High Performance Responsive Design Building Faster Sites Across Devices 1st Edition By Barker Tom 2014 Paperback

The design, construction, operation, and retrofit of buildings is evolving in response to ever-increasing knowledge about the impact of indoor environments on people and the impact of buildings on the environment. Research has shown that the quality of indoor environments can affect the health, safety, and productivity of the people who occupy them. Buildings are also resource intensive, accounting for 40 percent of primary energy use in the United States, 12 percent of water consumption, and 60 percent of all non-industrial waste. The processes for producing electricity at power plants and delivering it for use in buildings account for 40 percent of U.S. greenhouse gas emissions. The U.S. federal government manages approximately 429,000 buildings of many types with a total square footage of 3.34 billion worldwide, of which about 80 percent is owned space. More than 30 individual departments and agencies are responsible for managing these buildings. The characteristics of each agency's portfolio of facilities are determined by its mission and its programs. In 2010, GSA's Office of Federal High-Performance Green Buildings asked the National Academies to appoint an ad hoc committee of experts to conduct a public workshop and prepare a report that identified strategies and approaches for achieving a range of objectives associated with high-performance green federal buildings. Achieving High-Performance Federal Facilities identifies examples of important initiatives taking place and available resources. The report explores how these examples could be used to help make sustainability the preferred choice at all levels of decision making. Achieving High-Performance Federal Facilities can serve as a valuable guide federal agencies with differing missions, types of facilities, and operating procedures.

Performance is critical to the success of any web site, and yet today's web applications push browsers to their limits with increasing amounts of rich content and heavy use of Ajax. In this book, Steve Souders, web performance evangelist at Google and former Chief Performance Yahoo!, provides valuable techniques to help you optimize your site's performance. Souders' previous book, the bestselling High Performance Web Sites, shocked the web development world by revealing that 80% of the time it takes for a web page to load is on the client side. In Even Faster Web Sites, Souders and eight expert contributors provide best practices and pragmatic advice for improving your site's performance in three critical categories: JavaScript—Get advice for understanding Ajax performance, writing efficient JavaScript, creating responsive applications, loading scripts without blocking other components, and more. Network—Learn to share resources across multiple domains, reduce image size without loss of quality, and use chunked encoding to render pages faster. Browser—Discover alternatives to iframes, how to simplify CSS selectors, and other techniques. Speed is essential for

today's rich media web sites and Web 2.0 applications. With this book, you'll learn how to shave precious seconds off your sites' load times and make them respond even faster. This book contains six guest chapters contributed by Dion Almaer, Doug Crockford, Ben Galbraith, Tony Gentilcore, Dylan Schiemann, Stoyan Stefanov, Nicole Sullivan, and Nicholas C. Zakas.

Architecting High Performing, Scalable and Available Enterprise Web Applications provides in-depth insights into techniques for achieving desired scalability, availability and performance quality goals for enterprise web applications. The book provides an integrated 360-degree view of achieving and maintaining these attributes through practical, proven patterns, novel models, best practices, performance strategies, and continuous improvement methodologies and case studies. The author shares his years of experience in application security, enterprise application testing, caching techniques, production operations and maintenance, and efficient project management techniques. Delivers holistic view of scalability, availability and security, caching, testing and project management Includes patterns and frameworks that are illustrated with end-to-end case studies Offers tips and troubleshooting methods for enterprise application testing, security, caching, production operations and project management Exploration of synergies between techniques and methodologies to achieve end-to-end availability, scalability, performance and security quality attributes 360-degree viewpoint approach for achieving overall quality Practitioner viewpoint on proven patterns, techniques, methodologies, models and best practices. Bulleted summary and tabular representation of concepts for effective understanding Production operations and troubleshooting tips

The capability and use of IT and web based energy information and control systems has expanded from single facilities to multiple facilities and organizations with buildings located throughout the world. This book answers the question of how to take the mass of available data and extract from it simple and useful information which can determine what actions to take to improve efficiency and productivity of commercial, institutional and industrial facilities. The book also provides insight into the areas of advanced applications for web based EIS and ECS systems, and the integration of IT/web based information and control systems with existing BAS systems.

