Javascript Application Design A Build First Approach

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.

APIs are transforming the business world at an increasing pace. Gain the essential skills needed to quickly design, build, and deploy quality web APIs that are robust, reliable, and resilient. Go from initial design through prototyping and implementation to deployment of mission-critical APIs for your organization. Test, secure, and deploy your API with confidence and avoid the "release into production" panic. Tackle just about any API challenge with more than a dozen open-source utilities and common programming patterns you can apply right away. Good API design means starting with the API-First principle - understanding who is using the API and what they want to do with it - and applying basic design skills to match customers' needs while solving business-critical problems. Use the Sketch-Design-Build method to create reliable and scalable web APIs quickly and easily without a lot of risk to the day-to-day business operations. Create clear sequence diagrams, accurate specifications, and machine-readable API descriptions all reviewed, tested, and ready to turn into fully-functional NodeJS code. Create reliable test collections with Postman and implement proper identity and access control security with AuthO-without added cost or risk to the company. Deploy all of this to Heroku using a continuous delivery approach that pushes secure, well-tested code to your public servers ready for use by both internal and external developers. From design to code to test to deployment, unlock hidden business value and release stable and scalable web APIs that meet customer needs and solve important business problems in a consistent and reliable manner.

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

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Sams Teach Yourself HTML, CSS and JavaScript All in One The all-in-one HTML, CSS and JavaScript beginner's guide: covering the three most important languages for web development. Covers everything beginners need to know about the HTML and CSS standards and today's JavaScript and Ajax libraries - all in one book, for the first time Integrated, well-organized coverage expertly shows how to use all these key technologies together Short, simple lessons teach hands-on skills readers can apply immediately By best-selling author Julie Meloni Mastering HTML, CSS, and JavaScript is vital for any beginning web developer - and the importance of these technologies is growing as web development moves away from proprietary alternatives such as Flash. Sams Teach Yourself HTML, CSS, and JavaScript All in One brings together everything beginners need to build powerful web applications with the HTML and CSS standards and the latest JavaScript and Ajax libraries. With this book, beginners can get all the modern web

development knowledge you need from one expert source. Bestselling author Julie Meloni (Sams Teach Yourself PHP, MySQL and Apache All in One) teaches simply and clearly, through brief, hands-on lessons focused on knowledge you can apply immediately. Meloni covers all the building blocks of practical web design and development, integrating new techniques and features into every chapter. Each lesson builds on what's come before, showing you exactly how to use HTML, CSS, and JavaScript together to create great web sites.

Build HTML5-based hybrid applications for Android with a mix of native Java and JavaScript components, without using third-party libraries and wrappers such as PhoneGap or Titanium. This concise, hands-on book takes you through the entire process, from setting up your development environment to deploying your product to an app store. Learn how to create apps that have access to native APIs, such as location, vibrator, sensors, and the camera, using a JavaScript/Java bridge—and choose the language that gives you better performance for each task. If you have experience with HTML5 and JavaScript, you'll quickly discover why hybrid app development is the wave of the future. Set up a development environment with HTML, CSS, and JavaScript tools Create your first hybrid Android project, using Eclipse IDE Use the WebView control to host your hybrid application Explore hybrid application architecture, including JavaScript/Java communication Build single-page applications, using JavaScript libraries such as Backbone and Underscore Get optimization tips and useful snippets for CSS, DOM, and JavaScript Distribute your application to Google Play and the Amazon Appstore

Automated testing will help you write high-quality software in less time, with more confidence, fewer bugs, and without constant manual oversight. Testing JavaScript Applications is a guide to building a comprehensive and reliable JS application testing suite, covering both how to write tests and how JS testing tools work under the hood. Automated testing will help you write high-quality software in less time, with more confidence, fewer bugs, and without constant manual oversight. Testing JavaScript Applications is a guide to building a comprehensive and reliable JS application testing suite, covering both how to write tests and how JS testing tools work under the hood. Testing JavaScript Applications teaches you how to create JavaScript tests that are targeted to your application's specific needs. Through dozens of detailed code samples that you can apply to your own projects, you'll learn how to write tests for both backend and frontend applications, covering the full spectrum of testing types. Taking on the role of a developer for a bakery's web store, you'll learn to validate different aspects including databases, third-party services, and how to spin-up a real browser instance to interact with the entire application. All examples are delivered using the popular testing tool Jest and modern packages of the JavaScript ecosystem. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

