

Beginning Ruby From Novice To Professional Peter Cooper

Become an accomplished Ruby programmer by understanding the design principles, best practices, and trade-offs involved in implementation approaches to keep your Ruby applications maintainable in the long term

Key Features

- Understand the design principles behind polished Ruby code and trade-offs between implementation approaches
- Use metaprogramming and DSLs to reduce the amount of code needed without decreasing maintainability
- Learn Ruby web application design principles and strategies for databases, security, and testing

Book Description

Most successful Ruby applications become difficult to maintain over time as the codebase grows in size. Polished Ruby Programming provides you with recommendations and advice for designing Ruby programs that are easy to maintain in the long term. This book takes you through implementation approaches for many common programming situations, the trade-offs inherent in each approach, and why you may choose to use different approaches in different situations. You'll start by learning fundamental Ruby programming principles, such as correctly using core classes, class and method design, variable usage, error handling, and code formatting. Moving on, you'll learn higher-level programming principles, such as library design, use of metaprogramming and domain-specific languages, and refactoring. Finally, you'll learn principles specific to web application development, such as how to choose a database and web framework, and how to use advanced security features. By the end of this Ruby programming book, you'll have gained the skills you need to design robust, high-performance, scalable, and maintainable Ruby applications. While most code examples and principles discussed in the book apply to all Ruby versions, some examples and principles are specific to Ruby 3.0, the latest release at the time of publication.

What you will learn

- Use Ruby's core classes and design custom classes effectively
- Explore the principles behind variable usage and method argument choice
- Implement advanced error handling approaches such as exponential backoff
- Design extensible libraries and plugin systems in Ruby
- Use metaprogramming and DSLs to avoid code redundancy
- Implement different approaches to testing and understand their trade-offs
- Discover design patterns, refactoring, and optimization with Ruby
- Explore database design principles and advanced web app security

Who this book is for

If you already know how to program in Ruby and want to learn more about the principles and best practices behind writing maintainable, scalable, optimized, and well-structured Ruby code, then this Ruby book is for you. Intermediate to advanced-level working knowledge of the Ruby programming language is expected to get the most out of this book.

Ruby is famous for being easy to learn, but most users only scratch the surface of what it can do. While other books focus on Ruby's trendier features, The Book of Ruby reveals the secret inner workings of one of the world's most popular programming languages, teaching you to write clear, maintainable code. You'll start with the basics—types, data structures, and control flows—and progress to advanced features like blocks, mixins, metaclasses, and beyond. Rather than bog you down with a lot of theory, The Book of Ruby takes a hands-on approach and focuses on making you productive from day one. As you follow along, you'll learn to:

- Leverage Ruby's succinct and flexible syntax to maximize your productivity
- Balance Ruby's functional, imperative, and object-oriented features
- Write self-modifying programs using dynamic programming techniques
- Create new fibers and threads to manage independent processes concurrently
- Catch and recover from execution errors with robust exception handling
- Develop powerful web applications with the Ruby on Rails framework

Each chapter includes a "Digging Deeper" section that shows you how Ruby works under the hood, so you'll never be caught off guard by its deceptively simple scoping, multithreading features, or precedence rules. Whether you're new to programming or just new Ruby, The Book of Ruby is your guide to rapid, real-world software development with this unique and elegant language.

Summary

The Well-Grounded Rubyist, Third Edition is a beautifully written tutorial that begins with your first Ruby program and takes you all the way to sophisticated topics like reflection, threading, and recursion. Ruby masters David A. Black and Joe Leo distill their years of knowledge for you, concentrating on the language and its uses so you can use Ruby in any way you choose. Updated for Ruby 2.5. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

About the Technology

Designed for developer productivity, Ruby is an easy-to-learn dynamic language perfect for creating virtually any kind of software. Its famously friendly development community, countless libraries, and amazing tools, like the Rails framework, have established it as the language of choice for high-profile companies, including GitHub, SlideShare, and Shopify. The future is bright for the well-grounded Rubyist!

About the Book

In The Well-Grounded Rubyist, Third Edition, expert authors David A. Black and Joseph Leo deliver Ruby mastery in an easy-to-read, casual style. You'll lock in core principles as you write your first Ruby programs. Then, you'll progressively build up to topics like reflection, threading, and recursion, cementing your knowledge with high-value exercises to practice your skills along the way.

What's Inside

- Basic Ruby syntax
- Running Ruby extensions
- FP concepts like currying, side-effect-free code, and recursion

Ruby 2.5 updates

About the Reader

For readers with beginner-level programming skills.

About the Authors

- David A. Black is an internationally known Ruby developer and author, and a cofounder of Ruby Central. Ruby teacher and advocate
- Joseph Leo III is the founder of Def Method and lead organizer of the Gotham Ruby Conference.

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A guide to Ruby programming covers such topics as working with objects, strings, and variables; implementing conditional logic; working with Regular Expressions; object-oriented programming; and debugging.

