features **Interoperate with existing Java code, and plan a migration to Kotlin** Use coroutines to efficiently handle concurrency **Capture data via third-party APIs, map it to internal data representations, and present it to users** Master best practices for architecting Kotlin Android apps **Improve productivity and readability** by creating simple domain-specific languages in Kotlin

Kotlin is a statically typed programming language designed to interoperate with Java and fully supported by Google on the Android operating system. Based on Big Nerd Ranch's popular Kotlin Essentials course, this guide shows you how to work effectively with the Kotlin programming language through hands-on examples and clear explanations of key Kotlin concepts and foundational APIs. Written for Kotlin 1.2, this book will also introduce you to JetBrains' IntelliJ IDEA development environment. Whether you are an experienced Android developer looking for modern features beyond what Java offers or a new developer ready to learn your first programming language, the authors will guide you from first principles to advanced usage of Kotlin. By the end of this book, you will be empowered to create reliable, concise applications in Kotlin.

Familiarize yourself with all of Kotlin's features with this in-depth guide **About This Book** Get a thorough introduction to Kotlin **Learn to use Java code alongside Kotlin** without any hiccups **Get a complete overview of null safety, Generics, and many more interesting features** **Who This Book Is For** The book is for existing Java developers who want to learn more about an alternative JVM language. If you want to see what Kotlin has to offer, this book is ideal for you. **What You Will Learn** Use new features to write structured and readable object-oriented code Find out how to use lambdas and higher order functions to write clean, reusable, and simple code Write unit tests and integrate Kotlin tests with Java code in a transitioning code base Write real-world production code in Kotlin in the style of microservices Leverage Kotlin's extensions to the Java collections library Use destructuring expressions and find out how to write your own Write code that avoids null pointer errors and see how Java-nullable code can integrate with features in a Kotlin codebase Discover how to write functions in Kotlin, see the new features available, and extend existing libraries Learn to write an algebraic data types and figure out when they should be used **In Detail** Kotlin has been making waves ever since it was open sourced by JetBrains in 2011; it has been praised by developers across the world and is already being adopted by companies. This book provides a detailed introduction to Kotlin that shows you all its features and will enable you to write Kotlin code to production. We start with the basics: get you familiar with running Kotlin code, setting up, tools, and instructions that you can use to write basic programs.

Next, we cover object oriented code: functions, lambdas, and properties – all while using Kotlin's new features. Then, we move on to null safety aspects and type parameterization. We show you how to destructure expressions and even write your own. We also take you through important topics like testing, concurrency, microservices, and a whole lot more. By the end of this book you will be able to compose different services and build your own applications. Style and approach An easy to follow guide that covers the full set of features in Kotlin programming.

Learn Java, Android, and app development concepts easily with this updated third edition of Android Programming for Beginners. Whether you want to become a professional Android developer or just want to have fun learning Java and Android, this Android Java programming book is what you need.

Android development is so vast that mastering this mobile operating system can seem daunting--particularly now that Kotlin has become the official Android development language. This book helps Android developers make the transition from Java to Kotlin and shows them how Kotlin provides a true advantage for gaining control over asynchronous computations. By focusing specifically on coroutines, a new asynchronous programming paradigm, this book describes how you can achieve structured concurrency with Kotlin. Authors Pierre-Oliver Laurence, Amanda Hinchman-Dominguez, and Mike Dunn provide implementations of the most common tasks in native Android development. The basics of the Kotlin language and the Android architecture Data transformations in Kotlin Android fundamentals in memory and threading Concurrency with coroutines Channels and flows Android profiling tools

For both beginning and experienced programmers! From the author of the multi-award-winning Thinking in C++ and Thinking in Java together with a member of the Kotlin language team comes a book that breaks the concepts into small, easy-to-digest "atoms," along with exercises supported by hints and solutions directly inside IntelliJ IDEA! No programming background necessary. Summaries for experienced programmers. Easy steps via very small chapters ("atoms"). Free accompanying exercises/solutions within IntelliJ Idea. Gives you a strong Kotlin foundation. Kotlin is cleaner, more consistent and far more powerful than Java. Increase programming productivity with Kotlin's clear, concise syntax. Produce safer, more reliable programs. Kotlin easily interacts with Java. Effortlessly migrate by adding pieces of Kotlin to an existing Java project. Support for Windows, Mac and Linux. Free version of IntelliJ IDEA includes extensive Kotlin support. Book resources, live seminars, workshops and consulting available at AtomicKotlin.com.

