

# Building RESTful Web Services With Go Learn How To Build Powerful RESTful APIs With Golang That Scale Gracefully

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## Hands-On RESTful Web Services with Go - Naren Yellavula 2020-02-28

Design production-ready, testable, and maintainable RESTful web services for the modern web that scale easily

**Key Features**

- Employ a combination of custom and open source solutions for application program interface (API) development
- Discover asynchronous API and API security patterns and learn how to deploy your web services to the cloud
- Apply design patterns and techniques to build reactive and scalable web services

**Book Description**

Building RESTful web services can be tough as there are countless standards and ways to develop API. In modern architectures such as microservices, RESTful APIs are common in communication, making idiomatic and scalable API development crucial. This book covers basic through to advanced API development concepts and supporting tools. You'll start with an introduction to REST API development before moving on to building the

essential blocks for working with Go. You'll explore routers, middleware, and available open source web development solutions in Go to create robust APIs, and understand the application and database layers to build RESTful web services. You'll learn various data formats like protocol buffers and JSON, and understand how to serve them over HTTP and gRPC. After covering advanced topics such as asynchronous API design and GraphQL for building scalable web services, you'll discover how microservices can benefit from REST. You'll also explore packaging artifacts in the form of containers and understand how to set up an ideal deployment ecosystem for web services. Finally, you'll cover the provisioning of infrastructure using infrastructure as code (IaC) and secure your REST API. By the end of the book, you'll have intermediate knowledge of web service development and be able to apply the skills you've learned in a practical way. What you will learn

Explore the fundamentals of API

development and web services Understand the various building blocks of API development in Go Use superior open source solutions for representational state transfer (REST) API development Scale a service using microservices and asynchronous design patterns Deliver containerized artifacts to the Amazon Web Services (AWS) Cloud Get to grips with API security and its implementation Who this book is for This book is for all the Go developers who are comfortable with the language and seeking to learn REST API development. Even senior engineers can enjoy this book, as it discusses many cutting-edge concepts, such as building microservices, developing API with GraphQL, using protocol buffers, asynchronous API design, and Infrastructure as a Code. Developers who are already familiar with REST concepts and stepping into the Go world from other platforms, such as Python and Ruby, can also benefit a lot.

**Kotlin Programming Cookbook** - Rashi Karanpuria 2018-01-25

Discover Android programming and web development by understanding the concepts of Kotlin Programming Key Features Practical solutions to your common programming problems with Kotlin 1.1 Leverage the functional power of Kotlin to ease your Android application development Learn to use Java code in conjunction with Kotlin Book Description The Android team has announced first-class support for Kotlin 1.1. This acts as an added boost to the language and more and more developers are now looking at Kotlin for their application development. This recipe-based book will be your guide to learning the Kotlin programming language. The recipes in this book build from simple language concepts to more complex applications of the language. After the fundamentals of the language, you will learn how to apply the object-oriented programming features of Kotlin 1.1. Programming with Lambdas will show you how to use the functional power of Kotlin. This book has recipes that will

get you started with Android programming with Kotlin 1.1, providing quick solutions to common problems encountered during Android app development. You will also be taken through recipes that will teach you microservice and concurrent programming with Kotlin. Going forward, you will learn to test and secure your applications with Kotlin. Finally, this book supplies recipes that will help you migrate your Java code to Kotlin and will help ensure that it's interoperable with Java. What you will learn

- Understand the basics and object-oriented concepts of Kotlin Programming
- Explore the full potential of collection frameworks in Kotlin
- Work with SQLite databases in Android, make network calls, and fetch data over a network
- Use Kotlin's Anko library for efficient and quick Android development
- Uncover some of the best features of Kotlin: Lambdas and Delegates
- Set up web service development environments, write servlets, and build RESTful services with Kotlin
- Learn how to write unit tests, integration tests,

and instrumentation/acceptance tests. Who this book is for This book will appeal to Kotlin developers keen to find solutions for their common programming problems. Java programming knowledge would be an added advantage.

**RESTful .NET** - Jon Flanders 2008-11-21  
RESTful .NET is the first book that teaches Windows developers to build RESTful web services using the latest Microsoft tools. Written by Windows Communication Foundation (WCF) expert Jon Flanders, this hands-on tutorial demonstrates how you can use WCF and other components of the .NET 3.5 Framework to build, deploy and use REST-based web services in a variety of application scenarios. RESTful architecture offers a simpler approach to building web services than SOAP, SOA, and the cumbersome WS- stack. And WCF has proven to be a flexible technology for building distributed systems not necessarily tied to WS- standards. RESTful .NET provides you with a complete

guide to the WCF REST programming model for building web services consumed either by machines or humans. You'll learn how to: Program Read-Only (GET) services Program READ/WRITE services Host REST services Program REST feeds Program AJAX REST clients Secure REST endpoints Use workflow to deliver REST services Consume RESTful XML services using WCF Work with HTTP Work with ADO.NET Data Services (Astoria) RESTful .NET introduces you to the ideas of REST and RESTful architecture, and includes a detailed discussion of how the Web/REST model plugs into the WCF architecture. If you develop with .NET, it's time to jump on the RESTful bandwagon. This book explains how. "While REST is simple, WCF is not. To really understand and exploit this part of WCF requires a knowledgeable and experienced guide. I don't know anybody who's better suited for this role than Jon Flanders. ...Jon is first-rate at explaining complicated things. This book is the best introduction I've seen to creating and

using these services with WCF."--David Chappell, Chappell & Associates [Hands-On RESTful Web Services with TypeScript 3](#) - Biharck Muniz Araújo 2019-03-27 A step-by-step guide that will help you design, develop, scale, and deploy RESTful APIs with TypeScript 3 and Node.js Key FeaturesGain in-depth knowledge of OpenAPI and Swagger to build scalable web servicesExplore a variety of test frameworks and test runners such as Stryker, Mocha, and ChaiCreate a pipeline by Dockerizing your environment using Travis CI, Google Cloud Platform, and GitHubBook Description In the world of web development, leveraging data is the key to developing comprehensive applications, and RESTful APIs help you to achieve this systematically. This book will guide you in designing and developing web services with the power of TypeScript 3 and Node.js. You'll design REST APIs using best practices for request handling, validation, authentication, and authorization. You'll also

understand how to enhance the capabilities of your APIs with ODMs, databases, models and views, as well as asynchronous callbacks. This book will guide you in securing your environment by testing your services and initiating test automation with different testing approaches. Furthermore, you'll get to grips with developing secure, testable, and more efficient code, and be able to scale and deploy TypeScript 3 and Node.js-powered RESTful APIs on cloud platforms such as the Google Cloud Platform. Finally, the book will help you explore microservices and give you an overview of what GraphQL can allow you to do. By the end of this book, you will be able to use RESTful web services to create your APIs for mobile and web apps and other platforms. What you will learn

Explore various methods to plan your services in a scalable way

Understand how to handle different request types and the response status code

Get to grips with securing web services

Delve into error handling and logging

your web services for improved debugging

Uncover the microservices architecture and GraphQL

Create automated CI/CD pipelines for release and deployment strategies

Who this book is for

If you're a developer who has a basic understanding of REST concepts and want to learn how to design and develop RESTful APIs, this book is for you. Prior knowledge of TypeScript will help you make the most out of this book.

