

Learning Javascript Design Patterns Addy Osmani Format

Using research in neurobiology, cognitive science and learning theory, this text loads patterns into your brain in a way that lets you put them to work immediately, makes you better at solving software design problems, and improves your ability to speak the language of patterns with others on your team.

Learn how to write cross platform React Native code by using effective design patterns in the JavaScript world. Get to know industry standard patterns as well as situational patterns. Decouple your application with these set of “Idea patterns”. Key Features Mobile development in React Native should be done in a reusable way. Learn how to build scalable applications using JavaScript patterns that are battle tested. Try effective techniques on your own using over 80 standalone examples. Book Description React Native helps developers reuse code across different mobile platforms like iOS and Android. This book will show you effective design patterns in the React Native world and will make you ready for professional development in big teams. The book will focus only on the patterns that are relevant to JavaScript, ECMAScript, React and React Native. However, you can successfully transfer a lot of the skills and techniques to other languages. I call them “Idea patterns”. This book will start with the most standard development patterns in React like component building patterns, styling patterns in React Native and then extend these patterns to your mobile application using real world practical examples. Each chapter comes with full, separate source code of applications that you can build and run on your phone. The book is also diving into architectural patterns. Especially how to adapt MVC to React environment. You will learn Flux architecture and how Redux is implementing it. Each approach will be presented with its pros and cons. You will learn how to work with external data sources using libraries like Redux thunk and Redux Saga. The end goal is the ability to recognize the best solution for a given problem for your next mobile application. What you will learn Explore the design Patterns in React Native Learn the best practices for React Native development Explore common React patterns that are highly used within React Native development Learn to decouple components and use dependency injection in your applications Explore the best ways of fetching data from the backend systems Learn the styling patterns and how to implement custom mobile designs Explore the best ways to organize your application code in big codebases Who this book is for The ideal target audience for this book are people eager to learn React Native design patterns who already know the basics of JavaScript. We can assume that the target audience already knows how to write Hello World in JavaScript and know what are the functions, recursive functions, JavaScript types and loops.

Discover how graph algorithms can help you leverage the relationships within your data to develop more intelligent solutions and enhance your machine learning models. You'll learn how graph analytics are uniquely suited to unfold complex structures and reveal difficult-to-find patterns lurking in your data. Whether you are trying to build dynamic network models or forecast real-world behavior, this book illustrates how graph algorithms deliver value—from finding vulnerabilities and bottlenecks to detecting communities and improving machine learning predictions. This practical book walks you through hands-on examples of how to use graph algorithms in Apache Spark and Neo4j—two of the most common choices for graph analytics. Also included: sample code and tips for over 20 practical graph algorithms that cover optimal pathfinding, importance through centrality, and community detection. Learn how graph analytics vary from conventional statistical analysis Understand how classic graph algorithms work, and how they are applied Get guidance on which algorithms to use for different types of questions Explore algorithm examples with working code and sample datasets from Spark and Neo4j See how connected feature extraction can increase machine learning accuracy and precision Walk through creating an ML workflow for link prediction combining Neo4j and Spark

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

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.

Write reliable code to create powerful applications by mastering advanced JavaScript design patterns About This Book Learn how to use tried and true software design methodologies to enhance your JavaScript code Discover robust JavaScript implementations of classic and advanced design patterns Packed with easy-to-follow examples that can be used to create reusable code and extensible designs Who This Book Is For This book is ideal for JavaScript developers who want to gain expertise in object-oriented programming with JavaScript and the new capabilities of ES-2015 to improve their web development skills and build professional-quality web applications. What You Will Learn Harness the power of patterns for tasks ranging from application building to code testing Rethink and revitalize your code with the use of functional patterns Improve the way you organize your code Build large-scale apps seamlessly with the help of reactive patterns Identify the best use cases for microservices Get to grips with creational, behavioral, and structural design patterns Explore advanced design patterns including dependency injection In Detail With the recent release of ES-2015, there are several new object-oriented features and functions introduced in JavaScript. These new features enhance the capabilities of JavaScript to utilize design patterns and software design methodologies to write powerful code. Through this book, you will explore how design patterns can help you improve

