

# Beginning Java 8 Language Features Lambda Expressions Inner Classes Threads Io Collections And Streams

Intermediate level, for programmers fairly familiar with Java, but new to the functional style of programming and lambda expressions. Get ready to program in a whole new way. Functional Programming in Java will help you quickly get on top of the new, essential Java 8 language features and the functional style that will change and improve your code. This short, targeted book will help you make the paradigm shift from the old imperative way to a less error-prone, more elegant, and concise coding style that's also a breeze to parallelize. You'll explore the syntax and semantics of lambda expressions, method and constructor references, and functional interfaces. You'll design and write applications better using the new standards in Java 8 and the JDK. Lambda expressions are lightweight, highly concise anonymous methods backed by functional interfaces in Java 8. You can use them to leap forward into a whole new world of programming in Java. With functional programming capabilities, which have been around for decades in other languages, you can now write elegant, concise, less error-prone code using standard Java. This book will guide you through the paradigm change, offer the essential details about the new features, and show you how to transition from your old way of coding to an improved style. In this book you'll see popular design patterns, such as decorator, builder, and strategy, come to life to solve common design problems, but with little ceremony

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and effort. With these new capabilities in hand, Functional Programming in Java will help you pick up techniques to implement designs that were beyond easy reach in earlier versions of Java. You'll see how you can reap the benefits of tail call optimization, memoization, and effortless parallelization techniques. Java 8 will change the way you write applications. If you're eager to take advantage of the new features in the language, this is the book for you. What you need: Java 8 with support for lambda expressions and the JDK is required to make use of the concepts and the examples in this book.

An updated, concise reference for the Java programming language, version 8.0, and essential parts of its class languages, offering more detail than a standard textbook. The third edition of *Java Precisely* provides a concise description of the Java programming language, version 8.0. It offers a quick reference for the reader who has already learned (or is learning) Java from a standard textbook and who wants to know the language in more detail. The book presents the entire Java programming language and essential parts of the class libraries: the collection classes, the input-output classes, the stream libraries and Java 8's facilities for parallel programming, and the functional interfaces used for that. Though written informally, the book describes the language in detail and offers many examples. For clarity, most of the general rules appear on left-hand pages with the relevant examples directly opposite on the right-hand pages. All examples are fragments of legal Java programs. The complete ready-to-run example programs are available on the book's website. This third edition adds material about functional parallel processing of arrays; default and static methods on interfaces; a brief description of the memory model and visibility across concurrent threads; lambda expressions, method reference expressions, and the related functional interfaces; and stream processing,

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including parallel programming and collectors.

This book is a concise source to keep you updated about the released and upcoming changes in the core Java language. It covers version 10, 11, and various projects at Oracle, which every Java enthusiast will know about. You will learn to write better code and make informed decisions to choose new features for creating performant applications.

Beginning Java 8 Language Features covers essential and advanced features of the Java programming language such as the new lambda expressions (closures), inner classes, threads, I/O, Collections, garbage collection, streams, and more. Author Kishori Sharan provides over 60 diagrams and 290 complete programs to help you visualize and better understand the topics covered in this book. The book starts with a series of chapters on the essential language features provided by Java, including annotations, inner classes, reflection, and generics. These topics are then complemented by details of how to use lambda expressions, allowing you to build powerful and efficient Java programs. The chapter on threads follows this up and discusses everything from the very basic concepts of a thread to the most advanced topics such as synchronizers, the fork/join framework, and atomic variables. This book contains unmatched coverage of Java I/O, including NIO 2.0, the Path API, the FileVisitor API, the watch service and asynchronous file I/O. With this in-depth knowledge, your data- and file-management programs will be able to take advantage of every feature of Java's powerful I/O framework. Finally, you'll learn how to use the Stream API, a new, exciting addition to Java 8, to perform aggregate operations on collections of data elements using functional-style programming. You'll examine the details of stream processing such as creating streams from different data sources, learning the difference between

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sequential and parallel streams, applying the filter-map-reduce pattern, and dealing with optional values.