Learn Android programming with Kotlin! Learning Android programming can be challenging. Sure, there is plenty of documentation, but the tools and libraries available today for Android are easily overwhelming for newcomers to Android and Kotlin. Android Apprentice takes a different approach. From building a simple first app, all the way to a fully-featured podcast player app, this book walks you step-by-step, building on basic concepts to advanced techniques so you can build amazing apps worthy of the Google Play Store! Who This Book Is For This book is for anyone interested in writing mobile apps for Android. Though no previous mobile experience is necessary, this book is also a great resource for iPhone developers transitioning from iOS.

Topics Covered in Android Apprentice Getting Started: Learn how to set up Android Studio and the Android Emulator. Layouts: Create layouts that can be used for both Activities and Fragments Debugging: No one's perfect! Learn how to dig down and troubleshoot bugs in your apps. Communication: Design separate Activities and communicate and send data between them using Intents. Scrolling Layouts: Learn how to use RecyclerViews to make efficient, reusable views that scroll fluidly at a touch. Google Places: Integrate location APIs to bring the magic of maps into your Android apps. Networking: Learn how to access resources on the internet and handle networked responses. Material Design: Make sure your apps conform to modern best practices by using Google's standards of Material Design AndroidX: Learn how to use the AndroidX libraries to support older versions of Android. And much, much more! One thing you can count on: after reading this book, you'll be prepared to write feature-rich apps from scratch and go all the way to submitting them to the Google Play Store! About the Tutorial Team The Tutorial Team is a group of app developers and authors who write tutorials at the popular website raywenderlich.com. We take pride in making sure each tutorial we write holds to the highest standards of quality. We want our tutorials to be well written, easy to follow, and fun. If you've enjoyed the tutorials we've written in the past, you're in for a treat. The tutorials we've written for this book are some of our best yet - and this book contains detailed technical knowledge you simply won't be able to find anywhere else.

Google has officially announced Kotlin as a supported language to write Android Apps. These are amazing news for Android developers, which now have the ability to use a modern and powerful language to make their job easier and funnier. But this comes with other responsibilities. If you want to be a good candidate for new Android opportunities, Kotlin is becoming a new need most companies will ask for. So it's your time to start learning about it! And "Kotlin for Android Developers" is the best tool. Recommended by both Google and JetBrains, this book will guide through the process of learning all the new features that Java was missing, in an easy and fun way. You'll be creating an Android app from ground using Kotlin as the main language. The idea is to learn the language by example, instead of following a typical structure. I'll be stopping to explain the most interesting concepts and ideas about Kotlin, comparing it with Java 7. This way, you can see what the differences are and which parts of the language will help you speed up your work. This book is not meant to be a language reference, but a tool for Android developers to learn Kotlin and be able to continue with their own projects by themselves. I'll be solving many of the typical problems we have to face in our daily lives by making use of the language expressiveness and some other really interesting tools and libraries. The book is very practical, so it is recommended to follow the examples and the code in front of a computer and try everything it's suggested. You could, however, take a first read to get a broad idea and then dive into practice.

Learn Android programming with Kotlin! Learning Android programming can be challenging. Sure, there is plenty of documentation, but the tools and libraries available today for Android are easily overwhelming for newcomers to Android and Kotlin. Android Apprentice takes a different approach. From building a simple first app, all the way to a fully-featured podcast player app, this book walks you step-by-step, building on basic concepts to advanced techniques so you can build amazing apps worthy of the Google Play Store! Who This Book Is For This book is for anyone interested in writing mobile apps for Android. Though no previous mobile experience is necessary, this book is also a great resource for iPhone developers transitioning from iOS.

