

Download Free Java Network Programming 2nd Edition

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A63 - SHANE VICTORIA

This is the eBook version of the printed book. If the print book includes a CD-ROM, this content is not included within the eBook version. Advanced Linux Programming is divided into two parts. The first covers generic UNIX system services, but with a particular eye towards Linux specific information. This portion of the book will be of use even to advanced programmers who have worked with other Linux systems since it will cover Linux specific details and differences. For programmers without UNIX experience, it will be even more valuable. The second section covers material that is entirely Linux specific. These are truly advanced topics, and are the techniques that the gurus use to build great applications. While this book will focus mostly on the Application Programming Interface (API) provided by the Linux kernel and the C library, a preliminary introduction to the development tools available will allow all who purchase the book to make immediate use of Linux.

Encog is an advanced neural network and bot programming framework. This book focuses on using Encog to create a variety of neural network architectures using the Java programming language. Neural network architectures such as feedforward/perceptrons, Hopfield, Elman, Jordan, Radial Basis Function, and Self Organizing maps are all demonstrated. This book also shows how to use Encog to train neural networks using a variety of means. Several propagation techniques, such as back propagation, resilient propagation (RPROP) and the Manhattan update rule are discussed. Additionally, training with a genetic algorithm and simulated annealing is discussed as well. You will also see how to enhance training using techniques such as pruning, hybrid training. Real world examples tie the book together. Pattern recognition applications such as OCR, image and text recognition will be introduced. You will see how to apply time series and forecasting and how to financial markets. All of the Encog neural network components will be demonstrated to show how to use them in your own neural network applications.

Harness the hidden power of Java to build network-enabled applications with lower network traffic and faster processes About This Book Learn to deliver superior server-to-server communication through the networking channels Gain expertise of the networking features of your own applications to support various network architectures such as client/server and peer-to-peer Explore the issues that impact scalability, affect security, and allow applications to work in a heterogeneous environment Who This Book Is For Learning Network Programming with Java is oriented to developers who wish to use network technologies to enhance the utility of their applications. You should have a working knowledge of Java and an interest in learning the latest in network programming techniques using Java. No prior experience with network development or special software beyond the Java SDK is needed. Upon completion of the book, beginner and experienced developers will be able to use Java to access resources across a network and the Internet. What You Will Learn Connect to other applications using sockets Use channels and buffers to enhance communication between applications Access network services and develop client/server applications Explore the critical elements of peer-to-peer applications and current technologies available Use UDP to perform multicasting Address scalability through the use of core and advanced threading techniques Incorporate techniques into an application to make it more secure Configure and address interoperability issues to enable your applications to work in a heterogeneous environment In Detail Network-aware applications are becoming more prevalent and play an ever-increasing role in the world today. Connecting and using an Internet-based service is a frequent requirement for many applications. Java provides numerous classes that have evolved over the years to meet evolving network needs. These range from low-level socket and IP-based approaches to those encapsulated in software services. This book explores how Java supports networks, starting with the basics and then advancing to more complex topics. An overview of each relevant network technology is presented followed by detailed examples of how to use Java to support these technologies. We start with the basics of networking and then explore how Java supports the development of client/server and peer-to-peer applications. The NIO packages are examined as well as multitasking and how network applications can address practical issues such as security. A discussion on networking concepts will put many network issues into perspective and let you focus on the appropriate technology for the problem at hand. The examples used will provide a good starting point to develop similar capabilities for many of your network needs. Style and approach Each network technology's terms and concepts are introduced first. This is followed up with code examples to explain these technologies. Many of the examples are supplemented with alternate Java 8 solutions when appropriate. Knowledge of Java 8 is not necessary but these examples will help you better understand the power of Java 8.