HTML has been on a wild ride. Sure, HTML started as a mere markup language, but more recently HTML's put on some major muscle. Now we've got a language tuned for building web applications with Web storage, 2D drawing, offline support, sockets and threads, and more. And to speak this language you've got to go beyond HTML5 markup and into the world of the DOM, events, and JavaScript APIs. Now you probably already know all about HTML markup (otherwise known as structure) and you know all aboutCSS style (presentation), but what you've been missing is JavaScript (behavior). If all you know about are structure and presentation, you can create some great looking pages, but they're still just pages. When you add behavior with JavaScript, you can create an interactive experience; even better, you can create full blown web applications. Head First HTML5 Programming is your ultimate tour guide to creating web applications with HTML5 and JavaScript, and we give you everything you need to know to build them, including: how to add interactivity to your pages, how to communicate with the world of Web services, and how to use the great new APIs being developed for HTML5. Here are just some of the things you'll learn in Head First HTML5 Programing: Learn how to make your pages truly interactive by using the power of the DOM. Finally understand how JavaScript works and take yourself from novice to well-informed in just a few chapters. Learn how JavaScript APIs fit into the HTML5 ecosystem, and how to use any API in your web pages. Use the Geolocation API to know where your users are. Bring out your inner artist with Canvas, HTML5's new 2D drawing surface. Go beyond just plugging a video into your pages, and create custom video experiences. Learn the secret to grabbing five megabytes of storage in every user's browser. Improve your page's responsiveness and performance with Web workers. And much more.

An in-depth guide to exploring the design, architecture, and techniques behind building sophisticated, scalable, and maintainable single-page applications in JavaScript About This Book Build large-scale, feature-complete SPAs by leveraging widely used tools and techniques. Gain a solid understanding of architecture and SPA design to build applications using the library or framework of your choice. Explore the various facets of SPA development to build web apps that are fast, scalable, and easy to test. Who This Book Is For This book is ideal for JavaScript developers who want to build complex single-page applications in JavaScript. Some basic understanding of SPA concepts will be helpful but not essential. What You Will Learn Organize your development environment using the command line with NPM, Bower, and Grunt. Choose an accurate design pattern for your app Understand modular JavaScript programming and Node.js Interact with a REST API using JavaScript and AJAX with practical examples Build a single page application using the MEAN stack Connect your app across popular social media platforms such as Facebook, Twitter, and LinkedIn Test your app, both on the server side and in views Prepare your app for the real world and deploy it to Heroku In Detail Single-page web applications—or SPAs, as they are commonly referred to—are quickly becoming the de facto standard for web app development. The fact that a major part of the app runs inside a single web page makes it very interesting and appealing. Also, the accelerated growth of browser capabilities is pushing us closer to the day when all apps will run entirely in the browser. This book will take your JavaScript development skills to the next level by teaching you to create a single-page application within a full-stack JavaScript environment. Using only JavaScript, you can go from being a front-end developer to a full-stack application developer with relative ease. You will learn to cross the boundary from front-end development to server-side development through the use of JavaScript on both ends. Use your existing knowledge of JavaScript by learning to manage a JSON document data store with MongoDB, writing a JavaScript powered REST API with Node.js and Express, and designing a front-end powered by AngularJS. This book will teach you to leverage the MEAN stack to do everything from document database design, routing REST web API requests, data-binding within views, and adding authentication and security to building a full-fledged, complex, single-page web application. In addition to building a full-stack JavaScript

app, you will learn to test it with JavaScript-powered testing tools such as Mocha, Karma, and Jasmine. Finally, you will learn about deployment and scaling so that you can launch your own apps into the real world. Style and approach Following a structured approach, this book helps readers gain expertise in SPA development. Its thorough coverage of SPA architecture and design, along with practical use cases, provides readers with a clear path to building applications with the library of their choice. For readers who are afraid to take the plunge straightaway, the book also offers step-by-step guidance on developing a complex web app.

Summary SPA Design and Architecture teaches you the design and development skills you need to create SPAs. Includes an overview of MV* frameworks, unit testing, routing, layout management, data access, pub/sub, and client-side task automation. This book is full of easy-to-follow examples you can apply to the library or framework of your choice. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology The next step in the development of web-based software, single-page web applications deliver the sleekness and fluidity of a native desktop application in a browser. If you're ready to make the leap from traditional web applications to SPAs, but don't know where to begin, this book will get you going. About the Book SPA Design and Architecture teaches you the design and development skills you need to create SPAs. You'll start with an introduction to the SPA model and see how it builds on the standard approach using linked pages. The author guides you through the practical issues of building an SPA, including an overview of MV* frameworks, unit testing, routing, layout management, data access, pub/sub, and client-side task automation. This book is full of easy-to-follow examples you can apply to the library or framework of your choice. What's Inside Working with modular JavaScript Understanding MV* frameworks Layout management Client-side task automation Testing SPAs About the Reader This book assumes you are a web developer and know JavaScript basics. About the Author Emmit Scott is a senior software engineer and architect with experience building large-scale, web-based applications. Table of Contents PART 1 THE BASICS What is a single-page application? The role of MV* frameworks Modular JavaScript PART 2 CORE CONCEPTS Navigating the single page View composition and layout Inter-module interaction Communicating with the server Unit testing Client-side task automation APPENDIXES Employee directory example walk-through Review of the XMLHttpRequest API Chapter 7 server-side setup and summary Installing Node.js and Gulp.js

