

## Javascript Patterns Stoyan Stefanov

*JavaScript is arguably the most polarizing and misunderstood programming language in the world. Many have attempted to replace it as the language of the Web, but JavaScript has survived, evolved, and thrived. Why did a language created in such hurry succeed where others failed? This guide gives you a rare glimpse into JavaScript from people intimately familiar with it. Chapters contributed by domain experts such as Jacob Thornton, Ariya Hidayat, and Sara Chippis show what they love about their favorite language—whether it’s turning the most feared features into useful tools, or how JavaScript can be used for self-expression. Contributors include: Angus Croll Jonathan Barronville Sara Chippis Marijn Haverbeke Ariya Hidayat Daryl Koopersmith Anton Kovalyov Rebecca Murphey Daniel Pupius Graeme Roberts Jenn Schiffer Jacob Thornton Ben Vinegar Rick Waldron Nicholas Zakas* **JavaScript is the programming language of the Internet, the secret sauce that makes the Web awesome, your favorite sites interactive, and online games fun! JavaScript for Kids is a lighthearted introduction that teaches programming essentials through patient, step-by-step examples paired with funny illustrations. You’ll begin with the basics, like working with strings, arrays, and loops, and then move on to more advanced topics, like building interactivity with jQuery and drawing graphics with Canvas. Along the way, you’ll write games such as Find the Buried Treasure, Hangman, and Snake. You’ll also learn how to: -Create functions to organize and reuse your code -Write and modify HTML to create dynamic web pages -Use the DOM and jQuery to make your web pages react to user input -Use the Canvas element to draw and animate graphics -Program real user-controlled games with collision detection and score keeping With visual examples like bouncing balls, animated bees, and racing cars, you can really see what you’re programming. Each chapter builds on the last, and programming challenges at the end of each chapter will stretch your brain and inspire your own amazing programs. Make something cool with JavaScript today! Ages 10+ (and their parents!)**

**If you know how to use JavaScript in the browser, you already have the skills you need to put JavaScript to work on back-end servers with Node. This hands-on book shows you how to use this popular JavaScript platform to create simple server applications, communicate with the client, build dynamic pages, work with data, and tackle other tasks. Although Node has a complete library of developer-contributed modules to automate server-side development, this book will show you how to program with Node on your own, so you truly understand the platform. Discover firsthand how well Node works as a web server, and how easy it is to learn and use. Set up Node and learn how to build scaffolding for a web application Work with Node natively to see how it functions as a web server Understand how Node receives client data from GET and POST requests Use the Socket.IO module to facilitate realtime client-server communication Choose from among several Node templates to create dynamic pages Learn how to connect to a database, and store data in files Implement the Model-View-Controller pattern, and share Node modules with server and client**

**Create scalable, reusable high-quality JavaScript applications and libraries**

**Build Faster Web Application Interfaces**

**JavaScript: The Good Parts**

**JavaScript Cookbook**

**JavaScript & jQuery: The Missing Manual**

**Robust Web Architecture with Node, HTML5, and Modern JS Libraries**

**Rapid Prototyping and Scalable Deployment**

**JavaScript Patterns**

*Most programming languages contain good and bad parts, but JavaScript has more than its share of the bad, having been developed and released in a hurry before it could be refined. This authoritative book scrapes away these bad features to reveal a subset of JavaScript that’s more reliable, readable, and maintainable than the language as a whole—a subset you can use to create truly extensible and efficient code. Considered the JavaScript expert by many people in the development community, author Douglas Crockford identifies the abundance of good ideas that make JavaScript an outstanding object-oriented programming language—ideas such as functions, loose typing, dynamic objects, and an expressive object literal notation. Unfortunately, these good ideas are mixed in with bad and downright awful ideas, like a programming model based on global variables. When Java applets failed, JavaScript became the language of the Web by default, making its popularity almost completely independent of its qualities as a programming language. In JavaScript: The Good Parts, Crockford finally digs through the steaming pile of good intentions and blunders to give you a detailed look at all the genuinely elegant parts of JavaScript, including: Syntax Objects Functions Inheritance Arrays Regular expressions Methods Style Beautiful features The real beauty? As you move ahead with the subset of JavaScript that this book presents, you’ll also sidestep the need to unlearn all the bad parts. Of course, if you want to find out more about the bad parts and how to use them badly, simply consult any other JavaScript book. With JavaScript: The Good Parts, you’ll discover a beautiful, elegant, lightweight and highly expressive language that lets you create effective code, whether you’re managing object libraries or just trying to get Ajax to run fast. If you develop sites or applications for the Web, this book is an absolute must.*