Android is the most popular mobile platform today and it comes with a comprehensive set of APIs that make it easy for developers to write, test and deploy apps. With these APIs you can easily show user interface (UI) components, play and record audio and video, create games and animation, store and retrieve data, search the Internet, and so on. This book is a tutorial for experienced Java programmers wanting to learn to develop Android applications. It introduces the fundamentals and provide real-world applications for every topic of discussion. The Java® Tutorial, Fifth Edition, is based on Release 7 of the Java Platform Standard Edition. This revised and updated edition introduces the new features added to the platform, including a section on NIO.2, the new file I/O API, and information on migrating legacy code to the new API. The deployment coverage has also been expanded, with new chapters such as “Doing More with Rich Internet Applications” and “Deployment in Depth,” and a section on the fork/join feature has been added to the chapter on concurrency. Information reflecting Project Coin developments, including the new try-with-resources statement, the ability to catch more than one type of exception with a single exception handler, support for binary literals, and diamond syntax, which results in cleaner generics code, has been added where appropriate. The chapters covering generics, Java Web Start, and applets have also been updated. In addition, if you plan to take one of the Java SE 7 certification exams, this guide can help. A special appendix, “Preparing for Java Programming Language Certification,” lists the three exams available, details the items covered on each exam, and provides cross-references to where more information about each topic appears in the text. All of the material has been

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thoroughly reviewed by members of Oracle Java engineering to ensure that the information is accurate and up to date.

Beginning Java 8 Games Development, written by Java expert and author Wallace Jackson, teaches you the fundamentals of building a highly illustrative game using the Java 8 programming language. In this book, you'll employ open source software as tools to help you quickly and efficiently build your Java game applications. You'll learn how to utilize vector and bit-wise graphics; create sprites and sprite animations; handle events; process inputs; create and insert multimedia and audio files; and more. Furthermore, you'll learn about JavaFX 8, now integrated into Java 8 and which gives you additional APIs that will make your game application more fun and dynamic as well as give it a smaller foot-print; so, your game application can run on your PC, mobile and embedded devices. After reading and using this tutorial, you'll come away with a cool Java-based 2D game application template that you can re-use and apply to your own game making ambitions or for fun.

Work with essential and advanced features of the Java programming language such as Java modules development, lambda expressions (closures), inner classes, threads, I/O, Collections, garbage collection, and more. Author Kishori Sharan provides over 50 diagrams and 290 complete programs to help you visualize and better understand the topics covered in this book. Java Language Features, Second Edition starts with a series of chapters on the essential language features provided by Java, including annotations, reflection, and generics. These topics are then complemented by details of how to use lambda expressions, allowing you to build powerful and efficient Java programs. The chapter on threads follows this up and discusses everything from the very basic concepts of a thread to the most advanced topics

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such as synchronizers, the fork/join framework, and atomic variables. This book contains unmatched coverage of Java NIO, the Stream API, the Path API, the FileVisitor API, the watch service, and asynchronous file I/O. With this in-depth knowledge, your data- and file-management programs will be able to take advantage of every feature of Java's powerful I/O framework and much more. Additionally, three appendices are available for free via the Download Source Code on [apress.com](#). These appendices will give you a head start on the most important features of Java 10 and the new Java versioning scheme. What You'll Learn Use essential and advanced features of the Java language Code Java annotations and inner classes Work with reflection, generics, and threads Take advantage of the garbage collector Manage streams with the Stream API Who This Book Is For Those new to Java programming and continues the learning Java journey; it is recommended that you read an introductory Java programming book first, such as *Beginning Java Fundamentals*, from Apress.

Learn the basics of Java 9, including basic programming concepts and the object-oriented fundamentals necessary at all levels of Java development. Author Kishori Sharan walks you through writing your first Java program step-by-step. Armed with that practical experience, you'll be ready to learn the core of the Java language. *Beginning Java 9 Fundamentals* provides over 90 diagrams and 240 complete programs to help you learn the topics faster. The book continues with a series of foundation topics, including using data types, working with operators, and writing statements in Java. These basics lead onto the heart of the Java language: object-oriented programming. By learning topics such as classes, objects, interfaces, and inheritance you'll have a

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good understanding of Java's object-oriented model. The final collection of topics takes what you've learned and turns you into a real Java programmer. You'll see how to take the power of object-oriented programming and write programs that can handle errors and exceptions, process strings and dates, format data, and work with arrays to manipulate data. This book is a companion to two other books also by Sharan focusing on APIs and advanced Java topics. What You'll Learn Write your first Java programs with an emphasis on learning object-oriented programming in Java Work with data types, operators, statements, classes and objects Handle exceptions, assertions, strings and dates, and object formatting Use regular expressions Work with arrays, interfaces, enums, and inheritance Deploy Java applications on memory-constrained devices using compact profiles Take advantage of the new JShell REPL tool Who This Book Is For Those who are new to Java programming, who may have some or even no prior programming experience.

