Socketio Real Time Web Application Development

This book is for web developers who want to learn and implement WebSocket to create interesting apps for modern browsers, leveraging the capabilities of HTML5 with WebSockets.

Learn to build fast and scalable software in JavaScript with Node.js Node.js is a powerful and popular new framework for writing scalable network programs using JavaScript. This no nonsense book begins with an overview of Node.js and then quickly dives into the code, core concepts, and APIs. In-depth coverage pares down the essentials to cover debugging, unit testing, and flow control so that you can start building and testing your own modules right away. Covers node and asynchronous programming main concepts Addresses the basics: modules, buffers, events, and timers Explores streams, file systems, networking, and automated unit testing Goes beyond the basics, and shares techniques and tools for debugging, unit testing, and flow control If you already know JavaScript and are curious about the power of Node.js, then this is the ideal book for you.

Over 40 recipes to help you create real-time JavaScript applications using the robust Socket.IO framework About This Book Create secure WebSocket connections and real-time mobile applications using Socket.IO Devise efficient messaging systems between the server side and the client side A step-by-step implementation guide to help you create elements of Socket.IO application Who This Book Is For If you have some knowledge of JavaScript and Node.js and want to create awe-inspiring application experiences using real time communication, then this book is for you. Developers with knowledge of other scripting languages should also be able to easily follow along. What You Will Learn Build rich and interactive real-time dashboards using Socket.IO to pipe in data as it becomes available Design chat and multiple-person interfaces that leverage Socket.IO for communication Segment conversations to rooms and namespaces so that every socket doesn't have to receive every message Secure your data by implementing various authentication techniques, locking down the HTTP referrer and using secure WebSockets Load balance across multiple server-side nodes and keep your WebSockets in sync using Redis, RabbitMQ or Memcached Stream binary data such as audio and video in real-time over a Socket.IO connection Create real-time experiences outside of the browser by integrating Socket.IO with hybrid mobile applications In Detail Socket.IO is a JavaScript library that provides you with the ability to implement real-time analytics, binary streaming, instant messaging, and document collaboration. It has two parts: a client-side library that runs in the browser, and a server-side library for node.js. Socket.IO is event-driven and primarily uses the WebSocket protocol that allows us to emit data bi-directionally from the server and the client. Socket.IO This book is a complete resource, covering topics from webSocket security to scaling the server-side of a Socket.IO application and everything in between. This book will provide real-world examples of how secure bi-directional, full-duplex connections that can be created using Socket.IO for different environments. It will also explain how the connection vulnerabilities can be resolved for large numbers of users and huge amounts of data/messages. By the end of the book, you will be a competent Socket.IO developer. With the help of the examples and real-world solutions,you will learn to create fast, scalable, and dynamic real-time apps by creating efficient messaging systems between the server side and the client side using Socket.IO. Style and approach This book is written in a cookbook-style format and provides practical, immediately usable task-based recipes that show you how to create the elements of a Socket.IO application.

This book constitutes the refereed proceedings of the 4th Iberoamerican Conference on Applications and Usability of Interactive TV, jAUTI 2015, and the 6th Congress on Interactive Digital TV, CTVDI 2015, held in Palma de Mallorca, Spain, in October 2015. The 10 revised full papers and two short papers presented together with an invited talk were carefully reviewed and selected for this volume from 30 accepted submissions. The papers are organized in topical sections on Second Screen Applications Immersive TV; Video Consumption Development Tools; IDTV Interoperability; IDTV User Experience; Audiovisual Accessibility.

Unlock the power of the MEAN stack by creating attractive and real-world projects About This Book Learn about the different components that comprise a MEAN application to construct a fully functional MEAN application using the best third-party modules A step-by-step guide to developing the MEAN stack components from scratch to achieve maximum flexibility when building an e-commerce application Build optimum end-to-end web applications using the MEAN stack Who This Book Is For This learning path is for web developers who are experienced in developing applications using JavaScript. This course is for developers who are interested in learning how to build modern and multiple web applications using MongoDB, Express, AngularJS, and Node.js. What You Will Learn Build modern, end-to-end web applications by employing the full-stack web development solution of MEAN Connect your Express application to MongoDB and use a Mongoose model and build a complex application from start to finish in MongoDB Employ AngularJS to build responsive UI components Implement multiple authentication strategies such as OAuth, JsonWebToken, and Sessions Enhance your website's usability with social logins such as Facebook, Twitter, and Google Secure your app by creating SSL certificates and run payment platforms in a live environment Implement a chat application from scratch using Socket.IO Create distributed applications and use the power of server-side rendering in your applications Extend a project with a real-time bidding system using WebSockets In Detail The MEAN stack is a collection of the most popular modern tools for web development. This course will help you to build a custom e-commerce app along with several other applications. You will progress to creating several applications with MEAN. The first module in this course will provide you with the skills you need to successfully create, maintain, and test a MEAN application. Starting with MEAN core frameworks, this course will explain each framework key concepts of MongoDB, Express, AngularJS, and Node.js. We will walk through the different tools and frameworks that will help expedite your daily development cycles. After this, the next module will