Pick up where certification exams leave off. With this practical, in-depth guide to the entire network infrastructure, you'll learn how to deal with real Cisco networks, rather than the hypothetical situations presented on exams like the CCNA. Network Warrior takes you step by step through the world of routers, switches, firewalls, and other technologies based on the author's extensive field experience. You'll find new content for MPLS, IPv6, VoIP, and wireless in this completely revised second edition, along with examples of Cisco Nexus 5000 and 7000 switches throughout. Topics include: An in-depth view of routers and routing Switching, using Cisco Catalyst and Nexus switches as examples SOHO VoIP and SOHO wireless access point design and configuration Introduction to IPv6 with configuration examples Telecom technologies in the data-networking world, including T1, DS3, frame relay, and MPLS Security, firewall theory, and configuration, as well as ACL and authentication Quality of Service (QoS), with an emphasis on low-latency queuing (LLQ) IP address allocation, Network Time Protocol (NTP), and device failures

In addition to showing the programmer how to construct Neural Networks, the book discusses the Java Object Oriented Neural Engine (JOONE), a free open source Java neural engine. (Computers)

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

An overview of the programming language's fundamentals covers syntax, initialization, implementation, classes, error handling, objects, applets, multiple threads, projects, and network programming. Dive into key topics in network architecture and Go, such as data serialization, application level protocols, character sets and encodings. This book covers network architecture and gives an overview of the Go language as a primer, covering the latest Go release. Beyond the fundamentals, Network Programming with Go covers key networking and security issues such as HTTP and HTTPS, templates, remote procedure call (RPC), web sockets including HTML5 web sockets, and more. Additionally, author Jan Newmarch guides you in building and connecting to a complete web server based on Go. This book can serve as both as an essential learning guide and reference on Go networking. What You Will Learn Master network programming with Go Carry out data serialization Use applica-

tion-level protocols Manage character sets and encodings Deal with HTTP(S) Build a complete Go-based web server Work with RPC, web sockets, and more Who This Book Is For Experienced Go programmers and other programmers with some experience with the Go language.

Coding and testing are generally considered separate areas of expertise. In this practical book, Java expert Scott Oaks takes the approach that anyone who works with Java should be adept at understanding how code behaves in the Java Virtual Machine—including the tunings likely to help performance. This updated second edition helps you gain in-depth knowledge of Java application performance using both the JVM and the Java platform. Developers and performance engineers alike will learn a variety of features, tools, and processes for improving the way the Java 8 and 11 LTS releases perform. While the emphasis is on production-supported releases and features, this book also features previews of exciting new technologies such as ahead-of-time compilation and experimental garbage collections. Understand how various Java platforms and compilers affect performance Learn how Java garbage collection works Apply four principles to obtain best results from performance testing Use the JDK and other tools to learn how a Java application is performing Minimize the garbage collector's impact through tuning and programming practices Tackle performance issues in Java APIs Improve Java-driven database application performance

Cryptography, the science of secret writing, is the biggest, baddest security tool in the application programmer's arsenal. Cryptography provides three services that are crucial in secure programming. These include a cryptographic cipher that protects the secrecy of your data; cryptographic certificates, which prove identity (authentication); and digital signatures, which ensure your data has not been damaged or tampered with. This book covers cryptographic programming in Java. Java 1.1 and Java 1.2 provide extensive support for cryptography with an elegant architecture, the Java Cryptography Architecture (JCA). Another set of classes, the Java Cryptography Extension (JCE), provides additional cryptographic functionality. This book covers the JCA and the JCE from top to bottom, describing the use of the cryptographic classes as well as their innards. The book is designed for moderately experienced Java programmers who want to learn how to build cryptography into their applications. No prior knowledge of cryptography is assumed. The book is peppered with useful examples, ranging from simple demonstrations in the first chapter to full-blown applications in later chapters. Topics include: The Java Cryptography Architecture (JCA) The Java Cryptography Extension (JCE) Cryptographic providers The Sun key management tools Message digests, digital signatures, and certificates (X509v3) Block and stream ciphers Implementations of the ElGamal signature and cipher algorithms A network talk application that encrypts all data sent over the network An email application that encrypts its messages Covers JDK 1.2 and JCE 1.2.

