

Nosql With Mongodb In 24 Hours Sams Teach Yourself

Sams Teach Yourself NoSQL with MongoDB in 24 Hours Pearson Education

The "one-size-fits-all" thinking regarding traditional RDBMSs has been challenged in the last few years by the emergence of diversified NoSQL databases. More than 120 NoSQL databases are now available in the market, and the market leader by far is MongoDB. With so many companies opting for MongoDB as their NoSQL database of choice, there's a need for a practical how-to combined with expert advice for getting the most out of the software.

Beginning with a short introduction to the basics of NoSQL databases, MongoDB experts Navin Sabharwal and Shankatala Gupta Edward introduce readers to MongoDB – the leading document based NoSQL database, acquainting them step by step with all aspects of MongoDB. They cover the data model, underlying architecture, how to code using Mongo Shell, and administration of the MongoDB platform, among other topics. The book also provides clear guidelines and practical examples for architecting and developing applications using the MongoDB platform and deploying them. Database developers, architects, and database administrators will find useful information covering all aspects of the MongoDB platform and how to put it to use practically. Practical Guide to MongoDB provides readers with: A solid understanding of NoSQL databases An understanding of how to get started with MongoDB Methodical coverage of the architecture, development, and administration of MongoDB A plethora of "How to's" enabling you to use the technology most efficiently to solve the problems you face Practical MongoDB is for those just starting to learning to work with NoSQL databases in general and MongoDB in particular. Skills in these areas are in demand, making this book essential reading for those who want to work more productively or break into big data work. It will prove equally useful for entrepreneurs and others who like to work with new tech nologies.

Two years since its initial release, Redis already has an impressive list of adopters, including Engine Yard, GitHub, Craigslist, and Digg. This open source data structure server is built for speed and flexibility, making it ideal for many applications. If you're using Redis, or considering it, this concise cookbook provides recipes for a variety of issues you're likely to face. Each recipe solves a specific problem, and provides an in-depth discussion of how the solution works. You'll discover that Redis, while simple in nature, offers extensive functionality for manipulating and storing data. Learn when it makes sense to use Redis Explore several methods for installing Redis Connect to Redis in a number of ways, ranging from the command line to popular languages such as Python and Ruby Solve a range of needs, from linked datasets to analytics Handle backups, sharding, datasets larger than available memory, and many other tasks

Manage, fine-tune, secure and deploy your MongoDB solution with ease with the help of practical recipes About This Book Configure and deploy your MongoDB instance securely, without any hassle Optimize your database's query performance, perform scale-out operations, and make your database highly available Practical guide with a recipe-based approach to help you tackle any problem in the application and database administration aspects of MongoDB Who This Book Is For Database administrators with a basic understanding of the features of MongoDB and who want to professionally configure, deploy, and administer a MongoDB database, will find this book essential. If you are a MongoDB developer and want to get into MongoDB administration, this book will also help you. What You Will Learn Install and deploy MongoDB in production Manage and implement optimal indexes Optimize monitoring in MongoDB Fine-tune the performance of your queries Debug and diagnose your database's performance Optimize database backups and recovery and ensure high availability Make your MongoDB instance scalable Implement security and user authentication features in MongoDB Master optimal cloud deployment strategies In Detail MongoDB is a high-performance and

feature-rich NoSQL database that forms the backbone of the systems that power many different organizations. Packed with many features that have become essential for many different types of software professional and incredibly easy to use, this cookbook contains more than 100 recipes to address the everyday challenges of working with MongoDB. Starting with database configuration, you will understand the indexing aspects of MongoDB. The book also includes practical recipes on how you can optimize your database query performance, perform diagnostics, and query debugging. You will also learn how to implement the core administration tasks required for high-availability and scalability, achieved through replica sets and sharding, respectively. You will also implement server security concepts such as authentication, user management, role-based access models, and TLS configuration. You will also learn how to back up and recover your database efficiently and monitor server performance. By the end of this book, you will have all the information you need—along with tips, tricks, and best practices—to implement a high-performance MongoDB solution. Style and approach This practical book follows a problem-solution approach to help you tackle any issues encountered while performing MongoDB administrative tasks. Each recipe is detailed, and explained in a very easy to understand manner