Topics Covered in Android Apprentice Getting Started: Learn how to set up Android Studio and the Android Emulator. Layouts: Create layouts that can be used for both Activities and Fragments Debugging: No one's perfect! Learn how to dig down and troubleshoot bugs in your apps. Communication: Design separate Activities and communicate and send data between them using Intents. Scrolling Layouts: Learn how to use RecyclerViews to make efficient, reusable views that scroll fluidly at a touch. Google Places: Integrate location APIs to bring the magic of maps into your Android apps. Networking: Learn how to access resources on the internet and handle networked responses. Material Design: Make sure your apps conform to modern best

practices by using Google's standards of Material Design And much, much more! One thing you can count on: after reading this book, you'll be prepared to write feature-rich apps from scratch and go all the way to submitting them to the Google Play Store!

Fully updated for Android Studio 3.0 and Android 8, the goal of this book is to teach the skills necessary to develop Android based applications using the Android Studio Integrated Development Environment (IDE), the Android 8 Software Development Kit (SDK) and the Kotlin programming language. Beginning with the basics, this book provides an outline of the steps necessary to set up an Android development and testing environment followed by an introduction to programming in Kotlin including data types, flow control, functions, lambdas and object-oriented programming. An overview of Android Studio is included covering areas such as tool windows, the code editor and the Layout Editor tool. An introduction to the architecture of Android is followed by an in-depth look at the design of Android applications and user interfaces using the Android Studio environment. More advanced topics such as database management, content providers and intents are also covered, as are touch screen handling, gesture recognition, camera access and the playback and recording of both video and audio. This edition of the book also covers printing, transitions and cloud-based file storage. The concepts of material design are also covered in detail, including the use of floating action buttons, Snackbars, tabbed interfaces, card views, navigation drawers and collapsing toolbars. In addition to covering general Android development techniques, the book also includes Google Play specific topics such as implementing maps using the Google Maps Android API, and submitting apps to the Google Play Developer Console. Other key features of Android Studio 3 and Android 8 are also covered in detail including the Layout Editor, the ConstraintLayout and ConstraintSet classes, constraint chains and barriers, direct reply notifications and multi-window support. Chapters also cover advanced features of Android Studio such as App Links, Instant Apps, the Android Studio Profiler and Gradle build configuration. Assuming you already have some programming experience, are ready to download Android Studio and the Android SDK, have access to a Windows, Mac or Linux system and ideas for some apps to develop, you are ready to get started.

In this book, we take you on a fun, hands-on and pragmatic journey to learning Android application development using Kotlin. You'll start building your first Android app from scratch within minutes. Every section is written in a bite-sized manner and straight to the point as I don't want to waste your time (and most certainly mine) on the content you don't need. In the end, you will have the skills to create an app and submit it to the app store. In the course of this book, we will cover: Chapter 1: Introduction & BMI Calculator App Chapter 2: Quotes App Using RecyclerView Chapter 3: To Do List App Using RecyclerView & Shared Preferences Chapter 4: To Do List with Realm Chapter 5: Connecting to an API: Cryptocurrency Price Tracker Chapter 6: Connecting to GitHub API - Search GitHub Users App Chapter 7: Face Detection, Text Recognition with ML Kit Chapter 8: Publishing Our App on AppStore The goal of this book is to teach you Android development in a manageable way without overwhelming you. We focus only on the essentials and cover the material in a hands-on practice manner for you to code along. Requirements No previous knowledge of Android development or Kotlin required, but you should have basic programming knowledge. We will learn how to make Android apps while at the same time learning the Kotlin programming language.

