

Maintainable Javascript Writing Readable Code Ebook

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

JavaScript is one of the easiest, most straightforward ways to enhance a website with interactivity. Sams Teach Yourself JavaScript in 24 Hours, 4th Edition serves as an easy-to-understand tutorial on both scripting basics and JavaScript itself. The book is written in a clear and personable style with an extensive use of practical, complete examples. It also includes material on the latest developments in JavaScript and web scripting. You will learn how to use JavaScript to enhance web pages with interactive forms, objects, and cookies, as well as how to use JavaScript to work with games, animation, and multimedia.

Provides information on how to write better JavaScript programs, covering such topics as functions, arrays, library and API design, and concurrency.

Three years after the first edition of this book was released, there have been several advances in the techniques and technology of JavaScript in the browser. This Second Edition has been thoroughly updated to include the latest versions of all web browsers. The book also introduces newer techniques and related technologies such as canvas, E4X, and JavaScript 2.0. Setting the stage by covering JavaScript in HTML, the book then explores the core of JavaScript, ECMAScript, to give you an understanding of the language's basic syntax, data types, statements, and memory management.

Ten Guidelines for Future-Proof Code

Mastering JavaScript Design Patterns

Pro D3.js

Professional JavaScript for Web Developers

Refactoring JavaScript

The Problem with Software

JavaScript Next

Users can dramatically improve the design, performance, and manageability of object-oriented code without altering its interfaces or behavior. "Refactoring" shows users exactly how to spot the best opportunities for refactoring and exactly how to do it, step by step.

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 quality 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 simplify 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

This book is for experienced software developers who want to improve upon their existing skills in writing unit tests. You will learn how to build loosely coupled, highly maintainable and robust unit tests that are trustworthy and improve the overall code quality of your software applications. The content of this book is based on 15+ years experience with Test-Driven Development. Although the examples in this book are written in C#, the principles and guidance are broadly applicable to other platforms and programming environments as well (Java, Python, JavaScript, etc.). You will be able to universally apply this knowledge throughout the rest of your career.

Code Complete

Develop reliable, maintainable, and robust JavaScript

68 Specific Ways to Harness the Power of JavaScript

Learning JavaScript Design Patterns

Testable JavaScript

C++ for dinosaurs: Guide for readable, maintainable, reusable and faster code

Writing Maintainable Unit Tests: Mastering the Art of Loosely Coupled Unit Tests

You may have definite ideas about writing code when working alone, but team development requires that everyone use the same approach. With the JavaScript practices in this book—including code style, programming tips, and automation—you will learn how to write maintainable code that other team members can easily

understand, adapt, and extend. Author Nicholas Zakas assembled this collection of best practices as a front-end tech leader at Yahoo!, after completing his own journey from solo hacker to team player. He also includes rules recommended by other industry authorities. Use these tips and techniques to help your team set aside individual preferences and function at a higher level. Establish specific code conventions for your team Use tools such as JSLint and JSHint to keep your team on track Adopt style guidelines, such as basic formatting, to help your team produce uniform code Apply several programming practices to solve problems and improve code quality Create an automated JavaScript build system using a variety of utilities Integrate browser-based JavaScript testing with tools such as the YUI Test Selenium Driver

Presents guidelines on the art of coding with Perl, covering such topics as naming conventions, data and control structures, program decomposition, interface design, and error handling.

Go beyond the basics of D3.js to create maintainable, modular, and testable charts and to package them into a library that can be distributed as open source software or kept for private use. This book will show you how to transform regular D3.js chart code into reusable and extendable modules. You know the basics of working with D3.js, but it’s time to become a professional D3.js practitioner. This book is your launching pad to refactoring code, composing complex visualizations from small components, working as a team with other developers, and integrating charts with a Continuous Integration system. You’ll begin by creating a production-ready chart using D3.js v5, ES2015, and a test-driven approach and then move on to using and extending Britecharts, the reusable charting library based on Reusable API patterns. Finally, you’ll see how to use D3.js along with React to document and build your charts to compose a charting library you can release into the NPM repository. With Pro D3.js, you’ll become an accomplished D3.js developer in no time. What You Will Learn Create v5 D3.js charts with ES2016 and unit tests Develop modular, testable and extensible code with the Reusable API pattern Work with and extend Britecharts, a reusable charting library created at Eventbrite Use Webpack and npm to create and publish a charting library from your own chart collections Write reference documentation and build a documentation homepage for your library. Who This Book Is For Data scientists, data visualization engineers, and frontend developers with a fundamental knowledge of D3.js and some experience with JavaScript, as well as data journalists and consultants.