This book not only teaches the necessary skill set to become a proficient Ruby on Rails developer, it also explains the theory needed for the developer to explore and learn on their own. The reader will not be burdened by yet another set of "hello world" and other mundane examples. In this text they will learn Ruby on Rails by creating real world projects; a task manager, RSS aggregator, a community manager similar to MySpace.com, and an Amazon based store. While the book covers the basics for beginners, it also offers more advanced tools, including Ajax and a detailed discussion of ActiveRecord and ActionPack.

*The most updated PostgreSQL book on the market, covering version 8.0 *Highlights the most popular PostgreSQL APIs, including C, Perl, PHP, and Java *This is two books in one; it simultaneously covers key relational database design principles, while teaching PostgreSQL

Learn JavaScript from scratch! Packed with numerous examples, JavaScript: Novice to Ninja is a fun, step-by-step and comprehensive introduction to development in JavaScript. Discover how to use JavaScript to solve real-world problems, build smarter forms, track user events, and design eye-catching animations. Learn JavaScript's built-in functions, methods, and properties. Use JavaScript to validate form entries and interact with your users. Understand how to respond to user events and add interactivity to your applications. Create animations that bring your web site to life. Start programming using the DOM And much more!

Effectively learn and apply software development and engineering techniques to web application development using Rails 6 with this accelerated tutorial. This book teaches modern engineering practices including git flow, containerization, debugging, testing, and deployment. Along the way, you'll see how to build a social network application and then deploy it on a cloud provider such as Amazon Web Services. After reading and using this book, you'll be able to effectively build and deploy your Rails application to the cloud. You'll also have used the Ruby on Rails framework to carry out the rapid development of an idea into a product without sacrificing quality. What You Will Learn Use the Ruby on Rails 6 web development framework Integrate Docker with your Ruby on Rails code Apply software engineering techniques to learning the Rails framework Design, build, and deploy a social networking application to the Amazon cloud Who This Book Is For Beginners with at least some prior programming experience. Ruby experience is helpful, but not required.

Anybody can start building simple apps for the Android platform, and this book will show you how! Android Apps for Absolute Beginners takes you through the process of getting your first Android applications up and running using plain English and practical examples. It cuts through the fog of jargon and mystery that surrounds Android application development, and gives you simple, step-by-step instructions to get you started. Teaches Android application development in language anyone can understand, giving you the best possible start in Android development Provides simple, step-by-step examples that make learning easy, allowing you to pick up the concepts without fuss Offers clear code descriptions and layout so that you can get your apps running as soon as possible

This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. Used by sites as varied as Twitter, GitHub, Disney, and Airbnb, Ruby on Rails is one of the most popular frameworks for developing web applications, but it can be challenging to learn and use. Whether you're new to web development or new only to Rails, Ruby on Rails™ Tutorial, Fourth Edition, is the solution. Best-selling author and leading Rails developer Michael Hartl teaches Rails by guiding you through the development of three example applications of increasing sophistication. The tutorial's examples focus on the general principles of web development needed for virtually any kind of website. The updates to this edition include full compatibility with Rails 5, a division of the largest chapters into more manageable units, and a huge number of new exercises interspersed in each chapter for maximum reinforcement of the material. This indispensable guide provides integrated tutorials not only for Rails, but also for the essential Ruby, HTML, CSS, and SQL skills you need when developing web applications. Hartl explains how each new technique solves a real-world problem, and then he demonstrates it with bite-sized code that's simple enough to understand, yet novel enough to be useful. Whatever your previous web development experience, this book will guide you to true Rails mastery. This book will help you Install and set up your Rails development environment, including pre-installed integrated development environment (IDE) in the cloud Go beyond generated code to truly understand how to build Rails applications from scratch Learn testing and test-driven development (TDD) Effectively use the Model-View-Controller (MVC) pattern Structure applications using the REST architecture Build static pages and transform them into dynamic ones Master the Ruby programming skills all Rails developers need Create high-quality site layouts and data models Implement registration and authentication systems, including validation and secure passwords Update, display, and delete users Upload images in production using a cloud storage service Implement account activation and password reset, including sending email with Rails Add social features and microblogging, including an introduction to Ajax Record version changes with Git and create a secure remote repository at Bitbucket Deploy your applications early and often with Heroku