Sales force effectiveness drives every company's success, but keeping a sales organization at the top of its game is a constant challenge. As experts in the field, Andy Zoltners and Prabha Sinha have helped sales leaders around the world perfect their sales strategy, operations, and execution. Combining strategic insight with pragmatic advice, Building a Winning Sales Force provides current and aspiring sales leaders with innovative yet practical solutions to many of the most common issues faced by today's sales organizations. The book shows readers how to: assess how good their sales force really is • identify sales force improvement opportunities • implement tools and processes that have

immediate impact on sales effectiveness • attract and retain the best salespeople • design incentive compensation plans • set goals • manage sales performance • motivate the sales force With practical advice and case studies of companies that have conquered even the most challenging obstacles, Building a Winning Sales Force will enable every company to drive sales and stay competitive.

Both professionals and students are increasingly committed to achieving high-performance metrics in the design, construction and operation of residential buildings. This book responds to this demand by offering a comprehensive guide which features: architectural innovations in building skin technologies which make lighter more transparent buildings high performing energy-free architectural design principles and advances in building-integrated photovoltaics essential engineering principles, controls and approaches to simulation for achieving net zero the advantages of integrated design in residential construction and the challenges and opportunities it engenders detailed case studies of innovative homes which have incorporated low-energy design solutions, new materials, alternative building assemblies, digital fabrication, integrated engineering systems and operational controls. Divided into four parts, the book discusses the requisite AEC (Architecture, Engineering and Construction) knowledge needed when building a high-performance home. It also communicates this information across four case studies, which provide the reader with a thorough overview of all aspects to be considered in the design and construction of sustainable homes. With contributions from experts in the field, the book provides a well-rounded and multi-faceted approach. This book is essential reading for students and professionals in design, architecture, engineering (civil, mechanical and electrical), construction and energy management.

Chassis Engineering for HP Cars Manual Chassis Design Covers Center Of Gravity And Roll Center Enhancing Road Handling Ability Step-By-Step Guide Tire Technology And Front and Rear Suspensions Brakes; Shocks And Springs.

High performance buildings maximize operational energy savings; improve comfort, health, & safety of occupants & visitors; & limit detrimental effects on the environment. These Guidelines provide instruction in the new methodologies that form the underpinnings of high performance buildings. They further indicate how these practices may be accommodated within existing frameworks of capital project administration & facility management. Chapters: city process; design process; site design & planning; building energy use; indoor environment; material & product selection; water mgmt.; construction admin.; commissioning; & operations & maintenance.

Down and dirty – a complete step-by-step guide to making, installing and living with beautiful, all-natural earthen floors Poor heat and moisture management are the enemies of durable, comfortable, and efficient housing, and good building design and construction starts with a solid understanding of good building science. Essential Building Science provides a highly visual and accessible introduction to the fundamentals of building science for residential construction. Part one covers the rationale behind high-performance design and the

fundamentals of building physics, including thermal dynamics, moisture transfer, and hygro-thermal dynamics such as vapor drive and condensation. Part two teaches the vital critical thinking skills needed to consider buildings as whole systems and to develop thermal and moisture control strategies regardless of the specifics of the design. Case studies and examples from across North American climatic zones illuminate real-life problems and offer builders, designers, and DIYers the insights and tools required for creating better new buildings and dramatically improving old ones. Good science plus critical thinking equals high performance buildings.

Data is at the center of many challenges in system design today. Difficult issues need to be figured out, such as scalability, consistency, reliability, efficiency, and maintainability. In addition, we have an overwhelming variety of tools, including relational databases, NoSQL datastores, stream or batch processors, and message brokers. What are the right choices for your application? How do you make sense of all these buzzwords? In this practical and comprehensive guide, author Martin Kleppmann helps you navigate this diverse landscape by examining the pros and cons of various technologies for processing and storing data. Software keeps changing, but the fundamental principles remain the same. With this book, software engineers and architects will learn how to apply those ideas in practice, and how to make full use of data in modern applications. Peer under the hood of the systems you already use, and learn how to use and operate them more effectively Make informed decisions by identifying the strengths and weaknesses of different tools Navigate the trade-offs around consistency, scalability, fault tolerance, and complexity Understand the distributed systems research upon which modern databases are built Peek behind the scenes of major online services, and learn from their architectures