*One skill that’s essential for any professional JavaScript developer is the ability to write testable code. This book shows you what writing and maintaining testable JavaScript for the client- or server-side actually entails, whether you’re creating a new application or rewriting legacy code. From methods to reduce code complexity to unit testing, code coverage, debugging, and automation, you’ll learn a holistic approach for writing JavaScript code that you and your colleagues can easily fix and maintain going forward. Testing JavaScript code is complicated. This book helps experienced JavaScript developers simply the process considerably. Get an overview of Agile, test-driven development, and behavior-driven development Use patterns from static languages and standards-based JavaScript to reduce code complexity Learn the advantages of event-based architectures, including modularity, loose coupling, and reusability Explore tools for writing and running unit tests at the functional and application level Generate code coverage to measure the scope and effectiveness of your tests Conduct integration, performance, and load testing, using Selenium or CasperJS Use tools for in-browser, Node.js, mobile, and production debugging Understand what, when, and how to automate your development processes*

*Learn proven patterns, techniques, and tricks to take full advantage of the Node.js platform. Master well-known design principles to create applications that are readable, extensible, and that can grow big. Key FeaturesLearn how to create solid server-side applications by leveraging the full power of Node.js 14Understand how Node.js works and learn how to take full advantage of its core components as well as the solutions offered by its ecosystemAvoid common mistakes and use proven patterns to create production grade Node.js applicationsBook Description In this book, we will show you how to implement a series of best practices and design patterns to help you create efficient and robust Node.js applications with ease. We kick off by exploring the basics of Node.js, analyzing its asynchronous event driven architecture and its fundamental design patterns. We then show you how to build asynchronous control flow patterns with callbacks, promises and async/await. Next, we dive into Node.js streams, unveiling their power and showing you how to use them at their full capacity. Following streams is an analysis of different creational, structural, and behavioral design patterns that take full advantage of JavaScript and Node.js. Lastly, the book dives into more advanced concepts such as Universal JavaScript, scalability and messaging patterns to help you build enterprise-grade distributed applications. Throughout the book, you’ll see Node.js in action with the help of several real-life examples leveraging technologies such as LevelDB, Redis, RabbitMQ, ZeroMQ, and many others. They will be used to demonstrate a pattern or technique, but they will also give you a great introduction to the Node.js ecosystem and its set of solutions. What you will learnBecome comfortable with writing asynchronous code by leveraging callbacks, promises, and the async/await syntaxLeverage Node.js streams to create data-driven asynchronous processing pipelinesImplement well-known software design patterns to create production grade applicationsShare code between Node.js and the browser and take advantage of full-stack JavaScriptBuild and scale microservices and distributed systems powered by Node.jsUse Node.js in conjunction with other powerful technologies such as Redis, RabbitMQ, ZeroMQ, and LevelDBWho this book is for This book is for developers and software architects who have some prior basic knowledge of JavaScript and Node.js and now want to get the most out of these technologies in terms of productivity, design quality, and scalability. Software professionals with intermediate experience in Node.js and JavaScript will also find valuable the more advanced patterns and techniques presented in this book. This book assumes that you have an intermediate understanding of web application development, databases, and software design principles.*

*JavaScript lets you supercharge your HTML with animation, interactivity, and visual effects—but many web designers find the language hard to learn. This easy-to-read guide not only covers JavaScript basics, but also shows you how to save time and effort with the jQuery and jQuery UI libraries of prewritten JavaScript code. You’ll build web pages that feel and act like desktop programs—with little or no programming. The important stuff you need to know: Pull back the curtain on JavaScript. Learn how to build a basic program with this language. Get up to speed on jQuery. Quickly assemble JavaScript programs that work well on multiple web browsers. Transform your user interface. Learn jQuery UI, the JavaScript library for interface features like design themes and controls. Make your pages interactive. Create JavaScript events that react to visitor actions. Use animations and effects. Build drop-down navigation menus, pop-ups, automated slideshows, and more. Collect data with web forms. Create easy-to-use forms that ensure more accurate visitor responses. Practice with living examples. Get step-by-step tutorials for web projects you can build yourself.*

*Powerful Object-Oriented Programming*

*Web Performance Daybook Volume 2*

*Writing Server-Side JavaScript Applications*

*Object-Oriented JavaScript*

*PHP Programming with PEAR*

*Build Better Applications with Coding and Design Patterns*

*Async JavaScript*

*Take advantage of JavaScript’s power to build robust web-scale or enterprise applications that are easy to extend and maintain. By applying the design patterns outlined in this practical book, experienced JavaScript developers will learn how to write flexible and resilient code that’s easier—yes, easier—to work with as your code base grows. JavaScript may be the most essential web programming language, but in the real world, JavaScript applications often break when you make changes. With this book, author Eric Elliott shows you how to add client- and server-side features to a large JavaScript application without negatively affecting the rest of your code. Examine the anatomy of a large-scale JavaScript application Build modern web apps with the capabilities of desktop applications Learn best practices for code organization, modularity, and reuse Separate your application into different layers of responsibility Build efficient, self-describing hypermedia APIs with Node.js Test, integrate, and deploy software updates in rapid cycles Control resource access with user authentication and authorization Expand your application’s reach through internationalization*