and organize your JavaScript code. You'll get to grips with creational, structural and behavioral patterns as you discover how to put them to work in different scenarios. Then, you'll get a deeper look at patterns used in functional programming, as well as model view patterns and patterns to build web applications. This updated edition will also delve into reactive design patterns and microservices as they are a growing phenomenon in the world of web development. You will also find patterns to improve the testability of your code using mock objects, mocking frameworks, and monkey patching. We'll also show you some advanced patterns including dependency injection and live post processing. By the end of the book, you'll be saved of a lot of trial and error and developmental headaches, and you will be on the road to becoming a JavaScript expert. Style and approach Packed with several real-world use cases, this book shows you through step-by-step instructions how to implement the advanced object-oriented programming features to build sophisticated web applications that promote scalability and reusability. Explore data structures and algorithm concepts and their relation to everyday JavaScript development. A basic understanding of these ideas is essential to any JavaScript developer wishing to analyze and build great software solutions. You'll discover how to implement data structures such as hash tables, linked lists, stacks, queues, trees, and graphs. You'll also learn how a URL shortener, such as bit.ly, is developed and what is happening to the data as a PDF is uploaded to a webpage. This book covers the practical applications of data structures and algorithms to encryption, searching, sorting, and pattern matching. It is crucial for JavaScript developers to understand how data structures work and how to design algorithms. This book and the accompanying code provide that essential foundation for doing so. With JavaScript Data Structures and Algorithms you can start developing your knowledge and applying it to your JavaScript projects today. What You'll Learn Review core data structure fundamentals: arrays, linked-lists, trees, heaps, graphs, and hash-table Review core algorithm fundamentals: search, sort, recursion, breadth/depth first search, dynamic programming, bitwise operators Examine how the core data structure and algorithms knowledge fits into context of JavaScript explained using prototypical inheritance and native JavaScript objects/data types Take a high-level look at commonly used design patterns in JavaScript Who This Book Is For Existing web developers and software engineers seeking to develop or revisit their fundamental data structures knowledge; beginners and students studying JavaScript independently or via a course or coding bootcamp. No matter how much experience you have with JavaScript, odds are you don't fully understand the language. This concise, in-depth guide takes you inside JavaScript's this structure and object prototypes. You'll learn how they work and why they're integral to behavior delegation—a design pattern in which objects are linked, rather than cloned. Like other books in the “You Don't Know JS” series, this and Object Prototypes dives into trickier parts of the language that many JavaScript programmers simply avoid. Armed with this knowledge, you can become a true JavaScript master. With this book you will: Explore how the this binding points to objects based on how the function is called Look into the nature of JS objects and why you'd need to point to them Learn how developers use the mixin pattern to fake classes in JS Examine how JS's prototype mechanism forms links between objects Learn how to move from class/inheritance design to behavior delegation Understand how the OLOO (objects-linked-to-other-objects) coding style naturally implements behavior delegation 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 assures bad results. Good 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 JSON is becoming the backbone for meaningful data interchange over the internet. This format is now supported by an entire ecosystem of standards, tools, and technologies for building truly elegant, useful, and efficient applications. With this hands-on guide, author and architect Tom Marrs shows you how to build enterprise-class applications and services by leveraging JSON tooling and message/document design. JSON at Work provides application architects and developers with guidelines, best practices, and use cases, along with lots of real-world examples and code samples. You'll start with a comprehensive JSON overview, explore the JSON ecosystem, and then dive into JSON's use in the enterprise. Get acquainted with JSON basics and learn how to model JSON data Learn how to use JSON with Node.js, Ruby on Rails, and Java Structure JSON documents with JSON Schema to design and test APIs Search the contents of JSON documents with JSON Search tools Convert JSON documents to other data formats with JSON Transform tools Compare JSON-based hypermedia formats, including HAL and jsonapi Leverage MongoDB to store and access JSON documents Use Apache Kafka to exchange JSON-based messages between services Learning React A hands-on guide to building web applications using React and Redux As far as new web frameworks and libraries go, React is quite the runaway success. It not only deals with the most common problems developers face when building complex apps, it throws in a few additional tricks that make building the visuals for such apps much, much easier. What React isn't, though, is beginner-friendly and approachable. Until now. In Learning React , author Kirupa Chinnathambi brings his fresh, clear, and very personable writing style to help web developers new to React understand its fundamentals and how to use it to build really performant (and awesome) apps. The only book on the market that helps you get your first React app up