Develop the next killer Android App using Java programming! Android is everywhere! It runs more than half the smartphones in the U.S.—and Java makes it go. If you want to cash in on its popularity by learning to build Android apps with Java, all the easy-to-follow guidance you need to get started is at your fingertips. Inside, you'll learn the basics of Java and grasp how it works with Android; then, you'll go on to create your first real, working application. How cool is that? The demand for Android apps isn't showing any signs of slowing, but if you're a mobile developer who wants to get in on the action, it's vital that you get the necessary Java background to be a success. With the help of Java Programming for Android Developers For Dummies, you'll quickly and painlessly discover the ins and outs of using Java to create groundbreaking Android apps—no prior knowledge or experience required! Get the know-how to create an Android program from the ground up Make sense of basic Java development concepts and techniques Develop the skills to handle programming challenges Find out how to debug your app Don't sit back and watch other developers release apps that bring in the bucks! Everything you need to create that next killer Android app is just a page away!

A developer's guide provides a wealth of examples that demonstrate how to create powerful web applications, covering such topics as adding applets to HTML pages, the HotJava browser, and integrating animation and audio. Original. (Intermediate).

The book provides complete coverage of fundamental IP networking in Java. It introduces the concepts behind TCP/IP and UDP and their intended use and purpose; gives complete coverage of Java networking APIs, includes an extended discussion of advanced server design, so that the various design principles and tradeoffs concerned are discussed and equips the reader with analytic queuing-theory tools to evaluate design alternatives; covers UDP multicasting, and covers multi-homed hosts, leading the reader to understand the extra programming steps and design considerations required in such environments. After reading this book the reader will have an advanced knowledge of fundamental network design and programming concepts in the Java language, enabling them to design and implement distributed applications with advanced features and to predict their performance. Special emphasis is given to the scalable I/O facilities of Java 1.4 as well as complete treatments of multi-homing and UDP both unicast and multicast.

This example-driven book offers a thorough introduction to Java's APIs for XML Web Services (JAX-WS) and RESTful Web Services (JAX-RS). Java Web Services: Up and Running takes a clear, pragmatic approach to these technologies by providing a mix of architectural overview, complete working code examples, and short yet precise instructions for compiling, deploying, and executing an application. You'll learn how to write web services from scratch and integrate existing services into your Java applications. With Java Web Services: Up and Running, you will: Understand the distinction between SOAP-based and REST-style services Write, deploy, and consume SOAP-based services in core Java Understand the Web Service Definition Language (WSDL) service contract Recognize the structure of a SOAP message Learn how to deliver Java-based RESTful web services and consume commercial RESTful services Know security requirements for SOAP- and REST-based web services Learn how to implement JAX-WS in various application servers Ideal for students as well as experienced programmers, Java Web Services: Up and Running is the concise guide you need to start working with these technologies right away.

This volume focuses on the underlying sockets class, one of the basis for learning about networks in any programming language. By learning to write simple client and server programs that use TCP/IP, readers can then realize network routing, framing, error detection and correction, and performance. Learning a complex new language is no easy task especially when it is 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--re-

coding 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 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.

Quick and painless Java programming with expert multimedia instruction Java Programming 24-Hour Trainer, 2nd Edition is your complete beginner's guide to the Java programming language, with easy-to-follow lessons and supplemental exercises that help you get up and running quickly. Step-by-step instruction walks you through the basics of object-oriented programming, syntax, interfaces, and more, before building upon your skills to develop games, web apps, networks, and automations. This second edition has been updated to align with Java SE 8 and Java EE 7, and includes new information on GUI basics, lambda expressions, streaming API, WebSockets, and Gradle. Even if you have no programming experience at all, the more than six hours of Java programming screencasts will demonstrate major concepts and procedures in a way that facilitates learning and promotes a better understanding of the development process. This is your quick and painless guide to mastering Java, whether you're starting from scratch or just looking to expand your skill set. Master the building blocks that go into any Java project Make writing code easier with the Eclipse tools Learn to connect Java applications to databases Design and build graphical user interfaces and web applications Learn to develop GUIs with JavaFX If you want to start programming quickly, Java Programming 24-Hour Trainer, 2nd Edition is your ideal solution.

