Mastering Bitcoin 2e

Full Coverage of All Exam Objectives for the CEH Exams
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issues, footprinting, scanning, enumeration, system hacking,
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engineering, session hijacking, hacking Web servers, Web
application vulnerabilities, and more Walks you through exam
topics and includes plenty of real-world scenarios to help
reinforce concepts Includes a CD with an assessment test,
review questions, practice exams, electronic flashcards, and
the entire book in a searchable pdf
Mastering Blockchain, Third Edition is the blockchain bible to
equip you with extensive knowledge of distributed ledgers,
cryptocurrencies, smart contracts, consensus algorithms,
cryptography and blockchain platforms such as Ethereum,
Bitcoin, and many more.
Don't start trading Cryptocurrencies without reading this book
to avoid losses.Cryptocurrencies rank among the highest
value assets that could be owned in present day world as 1
BTC is worth more than $60,000 presently. One of the
conveniences digital money has also extended to societies is
the ease of payment up to cross-border payment levels.
Nowadays, payments to other countries are instant and
secure, thanks to eWallets and global payment platforms like
PayPal. Therefore, it is imperative to understand how these
systems work in order not to be left out of the digital rush. In

addition, trading cryptocurrencies is the new wealth creator and an understanding of how this works is what this book is written to address.In this book, you will learn the following: Cryptocurrencies Bitcoin's Ecosystem Bitcoin's Prices Over the Years Software and hardware Wallets Buying and Selling Bitcoins A Fork of a Codebase Hard Forks vs. Soft Forks Digital Tokens Blockchain TechnologyPublic Blockchains Darknet Markets Cross Border PaymentsInitial Coin Offerings (ICOs) Private Blockchains Blockchain Experiments Questions to Ask Initial Coin Offerings How do ICOs work? Whitepapers The Token Sale ICO Funding Stages Whitelisting Funding Caps Treasury Exchange Listing When is a Token a Security?Investing Who Controls the Price of Utility Tokens? Risks and Mitigations Crypto TradingSwing Trading vs. Day Trading Cryptocurrency Managing Cryptocurrency Trading on an ExchangeTrading using Robinhood MARKET SIGNALS Indecision Candles Oscillators Support and ResistanceWhat Drives Market Momentum? Looking for Uptrends Downtrends Flags Moving Averages The Rule for Moving AveragesTypes of Moving Average The Golden CrossDeath CrossLet's Get started, scroll up and click the BUY NOW WITH 1-CLICK BUTTON. Bitcoin for Beginners Bitcoin has taken the world by storm. The reasons are obvious. With the value of Bitcoins increasing by 1,000% in less than a year, Bitcoins have been a lucrative investment for many. Bitcoins can offer privacy to individuals that their own currencies do not offer. Bitcoins offer safety from the inflation caused by the widespread money printing going on throughout the world. Bitcoins are an international currency and are free of countries and borders In Bitcoin for Beginners - How to Buy Bitcoins, Sell Bitcoins, and Invest in Bitcoins you will learn about: What Bitcoins are The history of Bitcoins How Bitcoins work How Bitcoin mining works How to use Bitcoins The Benefits of Bitcoin Bitcoin

wallets Using Bitcoin as a currency Investing in Bitcoins And much more Many avoid Bitcoins because they seem too complicated. Bitcoin for Beginners is an easy to understand, plain English guide that is free of complicated and confusing technical jargon. You will learn all about Bitcoins in a simple, straight forward way that is easy to understand.
Mastering the Lightning Network
A Practical Guide to Distributed Ledger Technology
Mastering Bitcoin
Curiosity
The Collected Writings of Bitcoin Creator Satoshi Nakamoto
Mastering Kubernetes
CEH Certified Ethical Hacker Study Guide

The Lightning Network (LN) is a rapidly growing second-layer payment protocol that works on top of Bitcoin to provide near-instantaneous transactions between two parties. With this practical guide, authors Andreas M. Antonopoulos, Olaoluwa Osuntokun, and Rene Pickhardt explain how this advancement will enable the next level of scale for Bitcoin, increasing speed and privacy while reducing fees. Ideal for developers, systems architects, investors, and entrepreneurs looking to gain a better understanding of LN, this book demonstrates why experts consider LN a critical solution to Bitcoin's scalability problem. You'll learn how LN has the potential to support far more transactions than today's financial networks. This book examines: How the Lightning

Network addresses the challenge of blockchain scaling The Basis of Lightning Technology (BOLT) standards documents The five layers of the Lightning Network Protocol Suite LN basics, including wallets, nodes, and how to operate one Lightning payment channels, onion routing, and gossip protocol Finding paths across payment channels to transport Bitcoin off-chain from sender to recipient

You did it. You successfully transformed your application into a microservices architecture. But now that you're running services across different environments—public to public, private to public, virtual machine to container—your cloud native software is beginning to encounter reliability issues. How do you stay on top of this ever-increasing complexity? With the Istio service mesh, you'll be able to manage traffic, control access, monitor, report, get telemetry data, manage quota, trace, and more with resilience across your microservice. In this book, Lee Calcote and Zack Butcher explain why your services need a service mesh and demonstrate step-by-step how Istio fits into the life cycle of a distributed application. You'll learn about the tools and APIs for enabling and managing many of the features found in Istio. Explore

the observability challenges Istio addresses Use request routing, traffic shifting, fault injection, and other features essential to running a solid service mesh Generate and collect telemetry information Try different deployment patterns, including A/B, blue/green, and canary Get examples of how to develop and deploy real-world applications with Istio support

BONUS OFFER! Buy the Paperback version of this book, and get the Kindle eBook version included for FREE! Cryptocurrencies and digital money are all the rage these days, with news stories and lengthy online discussions highlighting their successes, trends, and their potential to grow even bigger in the foreseeable future. It is highly likely you have already heard or read quite a bit about cryptocurrencies, and your curiosity has been aroused enough for you to try and learn more about this trend in investing. And becoming a millionaire investor of cryptocurrencies is not some click bait headline. It is a real possibility for those who become committed to learning all about cryptocurrencies and how to trade and invest them properly for the most profitable outcomes. Let me give you an example using one of my personal favorite cryptocurrencies, Litecoin. On March 20,

2017, 1 Litecoin was worth exactly $3.96. Just a mere 5 and 1/2 months later in September, Litecoin was worth $81.78. That is a 1,965% increase in less than 6 months. And it's not like this huge jump came completely out of the blue. Many skilled investors who were involved with and studied cryptocurrencies saw this coming, and everyone who did benefited massively from it. A realistic and relatively small investment of $5,000 back in March of 2017, would be worth nearly $100,000 just 6 months later. This is the kind of potential we are dealing with when investing in cryptocurrencies. This is not what you should expect once you begin investing, but it is a possibility. You should also be focused on the long term instead of trying to get rich quick as that very rarely works out the way you want it to. In this book, we will cover the ins and outs of getting started as a cryptocurrency investor and how you can set up a balanced investment portfolio that can financially set you up very well for the future. Here is a preview of some of the things that you will learn about in this book: How to Get Started with Bitcoin Other Big Cryptocurrencies to Invest in Becoming a Millionaire with Cryptocurrency Benefits of Investing for the Long Term Analyzing Trends

in Cryptocurrency If any of this sounds interesting to you, then you should definitely give this book on Investing in Cryptocurrencies a read! You'll be happy you did.