This book is a guide to the TypeScript language, from basic concepts to advanced features, and will get you up and running quickly. You'll learn TypeScript programming in depth as you use popular application frameworks and utilize modern design patterns and architectural patterns to build modular, testable and enterprise-ready applications.

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

Ready to learn Windows 8 programming? Start Here! Learn the fundamentals of Windows 8 programming—and begin creating apps for desktops, laptops, tablets, and other devices. If you have previous experience with HTML5 and JavaScript—simply start here! This book introduces must-know concepts and getting-started techniques through easy-to-follow explanations, examples, and exercises. Here’s where you start learning Windows 8 app development Build on your knowledge of HTML5, CSS, and JavaScript Create photo and media galleries with built-in HTML widgets Interact with the system through live tiles, contracts, and view state detection Store and access data on the local device and via the Internet Access webcam, GPS, and other sensors embedded in the device Create your first programs and publish them to the Windows Store

Learn how to build web applications from three Microsoft MVPs. After building the data application layer using Entity Framework Core and a RESTful service using ASP.NET Core, you will then build the client side web application three ways: first, using ASP.NET Core, then using Angular 2, and, finally, using React. You will be able to compare and contrast these UI frameworks and select the best one for your needs. .NET Core is a complete rewrite of the popular .NET and its related frameworks. While many concepts are similar between .NET Core and the .NET 4.6 framework, there are revolutionary changes as well, including updates to Entity Framework Core and ASP.NET Core. The first section of this book covers the three main parts of building applications with C#: Entity Framework, ASP.NET Core Services, and ASP.NET Core Web Applications. There is also an explosion in popularity of JavaScript frameworks for client side development, and the authors cover two of the most popular UI frameworks. Start with TypeScript for developing clean JavaScript, along with a client side build tool such as Gulp, Grunt, and WebPack. Using the same data access layer and RESTful service from the .NET Core application, you can rebuild the UI using Angular 2. Then, repeat the process using React, for a true comparison of building client side applications using ASP.NET Core, Angular 2, and React. What You'll Learn Understand the fundamentals of .NET Core and what that means to the traditional .NET developer Build a data access layer with Entity Framework Core, a RESTful service with ASP.NET Core MVC, and a website with ASP.NET Core MVC and Bootstrap Automate many build tasks with client side build utilities Who This Book Is For Intermediate to advanced .NET developers

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

SinonJS

Grunt is everywhere. JavaScript projects from jQuery to Twitter Bootstrap use Grunt to convert code, run tests, and produce distributions for production. It's a build tool in the spirit of Make and Rake, but written with modern apps in mind. This book gets you up to speed with Grunt using practical hands-on examples, so you can wrangle your projects with ease. You'll learn how to create and maintain tasks and project builds, and automate your workflow with plugins and custom tasks. JavaScript has moved from being the language you love to hate to the language you need to use. And as JavaScript applications get more complex, you need a process to manage that complexity. While online tutorials just explain how to slap together a configuration file, this book goes further and shows you how to create your own tasks, design your own project templates, combine plugins together to bring a web app to life, and build your own plugins. You'll start by learning the basics of task creation, error handling, and logging as you create a simple configuration that executes basic JavaScript code using Node.js. Then you'll jump right into file manipulation as you read, write, copy, and delete files. You'll learn how Grunt's powerful multitasks work as you build a task to concatenate files together. Once you've got a grasp on these basics, you'll build a simple app with AngularJS and CoffeeScript, using Grunt to do all the heavy lifting and script processing. Finally, you'll create your own plugin so you can understand how plugins work. Each chapter contains hands-on exercises and ideas for further study. Whether you rock Ruby or sling C#, Grunt will be a useful addition to your toolbox. What You Need: This book covers Grunt 0.4.1 and higher, and requires basic knowledge of JavaScript and command-line tools on Windows, OS X, or Linux.