Node.js, MongoDB and Angular Web Development The definitive guide to using the MEAN stack to build web applications Node.js is a leading server-side programming environment, MongoDB is the most popular NoSQL database, and Angular is the leading framework for MVC-based front-end development. Together, they provide an easy-to-implement, fully integrated web development stack that allows web programmers to create high-performance sites and applications built completely in JavaScript, from server to client. Updated for Angular 2, Angular 4, and subsequent versions, this new edition of Node.js, MongoDB and Angular Web Development shows you how to integrate these three technologies into complete working solutions. It begins with concise, crystal-clear tutorials on each technology and then quickly moves on to building common web applications. You'll learn how to use Node.js and MongoDB to build more scalable, high-performance sites, how to leverage Angular's innovative MVC approach to structure more effective pages and applications, and how to use all three together to deliver outstanding next-generation Web solutions. Implement a highly scalable and dynamic web server using Node.js and Express Implement a MongoDB data store for your web applications Access and interact with MongoDB from Node.js JavaScript code Learn the basics of TypeScript Define custom Angular directives that extend the HTML language Build server-side web services in JavaScript Implement client-side services that can interact with the Node.js web server Build dynamic browser views that provide rich user interaction Add authenticated user accounts and nested comment components to your web applications and pages Contents at a Glance Part I: Getting Started 1 Introducing the Node.js-to-Angular Stack 2 JavaScript Primer Part II: Learning Node.js 3 Getting Started with Node.js 4 Using Events, Listeners, Timers, and Callbacks in Node.js 5 Handling Data I/O in Node.js 6 Accessing the File System from Node.js 7 Implementing HTTP Services in Node.js 8 Implementing Socket Services in Node.js 9 Scaling Applications Using Multiple Processors in Node.js 10 Using Additional Node.js Modules Part III: Learning MongoDB 11 Understanding NoSQL and MongoDB 12 Getting Started with MongoDB 13 Getting Started with MongoDB and Node.js 14 Manipulating MongoDB Documents from Node.js 15 Accessing MongoDB from Node.js 16 Using Mongoose for Structured Schema and Validation 17 Advanced MongoDB Concepts Part IV: Using Express to Make Life Easier 18 Implementing Express in Node.js 19 Implementing Express Middleware Part V: Learning Angular 20 Jumping into TypeScript 21 Getting Started with Angular 22 Angular Components 23 Expressions 24 Data Binding 25 Built-in Directives Part VI: Advanced Angular 26 Custom Directives 27 Events and Change Detection 28 Implementing Angular Services in Web Applications 29 Creating Your Own Custom Angular Services 30 Having Fun with Angular

NoSQL Starter is a great resource for someone starting with NoSQL and an indispensable guide for technology decision makers. It is assumed that you have a background in RDBMS modeling and SQL and have had exposure to at least one of the programming languages – Java or JavaScript. Friendly, practical tutorial with lots of hints and tips from several experienced Solr users and developers.

MongoDB, a cross-platform NoSQL database, is the fastest-growing new database in the world. MongoDB provides a rich document-oriented structure with dynamic queries that you'll recognize from RDBMS offerings such as MySQL. In other words, this is a book about a NoSQL database that does not require the SQL crowd to re-learn how the database world works! MongoDB has reached 1.0 and boasts 50,000+ users. The community is strong and vibrant and MongoDB is improving at a fast rate. With scalable and fast databases becoming critical for today's applications, this book shows you how to install, administer and program MongoDB without pretending SQL never existed.

Leverage the power of MongoDB 4.x to build and administer fault-tolerant database applications

Key Features Master the new features and capabilities of MongoDB 4.x
Implement advanced data modeling, querying, and administration techniques in MongoDB
Includes rich case-studies and best practices followed by expert MongoDB developers

Book Description MongoDB is the best platform for working with non-relational data and is considered to be the smartest tool for organizing data in line with business needs. The recently released MongoDB 4.x supports ACID transactions and makes the technology an asset for enterprises across the IT and fintech sectors. This book provides expertise in advanced and niche areas of managing databases (such as modeling and querying databases) along with various administration techniques in MongoDB, thereby helping you become a successful MongoDB expert. The book helps you understand how the newly added capabilities function with the help of some interesting examples and large datasets. You will dive deeper into niche areas such as high-performance configurations, optimizing SQL statements, configuring large-scale sharded clusters, and many more. You will also master best practices in overcoming database failover, and master recovery and backup procedures for database security. By the end of the book, you will have gained a practical understanding of administering database applications both on premises and on the cloud; you will also be able to scale database applications across all servers. What you will learn

Perform advanced querying techniques such as indexing and expressions
Configure, monitor, and maintain a highly scalable MongoDB environment
Master replication and data sharding to optimize read/write performance
Administer MongoDB-based applications on premises or on the cloud
Integrate MongoDB with big data sources to process huge amounts of data
Deploy MongoDB on Kubernetes containers
Use MongoDB in IoT, mobile, and serverless environments

Who this book is for This book is ideal for MongoDB developers and database administrators who wish to become successful MongoDB experts and build scalable and fault-tolerant applications using MongoDB. It will also be useful for database professionals who wish to become certified MongoDB professionals. Some understanding of MongoDB and basic database concepts is required to get the most out of this book.

This comprehensive guide book begins by explaining what makes MongoDB unique. A series of tutorials designed for MongoDB mastery then leads into detailed examples for leveraging MongoDB in e-commerce, social networking, analytics, and other common applications.