Dive into Bitcoin technology with this hands-on guide from one of the leading teachers on Bitcoin and Bitcoin programming. Author Jimmy Song shows Python programmers and developers how to program a Bitcoin library from scratch. You'll learn how to work with the basics, including the math, blocks, network, and transactions behind this popular cryptocurrency and its blockchain payment system. By the end of the book, you'll understand how this cryptocurrency works under the hood by coding all the components necessary for a Bitcoin library. Learn how to create transactions, get the data you need from peers, and send transactions over the network. Whether you're exploring Bitcoin applications for your company or considering a new career path, this practical book will get you started. Parse, validate, and create bitcoin transactions Learn Script, the smart contract language behind Bitcoin Do exercises in each chapter to build a Bitcoin library from scratch Understand how proof-of-work secures the blockchain Program Bitcoin using Python 3

Understand how simplified payment verification and light wallets work Work with public-key cryptography and cryptographic primitives

The Internet of Money

In Math We Trust

Learn How to Program Bitcoin from Scratch

IoT and Edge Computing for Architects

Create Golang production applications using network libraries, concurrency, machine learning, and advanced data structures

Using a Service Mesh to Connect, Secure, Control, and Observe

The Decentralized Alternative to Central Banking

"Bitcoin might seem very complicated to the uninitiated and it is, but this book really simplifies it." - Mati Greenspan, Founder & CEO of Quantum Economics "It's not too late to be early to bitcoin. How to Bitcoin is a great introduction that anyone can learn from, whether you're a beginner or a financial professional. Find out why crypto is the fastest growing asset class in the world." - Nicolas Cary, Co-Founder of Blockchain.com and Co-Founder & Chairman of SkysTheLimit.org "Education ensures that everyone can

benefit from the Bitcoin revolution." - Dan Held, Business Development Manager of Kraken From cowrie shells to gold to fiat money, humans have always been on the search for meaningful and efficient ways to store our wealth. The arrival of the Internet has brought us better accessibility to communicate across the globe - but more importantly, it allows for the exchange of information and ideas across borders. As the Internet becomes a more remarkable facet of modern society where humans interact, socialize, and live our lives, it is clear that an "Internet of Money" is needed. Enter Bitcoin. Today, Bitcoin has become a household name for an alternative financial system that anyone can opt into as a hedge against the global economy's uncertainties. Many appreciate Bitcoin for its decentralized, permissionless, censorship-resistant, secure, and borderless nature. Anyone with an Internet connection and mobile phone can send and receive bitcoin from anywhere in the world. How to Bitcoin is written for beginners with easy-to-understand analogies and step-by-step guides to help the everyday person

understand Bitcoin and how to be part of this movement. In this book, you will discover: - What is Bitcoin and how does it compare to money - What is blockchain technology - The history and evolution of Bitcoin - How to securely buy and store bitcoin safely - Guides on using desktop, mobile, and hardware wallets Summary If you think Bitcoin is just an alternative currency for geeks, it's time to think again. Grokking Bitcoin opens up this powerful distributed ledger system, exploring the technology that enables applications both for Bitcoin-based financial transactions and using the blockchain for registering physical property ownership. With this fully illustrated, easy-to-read guide, you'll finally understand how Bitcoin works, how you can use it, and why you can trust the blockchain. Foreword by David A. Harding, Contributor to Bitcoin documentation. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Inflation, depressed economies, debased currencies ... these are just a few of the problems centralized banking has caused

throughout history. Bitcoin, a digital currency created with the ambition to shift control away from change-prone governments, has the potential to bring an end to those problems once and for all. It's time to find out how it can help you. About the Book Grokking Bitcoin explains why Bitcoin's supporters trust it so deeply, and why you can too. This approachable book will introduce you to Bitcoin's groundbreaking technology, which is the key to this world-changing system. This illustrated, easy-to-read guide prepares you for a new way of thinking with easy-to-follow diagrams and exercises. You'll discover how Bitcoin mining works, how to accept Bitcoin, how to participate in the Bitcoin network, and how to set up a digital wallet. What's inside Bitcoin transactions The blockchain Bitcoin mining Bitcoin wallets About the Reader Intended for anyone interested in learning about Bitcoin technology. While a basic understanding of technical concepts is beneficial, no programming skills are necessary. About the Author Kalle Rosenbaum is a computer scientist, an avid Bitcoin supporter, and the founder

of Propeller, a Bitcoin consultancy. Table of Contents Introduction to Bitcoin Cryptographic hash functions and digital signatures Addresses Wallets Transactions The blockchain Proof of work Peer-to-peer network Transactions revisited Segregated witness Bitcoin upgrades
Enter the Profitable New World of Cryptocurrencies! When you get your copy of Cryptocurrency for Beginners, you'll learn about the profit potential of today's newest financial markets. This book describes concepts like blockchains, Bitcoin mining, and cryptocurrency wallets in simple, easy-to-understand language. You'll learn the mechanics of cryptocurrencies like Ethereum, Bitcoin, and Litecoin – and how to realize big returns from this emerging investment opportunity. Inside this comprehensive guide, you'll discover a wealth of knowledge about cryptocurrencies: The Top 10 Cryptocurrencies and Your Most Popular Options How Blockchain and Distributed Ledger Technologies Changed Finance The Basics of Ethereum Smart Contracts What Cryptocurrency Investors Must