Are You Ready To Learn Ruby Easily? This book aims to guide a complete novice in Ruby programming. This book is carefully crafted to aid the new or inexperienced programmer in learning to write a code in Ruby language. If you are someone who somehow developed a fear to explore the unknown and still interested in learning Ruby programming, then this book can truly help you. This book covers everything that a beginner in Ruby programming should learn. Understand that programming offers an infinite amount of information and knowledge. However, this book understands that it may overwhelm a mere beginner in programming if it tackles even the advanced features of the Ruby language. This book can help you build a solid, basic knowledge in programming that can help you a lot when you begin to write your own program in Ruby language. You can use the acquired knowledge to pursue or learn more about Ruby's advanced concepts later on. For now, just concentrate on the basics and make sure to absorb every lesson before you go to the next one. Practice makes perfect and this book provides a lot of practice programs or exercises that can help you enhance your experience in Ruby programming. The exercises are simple and easy to understand to help you comprehend the lesson quickly. You also need to take note of the error messages that you may encounter. Let them serve as your guide so you can avoid the same mistake in the future or help you resolve the same error when you encounter them once more. Learning Ruby programming in 7 days is not something impossible to accomplish. Even a person with a little or no experience with any programming language can learn it within those days. As you go through each lesson, you will notice that it is quite easy to understand. It becomes much simpler when you have patience and discipline. Understand that you will be able to learn the Ruby basics in 7 days, but that won't make you an instant expert. You still need to practice and work your way in discovering the cool things that you can do

with Ruby as you go along. Even expert programmers need to spend ample time in honing their programming skills. Before you know it, you are ready to create a more complex program. This book presents everything that a novice may need in understanding the basic Ruby programming. It is presented in such a way that anyone without prior programming knowledge will find it easy to understand - most technical jargons were kept to minimal, and they are the terminologies that you will likely encounter once you have started writing your program. Here's What You'll Learn From This Ruby For Beginners Book: ? Chapter 1: Getting acquainted with ruby ? Chapter 2: Initial Preparations ? Chapter 3: Start with the Basics ? Chapter 4: Ruby Variables ? Chapter 5: All About Methods ? Chapter 6: Flow Control ? Chapter 7: Iterators and Loops ? Chapter 8: More on Arrays and Hashes What Are You Waiting For? Start Coding Ruby Right Now!

Beginning Ruby From Novice to Professional Apress

Offers a Ruby tutorial featuring fifty-two exercises that cover such topics as installing the Ruby environment, organizing and writing code, strings and text, object-oriented programming, debugging and automated testing, and basic game development.

Jump Start Rails provides you with a fun and yet practical introduction to Rails, an incredibly popular framework that makes it possible to quickly develop incredibly powerful web applications with Ruby. This short book covers Rails 4, the latest version of the framework, and while it's not intended to be a completely comprehensive Rails guide or an in-depth Ruby tutorial, it will quickly get you up to speed with Rails and give you the confidence to start experimenting on your own. The book is built around a real-life example project: a personal portfolio site. It's a fun and easily understandable project that is used to demonstrate the concepts outlined in the book in a practical way. This is a clear, approachable and very easy-to-follow book that will get you to to speed with Rails in no time.

The extraordinary true story of Ruby Bridges, the first Black child to integrate a New Orleans school -- now with simple text for young readers!

Beginning Ruby is a thoroughly contemporary guide to this powerful object-oriented language. It's one of the only guides aimed at both the novice programmer as well as experienced developers who are new to Ruby. The book starts by explaining the principles behind object oriented programming and within a few chapters builds towards creating a genuine Ruby application. The book then explains key Ruby principles, such as classes and objects; projects, modules and libraries; and other aspects of Ruby such as database access. In addition, Ruby on Rails is covered in some depth and the book's appendixes provide essential and long-lasting reference information.

It's easier to learn how to program a computer than it has ever been before. Now everyone can learn to write programs for themselves - no previous experience is necessary. Chris Pine takes a thorough, but lighthearted approach that teaches you the fundamentals of computer programming, with a minimum of fuss or bother. Whether you are interested in a new hobby or a new career, this book is your doorway into the world of programming. Computers are everywhere, and being able to program them is more important than it has ever been. But since most books on programming are written for other programmers, it can be hard to break in. At least it used to be. Chris Pine will teach you how to program. You'll learn to use your computer better, to get it to do what you want it to do. Starting with small, simple one-line programs to calculate your age in seconds, you'll see how to write interactive programs, to use APIs to fetch live data from the internet, to rename your photos from your digital camera, and more. You'll learn the same technology used to drive modern dynamic websites and large, professional applications. Whether you are looking for a fun new hobby or are interested in entering the tech world as a professional, this book gives you a solid foundation in programming. Chris teaches the basics, but also shows you how to think like a programmer. You'll learn through tons of examples, and through programming challenges throughout the book. When you finish, you'll know how and where to learn more - you'll be on your way. What You Need: All you need to learn how to program is a computer (Windows, macOS, or Linux) and an internet connection. Chris Pine will lead you through setting set up with the software you will need to start writing programs of your own.