Utilize R to uncover hidden patterns in your Big Data

About This Book Perform computational analyses on Big Data to generate meaningful results
Get a practical knowledge of R programming language while working on Big Data platforms like Hadoop, Spark, H2O and SQL/NoSQL databases, Explore fast,

streaming, and scalable data analysis with the most cutting-edge technologies in the market

Who This Book Is For This book is intended for Data Analysts, Scientists, Data Engineers, Statisticians, Researchers, who want to integrate R with their current or future Big Data workflows. It is assumed that readers have some experience in data analysis and understanding of data management and algorithmic processing of large quantities of data, however they may lack specific skills related to R.

What You Will Learn Learn about current state of Big Data processing using R programming language and its powerful statistical capabilities
Deploy Big Data analytics platforms with selected Big Data tools supported by R in a cost-effective and time-saving manner
Apply the R language to real-world Big Data problems on a multi-node Hadoop cluster, e.g. electricity consumption across various socio-demographic indicators and bike share scheme usage
Explore the compatibility of R with Hadoop, Spark, SQL and NoSQL databases, and H2O platform
In Detail Big Data analytics is the process of examining large and complex data sets that often exceed the computational capabilities. R is a leading programming language of data science, consisting of powerful functions to tackle all problems related to Big Data processing. The book will begin with a brief introduction to the Big Data world and its current industry standards. With introduction to the R language and presenting its development, structure, applications in real world, and its shortcomings. Book will progress towards revision of major R functions for data management and transformations. Readers will be introduced to Cloud based Big Data solutions (e.g. Amazon EC2 instances and Amazon RDS, Microsoft Azure and its HDInsight clusters) and also provide guidance on R connectivity with relational and non-relational databases such as MongoDB and HBase etc. It will further expand to include Big Data tools such as Apache Hadoop ecosystem, HDFS and MapReduce frameworks. Also other R compatible tools such as Apache Spark, its machine learning library Spark MLlib, as well as H2O.

Style and approach This book will serve as a practical guide to tackling Big Data problems using R programming language and its statistical environment. Each section of the book will present you with concise and easy-to-follow steps on how to process, transform and analyse large data sets.

Provides information for building dynamic, high performance websites and Web applications completely in JavaScript, from server to client, using the Node.js, MongoDB, and AngularJS Web development technologies.

MongoDB has grown to become the de facto NoSQL database with millions of users, from small start-ups to Fortune 500 companies. It can solve problems that are considered difficult, if not impossible, for aging RDBMS technologies. Written for version 4 of MongoDB, this book is the easiest way to get started with MongoDB.

HBase data storage technology is rapidly adopted by traditional RDMS users. Unlike RDMS, where scaling the server vertically for a huge data is a big challenge. With HBase, you can do this easily. It allows you to integrate with Hadoop's MapReduce framework for massively parallelized data processing jobs.

Many expert and beginners are asking for a point-to-point guide that helps them to get a complete insight on HBase working. This book will answer all their queries and give them a complete tour of HBase technology. In this edition, you will begin with some very basic concept like HBase's architecture, including the storage format, write-ahead log, background processes, and some of the advance topics. You will also learn about accessing HBase with native Java clients, how to tune clusters, design schemas, copy tables, etc. So far if tracking other resources for HBase have disappointed you, you must try this e-book. It is cheap, easy to comprehend and concise in its content. The examples and images are an additional benefit of this book. While to enhance your knowledge pool for related topics, more referrals and links are provided.

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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 its 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.

NoSQL database usage is growing at a stunning 50% per year, as organizations discover NoSQL's potential to address even the most challenging Big Data and real-time database problems. Every NoSQL database is different, but one is the most popular by far: MongoDB. Now, in just 24 lessons of one hour or less, you can learn how to leverage MongoDB's immense power. Each short, easy lesson builds on all that's come before, teaching NoSQL concepts and MongoDB techniques from the ground up. Sams Teach Yourself NoSQL with MongoDB in 24 Hours covers all this, and much more: Learning how NoSQL is different, when to use it, and when to use traditional RDBMSes instead Designing and implementing MongoDB databases of diverse types and sizes Storing and interacting with data via Java, PHP, Python, and Node.js/Mongoose Choosing the right NoSQL distribution model for your application Installing and configuring MongoDB Designing MongoDB data models, including collections, indexes, and GridFS Balancing consistency, performance, and durability Leveraging the immense power of Map-Reduce Administering, monitoring, securing, backing up, and repairing MongoDB databases Mastering advanced techniques such as sharding and replication Optimizing performance

What would happen if you optimized a data store for the operations application developers actually use? You'd arrive at MongoDB, the reliable document-oriented database. With this concise guide, you'll learn how to build elegant database applications with MongoDB and PHP. Written by the Chief Solutions Architect at 10gen—the company that develops and supports this open source database—this book takes you through MongoDB basics such as queries, read-write operations, and administration, and then dives into MapReduce, sharding, and other advanced topics. Get out of the relational database rut, and take advantage of a high-performing system optimized for operations and scale. Learn step-by-step the tools you need to build PHP applications with MongoDB Perform Create, Read, Update, and Delete (CRUD) operations, and learn how to perform

queries to retrieve data Administer your database, and access and manipulate data with the MongoDB Shell Use functions to work with sets, arrays, and multiple documents to perform synchronous, asynchronous, and atomic operations Discover PHP's community tools and libraries, and why they're valuable Work with regular expressions, aggregation, MapReduce, replication, and sharding