"JavaScript Application Design: A Build First Approach introduces techniques to improve software quality and development workflow. You'll begin by learning how to establish processes designed to optimize the quality of your work. You'll execute tasks whenever your code changes, run tests on every commit, and deploy in an automated fashion. Then you'll focus on designing modular components and composing them together to build robust applications."--Resource description page.

Annotation. If you know HTML, CSS, and JavaScript, you already have the tools you need to develop Android apps. With this book, you'll learn how to use these web technologies to design and build apps for any Android device, using the framework of your choice.

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, Asyncronous 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!

Grasp the fundamentals of web application development by building a simple database-backed app from scratch, using HTML, JavaScript, and other open source tools. Through hands-on tutorials, this practical guide shows inexperienced web app developers how to create a user interface, write a server, build client-server communication, and use a cloud-based service to deploy the application. Each chapter includes practice problems, full examples, and mental models of the development workflow. Ideal for a college-level course, this book helps you get started with web app development by providing you with a solid grounding in the process. Set up a basic workflow with a text editor, version control system, and web browser Structure a user interface with HTML, and include styles with CSS Use JQuery and JavaScript to add interactivity to your application Link the client to the server with AJAX, JavaScript objects, and JSON Learn the basics of server-side programming with Node.js Store data outside your application with Redis and MongoDB Share your application by uploading it to the cloud with CloudFoundry Get basic tips for writing maintainable code on both client and server

WordPress is much more than a blogging platform. As this practical guide clearly demonstrates, you can use WordPress to build web apps of any type—not mere content sites, but full-blown apps for specific tasks. If you have PHP experience with a smattering of HTML, CSS, and JavaScript, you'll learn how to use WordPress plugins and themes to develop fast, scalable, and secure web apps, native mobile apps, web services, and even a network of multiple WordPress sites. The authors use examples from their recently released SchoolPress app to explain concepts and techniques throughout the book. All code examples are available on GitHub. Compare WordPress with traditional app development frameworks Use themes for views, and plugins for backend functionality Get suggestions for choosing WordPress plugins—or build your own Manage user accounts and roles, and access user data Build asynchronous behaviors in your app with jQuery Develop native apps for iOS and Android, using wrappers Incorporate PHP libraries, external APIs, and web service plugins Collect payments through ecommerce and membership plugins Use techniques to speed up and scale your WordPress app

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

Build on your basic knowledge of HTML5 and JavaScript to create substantial HTML5 applications. Through the many interesting projects you can create in this book, you'll develop HTML5 skills for future projects, and extend the core skills you may have learned with its companion book, The Essential Guide to HTML5. HTML5 and JavaScript Projects is fully updated as a second edition and covers important programming techniques and HTML, CSS, and JavaScript features to help you build projects with images, animation, video, audio and line drawings. You'll learn how to build games, quizzes and other interactive projects; incorporate the use of the Google Maps API and localStorage; and address the challenges of Responsive Design and Accessibility. Each project starts out with a description of the example's operation, often with full-color illustrations. You'll then review the HTML5 and JavaScript concepts that relate to the project followed by a step-by-step explanation of the programming used. Tables are used to show the relationship of functions and provide comments for each line of code so that you can easily apply the techniques to your own HTML5 projects.? What You'll Learn Enhance your HTML5 and JavaScript programming skills. Poduce applications combining Canvas drawings, photos, and videos Incorporate Google Maps and geolocation into your projects Build applications requiring persistent data, storing the information locally or on a database on the server Who This Book Is For Developers who have some knowledge of programming and want to build more substantial applications by combining basic features and combining JavaScript with other technologies.

A full-color introduction to the basics of HTML and CSS from the publishers of Wrox! Every day, more and more people want to learn some HTML and CSS. Joining the professional web designers and

programmers are new audiences who need to know a little bit of code at work (update a content management system or e-commerce store) and those who want to make their personal blogs more attractive. Many books teaching HTML and CSS are dry and only written for those who want to become programmers, which is why this book takes an entirely new approach. Introduces HTML and CSS in a way that makes them accessible to everyone—hobbyists, students, and professionals—and it's full-color throughout Utilizes information graphics and lifestyle photography to explain the topics in a simple way that is engaging Boasts a unique structure that allows you to progress through the chapters from beginning to end or just dip into topics of particular interest at your leisure This educational book is one that you will enjoy picking up, reading, then referring back to. It will make you wish other technical topics were presented in such a simple, attractive and engaging way! This book is also available as part of a set in hardcover - Web Design with HTML, CSS, JavaScript and jQuery, 9781119038634; and in softcover - Web Design with HTML, CSS, JavaScript and jQuery, 9781118907443.