show you how to create your own e-commerce application using the MEAN stack. It takes you step by step through the parallel process of learning and building to develop a production-ready, high-quality e-commerce site from scratch. It also shows you how to manage user authentication and authorization, check multiple payment platforms, add a product search and navigation feature, deploy a production-ready e-commerce site, and finally add your own high-quality feature to the site. The final step in this course will enable you to build a better foundation for your AngularJS apps. You'll learn how to build complex real-life applications with the MEAN stack and a few more advanced projects. You will become familiar with WebSockets, build real-time web applications, create auto-destructing entities, and see how to work with monetary data in Mongo. You will also find out how to a build real-time e-commerce application. This learning path combines some of the best that Packt has to offer in one complete, curated package. It includes content from the following Packt products: MEAN Web Development by Amos Haviv Building an E-Commerce Application with MEAN by Adrian Mejia MEAN Blueprints by Robert Onodi Style and approach This course will begin with the introduction to MEAN, gradually progressing with building applications in each framework. Each transition is well explained, and each chapter begins with the required background knowledge.

Nuxt.js is a progressive web framework for adding SSR capabilities to Vue.js apps. This practical guide will help you up and running with the fundamentals of Nuxt.js, how to integrate it with the latest version of Vue.js and enable you to build an entire project including authentication, testing, and deployment with Nuxt.js and Vue.js.

If you are interested in developing modern applications, this book will help you leverage the vast JavaScript ecosystem while using an elegant language, helping you avoid the shortcomings of JavaScript.

Socket. IO Real-Time Web Application DevelopmentPackt Publishing Ltd

Learn the basics of Socket.IO, and discover how to use this real-time web library to set up a chat application with multiple rooms.

With 90 detailed hacks, expert web developers Jesse Cravens and Jeff Burtoft demonstrate intriguing uses of HTML5-related technologies. Each recipe provides a clear explanation, screenshots, and complete code examples for specifications that include Canvas, SVG, CSS3, multimedia, data storage, web workers, WebSockets, and geolocation. You'll also find hacks for HTML5 markup elements and attributes that will give you a solid foundation for creative recipes that follow. The last chapter walks you through everything you need to know to get your HTML5 app off the ground, from Node.js to deploying your server to the cloud. Here are just a few of the hacks you'll find in this book: Make iOS-style card flips with CSS transforms and transitions Replace the background of your video with the Canvas tag Use Canvas to create high-res Retina Display-ready media Make elements on your page user-customizable with editable content Cache media resources locally with the filesystem API Reverse-geocode the location of your web app user Process image data with pixel manipulation in a dedicated web worker Push notifications to the browser with Server-Sent Events

Since it's creation in 2009, Node.js has grown into a powerful and increasingly popular asynchronous-development framework for creating highly-scalable network applications using JavaScript. Respected companies such as Dow Jones and LinkedIn are among the many organizations to have seen Node's potential and adopted it into their businesses. Pro Node.js for Developers provides a comprehensive guide to this exciting new technology. We introduce you to Node – what it is, why it matters and how to set it up – before diving deeply into the key concepts and APIs that underpin its operation. Building upon your existing JavaScript skills you'll be shown how to use Node.js to build both Web- and Network-based applications, to deal with data sources, capture events and deal with child processes to create robust applications that will work well in a wide range of circumstances. Once you've mastered these skills we'll go further, teaching you more advanced software engineering skills that will give your code a professional edge. You'll learn how to create easily reusable modules that will save you time through code reuse, to log and debug your applications quickly and effectively and to write code that will scale easily and reliably as the demand for your application grows.