Learn how to leverage MongoDB with your Python applications, using the hands-on recipes in this book. You get complete code samples for tasks such as making fast geo queries for location-based apps, efficiently indexing your user documents for social-graph lookups, and many other scenarios. This guide explains the basics of the document-oriented database and shows you how to set up a Python environment with it. Learn how to read and write to MongoDB, apply idiomatic MongoDB and Python patterns, and use the database with several popular Python web frameworks. You'll discover how to model your data, write effective queries, and avoid concurrency problems such as race conditions and deadlocks. The recipes will help you: Read, write, count, and sort documents in a MongoDB collection Learn how to use the rich MongoDB query language Maintain data integrity in replicated/distributed MongoDB environments Use embedding to efficiently model your data without joins Code defensively to avoid keyerrors and other bugs Apply atomic operations to update game scores, billing systems, and more with the fast accounting pattern Use MongoDB with the Pylons 1.x, Django, and Pyramid web frameworks

Get the most out of MongoDB using a problem-solution approach. This book starts with recipes on the MongoDB query language, including how to query various data structures stored within documents. These self-contained code examples allow you to solve your MongoDB problems without fuss. MongoDB Recipes describes how to use advanced querying in MongoDB, such as indexing and the aggregation framework. It demonstrates how to use the Compass function, a GUI client interacting with MongoDB, and how to apply data modeling to your MongoDB application. You'll see recipes on the latest features of MongoDB 4 allowing you to manage data in an efficient manner using MongoDB. What You Will Learn Work with the MongoDB document model Design MongoDB schemas Use the MongoDB query language Harness the aggregation framework Create replica sets and sharding in MongoDB Who This Book Is For Developers and professionals who work with MongoDB.

Manage the huMONGOus amount of data collected through your web application with MongoDB. This authoritative introduction—written by a core contributor to the project—shows you the many advantages of using document-oriented databases, and demonstrates how this reliable, high-performance system allows for almost infinite horizontal scalability. This updated second edition provides guidance for database developers, advanced configuration for system administrators, and an overview of the concepts and use cases for other people on your project. Ideal for NoSQL newcomers and experienced MongoDB users alike, this guide provides numerous real-world schema design examples. Get started with MongoDB core concepts and vocabulary Perform basic write operations at different levels of safety and speed Create complex queries, with options for limiting, skipping, and sorting results Design an application that works well with MongoDB Aggregate data, including counting, finding distinct values, grouping documents, and using MapReduce Gather and interpret statistics about your collections and databases Set up replica sets and automatic failover in MongoDB Use sharding to scale horizontally, and learn how it impacts applications Delve into monitoring, security and authentication, backup/restore, and other administrative tasks

MongoDB gives flexibility in compare to RDBMS. It has features like dynamic schemas, storage for large volume data, scaling database architecture, real-time data reporting, data sharding, and so on. It enables to develop application faster. To address all these features in a

concise manner, this e-book is created. This e-book has explained features of MongoDB, that is important from the point of Big data analytics. It makes clear the confusion over MySQL and NoSQL working pattern. It has accommodated all the topics on MongoDB with examples. It guides you right through setting up MongoDB environment to security requirements. The book is too small, but all important aspect of MongoDB is covered. The examples and code are explained in a manner that beginners can easily absorb the content. The book has also illustrated various shell commands to access MongoDB. Not only that, but the user will also explore about JSON document and creating queries in MongoDB. The book can be used for further reference for application build on MongoDB Java or MongoDB Python. Minimum price range and maximum deliverable is the main plus point of this e-book.

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Getting started with MongoDB is easy, but once you begin building applications with it, you'll face some complex issues. What are the tradeoffs between normalized and denormalized data? How do you handle replica set failure and failover? This collection of MongoDB tips, tricks, and hacks helps you resolve issues with everything from application design and implementation to data safety and monitoring. You get specific guidance in five topic areas directly from engineers at 10gen, the company that develops and supports this open source database: Application Design Tips: What to keep in mind when designing your schema Implementation Tips: Programming applications against MongoDB Optimization Tips: Speeding up your applications Data Safety Tips: Using replication and journaling to keep data safe—without sacrificing too much performance Administration Tips: How to configure MongoDB and keep it running smoothly

Whether you're building a social media site or an internal-use enterprise application, this hands-on guide shows you the connection between MongoDB and the business problems it's designed to solve. You'll learn how to apply MongoDB design patterns to several challenging domains, such as ecommerce, content management, and online gaming. Using Python and JavaScript code examples, you'll discover how MongoDB lets you scale your data model while simplifying the development process. Many businesses launch NoSQL databases without understanding the techniques for using their features most effectively. This book demonstrates the benefits of document embedding, polymorphic schemas, and other MongoDB patterns for tackling specific big data use cases, including: Operational intelligence: Perform real-time analytics of business data Ecommerce: Use MongoDB as a product catalog master or inventory management system Content management: Learn methods for storing content nodes, binary assets, and discussions Online advertising networks: Apply techniques for frequency capping ad impressions, and keyword targeting and bidding Social networking: Learn how to store a complex social graph, modeled after Google+ Online gaming: Provide

concurrent access to character and world data for a multiplayer role-playing game