Summary In Single Page Web Applications you'll learn to build modern browser-based apps that take advantage of stronger client platforms and more predictable bandwidth. You'll learn the SPA design approach, and then start exploring new techniques like structured JavaScript and responsive design. And you'll learn how to capitalize on trends like server-side JavaScript and NoSQL data stores, as well as new frameworks that make JavaScript more manageable and testable as a first-class language. About this Book If your website is a jumpy collection of linked pages, you are behind. Single page web applications are your next step: pushing UI rendering and business logic to the browser and communicating with the server only to synchronize data, they provide a smooth user experience, much like a native application. But, SPAs can be hard to develop, manage, and test. Single Page Web Applications shows how your team can easily design, test, maintain, and extend sophisticated SPAs using JavaScript end-to-end, without getting locked into a framework. Along the way, you'll develop advanced HTML5, CSS3, and JavaScript skills, and use JavaScript as the language of the web server and the database. This book assumes basic knowledge of web development. No experience with SPAs is required. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. What's Inside Design, build, and test a full-stack SPA Best-in-class tools like jQuery, TaffyDB, Node.js, and MongoDB Real-time web with web sockets and Socket.IO Touch controls for tablets and smartphones Common SPA design mistakes About the Authors The authors are architects and engineering managers. Michael Mikowski has worked on many commercial SPAs and a platform that processes over 100 billion requests per year. Josh Powell has built some of the most heavily trafficked sites on the web. Table of Contents PART 1: INTRODUCING SPAS Our first single page application Reintroducing JavaScript PART 2: SPA CLIENT Develop the Shell Add feature modules Build the Model Finish the Model and Data modules PART 3: THE SPA SERVER The web server The server database Readying our SPA for production Building rich JavaScript applications that bring a desktop experience to the Web requires moving state from the server to the client side—not a simple task. This hands-on book takes proficient JavaScript developers through all the steps necessary to create state-of-the-art applications, including structure, templating, frameworks, communicating with the server, and many other issues. Throughout the book, you'll work with real-world example applications to help you grasp the concepts involved. Learn how to create JavaScript applications that offer a more responsive and improved experience. Use the Model-View-Controller (MVC) pattern, and learn how to manage dependencies inside your application Get an introduction to templating and data binding Learn about loading remote data, Ajax, and cross-domain requests Create realtime applications with WebSockets and Node.js Accept dropped files and upload data with progress indicators Use major frameworks and libraries, including jQuery, Spine, and Backbone Write tests and use the console to debug your applications Get deployment best practices, such as caching and minification

Summary Third-Party JavaScript guides web developers through the complete development of a full-featured third-party JavaScript application. You'll learn dozens of techniques for developing widgets that collect data for analytics, provide helpful overlays and dialogs, or implement features like chat or commenting. The concepts and examples throughout this book represent the best practices for this emerging field, based on thousands of real-world dev hours and results from millions of users. About this Book There's an art to writing third-party JavaScript—embeddable scripts that can plug into any website. They must adapt easily to unknown host environments, coexist with other applications, and manage the tricky security vulnerabilities you get when code and asset files are served from remote web addresses. Get it right and you have unlimited options for distributing your apps. This unique book shows you how. Third-Party JavaScript guides you through the ins and outs of building full-featured third-party JavaScript applications. You'll learn techniques for developing widgets that collect data for analytics, provide helpful overlays and dialogs, or implement features like chat and commenting. The concepts and examples throughout the book represent the best practices for this emerging field, based on thousands of real-world dev hours and results from millions of users. Written for web developers who know JavaScript, this book requires no prior knowledge of third-party apps. What's Inside Writing conflict-free JavaScript, HTML, and CSS Making cross-domain requests from the browser How to overcome third-party cookie limitations Security vulnerabilities of third-party applications Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Authors Ben Vinegar is an engineer at Disqus, a third-party JavaScript commenting platform. Anton Kovalyov is a software engineer at Mozilla. They are third-party applications experts whose work has been distributed on millions of websites Table of Contents Introduction to third-party JavaScript Distributing and loading your application Rendering HTML and CSS Communicating with the server Cross-domain iframe messaging Authentication and sessions Security Developing a third-party JavaScript SDK Performance Debugging and testing