What really makes a high-performance, energy-efficient building? "Sustainable design is about developing buildings and urban spaces that are tuned to their context. . . . Any building that carries claims to be recognized as 'great architecture' should also qualify as a high-performance building." -From High-Performance Building How do we judge the success of a sustainable building? We shouldn't just reward good intentions based on the building design, argues Vidar Lerum in High- Performance Building; we must look at the evidence of the actual performance of architectural objects "as built." High-Performance Building gives architects a practical guide to excellent, sustainable design, showing how to analyze and evaluate the buildings "as built." Taking a hands-on view of sustainability, the author provides designers with specific benchmarks for high performance and energy efficiency. Utilizing the latest methods for analysis of climate responsive design, he asks: * Where does a building that claims to be "green" or "sustainable" check in on a scale relative to benchmark buildings of the same type? * How does the building contribute to a sustainable development in its demand for energy and natural materials? * Does the building provide a high level of thermal comfort to its users? To illustrate, Lerum takes the reader on an on-site tour of seven buildings around the world that exemplify these standards. Ranging from the west coast of Greenland to the Sonoran Desert, the buildings are examined as physical, built objects. For additional perspectives, the author interviews the architects and speaks with engineers, owners, and users. At the sites, something unexpected often shows up. The author's work reveals unknown or hidden features, characteristics, or details. By understanding what works and what does not in notable buildings around the world, High-Performance Building enables architects to discover the challenges and opportunities in their own designs, whether simple residences or large commercial structures.

Hands-on and abundant with source code for a practical guide to Securing Node.js web applications. This book is intended to be a hands-on thorough guide for securing web applications based on Node.js and the ExpressJS web application framework. Many of the concepts, tools and practices in this book are primarily based on open source libraries and the author leverages these projects and highlights them. The main objective of the book is to equip the reader with practical solutions to real world problems, and so this book is heavily saturated with source

code examples as well as a high level description of the risks involved with any security topic, and the practical solution to prevent or mitigate it.

How can you help your Drupal website continue to perform at the highest level as it grows to meet demand? This comprehensive guide provides best practices, examples, and in-depth explanations for solving several performance and scalability issues. You'll learn how to apply coding and infrastructure techniques to Drupal internals, application performance, databases, web servers, and performance analysis. Covering Drupal versions 7 and 8, this book is the ideal reference for everything from site deployment to implementing specific technologies such as Varnish, memcache, or Solr. If you have a basic understanding of Drupal and the Linux-Apache-MySQL-PHP (LAMP) stack, you're ready to get started. Establish a performance baseline and define goals for improvement Optimize your website's code and front-end performance Get best and worst practices for customizing Drupal core functionality Apply infrastructure design techniques to launch or expand a site Use tools to configure, monitor, and optimize MySQL performance Employ alternative storage and backend search options as your site grows Tune your web servers through httpd and PHP configuration Monitor services and perform load tests to catch problems before they become critical

Architecture 2030; BUG; Biophilic Design; BIPV; Circular Economy; LEED; Passive Design; Solar Chimney; Systems Thinking; WELL; Xeriscaping. What does it all mean? The complex and evolving language used in the sustainable design community can be very challenging, particularly to those new to environmentally friendly and resource-efficient design strategies that are needed today. Definitions of over two hundred terms with further sources. Clearly cross-referenced with Sustainaspeak, Theoryspeak, and Archispeak terms. Illustrated throughout with sustainable award-winning buildings by e.g. Behnisch, Brooks + Scarpa, EHDD, KieranTimberlake, Lake|Flato, Leddy Mahtum Stacy, SmithGroup, Perkins+Will, ZGF, VMDO, and McDonough + Partners. Sustainaspeak: A Guide to Sustainable Design Terms provides a current guide to the sustainable design strategies, terms, and practices needed for the next generation of designers, architects, students, and community leaders to design a carbon-neutral world for future generations.

Annotation Responsive web design's dirty secret today is how bloated everyone's implementations are. Many developers are loading sites full of the styles, images, and JavaScript for all of their break points - and designers are starting to complain about responsive web design's performance implications. This book will help you build a site that reaches top performance on all platforms.

