

# Kotlin In Action

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## **Android Development with Kotlin -**

Marcin Moskala 2017-08-30

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.

**Kotlin in Action** - Dmitry Jemerov  
2017-02-19

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,

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on by guest

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 [Java to Kotlin](#) - Duncan McGregor 2021-08-16

It takes a week to travel the 8,000 miles overland from Java to Kotlin. If you're an experienced Java developer who has tried the Kotlin language, you were probably productive in about the same time. You'll have found that they do things differently in Kotlin, though. Nullability is important, collections are different, and classes are final by default. Kotlin is more functional, but what does that mean, and how should it change the way that you program? And what about all that Java code that you still have to support? Your tour guides Duncan and Nat first made the trip in 2015, and they've since helped many teams and individuals follow in their footsteps. Travel with them as they break the route down into legs like Optional to Nullable, Beans to Values, and Open to Sealed Classes. Each

explains a key concept and then shows how to refactor production Java to idiomatic Kotlin, gradually and safely, while maintaining interoperability. The resulting code is simpler, more expressive, and easier to change. By the end of the journey, you'll be confident in refactoring Java to Kotlin, writing Kotlin from scratch, and managing a mixed language codebase as it evolves over time.

*ASP.NET Core in Action* - Andrew Lock  
2021-03-18

ASP.NET Core in Action, Second Edition is a comprehensive guide to creating web applications with ASP.NET Core 5.0. Go from basic HTTP concepts to advanced framework customization. Summary Fully updated to ASP.NET 5.0, ASP.NET Core in Action, Second Edition is a hands-on primer to building cross-platform web applications with your C# and .NET skills. Even if you've never worked with ASP.NET you'll start

creating productive cross-platform web apps fast. And don't worry about late-breaking changes to ASP.NET Core. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Build full-stack web applications that run anywhere. Developers love ASP.NET Core for its libraries and pre-built components that maximize productivity. Version 5.0 offers new features for server-side apps, as well as background services for cross-platform development. About the book ASP.NET Core in Action, Second Edition is a comprehensive guide to creating web applications with ASP.NET Core 5.0. Go from basic HTTP concepts to advanced framework customization. Illustrations and annotated code make learning visual and easy. Master logins, dependency injection, security, and more. This updated edition covers the latest features, including Razor Pages and the new

hosting paradigm. What's inside Developing apps for Windows and non-Windows servers Configuring applications Building custom components Logging, testing, and security About the reader For intermediate C# developers. About the author Andrew Lock is a Microsoft MVP who has worked with ASP.NET Core since before its first release. Table of Contents PART 1 - GETTING STARTED WITH ASP.NET CORE 1 Getting started with ASP.NET Core 2 Your first application 3 Handling requests with the middleware pipeline 4 Creating a website with Razor Pages 5 Mapping URLs to Razor Pages using routing 6 The binding model: Retrieving and validating user input 7 Rendering HTML using Razor views 8 Building forms with Tag Helpers 9 Creating a Web API for mobile and client applications using MVC PART 2 - BUILDING COMPLETE APPLICATIONS 10 Service configuration with dependency injection 11 Configuring an

ASP.NET Core application 12 Saving data with Entity Framework Core 13 The MVC and Razor Pages filter pipeline 14 Authentication: Adding users to your application with Identity 15 Authorization: Securing your application 16 Publishing and deploying your application PART 3 - EXTENDING YOUR APPLICATIONS 17 Monitoring and troubleshooting errors with logging 18 Improving your application's security 19 Building custom components 20 Building custom MVC and Razor Pages components 21 Calling remote APIs with IHttpConnectionFactory 22 Building background tasks and services 23 Testing your application

**Android Programming** - Bill Phillips  
2015-08-01

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>.

**Android Programming with Kotlin for Beginners** - John Horton 2019-04-30

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.

Beginner's Guide to Kotlin Programming - John Hunt 2021-10-08

This textbook assumes very little knowledge of programming so whether you have dabbled with a little JavaScript, played with a bit of Python, written Java or have virtually no programming experience at all you will find that it is for you. The first part of the book introduces Kotlin program structures as well as conditional flow of control features such as if and when expressions as well as iteration loops such as for, while and do-while. Subsequent chapters explain how functions are implemented in Kotlin and introduce concepts from functional

programming such as higher order functions and curried functions. The second part focusses on object oriented programming techniques, these include classes, inheritance, abstraction and interfaces. The third part presents container data types such as Arrays, and collections including Lists, Sets and Maps and the fourth part considers concurrency and parallelism using Kotlin coroutines. The book concludes with an introduction to Android mobile application development using Kotlin. Clear steps are provided explaining how to set up your environment and get started writing your own Kotlin programs. An important aspect of the book is teaching by example and there are many examples presented throughout the chapters. These examples are supported by a public GitHub repository that provides complete working code as well as sample solutions to the chapter exercises. This helps illustrate how to write

well structured, clear, idiomatic Kotlin to build real applications.