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.

Building Maintainable Software, Java Edition

How to improve your JavaScript programs using functional techniques

Use D3.js to Create Maintainable, Modular, and Testable Charts

Get Programming with JavaScript Next

Javascript for R

Build Faster Web Application Interfaces

Turning Bad Code Into Good Code

Page 26: How can I avoid off-by-one errors? Page 143: Are Trojan Horse attacks for real? Page 158: Where should I look when my application can't handle its workload? Page 256: How can I detect memory leaks? Page 309: How do I target my application to international markets? Page 394: How should I name my code's identifiers? Page 441: How can I find and improve the code coverage of my tests? Diomidis Spinellis' first book, Code Reading, showed programmers how to understand and modify key functional properties of software. Code Quality focuses on non-functional properties, demonstrating how to meet such critical requirements as reliability, security, portability, and maintainability, as well as efficiency in time and space. Spinellis draws on hundreds of examples from open source projects—such as the Apache web and application servers, the BSD Unix systems, and the HSQLDB Java database—to illustrate concepts and techniques that every professional software developer will be able to appreciate and apply immediately. Complete files for the open source code illustrated in this book are available online at: <http://www.spinellis.gr/codequality/>

"Writing readable code"—Cover.

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.

Modern browsers, Node, and major libraries have already started to adopt next generation JavaScript features. They can make JavaScript simpler to read, less prone to common errors, and much easier to use in asynchronous programs. Get Programming with JavaScript Next teaches JavaScript developers the most important additions from both ES6 and ES7. This clearly-written guide to JavaScript's newest features contains lots of short easy-to-digest chapters and exercises to help you master each new concept. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

Reflections on the Craft of Programming

JavaScript: Best Practice

Perl Best Practices

with examples in C#

JavaScript Patterns

Refactoring

A Handbook of Agile Software Craftsmanship

Pro JPA 2 introduces, explains, and demonstrates how to use the Java Persistence API (JPA). JPA provides Java developers with both the knowledge and insight needed to write Java applications that access relational databases through JPA. Authors Mike Keith and Merrick Schincariol take a hands-on approach to teaching by giving examples to illustrate each concept of the API and showing how it is used in practice. All of the examples use a common model from an overriding sample application, giving readers a context from which to start and helping them to understand the examples within an already familiar domain. After completing the book, you will have a full understanding and be able to successfully code applications using JPA. The book also serves as a reference guide during initial and later JPA application experiences. Hands-on examples for all the aspects of the JPA specification, based on the reference implementation of this specification A special section on migration to JPA Expert insight about various aspects of the API and when they are useful Portability hints to provide increased awareness of the potential for non-portable JPA code JavaScript has finally grown up. Armed with a slew of new features, JavaScript now makes writing the code that powers your applications elegant, concise, and easy to understand. This book is a pragmatic guide to the new features introduced in JavaScript, starting with Edition 6 of ECMAScript, and ending with Edition 9. Using a "compare and contrast" approach, each chapter offers a deep dive into new features, highlighting how best to use them moving forward. As you progress through the book, you'll be offered multiple opportunities to see the new features in action, and in concert with one another. Backed by an example-driven writing style, you'll learn by doing, and get ready to embrace the new world of JavaScript. What You'll Learn Provide a deep exposition of the new features introduced in ES6 through ES9 Review how JavaScript's new features by-pass any limitations of an existing approachExamine the refactoring necessary to go from old to newDemonstrate how JavaScript's new features work in unison with each other Who This Book Is For New and experienced developers who wish to keep abreast of the changes to JavaScript and deepen their understanding of the language.