* Clear and abundant examples, using real-world code, written by three experienced developers who write networking code for a living. * Describes how to build clients and servers, explains how TCP, UDP, and IP work, and shows how to debug networking applications via packet sniffing and deconstruction. * Well suited for Windows developer looking to expand to Linux, or for the proficient Linux developer looking to incorporate client-server programming into their application.

The 1st edition of this book was equally useful as an undergraduate textbook and as the lucid, no-nonsense guide required by IT professionals, featuring many code examples, screenshots and exercises. The new 2nd edition adds revised language reflecting significant changes in J2SE 5.0; update of support software; non-blocking servers; DataSource interface and Data Access Objects for connecting to remote databases.

Learn effective C++ network programming with Boost.Asio and become a proficient C++ network programmer About This Book Learn efficient C++ network programming with minimum coding using Boost.Asio Your one-stop destination to everything related to the Boost.Asio library Explore the fundamentals of networking to choose designs with more examples, and learn the basics of Boost.Asio Who This Book Is For This book is for C++ Network programmers with basic knowledge of network programming, but no knowledge of how to use Boost.Asio for network programming. What You Will Learn Prepare the tools to simplify network programming in C++ using Boost.Asio Explore the networking concepts of IP addressing, TCP/IP ports and protocols, and LAN topologies Get acquainted with the usage of the Boost libraries Get to know more about the content of Boost.Asio network programming and Asynchronous programming Establish communication between client and server by creating client-server application Understand the various functions inside Boost.Asio C++ libraries to delve into network programming Discover how to debug and run the code successfully In Detail Boost.Asio is a C++ library used for network programming operations. Organizations use Boost because of its productivity. Use of these high-quality libraries speed up initial development, result in fewer bugs, reduce reinvention-of-the-wheel, and cut long-term maintenance costs. Using Boost libraries gives an organization a head start in adopting new technologies. This book will teach you C++ Network programming using synchronous and asynchronous operations in Boost.Asio with minimum code, along with the fundamentals of Boost, server-client applications, debugging, and more. You will begin by preparing and setting up the required tools to simplify your network programming in C++ with Boost.Asio. Then you will learn about the basic concepts in networking such as IP addressing, TCP/IP protocols, and LAN with its topologies. This will be followed by an overview of the Boost libraries and their usage. Next you will get to know more about Boost.Asio and its concepts related to network programming. We will then go on to create a client-server application, helping you to understand the networking concepts. Moving on, you will discover how to use all the functions inside the Boost.Asio C++ libraries. Lastly, you will understand how to debug the code if there are errors found and will run the code successfully. Style and approach An example-oriented book to show you the basics of networking and help you create a network application simply using Boost.Asio, with more examples for you to get up and running with Boost.Asio quickly.

A package which provides an in-depth tutorial on programming networked applications with Java. It offers complete coverage of the Java networking APIs, including streams, TCP/IP and UDP/IP, with practical examples. The pack presents a cryptographic framework for developing Internet applications.

This book is a comprehensive guide to Java distributed computing. The book covers networking, distributed computing architectures, advanced Java facilities, security, data managing, and specific distributed computing techniques including sockets, Remote Method Invocation, Java servlets, Microsoft's Distributed Component Model, and the Common Object Request Broker Architecture.

The design and analysis of efficient data structures has long been recognized as a key component of the Computer Science curriculum. Goodrich, Tomassia and Goldwasser's approach to this classic topic is based on the object-oriented paradigm as the framework of choice for the design of data structures. For each ADT presented in the text, the authors provide an associated Java interface. Concrete data structures realizing the ADTs are provided as Java classes implementing the interfaces. The Java code implementing fundamental data structures in this book is organized in a single Java package, net.datastructures. This package forms a coherent library of data structures and algorithms in Java specifically designed for educational purposes in a way that is complimentary with the Java Collections Framework.