The Complete Guide to Writing More Maintainable, Manageable, Pleasing, and Powerful Ruby Applications Ruby's widely admired ease of use has a downside: Too many Ruby and Rails applications have been created without concern for their long-term maintenance or evolution. The Web is awash in Ruby code that is now virtually impossible to change or extend. This text helps you solve that problem by using powerful real-world object-oriented design techniques, which it thoroughly explains using simple and practical Ruby examples. Sandi Metz has distilled a lifetime of conversations and presentations about object-oriented design into a set of Ruby-focused practices for crafting manageable, extensible, and pleasing code. She shows you how to build new applications that can survive success and repair existing applications that have become impossible to change. Each technique is illustrated with extended examples, all downloadable from the companion Web site, poodr.info. The first title to focus squarely on object-oriented Ruby application design, Practical Object-Oriented Design in Ruby will guide you to superior outcomes, whatever your previous Ruby experience. Novice Ruby programmers will find specific rules to live by; intermediate Ruby programmers will find valuable principles they can flexibly interpret and apply; and advanced Ruby programmers will find a common language they can use to lead development and guide their colleagues. This guide will help you Understand how object-oriented programming can help you craft Ruby code that is easier to maintain and upgrade Decide what belongs in a single Ruby class Avoid entangling objects that should be kept separate Define flexible interfaces among objects Reduce programming overhead costs with duck typing Successfully apply inheritance Build objects via composition Design cost-effective tests Solve common problems associated with poorly designed Ruby code

Use Michael Hartl's Acclaimed Video Lessons and Best-Selling Book Side by Side to Master Rails Fast! LiveLessons™ DVD with 18+ hours of video instruction—a \$150 value Michael Hartl's Ruby on Rails™ 3 Tutorial, the #1 hands-on guide to Rails web programming—a \$40 value A \$190 value, this package delivers instant skills, answers, and solutions from 18+ hours of video LiveLessons (a \$150 value)...plus deeper insights from Ruby on Rails™ 3 Tutorial, the #1 Rails development guide (a \$40 value). About the LiveLessons DVD These focused video lessons help you learn crucial new skills fast—and put them to work immediately! Watch top Rails developer Michael Hartl guide you through building a complete application using today's best practices for MVC and REST design, layout, Ruby coding, security, testing, deployment, and more. Just place the DVD video in your computer's DVD drive, and master Rails the easy way.

Learn the principles behind object-oriented programming in Ruby and within a few chapters create a fully functional Ruby 3-based application. You'll gain a basic understanding of many ancillary technologies such as databases, XML, web frameworks, and networking - some of which will be needed for your first Ruby application. Based on the bestselling first and second editions, Beginning Ruby 3, 4th Edition is a leading guide to learn Ruby from the ground up. The new edition of this book provides the same excellent introduction to Ruby as the previous editions plus updates for the newest version of Ruby, including performance through an improved allocator, decreased heap fragmentation and more. Also, added: details on the just-in-time compiler, fewer limits on GIL (Global Interpreter Lock), and a static type checker.

You'll see why the light and agile Ruby programming language remains a popular open source scripting option for developers building today's web applications. This book can also be used as a textbook or companion to a textbook on beginning Ruby programming. After reading and using this book, you'll have a firm handle to program in the Ruby language. You will: Discover the fundamentals of Ruby and its object-oriented building blocks Use the Ruby libraries, gems, and documentation Work with files and databases Write and deploy Ruby applications Harness the various Ruby web frameworks and use them effectively Do network programming with Ruby .

Based on the bestselling first edition, *Beginning Ruby: From Novice to Professional, Second Edition* is the leading guide for every type of reader who wants to learn Ruby from the ground up. The new edition of this book provides the same excellent introduction to Ruby as the first edition plus updates for the newest version of Ruby, including the addition of the Sinatra and Ramaze web application frameworks and a chapter on GUI development so developers can take advantage of these new trends. *Beginning Ruby* starts by explaining the principles behind object-oriented programming and within a few chapters builds toward creating a full Ruby application. By the end of the book, in addition to in-depth knowledge of Ruby, you'll also have basic understanding of many ancillary technologies such as SQL, XML, web frameworks, and networking. Introduces readers to the Ruby programming language Takes readers from basic programming skills to web development with topics like Ruby-based frameworks and GUI programming Covers many ancillary technologies in order to provide a broader picture (e.g., databases, XML, network daemons)

Springboard your journey into web application development and discover how much fun building web applications with Ruby on Rails can be. This book has been revised to cover what's new in Rails 6 including features such as WebPack, advanced JavaScript integration, Action Mailbox, Action Text, system and parallel testing, Action Cable testing, and more. *Beginning Rails 6* gently guides you through designing your application, writing tests for the application, and then writing the code to make your application work as expected. It is a book that will guide you from never having programmed with Ruby, to having a Rails 6 application built and deployed to the web. After reading and using this book, you'll have the know-how and the freely available source code to get started with your own Rails-based web development in days. What You Will Learn Create Ruby on Rails 6 web applications from the bottom up Gain the basics of the Ruby programming language Combine all the components of Rails to develop your own web applications Apply TDD to make sure your application works exactly as you expect Use Git source control and best practice techniques to create applications like a pro Who This Book Is For Someone with little to no Ruby or Rails experience, or possibly even someone with no experience developing web applications at all. A basic familiarity with the web and typical web terms is assumed, but you don't need to be an expert in these.