and running in just minutes, Learning React is chock-full of colorful illustrations to help you visualize difficult concepts and practical step-by-step examples to show you how to apply what you learn. Build your first React app Create components to define parts of your UI Combine components into other components to build more complex UIs Use JSX to specify visuals without writing full-fledged JavaScript Deal with maintaining state Work with React's way of styling content Make sense of the mysterious component lifecycle Build multi-page apps using routing and views Optimize your React workflow using tools such as Node, Babel, webpack, and others Use Redux to make managing your app data and state easy Contents at a Glance 1 Introducing React 2 Building Your First React App 3 Components in React 4 Styling in React 5 Creating Complex Components 6 Transferring Properties 7 Meet JSX... Again! 8 Dealing with State in React 9 Going from Data to UI in React 10 Events in React 11 The Component Lifecycle 12 Accessing DOM Elements in React 13 Setting Up Your React Dev Environment 14 Working with External Data in React 15 Building an Awesome Todo List App in React 16 Creating a Sliding Menu in React 17 Avoiding Unnecessary Renders in React 18 Creating a Single-Page App in React Using React Router 19 Introduction to Redux 20 Using Redux with React

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."—Andrée Hansson, Lead Front-End Developer, presis!

The biggest challenge facing many game programmers is completing their game. Most game projects fizzle out, overwhelmed by the complexity of their own code. Game Programming Patterns tackles that exact problem. Based on years of experience in shipped AAA titles, this book collects proven patterns to untangle and optimize your game, organized as independent recipes so you can pick just the patterns you need. You will learn how to write a robust game loop, how to organize your entities using components, and take advantage of the CPUs cache to improve your performance. You'll dive deep into how scripting engines encode behavior, how quadrees and other spatial partitions optimize your engine, and how other classic design patterns can be used in games.

Get the best out of Node.js by mastering its most powerful components and patterns to create modular and scalable applications with ease About This Book Create reusable patterns and modules by leveraging the new features of Node.js . Understand the asynchronous single thread design of node and grasp all its features and patterns to take advantage of various functions. This unique guide will help you get the most out of Node.js and its ecosystem. Who This Book Is For The book is meant for developers and software architects with a basic working knowledge of JavaScript who are interested in acquiring a deeper understanding of how to design and develop enterprise-level Node.js applications. Basic knowledge of Node.js is also helpful to get the most out of this book. What You Will Learn Design and implement a series of server-side JavaScript patterns so you understand why and when to apply them in different use case scenarios Become comfortable with writing asynchronous code by leveraging constructs such as callbacks, promises, generators and the async-await syntax Identify the most important concerns and apply unique tricks to achieve higher scalability and modularity in your Node.js application Untangle your modules by organizing and connecting them coherently Reuse well-known techniques to solve common design and coding issues Explore the latest trends in Universal JavaScript, learn how to write code that runs on both Node.js and the browser and leverage React and its ecosystem to implement universal applications In Detail Node.js is a massively popular software platform that lets you use JavaScript to easily create scalable server-side applications. It allows you to create efficient code, enabling a more sustainable way of writing software made of only one language across the full stack, along with extreme levels of reusability, pragmatism, simplicity, and collaboration. Node.js is revolutionizing the web and the way people and companies create their software. In this book, we will take you on a journey across various ideas and components, and the challenges you would commonly encounter while designing and developing software using the Node.js platform. You will also discover the "Node.js way" of dealing with design and coding decisions. The book kicks off by exploring the basics of Node.js describing it's asynchronous single-threaded architecture and the main design patterns. It then shows you how to master the asynchronous control flow patterns, and the stream component and it culminates into a detailed list of Node.js implementations of the most common design patterns as well as some specific design patterns that are exclusive to the Node.js world. Lastly, it dives into more advanced concepts such as Universal Javascript, and scalability' and it's meant to conclude the journey by giving the reader all the necessary concepts to be able to build an enterprise grade application using Node.js. Style and approach This book takes its intended readers through a comprehensive explanation to create a scalable and efficient real-time server-side apps.