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

What is this book about? JavaScript is the language of the Web. Used for programming all major browsers, JavaScript gives you the ability to enhance your web site by creating interactive, dynamic, and personalized pages. Our focus in this book is on client-side scripting, but JavaScript is also hugely popular as a scripting language in server-side environments, a subject that we cover in later chapters. What does this book cover? Beginning JavaScript assumes no prior knowledge of programming languages, but will teach you all the fundamental concepts that you need as you progress. After covering the core JavaScript language, you'll move on to learn about more advanced techniques, including Dynamic HTML, using cookies, debugging techniques, and server-side scripting with ASP. By the end of this book, you will have mastered the art of using JavaScript to create dynamic and professional-looking web pages. Here are a few of the things you'll learn in this book: Fundamental programming concepts Comprehensive practical tutorial in JavaScript Cross-browser scripting, including Netscape 6 Cookie creation and use Plug-ins and ActiveX controls Dynamic HTML Scripting the W3C DOM Server-side JavaScript with ASP Who is this book for? This book is for anyone who wants to learn JavaScript. You will need a very basic knowledge of HTML, but no prior programming experience is necessary. Whether you want to pick up some programming skills, or want to find out how to transfer your existing programming knowledge to the Web, then this book is for you. All you need is a text editor (like Notepad) and a browser, and you're ready to go!

WORK EFFECT LEG CODE _p1

Pro JPA 2

Maintainable Javascript

Web Programming with HTML5, CSS, and JavaScript

In-depth guide for writing robust and maintainable JavaScript code in ES8 and beyond

Why Smart Engineers Write Bad Code

Mastering the JavaTM Persistence API

Web Programming with HTML5, CSS, and JavaScript is written for the undergraduate, client-side web programming course. It covers the three client-side technologies (HTML5, CSS, and JavaScript) in depth, with no dependence on server-side technologies.

If you have a working knowledge of JavaScript and ECMAScript 6 (ES6), this practical guide will help you tackle modular programming to produce code that’s readable, maintainable, and scalable. You’ll learn the fundamentals of modular architecture with JavaScript and the benefits of writing self-contained code at every system level, including Bevacqua, author of Practical Modern JavaScript, demonstrates how to scale out JavaScript applications by breaking codebases into smaller modules. By following the design practices in this book, senior developers, technical leaders, and software architects will learn how to create modules that are simple and flexible while keeping internal design essentials, including how your application will be consumed and what belongs on the interface Design module internals to keep your code readable and its intent clear Reduce complexity by refactoring code and containing and eliminating state Take advantage of modern JavaScript features to write clear programs and reduce comple

frontend and backend JavaScript application development

The best modern JavaScript is simple, readable, and predictable. Learn to write modern JavaScript not by memorizing a list of new syntax, but with practical examples of how syntax changes can make code more expressive. Starting from variable declarations that communicate intention clearly, see how modern principles can improve all parts of your code: functions, array methods, classes, and more to create code that does more with less while yielding fewer bugs. It's time to write JavaScript code that's clean and expressive. Modern JavaScript is simpler and more predictable and readable than ever. Discover how to write better code with clear examples using principles that show how you can avoid bugs. Starting from the ground up, learn new syntax (or how to reuse older syntax) to transform code from clunky bug-susceptible scripts to clear and elegant programs that are easy to read and easy to extend. Create a foundation for readable code with simple variable declarations that reduce side effects and subtle bugs. Select collectible objects or arrays. See how to simplify iterations from complex loops to single line array methods. Master techniques for writing flexible and solid code ranging from high-order functions, to reusable classes, to patterns for architecting large applications creating applications that will last while through rounds of refactoring and changing requirements. To read this book straight through. Jump around and incorporate new functionality at will. Most importantly, understand not just what the new syntax is, but when and how to use it. Start writing better code from the first page. What You Need: For the best experience, have the latest version of Node installed (at least version 7). You can also use any other modern web browser. If you'd like to run the tests, you'll also need to install the latest version of Node Package Manager (npm).