Ruby on Rails offers developers the opportunity to create fully-featured web applications in double-quick time. Rails and e-commerce are a match made in heaven and *Beginning Ruby on Rails E-Commerce* is the first book to directly target this market. The book explains, via real-life scenarios, how to use Rails to create every aspect of an online store – from creating a product catalog, to building a reliable shopping cart system, all the way to features and functions like customer feedback forums. This combination of high sophistication and broad focus makes this an essential working reference – the book all developers are calling for.

It's easy to write correct Ruby code, but to gain the fluency needed to write great Ruby code, you must go beyond syntax and absorb the “Ruby way” of thinking and problem solving. In *Eloquent Ruby*, Russ Olsen helps you write Ruby like true Rubyists do—so you can leverage its immense, surprising power. Olsen draws on years of experience internalizing the Ruby culture and teaching Ruby to other programmers. He guides you to the “Ah Ha!” moments when it suddenly becomes clear why Ruby works the way it does, and how you can take advantage of this language's elegance and expressiveness. *Eloquent Ruby* starts small, answering tactical questions focused on a single statement, method, test, or bug. You'll learn how to write code that actually looks like Ruby (not Java or C#); why Ruby has so many control structures; how to use strings, expressions, and symbols; and what dynamic typing is really good for. Next, the book addresses bigger questions related to building methods and classes. You'll discover why Ruby classes contain so many tiny methods, when to use operator overloading, and when to avoid it. Olsen explains how to write Ruby code that writes its own code—and why you'll want to. He concludes with powerful project-level features and techniques ranging from gems to Domain Specific Languages. A part of the renowned Addison-Wesley Professional Ruby Series, *Eloquent Ruby* will help you “put on your Ruby-colored glasses” and get results that make you a true believer.

If you're a web developer or designer ready to learn Ruby on Rails, this hands-on guide is the ideal way to get started. Rather than toss you into the middle of the framework's Model-View-Controller architecture, as many books do, *Learning Rails 5* begins with the foundations of the Web you already know. You'll learn how to create something visible with Rails' view layer before diving into the more difficult inner layers: the database models and controller code. All you need to begin your Rails journey is HTML experience. Each chapter includes exercises and review questions to test your understanding as you go. Present content by building an application with a basic view and a simple controller Build forms and process their results, progressing from simple to more complex Use Rails scaffolding and REST to build effective applications quickly Connect forms to models and create code that maps directly to database structures Build applications that combine data from multiple tables Use migrations to track changes to your database over time Add common elements such as sessions, cookies, and authentication

* Totalling 900 pages and covering all of the topics important to new and intermediate users, *Beginning Python* is intended to be the most comprehensive book on the Python ever written. * The 15 sample projects in *Beginning Python* are attractive to novice programmers interested in learning by creating applications of timely interest, such as a P2P file-sharing application, Web-based bulletin-board, and an arcade game similar to the classic *Space Invaders*. * The author Magnus Lie Hetland, PhD, is author of Apress' well-received 2002 title, *Practical Python*, ISBN: 1-59059-006-6. He's also author of the popular online guide, *Instant Python Hacking* (<http://www.hetland.org>), from which both *Practical Python* and *Beginning Python* are based.

Rails: Novice to Ninja is an easy-to-follow, practical and fun guide to Ruby on Rails for beginners. It covers all you need to get up and running, from installing Ruby, Rails and SQLite to building and deploying a fully-featured web application. The third edition of this book has been fully updated to cover Rails 5, the latest version of the framework. Unlike other Rails books, this book doesn't assume that you are an experienced web developer, or that you've used Ruby before. An entire chapter is devoted to learning Ruby in a fun way, using the interactive Ruby console, so you can follow along at home. You'll be an accomplished Ruby programmer in no time! You'll then start using Rails to build a practical, working project: a Reddit-like social news application. As you'll build the app, you'll gain valuable experience of using Rails features such as user authentication, session cookies, and automated testing. The book finishes with chapters on debugging, benchmarking and deployment to a live web server.

Summary *The Well-Grounded Rubyist, Second Edition* addresses both newcomers to Ruby as well as Ruby programmers who want to deepen their understanding of the language. This beautifully written and totally revised second edition includes coverage of features that are new in Ruby 2.1, as well as expanded and updated coverage of aspects of the language that have changed. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology This is a good time for Ruby! It's powerful like Java or C++, and has dynamic features that let your code react gracefully to changes at runtime. And it's elegant, so creating applications, development tools, and administrative scripts is easier and more straightforward. With the long-awaited Ruby 2, an active development community, and countless libraries and productivity tools, Ruby has come into its own. About the Book *The Well-Grounded Rubyist, Second Edition* is a beautifully written tutorial that begins with