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

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

"The ultimate guide to thinking like a stylist, with 1,000 design ideas for creating the most beautiful, personal, and livable rooms,"--Amazon.com.

No matter how much experience you have with JavaScript, odds are you don't fully understand the language. As part of the "You Don't Know JS" series, this concise yet in-depth guide focuses on new asynchronous features and performance techniques—including Promises, generators, and Web Workers—that let you create sophisticated single-page web applications and escape callback hell in the process. Like other books in this series, You Don't Know JS: Async & Performance dives into trickier parts of the language that many JavaScript programmers simply avoid. Armed with this knowledge, you can become a true JavaScript master. With this book you will: Explore old and new JavaScript methods for handling asynchronous programming Understand how callbacks let third parties control your program's execution Address the "inversion of control" issue with JavaScript Promises Use generators to express async flow in a sequential, synchronous-looking fashion Tackle program-level performance with Web Workers, SIMD, and asm.js Learn valuable resources and techniques for benchmarking and tuning your expressions and statements

Easy Learning Design Patterns 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 idea that includes practical advice for implementing each pattern discussed, along with several hands-on examples. This book takes a user-friendly approach to covering Javascript design patterns. Its concise presentation means that in a short space of time, you will get a good introduction to various design patterns and actual application case examples. 1. Strategy Pattern Principle 2. Strategy Pattern Case 3. Composition Pattern Principle 4. Composition Pattern Case 5. Singleton Pattern Principle 6. Singleton Pattern Case 7. Template Pattern Principle 8. Template Pattern Case 9. Factory Pattern Principle 10. Factory Pattern Case 11. Builder Pattern Principle 12. Builder Pattern Case 13. Adapter Pattern Principle 14. Adapter Pattern Case 15. Facade Pattern Principle 16. Facade Pattern Case 17. Decorator Pattern Principle 18. Decorator Pattern Case 19. Shallow Clone Pattern Principle 20. Deep Clone Pattern Principle 21. Clone Pattern Case 22. Bridge Pattern Principle 23. Bridge Pattern Case 24. FlyWeight Pattern Principle 25. FlyWeight Pattern Case 26. Chain Pattern Principle 27. Chain Pattern Case 28. Command Pattern Principle 29. Command Pattern Case 30. Iterator Pattern Principle 31. Iterator Pattern Case 32. Mediator Pattern Principle 33. Mediator Pattern Case 34. Memento Pattern Principle 35. Memento Pattern Case 36. Observer Pattern Principle 37. Observer Pattern Case 38. Visitor Pattern Principle 39. Visitor Pattern Case 40. State Pattern Principle 41. State Pattern Case 42. Proxy Pattern Principle 43. Proxy Pattern Case