TCP/IP Sockets in C: Practical Guide for Programmers, Second Edition is a quick and affordable way to gain the knowledge and skills needed to develop sophisticated and powerful web-based applications. The book's focused, tutorial-based approach enables the reader to master the tasks and tech-

niques essential to virtually all client-server projects using sockets in C. This edition has been expanded to include new advancements such as support for IPv6 as well as detailed defensive programming strategies. If you program using Java, be sure to check out this book's companion, TCP/IP Sockets in Java: Practical Guide for Programmers, 2nd Edition. Includes completely new and expanded sections that address the IPv6 network environment, defensive programming, and the select() system call, thereby allowing the reader to program in accordance with the most current standards for internetworking. Streamlined and concise tutelage in conjunction with line-by-line code commentary allows readers to quickly program web-based applications without having to wade through unrelated and discursive networking tenets.

This practical guide provides a complete introduction to developing network programs with Java. You'll learn how to use Java's network class library to quickly and easily accomplish common networking tasks such as writing multithreaded servers, encrypting communications, broadcasting to the local network, and posting data to server-side programs. Author Elliotte Rusty Harold provides complete working programs to illustrate the methods and classes he describes. This thoroughly revised fourth edition covers REST, SPDY, asynchronous I/O, and many other recent technologies. Explore protocols that underlie the Internet, such as TCP/IP and UDP/IP Learn how Java's core I/O API handles network input and output Discover how the InetAddress class helps Java programs interact with DNS Locate, identify, and download network resources with Java's URI and URL classes Dive deep into the HTTP protocol, including REST, HTTP headers, and cookies Write servers and network clients, using Java's low-level socket classes Manage many connections at the same time with the nonblocking I/O

Create and unleash the power of neural networks by implementing professional, clean, and clear Java code About This Book* Learn to build amazing projects using neural networks including forecasting the weather and pattern recognition* Explore the Java multi-platform feature to run your personal neural networks everywhere* This step-by-step guide will help you solve real-world problems and links neural network theory to their application Who This Book Is For This book is for Java developers who want to know how to develop smarter applications using the power of neural networks. Those who deal with a lot of complex data and want to use it efficiently in their day-to-day apps will find this book quite useful. Some basic experience with statistical computations is expected. What You Will Learn* Develop an understanding of neural networks and how they can be fitted* Explore the learning process of neural networks* Build neural network applications with Java using hands-on examples* Discover the power of neural network's unsupervised learning process to extract the intrinsic knowledge hidden behind the data* Apply the code generated in practical examples, including weather forecasting and pattern recognition* Understand how to make the best choice of learning parameters to ensure you have a more effective application* Select and split data sets into training, test, and validation, and explore validation strategies In Detail Want to discover the current state-of-art in the field of neural networks that will let you understand and design new strategies to apply to more complex problems? This book takes you on a complete walkthrough of the process of developing basic to advanced practical examples based on neural networks with Java, giving you everything you need to stand out. You will first learn the basics of neural networks and their process of learning. We then focus on what Perceptrons are and their features. Next, you will implement self-organizing maps using practical examples. Further on, you will learn about some of the applications that are presented in this book such as weather forecasting, disease diagnosis, customer profiling, generalization, extreme machine learning, and characters recognition (OCR). Finally, you will learn methods to optimize and adapt neural networks in real time. All the examples generated in the book are provided in the form of illustrative source code, which merges object-oriented programming (OOP) concepts and neural network features to enhance your learning experience.

* Covers low-level networking in Python —essential for writing a new networked application protocol. * Many working examples demonstrate concepts in action -- and can be used as starting points for new projects. * Networked application security is demystified. * Exhibits and explains multitasking network servers using several models, including forking, threading, and non-blocking sockets. * Features extensive coverage of Web and E-mail. Describes Python's database APIs.