Know about DAO and DAPP Market Capitalization and How to Invest in Cryptocurrencies and so much more! With this book, you can understand the role of Bitcoin and Ethereum miners in the cryptocurrency market. You'll find out about transaction verification, public distribution ledgers, and the creation of new Bitcoins. When you understand memory pools, candidate blocks, and the other fundamentals of cryptocurrency infrastructures, you can make smart and profitable investment decisions. Don't pass up this investment opportunity because you lack the relevant knowledge. Study up on cryptocurrencies today and get the information and confidence you need to enter this brave new financial system! It's quick and easy to order – just scroll up and click the BUY NOW WITH ONE CLICK button on the right-hand side of your screen "The Internet of Money Volume Two: a collection of talks" is the spectacular sequel to the cult classic and best seller "The Internet of Money Volume One: a collection of talks" by Andreas M. Antonopoulos. Volume Two contains 11 more of his most inspiring and thought-

provoking talks, including: Introduction to Bitcoin; Blockchain vs Bullshit; Fake News, Fake Money; Currency Wars; Bubble Boy and the Sewer Rat; Rocket Science and Ethereum's Killer App; and many more. Volume Two also includes an all-new frequently asked questions section! In 2013, Andreas M. Antonopoulos started publicly speaking about bitcoin and quickly became one of the world's most sought-after speakers in the industry. To date, he has delivered more than 75, TED-style talks in venues ranging from the Henry Ford Museum in the United States to packed-out Bitcoin Meetups around the world including Brazil, the Czech Republic, and New Zealand, and every talk is completely different. In these performances, Antonopoulos walks onto the stage and delivers a live, unscripted talk. Without a deck in sight, he unleashes his latest insights into the lightning-fast changes surrounding bitcoin. Combining the knowledge of one of the world's leading blockchain technologists, with cultural context, comedy, and the flair of a performance artist, Antonopoulos conveys an up-to-the-second

understanding of bitcoin to live audiences worldwide. Many of these talks were so visionary, their content so educational, that they were curated and refined into a book form. On 7 September 2016, The Internet of Money Volume One was launched on The Joe Rogan Experience podcast (the interview has since been viewed more than 300,000 times). With its genesis in the lived, human experience, The Internet of Moneyoffered something that was desperately needed: an explanation of the philosophy, economics, politics, poetics, and technologies of bitcoin and open blockchains set within a broad historical context and using clear, simple language that delighted general audiences and bitcoin enthusiasts alike. During its first year, Volume One quickly became a hit in the global crypto-currency community-appealing to audiences from fields as diverse as the arts, sciences, and humanities. As one reader wrote: "It provides a uniquely accessible take on a mind-bendingly abstract system." The Internet of Money Volume Two: a collection of talks builds on that momentum and offers readers an

opportunity to experience more these inspiring and thought-provoking talks in print. It also includes a bonus question and answer section, where Andreas answers some of the most frequently asked questions from audience members during his worldwide tour. Volume Two is a sequel that rivals, even exceeds, the first, in content, scope, and vision. These talks are intellectual fire-starters you won't want to miss. Make this book part of your collection and see why Andreas M. Antonopoulos is considered the most powerful and engaging voice in crypto-currency and blockchain.

A Collection of Talks by Andreas M. Antonopoulos

5 Expert Secrets for Beginners: Investing Into Bitcoin, Ethereum

Tools and Jewels from Malware to Bitcoin

How to Bitcoin

Mathematics of Public Key Cryptography

Mastering Blockchain

Mastering Go

While many books explain the 'how' of Bitcoin, The Internet of Money series delves into the 'why' of Bitcoin. Following the world-wide success of Volume One and Volume Two, this third installment contains 12 of his most inspiring and thought-provoking talks over the past two years, including: Universal Access to Basic FinanceMeasuring Success: Price

or PrincipleEscaping the Global Banking CartelLibre Not LibraUnstoppable Code: The Difference Between Can't and Won'tAround the world, governments and corporations are increasingly pursuing a reconstruction of money as a system-of-control and surveillance machine. Despite the emergence of an interconnected global society and economy through the decades-long expansion of the internet, the trajectory of these bureaucratic policies foreshadows dire consequences for financial inclusion and independence.Andreas contextualizes the significance of Bitcoin and open blockchains amid these socio-political and economic shifts: What if money could be created without an authority? Are corporate coins the first step towards techno neo-feudalism? Is the real "darknet" run by state intelligence agencies? What if everyone could have a Swiss bank in their pocket? Can we build digital communities resistant to gentrification?In 2013, Andreas M. Antonopoulos started publicly speaking about Bitcoin and quickly became one of the world's most sought-after speakers in the industry. He has delivered dozens of unique TED-style talks in venues ranging from the Henry Ford Museum to booked-out meetups in the Czech Republic and Argentina.In 2014, Antonopoulos authored the groundbreaking book, Mastering Bitcoin (O'Reilly Media), widely considered to be the best technical guide ever written about the technology. On 7 September 2016, Andreas launched his second book, The Internet of Money Volume One, on The Joe Rogan Experience podcast (the interview has since been viewed more than 300,000 times).The Internet of Money offered something that was desperately needed: an explanation of the philosophy, economics, politics, and poetics behind this technology.Make this book part of your collection and see why the internet of money will continue to transform the world and the internet itself

The future will be increasingly distributed. As the publicity surrounding Bitcoin and blockchain has shown, distributed technology and business models are gaining popularity. Yet the disruptive potential of this technology is often obscured by hype and misconception. This detailed guide distills the complex, fast moving ideas behind blockchain into an easily digestible reference manual, showing what's really going on under the hood. Finance and technology pros will learn how a blockchain works as they explore the evolution and current state of the technology, including the functions of cryptocurrencies and smart contracts. This book is for anyone evaluating whether to invest time in the cryptocurrency and blockchain industry. Go beyond buzzwords and see what the technology really has to offer. Learn why Bitcoin was fundamentally important in blockchain's birth Learn how Ethereum has created a fertile ground for new innovations like Decentralized Finance (DeFi), Non-Fungible Tokens (NFTs) and Flash Loans Discover the secrets behind cryptocurrency prices and different forces that affect the highly volatile cryptocurrency markets Learn how cryptocurrencies are used by criminals to carry out nefarious activities Discover how enterprise and governments are leveraging the blockchain including Facebook Understand the challenges of scaling and forking a blockchain Learn how different blockchains work Learn the language of blockchain as industry terms are explained This advanced graduate textbook gives an authoritative and insightful description of the major ideas and techniques of public key cryptography.