Get the most out of JavaScript for building web applications through a series of patterns, techniques, and case studies for clean coding Key FeaturesWrite maintainable JS code using internal abstraction, well-written tests, and well-documented codeUnderstand the agents of clean coding like SOLID principles, OOP, and functional programming JavaScript challenges in building UIs, managing APIs, and writing stateful apps starts with creating clean code. In this book, you'll explore techniques for doing this by learning everything from the basics of JavaScript through to the practices of clean code. You'll write functional, intuitive, and maintainable code that affects the end user and the wider community. The book starts with popular clean-coding principles such as SOLID, and the Law of Demeter (LoD), along with highlighting the enemies of writing clean code such as cargo culting and over-management. You'll then delve into JavaScript, understanding the more complex aspects of the language through design patterns and abstractions using design patterns, such as the Class Pattern and the Revealing Module Pattern. You'll explore real-world challenges such as DOM reconciliation, state management, dependency management, and security, both within browser and server environments. Later, you'll cover tooling and testing methodologies and the importance of testing. The book will focus on advocacy and good communication for improving code cleanliness within teams or workplaces, along with covering a case study for clean coding. By the end of this book, you'll be well-versed with JavaScript and have learned how to create clean abstractions, test them, and communicate about them via documentation. What You'll Learn: How to write clean code and the problems it solves for your end-users and colleaguesDiscover the tenets and enemies of clean code considering the effects of cultural and syntactic conventionsUse modern JavaScript syntax and design patterns to craft intuitive abstractionsMaintain code quality within your team via wise adoption of tooling and advocating for it JavaScript and its challenges like DOM reconciliation and state managementExpress the behavior of your code both within tests and via various forms of documentationWho this book is for This book is for anyone who writes JavaScript, professionally or otherwise. As this book does not relate specifically to any particular framework or environment, no JavaScript web framework is required. Some knowledge of programming is assumed to understand the concepts covered in the book more effectively.

Working Effectively with Legacy Code

The Open Source Perspective

Coders at Work

Maintainable JavaScript

The Good Parts

JavaScript: The Good Parts

Clean Code in JavaScript

Peter Seibel interviews 15 of the most interesting computer programmers alive today in Coders at Work, offering a companion volume to Apress's highly acclaimed best-seller Founders at Work by Jessica Livingston. As the words "at work" suggest, Peter Seibel focuses on how his interviewees tackle the day-to-day work of programming, while revealing much more, like how they became great programmers, how they recognize programming talent in others, and what kinds of problems they find most interesting. Hundreds of people have suggested names of programmers to interview on the Coders at Work web site: www.codersatwork.com. The complete list was 284 names. Having digested everyone's feedback, we selected 15 folks who've been kind enough to agree to be interviewed: Frances Allen: Pioneer in optimizing compilers, first woman to win the Turing Award (2006) and first female IBM fellow Joe Armstrong: Inventor of Erlang Joshua Bloch: Author of the Java collections framework, now at Google Bernie Cosell: One of the main software guys behind the original ARPANET IMPs and a master debugger Douglas Crockford: JSON founder, JavaScript architect at Yahoo! L. Peter Deutsch: Author of Ghostscript, implementer of Smalltalk-80 at Xerox PARC and Lisp 1.5 on PDP-1 Brendan Eich: Inventor of JavaScript, CTO of the Mozilla Corporation Brad Fitzpatrick: Writer of LiveJournal, OpenID, memcached, and Perlbal Dan Ingalls: Smalltalk implementor and designer Simon Peyton Jones: Coinventor of Haskell and lead designer of Glasgow Haskell Compiler Donald Knuth: Author of The Art of Computer Programming and creator of TeX Peter Norvig: Director of Research at Google and author of the standard text on AI Guy Steele: Coinventor of Scheme and part of the Common Lisp Gang of Five, currently working on Fortress Ken Thompson: Inventor of UNIX Jamie Zawinski: Author of XEmacs and early Netscape/Mozilla hacker