This book completes the Apress Java learning journey and is a comprehensive approach to learning Java APIs, extensions, and modules such as Java EE integration, mobile Java modules, JavaFX, and JDBC. In this book, you'll learn how to build user interfaces with Swing and JavaFX as well as how to write network programs with the new Java 9 and much more. Java APIs, Extensions and Libraries is for Java programmers who are familiar with the fundamentals of the Java language and Java programming, who are now ready to call upon the power of extended Java functionality

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available from the huge array of Java APIs, extensions, and libraries. After reading and learning from this book you'll be ready to become a professional Java programmer. What You'll Learn Extend your Java skills beyond the fundamental object-oriented concepts and core language features Apply Java Swing for building Java front ends Get started with Java network programming Connect to databases and access data from Java programs using the JDBC API Work with JavaFX, RMI (Remote Method Invocation), and JNI (Java Native Interface) Use the new scripting features of Java Who This Book Is For Java programmers who are familiar with the fundamentals of the Java language and Java programming.

A tutorial introducing Java basics covers programming principles, integrating applets with Web applications, and using threads, arrays, and sockets.

What is this book about? This book is a comprehensive introduction to the Java programming language, updated thoroughly (more than 35% new and updated) for the latest SDK 1.5 release. This book shows readers how to build real-world Java applications using the Java SDK. No previous programming experience is required. The author uses numerous step-by-step programming examples to guide readers through the ins and outs of Java development. In addition to fully covering new features of SDK 1.5, such as generic types, the author has also added new chapters on Java database programming with JDBC and Java programming with XML.

Templates are among the most powerful features of C++, but they remain

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misunderstood and underutilized, even as the C++ language and development community have advanced. In C++ Templates, Second Edition, three pioneering C++ experts show why, when, and how to use modern templates to build software that's cleaner, faster, more efficient, and easier to maintain. Now extensively updated for the C++11, C++14, and C++17 standards, this new edition presents state-of-the-art techniques for a wider spectrum of applications. The authors provide authoritative explanations of all new language features that either improve templates or interact with them, including variadic templates, generic lambdas, class template argument deduction, compile-time if, forwarding references, and user-defined literals. They also deeply delve into fundamental language concepts (like value categories) and fully cover all standard type traits. The book starts with an insightful tutorial on basic concepts and relevant language features. The remainder of the book serves as a comprehensive reference, focusing first on language details and then on coding techniques, advanced applications, and sophisticated idioms. Throughout, examples clearly illustrate abstract concepts and demonstrate best practices for exploiting all that C++ templates can do. Understand exactly how templates behave, and avoid common pitfalls Use templates to write more efficient, flexible, and maintainable software Master today's most effective idioms and techniques Reuse source code without compromising performance or safety Benefit from utilities for generic programming in the C++ Standard Library Preview the upcoming concepts feature The companion website, [tmplbook.com](http://tmplbook.com), contains sample

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code and additional updates.

"Java 8 in Action is a clearly written guide to the new features of Java 8. It begins with a practical introduction to lambdas, using real-world Java code. Next, it covers the new Streams API and shows how you can use it to make collection-based code radically easier to understand and maintain. It also explains other major Java 8 features including default methods, Optional, CompletableFuture, and the new Date and Time API ... This book/course is written for programmers familiar with Java and basic OO programming."-- Resource description page.

Java 8 Recipes offers solutions to common programming problems encountered while developing Java-based applications. Fully updated with the newest features and techniques available, Java 8 Recipes provides code examples involving Lambdas, embedded scripting with Nashorn, the new date-time API, stream support, functional interfaces, and much more. Especial emphasis is given to features such as lambdas that are newly introduced in Java 8. Content is presented in the popular problem-solution format: Look up the programming problem that you want to solve. Read the solution. Apply the solution directly in your own code. Problem solved! The problem-solution approach sets Java 8 Recipes apart. Java 8 Recipes is focused less on the language itself and more on what you can do with it that is useful. The book respects your time by always focusing on a task that you might want to perform using the language. Solutions come first. Explanations come later. You are free to crib from the

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book and apply the code examples directly to your own projects. Covers the newly-released Java 8, including a brand new chapter on lambdas Focuses especially on up-and-coming technologies such as Project Nashorn and Java FX 2.0 Respects your time by focusing on practical solutions you can implement in your own code