Write free, open-source, cross-platform, dynamic JavaScript applications that can run anywhere using the MEAN stack - MongoDB, ExpressJS, AngularJS, and Node.js. With this book Mac developers will get the tools needed to set up, write code once, and be able to deploy code on any device. You will be able to cut development time by using one stack to serve all your development needs. Pro MEAN Stack Development enables you to quickly learn everything needed to work effectively with MEAN, from setting up your toolstack to rolling out your free servers, and deploying on any device. You will also learn to build scripts with Grunt and Gulp, Webpack, and Vagrant and how to deploy to the web and mobile using Phonegap. Harness JavaScript to create dynamic and easily-maintainable applications fast and 100% free. Master the MEAN stack with this book today. What You Will Learn Utilize JavaScript for the entire development cycle from front end to back end, database and deployment. Learn to write responsive code that can be deployed on any device. Become a well-rounded developer and be able to understand the entire development cycle. Learn to utilize free open source and cloud services to deploy production-grade code. Who This Book Is For Front or back end Mac developers familiar with JavaScript and interested in utilizing the MEAN stack to deploy successful apps on all devices.

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

Share code and assets across domains in Web applications with CORS About This Book A step-by-step guide but at a high level/fast pace. Not all steps are covered as a basic knowledge is

assumed Provides a basic overview of the concepts but the focus is on providing the practical skills required to develop applications Focuses on providing practical examples Who This Book Is For Web developers have been limited by the Same Origin Policy and often wish they could spread their application across different domains. You know JavaScript and AJAX, and have run up against the Same Domain Policy, which is limiting your applications. What You Will Learn Why you need CORS: Bending the Same Origin Policy and basic CORS implementation, headers and XMLHttpRequest Creating proxies for CORS: Sometimes the header is not enough Security: vulnerabilities and how to secure your CORS application CORS implementations in Content Management systems Learn about CORS in Windows applications Take CORS on the Cloud Apply CORS in Node.js Best practices for CORS In Detail This book explains how to use CORS, including specific implementations for platforms such as Drupal, WordPress, IIS Server, ASP.NET, JBoss, Windows Azure, and Salesforce, as well as how to use CORS in the Cloud on Amazon AWS, YouTube, Mulesoft, and others. It examines limitations, security risks, and alternatives to CORS. It explores the W3C Specification and major developer documentation sources about CORS. It attempts to predict what kinds of extension to the CORS specification, or completely new techniques, will come in the future to address the limitations of CORS Web developers will learn how to share code and assets across domains with CORS. They will learn a variety of techniques that are rather similar in their method and syntax. The book is organized by similar types of framework and application, so it can be used as a reference. Developers will learn about special cases, such as when a proxy is necessary. And they will learn about some alternative techniques that achieve similar goals, and when they may be preferable to using CORS Style and approach A step-by-step guide filled with real-world applications

The three volume set LNAI 10462, LNAI 10463, and LNAI 10464 constitutes the refereed proceedings of the 10th International Conference on Intelligent Robotics and Applications, ICIRA 2017, held in Wuhan, China, in August 2017. The 235 papers presented in the three volumes were carefully reviewed and selected from 310 submissions. The papers in this first volume of the set are organized in topical sections on soft, micro-nano, bio-inspired robotics; human-machine interaction; swarm robotics; underwater robotics.

Node.js is a server-side JavaScript platform using an event-driven, non-blocking I/O model allowing users to build fast and scalable data-intensive applications running in real time. This book gives you an excellent starting point, bringing you straight to the heart of developing web applications with Node.js. You will progress from a rudimentary knowledge of JavaScript and server-side development to being able to create, maintain, deploy and test your own Node.js application.You will understand the importance of transitioning to functions that return Promise objects, and the difference between fs, fs/promises and fs-extra. With this book you'll learn how to use the HTTP Server and Client objects, data storage with both SQL and MongoDB databases, real-time applications with Socket.IO, mobile-first theming with Bootstrap, microservice deployment with Docker, authenticating against third-party services using OAuth, and use some well known tools to beef up security of Express applications.

This book aims to provide alternative guides and solutions for building Internet of Things applications using Javascript. So far JavaScript is commonly used on web-based information system applications. In this book you will dig deeper into JavaScript programming for hardware handling (Arduino) which can be integrated with another JavaScript libraries to build an interactive and real-time web-based interface system.