The Definitive Guide to MongoDB, Third Edition, is updated for MongoDB 3 and includes all of the latest MongoDB features, including the aggregation framework introduced in version 2.2 and hashed indexes in version 2.4. The Third Edition also now includes Python. MongoDB is the most popular of the "Big Data" NoSQL database technologies, and it's still growing. David Hows from 10gen, along with experienced MongoDB authors Peter Membrey and Eelco Plugge, provide their expertise and experience in teaching you everything you need to know to become a MongoDB pro.

? This book is a comprehensive guide to MongoDB for application developers. The book begins by explaining what makes MongoDB unique and describing its ideal use cases. A series of chapters designed for MongoDB mastery then leads into detailed examples for leveraging MongoDB in e-commerce, social networking, analytics, and other common applications. Numerous examples will help you develop confidence in the crucial area of data modeling. You'll also love the deep explanations of each feature, including replication, auto-sharding, and deployment. ? This is well-organized book which provides both the proper explanation you'll need as a student developer and enough detail to satisfy a developer. Several examples will help you develop confidence in the crucial area of data modeling. You'll also love the deep explanations of each feature, including replication, auto-sharding, and deployment. ? The first chapters cover a lot of theory but later you dive into practical hands-on experience setting up and configuring MongoDB from scratch. This is crucial if you want to truly understand the database environment. ? This book really does cover just the MongoDB, simply in depth so it also won't take you very far. Throughout each chapter you'll learn tons of new techniques for using MongoDB objects and the basic CRUD techniques for DB connections. Later chapters even offer source code from multiple languages like Java, Python, and PHP. This lets you see how applications can scale using Mongo regardless of the backend language. You can learn sharding and replication for scaling databases. ? This book is very compact with less than 100 pages. But it's also incredibly detailed and wastes no time diving right into the action and ease of use.. ? What's inside: - NoSQL, Architecture of MongoDB - Standard DB operations, Indexes, queries - Map-reduce for custom aggregations and reporting - Java, Python and PHP Connectivity - Schema design patterns - Deploying for scale and high availability.

This book discusses the advanced databases for the cloud-based application known as NoSQL. It will explore the recent advancements in NoSQL database technology. Chapters on structured, unstructured and hybrid databases will be included to explore bigdata analytics, bigdata storage and processing. The book is likely to cover a wide range of topics such as cloud computing, social computing, bigdata and advanced databases processing techniques.

Annotation With the rise of Web 2.0, the need for a highly scalable database, capable of storing diverse user-generated content is increasing. MongoDB, an open-source, non-relational database has stepped up to meet this demand and is being used in some of the most popular websites in the world. MongoDB is one of the NoSQL databases which is gaining popularity for developing PHP Web 2.0 applications. PHP and MongoDB Web Development Beginners Guide is a fast-paced, hands-on guide to get started with web application development using PHP and MongoDB. The book follows a Code first, explain later approach, using practical examples in PHP to demonstrate unique features of MongoDB. It does not overwhelm you with information (or starve you of it), but gives you enough to

get a solid practical grasp on the concepts. The book starts by introducing the underlying concepts of MongoDB. Each chapter contains practical examples in PHP that teach specific features of the database. The book teaches you to build a blogging application, handle user sessions and authentication, and perform aggregation with MapReduce. You will learn unique MongoDB features and solve interesting problems like real-time analytics, location-aware web apps etc. You will be guided to use MongoDB alongside MySQL to build a diverse data backend. With its concise coverage of concepts and numerous practical examples, PHP and MongoDB Web Development Beginners Guide is the right choice for the PHP developer to get started with learning MongoDB.

Get up to speed on the nuances of NoSQL databases and what they mean for your organization. This easy-to-read guide to NoSQL databases provides the type of no-nonsense overview and analysis that you need to learn, including what NoSQL is and which database is right for you. Featuring specific evaluation criteria for NoSQL databases, along with a look into the pros and cons of the most popular options, NoSQL For Dummies provides the fastest and easiest way to dive into the details of this incredible technology. You'll gain an understanding of how to use NoSQL databases for mission-critical enterprise architectures and projects, and real-world examples reinforce the primary points to create an action-oriented resource for IT pros. If you're planning a big data project or platform, you probably already know you need to select a NoSQL database to complete your architecture. But with options flooding the market and updates and add-ons coming at a rapid pace, determining what you require now, and in the future, can be a tall task. This is where NoSQL For Dummies comes in! Learn the basic tenets of NoSQL databases and why they have come to the forefront as data has outpaced the capabilities of relational databases. Discover major players among NoSQL databases, including Cassandra, MongoDB, MarkLogic, Neo4J, and others. Get an in-depth look at the benefits and disadvantages of the wide variety of NoSQL database options. Explore the needs of your organization as they relate to the capabilities of specific NoSQL databases. Big data and Hadoop get all the attention, but when it comes down to it, NoSQL databases are the engines that power many big data analytics initiatives. With NoSQL For Dummies, you'll go beyond relational databases to ramp up your enterprise's data architecture in no time.