*Set up and run your own discussion forum.*

*Summary JavaScript Application Design: A Build First Approach introduces JavaScript developers to techniques that will improve the quality of their software as well as their web development workflow. You'll begin by learning how to establish build processes that are appropriate for JavaScript-driven development. Then, you'll walk through best practices for productive day-to-day development, like running tasks when your code changes, deploying applications with a single command, and monitoring the state of your application once it's in production. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Book The fate of most applications is often sealed before a single line of code has been written. How is that possible? Simply, bad design and effective processes are the foundation on which maintainable applications are built, scaled, and improved. For JavaScript developers, this means discovering the tooling, modern libraries, and architectural patterns that enable those improvements. JavaScript Application Design: A Build First Approach introduces techniques to improve software quality and development workflow. You'll begin by learning how to establish processes designed to optimize the quality of your work. You'll execute tasks whenever your code changes, run tests on every commit, and deploy in an automated fashion. Then you'll focus on designing modular components and composing them together to build robust applications. This book assumes readers understand the basics of JavaScript. What's Inside Automated development, testing, and deployment processes JavaScript fundamentals and modularity best practices Modular, maintainable, and well-tested applications Master asynchronous flows, embrace MVC, and design a REST API About the Author Nicolas Bevacqua is a freelance developer with a focus on modular JavaScript, build processes, and sharp design. He maintains a blog at ponyfoo.com. Table of Contents PART 1 BUILD PROCESSES Introduction to Build First Composing build tasks and flows Mastering environments and the development workflow Release, deployment, and monitoring PART 2 MANAGING COMPLEXITY Embracing modularity and dependency management Understanding asynchronous flow control methods in JavaScript Leveraging the Model-View-Controller Testing JavaScript components REST API design and layered service architectures*

*The book requires no prior knowledge of JavaScript and works from the ground up to give you a thorough grounding in this powerful language. If you do already know some JavaScript, you will find plenty of eye-openers as you discover just what the language can do. This book takes a do-it-yourself approach when it comes to writing code, because the best way to really learn a programming language is by writing code. You are encouraged to type code into Firebug's console, see how it works and then tweak it and play around with it. There are practice questions at the end of each chapter to help review what you have learned.*

*A Playful Introduction to Programming*

*Maintainable JavaScript*

*Exploring JavaScript and the Modern DOM*

*JavaScript for PHP Developers*

*DOM Enlightenment*

*Pro JavaScript Design Patterns*

*Learning JavaScript Design Patterns*

*If you're like most developers, you rely heavily on JavaScript to build interactive and quick-responding web applications. The problem is that all of those lines of JavaScript code can slow down your apps. This book reveals techniques and strategies to help you eliminate performance bottlenecks during development. You'll learn how to improve execution time, downloading, interaction with the DOM, page life cycle, and more. Yahoo! frontend engineer Nicholas C. Zakas and five other JavaScript experts—Ross Harnes, Julien Lecomte, Steven Levithan, Stoyan Stefanov, and Matt Sweeney—demonstrate optimal ways to load code onto a page, and offer programming tips to help your JavaScript run as efficiently and quickly as possible. You'll learn the best practices to build and deploy your files to a production environment, and tools that can help you find problems once your site goes live. Identify problem code and use faster alternatives to accomplish the same task Improve scripts by learning how JavaScript stores and accesses data Implement JavaScript code so that it doesn't slow down interaction with the DOM Use optimization techniques to improve runtime performance Learn ways to ensure the UI is responsive at all times Achieve faster client-server communication Use a build system to minify files, and HTTP compression to deliver them to the browser*

*Performance is critical to the success of any website, and help with using today’s new tools is key. In this remarkable guide, 32 leading web performance experts offer practical tips, techniques, and advice for optimizing your site’s user experience. Originally written for an online calendar, this collection of articles will inspire you to squeeze every ounce of performance from your site—whether you’re a web developer, mobile developer, or web designer. Check the table of contents and you’ll be convinced. In order of appearance, Web Performance Daybook authors include: Patrick Meenan Nicholas Zakas Guy Podjarny Stoyan Stefanov Tim Kadlec Brian Pane Josh Fraser Steve Souders Betty Tso Israel Nir Marcel Duran Éric Daspét Alois Reitbauer Mathew Prince Buddy Brewer Alexander Podelko Estelle Weyl Aaron Peters Tony Gentilcore Matthew Steele Bryan McQuade Tobie Langel Billy Hoffman Joshua Bixby Sergey Chernyshev JP Castro Pavel Paulau David Calhoun Nicole Sullivan James Pearce Tom Hughes-Croucher Dave Artz*

*For web developers and other programmers interested in using JavaScript, this bestselling book provides the most comprehensive JavaScript material on the market. The seventh edition represents a significant update, with new information for ECMAScript 2020, and new chapters on language-specific features. JavaScript: The Definitive Guide is ideal for experienced programmers who want to learn the programming language of the web, and for current JavaScript programmers who want to master it.*