"Unity is a cross-platform, exciting and popular engine in the game industry. This video course shows you how to use Node.js to build websites, and focuses primarily on Express as the framework that the website will be built in. In addition to Express, we cover the use of Redis and Socket.io to make more robust and dynamic sites. Many courses only focus on one of these, but this course covers all of them. By the end of this course, you will be able to build applications using Express, Redis, and Socket.io. Express helps by making full-featured web applications easy if you know how. Redis opens doors by making data quick and easy to fetch. Many sites have used Redis to make difficult data problems easy. Lastly, Socket.io makes two-way communication between the browser and web application easy. If you have ever needed to build something that was real-time, then Socket.io is what you want to use."--Resource description page.

The JavaScript Workshop is a definitive guide to learning JavaScript in a practical way. Starting with JavaScript's core syntax and structure, the book gradually builds up to more advanced concepts like server-side development and functional programming. With this book, you'll gain the confidence to tackle any real-world JavaScript challenge.

This book, gathering the Proceedings of the 2018 Computing Conference, offers a remarkable collection of chapters covering a wide range of topics in intelligent systems, computing and their real-world applications. The Conference attracted a total of 568 submissions from pioneering researchers, scientists, industrial engineers, and students from all around the world. These submissions underwent a double-blind peer review process. Of those 568 submissions, 192 submissions (including 14 poster papers) were selected for inclusion in these proceedings. Despite computer science’s comparatively brief history as a formal academic discipline, it has made a number of fundamental contributions to science and society—in fact, along with electronics, it is a founding science of the current epoch of human history (‘the Information Age’) and a main driver of the Information Revolution. The goal of this conference is to provide a platform for researchers to present fundamental contributions, and to be a premier venue for academic and industry practitioners to share new ideas and development experiences. This book collects state of the art chapters on all aspects of Computer Science, from classical to intelligent. It covers both the theory and applications of the latest computer technologies and methodologies. Providing the state of the art in intelligent methods and techniques for solving real-world problems, along with a vision of future research, the book will be interesting and valuable for a broad readership.

Deliver rich audio and video real-time communication and peer-to-peer data exchange right in the browser, without the need for proprietary plug-ins. This concise hands-on guide shows you how to use the emerging Web Real-Time Communication (WebRTC) technology to build a browser-to-browser application, piece by piece. The authors’ learn-by-example approach is perfect for web programmers looking to understand real-time communication, and telecommunications architects unfamiliar with HTML5 and JavaScript-based client-server web programming. You’ll use a ten-step recipe to create a complete WebRTC system, with exercises that you can apply to your own projects. Tour the WebRTC development cycle and trapezoid architectural model Understand how and why VoIP is shifting from standalone functionality to a browser component Use mechanisms that let client-side web apps interact with browsers through the WebRTC API Transfer streaming data between browser peers with the RTCPeerConnection API Create a signaling channel between peers for setting up a WebRTC session Put everything together to create a basic WebRTC system from scratch Learn about conferencing, authorization, and other advanced WebRTC features

This book summarizes the results of Design Thinking Research Program at Stanford University in Palo Alto, California, USA and the Hasso Plattner Institute in Potsdam, Germany. Offering readers a closer look at design thinking, its innovation processes and methods, it covers topics ranging from how to design ideas, methods and technologies, to creativity experiments and creative collaboration in the real world, and the interplay between designers and engineers. But the topics go beyond this in their detailed exploration of design thinking and its use in IT systems engineering fields, and even from a

management perspective. The authors show how these methods and strategies actually work in companies, and introduce new technologies and their functions. Furthermore, readers learn how special-purpose design thinking can be used to solve thorny problems in complex fields. Thinking and devising innovations are fundamentally and inherently human activities – so is design thinking. Accordingly, design thinking is not merely the result of special courses nor of being gifted or trained: it’s a way of dealing with our environment and improving techniques, technologies and life. This edition offers a historic perspective on the theoretical foundations of design thinking. Within the four topic areas, various frameworks, methodologies, mindsets, systems and tools are explored and further developed. The first topic area focuses on team interaction, while the second part addresses tools and techniques for productive collaboration. The third section explores new approaches to teaching and enabling creative skills and lastly the book examines how design thinking is put into practice. All in all, the contributions shed light and provide deeper insights into how to support the collaboration of design teams in order to systematically and successfully develop innovations and design progressive solutions for tomorrow.