**Go Web Programming** - Sau Sheong Chang  
2016-07-05

Summary

Go Web Programming teaches you how to build scalable, high-performance web applications in Go using modern design principles. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

About the Technology

The Go language handles the demands of scalable, high-performance web applications by providing clean and fast compiled code, garbage collection, a simple

concurrency model, and a fantastic standard library. It's perfect for writing microservices or building scalable, maintainable systems. About the Book Go Web Programming teaches you how to build web applications in Go using modern design principles. You'll learn how to implement the dependency injection design pattern for writing test doubles, use concurrency in web applications, and create and consume JSON and XML in web services. Along the way, you'll discover how to minimize your dependence on external frameworks, and you'll pick up valuable productivity techniques for testing and deploying your applications. What's Inside Basics Testing and benchmarking Using concurrency Deploying to standalone servers, PaaS, and Docker Dozens of tips, tricks, and techniques About the Reader This book assumes you're familiar with Go language basics and the general concepts of web development. About the Author Sau Sheong Chang is Managing Director of Digital Technology at Singapore Power and an

active contributor to the Ruby and Go communities. Table of Contents PART 1 GO AND WEB APPLICATIONS Go and web applications Go ChitChat PART 2 BASIC WEB APPLICATIONS Handling requests Processing requests Displaying content Storing data PART 3 BEING REAL Go web services Testing your application Leveraging Go concurrency Deploying Go

### **Building RESTful Web Services with Java EE 8** - Mario-Leander Reimer 2018-07-31

Learn the fundamentals of Java EE 8 APIs to build effective web services Key Features Design modern and stylish web services with Java EE APIs Secure your web services with JSON Web Tokens Explore the advanced concepts of RESTful web services and the JAX-RS API Book Description Java Enterprise Edition is one of the leading application programming platforms for enterprise Java development. With Java EE 8 finally released and the first application servers now available, it is time to take a closer look at

how to develop modern and lightweight web services with the latest API additions and improvements. Building RESTful Web Services with Java EE 8 is a comprehensive guide that will show you how to develop state-of-the-art RESTful web services with the latest Java EE 8 APIs. You will begin with an overview of Java EE 8 and the latest API additions and improvements. You will then delve into the details of implementing synchronous RESTful web services and clients with JAX-RS. Next up, you will learn about the specifics of data binding and content marshalling using the JSON-B 1.0 and JSON-P 1.1 APIs. This book also guides you in leveraging the power of asynchronous APIs on the server and client side, and you will learn to use server-sent events (SSEs) for push communication. The final section covers advanced web service topics such as validation, JWT security, and diagnosability. By the end of this book, you will have implemented several working web services and have a thorough

understanding of the Java EE 8 APIs required for lightweight web service development. What you will learn Dive into the latest Java EE 8 APIs relevant for developing web services Use the new JSON-B APIs for easy data binding Understand how JSON-P API can be used for flexible processing Implement synchronous and asynchronous JAX-RS clients Use server-sent events to implement server-side code Secure Java EE 8 web services with JSON Web Tokens Who this book is for If you're a Java developer who wants to learn how to implement web services using the latest Java EE 8 APIs, this book is for you. Though no prior knowledge of Java EE 8 is required, experience with a previous Java EE version will be beneficial. [Hands-On RESTful Web Services with ASP.NET Core 3](#) - Samuele Resca 2019-12-27 Get up to speed with the latest features of C# 8, ASP.NET Core 3 and .NET Core 3.1 LTS to create robust and maintainable web services Key FeaturesApply design patterns and techniques to

achieve a reactive, scalable web service. Document your web services using the OpenAPI standard and test them using Postman. Explore mechanisms to implement a secure web service using client-side SSL and token authentication.

**Book Description** In recent times, web services have evolved to play a prominent role in web development. Applications are now designed to be compatible with any device and platform, and web services help us keep their logic and UI separate. Given its simplicity and effectiveness in creating web services, the RESTful approach has gained popularity, and this book will help you build RESTful web services using ASP.NET Core. This REST book begins by introducing you to the basics of the REST philosophy, where you'll study the different stages of designing and implementing enterprise-grade RESTful web services. You'll also gain a thorough understanding of ASP.NET Core's middleware approach and learn how to customize it. The

book will later guide you through improving API resilience, securing your service, and applying different design patterns and techniques to achieve a scalable web service. In addition to this, you'll learn advanced techniques for caching, monitoring, and logging, along with implementing unit and integration testing strategies. In later chapters, you will deploy your REST web services on Azure and document APIs using Swagger and external tools such as Postman. By the end of this book, you will have learned how to design RESTful web services confidently using ASP.NET Core with a focus on code testability and maintainability. What you will learn

Gain a comprehensive working knowledge of ASP.NET Core. Integrate third-party tools and frameworks to build maintainable and efficient services. Implement patterns using dependency injection to reduce boilerplate code and improve flexibility. Use ASP.NET Core's out-of-the-box tools to test your applications. Use Docker to run your ASP.NET

Core web service in an isolated and self-contained environment Secure your information using HTTPS and token-based authentication Integrate multiple web services using resiliency patterns and messaging techniques Who this book is for This book is for anyone who wants to learn how to build RESTful web services with the ASP.NET Core framework to improve the scalability and performance of their applications. Basic knowledge of C# and .NET Core will help you make the best use of the code samples included in the book.

*RESTful Java Web Services* - Bogunuva

Mohanram Balachandar 2017-11-17

Master core REST concepts and create RESTful web services in Java About This Book Build efficient and secure RESTful web APIs in Java.. Design solutions to produce, consume and visualize RESTful web services using WADL, RAML, and Swagger Familiarize the role of RESTful APIs usage in emerging technology trends like Cloud, IoT, Social Media. Who This

Book Is For If you are a web developer with a basic understanding of the REST concepts and envisage to get acquainted with the idea of designing and developing RESTful web services, this is the book for you. As all the code samples for the book are written in Java, proficiency in Java is a must. What You Will Learn Introduce yourself to the RESTful software architectural style and the REST API design principles Make use of the JSR 353 API, JSR 374 API, JSR 367 API and Jackson API for JSON processing Build portable RESTful web APIs, making use of the JAX-RS 2.1 API Simplify API development using the Jersey and RESTEasy extension APIs Secure your RESTful web services with various authentication and authorization mechanisms Get to grips with the various metadata solutions to describe, produce, and consume RESTful web services Understand the design and coding guidelines to build well-performing RESTful APIs See how the role of RESTful web services changes with emerging technologies and trends

In Detail Representational State Transfer (REST) is a simple yet powerful software architecture style to create lightweight and scalable web services. The RESTful web services use HTTP as the transport protocol and can use any message formats, including XML, JSON(widely used), CSV, and many more, which makes it easily inter-operable across different languages and platforms. This successful book is currently in its 3rd edition and has been used by thousands of developers. It serves as an excellent guide for developing RESTful web services in Java. This book attempts to familiarize the reader with the concepts of REST. It is a pragmatic guide for designing and developing web services using Java APIs for real-life use cases following best practices and for learning to secure REST APIs using OAuth and JWT. Finally, you will learn the role of RESTful web services for future technological advances, be it cloud, IoT or social media. By the end of this book, you will be able to efficiently build robust, scalable, and secure

RESTful web services using Java APIs. Style and approach Step-by-step guide to designing and developing robust RESTful web services. Each topic is explained in a simple and easy-to-understand manner with lots of real-life use-cases and their solutions.