[Learn Kotlin Programming](#) - Stephen Samuel  
2019-05-29

Delve into the world of Kotlin and learn to build powerful Android and web applications

**Key Features** Learn the fundamentals of Kotlin to write high-quality code Test and debug your applications with the different unit testing frameworks in Kotlin Explore Kotlin's interesting features such as null safety, reflection, and annotations

**Book Description** Kotlin is a general-purpose programming language used for developing cross-platform applications. Complete with a comprehensive introduction and projects covering the full set of Kotlin programming features, this book will take you through the fundamentals of Kotlin and get you up to speed in no time. Learn Kotlin Programming covers the installation, tools, and how to write basic programs in Kotlin. You'll learn

how to implement object-oriented programming in Kotlin and easily reuse your program or parts of it. The book explains DSL construction, serialization, null safety aspects, and type parameterization to help you build robust apps. You'll learn how to destructure expressions and write your own. You'll then get to grips with building scalable apps by exploring advanced topics such as testing, concurrency, microservices, coroutines, and Kotlin DSL builders. Furthermore, you'll be introduced to the `kotlinx.serialization` framework, which is used to persist objects in JSON, Protobuf, and other formats. By the end of this book, you'll be well versed with all the new features in Kotlin and will be able to build robust applications skillfully. What you will learn

Explore the latest Kotlin features in order to write structured and readable object-oriented code Get to grips with using lambdas and higher-order functions Write

unit tests and integrate Kotlin with Java code  
Create real-world apps in Kotlin in the microservices style  
Use Kotlin extensions with the Java collections library  
Uncover destructuring expressions and find out how to write your own  
Understand how Java-nullable code can be integrated with Kotlin features  
Who this book is for  
If you're a beginner or intermediate programmer who wants to learn Kotlin to build applications, this book is for you. You'll also find this book useful if you're a Java developer interested in switching to Kotlin.

**C# 10.0 All-in-One For Dummies** - John Paul Mueller 2022-03-02

Look sharp—learn or refresh your C# skills with the latest version  
C# is one of the most popular programming languages, and frequent updates help it keep pace as the world of coding changes. You can keep pace too, thanks to C# 10.0 All-in-One For Dummies, where you'll learn the basics of

the language itself, how to code in Visual Studio, and how to take advantage of the new features in the latest release. At every stage of your career, you'll need to know the cutting-edge trends and techniques that clients want. This book has your back, with info on object-oriented programming, writing secure code, building web applications, and more. The six standalone mini-books you'll find inside this all-in-one will take you through the changes to C# and the practical applications and dev tools that you need to know. New features covered include records, init only setters, top-level statements, pattern matching enhancements, fit and finish features, and a lot more. Plus, this version is packed with more examples and code snippets, so you can sharply see C# in action! Learn the very basics of C# programming, even if you have no prior experience Refresh your knowledge of the language and learn how to use the

new features in the 10.0 version release  
Read six mini-books on hot coding topics  
like object-oriented programming, Visual  
Studio, and Windows 10 development  
Enhance your employability and join the 6.5-  
million-strong community of C# developers  
You need an easy-to-read C# guide that will  
help you understand the incoming updates,  
and this For Dummies reference is it.

*Hands-On Design Patterns with Kotlin* -  
Alexey Soshin 2018-06-15

Make the most of Kotlin by leveraging  
design patterns and best practices to build  
scalable and high performing apps Key  
Features Understand traditional GOF design  
patterns to apply generic solutions Shift  
from OOP to FP; covering reactive and  
concurrent patterns in a step-by-step  
manner Choose the best microservices  
architecture and MVC for your development  
environment Book Description Design  
patterns enable you as a developer to speed

up the development process by providing  
you with proven development paradigms.  
Reusing design patterns helps prevent  
complex issues that can cause major  
problems, improves your code base,  
promotes code reuse, and makes an  
architecture more robust. The mission of  
this book is to ease the adoption of design  
patterns in Kotlin and provide good  
practices for programmers. The book begins  
by showing you the practical aspects of  
smarter coding in Kotlin, explaining the  
basic Kotlin syntax and the impact of design  
patterns. From there, the book provides an  
in-depth explanation of the classical design  
patterns of creational, structural, and  
behavioral families, before heading into  
functional programming. It then takes you  
through reactive and concurrent patterns,  
teaching you about using streams, threads,  
and coroutines to write better code along  
the way By the end of the book, you will be

able to efficiently address common problems faced while developing applications and be comfortable working on scalable and maintainable projects of any size. What you will learn Get to grips with Kotlin principles, including its strengths and weaknesses Understand classical design patterns in Kotlin Explore functional programming using built-in features of Kotlin Solve real-world problems using reactive and concurrent design patterns Use threads and coroutines to simplify concurrent code flow Understand antipatterns to write clean Kotlin code, avoiding common pitfalls Learn about the design considerations necessary while choosing between architectures Who this book is for This book is for developers who would like to master design patterns with Kotlin to build efficient and scalable applications. Basic Java or Kotlin programming knowledge is assumed

[Head First Kotlin](#) - Dawn Griffiths 2019-02-13  
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.