Explore the complete process of developing systems based on field-programmable gate arrays (FPGAs), including the design of electronic circuits and the construction and debugging of prototype embedded devices Key Features Learn the basics of embedded systems and real-time operating systems Understand how FPGAs implement processing algorithms in hardware Design, construct, and debug custom digital systems from scratch using KiCad Book Description Modern digital devices used in homes, cars, and wearables contain highly sophisticated computing capabilities composed of embedded systems that generate, receive, and process digital data streams at rates up to multiple gigabits per second. This book will show you how to use Field Programmable Gate Arrays (FPGAs) and high-speed digital circuit design to create your own cutting-edge digital systems. Architecting High-Performance Embedded Systems takes you through the fundamental concepts of embedded systems, including real-time operation and the Internet of Things (IoT), and the architecture and capabilities of the latest generation of FPGAs. Using powerful free tools for FPGA design and electronic circuit design, you'll learn how to design, build, test, and debug high-performance FPGA-based IoT devices. The book will also help you get up to speed with embedded system design, circuit design, hardware construction, firmware development, and debugging to produce a high-performance embedded device – a network-based

digital oscilloscope. You'll explore techniques such as designing four-layer printed circuit boards with high-speed differential signal pairs and assembling the board using surface-mount components. By the end of the book, you'll have a solid understanding of the concepts underlying embedded systems and FPGAs and will be able to design and construct your own sophisticated digital devices. What you will learn Understand the fundamentals of real-time embedded systems and sensors Discover the capabilities of FPGAs and how to use FPGA development tools Learn the principles of digital circuit design and PCB layout with KiCad Construct high-speed circuit board prototypes at low cost Design and develop high-performance algorithms for FPGAs Develop robust, reliable, and efficient firmware in C Thoroughly test and debug embedded device hardware and firmware Who this book is for This book is for software developers, IoT engineers, and anyone who wants to understand the process of developing high-performance embedded systems. You'll also find this book useful if you want to learn about the fundamentals of FPGA development and all aspects of firmware development in C and C++. Familiarity with the C language, digital circuits, and electronic soldering is necessary to get started.

Creating High Performance Teams is an accessible and thorough new introduction to this key area of business education. Written by teams experts Ray Aldag and Loren Kuzuhara, this book provides students with both a firm grounding in the key concepts of the field and the practical tools to become successful team managers and members. Built on a solid foundation of the most up to date research and theory, chapters are packed with case studies, real-world examples, tasks and discussion questions, while a companion website supports the book with a wealth of useful resources for students, team members, and instructors. Centered around an original model for high performance teams, topics covered include: Building and developing effective teams Managing diversity Effective communication Team processes – meetings, performance management Dealing with change and team problems Current issues – virtual teams, globalization With its combined emphasis on principles and application, interwoven with the tools, topics, and teams most relevant today, Creating High Performance Teams is perfectly placed to equip upper-level undergraduate and MBA students with the knowledge and skills necessary to take on teams in any situation.

The story of the building of the Adam Joseph Lewis Center at Oberlin College in the context of ecological design, institutional learning, and the green campus movement.

The book explores advanced building-facade daylighting design practices based on diverse energy and human-factor performance metrics. It also defines effective daylighting by rethinking the simplified approach to glazing and facade systems to incorporate the local climate and the needs of building occupants as critical drivers of building performance, design solutions and technological innovation. It discusses state-of-the-art approaches in the context of simulation-based design workflows, innovative technologies and real project case studies, all targeting low and net-zero energy solutions that enhance occupant comfort. Readers benefit from a comprehensive approach that improves the feedback loop between design intent and performance in use. The book is intended for architects, lighting designers, facade engineers, manufacturers and building owners/operators, as well as advanced students.