Node.js supports both client and server side applications. It is based on JavaScript and is very fast in operation. These distinctive features made node.js as one of the most powerful framework in the Java Ecosystem. JavaScript alone allows you to build real-time and scalable mobile and web applications. With this e-book, you will explore more on the node.js framework and how to use it efficiently for web development. Average developers or beginners who struggle to understand node.js basics will find this book very helpful and productive. The book tried to put examples that simplify problems usually faced by the users like how asynchronous code works, what are modules, how big file can be read, node.js express, etc. You will find that lots of concepts that take a long time to master can be learned in a day or two. If this is your first interaction with node.js and don’t want all sort of troubles that arise with the node, this edition is recommended. After going through this e-book, node.js will become an absolute pleasure. Table of content Chapter 1: Introduction 1. Introduction to Node.js 2. What is Node.js? 3. Why use Node.js? 4. Features of Node.js 5. Who uses Node.js 6. When to Use Node.js 7. When to not use Node.js Chapter 2: How to Download & Install Node.js - NPM on Windows 1. How to install Node.js on Windows 2. Installing NPM (Node Package Manager) on Windows 3. Running your first Hello World application in Node.js Chapter 3: Node.js NPM Tutorial: Create, Publish, Extend & Manage 1. What are modules in Node.js? 2. Using modules in Node.js 3. Creating NPM modules 4. Extending modules 5. Publishing NPM(Node Package Manager) Modules 6. Managing third party packages with npm 7. What is the package.json file Chapter 4: Create HTTP Web Server in Node.js: Complete Tutorial 1. Node as a web server using HTTP 2. Handling GET Requests in Node.js Chapter 5: Node.js Express FrameWork Tutorial 1. What is Express.js? 2. Installing and using Express 3. What are Routes? 4. Sample Web server using express.js Chapter 6: Node.js MongoDB Tutorial with Examples 1. Node.js and NoSQL Databases 2. Using MongoDB and Node.js 3. How to build a node express app with MongoDB to store and serve content Chapter 7: Node.js Promise Tutorial 1. What are promises? 2. Callbacks to promises 3. Dealing with nested promises 4. Creating a custom promise Chapter 8: Bluebird Promises Tutorial Chapter 9: Node.js Generators & Compare with Callbacks 1. What are generators? 2. Callbacks vs. generators Chapter 10: Node js Streams Tutorial: Filestream, Pipes 1. Filestream in Node.js 2. Pipes in Node.js 3. Events in Node.js 4. Emitting Events Chapter 11: Node.js Unit Testing Tutorial with Jasmine 1. Overview of Jasmine for testing Node.js applications 2. How to use Jasmine to test Node.js applications Chapter 12: Node.Js Vs AngularJS: Know the Difference 1. What is Node JS? 2. What is Angular JS? 3. Node JS VS. Angular JS 4. What Is Better Node JS Or Angular JS? Chapter 13: Node.js Vs Python: What's the Difference? 1. What is Node.js? 2. What is Python? 3. Node.JS Vs. Python 4. When to use Node js? 5. When to use Python?

This hands-on book looks past the hype and buzzwords surrounding HTML5 and gives you a conservative and practical approach to using HTML5, JavaScript MVC frameworks, and the latest W3C specifications. You’ll quickly master how to build mobile and desktop web apps that are widely supported across all major web browsers and devices. Even though Web Storage, Web Workers, Geolocation, Device Orientation, and WebSockets have been covered many times in the past, it is often from a very high or basic level. This book goes into the trenches to review actual use cases for each of these APIs and gives real-world examples on how to use each one. If you're familiar with JavaScript, CSS and HTML basics and are ready to start piecing together the architecture of HTML5, then this book is for you. Assemble a coherent architectural whole from HTML5’s complex collection of parts Gain a clear understanding of client-side architecture and the "mobile first" approach Design, create, and tune eye-catching and robust mobile web apps Explore how the top five JavaScript MVC frameworks interact with the server Learn best practices for setting up a raw WebSocket server Examine how sites such as Google, Twitter, and Amazon store data on the client Use real-world methods for applying geolocation, and learn the pitfalls of various implementations Process images and other data in the background with Web Workers