RESTful Web APIs - Leonard Richardson  
2013-09-12

The popularity of REST in recent years has led to tremendous growth in almost-RESTful APIs that don't include many of the architecture's benefits. With this practical guide, you'll learn what it takes to design usable REST APIs that evolve over time. By focusing on solutions that cross a variety of domains, this book shows you how to create powerful and secure applications, using the tools designed for the world's most successful distributed computing system: the World Wide Web. You'll explore the concepts behind REST, learn different strategies for creating hypermedia-based APIs, and then put everything together with a step-by-step guide to

designing a RESTful Web API. Examine API design strategies, including the collection pattern and pure hypermedia Understand how hypermedia ties representations together into a coherent API Discover how XMDP and ALPS profile formats can help you meet the Web API "semantic challenge" Learn close to two-dozen standardized hypermedia data formats Apply best practices for using HTTP in API implementations Create Web APIs with the JSON-LD standard and other the Linked Data approaches Understand the CoAP protocol for using REST in embedded systems

Hands-On Full Stack Development with Go - Mina Andrawos 2019-03-28

Create a real-world application in Go and explore various frameworks and methodologies for full-stack development Key FeaturesBuild a responsive front end by using the powerful React frameworkBuild web APIs and middleware in the Go language by making use of the popular Gin frameworkBuild an Isomorphic Go React

application via GopherJSPerform unit tests, and benchmarking on your web APIBook Description The Go programming language has been rapidly adopted by developers for building web applications. With its impressive performance and ease of development, Go enjoys the support of a wide variety of open source frameworks, for building scalable and high-performant web services and apps. Hands-On Full Stack Development with Go is a comprehensive guide that covers all aspects of full stack development with Go. This clearly written, example-rich book begins with a practical exposure to Go development and moves on to build a frontend with the popular React framework. From there, you will build RESTful web APIs utilizing the Gin framework. After that, we will dive deeper into important software backend concepts, such as connecting to the database via an ORM, designing routes for your services, securing your services, and even charging credit cards via the popular Stripe API. We will also cover how to

test, and benchmark your applications efficiently in a production environment. In the concluding chapters, we will cover isomorphic developments in pure Go by learning about GopherJS. As you progress through the book, you'll gradually build a musical instrument online store application from scratch. By the end of the book, you will be confident in taking on full stack web applications in Go. What you will learn

Understand Go programming by building a real-world application

Learn the React framework to develop a frontend for your application

Understand isomorphic web development utilizing the GopherJS framework

Explore methods to write RESTful web APIs in Go using the Gin framework

Learn practical topics such as ORM layers, secure communications, and Stripe's API

Learn methods to benchmark and test web APIs in Go

Who this book is for

Hands-On Full Stack Development with Go will appeal to developers who are looking to start building amazing full stack web

applications in Go. Basic knowhow of Go language and JavaScript is expected. The book targets web developers who are looking to move to the Go language.

[Ruby on Rails Tutorial](#) - Michael Hartl  
2016-11-17

This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. Used by sites as varied as Twitter, GitHub, Disney, and Airbnb, Ruby on Rails is one of the most popular frameworks for developing web applications, but it can be challenging to learn and use. Whether you're new to web development or new only to Rails, Ruby on Rails™ Tutorial, Fourth Edition, is the solution. Best-selling author and leading Rails developer Michael Hartl teaches Rails by guiding you through the development of three example applications of increasing sophistication. The tutorial's examples focus on the general principles of web development

needed for virtually any kind of website. The updates to this edition include full compatibility with Rails 5, a division of the largest chapters into more manageable units, and a huge number of new exercises interspersed in each chapter for maximum reinforcement of the material. This indispensable guide provides integrated tutorials not only for Rails, but also for the essential Ruby, HTML, CSS, and SQL skills you need when developing web applications. Hartl explains how each new technique solves a real-world problem, and then he demonstrates it with bite-sized code that's simple enough to understand, yet novel enough to be useful. Whatever your previous web development experience, this book will guide you to true Rails mastery. This book will help you Install and set up your Rails development environment, including pre-installed integrated development environment (IDE) in the cloud Go beyond generated code to truly understand how to build Rails applications from scratch Learn testing

and test-driven development (TDD) Effectively use the Model-View-Controller (MVC) pattern Structure applications using the REST architecture Build static pages and transform them into dynamic ones Master the Ruby programming skills all Rails developers need Create high-quality site layouts and data models Implement registration and authentication systems, including validation and secure passwords Update, display, and delete users Upload images in production using a cloud storage service Implement account activation and password reset, including sending email with Rails Add social features and microblogging, including an introduction to Ajax Record version changes with Git and create a secure remote repository at Bitbucket Deploy your applications early and often with Heroku *Building RESTful Web Services with PHP 7* - Haafiz Waheed-ud-din Ahmad 2017-09-11 Learn how to build RESTful API and web services in PHP 7 About This Book Leverage the

Lumen framework to build RESTful API endpoints for your applications Understand how to increase efficiency and security of your web service. Learn to apply the concepts by implementing the examples covered in the book Who This Book Is For This book is for PHP developers who wish to learn about the REST architecture to be able to build and consume REST APIs in their applications. What You Will Learn Understand the REST API architecture and its benefits Write RESTful API web services in PHP 7 Address security-related issues in a REST API Leverage the importance of automated testing and write tests for API endpoints Identify security flaws in our current API endpoints and tackle them effectively Observe the working of Lumen microframeworks and write RESTful web services in it In Detail REST is the most wide spread and effective standard to develop APIs for internet services. With the way PHP and its eco-system has modernized the way code is written by simplifying various operations, it is

useful to develop RESTful APIs with PHP 7 and modern tools. This book explains in detail how to create your own RESTful API in PHP 7 that can be consumed by other users in your organization. Starting with a brief introduction to the fundamentals of REST architecture and the new features in PHP 7, you will learn to implement basic RESTful API endpoints using vanilla PHP. The book explains how to identify flaws in security and design and teach you how to tackle them. You will learn about composer, Lumen framework and how to make your RESTful API cleaner, secure and efficient. The book emphasizes on automated tests, teaches about different testing types and give a brief introduction to microservices which is the natural way forward. After reading this book, you will have a clear understanding of the REST architecture and you can build a web service from scratch. Style and approach This book will get you started with REST architecture and will also teach you different methods to build web

services from scratch.

Mastering Go - Mihalis Tsoukalos 2021-08-31

Master key features of Go, including advanced concepts like concurrency and working with JSON, to create and optimize real-world services, network servers, and clients

**Key Features**This third edition of the bestselling guide to advanced Go programming has been overhauled and expanded to cover RESTful servers, the WebSocket protocol, and Go generics

**Use real-world exercises to build high-performance network servers and powerful command line utilities**Packed with practical examples and utilities to apply to your own development work and administrative tasks

**Get clear explanations about Go nuances and features to simplify Go development**Book Description Mastering Go is the essential guide to putting Go to work on real production systems. This freshly updated third edition includes topics like creating RESTful servers and clients, understanding Go generics, and

developing gRPC servers and clients. Mastering Go was written for programmers who want to explore the capabilities of Go in practice. As you work your way through the chapters, you'll gain confidence and a deep understanding of advanced Go concepts, including concurrency and the operation of the Go Garbage Collector, using Go with Docker, writing powerful command-line utilities, working with JavaScript Object Notation (JSON) data, and interacting with databases. You'll also improve your understanding of Go internals to optimize Go code and use data types and data structures in new and unexpected ways. This essential Go programming book will also take you through the nuances and idioms of Go with exercises and resources to fully embed your newly acquired knowledge. With the help of Mastering Go, you'll become an expert Go programmer by building Go systems and implementing advanced Go techniques in your projects. What you will learn

**Use Go in production**Write reliable, high-

performance concurrent code Manipulate data structures including slices, arrays, maps, and pointers Develop reusable packages with reflection and interfaces Become familiar with generics for effective Go programming Create concurrent RESTful servers, and build gRPC clients and servers Define Go structures for working with JSON data Who this book is for You'll need to know the basics of Go before you get started with this book, but beyond that, anyone can sink their teeth into it. It's written primarily for Go programmers who have a bit of experience with the language and want to become expert practitioners.