Beginning Java 7 guides you through version 7 of the Java language and a wide assortment of platform APIs. New Java 7 language features that are discussed include switch-on-string and try-with-resources. APIs that are discussed include Threading, the Collections Framework, the Concurrency Utilities, Swing, Java 2D, networking, JDBC, SAX, DOM, StAX, XPath, JAX-WS, and SAAJ. This book also presents an introduction to Android app development so that you can apply some of its knowledge to the exciting world of Android app development. This book presents the following table of contents: Chapter 1 introduces you to Java and begins to cover the Java language by focusing on fundamental concepts such as comments, identifiers, variables, expressions, and statements. Chapter 2 continues to explore this language by presenting all of its features for working with classes and objects. You learn about features related to class declaration and object creation, encapsulation, information hiding, inheritance, polymorphism, interfaces, and garbage collection. Chapter 3 focuses on the more advanced language features related to nested classes, packages, static imports, exceptions, assertions, annotations, generics, and enums. Additional chapters introduce you to the few features not covered in Chapters 1 through 3.

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Chapter 4 largely moves away from covering language features (although it does introduce class literals and `strictfp`) while focusing on language-oriented APIs. You learn about `Math`, `StrictMath`, `Package`, Primitive Type Wrapper Classes, `Reference`, `Reflection`, `String`, `StringBuffer` and `StringBuilder`, `Threading`, `BigDecimal`, and `BigInteger` in this chapter. Chapter 5 begins to explore Java's utility APIs by focusing largely on the Collections Framework. However, it also discusses legacy collection-oriented APIs and how to create your own collections. Chapter 6 continues to focus on utility APIs by presenting the concurrency utilities along with the `Objects` and `Random` classes. Chapter 7 moves you away from the command-line user interfaces that appear in previous chapters and toward graphical user interfaces. You first learn about the Abstract Window Toolkit foundation, and then explore the Java Foundation Classes in terms of `Swing` and `Java 2D`. Appendix C explores `Accessibility` and `Drag and Drop`. Chapter 8 explores filesystem-oriented I/O in terms of the `File`, `RandomAccessFile`, `stream`, and `writer/reader` classes. Chapter 9 introduces you to Java's network APIs (e.g., sockets). It also introduces you to the `JDBC` API for interacting with databases along with the `Java DB` database product. Chapter 10 dives into Java's XML support by first presenting an introduction to XML (including `DTDs` and `schemas`). It next explores the `SAX`, `DOM`, `StAX`, `XPath`, and `XSLT` APIs. It even briefly touches on the `Validation` API. While exploring `XPath`, you encounter namespace contexts, extension functions and function resolvers, and variables and variable resolvers. Chapter 11 introduces you

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to Java's support for SOAP-based and RESTful web services. As well as providing you with the basics of these web service categories, Chapter 11 presents some advanced topics, such as working with the SAAJ API to communicate with a SOAP-based web service without having to rely on JAX-WS. You will appreciate having learned about XML in Chapter 10 before diving into this chapter. Chapter 12 helps you put to use some of the knowledge you've gathered in previous chapters by showing you how to use Java to write an Android app's source code. This chapter introduces you to Android, discusses its architecture, shows you how to install necessary tools, and develops a simple app. Appendix A presents the solutions to the programming exercises that appear near the end of Chapters 1 through 12. Appendix B introduces you to Java's Scripting API along with Java 7's support for dynamically typed languages. Appendix C introduces you to additional APIs and architecture topics. Examples include Accessibility, classloaders, Console, Drag and Drop, Java Native Interface, and System Tray. Appendix D presents a gallery of significant applications that demonstrate various aspects of Java. Unfortunately, there are limits to how much knowledge can be crammed into a print book. For this reason, Appendixes A, B, C, and D are not included in this book's pages. Instead, these appendixes are freely distributed as PDF files. Appendixes A and B are bundled with the book's associated code file at the Apress website (<http://www.apress.com/9781430239093>). Appendixes C and D are bundled with their respective code files at my TutorTutor.ca website

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(<http://tutortutor.ca/cgi-bin/makepage.cgi?/books/bj7>).

A comprehensive Java guide, with samples, exercises, case studies, and step-by-step instruction *Beginning Java Programming: The Object Oriented Approach* is a straightforward resource for getting started with one of the world's most enduringly popular programming languages. Based on classes taught by the authors, the book starts with the basics and gradually builds into more advanced concepts. The approach utilizes an integrated development environment that allows readers to immediately apply what they learn, and includes step-by-step instruction with plenty of sample programs. Each chapter contains exercises based on real-world business and educational scenarios, and the final chapter uses case studies to combine several concepts and put readers' new skills to the test. *Beginning Java Programming: The Object Oriented Approach* provides both the information and the tools beginners need to develop Java skills, from the general concepts of object-oriented programming.