High-Performance BuildingJohn Wiley & Sons

Today's design professionals are faced with challenges on all fronts. They need not only to keep in step with rapid technological changes and the current revolution in design and construction processes, but to lead the industry. This means actively seeking to

innovate through design research, raising the bar in building performance and adopting advanced technologies in their practice. In a constant drive to improve design processes and services, how is it possible to implement innovations? And, moreover, to assimilate them in such a way that design, methods and technologies remain fully integrated? Focusing on innovations in architecture, this book covers new materials and design methods, advances in computational design practices, innovations in building technologies and construction techniques, and the integration of research with design. Moreover, it discusses strategies for integrating innovation into design practices, risks and economic impacts. Through numerous case studies, it illustrates how innovations have been implemented on actual architectural projects, and how design and technical innovations are used to improve building performance, as well as design practices in cutting-edge architectural and engineering firms. Projects of all scales and building types are discussed in the book, ranging from small-scale installations, academic and commercial buildings to large-scale mixed-use, healthcare, civic, academic, scientific research and sports facilities. Work from design firms around the globe and of various scales is discussed in the book, including for example Asymptote Architecture, cepezed, CO Architects, Consarc Architects, FAAB Architektura, Gerber Architekten, HOK, IDOM-ACXT, MAD Architects, Morphosis Architects, SDA | Synthesis Design + Architecture, Studiotrope, Perkins+Will, Richter Dahl Rocha & Associés, Snøhetta, Rob Ley Studio, Trahan Architects, UNStudio and Zaha Hadid Architects, among many others.

In any modern organisation, software has an increasingly important role to play. From content management systems to warehouse databases and e-commerce stores, software applications are fundamental to any successful business, yet are often a source of frustration for the business owner. Software teams can take that frustration away by creating software that provides a positive experience for both the organisation running it, and the audience using it. It's therefore important to make sure your team is well equipped to handle the challenges they'll face along the way. Written by the team at Made Tech, this book is your guide to building an agile, productive, and happy software delivery team.

How prepared are you to build fast and efficient web applications? This eloquent book provides what every web developer should know about the network, from fundamental limitations that affect performance to major innovations for building even more powerful browser applications—including HTTP 2.0 and XHR improvements, Server-Sent Events (SSE), WebSocket, and WebRTC. Author Ilya Grigorik, a web performance engineer at Google, demonstrates performance optimization best practices for TCP, UDP, and TLS protocols, and explains unique wireless and mobile network optimization requirements. You'll then dive into performance characteristics of technologies such as HTTP 2.0, client-side network scripting with XHR, real-time streaming with SSE and WebSocket, and P2P communication with WebRTC. Deliver superlative TCP, UDP, and TLS performance Speed up network performance over 3G/4G mobile networks Develop fast and energy-efficient mobile applications Address bottlenecks in HTTP 1.x and other browser protocols Plan for and deliver the best HTTP 2.0 performance Enable efficient real-time streaming in the browser Create efficient peer-to-peer videoconferencing and low-latency applications with real-time WebRTC transports Passive House Details introduces the concepts, principles, and design processes of building ultralow-energy buildings. The

objective of this book is to provide design goals, research, analysis, systems, details, and inspiring images of some of the most energy-efficient, carbon-neutral, healthy, and satisfying buildings currently built in the region. Other topics included: heat transfer, moisture management, performance targets, and climatic zones. Illustrated with more than 375 color images, the book is a visual catalog of construction details, materials, and systems drawn from projects contributed from forty firms. Fourteen in-depth case studies demonstrate the most energy-efficient systems for foundations, walls, floors, roofs, windows, doors, and more.