your first Ruby program and goes on to explore sophisticated topics like callable objects, reflection, and threading. The book concentrates on the language, preparing you to use Ruby in any way you choose. This second edition includes coverage of new Ruby features such as keyword arguments, lazy enumerators, and `Module#prepend`, along with updated information on new and changed core classes and methods. What's Inside Clear explanations of Ruby concepts Numerous simple examples Updated for Ruby 2.1 Prepares you to use Ruby anywhere for any purpose About the Author David A. Black is an internationally known Ruby developer, author, trainer, speaker, event organizer, and founder of Ruby Central, as well as a Lead Consultant at Cyrus Innovation. Table of Contents PART 1 RUBY FOUNDATIONS Bootstrapping your Ruby literacy Objects, methods, and local variables Organizing objects with classes Modules and program organization The default object (self), scope, and visibility Control-flow techniques PART 2 BUILT-IN CLASSES AND MODULES Built-in essentials Strings, symbols, and other scalar objects Collection and container objects Collections central: Enumerable and Enumerator Regular expressions and regexp-based string operations File and I/O operations PART 3 RUBY DYNAMICS Object individuation Callable and runnable objects Callbacks, hooks, and runtime introspection

Learn the principles behind object-oriented programming and within a few chapters create a fully functional Ruby application. You'll also gain a basic understanding of many ancillary technologies such as databases, XML, web frameworks, and networking - some of which are needed as part of a fully functioning Ruby application. Based on the bestselling first and second editions, *Beginning Ruby, Third Edition* is a leading guide to learn Ruby from the ground up. The new edition of this book provides the same excellent introduction to Ruby as the previous editions plus updates for the newest version of Ruby 2.3. This book can also be used as a textbook or companion to a textbook on beginning Ruby programming. The light and agile Ruby programming language remains a very popular open source scripting option for developers building today's web and even some enterprise applications. And, now, Ruby also has applications using the Raspberry Pi, popular among hobbyists and makers. Many former Java developers still use Ruby on Rails today, the most popular framework for building Ruby applications. What You'll Learn Discover the fundamentals of Ruby and its object-oriented building blocks Use the Ruby libraries, gems, and documentation Work with files and databases Write and deploy Ruby applications Harness the various Ruby web frameworks and how to use them Do network programming with Ruby Who This Book Is For Beginning programmers, programmers new to Ruby, and web developers interested in learning and knowing the foundations of the Ruby programming language.

The Complete Guide to Writing Maintainable, Manageable, Pleasing, and Powerful Object-Oriented Applications Object-oriented programming languages exist to help you create beautiful, straightforward applications that are easy to change and simple to extend. Unfortunately, the world is awash with object-oriented (OO) applications that are difficult to understand and expensive to change. *Practical Object-Oriented Design, Second Edition*, immerses you in an OO mindset and teaches you powerful, real-world, object-oriented design techniques with simple and practical examples. Sandi Metz demonstrates how to build new applications that can "survive success" and repair existing applications that have become impossible to change. Each technique is illustrated with extended examples in the easy-to-understand Ruby programming language, all downloadable from the companion website, poodr.com. Fully updated for Ruby 2.5, this guide shows how to Decide what belongs in a single class Avoid entangling objects that should be kept separate Define flexible interfaces among objects Reduce programming overhead costs with duck typing Successfully apply inheritance Build objects via composition Whatever your previous object-oriented experience, this concise guide will help you achieve the superior outcomes you're looking for. Register your book for convenient access to downloads, updates, and/or corrections as they become available. See inside book for details.

Learn Rails the way the Rails core team recommends it, along with the tens of thousands of developers who have used this broad, far-reaching tutorial and reference. If you're new to Rails, you'll get step-by-step guidance. If you're an experienced developer, get the comprehensive, insider information you need for the latest version of Ruby on Rails. The new edition of this award-winning classic is completely updated for Rails 6 and Ruby 2.6, with information on system testing, Webpack, and advanced JavaScript. Ruby on Rails helps you produce high-quality, beautiful-looking web applications quickly - you concentrate on creating the application, and Rails takes care of the details. Rails 6 brings many improvements, and this edition is updated to cover the new features and changes in best practices. We start with a step-by-step walkthrough of building a real application, and in-depth chapters look at the built-in Rails features. Follow along with an extended tutorial as you write a web-based store application. Eliminate tedious configuration and housekeeping, seamlessly incorporate Ajax and JavaScript, send and receive emails, manage background jobs with `ActiveJob`, and build real-time features using `WebSockets` and `ActionCable`. Test your applications as you write them using the built-in unit, integration, and system testing frameworks, internationalize your applications, and deploy your applications easily and securely. New in this edition is coverage of `Action Mailer`, which allows you to receive emails in your app as well as `ActionText`, a zero-configuration rich text editing feature. Rails 1.0 was released in December 2005. This book was there from the start, and didn't just evolve alongside Rails, it evolved with Rails. It has been developed in consultation with the Rails core team. In fact, Rails itself is tested against the code in this book. What You Need: All you need is a Windows, Mac OS X, or Linux machine to do development on. This book will take you through the steps to install Rails and its dependencies. If you aren't familiar with the Ruby programming language, this book contains a chapter that covers the basics necessary to understand the material in the book.