Learn to:

- Understand the Java language and object-oriented concept implementation
- Use Java to access and manipulate external data
- Make applications accessible to users with GUIs
- Streamline workflow with object-oriented patterns

The book is geared for those who want to use Java in an applied environment while learning at the same time. Useful as either a course text or a stand-alone self-study program, *Beginning Java Programming* is a thorough, comprehensive guide.

For nearly five years, one book has served as the definitive reference to Java for all

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serious developers: The Java Language Specification, by James Gosling, Bill Joy, and Guy Steele. Now, these world-renowned Java authorities (along with new co-author Gilad Bracha) have delivered a monumental update. This completely revised Second Edition covers the Java 2 Platform Standard Edition Version 1.3 with unprecedented depth and precision, offering the invaluable insights of Java's creators to every developer. There is no better source for learning everything about the Syntax and Semantics of the Java programming language. Developers will turn to this book again and again.

The Definitive Guide to Lambda Expressions Mastering Lambdas: Java Programming in a Multicore World describes how the lambda-related features of Java SE 8 will enable Java to meet the challenges of next-generation parallel hardware architectures. The book explains how to write lambdas, and how to use them in streams and in collection processing, providing code examples throughout. You'll learn how to use lambda expressions to take full advantage of performance improvements provided by today's multicore hardware. This Oracle Press book covers: Why lambdas were needed, and how they will change Java programming Syntax of lambda expressions The basic operation of streams and pipelines Using collectors and reduction to end pipelines Creating streams Spliterators, the fork/join framework, and exceptions Examining stream performance with microbenchmarking API evolution using default methods

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Beginning Java 8 APIs, Extensions and Libraries completes the Apress Java learning journey and is a comprehensive approach to learning the Java Swing, JavaFX, Java Scripting, JDBC and network programming APIs. This book covers the key extensions of the Java programming language such as Swing, JavaFX, network programming, and JDBC. Each topic starts with a discussion of the topic's background. A step-by-step process, with small snippets of Java code, provides easy-to-follow instructions. At the end of a topic, a complete and ready-to-run Java program is provided. This book contains over 130 images and diagrams to help you visualize and better understand the topics. More than 130 complete programs allow you to practice and quickly learn the topics. The Swing chapters discuss various aspects of working with a GUI, from the very basic concepts of developing a Swing application, to the most advanced topics, such as decorating a Swing component with a JLayer, drag-and-drop features, Synth Skinnable L&F, etc. The chapter on network programming covers the basics of network technologies first, and then, the advanced topics of network programming, using a Java class library. It covers IPv4 and IPv6, addressing schemes, subnetting, supernetting, multicasting, TCP/IP sockets, UDP sockets, asynchronous socket I/O, etc. The chapter on JDBC provides the details of connecting and working with databases such as Oracle, SQL Server, MySQL, DB2, Java DB (Apache Derby), Sybase, Adaptive Server Anywhere, etc. It contains a complete discussion on processing a ResultSet and a RowSet. It discusses how to use the RowSetFactory, to obtain a RowSet object of a

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specific type. Working with Large Objects (LOBs), such as Blob, Clob, and NClob, is covered in detail with Java code examples and database scripts.

Explore the new Java programming language features and APIs introduced in Java 10 through Java 13. Java 13 Revealed is for experienced Java programmers looking to migrate to Java 13. Author Kishori Sharan begins by covering how to use local variable type inference to improve readability of your code and time-based release versioning of the Java platform to understand the Java release strategy. This book provides extensive coverage of the new HTTP Client APIs, which were introduced in Java 9 as a preview and was made a standard feature in Java 11. New Java features such as launching a single-file source code program and new switch syntax are discussed in detail. What You Will Learn Use local variable type inference to declare local variables using the var restricted type name introduced in Java 10 Take advantage of application class data sharing among JVMs for faster application startup Create HTTP requests, responses, and web sockets with the new HTTP Client APIs Run a single-file Java source code program using the java command without compiling it Apply the new switch statement and expressions to write compact and less error-prone code Work with text blocks in Java code About new APIs, deprecated APIs, and deprecated tools Who This Book Is For Java developers who want to update their Java skills from Java 9 to Java 13.