Absorb the knowledge required to utilize, manage, and deploy RethinkDB using Node.js About This Book Make the most of this open source, scalable database—RethinkDB —to ease the construction of web applications Run powerful queries using ReQL, which is the most convenient language to manipulate JSON documents with Develop fully-fledged real-time web apps using Node.js and RethinkDB Who This Book Is For Getting Started with RethinkDB is ideal for developers who are new to RethinkDB and need a practical understanding to start working with it. No previous knowledge of database programming is required, although a basic knowledge of JavaScript or Node.js would be helpful. What You Will Learn Download and install the database on your system Configure RethinkDB's settings and start using the web interface Import data into RethinkDB Run queries using the ReQL language Create shards, replicas, and RethinkDB clusters Use an index to improve database performance Get to know all the RethinkDB deployment techniques In Detail RethinkDB is a high-performance document-oriented database with a unique set of features. This increasingly popular NoSQL database is used to develop real-time web applications and, together with Node.js, it can be used to easily deploy them to the cloud with very little difficulty. Getting Started with RethinkDB is designed to get you working with RethinkDB as quickly as possible. Starting with the installation and configuration process, you will learn how to start importing data into the database and run simple queries using the intuitive ReQL query language. After successfully running a few simple queries, you will be introduced to other topics such as clustering and sharding. You will get to know how to set up a cluster of RethinkDB nodes and spread database load across multiple machines. We will then move on to advanced queries and optimization techniques. You will discover how to work with RethinkDB from a Node.js environment and find out all about deployment techniques. Finally, we'll finish by working on a fully-fledged example that uses the Node.js framework and advanced features such as Changefeeds to develop a real-time web application. Style and approach This is a step-by-step book that provides a practical approach to RethinkDB programming, and is explained in a conversational, easy-to-follow style.

Realtime Web Apps: With HTML5 WebSocket, PHP, and jQuery is a guide for beginner- to intermediate-level web developers looking to take the next leap forward in website and app development: realtime. With Realtime Web Apps, you’ll be able to quickly get up to speed on what HTML5 WebSocket does, how it is going to affect the future of the web as we know it, and—thanks to Pusher’s simple API—start developing your first realtime app today. Using a practical approach rather than focusing on dry theory, Realtime Web Apps will guide you through building your first app using HTML5, CSS3, jQuery, and Pusher. After your initial introduction to the technologies used in the book, you’ll immediately jump into the process of creating a realtime Q&A app that will work on desktop browsers as well as mobile phones (including iOS and Android). In addition to learning realtime development strategies, you’ll also learn progressive development strategies including responsive CSS3 layouts, AJAX development with jQuery, and more. The future of the web is realtime. Grab your hoverboard. Introduces you to the revolutionary capabilities of the HTML5 WebSocket API Gets you started with WebSocket immediately using the super-simple Pusher API Walks you through the development of a real-life realtime web app Gets you working with responsive layouts, jQuery, and AJAX development

"If you wish to build something that is real time, this Learning Path will help you achieve your goal. Learn how to implement real-time applications on websites using Socket.IO, Express, and Redis. Socket.IO helps in real-time analytics, instant messaging, and two-way communication between the browser and web application. Redis opens doors by making data quick and easy to fetch. Lastly, Express helps by making full-featured web applications easy. A powerful combination of these three will give you awe-inspiring application experiences and you'll be able to create fast, scalable, and dynamic real-time apps in no time!"--Resource description page.

This book includes the thoroughly refereed post-conference proceedings of the 17th Annual RoboCup International Symposium, held in Eindhoven, The Netherlands, in June 2013. The 20 revised papers presented together with 11 champion team papers, 3 best paper awards, 11 oral presentations, and 19 special track on open-source hard- and software papers were carefully reviewed and selected from 78 submissions. The papers present current research and educational activities within the fields of robotics and artificial intelligence with a special focus to robot hardware and software, perception and action, robotic cognition and learning, multi-robot systems, human-robot interaction, education and edutainment, and applications.