The networking capabilities of the Java platform have been extended considerably since the first edition of the book. This new edition covers version 1.5-1.7, the most current iterations, as well as making the following improvements: The API (application programming interface) reference sections in each chapter, which describe the relevant parts of each class, have been replaced with (i) a summary section that lists the classes and methods used in the code, and (ii) a "gotchas" section that mentions nonobvious or poorly-documented aspects of the objects. In addition, the book covers several new classes and capabilities introduced in the last few revisions of the Java platform. New abstractions to be covered include NetworkInterface, InetAddress, Inet4/6Address, SocketAddress/InetSocketAddress, Executor, and others; extended access to low-level network information; support for IPv6; more complete access to socket options; and scalable I/O. The example code is also modified to take advantage of new language features such as annotations, enumerations, as well as generics and implicit iterators where appropriate. Most Internet applications use sockets to implement network communication protocols. This book's focused, tutorial-based approach helps the reader master the tasks and techniques essential to virtually all client-server projects using sockets in Java. Chapter 1 provides a general overview of networking concepts to allow readers to synchronize the concepts with terminology. Chapter 2 introduces the mechanics of simple clients and servers. Chapter 3 covers basic message construction and parsing. Chapter 4 then deals with techniques used to build more robust clients and servers. Chapter 5 (NEW) introduces the scalable interface facilities which were introduced in Java 1.5, including the buffer and channel abstractions. Chapter 6 discusses the relationship between the programming constructs and the underlying protocol implementations in more detail. Programming concepts are introduced through simple program examples accompanied by line-by-line code commentary that describes the purpose of every part of the program. No other resource presents so concisely or so effectively the material necessary to get up and running with Java sockets programming. Focused, tutorial-based instruction in key sockets programming techniques allows reader to quickly come up to speed on Java applications. Concise and up-to-date coverage of the most recent platform (1.7) for Java applications in networking technology.

A guide to developing network programs covers networking fundamentals as well as TCP and UDP sockets, multicasting protocol, content handlers, servlets, I/O, parsing, Java Mail API, and Java Secure Sockets Extension.

Answering the need for an accessible overview of the field, this text/reference presents a manageable introduction to both the theoretical and practical aspects of computer networks and network programming. Clearly structured and easy to follow, the book describes cutting-edge developments in network architectures, communication protocols, and programming techniques and models, supported by code examples for hands-on practice with creating network-based applications. Features: presents detailed coverage of network architectures; gently introduces the reader to the basic ideas underpinning computer networking, before gradually building up to more advanced concepts; provides numerous step-by-step descriptions of practical examples; examines a range of network programming techniques; reviews network-based data storage and multimedia transfer; includes an extensive set of practical code examples, together with detailed comments and explanations.

Java's rich, comprehensive networking interfaces make it an ideal platform for building today's networked, Internet-centered applications, components, and Web services. Now, two Java networking experts demystify Java's complex networking API, giving developers practical insight into the key techniques of network development, and providing extensive code examples that show exactly how it's done. David and Michael Reilly begin by reviewing fundamental Internet architecture and TCP/IP protocol concepts all network programmers need to understand, as well as general Java features and techniques that are especially important in network programming, such as exception handling and input/output. Using practical examples, they show how to write clients and servers using UDP and TCP; how to build multithreaded network applications; and how to utilize HTTP and access the Web using Java. The book includes detailed coverage of server-side application development; distributed computing development with RMI and CORBA; and email-enabling applications with the powerful JavaMail API. For all beginning to intermediate Java programmers, network programmers who need to learn to work with Java.