[Akka in Action](#) - Raymond Roostenburg  
2016-09-20

Summary Akka in Action is a comprehensive tutorial on building message-oriented systems using Akka. The book takes a hands-on approach, where each new concept is followed by an example that shows you how it works, how to implement the code, and how to (unit) test it. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Akka makes it relatively easy to build applications in the cloud or on devices with many cores that efficiently use the full capacity of the computing power available. It's a toolkit that provides an actor programming model, a runtime, and required support tools for building scalable applications. About the Book Akka in Action shows you how to build

message-oriented systems with Akka. This comprehensive, hands-on tutorial introduces each concept with a working example. You'll start with the big picture of how Akka works, and then quickly build and deploy a fully functional REST service out of actors. You'll explore test-driven development and deploying and scaling fault-tolerant systems. After mastering the basics, you'll discover how to model immutable messages, implement domain models, and apply techniques like event sourcing and CQRS. You'll also find a tutorial on building streaming applications using akka-stream and akka-http. Finally, you'll get practical advice on how to customize and extend your Akka system. What's Inside Getting concurrency right Testing and performance tuning Clustered and cloud-based applications Covers Akka version 2.4 About the Reader This book assumes that you're comfortable with Java and Scala. No prior

experience with Akka required. About the Authors A software craftsman and architect, Raymond Roestenburg is an Akka committer. Rob Bakker specializes in concurrent back-end systems and systems integration. Rob Williams has more than 20 years of product development experience.

Table of Contents  
Introducing Akka  
Up and running  
Test-driven development with actors  
Fault tolerance  
Futures  
Your first distributed Akka app  
Configuration, logging, and deployment  
Structural patterns for actors  
Routing messages  
Message channels  
Finite-state machines and agents  
System integration  
Streaming  
Clustering  
Actor persistence  
Performance tips  
Looking ahead

*Pro Android with Kotlin* - Peter Späth  
2018-09-03

Develop Android apps with Kotlin to create more elegant programs than the Java equivalent. This book covers the various aspects of a modern Android app that

professionals are expected to encounter. There are chapters dealing with all the important aspects of the Android platform, including GUI design, file- and data-handling, coping with phone calls, multimedia apps, interaction with location and mapping services, monetizing apps, and much more. *Pro Android with Kotlin* is an invaluable source for developers wanting to build real-world state-of-the-art apps for modern Android devices. What You Will Learn  
Integrate activities, such as intents, services, toasts and more, into your Android apps  
Build UIs in Android using layouts, widgets, lists, menus, and action bars  
Deal with data in your Android apps using data persistence and cloud access  
Design for different Android devices  
Create multimedia apps in Android  
Secure, deploy, and monetize your Android apps  
Who This Book Is For  
Professional Android app developers.  
*Programming Kotlin* - Venkat Subramaniam

2019-05-31

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.

### **Spring Boot in Action** - Craig Walls

2015-12-16

Summary A developer-focused guide to writing applications using Spring Boot. You'll learn how to bypass the tedious configuration steps so that you can concentrate on your application's behavior. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology The Spring Framework simplifies enterprise Java development, but it does require lots of tedious configuration work. Spring Boot radically streamlines spinning up a Spring

application. You get automatic configuration and a model with established conventions for build-time and runtime dependencies. You also get a handy command-line interface you can use to write scripts in Groovy. Developers who use Spring Boot often say that they can't imagine going back to hand configuring their applications. About the Book Spring Boot in Action is a developer-focused guide to writing applications using Spring Boot. In it, you'll learn how to bypass configuration steps so you can focus on your application's behavior. Spring expert Craig Walls uses interesting and practical examples to teach you both how to use the default settings effectively and how to override and customize Spring Boot for your unique environment. Along the way, you'll pick up insights from Craig's years of Spring development experience. What's Inside Develop Spring apps more efficiently

Minimal to no configuration Runtime metrics with the Actuator Covers Spring Boot 1.3 About the Reader Written for readers familiar with the Spring Framework. About the Author Craig Walls is a software developer, author of the popular book Spring in Action, Fourth Edition, and a frequent speaker at conferences. Table of Contents Bootstarting Spring Developing your first Spring Boot application Customizing configuration Testing with Spring Boot Getting Groovy with the Spring Boot CLI Applying Grails in Spring Boot Taking a peek inside with the Actuator Deploying Spring Boot applications APPENDIXES Spring Boot developer tools Spring Boot starters Configuration properties Spring Boot dependencies **Programming Kotlin** - Stephen Samuel 2017-01-18 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.

**Gradle in Action** - Benjamin Muschko  
2014-02-19

Summary Gradle in Action is a comprehensive guide to end-to-end project automation with Gradle. Starting with the basics, this practical, easy-to-read book discusses how to build a full-fledged, real-world project. Along the way, it touches on advanced topics like testing, continuous integration, and monitoring code quality. You'll also explore tasks like setting up your target environment and deploying your software. About the Technology Gradle is a

general-purpose build automation tool. It extends the usage patterns established by its forerunners, Ant and Maven, and allows builds that are expressive, maintainable, and easy to understand. Using a flexible Groovy-based DSL, Gradle provides declarative and extendable language elements that let you model your project's needs the way you want. About the Book Gradle in Action is a comprehensive guide to end-to-end project automation with Gradle. Starting with the basics, this practical, easy-to-read book discusses how to establish an effective build process for a full-fledged, real-world project. Along the way, it covers advanced topics like testing, continuous integration, and monitoring code quality. You'll also explore tasks like setting up your target environment and deploying your software. The book assumes a basic background in Java, but no knowledge of Groovy. Purchase of the print book includes