Modularize your JavaScript code for better readability, greater maintainability, and enhanced testability About This Book Design and build fully modular, modern JavaScript applications using modular design concepts Improve code portability, maintainability, and integrity while creating highly scalable and responsive web applications Implement your own loosely coupled code blocks that can power highly maintainable and powerful applications in a flexible and highly responsive modular architecture Who This Book Is For If you are an intermediate to advanced JavaScript developer who has experience of writing JavaScript code but probably not in a modular, portable manner, or you are looking to

develop enterprise level JavaScript applications, then this book is for you. A basic understanding of JavaScript concepts such as OOP, prototypal inheritance, and closures is expected. What You Will Learn Understand the important concepts of OOP in JavaScript, such as scope, objects, inheritance, event delegation, and more Find out how the module design pattern is used in OOP in JavaScript Design and augment modules using both tight augmentation and loose augmentation Extend the capabilities of modules by creating sub-modules using techniques such as cloning and inheritance Move from isolated module pieces to a cohesive, well integrated application modules that can interact and work together without being tightly coupled See how SandBoxing is used to create a medium for all the modules to talk to each other as well as to the core Use the concepts of modular application design to handle dependencies and load modules asynchronously Become familiar with AMD and CommonJS utilities and discover what the future of JavaScript holds for modular programming and architecture In Detail Programming in the modular manner is always encouraged for bigger systems—it is easier to achieve scalability with modular programming. Even JavaScript developers are now interested in building programs in a modular pattern. Modules help people who aren't yet familiar with code to find what they are looking for and also makes it easier for programmers to keep things that are related close together. Designing and implementing applications in a modular manner is highly encouraged and desirable in both simple and enterprise level applications. This book covers some real-life examples of modules and how we can translate that into our world of programming and application design. After getting an overview of JavaScript object-oriented programming (OOP) concepts and their practical usage, you should be able to write your own object definitions using the module pattern. You will then learn to design and augment modules and will explore the concepts of cloning, inheritance, sub-modules, and code extensibility. You will also learn about SandBoxing, application design, and architecture based on modular design concepts. Become familiar with AMD and CommonJS utilities. By the end of the book, you will be able to build spectacular modular applications in JavaScript. Style and approach This in-depth step-by-step guide will teach you modular programming with JavaScript. Starting from the basics, it will cover advanced modular patterns that can be used in sophisticated JavaScript applications.

Summary Get Programming with Node.js teaches you to build web servers using JavaScript and Node. In this engaging tutorial, you'll work through eight complete projects, from writing the code for your first web server to adding live chat to a web app. Your hands will stay on the keyboard as you explore the most important aspects of the Node development process, including security, database management, authenticating user accounts, and deploying to production. You'll especially appreciate the easy-to-follow discussions, illuminating diagrams, and carefully explained code! Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Node.js delivers the speed and reliability you need for ecommerce, social media, and gaming applications. It comes with thousands of prebuilt packages to help you get started immediately. If you want to use JavaScript on the server, Node.js is your choice. What's inside New features from ES2015 and later Writing asynchronous code Creating data models Debugging JavaScript modules About the Reader Written for front-end web developers with intermediate JavaScript skills. Table of Contents GETTING SET UP Lesson 0 - Setting up Node.js and the JavaScript engine Lesson 1 - Configuring your environment Lesson 2 - Running a Node.js application UNIT 1 - GETTING STARTED WITH NODE.JS Lesson 3 - Creating a Node.js module Lesson 4 - Building a simple web server in Node.js Lesson 5 - Handling incoming data Lesson 6 - Writing better routes and serving external files Lesson 7 - Capstone: Creating your first web application UNIT 2 - EASIER WEB DEVELOPMENT WITH EXPRESS.JS Lesson 8 - Setting up an app with Express.js Lesson 9 - Routing in Express.js Lesson 10 - Connecting views with templates Lesson 11 - Configurations and error handling Lesson 12 - Capstone: Enhancing the Confetti Cuisine site with Express.js UNIT 3 - CONNECTING TO A DATABASE Lesson 13 - Setting up a MongoDB database Lssson 14 - Building models with Mongoose Lesson 15 - Connecting controllers and models Using promises with Mongoose Lesson 16 - Capstone: Saving user subscriptions UNIT 4 - BUILDING A USER MODEL Lesson 17 - Improving your data models Lesson 18 - Building the user model Lesson 19 - Creating and reading your models Lesson 20 - Updating and deleting your models Lesson 21 - Capstone: Adding CRUD models to Confetti Cuisine Creating controllers UNIT 5 - AUTHENTICATING USER ACCOUNTS Lesson 22 - Adding sessions and flash messages Lesson 23 - Building a user login and hashing passwords Lesson 24 - Adding user authentication Lesson 25 - Capstone: Adding user authentication to Confetti Cuisine UNIT 6 - BUILDING AN API Lesson 26 - Adding an API to your application Lesson 27 - Accessing your API from your application Lesson 28 - Adding API security Lesson 29 - Capstone: Implementing an API UNIT 7 - ADDING CHAT FUNCTIONALITY Lesson 30 - Working with Socket.io Lesson 31 - Saving chat messages Lesson 32 - Adding a chat notification indicator UNIT 8 - DEPLOYING AND MANAGING CODE IN PRODUCTION Lesson 33 - Capstone: Adding a chat feature to Confetti Cuisine Lesson 34 - Deploying your application Lesson 35 - Managing in production Lesson 36 - Testing your application Lesson 37 - Capstone: Deploying Confetti Cuisine