On its own, C# simplifies network programming. Combine it with the precise instruction found in C# Network Programming, and you'll find that building network applications is easier and quicker than ever. This book helps newcomers get started with a look at the basics of network programming as they relate to C#, including the language's network classes, the Winsock interface, and DNS resolution. Spend as much time here as you need, then dig into the core topics of the network layer. You'll learn to make socket connections via TCP and "connectionless" connections via UDP. You'll also discover just how much help C# gives you with some of your toughest chores, such as asynchronous socket programming, multithreading, and multicasting. Network-layer techniques are just a means to an end, of course, and so this book keeps going, providing a series of detailed application-layer programming examples that show you how to work with real protocols and real network environments to build and implement a variety of applications. Use SNMP to manage network devices, SMTP to communicate with remote mail servers, and HTTP to Web-enable your applications. And use classes native to C# to query and modify Active Directory entries. Rounding it all out is plenty of advanced coverage to push your C# network programming skills to the limit. For example, you'll learn two ways to share application methods across the network: using Web services and remoting. You'll also master the security features intrinsic to C# and .NET—features that stand to benefit all of your programming projects.

Summary Netty in Action introduces the Netty framework and shows you how to incorporate it into your Java network applications. You'll learn to write highly scalable applications without the need to dive into the low-level non-blocking APIs at the core of Java. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Netty is a Java-based networking framework that manages complex networking, multithreading, and concurrency for your applications. And Netty hides the boilerplate and low-level code, keeping your business logic separate and easier to reuse. With Netty, you get an easy-to-use API, leaving you free to focus on what's unique to your application. About the Book Netty in Action introduces the Netty framework and shows you how to incorporate it into your Java network applications. You will discover how to write highly scalable applications without getting into low-level APIs. The book teaches you to think in an asynchronous way as you work through its many hands-on examples and helps you master the best practices of building large-scale network apps. What's Inside Netty from the ground up Asynchronous, event-driven programming Implementing services using different protocols Covers Netty 4.x About the Reader This book assumes readers are comfortable with Java and basic network architecture. About the Authors Norman Maurer is a senior software engineer at Apple and a core developer of Netty. Marvin Wolfthal is a Dell Services consultant who has implemented mission-critical enterprise systems using Netty. Table of Contents PART 1 NETTY CONCEPTS AND ARCHITECTURE Netty-asynchronous and event-driven Your first Netty application Netty components and design Transports ByteBuf ChannelHandler and ChannelPipeline EventLoop and threading model Bootstrapping Unit testing PART 2 CODECS The codec framework Provided ChannelHandlers and codecs PART 3 NETWORK PROTOCOLS WebSocket Broadcasting events with UDP PART 4 CASE STUDIES Case studies, part 1 Case studies, part 2

All of Java's Input/Output (I/O) facilities are based on streams, which provide simple ways to read and write data of different types. Java provides many different kinds of streams, each with its own application. The universe of streams is divided into four large categories: input streams and output streams, for reading and writing binary data; and readers and writers, for reading and writing textual (character) data. You're almost certainly familiar with the basic kinds of streams—but did you know that there's a CipherInputStream for reading encrypted data? And a ZipOutputStream for automatically compressing data? Do you know how to use buffered streams effectively to make your I/O operations more efficient? Java I/O, 2nd Edition has been updated for Java 5.0 APIs and tells you all you ever need to know about streams—and probably more. A discussion of I/O wouldn't be complete without treatment of character sets and formatting. Java supports the Unicode standard, which provides definitions for the character sets of most written languages. Consequently, Java is the first programming language that lets you do I/O in virtually any language. Java also provides a sophisticated model for formatting textual and numeric data. Java I/O, 2nd Edition shows you how to control number

formatting, use characters aside from the standard (but outdated) ASCII character set, and get a head start on writing truly multilingual software. Java I/O, 2nd Edition includes: Coverage of all I/O classes and related classes In-depth coverage of Java's number formatting facilities and its support for international character sets