How often do you hear people say things like this? "Our JavaScript is a mess, but we're thinking about using [framework of the month]." Like it or not, JavaScript is not going away. No matter what framework or "compiles-to-js" language or library you use, bugs and performance concerns will always be an issue if the underlying quality of your JavaScript is poor. Rewrites, including porting to the framework of the month, are terribly expensive and unpredictable. The bugs won't magically go away, and can happily reproduce themselves in a new context. To complicate things further, features will get dropped, at least temporarily. The other popular method of fixing your JS is playing "JavaScript Jenga," where each developer slowly and carefully takes their best guess at how the out-of-control system can be altered to allow for new features, hoping that this doesn't bring the whole stack of blocks down. This book provides clear guidance on how best to avoid these pathological approaches to writing JavaScript: Recognize you have a problem with your JavaScript quality. Forgive the code you have now, and the developers who made it. Learn repeatable, memorable, and time-saving refactoring techniques. Apply these techniques as you work, fixing things along the way. Internalize these techniques, and avoid writing as much problematic code to begin with. Bad code doesn't have to stay that way. And making it better doesn't have to be intimidating or unreasonably expensive.

A catalog of solutions to commonly occurring design problems, presenting 23 patterns that allow designers to create flexible and reusable designs for object-oriented software. Describes the circumstances in which each pattern is applicable, and discusses the consequences and trade-offs of using the pattern within a larger design. Patterns are compiled from real systems, and include code for implementation in object-oriented programming languages like C++ and Smalltalk. Includes a bibliography. Annotation copyright by Book News, Inc., Portland, OR

If you want to build your site's frontend with the single-page application (SPA) model, this hands-on book shows you how to get the job done with Backbone.js. You'll learn how to create structured JavaScript applications, using Backbone's own flavor of model-view-controller (MVC) architecture. Start with the basics of MVC, SPA, and Backbone, then get your hands dirty building sample applications—a simple Todo list app, a RESTful book library app, and a modular app with Backbone and RequireJS. Author Addy Osmani, an engineer for Google's Chrome team, also demonstrates advanced uses of the framework. Learn how Backbone.js brings MVC benefits to the client-side Write code that can be easily read, structured, and extended Work with the Backbone.Marionette and Thorax extension frameworks Solve common problems you'll encounter when using Backbone.js Organize your code into modules with AMD and RequireJS Paginate data for your Collections with the Backbone.Paginator plugin Bootstrap a new Backbone.js application with boilerplate code Use Backbone with jQuery Mobile and resolve routing problems between the two Unit-test your Backbone apps with Jasmine, QUnit, and SinonJS

If you're new to JavaScript, or an experienced web developer looking to improve your skills, Learning JavaScript provides you with complete, no-nonsense coverage of this quirky yet essential language for web development. You'll learn everything from primitive data types to complex features, including JavaScript elements involved with Ajax and dynamic page effects. By the end of the book, you'll be able to work with even the most sophisticated libraries and web applications. Complete with best practices and examples of JavaScript use, this new edition shows you how to integrate the language with the browser environment, and how to practice proper coding techniques for standards-compliant websites. This book will help you: Learn the JavaScript application structure, including basic statements and control structures Identify JavaScript objects—String, Number, Boolean, Function, and more Use browser debugging tools and troubleshooting techniques Understand event handling, form events, and JavaScript applications with forms Develop with the Browser Object Model, the Document Object Model, and custom objects you create Learn about browser cookies and more modern client-side storage techniques Get details for using XML or JSON with Ajax applications Learning JavaScript follows proven learning principles to help you absorb the concepts at an easy pace, so you'll learn how to create powerful and responsive applications in any browser.

Learning JavaScript Design Patterns"O'Reilly Media, Inc."

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.