Strengthen your applications by adopting Test-Driven Development (TDD), the OpenAPI Specification, Continuous Integration (CI), and container orchestration. Key Features Create production-grade JavaScript applications from scratch Build microservices and deploy them to a Docker container for scaling applications Test and deploy your code with confidence using Travis CI Book Description With the over-abundance of tools in the JavaScript ecosystem, it's easy to feel lost. Build tools, package managers, loaders, bundlers, linters, compilers, transpilers, typecheckers - how do you make sense of it all? In this book, we will build a simple API and React application from scratch. We begin by setting up our development environment using Git, yarn, Babel, and ESLint. Then, we will use Express, Elasticsearch and JSON Web Tokens (JWTs) to build a stateless API service. For the front-end, we will use React, Redux, and Webpack. A central theme in the book is maintaining code quality. As such, we will enforce a Test-Driven Development (TDD) process using Selenium, Cucumber, Mocha, Sinon, and Istanbul. As we progress through the book, the focus will shift towards automation and infrastructure. You will

learn to work with Continuous Integration (CI) servers like Jenkins, deploying services inside Docker containers, and run them on Kubernetes. By following this book, you would gain the skills needed to build robust, production-ready applications. What you will learn Practice Test-Driven Development (TDD) throughout the entire book Use Cucumber, Mocha and Selenium to write E2E, integration, unit and UI tests Build stateless APIs using Express and Elasticsearch Document your API using OpenAPI and Swagger Build and bundle front-end applications using React, Redux and Webpack Containerize services using Docker Deploying scalable microservices using Kubernetes Who this book is for If you're a JavaScript developer looking to expand your skillset and become a senior JavaScript developer by building production-ready web applications, then this book is for you.
With the advent of HTML5, front-end MVC, and Node.js, JavaScript is ubiquitous--and still messy. This book will give you a solid foundation for managing async tasks without losing your sanity in a tangle of callbacks. It's a fast-paced guide to the most essential techniques for dealing with async behavior, including PubSub, evented models, and Promises. With these tricks up your sleeve, you'll be better prepared to manage the complexity of large web apps and deliver responsive code. With Async JavaScript, you'll develop a deeper understanding of the JavaScript language. You'll start with a ground-up primer on the JavaScript event model--key to avoiding many of the most common mistakes JavaScripters make. From there you'll see tools and design patterns for turning that conceptual understanding into practical code. The concepts in the book are illustrated with runnable examples drawn from both the browser and the Node.js server framework, incorporating complementary libraries including jQuery, Backbone.js, and Async.js. You'll learn how to create dynamic web pages and highly concurrent servers by mastering the art of distributing events to where they need to be handled, rather than nesting callbacks within callbacks within callbacks. Async JavaScript will get you up and running with real web development quickly. By the time you've finished the Promises chapter, you'll be parallelizing Ajax requests or running animations in sequence. By the end of the book, you'll even know how to leverage Web Workers and AMD for JavaScript applications with cutting-edge performance. Most importantly, you'll have the knowledge you need to write async code with confidence. What You Need: Basic knowledge of JavaScript is recommended. If you feel that you're not up to speed, see the "Resources for Learning JavaScript" section in the preface.
Completely revised and updated, this best-selling introduction to programming in JavaScript focuses on writing real applications. JavaScript lies at the heart of almost every modern web application, from social apps like Twitter to browser-based game frameworks like Phaser and Babylon. Though simple for beginners to pick up and play with, JavaScript is a flexible, complex language that you can use to build full-scale applications. This much anticipated and thoroughly revised third edition of Eloquent JavaScript dives deep into the JavaScript language to show you how to write beautiful, effective code. It has been updated to reflect the current state of Java¬Script and web browsers and includes brand-new material on features like class notation, arrow functions, iterators, async functions, template strings, and block scope. A host of new exercises have also been added to test your skills and keep you on track. As with previous editions, Haverbeke continues to teach through extensive examples and immerses you in code from the start, while exercises and full-chapter projects give you hands-on experience with writing your own programs. You start by learning the basic structure of the JavaScript language as well as control structures, functions, and data structures to help you write basic programs. Then you'll learn about error handling and bug fixing, modularity, and asynchronous programming before moving on to web browsers and how JavaScript is used to program them. As you build projects such as an artificial life simulation, a simple programming language, and a paint program, you'll learn how to: - Understand the essential elements of programming, including syntax, control, and data - Organize and clarify your code with object-oriented and functional programming techniques - Script the browser and make basic web applications - Use the DOM effectively to interact with browsers - Harness Node.js to build servers and utilities Isn't it time you became fluent in the language of the Web? * All source code is available online in an inter¬active sandbox, where you can edit the code, run it, and see its output instantly.
Summary Node.js in Action, Second Edition is a thoroughly revised book based on the best-selling first edition. It starts at square one and guides you through all the features, techniques, and concepts you'll need to build production-quality Node applications. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology You already know JavaScript. The trick to mastering Node.js is learning how to build applications that fully exploit its powerful asynchronous event handling and non-blocking I/O features. The Node server radically simplifies event-driven real-time apps like chat, games, and live data analytics, and with its incredibly rich ecosystem of modules, tools, and libraries, it's hard to beat! About the Book Based on the bestselling first edition, Node.js in Action, Second Edition is a completely new book. Packed with practical examples, it teaches you how to create high-performance web servers using JavaScript and Node. You'll master key design concepts such as asynchronous programming, state management, and event-driven programming. And you'll learn to put together MVC servers using Express and Connect, design web APIs, and set up the perfect production environment to build, lint, and test. What's Inside Mastering non-blocking I/O The Node event loop Testing and deploying Web application templating About the Reader Written for web developers with intermediate JavaScript skills. About the Authors The Second Edition author team includes Node masters Alex Young, Bradley Meck, Mike Cantelon, and Tim Oxley, along with original authors Marc Harter, T.J. Holowaychuk, and Nathan Rajlich. Table of contents PART 1 - WELCOME TO NODE Welcome to Node.js Node programming fundamentals What is a Node web application? PART 2 - WEB DEVELOPMENT WITH NODE Front-end build systems Server-side frameworks Connect and Express in depth Web application templating Storing application data Testing Node applications Deploying Node applications and maintaining uptime PART 3 - BEYOND WEB DEVELOPMENT Writing command-line applications Conquering the desktop with Electron
What people are saying about Building iPhone Apps w/ HTML, CSS, and JavaScript "The future of mobile development is clearly web technologies like CSS, HTML and