*The World’s Easiest Java Script Tutorial—Fully Updated! JavaScript by Example, Second Edition, is the easiest, most hands-on way to learn JavaScript. Legendary programming instructor Ellie Quigley has thoroughly updated her classic book to deliver the skills and information today’s JavaScript users need most—including up-to-the-minute coverage of JavaScript programming constructs, CSS, Ajax, JSON, and the latest JavaScript libraries and best practices. Quigley illuminates every technique with focused, classroom-tested code examples, detailed line-by-line explanations, and real program output. This exceptionally clear, easy-to-understand book takes you from your first script to advanced techniques. It’s the only JavaScript book you’ll ever need! New in This Edition End-of-chapter study tools, including classroom-tested labs Programming the DOM More Cascading Style Sheets Introduction to Ajax and JSON Explanation of how to develop interactive Web applications with dynamic, desktop-style interfaces Programmers’ preparation for HTML 5’s breakthrough capabilities This edition has been completely updated and includes many new and completely rewritten code examples; contains fully revised and updated coverage of Cascading Style Sheets (CSS) and the Document Object Model (DOM); and fully covers modern JavaScript concepts, principles, and programming techniques. Thousands of Web developers, administrators, and power users have relied on JavaScript by Example to become expert JavaScript programmers. With this new edition, you can, too—even if you’re completely new to JavaScript. After you’ve become an expert, you’ll turn to this book constantly as the best source for trustworthy answers, solutions, and code.*

*How to Code Safely in the World’s Most Dangerous Language*

*JavaScript by Example*

*Design and implement production-grade Node.js applications using proven patterns and techniques, 3rd Edition*

*A Build First Approach*

*Coding, Capabilities, and Tooling*

*Node for Front-End Developers*

*Node.js Design Patterns*

**'Reliable JavaScript' demonstrates how to create test-driven development for large-scale JavaScript applications that will stand the test of time and stay accurate through long-term use and maintenance**

**If you want to significantly expand your web development skills beyond PHP, this practical, hands-on book teaches you ECMAScript—the core JavaScript language—from the ground up. You’ll discover some similarities between JavaScript and PHP, such as conditions and loops, but the primary focus is on JavaScript’s unique object creation, classes, prototypes, and inheritance. JavaScript knowledge is essential for working with today’s Web, whether you’re building applications for the client, the server, or for mobile use—and your PHP experience gives you a head start. This book will help you become fluent with JavaScript quickly, and then serve as a handy reference once you start coding. Explore JavaScript syntax, including variables, arrays, loops, and conditions Learn how functions are important in JavaScript—and why they’re actually objects Delve into JavaScript’s object-oriented features, including prototypes, code reuse, and inheritance Examine the built-in API and explore its global functions, properties, and objects Learn about updates in ECMAScript5, the latest version of the standard**

### Use common design patterns to organize your code in large applications

How can you take advantage of the Django framework to integrate complex client-side interactions and real-time features into your web applications? Through a series of rapid application development projects, this hands-on book shows experienced Django developers how to include REST APIs, WebSockets, and client-side MVC frameworks such as Backbone.js into new or existing projects. Learn how to make the most of Django's decoupled design by choosing the components you need to build the lightweight applications you want. Once you finish this book, you'll know how to build single-page applications that respond to interactions in real time. If you're familiar with Python and JavaScript, you're good to go. Learn a lightweight approach for starting a new Django project Break reusable applications into smaller services that communicate with one another Create a static, rapid prototyping site as a scaffold for websites and applications Build a REST API with django-rest-framework Learn how to use Django with the Backbone.js MVC framework Create a single-page web application on top of your REST API Integrate real-time features with WebSockets and the Tornado networking library Use the book's code-driven examples in your own projects

With DOM Enlightenment, you'll learn how to manipulate HTML more efficiently by scripting the Document Object Model (DOM) without a DOM library. Using code examples in cookbook style, author Cody Lindley (jQuery Cookbook) walks you through modern DOM concepts to demonstrate how various node objects work. Over the past decade, developers have buried the DOM under frameworks that simplify its use. This book brings these tools back into focus, using concepts and code native to modern browsers. If you have JavaScript experience, you'll understand the role jQuery plays in DOM scripting, and learn how to use the DOM directly in applications for mobile devices and specific browsers that require low overhead. Understand JavaScript node objects and their relationship to the DOM Learn the properties and methods of document, element, text, and DocumentFragment objects Delve into element node selecting, geometry, and inline styles Add CSS style sheets to an HTML document and use CSSStyleRule objects Set up DOM events by using different code patterns Learn the author's vision for dom.js, a jQuery-inspired DOM Library for modern browsers