Like it or not, JavaScript is everywhere these days—from browser to server to mobile—and now you, too, need to learn the language or dive deeper than you have. This concise book guides you into and through JavaScript, written by a veteran programmer who once found himself in the same position. Speaking JavaScript helps you approach the

language with four standalone sections. First, a quick-start guide teaches you just enough of the language to help you be productive right away. More experienced JavaScript programmers will find a complete and easy-to-read reference that covers each language feature in depth. Complete contents include: JavaScript quick start: Familiar with object-oriented programming? This part helps you learn JavaScript quickly and properly. JavaScript in depth: Learn details of ECMAScript 5, from syntax, variables, functions, and object-oriented programming to regular expressions and JSON with lots of examples. Pick a topic and jump in. Background: Understand JavaScript's history and its relationship with other programming languages. Tips, tools, and libraries: Survey existing style guides, best practices, advanced techniques, module systems, package managers, build tools, and learning resources.

Looks at the principles and clean code, includes case studies showcasing the practices of writing clean code, and contains a list of heuristics and "smells" accumulated from the process of writing clean code.

An introduction to writing code with JavaScript using classical and modern design patterns, including modules, observers, facades, and mediators.

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 Features Learn how to create solid server-side applications by leveraging the full power of Node.js 14 Understand how Node.js works and learn how to take full advantage of its core components as well as the solutions offered by its ecosystem Avoid common mistakes and use proven patterns to create production grade Node.js applications Book 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 learn Become comfortable with writing asynchronous code by leveraging callbacks, promises, and the async/await syntax Leverage Node.js streams to create data-driven asynchronous processing pipelines Implement well-known software design patterns to create production grade applications Share code between Node.js and the browser and take advantage of full-stack JavaScript Build and scale microservices and distributed systems powered by Node.js Use Node.js in conjunction with other powerful technologies such as Redis, RabbitMQ, ZeroMQ, and LevelDB Who 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.

Learn the best practices on writing efficient jQuery applications to maximize performance in large-scale deployments About This Book Learn about the observer pattern and the deferred observer pattern, two of the most popular design patterns that handle custom events Advance your jQuery skills by learning about patterns such as divide and conquer, facade, and builder and factory to handle complex results This step-by-step guide to applying micro-patterns and optimizing jQuery applications will help you get the best performance in a production environment Who This Book Is For This book is for existing jQuery Developers or new developers who want to get an understanding of the "correct way" to build jQuery applications, using best practices and industry standard patterns. What You Will Learn Respond to user actions Achieve greater flexibility and code decoupling Have a central point for emitting and receiving application level events Structure the application into small independent modules Abstract complex APIs Isolate the procedure of generating complex parts of the application Efficiently orchestrate asynchronous procedures using jQuery Deferred and Promises Utilize the most widely-used client-side templating libraries for more complex use cases In Detail jQuery is a feature-rich JavaScript library that makes HTML document traversal and manipulation, event handling, animation, and Ajax much simpler with an easy-to-use API that works across a variety of browsers. With a combination of versatility and extensibility, jQuery has changed the way that millions of people write JavaScript. jQuery solves the problems of DOM manipulation, event detection, AJAX calls, element selection and document queries, element attribute and data management, as well as object management utilities. This book addresses these problems and shows you how to make the best of jQuery through the various design patterns available. The book starts off with a refresher to jQuery and will then take you through the different design patterns such as facade, observer, publisher/subscriber, and so on. We will also go into client-side templating techniques and libraries, as well as some plugin development patterns. Finally, we will look into some best practices that you can use to make the best of jQuery. Style and approach The example-oriented guide covers the best and most widely used patterns to help you improve your development with jQuery.

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 JavaScript 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.

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.

Revised and Updated, Featuring a New Case Study How do successful companies create products people can't put down? Why do some products capture widespread attention while others flop? What makes us engage with certain products out of sheer habit? Is there a pattern underlying how technologies hook us? Nir Eyal answers these questions (and many more) by explaining the Hook Model—a four-step process embedded into the products of many successful companies to subtly encourage customer behavior. Through consecutive “hook cycles,” these products reach their ultimate goal of bringing users back again and again without depending on costly advertising or aggressive messaging. Hooked is based on Eyal's years of research, consulting, and practical experience. He wrote the book he wished had been available to him as a start-up founder—not abstract theory, but a how-to guide for building better products. Hooked is written for product managers, designers, marketers, start-up founders, and anyone who seeks to understand how products influence our behavior. Eyal provides readers with:

- Practical insights to create user habits that stick.
- Actionable steps for building products people love.
- Fascinating examples from the iPhone to Twitter, Pinterest to the Bible App, and many other habit-forming products.