a free eBook in PDF, Kindle, and ePub formats from Manning Publications. Whats Inside A comprehensive guide to Gradle Practical, real-world examples Transitioning from Ant and Maven In-depth plugin development Continuous delivery with Gradle About the Author Benjamin Muschko is a member of the Gradleware engineering team and the author of several popular Gradle plugins. Table of Contents PART 1 INTRODUCING GRADLE Introduction to project automation Next-generation builds with Gradle Building a Gradle project by example PART 2 MASTERING THE FUNDAMENTALS Build script essentials Dependency management Multiproject builds Testing with Gradle Extending Gradle Integration and migration PART 3 FROM BUILD TO DEPLOYMENT IDE support and tooling Building polyglot projects Code quality management and monitoring Continuous integration Artifact assembly

and publishing Infrastructure provisioning and deployment

**Spring Security in Action** - Laurentiu Spilca 2020-11-03

Spring Security in Action shows you how to prevent cross-site scripting and request forgery attacks before they do damage. You'll start with the basics, simulating password upgrades and adding multiple types of authorization. As your skills grow, you'll adapt Spring Security to new architectures and create advanced OAuth2 configurations. By the time you're done, you'll have a customized Spring Security configuration that protects against threats both common and extraordinary. Summary While creating secure applications is critically important, it can also be tedious and time-consuming to stitch together the required collection of tools. For Java developers, the powerful Spring Security framework makes it easy for you to bake

security into your software from the very beginning. Filled with code samples and practical examples, Spring Security in Action teaches you how to secure your apps from the most common threats, ranging from injection attacks to lackluster monitoring. In it, you'll learn how to manage system users, configure secure endpoints, and use OAuth2 and OpenID Connect for authentication and authorization. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Security is non-negotiable. You rely on Spring applications to transmit data, verify credentials, and prevent attacks. Adopting "secure by design" principles will protect your network from data theft and unauthorized intrusions. About the book Spring Security in Action shows you how to prevent cross-site scripting and request forgery attacks before they do damage. You'll start with the basics,

simulating password upgrades and adding multiple types of authorization. As your skills grow, you'll adapt Spring Security to new architectures and create advanced OAuth2 configurations. By the time you're done, you'll have a customized Spring Security configuration that protects against threats both common and extraordinary. What's inside Encoding passwords and authenticating users Securing endpoints Automating security testing Setting up a standalone authorization server About the reader For experienced Java and Spring developers. About the author Laurentiu Spilca is a dedicated development lead and trainer at Endava, with over ten years of Java experience. Table of Contents PART 1 - FIRST STEPS 1 Security Today 2 Hello Spring Security PART 2 - IMPLEMENTATION 3 Managing users 4 Dealing with passwords 5 Implementing authentication 6 Hands-on: A small secured web application 7 Configuring

authorization: Restricting access 8 Configuring authorization: Applying restrictions 9 Implementing filters 10 Applying CSRF protection and CORS 11 Hands-on: A separation of responsibilities 12 How does OAuth 2 work? 13 OAuth 2: Implementing the authorization server 14 OAuth 2: Implementing the resource server 15 OAuth 2: Using JWT and cryptographic signatures 16 Global method security: Pre- and postauthorizations 17 Global method security: Pre- and postfiltering 18 Hands-on: An OAuth 2 application 19 Spring Security for reactive apps 20 Spring Security testing *Mastering Kotlin* - Nate Ebel 2019-10-11 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.

### **Kotlin for Android App Development** -

Peter Sommerhoff 2018-12-17

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

**The Joy of Kotlin** - Pierre-Yves Saumont  
2019-04-21

Summary Maintaining poor legacy code, interpreting cryptic comments, and writing the same boilerplate over and over can suck the joy out of your life as a Java developer. Fear not! There's hope! Kotlin is an elegant

JVM language with modern features and easy integration with Java. The Joy of Kotlin teaches you practical techniques to improve abstraction and design, to write comprehensible code, and to build maintainable bug-free applications. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Your programming language should be expressive, safe, flexible, and intuitive, and Kotlin checks all the boxes! This elegant JVM language integrates seamlessly with Java, and makes it a breeze to switch between OO and functional styles of programming. It's also fully supported by Google as a first-class Android language. Master the powerful techniques in this unique book, and you'll be able to take on new challenges with increased confidence and skill. About the Book The Joy of Kotlin teaches you to write comprehensible, easy-to-maintain, safe

programs with Kotlin. In this expert guide, seasoned engineer Pierre-Yves Saumont teaches you to approach common programming challenges with a fresh, FP-inspired perspective. As you work through the many examples, you'll dive deep into handling errors and data properly, managing state, and taking advantage of laziness. The author's down-to-earth examples and experience-driven insights will make you a better—and more joyful—developer! What's inside