JavaScript. Jonathan Stark shows you how to leverage your existing web development skills to build native iPhone applications using these technologies." --John Allsopp, author and founder of Web Directions "Jonathan's book is the most comprehensive documentation available for developing web applications for mobile Safari. Not just great tech coverage, this book is an easy read of purely fascinating mobile tidbits in a fun colloquial style. Must have for all PhoneGap developers." -- Brian LeRoux, Nitobi Software It's a fact: if you know HTML, CSS, and JavaScript, you already have the tools you need to develop your own iPhone apps. With this book, you'll learn how to use these open source web technologies to design and build apps for the iPhone and iPod Touch on the platform of your choice-without using Objective-C or Cocoa. Device-agnostic mobile apps are the wave of the future, and this book shows you how to create one product for several platforms. You'll find guidelines for converting your product into a native iPhone app using the free PhoneGap framework. And you'll learn why releasing your product as a web app first helps you find, fix, and test bugs much faster than if you went straight to the App Store with a product built with Apple's tools. Build iPhone apps with tools you already know how to use Learn how to make an existing website look and behave like an iPhone app Add native-looking animations to your web app using jQTouch Take advantage of client-side data storage with apps that run even when the iPhone is offline Hook into advanced iPhone features -- including the accelerometer, geolocation, and vibration -- with JavaScript Submit your applications to the App Store with Xcode This book received valuable community input through O'Reilly's Open Feedback Publishing System (OFPS).

Master the application design using the core design patterns and features of ES6+JavaScript. the design pattern is an elected solution for solving software design problems. This book takes you through important design patterns and explains them with real-world examples. You will get to grips with low-level details and concepts that show you how to write JavaScript code. This book will help you learn the core concepts of design patterns and the way they can be used to resolve Web Development design problems. and take your skills to the next level with reactive and functional patterns that help you build resilient, scalable, and robust web applications. All patterns are compiled from real systems and are based on real-world examples. Each pattern also includes code that demonstrates how it may be implemented in object-oriented programming languages like ES6+JavaScript.The book is divided into 2 parts: 1. The first part vividly explains the concept of each design pattern through life 2. The second part applies design patterns to real project examples

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 the client and server. Nicolás 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 complexity in check. Learn modular 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 complexity Apply Twelve-Factor App principles to frontend and backend JavaScript application development

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

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.

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

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