This book addresses today's approach to JavaScript in detail: modern browser support, including information on Internet Explorer 7; Object-Oriented JavaScript; testing and debugging; unobtrusive JavaScript techniques using DOM Scripting; Ajax; creating and using blocks of reusable code, and the future of JavaScript. All the concepts expressed in this up-to-the-minute reference are thoroughly backed up with real world examples and full-scale case studies. The book offers reusable functions for readers to use in their own projects, a significant time-saver. Also included are several reference sections that allow developers to look up details quickly and easily.

Ruby on Rails is the revolutionary online programming tool that makes creating functional e-commerce web sites faster and easier than ever. With the intuitive, straightforward nature of Ruby and the development platform provided by Rails, you can put together full-fledged web applications quickly, even if you're new to web programming. You will find a thorough introduction to both Ruby and Rails in this book. You'll get the easy instructions for acquiring and installing both; understand the nature of conditionals, loops, methods, and blocks; and become familiar with Ruby's classes and objects. You'll learn to build Rails applications, connect to databases, perform necessary testing, and put the whole thing together to create real-world applications such as shopping carts and online catalogs--apps you can actually use right away. What you will learn from this book * How to install and use Ruby and Rails * Object-oriented programming with Ruby * Rails fundamentals and how to create basic online applications * How to work with HTML controls, use models in Rails applications, and work with sessions * Details on working with databases and creating, editing, and deleting database records * Methods for handling cookies and filters and for caching pages * How to connect Rails with Ajax Who this book is for This book is for anyone who wants to develop online applications using Ruby and Rails. A basic understanding of programming is helpful; some knowledge of HTML is necessary. Wrox Beginning guides are crafted to make learning programming languages and

technologies easier than you think, providing a structured, tutorial format that will guide you through all the techniques involved.

The open source Scala language is a Java-based dynamic scripting, functional programming language. Moreover, this highly scalable scripting language lends itself well to building cloud-based/deliverable Software as a Service (SaaS) online applications. Written by Lift Scala web framework founder and lead Dave Pollak, Beginning Scala takes a down-to-earth approach to teaching Scala that leads you through simple examples that can be combined to build complex, scalable systems and applications. This book introduces you to the Scala programming language and then guides you through Scala constructs and libraries that allow small and large teams to assemble small components into high-performance, scalable systems. You will learn why Scala is becoming the language of choice for Web 2.0 companies such as Twitter as well as enterprises such as Seimens and SAP.

Learn how to program using the updated C++17 language. You'll start with the basics and progress through step-by-step examples to become a working C++ programmer. All you need are Beginning C++17 and any recent C++ compiler and you'll soon be writing real C++ programs. There is no assumption of prior programming knowledge. All language concepts that are explained in the book are illustrated with working program examples, and all chapters include exercises for you to test and practice your knowledge. Code downloads are provided for all examples from the text and solutions to the exercises. This latest edition has been fully updated to the latest version of the language, C++17, and to all conventions and best practices of so-called modern C++. Beginning C++17 also introduces the elements of the C++ Standard Library that provide essential support for the C++17 language. What You'll Learn Define variables and make decisions Work with arrays and loops, pointers and references, strings, and more Write your own functions, types, and operators Discover the essentials of object-oriented programming Use overloading, inheritance, virtual functions and polymorphism Write generic function templates and class templates Get up to date with modern C++ features: auto type declarations, move semantics, lambda expressions, and more Examine the new additions to C++17 Who This Book Is For Programmers new to C++ and those who may be looking for a refresh primer on the C++17 programming language in general.

Portable shell scripting is the future of modern Linux, OS X, and Unix command-line access. Beginning Portable Shell Scripting: From Novice to Professional teaches shell scripting by using the common core of most shells and expands those principles to all of scripting. You will learn about portable scripting and how to use the same syntax and design principles for all shells. You'll discover about the interaction between shells and other scripting languages like Ruby and Python, and everything you learn will be shown in context for Linux, OS X, bash, and AppleScript. What you'll learn This book will prime you on not just shell scripting, but also the modern context of portable shell scripting. You will learn The core Linux/OS X shell constructs from a portability point of view How to write scripts that write other scripts, and how to write macros and debug them How to write and design shell script portably from the ground up How to use programmable utilities and their inherent portability to your advantage, while pinpointing potential traps Pulling everything together, how to engineer scripts that play well with Python and Ruby, and even run on embedded systems Who this book is for This book is for system administrators, programmers, and testers working across Linux, OS X, and the Unix command line. Table of Contents Introduction to Shell Scripting Patterns and Regular Expressions Basic Shell Scripting Core Shell Features Explained Shells Within Shells Invocation and Execution Shell Language Portability Utility Portability Bringing It All Together Shell Script Design Mixing and Matching