Programming with functions  
Dealing with optional data  
Safe handling of errors and exceptions  
Handling and sharing state  
mutation  
About the Reader  
Written for intermediate Java or Kotlin developers.  
About the Author  
Pierre-Yves Saumont is a senior software engineer at Alcatel-Submarine Networks. He's the author of *Functional Programming in Java* (Manning, 2017).  
Table of Contents  
Making programs

safer Functional programming in Kotlin: An overview  
Programming with functions  
Recursion, corecursion, and memoization  
Data handling with lists  
Dealing with optional data  
Handling errors and exceptions  
Advanced list handling  
Working with laziness  
More data handling with trees  
Solving problems with advanced trees  
Functional input/output  
Sharing mutable states with actors  
Solving common problems functionally

**Vert.x in Action** - Julien Ponge 2020-12-01  
Vert.x in Action teaches you how to build production-quality reactive applications in Java. This book covers core Vert.x concepts, as well as the fundamentals of asynchronous and reactive programming. Learn to develop microservices by using Vert.x tools for database communications, persistent messaging, and test app resiliency. The patterns and techniques included here transfer to reactive

technologies and frameworks beyond Vert.x. Summary As enterprise applications become larger and more distributed, new architectural approaches like reactive designs, microservices, and event streams are required knowledge. The Vert.x framework provides a mature, rock-solid toolkit for building reactive applications using Java, Kotlin, or Scala. Vert.x in Action teaches you to build responsive, resilient, and scalable JVM applications with Vert.x using well-established reactive design patterns. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Vert.x is a collection of libraries for the Java virtual machine that simplify event-based and asynchronous programming. Vert.x applications handle tedious tasks like asynchronous communication, concurrent work, message and data persistence, plus they're easy to

scale, modify, and maintain. Backed by the Eclipse Foundation and used by Red Hat and others, this toolkit supports code in a variety of languages. About the book Vert.x in Action teaches you how to build production-quality reactive applications in Java. This book covers core Vert.x concepts, as well as the fundamentals of asynchronous and reactive programming. Learn to develop microservices by using Vert.x tools for database communications, persistent messaging, and test app resiliency. The patterns and techniques included here transfer to reactive technologies and frameworks beyond Vert.x. What's inside Building reactive services Responding to external service failures Horizontal scaling Vert.x toolkit architecture and Vert.x testing Deploying with Docker and Kubernetes About the reader For intermediate Java web developers. About the author Julien Ponge is a principal software engineer at Red Hat,

working on the Eclipse Vert.x project. Table of Contents PART 1 - FUNDAMENTALS OF ASYNCHRONOUS PROGRAMMING WITH VERT.X 1 Vert.x, asynchronous programming, and reactive systems 2 Verticles: The basic processing units of Vert.x 3 Event bus: The backbone of a Vert.x application 4 Asynchronous data and event streams 5 Beyond callbacks 6 Beyond the event bus PART 2 - DEVELOPING REACTIVE SERVICES WITH VERT.X 7 Designing a reactive application 8 The web stack 9 Messaging and event streaming with Vert.x 10 Persistent state management with databases 11 End-to-end real-time reactive event processing 12 Toward responsiveness with load and chaos testing 13 Final notes: Container-native Vert.x  
Atomic Kotlin - Bruce Eckel 2021-01-11  
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 Studio 3 with Kotlin** - Ted Hagos 2018-11-12

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 LearnUse 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.

**Kotlin In-depth [Vol-II]** - Sedunov Aleksei 2020-03-07

Master the concise and expressive power of a pragmatic multi-paradigm language for JVM, Android and beyond Key Featuresa- Language fundamentalsa- Object-oriented and functional programming with Kotlina- Kotlin standard librarya- Building domain-specific languagesa- Using Kotlin for Web developmenta- Kotlin for Android platforma- Coroutine-based concurrencyDescriptionThe purpose of this book is to guide a reader

through the capabilities of the Kotlin language and give examples of using it for development of various applications be it desktop, mobile or Web. Although our primary focus is on the JVM and Android, the knowledge we're sharing here to various extents applies to other Kotlin-supported platforms such as JavaScript, native and even multi-platform applications. The book starts with an introduction to language and its ecosystem that will give you an understanding of the key ideas behind Kotlin design, introduce you to the Kotlin tooling and present you the basic language syntax and constructs. In the next chapters we'll get to know the multi-paradigm nature of Kotlin which allows you to create powerful abstractions by combining various aspects of functional and object-oriented programming. We'll talk about using common Kotlin APIs such as the standard library, reflection, and coroutine-based

concurrency as well as the means for creating your own flexible APIs based on domain-specific languages. In the concluding chapters, we'll give examples of using Kotlin for more specialized tasks such as testing, building Android applications, Web development and creating microservices. What will you learn By the end of the book, you'll obtain a thorough knowledge of all basic aspects of Kotlin programming. You'll be able to create a flexible and reusable code by taking advantage of object-oriented and functional features, use Kotlin standard library, compose your own domain-specific languages, write asynchronous code using Kotlin coroutines library as well. You'll also have a basic understanding of using Kotlin for writing test code, web applications and Android development. This knowledge will also give you a solid foundation for deeper learning of related development platforms,

tools and frameworks. Who this book is for  
The book is primarily aimed at developers familiar with Java and JVM and willing to get a firm understanding of Kotlin while having little to no experience in that language. Discussion of various language features will be accompanied, if deemed necessary, by comparisons with their Java's analogs which should simplify Java-to-Kotlin transition. Most of the material, however, is rather Java-agnostic and should be beneficial even without prior Java knowledge. In general, experience in object-oriented or functional paradigm is a plus, but not required.