The introduction of functional programming concepts in Java SE 8 was a drastic

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change for this venerable object-oriented language. Lambda expressions, method references, and streams fundamentally changed the idioms of the language, and many developers have been trying to catch up ever since. This cookbook will help. With more than 70 detailed recipes, author Ken Kousen shows you how to use the newest features of Java to solve a wide range of problems. For developers comfortable with previous Java versions, this guide covers nearly all of Java SE 8, and includes a chapter focused on changes coming in Java 9. Need to understand how functional idioms will change the way you write code? This cookbook—chock full of use cases—is for you. Recipes cover: The basics of lambda expressions and method references Interfaces in the `java.util.function` package Stream operations for transforming and filtering data Comparators and Collectors for sorting and converting streaming data Combining lambdas, method references, and streams Creating instances and extract values from Java's Optional type New I/O capabilities that support functional streams The Date-Time API that replaces the legacy Date and Calendar classes Mechanisms for experimenting with concurrency and parallelism

Pro Java 8 Programming covers the core Java development kit. It takes advantage of the finer points of the core standard edition (SE) and development kit version 8. You'll discover the particulars of working with the Java language and APIs to develop applications in many different contexts. You will also delve into more advanced topics like lambda expressions, closures, new i/o (NIO.2), enums, generics, XML, metadata

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and the Swing APIs for GUI design and development. By the end of the book, you'll be fully prepared to take advantage of Java's ease of development, and able to create powerful, sophisticated Java applications.

Android development is hot, and many programmers are interested in joining the fun. However, because this technology is based on Java, you should first obtain a solid grasp of the Java language and its foundational APIs to improve your chances of succeeding as an Android app developer. After all, you will be busy learning the architecture of an Android app, the various Android-specific APIs, and Android-specific tools. If you do not already know Java fundamentals, you will probably end up with a massive headache from also having to quickly cram those fundamentals into your knowledge base. *Learn Java for Android Development, Second Edition* teaches programmers of any skill level the essential Java language and foundational Java API skills that must be learned to improve the programmer's chances of succeeding as an Android app developer. Each of the book's 14 chapters provides an exercise section that gives you the opportunity to reinforce your understanding of the chapter's material. Answers to the book's more than 500 exercises are provided in an appendix. A second appendix provides a significant game-oriented Java application, which you can convert into an Android app. Once you complete this book, you should be ready to dive into beginning Android app development. Maybe, start that journey with Apress' *Beginning Android*.

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Learning a complex new language is no easy task especially when it's an object-oriented computer programming language like Java. You might think the problem is your brain. It seems to have a mind of its own, a mind that doesn't always want to take in the dry, technical stuff you're forced to study. The fact is your brain craves novelty. It's constantly searching, scanning, waiting for something unusual to happen. After all, that's the way it was built to help you stay alive. It takes all the routine, ordinary, dull stuff and filters it to the background so it won't interfere with your brain's real work--recording things that matter. How does your brain know what matters? It's like the creators of the Head First approach say, suppose you're out for a hike and a tiger jumps in front of you, what happens in your brain? Neurons fire. Emotions crank up. Chemicals surge. That's how your brain knows. And that's how your brain will learn Java. Head First Java combines puzzles, strong visuals, mysteries, and soul-searching interviews with famous Java objects to engage you in many different ways. It's fast, it's fun, and it's effective. And, despite its playful appearance, Head First Java is serious stuff: a complete introduction to object-oriented programming and Java. You'll learn everything from the fundamentals to advanced topics, including threads, network sockets, and distributed programming with RMI. And the new, second edition focuses on Java 5.0, the latest version of the Java language and development platform. Because Java 5.0 is a major update to the platform, with deep, code-level changes, even more careful study and implementation is required. So learning the Head First

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way is more important than ever. If you've read a Head First book, you know what to expect--a visually rich format designed for the way your brain works. If you haven't, you're in for a treat. You'll see why people say it's unlike any other Java book you've ever read. By exploiting how your brain works, Head First Java compresses the time it takes to learn and retain--complex information. Its unique approach not only shows you what you need to know about Java syntax, it teaches you to think like a Java programmer. If you want to be bored, buy some other book. But if you want to understand Java, this book's for you.