Kotlin is attracting attention as "a better Java" especially since Google backed it as a language for Android development. In this book Mike James introduces Kotlin to programmers. You don't have to be an expert programmer in Java or any other language, but you need to know the basics of programming and using objects. While Kotlin is similar to Java, and you can pick up much of the language as you go along, a deeper understanding will enable you to create better and more robust programs. As with all languages there are some subtle areas where an understanding of how things work makes all the difference.

Learn how to implement Reactive Programming paradigms with Kotlin, and apply them to web programming with Spring Framework 5.0 and in Android Application Development. About This Book Learn how to solve blocking user experience with Reactive Programming and get deep insights into RxKotlin Integrate Reactive Kotlin with Spring and build fantastic Android Apps with RxKotlin and RxAndroid Build reactive architectures that reduce complexity throughout the development process and make your apps(web and Android) scalable Who This Book Is For This book is for Kotlin developers who would like to build fault-tolerant, scalable, and distributed systems. A basic knowledge of Kotlin is required, but no prior knowledge of reactive programming. What You Will Learn Learn about reactive programming paradigms and how reactive programming can improve your existing projects Gain in-depth knowledge in RxKotlin 2.0 and the ReactiveX Framework Use RxKotlin with Android Create your own custom operators in RxKotlin Use Spring Framework 5.0 with Kotlin Use the reactor-kotlin extension Build Rest APIs with Spring,Hibernate, and RxKotlin Use testSubscriber to test RxKotlin applications Use backpressure management and Flowables In Detail In today's app-driven era, when programs are asynchronous, and responsiveness is so vital, reactive programming can help you write code that's more reliable, easier to scale, and better-performing. Reactive programming is revolutionary. With this practical book, Kotlin developers will first learn how to view problems in the reactive way, and then build programs that leverage the best features of this exciting new programming paradigm. You will begin with the general concepts of Reactive programming and then gradually move on to working with asynchronous data streams. You will dive into advanced techniques such as manipulating time in data-flow, customizing operators and provider and how to Use the concurrency model to control asynchronicity of code and process event handlers effectively. You will then be introduced to functional reactive programming and will learn to apply FRP in practical use cases in Kotlin. This book will also take you one step forward by introducing you to spring 5 and spring boot 2 using Kotlin. By the end of the book, you will be able to build real-world applications with reactive user interfaces as well as you'll learn to implement reactive programming paradigms in Android. Style and Approach Loaded with numerous code examples and real-life projects, this book helps you delve into Reactive Programming with Kotlin, and apply it to real-world Spring-web and Android projects, thus making all your apps reactive.

Whether you are a professional programmer or a hobbyist, programming an Android app is an attractive proposition. Android firmly dominates the global smartphone market, meaning many potential users. All the tools you need are free to download and use and it's easy to get started as Android Studio will build you a Hello World app in a few minutes. What you do next is more difficult as Android is a tough system to master and to create a good app you need a feel for how the system works and its limitations. The good news is that Kotlin is a language that makes working with Android much easier. Android Programming In Kotlin: Starting With An App shows you how common tasks are done in Android Studio 3 using Kotlin, pointing out where necessary how this differs from the Java approach. Given that you can't avoid Java altogether it also explains how Kotlin can work with the Java-based Android SDK. Although Android development seems confusing at first, it has patterns which mean that having done something once you can generalize the approach to components you haven't previously encountered. This book doesn't set out to be a complete treatment of Kotlin or Android. Instead it focuses on the things you need to know to write an app with a single Activity and a UI, a good foundation for further Android programming. Particular attention is paid to creating the user interface (UI) because this is what you spend most of your time working on even if the app in question is sophisticated. There are plenty of examples in this book but they are deliberately simple, stripped down to let you see what is essential. What will you learn from this book? If you have an idea for a killer Android app, this book will help you build your first working application in a jiffy. You'll learn hands-on how to structure your app, design interfaces, create a database, make your app work on various smartphones and tablets, and much more. It's like having an experienced Android developer sitting right next to you! All you need is some Java