An example-driven guide covering modern web app development techniques and emerging technologies such as WebAssembly, Service Workers, and Svelte.js to build faster, secure, and scalable apps Key Features Discover effective techniques for accessing DOM, minimizing painting, and using a V8 engine to optimize JavaScript Understand what makes the web tick and create apps that look and feel like native desktop applications Explore modern JavaScript frameworks like Svelte.js for building next-gen web apps Book Description High-performance web development is all about cutting through the complexities in different layers of a web app and building services and APIs that improve the speed and performance of your apps on the browser. With emerging web technologies, building scalable websites and sustainable web apps is smoother than ever. This book starts by taking you through the web frontend, popular web development practices, and the latest version of ES and JavaScript. You'll work with Node.js and learn how to build web apps without a framework. The book consists of three hands-on examples that help you understand JavaScript applications at both the server-side and the client-side using Node.js and Svelte.js. Each chapter covers modern techniques such as DOM manipulation and V8 engine optimization to strengthen your understanding of the web. Finally, you'll delve into advanced topics such as CI/CD and how you can harness their capabilities to speed up your web development dramatically. By the end of this web development book, you'll have understood how the JavaScript landscape has evolved, not just for the frontend but also for the backend, and be ready to use new tools and techniques to solve common web problems. What you will learn Explore Vanilla JavaScript for optimizing the DOM, classes, and modules, and querying with jQuery Understand immutable and mutable code and develop faster web apps Delve into Svelte.js and use it to build a complete real-time Todo app Build apps to work offline by caching calls using service workers Write C++ native code and call the WebAssembly module with JavaScript to run it on a browser Implement CircleCI for continuous integration in deploying your web apps Who this book is for This JavaScript book is for web developers, C/C++ programmers, and anyone who wants to build robust web applications using advanced web technologies. This book assumes a good grasp of Vanilla JavaScript and an understanding of web development tools, such as Chrome Developer tools or Mozilla's developer tools.

Evidence has accumulated that shows that the quality of indoor environments can affect the health and productivity of adults and children. One consequence is that a movement has emerged to promote the design of schools that have fewer adverse environmental effects. To examine the potential of such design for improving education, several private organizations asked the NRC to review and assess the health and productivity benefits of green schools. This report provides an analysis of the complexity of making such a determination; and an assessment of the potential human health and performance benefits of improvements in

the building envelope, indoor air quality, lighting, and acoustical quality. The report also presents an assessment of the overall building condition and student achievement, and offers an analysis of and recommendations for planning and maintaining green schools including research considerations.

Want your web site to display more quickly? This book presents 14 specific rules that will cut 25% to 50% off response time when users request a page. Author Steve Souders, in his job as Chief Performance Yahoo!, collected these best practices while optimizing some of the most-visited pages on the Web. Even sites that had already been highly optimized, such as Yahoo! Search and the Yahoo! Front Page, were able to benefit from these surprisingly simple performance guidelines. The rules in High Performance Web Sites explain how you can optimize the performance of the Ajax, CSS, JavaScript, Flash, and images that you've already built into your site -- adjustments that are critical for any rich web application. Other sources of information pay a lot of attention to tuning web servers, databases, and hardware, but the bulk of display time is taken up on the browser side and by the communication between server and browser. High Performance Web Sites covers every aspect of that process. Each performance rule is supported by specific examples, and code snippets are available on the book's companion web site. The rules include how to: Make Fewer HTTP Requests Use a Content Delivery Network Add an Expires Header Gzip Components Put Stylesheets at the Top Put Scripts at the Bottom Avoid CSS Expressions Make JavaScript and CSS External Reduce DNS Lookups Minify JavaScript Avoid Redirects Remove Duplicates Scripts Configure ETags Make Ajax Cacheable If you're building pages for high traffic destinations and want to optimize the experience of users visiting your site, this book is indispensable. "If everyone would implement just 20% of Steve's guidelines, the Web would be adramatically better place. Between this book and Steve's YSlow extension, there's reallyno excuse for having a sluggish web site anymore." -Joe Hewitt, Developer of Firebug debugger and Mozilla's DOM Inspector "Steve Souders has done a fantastic job of distilling a massive, semi-arcane art down to a set of concise, actionable, pragmatic engineering steps that will change the world of web performance." -Eric Lawrence, Developer of the Fiddler Web Debugger, Microsoft Corporation

Yes, you can use responsive web design to create high performance, compelling websites. With this practical book, author Tom Barker demonstrates that responsive design is not just a frontend-only approach, but also a philosophy for taking advantage of the entire web stack. Responsive design patterns and anti-patterns, derived from heavily used real-world sites, are guiding principles throughout the book. Ideal for frontend-focused web developers, this book shows you how to incorporate responsiveness and performance into your project plan, use Node.js for device-specific functionality on the backend, and write automated tests for a continuous integration environment. You'll explore many useful tools and responsive frameworks, and gain useful insights from Barker's own experience with responsive design along the way. Get a primer on web performance concepts, web runtime performance, and performance tracking tools Write functionality with Node.js that serves up a device-specific experience to the client Explore client-side solutions, such as lazy loading entire sections of a page—including images, styling, and content Validate service level agreements (SLAs) by writing automated tests with PhantomJS Examine several responsive frameworks, including