Table of Contents

10. Annotations and Reflection
11. Domain-Specific Languages
12. Java Interoperability
13. Concurrency
14. Testing with Kotlin
15. Android Applications
16. Web Development with Ktor
17. Building Microservices

About the Author  
Aleksei Sedunov has been working as a Java developer since 2008. After joining JetBrains

in 2012 he's been actively participating in the Kotlin language development focusing on IDE tooling for the IntelliJ platform. Currently, he's working in a DataGrip team, a JetBrains Database IDE, carrying on with using Kotlin as the main development tool. His LinkedIn Profile:  
<https://www.linkedin.com/in/alexey-sedunov-8554a530/>

**Practical Guide for Oracle SQL, T-SQL and MySQL** - Preston Zhang 2017-11-23  
SQL is a widely used to access most databases, therefore database developers and system administrators should be familiar with it. This hands-on SQL book will help beginner and intermediate users to write queries that apply complex conditions on a table. The book's unique side by side approach makes it easy for the reader to learn three major query languages in the IT industry. The author has over 20 years of experience in database design. KEY

**FEATURES:** Contains numerous practical screenshots of Oracle SQL, T-SQL, MySQL statements and results. Shows the differences between Oracle SQL, T-SQL and MySQL side by side. Gives a real world experience for SQL developers and database administrators. Sample data is available to work on (available on our website).

*Functional Kotlin* - Mario Arias 2018-02-23  
Learn how to apply Functional Programming with Kotlin to real-life projects with popular libraries like Arrow. Key Features Focus on the functional aspects of Kotlin and identify the advantages that functional programming brings to the table and the associated coding benefits. Implement common functional programming design patterns and techniques. Learn to combine OOP and Reactive Programming with Functional Programming and how RxKotlin and funkTionale can help you implementing

Functional Programming in Kotlin Book Description Functional programming makes your application faster, improves performance, and increases your productivity. Kotlin supports many of the popular and advanced functional features of functional languages. This book will cover the A-Z of functional programming in Kotlin. This book bridges the language gap for Kotlin developers by showing you how to create and consume functional constructs in Kotlin. We also bridge the domain gap by showing how functional constructs can be applied in business scenarios. We'll take you through lambdas, pattern matching, immutability, and help you develop a deep understanding of the concepts and practices of functional programming. If you want learn to address problems using Recursion, Kotlin has support for it as well. You'll also learn how to use the funkTionale library to perform currying and lazy programming and



more. Finally, you'll learn functional design patterns and techniques that will make you a better programmer. By the end of the book, you will be more confident in your functional programming skills and will be able to apply them while programming in Kotlin. What you will learn

- Learn the Concepts of Functional Programming with Kotlin
- Discover the Coroutines in Kotlin
- Uncover Using funkTionale plugin
- Learn Monads, Functions and Applicatives
- Combine Functional Programming with OOP and Reactive Programming
- Uncover Using Monads with funkTionale
- Discover Stream Processing

Who this book is for  
Kotlin developers who have no functional programming experience, will benefit from this book.

**Kotlin in action** - 2017

*Effective Kotlin* - Marcin Moskała  
Kotlin is a powerful and pragmatic language,

but it's not enough to know about its features. We also need to know when they should be used and in what way. This book is a guide for Kotlin developers on how to become excellent Kotlin developers. It presents and explains in-depth the best practices for Kotlin development. Each item is presented as a clear rule of thumb, supported by detailed explanations and practical examples.

**Spring in Action, Sixth Edition** - Craig Walls 2022-04-05

If you need to learn Spring, look no further than this widely beloved and comprehensive guide! Fully revised for Spring 5.3, and packed with interesting real-world examples to get your hands dirty with Spring. In *Spring in Action*, 6th Edition you will learn:

- Building reactive applications
- Relational and NoSQL databases
- Integrating via HTTP and REST-based services, and sand reactive RSocket services
- Reactive programming

techniques Deploying applications to traditional servers and containers Securing applications with Spring Security Over the years, Spring in Action has helped tens of thousands of developers get a major productivity boost from Spring. This new edition of the classic bestseller covers all of the new features of Spring 5.3 and Spring Boot 2.4 along with examples of reactive programming, Spring Security for REST Services, and bringing reactivity to your databases. You'll also find the latest Spring best practices, including Spring Boot for application setup and configuration. About the technology Spring is required knowledge for Java developers! Why? Th is powerful framework eliminates a lot of the tedious configuration and repetitive coding tasks, making it easy to build enterprise-ready, production-quality software. The latest updates bring huge productivity boosts to microservices, reactive development, and

other modern application designs. It's no wonder over half of all Java developers use Spring. About the book Spring in Action, Sixth Edition is a comprehensive guide to Spring's core features, all explained in Craig Walls' famously clear style. You'll put Spring into action as you build a complete database-backed web app step-by-step. This new edition covers both Spring fundamentals and new features such as reactive flows, Kubernetes integration, and RSocket. Whether you're new to Spring or leveling up to Spring 5.3, make this classic bestseller your bible! What's inside Relational and NoSQL databases Integrating via RSocket and REST-based services Reactive programming techniques Deploying applications to traditional servers and containers About the reader For beginning to intermediate Java developers. About the author Craig Walls is an engineer at VMware, a member of the Spring