The expert guide to building Ruby on Rails applications Ruby on Rails strips complexity from the development process, enabling professional developers to focus on what matters most: delivering business value. Now, for the first time, there's a comprehensive, authoritative guide to building production-quality software with Rails. Pioneering Rails developer Obie Fernandez and a team of experts illuminate the entire Rails API, along with the Ruby idioms, design approaches, libraries, and plug-ins that make Rails so valuable. Drawing on their unsurpassed experience, they address the real challenges development teams face, showing how to use Rails' tools and best practices to maximize productivity and build polished applications users will enjoy. Using detailed code examples, Obie systematically covers Rails' key capabilities and subsystems. He presents advanced programming techniques, introduces open source libraries that facilitate easy Rails adoption, and offers important insights into testing and production deployment. Dive deep into the Rails codebase together, discovering why Rails behaves as it does—and how to make it behave the way you want it to. This book will help you Increase your productivity as a web developer Realize the overall joy of programming with Ruby on Rails Learn what's new in Rails 2.0 Drive design and protect long-term maintainability with TestUnit and RSpec Understand and manage complex program flow in Rails controllers Leverage Rails' support for designing REST-compliant APIs Master sophisticated Rails routing concepts and techniques Examine and troubleshoot Rails routing Make the most of ActiveRecord object-relational mapping Utilize Ajax within your Rails applications Incorporate logins and authentication into your application Extend Rails with the best third-party plug-ins and write your own Integrate email services into your applications with ActionMailer Choose the right Rails production configurations Streamline deployment with Capistrano

Learn to program with Rust in an easy, step-by-step manner on Unix, Linux shell, macOS and the Windows command line. As you read this book, you'll build on the knowledge you gained in previous chapters and see what Rust has to offer. Beginning Rust starts with the basics of Rust, including how to name objects, control execution flow, and handle primitive types. You'll see how to do arithmetic, allocate memory, use iterators, and handle input/output. Once you have mastered these core skills, you'll work on handling errors and using the object-oriented features of Rust to build robust Rust applications in no time. Only a basic knowledge of programming is required, preferably in C or C++. To understand this book, it's enough to know what integers and floating-point numbers are, and to distinguish identifiers from string literals. After reading this book, you'll be ready to

build Rust applications. What You'll Learn Get started programming with Rust Understand heterogeneous data structures and data sequences Define functions, generic functions, structs, and more Work with closures, changeable strings, ranges and slices Use traits and learn about lifetimes Who This Book Is For Those who are new to Rust and who have at least some prior experience with programming in general: some C/C++ is recommended particularly.

Web frameworks are playing a major role in the creation of today's most compelling web applications, because they automate many of the tedious tasks, allowing developers to instead focus on providing users with creative and powerful features. Java developers have been particularly fortunate in this area, having been able to take advantage of Grails, an open source framework that supercharges productivity when building Java-driven web sites. Grails is based on Groovy, which is a very popular and growing dynamic scripting language for Java developers and was inspired by Python, Ruby, and Smalltalk. Beginning Groovy and Grails is the first introductory book on the Groovy language and its primary web framework, Grails. This book gets you started with Groovy and Grails and culminates in the example and possible application of some real-world projects. You follow along with the development of each project, implementing and running each application while learning new features along the way.

You don't have to know everything about a car to drive one, and you don't need to know everything about Ruby to start programming with it. Written for both experienced and new programmers alike, Learning Ruby is a just-get-in-and-drive book -- a hands-on tutorial that offers lots of Ruby programs and lets you know how and why they work, just enough to get you rolling down the road. Interest in Ruby stems from the popularity of Rails, the web development framework that's attracting new devotees and refugees from Java and PHP. But there are plenty of other uses for this versatile language. The best way to learn is to just try the code! You'll find examples on nearly every page of this book that you can imitate and hack. Briefly, this book: Outlines many of the most important features of Ruby Demonstrates how to use conditionals, and how to manipulate strings in Ruby. Includes a section on regular expressions Describes how to use operators, basic math, functions from the Math module, rational numbers, etc. Talks you through Ruby arrays, and demonstrates hashes in detail Explains how to process files with Ruby Discusses Ruby classes and modules (mixins) in detail, including a brief introduction to object-oriented programming (OOP) Introduces processing XML, the Tk toolkit, RubyGems, reflection, RDoc, embedded Ruby, metaprogramming, exception handling, and other topics Acquaints you with some of the essentials of Rails, and includes a short Rails tutorial. Each chapter concludes with a set of review questions, and appendices provide you with a glossary of terms related to Ruby programming, plus reference material from the book in one convenient location. If you want to take Ruby out for a drive, Learning Ruby holds the keys.

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