know-how to get started. Why does this book look so different? Based on the latest research in cognitive science and learning theory, Head First Android Development uses a visually rich format to engage your mind, rather than a text-heavy approach that puts you to sleep. Why waste your time struggling with new concepts? This multi-sensory learning experience is designed for the way your brain really works. Learn how to make Android development much faster using a variety of Kotlin features, from basics to advanced, to write better quality code. About This Book Leverage specific features of Kotlin to ease Android application development Write code based on both object oriented and functional programming to build robust applications Filled with various practical examples so you can easily apply your knowledge to real world scenarios Identify the improved way of dealing with common Java patterns Who This Book Is For This book is for developers who have a basic understanding of Java language and have 6-12 months of experience with Android development and developers who feel comfortable with OOP concepts. What You Will Learn Run a Kotlin application and understand the integration with Android Studio Incorporate Kotlin into new/existing Android Java based project Learn about Kotlin type system to deal with null safety and immutability Define various types of classes and deal with properties Define collections and transform them in functional way Define extensions, new behaviours to existing libraries and Android framework classes Use generic type variance modifiers to define subtyping relationship between generic types Build a sample application In Detail Nowadays, improved application development does not just mean building better performing applications. It has become crucial to find improved ways of writing code. Kotlin is a language that helps developers build amazing Android applications easily and effectively. This book discusses Kotlin features in context of Android development. It demonstrates how common examples that are typical for Android development, can be simplified using Kotlin. It also shows all the benefits, improvements and new possibilities provided by this language. The book is divided in three modules that show the power of Kotlin and teach you how to use it properly. Each module present features in different levels of advancement. The first module covers Kotlin basics. This module will lay a firm foundation for the rest of the chapters so you are able to read and understand most of the Kotlin code. The next module dives deeper into the building blocks of Kotlin, such as functions, classes, and function types. You will learn how Kotlin brings many improvements to the table by improving common Java concepts and decreasing code verbosity. The last module presents features that are not present in Java. You will learn how certain tasks can be achieved in simpler ways thanks to Kotlin. Through the book, you will learn how to use Kotlin for Android development. You will get to know and understand most important Kotlin features, and how they can be used. You will be ready to start your own adventure with Android development with Kotlin. Build Android apps using the popular and efficient Android Studio 3 suite of tools, an integrated development environment (IDE) with which Android developers can now use the Kotlin programming language. With this book, you'll learn the latest and most productive tools in the Android tools ecosystem, ensuring quick Android app development and minimal effort on your part. Along the way, you'll use Android Studio to develop apps tier by tier through practical examples. These examples cover core Android topics such as Activities, Intents, BroadcastReceivers, Services and AsyncTask. Then, you'll learn how to publish your apps and sell them online and in the Google Play store. What You'll Learn Use Android Studio 3 to quickly and confidently build your first Android apps Build an Android user interface using activities and layouts, event handling, images, menus and the action bar Incorporate new elements including fragments Learn how data is persisted Use Kotlin to build apps Who This Book Is For Those who may be new to Android Studio 3 or Android Studio in general. You may or may not be new to Android development in general. Some prior experience with Java is also recommended. Use Kotlin to build Android apps, web applications, and more—while you learn the nuances of this popular language. With this unique cookbook, developers will learn how to apply thisJava-based language to their own projects. Both experienced programmers and those new to Kotlin will benefit from the practical recipes in this book. Author Ken Kousen (Modern Java Recipes) shows you how to solve problems with Kotlin by concentrating on your own use cases rather than on basic syntax. You provide the contextand this book supplies the answers. Already big in Android development, Kotlin can be used anywhere Java is applied, as well as for iOS development, native applications, JavaScriptgeneration, and more. Jump in and build meaningful projects with Kotlin today. Apply functional programming concepts, including lambdas, sequences, and concurrency See how to use delegates, late initialization, and scope functions Explore Java interoperability and access Java libraries using Kotlin Add your own extension functions Use helpful libraries such as JUnit 5 Get practical advice for working with specific frameworks, like Android and Spring

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