the author's server-side framework, Ripple

Optimize the performance of your mobile websites and webapps to the extreme. With this hands-on book, veteran mobile and web developer Maximiliano Firtman demonstrates which aspects of your site or app slow down the user's experience, and what you can do to achieve lightning-fast performance. There's much at stake: if you want to boost your app's conversion rate, then tackling performance issues is the best way to start. Learn tools and techniques for working with responsive web design, images, the network layer, and many other ingredients—plus the metrics to check your progress. Ideal for web developers and web designers with HTML, CSS, JavaScript, and HTTP experience, this is your guide to superior mobile web performance. You'll dive into: Emulators, simulators, and other tools for measuring performance Basic web performance concepts, including metrics, charts, and goals How to get real data from mobile browsers on your real networks APIs and specs for measuring, tracking and improving web performance Insights and tricks for optimizing the first view experience Ways to optimize post-loading experiences and future visits Responsive web design and its performance challenges Tips for extreme performance to achieve best conversion rates How to work with web views inside native apps

High-quality images have an amazing power of attraction. Just add some stunning photos and graphics to your website or app and watch your user engagement and conversion numbers climb. It can be tricky, but with this practical guide, you'll master the many facets of delivering high performance images on the internet—without adversely affecting site performance. You'll learn the nuts and bolts of color theory, image formats, storage and management, operations delivery, browser and application behavior, the responsive web, and many other topics. Ideal for developers, this book also provides useful tips, tricks, and practical theory for processing and displaying powerful images that won't slow down your online product. Explore digital image theory and the different formats available Dive into JPEGs, SVG and vector images, lossless compression, and other formats Use techniques for downloading and rendering images in a browser, and for loading images on mobile devices and cellular networks Examine specific rendering techniques, such as lazy loading, image processing, image consolidation, and responsive images Take responsive images to the next level by using content negotiation between browser and server with the Client Hints HTTP standard Learn how to operationalize your image workflow Contributors include Colin Bendell, Tim Kadlec, Yoav Weiss, Guy Podjarny, Nick Doyle, and Mike McCall from Akamai Technologies.

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 Harmes, 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

Summary Web Performance in Action is your companion guide to making websites faster. You'll learn techniques that speed the delivery of your site's assets to the user, increase rendering speed, decrease the overall footprint of your site, as well as how to build a workflow that automates common optimization techniques. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Nifty features, hip design, and clever marketing are great, but your website will flop if visitors think it's slow. Network conditions can be unpredictable, and with today's sites being bigger than ever, you need to set yourself apart from the competition by focusing on speed. Achieving a high level of performance is a combination of front-end architecture choices, best practices, and some clever sleight-of-hand. This book will demystify all these topics for you. About the Book Web Performance in Action is your guide to making fast websites. Packed with "Aha!" moments and critical details, this book teaches you how to create performant websites the right way. You'll master optimal rendering techniques, tips for decreasing your site's footprint, and technologies like HTTP/2 that take your website's speed from merely adequate to seriously fast. Along the way, you'll learn how to create an automated workflow to accomplish common optimization tasks and speed up development in the process. What's Inside Foolproof performance-boosting techniques Optimizing images and fonts HTTP/2 and how it affects your optimization workflow About the Reader This book assumes that you're familiar with HTML, CSS, and JavaScript. Many examples make use of Git and Node.js. About the Author Jeremy Wagner is a professional front-end web developer with over ten years of experience. Foreword by Ethan Marcotte. Table of Contents Understanding web performance Using assessment tools Optimizing CSS Understanding critical CSS Making images responsive Going further with images Faster fonts Keeping JavaScript lean and fast Boosting performance with service workers Fine-tuning asset delivery Looking to the future with HTTP/2 Automating optimization with gulp