Master Functional Programming techniques with this comprehensive guide for writing cleaner, safer, high-performing JavaScript codes About This Book Become proficient and skilled with Functional Programming in JavaScript to solve real-world development problems Successfully apply Functional Programming concepts and techniques to everyday JavaScript programming Bring modularity, reusability, testability, and performance to your web apps Who This Book Is For If you are a JavaScript developer and want to apply functional programming techniques, then this book is for you. Only a basic knowledge of the concepts of functional programming is required for this book. What You Will Learn Create more reliable code with closures and immutable data Convert existing methods into pure functions, and loops into recursive methods Develop more powerful applications with currying and function composition Separate the logic of your system from implementation details Implement composition and chaining techniques to simplify coding Use functional programming techniques where it makes the most sense In Detail Functional programming is a programming paradigm for developing software using functions. Learning to use functional programming is a good way to write more concise code, with greater concurrency and performance. The JavaScript language is particularly suited to functional programming. This book provides comprehensive coverage of the major topics in functional programming with JavaScript to produce shorter, clearer, and testable programs. You'll delve into functional programming; including writing and testing pure functions, reducing side-effects, and other features to make your applications functional in nature. Specifically, we'll explore techniques to simplify coding, apply recursion for loopless coding, learn ways to achieve immutability, implement design patterns, and work with data types. By the end of this book, you'll have developed the JavaScript skills you need to program functional applications with confidence. Style and approach This book takes an easy-to-follow, step-by-step tutorial approach. You will make the most of JavaScript programming with a focus on the progression of functional programming techniques, styles, and detailed information about JavaScript libraries.

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

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.

Mastering Modular JavaScript

Writing Modern JavaScript with ES5, ES6, and Beyond

Clean Code

Simplifying JavaScript

Writing Readable Code

A JavaScript and jQuery Developer's Guide

How and when to refactor

Get more out of your legacy systems: more performance, functionality, reliability, and manageability Is your code easy to change? Can you get nearly instantaneous feedback when you do change it? Do you understand it? If the answer to any of these questions is no, you have legacy code, and it is draining time and money away from your development efforts. In this book, Michael Feathers offers start-to-finish strategies for working more effectively with large, untested legacy code bases. This book draws on material Michael created for his renowned Object Mentor seminars: techniques Michael has used in mentoring to help hundreds of developers, technical managers, and testers bring their legacy systems under control. The topics covered include Understanding the mechanics of software change: adding features, fixing bugs, improving design, optimizing performance Getting legacy code into a test harness Writing tests that protect you against introducing new problems Techniques that can be used with any language or platform—with examples in Java, C++, C, and C# Accurately identifying where code changes need to be made Coping with legacy systems that aren't object-oriented Handling applications that don't seem to have any structure This book also includes a catalog of twenty-four dependency-breaking techniques that help you work with program elements in isolation and make safer changes.

Maintainable JavaScriptWriting Readable Code"O'Reilly Media, Inc."

This is a guide for creating readable, maintainable, reusable and faster code. No object oriented programming is involved. Out of all techniques which aim to improve your product's quality, readability has the highest return on effort. - Quality: Bugs are found mostly by reviewing other people's code. You can't review somebody else's code if you cannot read it. Bugs are not found by unit-tests, because unit-tests are created to capture errors that are known to exist. - Efficiency: Maintenance takes about 80% of developers' time. Therefore, spending some time in writing better code will save you more time during maintenance. - Performance: Unreadable code is difficult to reason about. Any opportunities for optimisation that may exist are often impossible to spot. The six techniques described are easy, therefore: - students can apply them - C programmers can follow it without changing programming paradigm - you can write idiomatic C++, instead of writing like C, Java, or Fortran.

Widely considered one of the best practical guides to programming, Steve McConnell's original CODE COMPLETE has been helping developers write better software for more than a decade. Now this classic book has been fully updated and revised with leading-edge practices—and hundreds of new code samples—illustrating the art and science of software construction. Capturing the body of knowledge available from research, academia, and everyday commercial practice, McConnell synthesizes the most effective techniques and must-know principles into clear, pragmatic guidance. No matter what your experience level, development environment, or project size, this book will inform and stimulate your thinking—and help you build the highest quality code. Discover the timeless techniques and strategies that help you: Design for minimum complexity and maximum creativity Reap the benefits of collaborative development Apply defensive programming techniques to reduce and flush out errors Exploit opportunities to refactor—or evolve—code, and do it safely Use construction practices that are right-weight for your project Debug problems quickly and effectively Resolve critical construction issues early and correctly Build quality into the beginning, middle, and end of your project

High Performance JavaScript

Pro JavaScript Techniques

Your Complete Guide to the New Features Introduced in JavaScript, Starting from ES6 to ES9

Mastering JavaScript Functional Programming

The Art of Unit Testing

Build Better Applications with Coding and Design Patterns

Code Quality

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!