JavaScript Web Applications

JavaScript: Object Oriented Programming

Techniques and Tips for Optimizing Web Site Performance

Object-Oriented JavaScript - Second Edition

Build More Responsive Apps with Less Code

JavaScript Application Design

A User Guide

Completely revised and updated, this best-selling introduction to programming in JavaScript focuses on writing real applications. JavaScript lies at the heart of almost every modern web application, from social apps like Twitter to browser-based game frameworks like Phaser and Babylon. Though simple for beginners to pick up and play with, JavaScript is a flexible, complex language that you can use to build full-scale applications. This much anticipated and thoroughly revised third edition of Eloquent JavaScript dives deep into the JavaScript language to show you how to write beautiful, effective code. It has been updated to reflect the current state of Java-Script and web browsers and includes brand-new material on features like class notation, arrow functions, iterators, async functions, template strings, and block scope. A host of new exercises have also been added to test your skills and keep you on track. As with previous editions, Haverbeke continues to teach through extensive examples and immerses you in code from the start, while exercises and full-chapter projects give you hands-on experience with writing your own programs. You start by learning the basic structure of the JavaScript language as well as control structures, functions, and data structures to help you write basic programs. Then you'll learn about error handling and bug fixing, modularity, and asynchronous programming before moving on to web browsers and how JavaScript is used to program them. As you build projects such as an artificial life simulation, a simple programming language, and a paint program, you'll learn how to: - Understand the essential elements of programming, including syntax, control, and data - Organize and clarify your code with object-oriented and functional programming techniques - Script the browser and make basic web applications - Use the DOM effectively to interact with browsers - Harness Node.js to build servers and utilities Isn't it time you became fluent in the language of the Web? \* All source code is available online in an inter-active sandbox, where you can edit the code, run it, and see its output instantly.

No matter how much experience you have with JavaScript, odds are you don't fully understand the language. This concise yet in-depth guide takes you inside scope and closures, two core concepts you need to know to become a more efficient and effective JavaScript programmer. You'll learn how and why they work, and how an understanding of closures can be a powerful part of your development skillset. Like other books in the "You Don't Know JS" series, Scope and Closures dives into trickier parts of the language that many JavaScript programmers simply avoid. Armed with this knowledge, you can achieve true JavaScript mastery. Learn about scope, a set of rules to help JavaScript engines locate variables in your code Go deeper into nested scope, a series of containers for variables and functions Explore function- and block-based scope, "hoisting", and the patterns and benefits of scope-based hiding Discover how to use closures for synchronous and asynchronous tasks, including the creation of JavaScript libraries

You will first be introduced to object-oriented programming, then to the basics of objects in JavaScript. This book takes a do-it-yourself approach when it comes to writing code, because the best way to really learn a programming language is by writing code. You are encouraged to type code into Firebug's console, see how it works and then tweak it and play around with it. There are practice questions at the end of each chapter to help you review what you have learned. For new to intermediate JavaScript developer who wants to prepare themselves for web development problems solved by smart JavaSc.

With the advent of HTML5, front-end MVC, and Node.js, JavaScript is ubiquitous--and still messy. This book will give you a solid foundation for managing async tasks without losing your sanity in a tangle of callbacks. It's a fast-paced guide to the most essential techniques for dealing with async behavior, including PubSub, evented models, and Promises. With these tricks up your sleeve, you'll be better prepared to manage the complexity of large web apps and deliver responsive code. With Async JavaScript, you'll develop a deeper understanding of the JavaScript language. You'll start with a ground-up primer on the JavaScript event model--key to avoiding many of the most common mistakes JavaScripters make. From there you'll see tools and design patterns for turning that conceptual understanding into practical code. The concepts in the book are illustrated with runnable examples drawn from both the browser and the Node.js server framework, incorporating complementary libraries including jQuery, Backbone.js, and Async.js. You'll learn how to create dynamic web pages and highly concurrent servers by mastering the art of distributing events to where they need to be handled, rather than nesting callbacks within callbacks within callbacks. Async JavaScript will get you up and running with real web development quickly. By the time you've finished the Promises chapter, you'll be parallelizing Ajax requests or running animations in sequence. By the end of the book, you'll even know how to leverage Web Workers and AMD for JavaScript applications with cutting-edge performance. Most importantly, you'll have the knowledge you need to write async code with confidence. What You Need: Basic knowledge of JavaScript is recommended. If you feel that you're not up to speed, see the "Resources for Learning JavaScript" section in the preface.