When you need quick answers for developing or debugging Java programs, this pocket guide provides a handy reference to standard features of the Java programming language and its platform. You'll find helpful programming examples, tables, figures, and lists, as well as Java 8 features such as Lambda Expressions and the Date and Time API. It's an ideal companion, whether you're in the office, in the lab, or on the road. This book also provides material to help you prepare for the Oracle Certified Associate Java Programmer exam. Quickly find Java language details, such as naming conventions, types, statements and blocks, and object-oriented programming Get details on the Java SE platform, including development basics, memory management, concurrency, and generics Browse through information on basic input/output, NIO 2.0, the Java collections framework, and the Java Scripting API Get supplemental references to fluent APIs, third-party tools, and basics of the Unified Modeling

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### Language (UML)

A comprehensive Java guide, with samples, exercises, casestudies, and step-by-step instruction Beginning Java Programming: The Object Oriented Approach is a straightforward resource for getting started with one of the world's most enduringly popular programming languages. Based on classes taught by the authors, the book starts with the basics and gradually builds into more advanced concepts. The approach utilizes an integrated development environment that allows readers to immediately apply what they learn, and includes step-by-step instruction with plenty of sample programs. Each chapter contains exercises based on real-world business and educational scenarios, and the final chapter uses case studies to combine several concepts and put readers' new skills to the test. Beginning Java Programming: The Object Oriented Approach provides both the information and the tools beginners need to develop Java skills, from the general concepts of object-oriented programming. Learn to: Understand the Java language and object-oriented concept implementation Use Java to access and manipulate external data Make applications accessible to users with GUIs Streamline workflow with object-oriented patterns The book is geared for those who want to use Java in an applied environment while learning at the same time. Useful as either a course text or a stand-alone self-study program, Beginning Java Programming is a thorough, comprehensive guide.

Summary Manning's bestselling Java 8 book has been revised for Java 9! In Modern

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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

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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

If you're a developer with core Java SE skills, this hands-on book takes you through the language changes in Java 8 triggered by the addition of lambda expressions. You'll learn through code examples, exercises, and fluid explanations how these anonymous functions will help you write simple, clean, library-level code that solves business problems. Lambda expressions are a fairly simple change to Java, and the first part of the book shows you how to use them properly. Later chapters show you how lambda functions help you improve performance with parallelism, write simpler concurrent code, and model your domain more accurately, including building better DSLs. Use exercises

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in each chapter to help you master lambda expressions in Java 8 quickly Explore streams, advanced collections, and other Java 8 library improvements Leverage multicore CPUs and improve performance with data parallelism Use techniques to “lambdify” your existing codebase or library code Learn practical solutions for lambda expression unit testing and debugging Implement SOLID principles of object-oriented programming with lambdas Write concurrent applications that efficiently perform message passing and non-blocking I/O

The upcoming Java 9 module system will affect existing applications and offer new ways of creating modular and maintainable applications. With this hands-on book, Java developers will learn not only about the joys of modularity, but also about the patterns needed to create truly modular and reliable applications. Authors Sander Mak and Paul Bakker teach you the concepts behind the Java 9 module system, along with the new tools it offers. You’ll also gain learn how to modularize existing code and how to build new Java applications in a modular way. Understand Java 9 module system concepts Master the patterns and practices for building truly modular applications Migrate existing applications and libraries to Java 9 modules Use JDK 9 tools for modular development and migration

Are you looking for a deeper understanding of the Java™ programming language so that you can write code that is clearer, more correct, more robust, and more reusable? Look no further! Effective Java™, Second Edition, brings together seventy-eight indispensable

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programmer's rules of thumb: working, best-practice solutions for the programming challenges you encounter every day. This highly anticipated new edition of the classic, Jolt Award-winning work has been thoroughly updated to cover Java SE 5 and Java SE 6 features introduced since the first edition. Bloch explores new design patterns and language idioms, showing you how to make the most of features ranging from generics to enums, annotations to autoboxing. Each chapter in the book consists of several "items" presented in the form of a short, standalone essay that provides specific advice, insight into Java platform subtleties, and outstanding code examples. The comprehensive descriptions and explanations for each item illuminate what to do, what not to do, and why. Highlights include: New coverage of generics, enums, annotations, autoboxing, the for-each loop, varargs, concurrency utilities, and much more Updated techniques and best practices on classic topics, including objects, classes, libraries, methods, and serialization How to avoid the traps and pitfalls of commonly misunderstood subtleties of the language Focus on the language and its most fundamental libraries: java.lang, java.util, and, to a lesser extent, java.util.concurrent and java.io Simply put, Effective Java™, Second Edition, presents the most practical, authoritative guidelines available for writing efficient, well-designed programs. Beginning Java 8 Language Features Lambda Expressions, Inner Classes, Threads, I/O, Collections, and Streams Apress

This book concisely introduces Java 8's most valuable new features, including lambda

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expressions (closures) and streams. If you're an experienced Java programmer, the author's practical insights and sample code will help you quickly take advantage of these and other Java language and platform improvements.