An industry insider explains why there is so much bad software—and why academia doesn't teach programmers what industry wants them to know. Why is software so prone to bugs? So vulnerable to viruses? Why are software products so often delayed, or even canceled? Is software development really hard, or are software developers just not that good at it? In The Problem with Software, Adam Barr examines the proliferation of bad software, explains what causes it, and offers some suggestions on how to improve the situation. For one thing, Barr points out, academia doesn't teach programmers what they actually need to know to do their jobs: how to work in a team to create code that works reliably and can be maintained by somebody other than the original authors. As the size and complexity of commercial software have grown, the gap between academic computer science and industry has widened. It's an open secret that there is little engineering in software engineering, which continues to rely not on codified scientific knowledge but on intuition and experience. Barr, who worked as a programmer for more than twenty years, describes how the industry has evolved, from the era of mainframes and Fortran to today's embrace of the cloud. He explains bugs and why software has so many of them, and why today's interconnected computers offer fertile ground for viruses and worms. The difference between good and bad software can be a single line of code, and Barr includes code to illustrate the consequences of seemingly inconsequential choices by programmers. Looking to the future, Barr writes that the best prospect for improving

software engineering is the move to the cloud. When software is a service and not a product, companies will have more incentive to make it good rather than “good enough to ship.”

Have you ever felt frustrated working with someone else’s code? Difficult-to-maintain source code is a big problem in software development today, leading to costly delays and defects. Be part of the solution. With this practical book, you’ll learn 10 easy-to-follow guidelines for delivering Java software that’s easy to maintain and adapt. These guidelines have been derived from analyzing hundreds of real-world systems. Written by consultants from the Software Improvement Group (SIG), this book provides clear and concise explanations, with advice for turning the guidelines into practice. Examples for this edition are written in Java, while our companion C# book provides workable examples in that language. Write short units of code: limit the length of methods and constructors Write simple units of code: limit the number of branch points per method Write code once, rather than risk copying buggy code Keep unit interfaces small by extracting parameters into objects Separate concerns to avoid building large classes Couple architecture components loosely Balance the number and size of top-level components in your code Keep your codebase as small as possible Automate tests for your codebase Write clean code, avoiding "code smells" that indicate deeper problems

Little known to many, R works just as well with JavaScript—this book delves into the various ways both languages can work together. The ultimate aim of this work is to put the reader at ease with inviting JavaScript in their data science workflow. In that respect the book is not teaching one JavaScript but rather we show how little JavaScript can greatly support and enhance R code. Therefore, the focus is on integrating external JavaScript libraries and no prior knowledge of JavaScript is required. Key Features: ● Easy to pick up. ● An entry way to learning JavaScript for R. ● Covers topics not covered anywhere else. ● Easy to follow along.

Functional Programming in JavaScript

Sams Teach Yourself JavaScript in 24 Hours

Five Lines of Code

Effective JavaScript

New Features of ECMAScript 2015, 2016, and Beyond

Improving the Design of Existing Code

Summary The Art of Unit Testing, Second Edition guides you step by step from writing your first simple tests to developing robust test sets that are maintainable, readable, and trustworthy. You'll master the foundational ideas and quickly move to high-value subjects like mocks, stubs, and isolation, including frameworks such as Moq, FakeItEasy, and NSubstitute. Along the way, you'll learn about integration testing and techniques and tools for testing databases and other technologies. About this Book You know you should be unit testing, so why aren't you doing it? If you're new to unit testing, if you find unit testing tedious, or if you're looking for a more structured approach to testing, this book is for you. The Art of Unit Testing, Second Edition guides you step by step from writing your first simple unit tests to building complete test sets that are maintainable, readable, and trustworthy. You'll move quickly to more complicated subjects like mocks and stubs, while learning to use isolation (mocking) frameworks like Moq, FakeItEasy, and NSubstitute. Along the way, you'll learn about integration testing and techniques for testing with databases. The examples in the book use C#, but will benefit anyone using a statically typed language such as Java or C++. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Every codebase includes mistakes and inefficiencies that you need to find and fix. Refactor the right way, and your code becomes elegant, easy to read, and easy to maintain. In this book, you'll learn a unique approach to refactoring legacy code. About the Author Roy Osherove has been coding for over 15 years, and he consults and trains teams worldwide on the gentle art of unit testing. What's Inside Create readable, maintainable, trustworthy tests Fakes, stubs, mock objects, and isolation (mocking) frameworks Simple dependency injection techniques Refactoring legacy code About the Author Roy Osherove has been coding for over 15 years, and he consults and trains teams worldwide on the gentle art of unit testing. Table of Contents PART 1 GETTING STARTED The basics of unit testing A first unit test PART 2 CORE TECHNIQUES Using stubs to break dependencies Interaction testing using mock objects Isolation (mocking) frameworks Digging deeper into isolation frameworks PART 3 THE TEST CODE Test hierarchies and organization The pillars of good unit testing into the organization Working with legacy code Design and testability