A comprehensive guide to building green on any budget. According to conventional wisdom, building a green home is an expensive endeavor. The standard approach treats green as an add-on, tacking "premium" products, finishes, and equipment onto a traditional home design. As a result, many green home projects end up over budget or fail to achieve their environmental and performance goals. Green Home Building explodes the myth that green homes have to cost more. Using proven methods based on applied building science, the authors show how to: Lower base construction costs to provide funding for high performance upgrades Achieve a net-zero energy home, including "zero-ing" water, waste, carbon, and associated costs within fifteen years Live affordably into the future, despite anticipated rising costs for fuel, water, materials, taxes, and health care This comprehensive guide to building green on any budget defines the strategies

that maximize the return on green investments. Written for anyone who has ever been swayed by the argument that the price tag limits how green a home can be, Green Home Building is a must-read for builders, contractors, architects, designers, and homeowners. Miki Cook is a green building and sustainability consultant who has dedicated her career to educating contractors and the public on the strategies, methods, and benefits of green homes. Doug Garrett has trained thousands of homebuilders, architects, and sub-contractors to build energy-efficient homes using applied building science to improve comfort, durability, and healthfulness while meeting or exceeding the energy code.

This book charts the path toward high performance sustainable buildings and the smart dwellings of the future. The volume clearly explains the principles and practices of high performance design, the uses of building information modelling (BIM), and the materials and methods of smart construction. Power Systems, Architecture, Material Science, Civil Engineering and Information Systems are all given consideration, as interdisciplinary endeavours are at the heart of this green building revolution.

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 Harmes, 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

This authoritative new resource provides a comprehensive review of the current approaches to the design and construction of sustainable buildings. This hand-on guide features global case studies with practical examples of both successful and unsuccessful designs. The whole system approach to integrated design is clearly presented. This book includes insight into designing for the future, including design quality and future proofing, intelligent buildings, and whole life value. Nature inspired sustainable designs that can be mimicked in the construction industry are presented. Technical challenges such as energy efficiency, design, and computer modeling are explored along with various construction phase

opportunities.

Scaling Java enterprise applications beyond just programming techniques--this is the next level. This volume covers all the technologies Java developers need to build scalable, high-performance Web applications. The book also covers servlet-based session management, EJB application logic, database design and integration, and more.

Practical information on designing sustainable,energy-efficient building facades As energy and other natural resources are being depleted, it hasbecome clear that technologies and strategies that allow us tomaintain our satisfaction with interior environments whileconsuming less of these resources are major objectives ofcontemporary facade design. Sustainable Facades focuses onthe strategies and approaches for designing sustainable,high-performance building facades, and provides technical guidancefor architects and designers. This timely and useful guide presents strategies and technicalguidelines for designing environmentally sensitive,energy-efficient facades based on scientific principles. Itprovides climate-specific approaches for minimizing energyconsumption, analyzes the thermal behavior of different facadesystems and materials, and illustrates with case studies how theseapproaches have been implemented on architectural projects. It alsodiscusses emerging facade technologies, materials, and systems. Topics covered in this unique and indispensable guideinclude: Climate-based design approaches for high-performancefacades Characteristics of sustainable facades: energy efficiency,thermal behavior, and moisture resistance Designing for thermal comfort, lighting and glare control, andacoustic quality Emerging technologies in facade design, including smartmaterials, double-skin facades, and facades as energygenerators Case studies on building orientation and facade design,tectonic sun exposure control, external shading elements, andmore

Svelte is a modern framework for building static web apps running in the browser that can be used to create fast, lean apps, and which is fun for developers to use. This thorough and quick start guide will explore the components of Svelte and have you up and running with building a complete production-ready, static web app in no time.

As a web designer, you encounter tough choices when it comes to weighing aesthetics and performance. Good content, layout, images, and interactivity are essential for engaging your audience, and each of these elements have an enormous impact on page load time and the end-user experience. In this practical book, Lara Hogan helps you approach projects with page speed in mind, showing you how to test and benchmark which design choices are most critical. To get started, all you need are basic HTML and CSS skills and Photoshop experience. Topics include: The impact of page load time on your site, brand, and users Page speed basics: how browsers retrieve and render content Best practices for optimizing and loading images How to clean up HTML and CSS, and optimize web fonts Mobile-first design with performance goals by breakpoint Using tools to measure performance as your site evolves Methods for shaping an

organization's performance culture

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