Beginning Java 8 Fundamentals provides a comprehensive approach to learning the Java programming language, especially the object-oriented fundamentals necessary at all levels of Java development. Author Kishori Sharan provides over 90 diagrams and 240 complete programs to help beginners and intermediate level programmers learn the topics faster. Starting with basic programming concepts, the author walks you through writing your first Java program step-by-step. Armed with that practical experience, you'll be ready to learn the core of the Java language. The book continues with a series of foundation topics, including using data types, working with operators, and writing statements in Java. These basics lead onto the heart of the Java language: object-oriented programming. By learning topics such as classes, objects, interfaces, and inheritance you'll have a good understanding of Java's object-oriented model. The final collection of topics takes what you've learned and turns you into a real Java programmer. You'll see how to take the power of object-oriented programming and write programs that can handle errors and exceptions, process strings and dates, format data, and work with arrays to manipulate data.

Java 8 is a giant step forward for the Java language. In Project Lambda, Java gets a new closure syntax (lambda expressions), method-references, and default and static

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methods on interfaces. It manages to add many of the features of functional languages without losing the clarity and simplicity Java developers have come to expect. In addition, many of the existing Java core library classes have been enhanced with the new Streams API. This book will help you understand Java 8, including: Project Lambda, the new Date-Time API, Streams, default methods, the Nashorn Javascript engine, and more.

Are you are worried you are missing out on the latest version of Java? When you hear a term such as lambda expressions - do you wonder what you are neglecting? If so, Java 8 New Features will squash your concerns and deliver a quick and easy-to-understand guide to what's new in Java 8. The latest version of Java offers numerous improvements and new features to better utilize Java. Streams, for example, supports a fluent approach to problem solving and lets the developer take advantage of concurrency with minimal effort, whilst Lambda Expressions offer new ways of expressing a solution that brings efficiency and succinct programming. Get up-to-speed here with this color book! - Learn how interface enhancements - such as default methods - affect new additions to Java 8 and their impact on multiple inheritance between interfaces - Use lambda expressions to simplify solutions to development problems - Discover how the new Stream interface supports query type problems - Explore the new support for concurrent processing including that supported by Streams - Find out why the new date and time enhancements make working with time so much

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easier than it used to be - Includes information on the Nashorn JavaScript Engine, File IO Enhancements, and Project Jigsaw

In arenas ranging from enterprise development to Android app programming, Java remains one of the world's most popular programming languages. Sams Teach Yourself Java in 21 Days helps the serious learner gain true mastery over the new Java 8. In this book's straightforward, step-by-step approach, each lesson builds on everything that's come before, helping readers learn Java's core features and techniques from the ground up. Friendly, accessible, and conversational, Sams Teach Yourself Java in 21 Days offers a practical grounding in the language, without ever becoming overwhelming or intimidating. Week 1 introduces the basic building blocks of the Java programming language: keywords, operators, class and object definitions, packages, interfaces, exceptions, and threads. Week 2 covers the Swing graphical user interface class libraries and the important classes that support data structures, string handling, dates and times. Week 3 ventures into the hottest areas of Java programming: web services, Java servlets, network programming, database programming and Android development.

CodeNotes provides the most succinct, accurate, and speedy way for a developer to ramp up on a new technology or language. Unlike other programming books, CodeNotes drills down to the core aspects of a technology, focusing on the key elements needed in order to understand it quickly and implement it immediately. It is a

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unique resource for developers, filling the gap between comprehensive manuals and pocket references. CodeNotes for Java: Intermediate and Advanced Language Features will introduce the reader with a grasp of basic Java to advanced object oriented design techniques, collections, I/O, multi-threaded applications, internationalization and more. Experienced Java programmers will also benefit from the numerous examples, tips and tricks and design notes that explain why these Java features are fundamentally important to every development effort. This edition of CodeNotes includes: -A global overview of a technology and explanation of what problems it can be used to solve -Real-world examples -"How and Why", and "Bugs and Caveats" sections that provide hints, tricks, workarounds, and tips on what should be taken advantage of or avoided -"Design Notes" illustrating many of the common use patterns for Java programs -Instructions and classroom-style tutorials throughout from expert trainers and software developers Visit [www.codenotes.com](http://www.codenotes.com) for updates, source code templates, access to message boards, and discussion of specific problems with CodeNotes authors and other developers. Every CodeNotes title is written and reviewed by a team of commercial software developers and technology experts. See "About the Authors" at the beginning of the book for more information.

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