This book provides a concise yet comprehensive overview of computer and Internet security, suitable for a one-term introductory course for junior/senior undergrad or first-year graduate students. It is also suitable for self-study by anyone seeking a solid footing in security – including

software developers and computing professionals, technical managers and government staff. An overriding focus is on brevity, without sacrificing breadth of core topics or technical detail within them. The aim is to enable a broad understanding in roughly 350 pages. Further prioritization is supported by designating as optional selected content within this. Fundamental academic concepts are reinforced by specifics and examples, and related to applied problems and real-world incidents. The first chapter provides a gentle overview and 20 design principles for security. The ten chapters that follow provide a framework for understanding computer and Internet security. They regularly refer back to the principles, with supporting examples. These principles are the conceptual counterparts of security-related error patterns that have been recurring in software and system designs for over 50 years. The book is "elementary" in that it assumes no background in security, but unlike "soft" high-level texts it does not avoid low-level details, instead it selectively dives into fine points for exemplary topics to concretely illustrate concepts and principles. The book is rigorous in the sense of being technically sound, but avoids both mathematical proofs and lengthy source-code examples that typically make books inaccessible to general audiences. Knowledge of elementary operating system and networking concepts is helpful, but review sections summarize the essential background. For graduate students, inline exercises and supplemental references provided in per-chapter endnotes provide a bridge to further topics and a springboard to the research literature; for those in industry and government, pointers are provided to helpful surveys and relevant standards, e.g., documents from the Internet Engineering Task Force (IETF), and the U.S. National Institute of Standards and Technology.
The Book of Satoshi

Python for Finance
Building Smart Contracts and DApps
A Step by Step Guide to Day and Swing Trading Bitcoin and
Other Cryptocurrencies for Profits
Mastering Ethereum
Distributed ledger technology, decentralization, and smart
contracts explained, 2nd Edition
Mastering BitcoinProgramming the Open
Blockchain"O'Reilly Media, Inc."
The financial industry has recently adopted
Python at a tremendous rate, with some of the
largest investment banks and hedge funds
using it to build core trading and risk
management systems. Updated for Python 3, the
second edition of this hands-on book helps
you get started with the language, guiding
developers and quantitative analysts through
Python libraries and tools for building
financial applications and interactive
financial analytics. Using practical examples
throughout the book, author Yves Hilpisch
also shows you how to develop a full-fledged
framework for Monte Carlo simulation-based
derivatives and risk analytics, based on a
large, realistic case study. Much of the book
uses interactive IPython Notebooks.
Learn to design, implement, and secure your
IoT infrastructure. Revised and expanded for
edge computing. Key Features Build a complete
IoT system that's the best fit for your
organization Learn about different concepts,
tech, and trade-offs in the IoT architectural
stack Understand the theory and
implementation of each element that comprises

IoT design Book Description Industries are embracing IoT technologies to improve operational expenses, product life, and people's well-being. An architectural guide is needed if you want to traverse the spectrum of technologies needed to build a successful IoT system, whether that's a single device or millions of IoT devices. IoT and Edge Computing for Architects, Second Edition encompasses the entire spectrum of IoT solutions, from IoT sensors to the cloud. It examines modern sensor systems, focusing on their power and functionality. It also looks at communication theory, paying close attention to near-range PAN, including the new Bluetooth® 5.0 specification and mesh networks. Then, the book explores IP-based communication in LAN and WAN, including 802.11ah, 5G LTE cellular, Sigfox, and LoRaWAN. It also explains edge computing, routing and gateways, and their role in fog computing, as well as the messaging protocols of MQTT 5.0 and CoAP. With the data now in internet form, you'll get an understanding of cloud and fog architectures, including the OpenFog standards. The book wraps up the analytics portion with the application of statistical analysis, complex event processing, and deep learning models. The book then concludes by providing a holistic view of IoT security, cryptography, and shell security in addition to software-defined perimeters and blockchains. What you will learn Understand the role and scope of

architecting a successful IoT deployment Scan the landscape of IoT technologies, from sensors to the cloud and more See the trade-offs in choices of protocols and communications in IoT deployments Become familiar with the terminology needed to work in the IoT space Broaden your skills in the multiple engineering domains necessary for the IoT architect Implement best practices to ensure reliability, scalability, and security in your IoT infrastructure Who this book is for This book is for architects, system designers, technologists, and technology managers who want to understand the IoT ecosphere, technologies, and trade-offs, and develop a 50,000-foot view of IoT architecture. An understanding of the architectural side of IoT is necessary. Publisher's Note: This edition from 2019 is outdated and is not compatible with the latest version of Go. A new third edition, updated for 2021 and featuring the latest in Go programming, has now been published. Key Features • Second edition of the bestselling guide to advanced Go programming, expanded to cover machine learning, more Go packages and a range of modern development techniques • Completes the Go developer's education with real-world guides to building high-performance production systems • Packed with practical examples and patterns to apply to your own development work • Clearly explains Go nuances and features to remove the frustration from Go development Book

Description Often referred to (incorrectly) as Golang, Go is the high-performance systems language of the future. Mastering Go, Second Edition helps you become a productive expert Go programmer, building and improving on the groundbreaking first edition. Mastering Go, Second Edition shows how to put Go to work on real production systems. For programmers who already know the Go language basics, this book provides examples, patterns, and clear explanations to help you deeply understand Go's capabilities and apply them in your programming work. The book covers the nuances of Go, with in-depth guides on types and structures, packages, concurrency, network programming, compiler design, optimization, and more. Each chapter ends with exercises and resources to fully embed your new knowledge. This second edition includes a completely new chapter on machine learning in Go, guiding you from the foundation statistics techniques through simple regression and clustering to classification, neural networks, and anomaly detection. Other chapters are expanded to cover using Go with Docker and Kubernetes, Git, WebAssembly, JSON, and more. If you take the Go programming language seriously, the second edition of this book is an essential guide on expert techniques. What you will learn •
Clear guidance on using Go for production systems • Detailed explanations of how Go internals work, the design choices behind the language, and how to optimize your Go code •

A full guide to all Go data types, composite types, and data structures • Master packages, reflection, and interfaces for effective Go programming • Build high-performance systems networking code, including server and client-side applications • Interface with other systems using WebAssembly, JSON, and gRPC • Write reliable, high-performance concurrent code • Build machine learning systems in Go, from simple statistical regression to complex neural networks Who this book is for Mastering Go, Second Edition is for Go programmers who already know the language basics, and want to become expert Go practitioners. Table of Contents • Go and the Operating System • Understanding Go Internals • Working with Basic Go Data Types • The Uses of Composite Types • How to Enhance Go Code with Data Structures • What You Might Not Know About Go Packages and functions • Reflection and Interfaces for All Seasons • Telling a Unix System What to Do • Concurrency in Go: Goroutines, Channels, and Pipelines • Concurrency in Go: Advanced Topics • Code Testing, Optimization, and Profiling • The Foundations of Network Programming in Go • Network Programming: Building Your Own Servers and Clients • Machine Learning in Go Review "Mastering Go - Second Edition is a must-read for developers wanting to expand their knowledge of the language or wanting to pick it up from scratch" -- Alex Ellis - Founder of OpenFaaS Ltd, CNCF Ambassador