Develop your real-time MEAN application efficiently using a combination of MongoDB, Express, Angular, and Node About This Book Construct a fully-functional MEAN application by using its components along with the best third-party modules Harness the power of the JavaScript ecosystem to effectively run, build, and test your MEAN application Gain a deep, practical understanding of real-time web application development through real-world examples Who This Book Is For If you are a JavaScript developer who is interested in building modern web applications using MongoDB, Express, Angular 2, and Node 5.0, then this book is for you. You only need knowledge of JavaScript development. What You Will Learn Use MongoDB to store and retrieve your application's data Connect your Express application to MongoDB and use the Mongoose module Manage your users' authentication and offer them diverse login options using Passport Structure and use an Angular 2 application in your MEAN project Use Socket.io to create real-time communication between your client and server Test your application's Express and Angular 2 entities In Detail The MEAN stack is a collection of the most popular modern tools for web development that helps you build fast, robust, and maintainable web applications. Starting with the MEAN core frameworks, this pragmatic guide will explain the key concepts of each framework, how to set them up properly, and how to use popular modules to connect it all together. By following the real-world examples shown in this tutorial, you will scaffold your MEAN application architecture, add an authentication layer, and develop an MVC structure to support your project development. You will learn the best practices of maintaining clear and simple code and will see how to avoid common pitfalls. Finally, you will walk through the different tools and frameworks that will help expedite your daily development cycles. Watch how your application development grows by learning from the only guide that is solely orientated towards building a full, end-to-end, real-time application using the MEAN stack! Style and approach This comprehensive guide covers every part of the MEAN stack, and focuses on the gestalt power of the apps they can create through practical, real-world examples

Learn everything you need to about Node.js About This Video Understand how modules work in Node.js Learn asynchronous programming Learn Node.js paradigms In Detail We will be covering how to use Node.js to build websites. This course will focus primarily on Express as the framework that the website will be built in. In addition to Express, we will cover using Redis and Socket.io to make more robust and dynamic sites. Many courses only focus on one of these, but this course will cover all of them. By the end of this course the reader will be able to build applications using Express, Redis, and Socket.io. Express helps by making full featured web applications easy, if you know how. Redis opens doors by making data quick and easy to fetch. Many sites have used Redis to make difficult data problems easy. Lastly Socket.io makes two way communication between the browser and web application easy. If you have every needed to build something that was real-time than Socket.io is what you want to use.

Practical Node.js is your step-by-step guide to learning how to build a wide range of scalable real-world web applications using a professional development toolkit. Node.js is an innovative and highly efficient platform for creating web services. But Node.js doesn't live in a vacuum! In a modern web development, many different components need to be put together — routing, database driver, ORM, session management, OAuth, HTML template engine, CSS compiler and many more. If you already know the basics of Node.js, now is the time to discover how to bring it to production level by leveraging its vast ecosystem of packages. As a web developer, you'll work with a varied collection of standards and frameworks - Practical Node.js shows you how all those pieces fit together. Practical Node.js takes you from installing all the necessary modules to writing full-stack web applications by harnessing the power of the Express.js and Hapi frameworks, the MongoDB database with Mongoskin and Mongoose, Jade and Handlebars template engines, Stylus and LESS CSS languages, OAuth and Everyauth libraries, and the Socket.IO and Derby libraries, and everything in between. The book also covers how to deploy to Heroku and AWS, daemonize apps, and write REST APIs. You'll build full-stack real-world Node.js apps from scratch, and also discover how to write your own Node.js modules and publish them on NPM. You already know what Node.js is; now learn what you can do with it and how far you can take it!

Build an interactive and full-featured web application from scratch using Node.js and MongoDB About This Book Configure your development environment to use Node.js and MongoDB Use Node.js to connect to a MongoDB database and perform data manipulations A practical guide with clear instructions to design and develop a complete web application from start to finish Who This Book Is For This book is designed for JavaScript developers of any skill level that want to get up and running using Node.js and MongoDB to build full-featured web applications. A basic understanding of JavaScript and HTML is the only requirement for this book. What You Will Learn Configure your development environment to use Node.js and MongoDB Write and configure a web server using Node.js powered by the Express.js framework Build dynamic HTML pages using the Handlebars template engine Persist application data using MongoDB and Mongoose ODM Test your code using automated testing tools such as the Mocha framework Deploy the development environment to the cloud using services such as Heroku, Amazon Web Services, and Microsoft Azure Explore Single-Page application frameworks to take your web applications to the next level In Detail Node.js and MongoDB are quickly becoming one of the most popular tech stacks for the web. Powered by Google's V8 engine, Node.js caters to easily building fast, scalable network applications while MongoDB is the perfect fit as a scalable, high-performance, open source NoSQL database solution. Using these two technologies together, web applications can be built quickly and easily and deployed to the cloud with very little difficulty. The book will begin by introducing you to the groundwork needed to set up the development environment. Here, you will quickly run through the steps necessary to get the main application server up and running. Then you will see how to use Node.js to connect to a MongoDB database and perform data manipulations. From here on, the book will take you through integration with third-party tools for interaction with web apps. It then moves on to show you how to use controllers and view models to generate reusable code that will reduce development time. Toward the end of the book, we will cover tests to properly execute the code and some popular frameworks for developing web applications. By the end of the book, you will have a running web application developed with MongoDB and Node.js along with it's popular frameworks. Style and approach An easy guide to Node.js and MongoDB, which will quickly introduce you to the relevant concepts by taking you through the different steps involved in building a full-fledged web application.