Ensuring Reliable Code

You Don't Know JS: Scope & Closures

A JavaScript and jQuery Developer's Guide

JavaScript Enlightenment

Lightweight Django

40 Algorithms Every Programmer Should Know

Secrets of the JavaScript Ninja

Google and YouTube use Python because it's highly adaptable, easy to maintain, and allows for rapid development. If you want to write high-quality, efficient code that's easily integrated with other languages and tools, this hands-on book will help you be productive with Python quickly -- whether you're new to programming or just new to Python. It's an easy-to-follow self-paced tutorial, based on author and Python expert Mark Lutz's popular training course. Each chapter contains a stand-alone lesson on a key component of the language, and includes a unique Test Your Knowledge section with practical exercises and quizzes, so you can practice new skills and test your understanding as you go. You'll find lots of annotated examples and illustrations to help you get started with Python 3.0. Learn about Python's major built-in object types, such as numbers, lists, and dictionaries Create and process objects using Python statements, and learn Python's general syntax model Structure and reuse code using functions, Python's basic procedural tool Learn about Python modules: packages of statements, functions, and other tools, organized into larger components Discover Python's object-oriented programming tool for structuring code Learn about the exception-handling model, and development tools for writing larger programs Explore advanced Python tools including decorators, descriptors, metaclasses, and Unicode processing

Pro JavaScript Development is a practical guide for front-end web developers who are experiencing at building web pages with HTML, CSS, and JavaScript, and now wish to advance their JavaScript skills to a higher level. You will learn how to build large, well-structured, high quality, mobile-optimized web sites and apps, using the latest supported browser APIs, language features, and tools. This book teaches and shows you in practical hands-on terms how you can: Master the performance, reliability, stability, and code manageability of your JavaScript Understand and write efficient object-oriented and prototypal code, including full understanding of the 'this' keyword Boost the performance of your JavaScript code Architect large web applications using common design patterns Write high quality JavaScript code and avoid the pitfalls most likely to cause errors Manage code dependencies with AMD and RequireJS Develop for mobile, build games, and set up a real-time video chat using modern APIs such as Geolocation, Canvas and WebRTC Document your code as the professionals do Write command-line and web server applications in JavaScript with Node.js, Use build tools, such as Grunt and Gulp, to automate repetitive tasks and improve your development workflow Using real-world examples and applications that you'll build yourself, Pro JavaScript Development has unique, practical content that will make you a better JavaScript developer. Become a master of the latest JavaScript coding techniques and tools, and harness its best capabilities today.

Build an application from backend to browser with Node.js, and kick open the doors to real-time event programming. With this hands-on book, you'll learn how to create a social network application similar to LinkedIn and Facebook, but with a real-time twist. And you'll build it with just one programming language: JavaScript. If you're an experienced web developer unfamiliar with JavaScript, the book's first section introduces you to the project's core technologies: Node.js, Backbone.js, and the MongoDB data store. You'll then launch into the project—a highly responsive, highly scalable application—guided by clear explanations and lots of code examples. Learn about key modules in Node.js for building real-time apps Use the Backbone.js framework to write clean browser code, and maintain better data integration with MongoDB Structure project files as a foundation for code that will arrive later Create user accounts and learn how to secure the data Use Backbone.js templates to build the application's UIs, and integrate access control with Node.js Develop a contact list to help users link to and track other accounts Use Socket.io to create real-time chat functionality Extend your UIs to give users up-to-the-minute information

Learn algorithms for solving classic computer science problems with this concise guide covering everything from fundamental algorithms, such as sorting and searching, to modern algorithms used in machine learning and cryptography Key FeaturesLearn the techniques you need to know to design algorithms for solving complex problemsBecome familiar with neural networks and deep learning techniquesExplore different types of algorithms and choose the right data structures for their optimal implementationBook Description Algorithms have always played an important role in both the science and practice of computing. Beyond traditional computing, the ability to use algorithms to solve real-world problems is an important skill that any developer or programmer must have. This book will help you not only to develop the skills to select and use an algorithm to solve real-world problems but also to understand how it works. You'll start with an introduction to algorithms and discover various algorithm design techniques, before exploring how to implement different types of algorithms, such as searching and sorting, with the help of practical examples. As you advance to a more complex set of algorithms, you'll learn about linear programming, page ranking, and graphs, and even work with machine learning algorithms, understanding the math and logic behind them. Further on, case studies such as weather prediction, tweet clustering, and movie recommendation engines will show you how to apply these algorithms optimally. Finally, you'll become well versed in techniques that enable parallel processing, giving you the ability to use these algorithms for compute-intensive tasks. By the end of this book, you'll have become adept at solving real-world computational problems by using a wide range of algorithms. What you will learnExplore existing data structures and algorithms found in Python librariesImplement graph algorithms for fraud detection using network analysisWork with machine learning algorithms to cluster similar tweets and process Twitter data in real timePredict the weather using supervised learning algorithmsUse neural networks for object detectionCreate a recommendation engine that suggests relevant movies to subscribersImplement foolproof security using symmetric and asymmetric encryption on Google Cloud Platform (GCP)Who this book is for This book is for programmers or developers who want to understand the use of algorithms for problem-solving and writing efficient code. Whether you are a beginner looking to learn the most commonly used algorithms in a clear and concise way or an experienced programmer looking to explore cutting-edge algorithms in data science, machine learning, and cryptography, you'll find this book useful. Although Python programming experience is a must, knowledge of data science will be helpful but not necessary.