Want to join the technological revolution that's taking the world of finance by storm? Mastering Bitcoin is your guide through the seemingly complex world of bitcoin, providing the requisite knowledge to help you participate in the internet of money. Whether you're building the next killer app, investing in a startup, or simply curious about the technology, this practical book is essential reading. Bitcoin, the first successful decentralized digital currency, is still in its infancy and it's already spawned a multi-billion dollar global economy. This economy is open to anyone with the knowledge and passion to participate. Mastering Bitcoin provides you with the knowledge you need

(passion not included). This book includes: A broad introduction to bitcoin—ideal for non-technical users, investors, and business executives An explanation of the technical foundations of bitcoin and cryptographic currencies for developers, engineers, and software and systems architects Details of the bitcoin decentralized network, peer-to-peer architecture, transaction lifecycle, and security principles Offshoots of the bitcoin and blockchain inventions, including alternative chains, currencies, and applications User stories, analogies, examples, and code snippets illustrating key technical concepts Distributed ledgers, decentralization and smart contracts explained About This Book Get to grips with the underlying technical principles and implementations of blockchain. Build powerful applications using Ethereum to secure transactions and create smart contracts. Explore cryptography, mine cryptocurrencies, and solve scalability issues with this comprehensive guide. Who This Book Is For This book appeals

to those who wish to build fast, highly secure, transactional applications. This book is for those who are familiar with the concept of blockchain and are comfortable with a programming language. What You Will Learn Master the theoretical and technical foundations of blockchain technology Fully comprehend the concept of decentralization, its impact and relationship with blockchain technology Experience how cryptography is used to secure data with practical examples Grasp the inner workings of blockchain and relevant mechanisms behind Bitcoin and alternative cryptocurrencies Understand theoretical foundations of smart contracts Identify and examine applications of blockchain technology outside of currencies Investigate alternate blockchain solutions including Hyperledger, Corda, and many more Explore research topics and future scope of blockchain technology In Detail Blockchain is a distributed database that enables permanent, transparent, and secure storage of data. The blockchain technology is the backbone of cryptocurrency – in fact,

it's the shared public ledger upon which the entire Bitcoin network relies — and it's gaining popularity with people who work in finance, government, and the arts. Blockhchain technology uses cryptography to keep data secure. This book gives a detailed description of this leading technology and its implementation in the real world. This book begins with the technical foundations of blockchain, teaching you the fundamentals of cryptography and how it keeps data secure. You will learn about the mechanisms behind cryptocurrencies and how to develop applications using Ethereum, a decentralized virtual machine. You will explore different blockchain solutions and get an exclusive preview into Hyperledger, an upcoming blockchain solution from IBM and the Linux Foundation. You will also be shown how to implement blockchain beyond currencies, scability with blockchain, and the future scope of this fascinating and powerful technology. Style and approach This comprehensive guide allows you to build smart blockchain applications and explore the

power of this database. The book will let you quickly brush up on the basics of the blockchain database, followed by advanced implementations of blockchain in currency, smart contracts, decentralization, and so on. Beginning with a basic primer on reverse engineering-including computer internals, operating systems, and assembly language-and then discussing the various applications of reverse engineering, this book provides readers with practical, in-depth techniques for software reverse engineering. The book is broken into two parts, the first deals with security-related reverse engineering and the second explores the more practical aspects of reverse engineering. In addition, the author explains how to reverse engineer a third-party software library to improve interfacing and how to reverse engineer a competitor's software to build a better product. * The first popular book to show how software reverse engineering can help defend against security threats, speed up development, and unlock the secrets of competitive products * Helps developers plug

security holes by demonstrating how
hackers exploit reverse engineering
techniques to crack copy-protection
schemes and identify software targets
for viruses and other malware * Offers
a primer on advanced reverse-
engineering, delving into
"disassembly"-code-level reverse
engineering-and explaining how to
decipher assembly language
Exploit design, deployment, and
management of large-scale containers
Key Features Explore the latest
features available in Kubernetes 1.10
Ensure that your clusters are always
available, scalable, and up to date
Master the skills of designing and
deploying large clusters on various
cloud platforms Book Description
Kubernetes is an open source system
that is used to automate the
deployment, scaling, and management of
containerized applications. If you are
running more containers or want
automated management of your
containers, you need Kubernetes at your
disposal. To put things into
perspective, Mastering Kubernetes walks
you through the advanced management of

Kubernetes clusters. To start with, you will learn the fundamentals of both Kubernetes architecture and Kubernetes design in detail. You will discover how to run complex stateful microservices on Kubernetes including advanced features such as horizontal pod autoscaling, rolling updates, resource quotas, and persistent storage backend. Using real-world use cases, you will explore the options for network configuration, and understand how to set up, operate, and troubleshoot various Kubernetes networking plugins. In addition to this, you will get to grips with custom resource development and utilization in automation and maintenance workflows. To scale up your knowledge of Kubernetes, you will encounter some additional concepts based on the Kubernetes 1.10 release, such as Promethus, Role-based access control, API aggregation, and more. By the end of this book, you'll know everything you need to graduate from intermediate to advanced level of understanding Kubernetes. What you will learn Architect a robust Kubernetes cluster for long-time operation

Discover the advantages of running
Kubernetes on GCE, AWS, Azure, and bare
metal Understand the identity model of
Kubernetes, along with the options for
cluster federation Monitor and
troubleshoot Kubernetes clusters and
run a highly available Kubernetes
Create and configure custom Kubernetes
resources and use third-party resources
in your automation workflows Enjoy the
art of running complex stateful
applications in your container
environment Deliver applications as
standard packages Who this book is for
Mastering Kubernetes is for you if you
are a system administrator or a
developer who has an intermediate
understanding of Kubernetes and wish to
master its advanced features. Basic
knowledge of networking would also be
helpful. In all, this advanced-level
book provides a smooth pathway to
mastering Kubernetes.
How to Buy Bitcoins, Sell Bitcoins, and
Invest in Bitcoins
Mastering Bitcoin and Cryptocurrency
Trading For Beginners
Implementing edge and IoT systems from
sensors to clouds with communication

systems, analytics, and security, 2nd
Edition
Edicion Abierta
The Internet of Money Volume Three: A
Collection of Talks by Andreas M.
Antonopoulos
Grokking Bitcoin
Cryptoasset Inheritance Planning
Are you new to cryptocurrencies? For the first time,
Anthony Tu reveals 5 expert tips that will give
beginners the edge when investing in
cryptocurrencies. Cryptocurrencies are a craze right
now, and they present an attractive investment
opportunity for anyone with some extra cash. So
when it comes to investing in cryptocurrencies, many
people have a lot of doubts and questions. They
aren't sure about the risks involved, and are confused
by the rumors spread by everyone. Whether you're a
beginner or a professional, if you want to understand
how to invest and make money, you must understand
the basics of which you're investing in. The multi-
billionaire investor Warren Buffet once said; "Never
invest in a business you cannot understand." In this
book, we will first familiarize you with the concepts of
cryptocurrency, explain the various benefits and risks
that come with it, and tell you five secrets you need to
follow while investing into cryptocurrencies. Here is
what you will learn... - Fundamentals of
Cryptocurrency Markets - Important Cryptocurrency