engineering team, a popular author, and a frequent conference speaker. Table of Contents PART 1 FOUNDATIONAL SPRING 1 Getting started with Spring 2 Developing web applications 3 Working with data 4 Working with nonrelational data 5 Securing Spring 6 Working with configuration properties PART 2 INTEGRATED SPRING 7 Creating REST services 8 Securing REST 9 Sending messages asynchronously 10 Integrating Spring PART 3 REACTIVE SPRING 11 Introducing Reactor 12 Developing reactive APIs 13 Persisting data reactively 14 Working with RSocket PART 4 DEPLOYED SPRING 15 Working with Spring Boot Actuator 16 Administering Spring 17 Monitoring Spring with JMX 18 Deploying Spring  
*Domain-driven Design* - Eric Evans 2004  
"Domain-Driven Design" incorporates numerous examples in Java-case studies taken from actual projects that illustrate the

application of domain-driven design to real-world software development.

**Elm in Action** - Richard Feldman  
2020-04-04

Summary Elm is more than just a cutting-edge programming language, it's a chance to upgrade the way you think about building web applications. Once you get comfortable with Elm's refreshingly different approach to application development, you'll be working with a clean syntax, dependable libraries, and a delightful compiler that essentially eliminates runtime exceptions. Elm compiles to JavaScript, so your code runs in any browser, and Elm's best-in-class rendering speed will knock your socks off. Let's get started! Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Simply put, the Elm programming language transforms the way you think about frontend web development.

Elm's legendary compiler is an incredible assistant, giving you the precise and user-friendly support you need to work efficiently. Elm applications have small bundle sizes that run faster than JavaScript frameworks and are famously easy to maintain as they grow. The catch? Elm isn't JavaScript, so you'll have some new skills to learn. About the book *Elm in Action* teaches you the Elm language along with a new approach to coding frontend applications. Chapter by chapter, you'll create a full-featured photo-browsing app, learning as you go about Elm's modular architecture, Elm testing, and how to work seamlessly with your favorite JavaScript libraries. You'll especially appreciate author and Elm core team member Richard Feldman's unique insights, based on his thousands of hours writing production code in Elm. When you're done, you'll have a toolbox of new development skills and a stunning web app for your

portfolio. What's inside Scalable design for production web applications Single-page applications in Elm Data modeling in Elm Accessing JavaScript from Elm About the reader For web developers with no prior experience in Elm or functional programming. About the author Richard Feldman is a software engineer at NoRedInk and a well-known member of the Elm community. Table of Contents PART 1 - GETTING STARTED 1. Welcome to Elm 2. Your first Elm application 3. Compiler as assistant PART 2 - PRODUCTION-GRADE ELM 4. Talking to servers 5. Talking to JavaScript 6. Testing PART 3 - BUILDING BIGGER 7. Data modeling 8. Single-page applications *Kotlin for Android Developers* - Antonio Leiva 2016-03-21 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.

[Kotlin Quick Start Guide](#) - Marko Devcic  
2018-08-31

Get started with Kotlin programming for building real world applications  
Key Features  
Start programming with Kotlin  
Explore Kotlin language syntax, standard libraries and Java Interoperability  
Builds an example application with what you learn  
Book

Description Kotlin is a general purpose, object-oriented language that primarily targets the JVM and Android. Intended as a better alternative to Java, its main goals are high interoperability with Java and increased developer productivity. Kotlin is still a new language and this book will help you to learn the core Kotlin features and get you ready for developing applications with Kotlin. This book covers Kotlin features in detail and explains them with practical code examples. You will learn how to set up the environment and take your first steps with Kotlin and its syntax. We will cover the basics of the language, including functions, variables, and basic data types. With the basics covered, the next chapters show how functions are first-class citizens in Kotlin and deal with the object-oriented side of Kotlin. You will move on to more advanced features of Kotlin. You will explore Kotlin's Standard Library and learn how to work with the

Collections API. The book finishes by putting Kotlin in to practice, showing how to build a desktop app. By the end of this book, you will be confident enough to use Kotlin for your next project. What you will learn Programming in Kotlin language syntax, basic types, control flow, classes, and OOP Writing functions and functional programming in Kotlin Defining and importing from packages in Kotlin Running Kotlin on JVMs and Android runtimes Working with the Kotlin Standard Library and advanced features of Kotlin programming Setting up a Kotlin development environment with JetBrains tools Building real-world applications with Kotlin Who this book is for This book is intended for anybody who wants to learn the most important Kotlin features. No experience of Kotlin is expected.  
**Modern Java in Action** - Raoul-Gabriel Urma 2018-09-26

Summary Manning's bestselling Java 8 book has been revised for Java 9! In *Modern Java in Action*, you'll build on your existing Java language skills with the newest features and techniques. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

About the Technology Modern applications take advantage of innovative designs, including microservices, reactive architectures, and streaming data. Modern Java features like lambdas, streams, and the long-awaited Java Module System make implementing these designs significantly easier. It's time to upgrade your skills and meet these challenges head on!