### **Building RESTful Web Services with .NET Core** - Gaurav Arora 2018-05-31

Building Complete E-commerce/Shopping Cart Application Key Features Follow best practices and explore techniques such as clustering and caching to achieve a reactive, scalable web service Leverage the .NET Framework to quickly implement RESTful endpoints. Learn to

implement a client library for a RESTful web service using ASP.NET Core. Book Description REST is an architectural style that tackles the challenges of building scalable web services. In today's connected world, APIs have taken a central role on the web. APIs provide the fabric through which systems interact, and REST has become synonymous with APIs. The depth, breadth, and ease of use of ASP.NET Core makes it a breeze for developers to work with for building robust web APIs. This book takes you through the design of RESTful web services and leverages the ASP.NET Core framework to implement these services. This book begins by introducing you to the basics of the philosophy behind REST. You'll go through the steps of designing and implementing an enterprise-grade RESTful web service. This book takes a practical approach, that you can apply to your own circumstances. This book brings forth the power of the latest .NET Core release, working with MVC. Later, you will learn about the use of the

framework to explore approaches to tackle resilience, security, and scalability concerns. You will explore the steps to improve the performance of your applications. You'll also learn techniques to deal with security in web APIs and discover how to implement unit and integration test strategies. By the end of the book, you will have a complete understanding of Building a client for RESTful web services, along with some scaling techniques. What you will learn Add basic authentication to your RESTful API Create a Carts Controller and Orders Controller to manage and process Orders Intercept HTTP requests and responses by building your own middleware Test service calls using Postman and Advanced REST Client Secure your data/application using annotations Who this book is for This book is intended for those who want to learn to build RESTful web services with the latest .NET Core Framework. To make best use of the code samples included in the book, you should have a basic knowledge

of C# and .NET Core.

Django RESTful Web Services - Gaston C. Hillar  
2018-01-25

Design, build and test RESTful web services with the Django framework and Python Key Features Create efficient real-world RESTful web services with the latest Django framework Authenticate, secure, and integrate third-party packages efficiently in your Web Services Leverage the power of Python for faster Web Service development Book Description Django is a Python web framework that makes the web development process very easy. It reduces the amount of trivial code, which simplifies the creation of web applications and results in faster development. It is very powerful and a great choice for creating RESTful web services. If you are a Python developer and want to efficiently create RESTful web services with Django for your apps, then this is the right book for you. The book starts off by showing you how to install and configure the environment, required

software, and tools to create RESTful web services with Django and the Django REST framework. We then move on to working with advanced serialization and migrations to interact with SQLite and non-SQL data sources. We will use the features included in the Django REST framework to improve our simple web service. Further, we will create API views to process diverse HTTP requests on objects, go through relationships and hyperlinked API management, and then discover the necessary steps to include security and permissions related to data models and APIs. We will also apply throttling rules and run tests to check that versioning works as expected. Next we will run automated tests to improve code coverage. By the end of the book, you will be able to build RESTful web services with Django. What you will learn The best way to build a RESTful Web Service or API with Django and the Django REST Framework Develop complex RESTful APIs from scratch with Django and the Django REST Framework Work with

either SQL or NoSQL data sources Design RESTful Web Services based on application requirements Use third-party packages and extensions to perform common tasks Create automated tests for RESTful web services Debug, test, and profile RESTful web services with Django and the Django REST Framework Who this book is for This book is for Python developers who want to create RESTful web services with Django; you need to have a basic working knowledge of Django but no previous experience with RESTful web services is required.

### **Hands-On RESTful Web Services with Go - Second Edition** - Naren Yellavula 2020

Design production-ready, testable, and maintainable RESTful web services for the modern web that scale easily Key Features Employ a combination of custom and open source solutions for application program interface (API) development Discover asynchronous API and API security patterns and

learn how to deploy your web services to the cloud Apply design patterns and techniques to build reactive and scalable web services Book Description Building RESTful web services can be tough as there are countless standards and ways to develop API. In modern architectures such as microservices, RESTful APIs are common in communication, making idiomatic and scalable API development crucial. This book covers basic through to advanced API development concepts and supporting tools. You'll start with an introduction to REST API development before moving on to building the essential blocks for working with Go. You'll explore routers, middleware, and available open source web development solutions in Go to create robust APIs, and understand the application and database layers to build RESTful web services. You'll learn various data formats like protocol buffers and JSON, and understand how to serve them over HTTP and gRPC. After covering advanced topics such as asynchronous

API design and GraphQL for building scalable web services, you'll discover how microservices can benefit from REST. You'll also explore packaging artifacts in the form of containers and understand how to set up an ideal deployment ecosystem for web services. Finally, you'll cover the provisioning of infrastructure using infrastructure as code (IaC) and secure your REST API. By the end of the book, you'll have intermediate knowledge of web service development and be able to apply the skills you've learned in a practical way. What you will learn Explore the fundamentals of API development and web services Understand the various building blocks of API development in Go Use superior open source solutions for representational state transfer (REST) API development Scale a service using microservices and asynchronous design patterns Deliver containerized artifacts to the Amazon Web Services (AWS) Cloud Get to grips with API security and its implementation Who this book is

for This book is for all the Go developers who are comfortable with the language and seeking to learn REST API development. Even senior engineers can enjoy this book, as it discusses many cutting-edge concepts, such as building microser...

Building RESTful Web Services with Go - Naren Yellavula 2017-12-28

Explore the necessary concepts of REST API development by building few real world services from scratch. Key Features Follow best practices and explore techniques such as clustering and caching to achieve a reactive, scalable web service Leverage the Gin Framework to quickly implement RESTful endpoints Learn to implement a client library for a RESTful web service using Go Book Description REST is an architectural style that tackles the challenges of building scalable web services and in today's connected world, APIs have taken a central role on the web. APIs provide the fabric through which systems interact, and REST has become

synonymous with APIs. The depth, breadth, and ease of use of Go, makes it a breeze for developers to work with it to build robust Web APIs. This book takes you through the design of RESTful web services and leverages a framework like Gin to implement these services. The book starts with a brief introduction to REST API development and how it transformed the modern web. You will learn how to handle routing and authentication of web services along with working with middleware for internal service. The book explains how to use Go frameworks to build RESTful web services and work with MongoDB to create REST API. You will learn how to integrate Postgres SQL and JSON with a Go web service and build a client library in Go for consuming REST API. You will learn how to scale APIs using the microservice architecture and deploy the REST APIs using Nginx as a proxy server. Finally you will learn how to metricize a REST API using an API Gateway. By the end of the book you will be

proficient in building RESTful APIs in Go. What you will learn Create HTTP handler and introspect the Gorilla Mux router OAuth 2 implementation with Go Build RESTful API with Gin Framework Create REST API with MongoDB and Go Build a working client library and unit test for REST API Debug, test, and profile RESTful APIs with each of the frameworks Optimize and scale REST API using microservices Who this book is for This book is intended for those who want to learn to build RESTful web services with a framework like Gin. To make best use of the code samples included in the book, you should have a basic knowledge of Go programming.