Summary Functional Programming in JavaScript teaches JavaScript developers functional techniques that will improve extensibility, modularity, reusability, testability, and performance. Through concrete examples and jargon-free explanations, this book teaches you how to apply functional programming to real-life development tasks Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology In complex web applications, the low-level details of your JavaScript code can obscure the workings of the system as a whole. As a coding style, functional programming (FP) promotes loosely coupled relationships among the components of your application, making the big picture easier to understand. Book Functional Programming in JavaScript teaches you techniques to improve your web applications - their extensibility, modularity, reusability, and testability, as well as their performance. This easy-to-read book uses concrete examples and clear explanations to show you how to use functional programming in real life. If you're new to functional programming, or if you're looking for a more structured approach to testing, this book is for you. insightful comparisons to imperative or object-oriented programming that help you understand functional design. By the end, you'll think about application design in a fresh new way, and you may even grow to appreciate monads! What's Inside High-value FP techniques for real-world uses Using FP where it makes the most sense Separating concerns to avoid building large classes Couple architecture components loosely Balance the number and size of top-level components in your code Keep your codebase as small as possible Automate tests for your codebase Write clean code, avoiding "code smells" that indicate deeper problems

Five Lines of Code teaches refactoring that’s focused on concrete rules and getting any method down to five lines or less! There’s no jargon or tricky automated-testing skills required, just easy guidelines and patterns illustrated by detailed code samples. In Five Lines of Code you will learn: The signs of bad code Improving code safely, even when you don’t understand it Balancing optimization and code generality Proper compiler practices About the reader For developers of all skill levels. Examples use easy-to-read code. About the Author Christian Clausen works as a Technical Agile Coach, teaching teams how to refactor code. Table of Contents 1 Refactoring refactoring 2 Looking under the hood of refactoring PART 1 LEARN BY REFACTORED A COMPUTER GAME 3 Shatter long function 4 Make type codes work 5 Fuse similar code together 6 Defend the data PART 2 TAKE THE WORLD 7 Collaborate with the compiler 8 Stay away from comments 9 Love deleting code 10 Never be afraid to add code 11 Follow the structure in the code 12 Avoid optimizations and generality 13 Make bad code look bad 14 Wrapping up

There’s no doubt that the JavaScript ecosystem changes fast. Not only are new tools and frameworks introduced and developed at a rapid rate, the language itself has undergone big changes with the introduction of ES2015 (aka ES6). Understandably, many articles have been written complaining about how difficult it is to learn modern JavaScript. This book presents modern JavaScript best practice, utilizing the features now available in the language that enable you to write more powerful code that is clean, performant, maintainable, and reusable. It contains: The Anatomy of a Modern JavaScript Application by James Kolce and Moritz Kruger JavaScript Performance Optimization Tips: An Overview by Ivan CuriC JavaScript Design Patterns: The Singleton by Samier Saeed JavaScript Object Creation: Patterns and Best Practices by Jeff Mott Best Practices for Using Modern JavaScript Syntax by M. David Green Flow Control in Modern JS: Callbacks to Promises to Async Functions, and How to Use Them by Craig Buckler This book is for all front-end developers who wish to improve their JavaScript skills. You’ll need to be familiar with HTML and CSS and have a reasonable level of understanding of JavaScript in order to follow the discussion.

Beginning JavaScript

Ensuring Reliable Code