Terminology - Benefits of Investing into
Cryptocurrencies - Risks of Investing in
Cryptocurrencies - 5 Expert Secrets in
Cryptocurrency Investment
Introductory textbook in the important area of network
security for undergraduate and graduate students
Comprehensively covers fundamental concepts with
newer topics such as electronic cash, bit-coin, P2P,
SHA-3, E-voting, and Zigbee security Fully updated
to reflect new developments in network security
Introduces a chapter on Cloud security, a very
popular and essential topic Uses everyday examples
that most computer users experience to illustrate
important principles and mechanisms Features a
companion website with Powerpoint slides for
lectures and solution manuals to selected exercise
problems, available at
http://www.cs.uml.edu/~wang/NetSec
An eclectic history of human curiosity, a great feast of
ideas, and a memoir of a reading life from an
internationally celebrated reader and thinker Curiosity
has been seen through the ages as the impulse that
drives our knowledge forward and the temptation that
leads us toward dangerous and forbidden waters.
The question "Why?" has appeared under a
multiplicity of guises and in vastly different contexts
throughout the chapters of human history. Why does
evil exist? What is beauty? How does language
inform us? What defines our identity? What is our

responsibility to the world? In Alberto Manguel's most personal book to date, the author tracks his own life of curiosity through the reading that has mapped his way. Manguel chooses as his guides a selection of writers who sparked his imagination. He dedicates each chapter to a single thinker, scientist, artist, or other figure who demonstrated in a fresh way how to ask "Why?" Leading us through a full gallery of inquisitives, among them Thomas Aquinas, David Hume, Lewis Carroll, Rachel Carson, Socrates, and, most importantly, Dante, Manguel affirms how deeply connected our curiosity is to the readings that most astonish us, and how essential to the soaring of our own imaginations.

A comprehensive and authoritative exploration of Bitcoin and its place in monetary history When a pseudonymous programmer introduced "a new electronic cash system that's fully peer-to-peer, with no trusted third party" to a small online mailing list in 2008, very few people paid attention. Ten years later, and against all odds, this upstart autonomous decentralized software offers an unstoppable and globally accessible hard money alternative to modern central banks. The Bitcoin Standard analyzes the historical context to the rise of Bitcoin, the economic properties that have allowed it to grow quickly, and its likely economic, political, and social implications. While Bitcoin is an invention of the digital age, the problem it purports to solve is as old as human

society itself: transferring value across time and space. Author Saifedean Ammous takes the reader on an engaging journey through the history of technologies performing the functions of money, from primitive systems of trading limestones and seashells, to metals, coins, the gold standard, and modern government debt. Exploring what gave these technologies their monetary role, and how most lost it, provides the reader with a good idea of what makes for sound money, and sets the stage for an economic discussion of its consequences for individual and societal future-orientation, capital accumulation, trade, peace, culture, and art. Compellingly, Ammous shows that it is no coincidence that the loftiest achievements of humanity have come in societies enjoying the benefits of sound monetary regimes, nor is it coincidental that monetary collapse has usually accompanied civilizational collapse. With this background in place, the book moves on to explain the operation of Bitcoin in a functional and intuitive way. Bitcoin is a decentralized, distributed piece of software that converts electricity and processing power into indisputably accurate records, thus allowing its users to utilize the Internet to perform the traditional functions of money without having to rely on, or trust, any authorities or infrastructure in the physical world. Bitcoin is thus best understood as the first successfully implemented form of digital cash

and digital hard money. With an automated and perfectly predictable monetary policy, and the ability to perform final settlement of large sums across the world in a matter of minutes, Bitcoin's real competitive edge might just be as a store of value and network for the final settlement of large payments—a digital form of gold with a built-in settlement infrastructure. Ammous' firm grasp of the technological possibilities as well as the historical realities of monetary evolution provides for a fascinating exploration of the ramifications of voluntary free market money. As it challenges the most sacred of government monopolies, Bitcoin shifts the pendulum of sovereignty away from governments in favor of individuals, offering us the tantalizing possibility of a world where money is fully extricated from politics and unrestrained by borders. The final chapter of the book explores some of the most common questions surrounding Bitcoin: Is Bitcoin mining a waste of energy? Is Bitcoin for criminals? Who controls Bitcoin, and can they change it if they please? How can Bitcoin be killed? And what to make of all the thousands of Bitcoin knockoffs, and the many supposed applications of Bitcoin's 'block chain technology'? The Bitcoin Standard is the essential resource for a clear understanding of the rise of the Internet's decentralized, apolitical, free-market alternative to national central banks. Reversing

The Bitcoin Standard
Programming the Open Blockchain
Secrets of Reverse Engineering
Network Security Hacks
Dominando a Ethereum
Master the art of container management by using the power of Kubernetes, 2nd Edition

Introduces more than one hundred effective ways to ensure security in a Linux, UNIX, or Windows network, covering both TCP/IP-based services and host-based security techniques, with examples of applied encryption, intrusion detections, and logging.
A highly readable account of a complex subject, In Math We Trust is all you need to find out about Bitcoin, cryptocurrency, the future of money and the journey to being your own bank. Money is the most important human invention after language. It provides tokens for the faith we have in each other and society, but that trust has been violated repeatedly throughout history by the middlemen and authorities we rely upon in order to transact with each other. Now a new kind of money promises to rescue us from these tyrants and return us to the roots of money, without relying on third-parties. Instead of putting our faith in banks and governments, we can trust math. Simon Dingle has been working with Bitcoin and other cryptocurrencies since 2011, designing products that make it easier to engage with this new world of money. He is also a broadcaster, writer and speaker who makes complex subjects simple for his audiences. Having led the product team at one of the world's first Bitcoin exchanges and on other popular fintech products, Simon continues to design and invest

in projects that make money more fair, this in addition to his weekly radio show that helps people with technology more generally. In this book Simon looks at the evolution of human trust that not only explains how cryptocurrencies work and the origins of Bitcoin, but how you can use these networks to take control of your own financial universe.