### **RESTful Java Web Services** - Jobinesh

Purushothaman 2015-09-22

Design scalable and robust RESTful web services with JAX-RS and Jersey extension APIs About This Book Get to grips with the portable Java APIs used for JSON processing Design solutions to produce, consume, and visualize

RESTful web services using WADL, RAML, and Swagger A step-by-step guide packed with many real-life use-cases to help you build efficient and secure RESTful web APIs in Java Who This Book Is For If you are a web developer with a basic understanding of the REST concepts but are new to the idea of designing and developing RESTful web services, this is the book for you. As all the code samples for the book are written in Java, proficiency in Java is a must. What You Will Learn Introduce yourself to the RESTful software architectural style and the REST API design principles Make use of the JSR 353 APIs and Jackson API for JSON processing Build portable RESTful web APIs, making use of the JAX-RS 2.0 API Simplify API development using the Jersey extension APIs Secure your RESTful web services with various authentication and authorization mechanisms Get to grips with the various metadata solutions to describe, produce, and consume RESTful web services Understand the design and coding guidelines to build well-

performing RESTful APIs See how the role of RESTful web services changes with emerging technologies and trends In Detail REST (REpresentational State Transfer) is a simple yet powerful software architecture style to create scalable web services and allow them to be simple, lightweight, and fast. The REST API uses HTTP and JSON, so that it can be used with many programming languages such as Ruby, Java, Python, and Scala. Its use in Java seems to be the most popular though, because of the API's reusability. This book is a guide to developing RESTful web services in Java using the popular RESTful framework APIs available today. You will begin with gaining an in-depth knowledge of the RESTful software architectural style and its relevance in modern applications. Further, you will understand the APIs to parse, generate, transform, and query JSON effectively. Then, you will see how to build a simple RESTful service using the popular JAX-RS 2.0 API along with some real-world examples. This book will

introduce you to the Jersey framework API, which is used to simplify your web services. You will also see how to secure your services with various authentication mechanisms. You will get to grips with various solutions to describe, produce, consume, and visualize RESTful web services. Finally, you will see how to design your web services to equip them for the future technological advances, be it Cloud or mobile computing. By the end of this book, you will be able to efficiently build robust, scalable, and secure RESTful web services, making use of the JAX-RS and Jersey framework extensions. Style and approach This book is written as a step-by-step guide to designing and developing robust RESTful web services. Each topic is explained in a simple and easy-to-understand manner with lots of real-life use-cases and their solutions. [Building a RESTful Web Service with Spring](#) - Ludovic Dewailly 2015-10-14 A hands-on guide to building an enterprise-grade, scalable RESTful web service using the

Spring Framework About This Book Follow best practices and explore techniques such as clustering and caching to achieve a scalable web service Leverage the Spring Framework to quickly implement RESTful endpoints Learn to implement a client library for a RESTful web service using the Spring Framework Who This Book Is For This book is intended for those who want to learn to build RESTful web services with the Spring Framework. To make best use of the code samples included in the book, you should have a basic knowledge of the Java language. Previous experience with the Spring Framework would also help you get up and running quickly. What You Will Learn Deep dive into the principles behind REST Expose CRUD operations through RESTful endpoints with the Spring Framework Devise response formats and error handling strategies, offering a consistent and flexible structure to simplify integration for service consumers Follow the best approaches for dealing with a service's evolution while

maintaining backward compatibility Understand techniques to secure web services Comply with the best ways to test RESTful web services, including tips for load testing Optimise and scale web services using techniques such as caching and clustering In Detail REST is an architectural style that tackles the challenges of building scalable web services. In today's connected world, APIs have taken a central role on the web. APIs provide the fabric through which systems interact, and REST has become synonymous with APIs. The depth, breadth, and ease of use of Spring makes it one of the most attractive frameworks in the Java ecosystem. Marrying the two technologies is therefore a very natural choice. This book takes you through the design of RESTful web services and leverages the Spring Framework to implement these services. Starting from the basics of the philosophy behind REST, you'll go through the steps of designing and implementing an enterprise-grade RESTful web service. Taking a

practical approach, each chapter provides code samples that you can apply to your own circumstances. This book goes beyond the use of Spring and explores approaches to tackle resilience, security, and scalability concerns. You'll learn techniques to deal with security in Spring and discover how to implement unit and integration test strategies. Finally, the book ends by walking you through building a Java client for your RESTful web service, along with some scaling techniques for it. Style and approach This book is a step-by-step, hands-on guide to designing and building RESTful web services. The book follows the natural cycle of developing these services and includes multiple code samples to help you.

### **Hands-On RESTful API Design Patterns and Best Practices** - Harihara Subramanian

2019-01-31

REST architecture (style) is a pivot of distributed systems, simplify data integration amongst modern and legacy applications leverages

through the RESTful paradigm. This book is fully loaded with many RESTful API patterns, samples, hands-on implementations and also discuss the capabilities of many REST API frameworks for Java, Scala, Python and Go  
*Building REST APIs with Flask* - Kunal Relan  
2019-09-12

Develop RESTful web services using the Flask micro-framework and integrate them using MySQL. Use Flask to develop, deploy, and manage REST APIs with easy-to-read and understand Python code. Solve your problem from a choice of libraries. Learn to use MySQL as the web services database for your Flask API using SQLAlchemy ORM. Building REST APIs with Flask provides a primer on Flask, RESTful services, and working with pip to set up your virtual environment. The key differences between NoSQL and SQL are covered, and you are taught how to connect MySQL and Flask using SQLAlchemy. Author Kunal Relan presents best practices for creating REST APIs and

guides you in structuring your app and testing REST endpoints. He teaches you how to set up authentication and render HTML using views. You learn how to write unit tests for your REST APIs, and understand mocks, assertions, and integration testing. You will know how to document your REST APIs, deploy your Flask application on all of the major cloud platforms, and debug and monitor your Flask application. What You'll Learn Use MySQL to create Flask REST APIs Test REST endpoints Create CRUD endpoints with Flask and MySQL Deploy Flask on all of the major cloud platforms Monitor your Flask application Who This Book Is For Python developers interested in REST API development using Flask and web developers with basic programming knowledge who want to learn how Python and REST APIs work together. Readers should be familiar with Python (command line, or at least pip) and MySQL.

**Hands-On RESTful Web Services with Go, Second Edition** - Naren Yellavula 2020-02-28

**Concurrency in Go** - Katherine Cox-Buday 2017-07-19

Concurrency can be notoriously difficult to get right, but fortunately, the Go open source programming language makes working with concurrency tractable and even easy. If you're a developer familiar with Go, this practical book demonstrates best practices and patterns to help you incorporate concurrency into your systems. Author Katherine Cox-Buday takes you step-by-step through the process. You'll understand how Go chooses to model concurrency, what issues arise from this model, and how you can compose primitives within this model to solve problems. Learn the skills and tooling you need to confidently write and implement concurrent systems of any size. Understand how Go addresses fundamental problems that make concurrency difficult to do correctly Learn the key differences between concurrency and parallelism Dig into the syntax of Go's memory synchronization primitives Form patterns with

these primitives to write maintainable concurrent code Compose patterns into a series of practices that enable you to write large, distributed systems that scale Learn the sophistication behind goroutines and how Go's runtime stitches everything together