Congratulations! You completed the MongoDB application within the given tight timeframe and there is a party to celebrate your application's release into production. Although people are congratulating you at the celebration, you are feeling some uneasiness inside. To complete the project on time required making a lot of assumptions about the data, such as what terms meant and how calculations are derived. In addition, the poor documentation about the application will be of limited use to the support team, and not investigating all of the inherent rules in the data may eventually lead to poorly-performing structures in the not-so-distant future. Now, what if you had a time machine and could go

back and read this book. You would learn that even NoSQL databases like MongoDB require some level of data modeling. Data modeling is the process of learning about the data, and regardless of technology, this process must be performed for a successful application. You would learn the value of conceptual, logical, and physical data modeling and how each stage increases our knowledge of the data and reduces assumptions and poor design decisions. Read this book to learn how to do data modeling for MongoDB applications, and accomplish these five objectives: Understand how data modeling contributes to the process of learning about the data, and is, therefore, a required technique, even when the resulting database is not relational. That is, NoSQL does not mean NoDataModeling! Know how NoSQL databases differ from traditional relational databases, and where MongoDB fits. Explore each MongoDB object and comprehend how each compares to their data modeling and traditional relational database counterparts, and learn the basics of adding, querying, updating, and deleting data in MongoDB. Practice a streamlined, template-driven approach to performing conceptual, logical, and physical data modeling. Recognize that data modeling does not always have to lead to traditional data models! Distinguish top-down from bottom-up development approaches and complete a top-down case study which ties all of the modeling techniques together. This book is written for anyone who is working with, or will be working with MongoDB, including business analysts, data modelers, database administrators, developers, project managers, and data scientists. There are three sections: In Section I, Getting Started, we will reveal the power of data modeling and the tight connections to data models that exist when designing any type of database (Chapter 1), compare NoSQL with traditional relational databases and where MongoDB fits (Chapter 2), explore each MongoDB object and comprehend how each compares to their data modeling and traditional relational database counterparts (Chapter 3), and explain the basics of adding, querying, updating, and deleting data in MongoDB (Chapter 4). In Section II, Levels of Granularity, we cover Conceptual Data Modeling (Chapter 5), Logical Data Modeling (Chapter 6), and Physical Data Modeling (Chapter 7). Notice the “ing” at the end of each of these chapters. We focus on the process of building each of these models, which is where we gain essential business knowledge. In Section III, Case Study, we will explain both top down and bottom up development approaches and go through a top down case study where we start with business requirements and end with the MongoDB database. This case study will tie together all of the techniques in the previous seven chapters. Nike Senior Data Architect Ryan Smith wrote the foreword. Key points are included at the end of each chapter as a way to reinforce concepts. In addition, this book is loaded with hands-on exercises, along with their answers provided in Appendix A. Appendix B contains all of the book’s references and Appendix C contains a glossary of the terms used throughout the text.

The need to handle increasingly larger data volumes is one factor driving the

adoption of a new class of nonrelational “NoSQL” databases. Advocates of NoSQL databases claim they can be used to build systems that are more performant, scale better, and are easier to program. NoSQL Distilled is a concise but thorough introduction to this rapidly emerging technology. Pramod J. Sadalage and Martin Fowler explain how NoSQL databases work and the ways that they may be a superior alternative to a traditional RDBMS. The authors provide a fast-paced guide to the concepts you need to know in order to evaluate whether NoSQL databases are right for your needs and, if so, which technologies you should explore further. The first part of the book concentrates on core concepts, including schemaless data models, aggregates, new distribution models, the CAP theorem, and map-reduce. In the second part, the authors explore architectural and design issues associated with implementing NoSQL. They also present realistic use cases that demonstrate NoSQL databases at work and feature representative examples using Riak, MongoDB, Cassandra, and Neo4j. In addition, by drawing on Pramod Sadalage's pioneering work, NoSQL Distilled shows how to implement evolutionary design with schema migration: an essential technique for applying NoSQL databases. The book concludes by describing how NoSQL is ushering in a new age of Polyglot Persistence, where multiple data-storage worlds coexist, and architects can choose the technology best optimized for each type of data access.