Creating robust software requires the use of efficient algorithms, but programmers seldom think about them until a problem occurs. Algorithms in a Nutshell describes a large number of existing algorithms for solving a variety of problems, and helps you select and implement the right algorithm for your needs -- with just enough math to let you understand and analyze algorithm performance. With its focus on application, rather than theory, this book provides efficient code solutions in several programming languages that you can easily adapt to a specific project. Each major algorithm is presented in the style of a design pattern that includes information to help you understand why and when the algorithm is appropriate. With this book, you will: Solve a particular coding problem or improve on the performance of an existing solution Quickly locate algorithms that relate to the problems you want to solve, and determine why a particular algorithm is the right one to use Get algorithmic solutions in C, C++, Java, and Ruby with implementation tips Learn the expected performance of an algorithm, and the conditions it needs to perform at its best Discover the impact that similar design decisions have on different algorithms Learn advanced data structures to improve the efficiency of algorithms With Algorithms in a Nutshell, you'll learn how to improve the performance of key algorithms essential for the success of your

software applications.
Join the technological revolution that's taking the financial world by storm. Mastering Bitcoin is your guide through the seemingly complex world of bitcoin, providing the knowledge you need to participate in the internet of money. Whether you're building the next killer app, investing in a startup, or simply curious about the technology, this revised and expanded second edition provides essential detail to get you started. Bitcoin, the first successful decentralized digital currency, is still in its early stages and yet it's already spawned a multi-billion-dollar global economy open to anyone with the knowledge and passion to participate. Mastering Bitcoin provides the knowledge. You simply supply the passion. The second edition includes: A broad introduction of bitcoin and its underlying blockchain—ideal for non-technical users, investors, and business executives An explanation of the technical foundations of bitcoin and cryptographic currencies for developers, engineers, and software and systems architects Details of the bitcoin decentralized network, peer-to-peer architecture, transaction lifecycle, and security principles New developments such as Segregated Witness, Payment Channels, and Lightning Network A deep dive into blockchain applications, including how to combine the building blocks offered by this platform into higher-level applications User stories, analogies, examples, and code snippets illustrating key technical concepts
Bitcoin for Beginners
Cryptocurrency
A Simple Guide for Owners
Algorithms in a Nutshell
Mastering Data-Driven Finance
Cryptocurrency Secrets

Bitcoin, Cryptocurrency and the Journey To Being Your Own Bank

"Have you, like the rest of the world, speculated as to the identity of Satoshi Nakamoto, anonymous creator of Bitcoin? The world's first cryptocurrency, Bitcoin went online in 2009 and has since revolutionized our concepts of currency and money. Not supported by any government or central bank, completely electronic, Bitcoin is a virtual currency based on advanced cryptographic systems. Like the currency he created, the identity of Bitcoin's creator Satoshi Nakamoto is virtual, existing only online. The Nakamoto persona, which may represent an individual or a group, exists only in the online publications that introduced and explained Bitcoin during its earliest days. Here, collected and professionally published for the first time are the essential writings that detail Bitcoin's creation. Included are: Satoshi Nakamoto Emails and Posts on Computer Forums Presented in Chronological Order; Bitcoin Fundamentals Presented in Layman's Terms; Bitcoin's Potential and Profound Economic Implications; The Seminal Paper Which Started It All. The Book of Satoshi provides a convenient way to parse through what Bitcoin's creator wrote over the span of the two years that constituted his "public life" before he disappeared from the Internet ... at least under the name Satoshi Nakamoto. Beginning on November 1st 2009 with the publication of the seminal paper describing

Bitcoin, this public life ends at about the time PC World speculated as to a possible link between Bitcoin and WikiLeaks, the infamous website that publishes leaked classified materials. Was there a connection? You be the judge. Nakamoto's true identity may never be known. Therefore the writings reproduced here are probably all the world will ever hear from him concerning Bitcoin's creation, workings, and theoretical basis. Want to learn more about Bitcoin? Go directly to the source - the writings of the creator himself, Satoshi Nakamoto!"--Amazon.com viewed October 1, 2014.
"What happens to my bitcoin, ether, or other cryptoassets when I die?" Cryptoasset Inheritance Planning: A Simple Guide for Owners by Pamela Morgan, Esq. is a clear blueprint to inheritance planning for those holding cryptocurrency, tokens, crypto-collectibles, and other cryptoassets. Since 2015, Pamela has educated thousands of cryptocurrency owners around the world about why inheritance planning for cryptoassets matters and how to do it in a secure, usable, resilient, and efficient manner. In this book, Pamela walks you through her successful step-by-step inheritance planning processes. These processes are designed to help you build a customized cryptoasset inheritance access plan - and you don't need to be a security expert or lawyer to do it. Inside you'll also find helpful tools like checklists, templates, and worksheets to make

building your plan simple and easy. Topics include: * how to write a basic access plan in two to three hours * how to assess your risks and make your plan better * debunking common myths and misconceptions about cryptoasset inheritance planning * what laws you need to know about and why * how to interview, hire, and fire a lawyer and how to keep costs down * why smart contracts don't apply to inheritance today, but will someday * and so much more By the time you complete the book, your plans should: (1) allow your heirs to take possession of your cryptoassets when the time comes, but not before, (2) minimize the opportunity for others to steal cryptoassets from your loved ones, (3) provide an opportunity for your loved ones to hold the assets securely, instead of liquidating, (4) prevent fighting amongst your heirs and avoid legal problems whenever possible. Buy this book, follow the processes, and you'll be able to confidently answer the question, "What happens to my bitcoin, ether, or other cryptoassets when I die?" F.A.Q. Who is this book written for? If you own any cryptocurrency or cryptoasset tokens, this book is for you. If you use an exchange to buy and sell cryptoassets, this book is for you. If you've ever asked the question, "What will happen to my bitcoin, ether, or other cryptoassets when I die?" this book is for you. If you want someone, anyone, to inherit your cryptoassets when you die, this book is for you. Do I need to be an

**attorney or security expert to use this book?
No. This book isn't written specifically for
lawyers, security experts, or cryptographers,
though they may benefit from the material. I
don't live in the USA, is this book still
relevant to my inheritance planning? The
entire book, with the exception of the Making
it Legal, is applicable to any cryptoasset
owner in any jurisdiction. The Making it
Legal section cites some USA law but the
principles are broadly applicable around the
world. Will this book teach me about specific
cryptoasset laws in my jurisdiction? No. A
book like that is called a legal treatise;
they're heady and dense, even for lawyers.
Instead, this book focuses on practical
information you need know, like what happens
to your assets if you don't have a will and
why you shouldn't put your cryptographic keys
in your will. You'll learn about high-level
legal concepts that might affect your assets,
how to find out more information about the
laws in your jurisdiction, and how to keep
legal costs down. The unique challenges with
cryptoasset inheritance planning are not
primarily legal - they're primarily
technical. With this book, you'll learn how
to create a cryptoasset access plan for your
heirs. Your access plan aims to answer the
question, "From a practical perspective, how
will my loved ones access my cryptoassets
when I'm not around to help them?"
I'm sure many of you are curious of this so
called "21st-century money of the future and**