RESTful Web Services - Leonard Richardson

2008-12-17

"Every developer working with the Web needs to read this book." -- David Heinemeier Hansson, creator of the Rails framework "RESTful Web Services finally provides a practical roadmap for constructing services that embrace the Web, instead of trying to route around it." -- Adam Trachtenberg, PHP author and eBay Web Services Evangelist You've built web sites that can be used by humans. But can you also build web sites that are usable by machines? That's where the future lies, and that's what RESTful Web Services shows you how to do. The World Wide Web is the most popular distributed application in history, and Web services and

mashups have turned it into a powerful distributed computing platform. But today's web service technologies have lost sight of the simplicity that made the Web successful. They don't work like the Web, and they're missing out on its advantages. This book puts the "Web" back into web services. It shows how you can connect to the programmable web with the technologies you already use every day. The key is REST, the architectural style that drives the Web. This book: Emphasizes the power of basic Web technologies -- the HTTP application protocol, the URI naming standard, and the XML markup language Introduces the Resource-Oriented Architecture (ROA), a common-sense set of rules for designing RESTful web services Shows how a RESTful design is simpler, more versatile, and more scalable than a design based on Remote Procedure Calls (RPC) Includes real-world examples of RESTful web services, like Amazon's Simple Storage Service and the Atom Publishing Protocol Discusses web service

clients for popular programming languages  
Shows how to implement RESTful services in three popular frameworks -- Ruby on Rails, Restlet (for Java), and Django (for Python)  
Focuses on practical issues: how to design and implement RESTful web services and clients  
This is the first book that applies the REST design philosophy to real web services. It sets down the best practices you need to make your design a success, and the techniques you need to turn your design into working code. You can harness the power of the Web for programmable applications: you just have to work with the Web instead of against it. This book shows you how.  
*Go in Practice* - Matt Farina 2016-08-15  
Summary *Go in Practice* guides you through 70 real-world techniques in key areas like package management, microservice communication, and more. Following a cookbook-style Problem/Solution/Discussion format, this practical handbook builds on the foundational concepts of the Go language and introduces

specific strategies you can use in your day-to-day applications. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Go may be the perfect systems language. Built with simplicity, concurrency, and modern applications in mind, Go provides the core tool set for rapidly building web, cloud, and systems applications. If you know a language like Java or C#, it's easy to get started with Go; the trick is finding the practical dirt-under-the-fingernails techniques that you need to build production-ready code. About the Book *Go in Practice* guides you through dozens of real-world techniques in key areas. Following a cookbook-style Problem/Solution/Discussion format, this practical handbook builds on the foundational concepts of the Go language and introduces specific strategies you can use in your day-to-day applications. You'll learn techniques for building web services, using Go in the cloud, testing and debugging, routing, network applications, and

much more. After finishing this book, you will be ready to build sophisticated cloud-native Go applications. What's Inside Dozens of specific, practical Golang techniques Using Go for devops and cloudops Writing RESTful web services and microservices Practical web dev techniques About the Reader Written for experienced developers who have already started exploring Go and want to use it effectively in a production setting. About the Authors Matt Farina is a software architect at Deis. Matt Butcher is a Principal Engineer in the Advanced Technology Group at Hewlett Packard Enterprise. They are both authors, speakers, and regular open source contributors. Table of Contents PART 1 - BACKGROUND AND FUNDAMENTALS Getting into Go A solid foundation Concurrency in Go PART 2 - WELL-ROUNDED APPLICATIONS Handling errors and panic Debugging and testing PART 3 - AN INTERFACE FOR YOUR APPLICATIONS HTML and email template patterns Serving and receiving assets and forms

Working with web services PART 4 - TAKING YOUR APPLICATIONS TO THE CLOUD Using the cloud Communication between cloud services Reflection and code generation **Network Programming with Go** - Jan Newmarch 2017-05-15

Dive into key topics in network architecture and Go, such as data serialization, application level protocols, character sets and encodings. This book covers network architecture and gives an overview of the Go language as a primer, covering the latest Go release. Beyond the fundamentals, Network Programming with Go covers key networking and security issues such as HTTP and HTTPS, templates, remote procedure call (RPC), web sockets including HTML5 web sockets, and more. Additionally, author Jan Newmarch guides you in building and connecting to a complete web server based on Go. This book can serve as both as an essential learning guide and reference on Go networking. What You Will Learn Master network

programming with Go Carry out data serialization Use application-level protocols Manage character sets and encodings Deal with HTTP(S) Build a complete Go-based web server Work with RPC, web sockets, and more Who This Book Is For Experienced Go programmers and other programmers with some experience with the Go language.

**The Design of Web APIs** - Arnaud Lauret  
2019-10-08

Web APIs are everywhere, giving developers an efficient way to interact with applications, services, and data. Well-designed APIs are a joy to use; poorly-designed APIs are cumbersome, confusing, and frustrating. The Design of Web APIs is a practical, example packed guide to crafting extraordinary web APIs. Author Arnaud Lauret demonstrates fantastic design principles and techniques you can apply to both public and private web APIs. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

*Pro RESTful APIs* - Sanjay Patni 2017-03-20  
Discover the RESTful technologies, including REST, JSON, XML, JAX-RS web services, SOAP and more, for building today's microservices, big data applications, and web service applications. This book is based on a course the Oracle-based author is teaching for UC Santa Cruz Silicon Valley which covers architecture, design best practices and coding labs. *Pro RESTful APIs: Design* gives you all the fundamentals from the top down: from the top (architecture) through the middle (design) to the bottom (coding). This book is a must have for any microservices or web services developer building applications and services. What You'll Learn Discover the key RESTful APIs, including REST, JSON, XML, JAX, SOAP and more Use these for web services and data exchange, especially in today's big data context Harness XML, JSON, REST, and JAX-RS in examples and case studies Apply best practices to your solutions' architecture Who This Book Is For Experienced web programmers

and developers.

**Java Web Services: Up and Running** - Martin Kalin 2009-02-12

This example-driven book offers a thorough introduction to Java's APIs for XML Web Services (JAX-WS) and RESTful Web Services (JAX-RS). *Java Web Services: Up and Running* takes a clear, pragmatic approach to these technologies by providing a mix of architectural overview, complete working code examples, and short yet precise instructions for compiling, deploying, and executing an application. You'll learn how to write web services from scratch and integrate existing services into your Java applications. With *Java Web Services: Up and Running*, you will:

- Understand the distinction between SOAP-based and REST-style services
- Write, deploy, and consume SOAP-based services in core Java
- Understand the Web Service Definition Language (WSDL) service contract
- Recognize the structure of a SOAP message
- Learn how to deliver Java-based

RESTful web services and consume commercial RESTful services

Know security requirements for SOAP- and REST-based web services

Learn how to implement JAX-WS in various application servers

Ideal for students as well as experienced programmers, *Java Web Services: Up and Running* is the concise guide you need to start working with these technologies right away.