High Performance JavaScript

Building Node Applications with MongoDB and Backbone

Learning Python

Programming JavaScript Applications

Pro JavaScript Development

Reliable JavaScript

jQuery Developers' Guide to Moving State to the Client

Why reinvent the wheel every time you run into a problem with JavaScript? This cookbook is chock-full of code recipes that address common programming tasks, as well as techniques for building web apps that work in any browser. Just copy and paste the code samples into your project—you'll get the job done faster and learn more about JavaScript in the process. You'll also learn how to take advantage of the latest features in ECMAScript 5 and HTML5, including the new cross-domain widget communication technique, HTML5's video and audio elements, and the drawing canvas. You'll find recipes for using these features with JavaScript to build high-quality application interfaces. Create interactive web and desktop applications Work with JavaScript objects, such as String, Array, Number, and Math Use JavaScript with Scalable Vector Graphics (SVG) and the canvas element Store data in various ways, from the simple to the complex Program the new HTML5 audio and video elements Implement concurrent programming with Web Workers Use and create jQuery plug-ins Use ARIA and JavaScript to create fully accessible rich internet applications

If you've used a more traditional object-oriented language, such as C++ or Java, JavaScript probably doesn't seem object-oriented at all. It has no concept of classes, and you don't even need to define any objects in order to write code. But don't be fooled—JavaScript is an incredibly powerful and expressive object-oriented language that puts many design decisions right into your hands. In The Principles of Object-Oriented JavaScript, Nicholas C. Zakas thoroughly explores JavaScript's object-oriented nature, revealing the language's unique implementation of inheritance and other key characteristics. You'll learn: –The difference between primitive and reference values –What makes JavaScript functions so unique –The various ways to create objects –How to define your own constructors –How to work with and understand prototypes –Inheritance patterns for types and objects The Principles of Object-Oriented JavaScript will leave even experienced developers with a deeper understanding of JavaScript. Unlock the secrets behind how objects work in JavaScript so you can write clearer, more flexible, and more efficient code.

An introduction to writing code with JavaScript covers such topics as style guidelines, programming practices, and automation.

"From library user to JavaScript developer"--Cover.

JavaScript for Kids

JavaScript: The Definitive Guide

Eloquent JavaScript, 3rd Edition

Beautiful JavaScript

A Modern Introduction to Programming

Phppbb

Hone your problem-solving skills by learning different algorithms and their implementation in Python

With Pro JavaScript Design Patterns, you'll start with the basics of object-oriented programming in JavaScript applicable to design patterns, including making JavaScript more expressive, inheritance, encapsulation, information hiding, and more. The book then details how to implement and take advantage of several design patterns in JavaScript. Each chapter is packed with real-world examples of how the design patterns are best used and expert advice on writing better code, as well as what to watch out for. Along the way you'll discover how to create your own libraries and APIs for even more efficient coding.

Packed with code examples, every topic is explained in a clear, practical way. This book is for PHP developers who want to maximize their productivity through the use of proven, high-quality, reusable PEAR components. Some experience of working with PEAR classes will prove helpful, and developers who've used PEAR before can find something new to delight them.

Building rich JavaScript applications that bring a desktop experience to the Web requires moving state from the server to the client side—not a simple task. This hands-on book takes proficient JavaScript developers through all the steps necessary to create state-of-the-art applications, including structure, templating, frameworks, communicating with the server, and many other issues. Throughout the book, you'll work with real-world example applications to help you grasp the concepts involved. Learn how to create JavaScript applications that offer a more responsive and improved experience. Use the Model-View-Controller (MVC) pattern, and learn how to manage dependencies inside your application Get an introduction to templating and data binding Learn about loading remote data, Ajax, and cross-domain requests Create realtime applications with WebSockets and Node.js Accept dropped files and upload data with progress indicators Use major frameworks and libraries, including jQuery, Spine, and Backbone Write tests and use the console to debug your applications Get deployment best practices, such as caching and minification

More than ever, the web is a universal platform for all types of applications, and JavaScript is the language of the web. For anyone serious about web development, it's not enough to be a decent JavaScript coder. They need to be ninja-stealthy, efficient, and ready for anything. Secrets of the JavaScript Ninja, Second Edition dives below the surface and helps readers understand the deceptively-complex world of JavaScript and browser-based application development. It skips the basics, and dives into core JavaScript concepts such as functions, closures, objects, prototypes, promises, and so on. With examples, illustrations, and insightful explanations, readers will benefit from the collective wisdom of seasoned experts John Resig, Bear Bibeault, and Josip Maras. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

XML, Data, Dates, Web Services, and Web APIs : Maximize Your PHP Development Productivity by Mastering the PEAR Packages for Accessing and Displaying Data, Handling Dates, Working with XML and Web Services, and Accessing Web APIs