Build an application from backend to browser with Node.js, and kick open the doors to real-time event programming. With this hands-on book, you'll learn how to create a social network application similar to LinkedIn and Facebook, but with a real-time twist. And you'll build it with just one programming language: JavaScript. If you're an experienced web

developer unfamiliar with JavaScript, the book's first section introduces you to the project's core technologies: Node.js, Backbone.js, and the MongoDB data store. You'll then launch into the project—a highly responsive, highly scalable application—guided by clear explanations and lots of code examples. Learn about key modules in Node.js for building real-time apps Use the Backbone.js framework to write clean browser code, and maintain better data integration with MongoDB Structure project files as a foundation for code that will arrive later Create user accounts and learn how to secure the data Use Backbone.js templates to build the application's UIs, and integrate access control with Node.js Develop a contact list to help users link to and track other accounts Use Socket.io to create real-time chat functionality Extend your UIs to give users up-to-the-minute information
Develop smaller, lighter web apps that are simple to create and easy to test, extend, and maintain as they grow. This hands-on guide introduces you to AngularJS, the open source JavaScript framework that uses Model–view–controller (MVC) architecture, data binding, client-side templates, and dependency injection to create a much-needed structure for building web apps. Guided by two engineers who worked on AngularJS at Google, you'll walk through the framework's key features, and then build a working AngularJS app—from layout to testing, compiling, and debugging. If you have JavaScript experience, you'll learn how AngularJS helps reduce the complexity of your web app. Dive deep into Angular's building blocks and learn how they work together Gain maximum flexibility by separating logic, data, and presentation responsibilities with MVC Assemble your full app in the browser, using client-side templates Use AngularJS directives to extend HTML with declarative syntax Communicate with the server and implement simple caching with the $http service Use dependency injection to improve refactoring, testability, and multiple environment design Get code samples for common problems you face in most web apps
Socket.io Real-time Web Application Development.
Intended for seasoned Go programmers who want to put their expertise in Go to use to solve big, real-world, modern problems. With a basic understanding of channels and goroutines, you will hone your skills to build tools and programs that are quick and simple. You need not be an expert in distributed systems or technologies in order to deliver solutions capable of great scale. It is assumed that you are familiar with the basic concepts of Go.
This book presents some of the emerging techniques and technologies used to handle Web data management. Authors present novel software architectures and emerging technologies and then validate using experimental data and real world applications. The contents of this book are focused on four popular thematic categories of intelligent Web data management: cloud computing, social networking, monitoring and literature management. The Volume will be a valuable reference to researchers, students and practitioners in the field of Web data management, cloud computing, social networks using advanced intelligence tools.
This book presents part of the iM3F 2020 proceedings from the Mechatronics track. It highlights key challenges and recent trends in mechatronics engineering and technology that are non-trivial in the age of Industry 4.0. It discusses traditional as well as modern solutions that are employed in the multitude spectra of mechatronics-based applications. The readers are expected to gain an insightful view on the current trends, issues, mitigating factors as well as solutions from this book.
Based on a rigorous selection of submissions to The 29th International Symposium on Computer and Information Sciences (ISCIS 2014), this books includes some of the most recent ideas and technical results in computer systems, computer science, and computer-communication networks. It offers the reader a timely access to innovative research and advances in computing and communications from many different areas of the world. The topics covered include (but are not limited to) computer architectures and digital systems, algorithms, theory, software engineering, data engineering, computational intelligence, system security, computer systems and networks, performance modeling and analysis, distributed and parallel systems, bioinformatics, computer vision and significant applications such as medical informatics and imaging. The 29th International Symposium on Computer and Information Sciences (ISCIS 2014) took place in Krakow Old City, Poland on October, 27–8, 2014.