About the Book *Modern Java in Action* connects new features of the Java language with their practical applications. Using crystal-clear examples and careful attention to detail, this book respects your time. It will help you expand your existing knowledge of core Java

as you master modern additions like the Streams API and the Java Module System, explore new approaches to concurrency, and learn how functional concepts can help you write code that's easier to read and maintain. What's inside Thoroughly revised edition of Manning's bestselling Java 8 in Action New features in Java 8, Java 9, and beyond Streaming data and reactive programming The Java Module System About the Reader Written for developers familiar with core Java features. About the Author Raoul-Gabriel Urma is CEO of Cambridge Spark. Mario Fusco is a senior software engineer at Red Hat. Alan Mycroft is a University of Cambridge computer science professor; he cofounded the Raspberry Pi Foundation.

Table of Contents  
PART 1 - FUNDAMENTALS Java 8, 9, 10, and 11: what's happening? Passing code with behavior parameterization Lambda expressions  
PART 2 - FUNCTIONAL-STYLE

DATA PROCESSING WITH STREAMS  
Introducing streams Working with streams  
Collecting data with streams Parallel data  
processing and performance PART 3 -  
EFFECTIVE PROGRAMMING WITH STREAMS  
AND LAMBDA Collection API enhancements  
Refactoring, testing, and debugging  
Domain-specific languages using lambdas  
PART 4 - EVERYDAY JAVA Using Optional as  
a better alternative to null New Date and  
Time API Default methods The Java Module  
System PART 5 - ENHANCED JAVA  
CONCURRENCY Concepts behind  
CompletableFuture and reactive  
programming CompletableFuture:  
composable asynchronous programming  
Reactive programming PART 6 -  
FUNCTIONAL PROGRAMMING AND FUTURE  
JAVA EVOLUTION Thinking functionally  
Functional programming techniques  
Blending OOP and FP: Comparing Java and  
Scala Conclusions and where next for Java

Kotlin Programming - Josh Skeen 2018-08-09  
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.



*Functional Programming in Kotlin* - Marco Vermeulen 2021-10-05

Functional Programming in Kotlin is a reworked version of the bestselling *Functional Programming in Scala*, with all code samples, instructions, and exercises translated into the powerful Kotlin language. In this authoritative guide, you'll take on the challenge of learning functional programming from first principles, and start writing Kotlin code that's easier to read, easier to reuse, better for concurrency, and less prone to bugs and errors. about the technology Kotlin is a new JVM language designed to interoperate with Java and offer an improved developer experience for creating new applications. It's already a top choice for writing web services, and Android apps. Although it preserves Java's OO roots, Kotlin really shines when you adopt a functional programming mindset. By learning the core principles and practices of

functional programming outlined in this book, you'll start writing code that's easier to read, easier to test and reuse, better for concurrency, and less prone to bugs. about the book *Functional Programming in Kotlin* is a serious tutorial for programmers looking to learn FP and apply it to the everyday business of coding. Based on the bestselling *Functional Programming in Scala*, this book guides intermediate Java and Kotlin programmers from basic techniques to advanced topics in a logical, concise, and clear progression. In it, you'll find concrete examples and exercises that open up the world of functional programming. The book will deliver practical mastery of FP using Kotlin and a valuable perspective on program design that you can apply to other languages. what's inside *Functional Programming Techniques for Real-World Applications* Write combinator libraries Identify common structures and idioms in

functional design Code for simplicity, modularity, and fewer bugs about the reader For intermediate Kotlin and Java developers. No experience with functional programming is required. about the author Marco Vermeulen has almost two decades of programming experience on the JVM, with much of that time spent on functional programming using Scala and Kotlin. Rúnar Bjarnason and Paul Chiusano are the authors of Functional Programming in Scala, on which this book is based. They are internationally-recognized experts in functional programming and the Scala programming language.

**Kotlin Cookbook** - Ken Kousen 2019-11-14 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

**Kotlin in Action** - Dmitry Jemerov

2017-02-03

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  
**Programming Android with Kotlin** -  
Pierre-Olivier Laurence 2021-12-06  
Developing applications for the Android mobile operating system can seem daunting, particularly if it requires learning a new programming language: Kotlin, now Android's official development language. With this practical book, Android developers will learn how to make the transition from Java to Kotlin, including how Kotlin provides a true advantage for gaining control over asynchronous computations. Authors Pierre-Olivier Laurence, Amanda Hinchman-Dominguez, G. Blake Meike, and Mike Dunn

explore implementations of the most common tasks in native Android development, and show you how Kotlin can help you solve concurrency problems. With a focus on structured concurrency, a new asynchronous programming paradigm, this book will guide you through one of Kotlin's most powerful constructs, coroutines. Learn about Kotlin essentials and the Kotlin Collections Framework Explore Android fundamentals: the operating system and the application container and its components Learn about thread safety and how to handle concurrency Write sequential, asynchronous work at a low cost Examine structured concurrency with coroutines, and learn how channels make coroutines communicate Learn how to use flows for asynchronous data processing Understand performance considerations using Android profiling tools Use performance optimizations to trim resource consumption