*Hands-On RESTful Python Web Services* - Gaston C. Hillar 2018-12-26

Explore the best tools and techniques to create lightweight, maintainable, and scalable Python web services

Key Features

- Combine Python with different data sources to build complex RESTful APIs from scratch
- Configure and fine-tune your APIs using the best tools and techniques available
- Use command-line and GUI tools to test CRUD operations performed by RESTful Web Services or APIs

Book Description

Python is the language of choice for millions of developers worldwide that builds great web services in RESTful architecture. This second edition of

Hands-On RESTful Python Web Services will cover the best tools you can use to build engaging web services. This book shows you how to develop RESTful APIs using the most popular Python frameworks and all the necessary stacks with Python, combined with related libraries and tools. You'll learn to incorporate all new features of Python 3.7, Flask 1.0.2, Django 2.1, Tornado 5.1, and also a new framework, Pyramid. As you advance through the chapters, you will get to grips with each of these frameworks to build various web services, and be shown use cases and best practices covering when to use a particular framework. You'll then successfully develop RESTful APIs with all frameworks and understand how each framework processes HTTP requests and routes URLs. You'll also discover best practices for validation, serialization, and deserialization. In the concluding chapters, you will take advantage of specific features available in certain frameworks such as integrated ORMs, built-in

authorization and authentication, and work with asynchronous code. At the end of each framework, you will write tests for RESTful APIs and improve code coverage. By the end of the book, you will have gained a deep understanding of the stacks needed to build RESTful web services. What you will learn

Select the most appropriate framework based on requirements

Develop complex RESTful APIs from scratch using Python

Use requests handlers, URL patterns, serialization, and validations

Add authentication, authorization, and interaction with ORMs and databases

Debug, test, and improve RESTful APIs with four frameworks

Design RESTful APIs with frameworks and create automated tests

Who this book is for

This book is for web developers who have a working knowledge of Python and would like to build amazing web services by taking advantage of the various frameworks of Python. You should have some knowledge of RESTful APIs.

## Building RESTful Python Web Services - Gaston C. Hillar 2016-10-27

Create web services that are lightweight, maintainable, scalable, and secure using the best tools and techniques designed for Python

About This Book Develop RESTful Web Services using the most popular frameworks in Python

Configure and fine-tune your APIs using the best tools and techniques available

This practical guide will help you to implement complete REST-based APIs from scratch

Who This Book Is For This book is for web developers who have working knowledge of Python and would like to build amazing web services by taking advantage of the various frameworks of Python. You should have some knowledge of RESTful APIs.

What You Will Learn Develop complex RESTful APIs from scratch with Python combined with and without data sources

Choose the most appropriate (micro) framework based on the specific requirements of a RESTful API / web service

Debug, test, and profile RESTful APIs

with each of the frameworks

Develop a complex RESTful API that interacts with a PostgreSQL database

Add authentication and permissions to a RESTful API built in each of the frameworks

Map URL patterns to request handlers and check how the API works

Profile an existing API and refactor it to take advantage of asynchronous code

In Detail Python is the language of choice for millions of developers worldwide, due to its gentle learning curve as well as its vast applications in day-to-day programming. It serves the purpose of building great web services in the RESTful architecture. This book will show you the best tools you can use to build your own web services. Learn how to develop RESTful APIs using the popular Python frameworks and all the necessary stacks with Python, Django, Flask, and Tornado, combined with related libraries and tools. We will dive deep into each of these frameworks to build various web services, and will provide use cases and best practices on when to use a

particular framework to get the best results. We will show you everything required to successfully develop RESTful APIs with the four frameworks such as request handling, URL mapping, serialization, validation, authentication, authorization, versioning, ORMs, databases, custom code for models and views, and asynchronous callbacks. At the end of each framework, we will add authentication and security to the RESTful APIs and prepare tests for it. By the end of the book, you will have a deep understanding of the stacks needed to build RESTful web services. Style and approach The book takes a straightforward approach, not spending time getting you started with RESTful APIs and web services. It will give you the best use cases for each framework to build great web services in Python.

### **Building RESTful Web services with Go -**

Naren Yellavula 2017-12-28

Explore the necessary concepts of REST API development by building few real world services

from scratch. About This Book Follow best practices and explore techniques such as clustering and caching to achieve a reactive, scalable web service Leverage the Gin Framework to quickly implement RESTful endpoints Learn to implement a client library for a RESTful web service using Go Who This Book Is For This book is intended for those who want to learn to build RESTful web services with a framework like Gin. To make best use of the code samples included in the book, you should have a basic knowledge of Go programming. What You Will Learn Create HTTP handler and introspect the Gorilla Mux router OAuth 2 implementation with Go Build RESTful API with Gin Framework Create REST API with MongoDB and Go Build a working client library and unit test for REST API Debug, test, and profile RESTful APIs with each of the frameworks Optimize and scale REST API using microservices In Detail REST is an architectural style that tackles the challenges of building

scalable web services and in today's connected world, APIs have taken a central role on the web. APIs provide the fabric through which systems interact, and REST has become synonymous with APIs. The depth, breadth, and ease of use of Go, makes it a breeze for developers to work with it to build robust Web APIs. This book takes you through the design of RESTful web services and leverages a framework like Gin to implement these services. The book starts with a brief introduction to REST API development and how it transformed the modern web. You will learn how to handle routing and authentication of web services along with working with middleware for internal service. The book explains how to use Go frameworks to build RESTful web services and work with MongoDB to create REST API. You will learn how to integrate Postgres SQL and JSON with a Go web service and build a client library in Go for consuming REST API. You will learn how to scale APIs using the microservice

architecture and deploy the REST APIs using Nginx as a proxy server. Finally you will learn how to metricize a REST API using an API Gateway. By the end of the book you will be proficient in building RESTful APIs in Go. Style and Approach This book is a step-by-step, hands-on guide to designing and building RESTful web services.

RESTful PHP Web Services - Samisa Abeysinghe  
2008-10-30

Learn the basic architectural concepts and step through examples of consuming and creating RESTful web services in PHP.

REST API Design Rulebook - Mark Masse  
2011-10-25

The basic rules of REST APIs - "many nouns, few verbs, stick with HTTP" - seem easy, but that simplicity and power require discipline to work smoothly. This brief guide provides next steps for implementing complex projects on simple and extensible foundations.

Go Web Development Cookbook - Arpit Aggarwal

2018-04-23

86 recipes on how to build fast, scalable, and powerful web services and applications with Go  
Key Features  
Become proficient in RESTful web services  
Build scalable, high-performant web applications in Go  
Get acquainted with Go frameworks for web development  
Book

Description  
Go is an open source programming language that is designed to scale and support concurrency at the language level. This gives you the liberty to write large concurrent web applications with ease. From creating web application to deploying them on Amazon Cloud Services, this book will be your one-stop guide to learn web development in Go. The Go Web Development Cookbook teaches you how to create REST services, write microservices, and deploy Go Docker containers. Whether you are new to programming or a professional developer, this book will help get you up to speed with web development in Go. We will focus on writing modular code in Go; in-depth

informative examples build the base, one step at a time. You will learn how to create a server, work with static files, SQL, NoSQL databases, and Beego. You will also learn how to create and secure REST services, and create and deploy Go web application and Go Docker containers on Amazon Cloud Services. By the end of the book, you will be able to apply the skills you've gained in Go to create and explore web applications in any domain. What you will learn  
Create a simple HTTP and TCP web server and understand how it works  
Explore record in a MySQL and MongoDB database  
Write and consume RESTful web service in Go  
Invent microservices in Go using Micro - a microservice toolkit  
Create and Deploy the Beego application with Nginx  
Deploy Go web application and Docker containers on an AWS EC2 instance  
Who this book is for  
This book is for Go developers interested in learning how to use Go to build powerful web applications. A background in web development is expected.