**due to its increasing recognition and
security, the cryptocurrency market looks
bright ahead. By the end of this e-book,
you'll certainly know more about
cryptocurrency than most people out there. It
will show you how to grow and invest your
money with cryptocurrency.
Learn about cryptography and
cryptocurrencies, so you can build highly
secure, decentralized applications and
conduct trusted in-app transactions. Key
Features Get to grips with the underlying
technical principles and implementations of
blockchain Build powerful applications using
Ethereum to secure transactions and create
smart contracts Explore cryptography, mine
cryptocurrencies, and solve scalability
issues with this comprehensive guide Book
Description A blockchain is a distributed
ledger that is replicated across multiple
nodes and enables immutable, transparent and
cryptographically secure record-keeping of
transactions. The blockchain technology is
the backbone of cryptocurrencies, and it has
applications in finance, government, media
and almost all other industries. Mastering
Blockchain, Second Edition has been
thoroughly updated and revised to provide a
detailed description of this leading
technology and its implementation in the real
world. This book begins with the technical
foundations of blockchain technology,
teaching you the fundamentals of distributed
systems, cryptography and how it keeps data**

secure. You will learn about the mechanisms behind cryptocurrencies and how to develop applications using Ethereum, a decentralized virtual machine. You will also explore different other blockchain solutions and get an introduction to business blockchain frameworks under Hyperledger, a collaborative effort for the advancement of blockchain technologies hosted by the Linux Foundation. You will also be shown how to implement blockchain solutions beyond currencies, Internet of Things with blockchain, blockchain scalability, and the future scope of this fascinating and powerful technology. What you will learn Master the theoretical and technical foundations of the blockchain technology Understand the concept of decentralization, its impact, and its relationship with blockchain technology Master how cryptography is used to secure data - with practical examples Grasp the inner workings of blockchain and the mechanisms behind bitcoin and alternative cryptocurrencies Understand the theoretical foundations of smart contracts Learn how Ethereum blockchain works and how to develop decentralized applications using Solidity and relevant development frameworks Identify and examine applications of the blockchain technology - beyond currencies Investigate alternative blockchain solutions including Hyperledger, Corda, and many more Explore research topics and the future scope of blockchain technology Who this book is for

This book will appeal to those who wish to build fast, highly secure, transactional applications. It targets people who are familiar with the concept of blockchain and are comfortable with a programming language. The Internet of Money Volume Two Theory and Practice Build Your Own Blockchain Programming Bitcoin Why It's Not Too Late to Become a Millionaire Investor With Digital Money Blockchain, Ethereum, Litecoin Trading

Ethereum represents the gateway to a worldwide, decentralized computing paradigm. This platform enables you to run decentralized applications (DApps) and smart contracts that have no central points of failure or control, integrate with a payment network, and operate on an open blockchain. With this practical guide, Andreas M. Antonopoulos and Gavin Wood provide everything you need to know about building smart contracts and DApps on Ethereum and other virtual-machine blockchains. Discover why IBM, Microsoft, NASDAQ, and hundreds of other organizations are experimenting with Ethereum. This essential guide shows you how to develop the skills necessary to be an innovator in this growing and exciting new industry. Run an Ethereum client, create and transmit basic transactions,

*and program smart contracts Learn the
essentials of public key cryptography,
hashes, and digital signatures Understand
how "wallets" hold digital keys that
control funds and smart contracts Interact
with Ethereum clients programmatically
using JavaScript libraries and Remote
Procedure Call interfaces Learn security
best practices, design patterns, and anti-
patterns with real-world examples Create
tokens that represent assets, shares,
votes, or access control rights Build
decentralized applications using multiple
peer-to-peer (P2P) components
While many books explain the how of
bitcoin, The Internet of Money delves into
the why of bitcoin. Acclaimed information-
security expert and author of Mastering
Bitcoin, Andreas M. Antonopoulos examines
and contextualizes the significance of
bitcoin through a series of essays
spanning the exhilarating maturation of
this technology. Bitcoin, a technological
breakthrough quietly introduced to the
world in 2008, is transforming much more
than finance. Bitcoin is disrupting
antiquated industries to bring financial
independence to billions worldwide. In
this book, Andreas explains why bitcoin is
a financial and technological evolution
with potential far exceeding the label*

*-digital currency.- Andreas goes beyond
exploring the technical functioning of the
bitcoin network by illuminating bitcoin's
philosophical, social, and historical
implications. As the internet has
essentially transformed how people around
the world interact and has permanently
impacted our lives in ways we never could
have imagined, bitcoin--the internet of
money--is fundamentally changing our
approach to solving social, political, and
economic problems through decentralized
technology.*

*This book provides a comprehensive
introduction to blockchain and distributed
ledger technology. Intended as an applied
guide for hands-on practitioners, the book
includes detailed examples and in-depth
explanations of how to build and run a
blockchain from scratch. Through its
conceptual background and hands-on
exercises, this book allows students,
teachers and crypto enthusiasts to launch
their first blockchain while assuming
prior knowledge of the underlying
technology. How do I build a blockchain?
How do I mint a cryptocurrency? How do I
write a smart contract? How do I launch an
initial coin offering (ICO)? These are
some of questions this book answers.
Starting by outlining the beginnings and*

development of early cryptocurrencies, it provides the conceptual foundations required to engineer secure software that interacts with both public and private ledgers. The topics covered include consensus algorithms, mining and decentralization, and many more. "This is a one-of-a-kind book on Blockchain technology. The authors achieved the perfect balance between the breadth of topics and the depth of technical discussion. But the real gem is the set of carefully curated hands-on exercises that guide the reader through the process of building a Blockchain right from Chapter 1." Volodymyr Babich, Professor of Operations and Information Management, McDonough School of Business, Georgetown University "An excellent introduction of DLT technology for a non-technical audience. The book is replete with examples and exercises, which greatly facilitate the learning of the underlying processes of blockchain technology for all, from students to entrepreneurs." Serguei Netessine, Dhirubhai Ambani Professor of Innovation and Entrepreneurship, The Wharton School, University of Pennsylvania "Whether you want to start from scratch or deepen your blockchain knowledge about the latest

developments, this book is an essential reference. Through clear explanations and practical code examples, the authors take you on a progressive journey to discover the technology foundations and build your own blockchain. From an operations perspective, you can learn the principles behind the distributed ledger technology relevant for transitioning towards blockchain-enabled supply chains. Reading this book, you'll get inspired, be able to assess the applicability of blockchain to supply chain operations, and learn from best practices recognized in real-world examples." Ralf W. Seifert, Professor of Technology and Operations Management at EPFL and Professor of Operations Management at IMD