Summary MongoDB in Action, Second Edition is a completely revised and updated version. It introduces MongoDB 3.0 and the document-oriented database model. This perfectly paced book gives you both the big picture you'll need as a developer and enough low-level detail to satisfy system engineers. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology This document-oriented database was built for high availability, supports rich, dynamic schemas, and lets you easily distribute data across multiple servers. MongoDB 3.0 is flexible, scalable, and very fast, even with big data loads. About the Book MongoDB in Action, Second Edition is a completely revised and updated version. It introduces MongoDB 3.0 and the document-oriented database model. This perfectly paced book gives you both the big picture you'll need as a developer and enough low-level detail to satisfy system engineers. Lots of examples will help you develop confidence in the crucial area of data modeling. You'll also love the deep explanations of each feature, including replication, auto-sharding, and deployment. What's Inside Indexes, queries, and standard DB operations Aggregation and text searching Map-reduce for custom aggregations and reporting Deploying for scale and high availability Updated for Mongo 3.0 About the Reader Written for developers. No previous MongoDB or NoSQL experience is assumed. About the Authors After working at MongoDB, Kyle Banker is now at a startup. Peter Bakkum is a developer with MongoDB expertise. Shaun Verch has worked on the core server team at MongoDB. A Genentech engineer, Doug Garrett is one of the winners of the MongoDB Innovation Award for Analytics. A

software architect, Tim Hawkins has led search engineering at Yahoo Europe. Technical Contributor: Wouter Thielen. Technical Editor: Mihalis Tsoukalos. Table of Contents PART 1 GETTING STARTED A database for the modern web MongoDB through the JavaScript shell Writing programs using MongoDB PART 2 APPLICATION DEVELOPMENT IN MONGODB Document-oriented data Constructing queries Aggregation Updates, atomic operations, and deletes PART 3 MONGODB MASTERY Indexing and query optimization Text search WiredTiger and pluggable storage Replication Scaling your system with sharding Deployment and administration

A hands-on guide to leveraging NoSQL databases NoSQL databases are an efficient and powerful tool for storing and manipulating vast quantities of data. Most NoSQL databases scale well as data grows. In addition, they are often malleable and flexible enough to accommodate semi-structured and sparse data sets. This comprehensive hands-on guide presents fundamental concepts and practical solutions for getting you ready to use NoSQL databases. Expert author Shashank Tiwari begins with a helpful introduction on the subject of NoSQL, explains its characteristics and typical uses, and looks at where it fits in the application stack. Unique insights help you choose which NoSQL solutions are best for solving your specific data storage needs. Professional NoSQL: Demystifies the concepts that relate to NoSQL databases, including column-family oriented stores, key/value databases, and document databases. Delves into installing and configuring a number of NoSQL products and the Hadoop family of products. Explains ways of storing, accessing, and querying data in NoSQL databases through examples that use MongoDB, HBase, Cassandra, Redis, CouchDB, Google App Engine Datastore and more. Looks at architecture and internals. Provides guidelines for optimal usage, performance tuning, and scalable configurations. Presents a number of tools and utilities relating to NoSQL, distributed platforms, and scalable processing, including Hive, Pig, RRDtool, Nagios, and more.

This book offers a comprehensive introduction to relational (SQL) and non-relational (NoSQL) databases. The authors thoroughly review the current state of database tools and techniques, and examine coming innovations. The book opens with a broad look at data management, including an overview of information systems and databases, and an explanation of contemporary database types: SQL and NoSQL databases, and their respective management systems The nature and uses of Big Data A high-level view of the organization of data management Data Modeling and Consistency Chapter-length treatment is afforded Data Modeling in both relational and graph databases, including enterprise-wide data architecture, and formulas for database design. Coverage of languages extends from an overview of operators, to SQL and and QBE (Query by Example), to integrity constraints and more. A full chapter probes the challenges of Ensuring Data Consistency, covering: Multi-User Operation Troubleshooting Consistency in Massive Distributed Data Comparison of the

ACID and BASE consistency models, and more System Architecture also gets from its own chapter, which explores Processing of Homogeneous and Heterogeneous Data; Storage and Access Structures; Multi-dimensional Data Structures and Parallel Processing with MapReduce, among other topics. Post-Relational and NoSQL Databases The chapter on post-relational databases discusses the limits of SQL – and what lies beyond, including Multi-Dimensional Databases, Knowledge Bases and and Fuzzy Databases. A final chapter covers NoSQL Databases, along with Development of Non-Relational Technologies, Key-Value, Column-Family and Document Stores XML Databases and Graphic Databases, and more The book includes more than 100 tables, examples and illustrations, and each chapter offers a list of resources for further reading. SQL & NoSQL Databases conveys the strengths and weaknesses of relational and non-relational approaches, and shows how to undertake development for big data applications. The book benefits readers including students and practitioners working across the broad field of applied information technology. This textbook has been recommended and developed for university courses in Germany, Austria and Switzerland.

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.