## **Building RESTful Web Services with Spring**

5 - Raja CSP Raman 2018-01-29

Find out how to implement the REST architecture to build resilient software in Java with the help of the Spring 5.0 framework. Key Features Follow best practices and explore techniques such as clustering and caching to achieve a reactive, scalable web service. Leverage the Spring Framework to quickly implement RESTful endpoints. Learn to implement a client library for a RESTful web service using the Spring Framework along with the new front end framework. Book Description REST is an architectural style that tackles the challenges of building scalable web services. In today's connected world, APIs have taken a central role on the web. APIs provide the fabric through which systems interact, and REST has become synonymous with APIs. The depth, breadth, and ease of use of Spring makes it one of the most attractive frameworks in the Java ecosystem. Marrying the two technologies is

therefore a very natural choice. This book takes you through the design of RESTful web services and leverages the Spring Framework to implement these services. Starting from the basics of the philosophy behind REST, you'll go through the steps of designing and implementing an enterprise-grade RESTful web service. Taking a practical approach, each chapter provides code samples that you can apply to your own circumstances. This second edition brings forth the power of the latest Spring 5.0 release, working with MVC built-in as well as the front end framework. It then goes beyond the use of Spring to explore approaches to tackle resilience, security, and scalability concerns. Improve performance of your applications with the new HTTP 2.0 standards. You'll learn techniques to deal with security in Spring and discover how to implement unit and integration test strategies. Finally, the book ends by walking you through building a Java client for your RESTful web service, along with some

scaling techniques using the new Spring Reactive libraries. What you will learn Deep dive into the principles behind REST Expose CRUD operations through RESTful endpoints with the Spring Framework Devise response formats and error handling strategies, offering a consistent and flexible structure to simplify integration for service consumers Follow the best approaches for dealing with a service's evolution while maintaining backward compatibility Understand techniques to secure web services Comply with the best ways to test RESTful web services, including tips for load testing Optimise and scale web services using techniques such as caching and clustering Who this book is for This book is intended for those who want to learn to build RESTful web services with the latest Spring 5.0 Framework. To make best use of the code samples included in the book, you should have a basic knowledge of the Java language. Previous experience with the Spring Framework would also help you get up and running quickly.

*The Go Programming Language* - Alan A. A. Donovan 2015-11-16

The Go Programming Language is the authoritative resource for any programmer who wants to learn Go. It shows how to write clear and idiomatic Go to solve real-world problems. The book does not assume prior knowledge of Go nor experience with any specific language, so you'll find it accessible whether you're most comfortable with JavaScript, Ruby, Python, Java, or C++. The first chapter is a tutorial on the basic concepts of Go, introduced through programs for file I/O and text processing, simple graphics, and web clients and servers. Early chapters cover the structural elements of Go programs: syntax, control flow, data types, and the organization of a program into packages, files, and functions. The examples illustrate many packages from the standard library and show how to create new ones of your own. Later chapters explain the package mechanism in more detail, and how to build, test, and maintain

projects using the go tool. The chapters on methods and interfaces introduce Go's unconventional approach to object-oriented programming, in which methods can be declared on any type and interfaces are implicitly satisfied. They explain the key principles of encapsulation, composition, and substitutability using realistic examples. Two chapters on concurrency present in-depth approaches to this increasingly important topic. The first, which covers the basic mechanisms of goroutines and channels, illustrates the style known as communicating sequential processes for which Go is renowned. The second covers more traditional aspects of concurrency with shared variables. These chapters provide a solid foundation for programmers encountering concurrency for the first time. The final two chapters explore lower-level features of Go. One covers the art of metaprogramming using reflection. The other shows how to use the unsafe package to step outside the type system

for special situations, and how to use the cgo tool to create Go bindings for C libraries. The book features hundreds of interesting and practical examples of well-written Go code that cover the whole language, its most important packages, and a wide range of applications. Each chapter has exercises to test your understanding and explore extensions and alternatives. Source code is freely available for download from <http://gopl.io/> and may be conveniently fetched, built, and installed using the go get command.

**Go in Action** - Erik St. Martin 2015-11-04  
Summary Go in Action introduces the Go language, guiding you from inquisitive developer to Go guru. The book begins by introducing the unique features and concepts of Go. Then, you'll get hands-on experience writing real-world applications including websites and network servers, as well as techniques to manipulate and convert data at speeds that will make your friends jealous. Purchase of the print book

includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Application development can be tricky enough even when you aren't dealing with complex systems programming problems like web-scale concurrency and real-time performance. While it's possible to solve these common issues with additional tools and frameworks, Go handles them right out of the box, making for a more natural and productive coding experience. Developed at Google, Go powers nimble startups as well as big enterprises—companies that rely on high-performing services in their infrastructure. About the Book Go in Action is for any intermediate-level developer who has experience with other programming languages and wants a jump-start in learning Go or a more thorough understanding of the language and its internals. This book provides an intensive, comprehensive, and idiomatic view of Go. It focuses on the specification and implementation of the

language, including topics like language syntax, Go's type system, concurrency, channels, and testing. What's Inside Language specification and implementation Go's type system Internals of Go's data structures Testing and benchmarking About the Reader This book assumes you're a working developer proficient with another language like Java, Ruby, Python, C#, or C++. About the Authors William Kennedy is a seasoned software developer and author of the blog GoingGo.Net. Brian Ketelsen and Erik St. Martin are the organizers of GopherCon and coauthors of the Go-based Skynet framework. Table of Contents Introducing Go Go quick-start Packaging and tooling Arrays, slices, and maps Go's type system Concurrency Concurrency patterns Standard library Testing and benchmarking

**Web Development with Go** - Shiju Varghese

2015-12-30

Take a deep dive into web development using the Go programming language to build web apps

and RESTful services to create reliable and efficient software. Web Development with Go provides Go language fundamentals and then moves on to advanced web development concepts and successful deployment of Go web apps to the cloud. Web Development with Go will teach you how to develop scalable real-world web apps, RESTful services, and backend systems with Go. The book starts off by covering Go programming language fundamentals as a prerequisite for web development. After a thorough understanding of the basics, the book delves into web development using the built-in package, net/http. With each chapter you'll be introduced to new concepts for gradually building a real-world web system. The book further shows you how to integrate Go with other technologies. For example, it provides an overview of using MongoDB as a means of persistent storage, and provides an end-to-end REST API sample as well. The book then moves on to demonstrate how to deploy web apps to

the cloud using the Google Cloud platform. Web Development with Go provides: Fundamentals for building real-world web apps in Go Thorough coverage of prerequisites and practical code examples Demo web apps for attaining a deeper understanding of web development A reference REST API app which can be used to build scalable real-world backend services in Go A thorough demonstration of deploying web apps to the Cloud using the Google Cloud platform Go is a high-performance language while providing greater level of developer productivity, therefore Web Development with Go equips you with the necessary skills and knowledge required for effectively building robust and efficient web apps by leveraging the features of Go.

**RESTful Web Services Cookbook** - Subbu Allamaraju 2010-02-22

While the REST design philosophy has captured the imagination of web and enterprise developers alike, using this approach to develop real web services is no picnic. This cookbook

includes more than 100 recipes to help you take advantage of REST, HTTP, and the infrastructure of the Web. You'll learn ways to design RESTful web services for client and server applications that meet performance, scalability, reliability, and security goals, no matter what programming language and development framework you use. Each recipe includes one or two problem statements, with easy-to-follow, step-by-step instructions for solving them, as well as examples using HTTP requests and responses, and XML, JSON, and Atom snippets. You'll also get implementation

guidelines, and a discussion of the pros, cons, and trade-offs that come with each solution. Learn how to design resources to meet various application scenarios Successfully design representations and URIs Implement the hypertext constraint using links and link headers Understand when and how to use Atom and AtomPub Know what and what not to do to support caching Learn how to implement concurrency control Deal with advanced use cases involving copying, merging, transactions, batch processing, and partial updates Secure web services and support OAuth