Java Network Programming, Third Edition, brings you up-to-date with the latest features of Java's network APIs. This book discusses all the changes and additions to networking in JDK 1.4 and 1.5 (now christened J2SE 5). It covers everything from networking fundamentals to remote method invocation (RMI), including chapters on TCP and UDP sockets, server sockets, URLs and URIs, multicasting, and special-purpose APIs such as JavaMail. This book shows you how to use JSSE to write secure networking applications and explains how to use the NIO APIs to write ultra high-performance servers. And it covers Java's support for network proxies, web cookies, and URL caching. Java Network Programming doesn't just explain the APIs: it shows you how to put them to work. This book is full of examples; it contains thousands of lines of working code (all of which are available online), implementing fully functional network clients and servers. Whether you want to write a special-purpose web server, a secure online order taker, a simple multicast agent, or even an email client, you'll find code that you can learn from and borrow. Whether you're an experienced network developer, a new Java programmer, or someone who just wants to see what's possible, you'll find that Java Network Programming, Third Edition is an important part of your library. Once you've started using the Java Networking APIs, the possibilities are only limited by your imagination.

Your one-stop guide to programming with Java If you've always wanted to program with Java but didn't know where to start, this will be the java-stained reference you'll turn to again and again. Fully updated for the JDK 9, this deep reference on the world's most popular programming language is the perfect starting point for building things with Java—and an invaluable ongoing reference as you continue to deepen your knowledge. Clocking in at over 900 pages, Java All-in-One For Dummies takes the intimidation out of learning Java and offers clear, step-by-step guidance on how to download and install Java tools; work with variables, numbers, expressions, statements, loops, methods, and exceptions; create applets, servlets, and JavaServer pages; handle and organize data; and so much more. Focuses on the vital information that enables you to get up and running quickly with Java Provides details on the new features of JDK 9 Shows you how to create simple Swing programs Includes design tips on layout, buttons, and labels Everything you need to know to program with Java is included in this practical, easy-to-use guide!

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From lambda expressions and JavaFX 8 to new support for network programming and mobile development, Java 8 brings a wealth of changes. This cookbook helps you get up to speed right away with hundreds of hands-on recipes across a broad range of Java topics. You'll learn useful techniques for everything from debugging and data structures to GUI development and functional programming. Each recipe includes self-contained code solutions that you can freely use, along with a discussion of how and why they work. If you are familiar with Java basics, this cookbook will bolster your knowledge of the language in general and Java 8's main APIs in particular. Recipes include: Methods for compiling, running, and debugging Manipulating, comparing, and rearranging text Regular expressions for string- and pattern-matching Handling numbers, dates, and times Structuring data with collections, arrays, and other types Object-oriented and functional programming techniques Directory and filesystem operations Working with graphics, audio, and video GUI development, including JavaFX and handlers Network programming on both client and server Database access, using JPA, Hibernate, and JDBC Processing JSON and XML for data storage Multithreading and concurrency

Write your first code in Java using simple, step-by-step examples that model real-world objects and events, making learning easy. With this book you'll be able to pick up the concepts without fuss. Java for Absolute Beginners teaches Java development in language anyone can understand, giving you the best possible start. You'll see clear code descriptions and layout so that you can get your code running as soon as possible. After reading this book, you'll come away with the basics to get started writing programs in Java. Author Iuliana Cosmina focuses on practical knowledge and getting up to speed quickly—all the bits and pieces a novice needs to get started programming in Java. First, you'll discover how Java is executed, what type of language it is, and what it is good for. With the theory out of the way, you'll install Java, choose an editor such as IntelliJ IDEA, and write your first simple Java program. Along the way you'll compile and execute this program so it can run on any platform that supports Java. As part of this tutorial you'll see how to write high-quality code by following conventions and respecting well-known programming principles, making your projects more professional and efficient. Finally, alongside the core features of Java, you'll learn skills in some of the newest and most exciting features of the language: Generics, Lambda expressions, modular organization, local-variable type inference, and local variable syntax for Lambda expressions. Java for Absolute Beginners gives you all you need to start your Java 9+ programming journey. No experience necessary. What You'll Learn Use data types, operators, and the new stream API Install and use a build tool such as Gradle Build interactive Java applications with JavaFX Exchange data using the new JSON APIs Play with images using multi-resolution APIs Use the publish-subscribe framework Who This Book Is For Those who are new to programming and who want to start with Java.