Learn application security from the very start, with this comprehensive and approachable guide! Alice and Bob Learn Application Security is an accessible and thorough resource for anyone seeking to incorporate, from the beginning of the System Development Life Cycle, best security practices in software development. This book covers all the basic subjects such as threat modeling and security testing, but also dives deep into more complex and advanced topics for securing modern software systems and architectures. Throughout, the book offers analogies, stories of the characters Alice and Bob, real-life examples, technical explanations and diagrams to ensure maximum clarity of the many abstract and complicated subjects. Topics include:

- Secure requirements, design, coding, and deployment
- Security Testing (all forms)
- Common Pitfalls
- Application Security Programs
- Securing Modern Applications
- Software Developer Security Hygiene

Alice and Bob Learn Application Security is perfect for aspiring application security engineers and practicing software developers, as well as software project managers, penetration testers, and chief information security officers who seek to build or improve their application security programs. Alice and Bob Learn Application Security illustrates all the included concepts with easy-to-understand examples and concrete practical applications, furthering the reader's ability to grasp and retain the foundational and advanced topics contained within.

Build server-side applications more efficiently—and improve your PHP programming skills in the process—by learning how to use design patterns in your code. This book shows you how to apply several object-oriented patterns through simple examples, and demonstrates many of them in full-fledged working applications. Learn how these reusable patterns help you solve complex problems, organize object-oriented code, and revise a big project by only changing small parts. With Learning PHP Design Patterns, you'll learn how to adopt a more sophisticated programming style and dramatically reduce development time. Learn design pattern concepts, including how to select patterns to handle specific problems. Get an overview of object-oriented programming concepts such as composition, encapsulation, polymorphism, and inheritance. Apply creational design patterns to create pages dynamically, using a factory method instead of direct instantiation. Make changes to existing objects or structure without having to change the original code, using

structural design patterns Use behavioral patterns to help objects work together to perform tasks Interact with MySQL, using behavioral patterns such as Proxy and Chain of Responsibility Explore ways to use PHP's built-in design pattern interfaces

* Allen Holub is a highly regarded instructor for the University of California, Berkeley, Extension. He has taught since 1982 on various topics, including Object-Oriented Analysis and Design, Java, C++, C. Holub will use this book in his Berkeley Extension classes. * Holub is a regular presenter at the Software Development conferences and is Contributing Editor for the online magazine JavaWorld, for whom he writes the Java Toolbox. He also wrote the OO Design Process column for IBM DeveloperWorks. * This book is not time-sensitive. It is an extremely well-thought out approach to learning design patterns, with Java as the example platform, but the concepts presented are not limited to just Java programmers. This is a complement to the Addison-Wesley seminal "Design Patterns" book by the "Gang of Four".

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

mmers better use the energy of algorithms in daily projects.1. Classic reference book in the field of algorithms: reflects the core knowledge system of algorithms2.

Comprehensive content: Comprehensive discussion of sorting, linked list, search, hash, graph and tree algorithms and data structures, covering the algorithms commonly used by every programmer3. The C implementation code, using a modular programming style, gives the actual code of the algorithm.Simple is the beginning of wisdom. From the essence of practice, this book to briefly explain the concept and vividly cultivate programming interest, you will learn it easy, fast and well