The Good Parts

Master the World's Most-Used Programming Language

Testable JavaScript

The Principles of Object-Oriented JavaScript

Leading Programmers Explain How They Think

Build sophisticated web applications by mastering the art of Object-Oriented Javascript About This Book Learn popular Object-Oriented programming (OOP) principles and design patterns to build robust apps Implement Object-Oriented concepts in a wide range of frontend architectures Capture objects from real-world elements and create object-oriented code that represents them Learn the latest ES6 features and how to test and debug issues with JavaScript code using various modern mechanisms Who This Book Is For JavaScript developers looking to enhance their web developments skills by learning object-oriented programming. What You Will Learn Get acquainted with the basics of JavaScript language constructs along with object-oriented programming and its application. Learn to build scalable server application in JavaScript using Node.js Generate instances in three programming languages: Python, JavaScript, and C# Work with a combination of access modifiers, prefixes, properties, fields, attributes, and local variables to encapsulate and hide data Master DOM manipulation, cross-browser strategies, and ES6 Identify and apply the most common design patterns such as Singleton, Factory, Observer, Model-View-Controller, and Mediator Patterns Design applications using a modular architecture based on SOLID principles In Detail JavaScript is the behavior, the third pillar in today's paradigm that looks at web pages as something that consists of : content (HTML), presentation (CSS), and behavior (JavaScript). Using JavaScript, you can create interactive web pages along with desktop widgets, browser, and application extensions, and other pieces of software. Object-oriented programming, which is popularly known as OOP, is basically based on the concept of objects rather than actions. The first module will help you master JavaScript and build futuristic web applications. You will start by getting acquainted with the language constructs and how to organize code easily. You develop concrete understanding of variable scoping, loops, and best practices on using types and data structures, as well as the coding style and recommended code organization patterns in JavaScript. The book will also teach you how to use arrays and objects as data structures. By the end of the book, you will understand how reactive JavaScript is going to be the new paradigm. The second module is an easy-to-follow course, which includes hands-on examples of solutions to common problems with object-oriented code. It will help to identify objects from real-life scenarios, to protect and hide data with the data encapsulation features of Python, JavaScript, and C#. You will discover the advantage of duck typing in both Python and JavaScript, while you work with interfaces and generics in C#. With a fair understanding of interfaces, multiple inheritance, and composition, you will move on to refactor existing code and to organize your source for easy maintenance and extension. The third module takes you through all the in-depth and exciting futures hidden behind the facade. You should read through this course if you want to be able to take your JavaScript skills to a new level of sophistication. Style and approach This course is a comprehensive guide where each chapter consists of best practices, constructive advice, and few easy-to-follow examples that will build up your skills as you advance through the book. Get object oriented with this course, which takes you on a journey to get acquainted with few useful hands-on tools, features, and ways to enhance your productivity using OOP techniques. It will also act as a reference guide with useful examples on resolving problems with object-oriented code in Python, JavaScript, and C#.

With Learning JavaScript Design Patterns, you ' ll learn how to write beautiful, structured, and maintainable JavaScript by applying classical and modern design patterns to the language. If you want to keep your code efficient, more manageable, and up-to-date with the latest best practices, this book is for you. Explore many popular design patterns, including Modules, Observers, Facades, and Mediators. Learn how modern architectural patterns—such as MVC, MVP, and MVVM—are useful from the perspective of a modern web application developer. This book also walks experienced JavaScript developers through modern module formats, how to namespace code effectively, and other essential topics. Learn the structure of design patterns and how they are written Understand different pattern categories, including creational, structural, and behavioral Walk through more than 20 classical and modern design patterns in JavaScript Use several options for writing modular code—including the Module pattern, Asynchronous Module Definition (AMD), and CommonJS Discover design patterns implemented in the jQuery library Learn popular design patterns for writing maintainable jQuery plug-ins "This book should be in every JavaScript developer ' s hands. It ' s the go-to book on JavaScript patterns that will be read and referenced many times in the future."—Andr é e Hansson, Lead Front-End Developer, presis!

What's the best approach for developing an application with JavaScript? This book helps you answer that question with numerous JavaScript coding patterns and best practices. If you're an experienced developer looking to solve problems related to objects, functions, inheritance, and other language-specific categories, the abstractions and code templates in this guide are ideal—whether you're using JavaScript to write a client-side, server-side, or desktop application. Written by JavaScript expert Stoyan Stefanov—Senior Yahoo! Technical and architect of YSlow 2.0, the web page performance optimization tool—JavaScript Patterns includes practical advice for implementing each pattern discussed, along with several hands-on examples. You'll also learn about anti-patterns: common programming approaches that cause more problems than they solve. Explore useful habits for writing high-quality JavaScript code, such as avoiding globals, using single var declarations, and more Learn why literal notation patterns are simpler alternatives to constructor functions Discover different ways to define a function in JavaScript Create objects that go beyond the basic patterns of using object literals and constructor functions Learn the options available for code reuse and inheritance in JavaScript Study sample JavaScript approaches to common design patterns such as Singleton, Factory, Decorator, and more Examine patterns that apply specifically to the client-side browser environment