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You can choose several data access frameworks when building Java enterprise applications that work with relational databases. But what about big data? This hands-on introduction shows you how Spring Data makes it relatively easy to build applications across a wide range of new data access technologies such as NoSQL and Hadoop. Through several sample projects, you'll learn how Spring Data provides a consistent programming model that retains NoSQL-specific features and capabilities, and helps you develop Hadoop applications across a wide range of use-cases such as data analysis, event stream processing, and workflow. You'll also discover the features Spring Data adds to Spring's existing JPA and JDBC support for writing RDBMS-based data access layers. Learn about Spring's template helper classes to simplify the use of database-specific functionality Explore Spring Data's repository abstraction and advanced query functionality Use Spring Data with Redis (key/value store), HBase (column-family), MongoDB (document database), and Neo4j (graph database) Discover the GemFire distributed data grid solution Export Spring Data JPA-managed entities to the Web as RESTful web services Simplify the development of HBase applications, using a lightweight object-mapping framework Build example big-data pipelines with Spring Batch and Spring Integration

"Now, in just 24 lessons of one hour or less, you can learn how to leverage MongoDB's immense power. Each short, easy lesson builds on all that's come before, teaching NoSQL concepts and MongoDB techniques from the ground up."--

NoSQL database usage is growing at a stunning 50% per year, as organizations discover NoSQL's potential to address even the most challenging Big Data and real-time database problems. Every NoSQL database is different, but one is the most popular by far: MongoDB. Now, in just 24 lessons of one hour or less, you can learn how to leverage MongoDB's immense power. Each short, easy lesson

builds on all that's come before, teaching NoSQL concepts and MongoDB techniques from the ground up. Sams Teach Yourself NoSQL with MongoDB in 24 Hours covers all this, and much more: Learning how NoSQL is different, when to use it, and when to use traditional RDBMSes instead Designing and implementing MongoDB databases of diverse types and sizes Storing and interacting with data via Java, PHP, Python, and Node.js/Mongoose Choosing the right NoSQL distribution model for your application Installing and configuring MongoDB Designing MongoDB data models, including collections, indexes, and GridFS Balancing consistency, performance, and durability Leveraging the immense power of Map-Reduce Administering, monitoring, securing, backing up, and repairing MongoDB databases Mastering advanced techniques such as sharding and replication Optimizing performance.

NoSQL was developed to overcome the limitations of relational databases in the largest Web applications at companies such as Google, Yahoo and Facebook. As it is applied more widely, developers are finding that it can simplify scalability while requiring far less coding and management overhead. However, NoSQL requires fundamentally different approaches to database design and modeling, and many conventional relational techniques lead to suboptimal results. *¿* NoSQL for Mere Mortals is an easy, practical guide to succeeding with NoSQL in your environment. Following the classic, best-selling format pioneered in SQL Queries for Mere Mortals, enterprise database expert Dan Sullivan guides you step-by-step through choosing technologies, designing high-performance databases, and planning for long-term maintenance. *¿* Sullivan introduces each type of NoSQL database, shows how to install and manage them, and demonstrates how to leverage their features while avoiding common mistakes that lead to poor performance and unmet requirements. He uses four popular NoSQL databases as reference models: MongoDB, a document database; Cassandra, a column family data store; Redis, a key-value database; and Neo4j, a graph database. You'll find explanations of each database's structure and capabilities, practical guidelines for choosing amongst them, and expert guidance on designing databases with them. *¿* Packed with examples, NoSQL for Mere Mortals is today's best way to master NoSQL -- whether you're a DBA, developer, user, or student.

Data is getting bigger and more complex by the day, and so are your choices in handling it. Explore some of the most cutting-edge databases available - from a traditional relational database to newer NoSQL approaches - and make informed decisions about challenging data storage problems. This is the only comprehensive guide to the world of NoSQL databases, with in-depth practical and conceptual introductions to seven different technologies: Redis, Neo4J, CouchDB, MongoDB, HBase, Postgres, and DynamoDB. This second edition includes a new chapter on DynamoDB and updated content for each chapter. While relational databases such as MySQL remain as relevant as ever, the alternative, NoSQL paradigm has opened up new horizons in performance and

scalability and changed the way we approach data-centric problems. This book presents the essential concepts behind each database alongside hands-on examples that make each technology come alive. With each database, tackle a real-world problem that highlights the concepts and features that make it shine. Along the way, explore five database models - relational, key/value, columnar, document, and graph - from the perspective of challenges faced by real applications. Learn how MongoDB and CouchDB are strikingly different, make your applications faster with Redis and more connected with Neo4J, build a cluster of HBase servers using cloud services such as Amazon's Elastic MapReduce, and more. This new edition brings a brand new chapter on DynamoDB, updated code samples and exercises, and a more up-to-date account of each database's feature set. Whether you're a programmer building the next big thing, a data scientist seeking solutions to thorny problems, or a technology enthusiast venturing into new territory, you will find something to inspire you in this book. What You Need: You'll need a *nix shell (Mac OS or Linux preferred, Windows users will need Cygwin), Java 6 (or greater), and Ruby 1.8.7 (or greater). Each chapter will list the downloads required for that database. Provides twenty-four lessons about how to use jQuery and JavaScript to build single-page web apps for multiple devices, with designs that incorporate animations, special effects, and image galleries.

"The media elements for Sams Teach Yourself NoSQL with MongoDB in 24 Hours demonstrate key points in the text."--Resource description page.

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