Summary Deep learning has transformed the fields of computer vision, image processing, and natural language applications. Thanks to TensorFlow.js, now JavaScript developers can build deep learning apps without relying on Python or R. Deep Learning with JavaScript shows developers how they can bring DL technology to the web. Written by the main authors of the TensorFlow library, this new book provides fascinating use cases and in-depth instruction for deep learning apps in JavaScript in your browser or on Node. Foreword by Nikhil Thorat and Daniel Smilkov. About the technology Running deep learning applications in the browser or on Node-based backends opens up exciting possibilities for smart web applications. With the TensorFlow.js library, you build and train deep learning models with JavaScript. Offering uncompromising production-quality scalability, modularity, and responsiveness, TensorFlow.js really shines for its portability. Its models run anywhere JavaScript runs, pushing ML farther up the application stack. About the book In Deep Learning with JavaScript, you'll learn to use TensorFlow.js to build deep learning models that run directly in the browser. This fast-paced book, written by Google engineers, is practical, engaging, and easy to follow. Through diverse examples featuring text analysis, speech processing, image recognition, and self-learning game AI, you'll master all the basics of deep learning and explore advanced concepts, like retraining existing models for transfer learning and image generation. What's inside - Image and language processing in the browser - Tuning ML models with client-side data - Text and image creation with generative deep learning - Source code samples to test and modify

About the reader For JavaScript programmers interested in deep learning. About the author Shangting Cai, Stanley Bileschi and Eric D. Nielsen are software engineers with experience on the Google Brain team, and were crucial to the development of the high-level API of TensorFlow.js. This book is based in part on the classic, Deep Learning with Python by François Chollet. TOC: PART 1 - MOTIVATION AND BASIC CONCEPTS 1 • Deep learning and JavaScript PART 2 - A GENTLE INTRODUCTION TO TENSORFLOW.JS 2 • Getting started: Simple linear regression in TensorFlow.js 3 • Adding nonlinearity: Beyond weighted sums 4 • Recognizing images and sounds using convnets 5 • Transfer learning: Reusing pretrained neural networks PART 3 - ADVANCED DEEP LEARNING WITH TENSORFLOW.JS 6 • Working with data 7 • Visualizing data and models 8 • Underfitting, overfitting, and the universal workflow of machine learning 9 • Deep learning for sequences and text 10 • Generative deep learning 11 • Basics of deep reinforcement learning PART 4 - SUMMARY AND CLOSING WORDS 12 • Testing, optimizing, and deploying models 13 • Summary, conclusions, and beyond

Easy Learning Design Patterns 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 idea that includes practical advice for implementing each pattern discussed, along with several hands-on examples.ECMA Script 6 (ES6). This book provides a highly practical look at ES6, This book takes a user-friendly approach to covering ES6 Javascript design patterns. Its concise presentation means that in a short space of time, you will get a good introduction to various design patterns and actual application case examples.1. Strategy Pattern Principle 2. Strategy Pattern Case3. Composition Pattern Principle4. Composition Pattern Case5. Singleton Pattern Principle6. Singleton Pattern Case7. Template Pattern Principle8. Template Pattern Case9. Factory Pattern Principle10. Factory Pattern Case11. Builder Pattern Principle12. Builder Pattern Case13. Adapter Pattern Principle14. Adapter Pattern Case15. Facade Pattern Principle16. Facade Pattern Case17. Decorator Pattern Principle18. Decorator Pattern Case19. Shallow Clone Pattern Principle20. Clone Pattern Case21. Bridge Pattern Principle22. Bridge Pattern Case23. FlyWeight Pattern Principle24. FlyWeight Pattern Case25. Chain Pattern

Principle26. Chain Pattern Case27. Command Pattern Principle28. Command Pattern Case29. Iterator Pattern Principle30. Iterator Pattern Case31. Mediator Pattern Principle32. Mediator Pattern Case33. Memento Pattern Principle34. Memento Pattern Case35. Observer Pattern Principle36. Observer Pattern Case37. Visitor Pattern Principle38. Visitor Pattern Case39. State Pattern Principle40. State Pattern Case41. Proxy Pattern Principle42. Proxy Pattern Case

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