
Build Web Application With Golang Gitbook

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*Build Web Application
With Golang Gitbook*

2023-03-16

OBRIEN MICHAEL

[Learn How to Build an API-First SaaS / Web Application Apress](#)

Go is an open-source language from Google that's a bit like C. Designed for programmer productivity, it's got a clean syntax, and emphasizes concurrency. This book gives you all you need to use Go in your web applications. You'll learn the basic concepts - language structures, the standard library, and Go tools - then tackle more advanced features like concurrency concepts, testing methodologies, and package structures. At each step, you'll get advice for better coding in Go. You'll see how to structure projects, how to use concurrency effectively, and best practices for testing - as well as many valuable hints and tips gleaned from real world experience of developing web applications with Go. You'll learn: Get to grips with Go language basics (types, the standard library, tools) Use Go with HTTP Work with images Understand concurrency

Test effectively Master deployment And much more ...

[Building Web Applications and Microservices for the Cloud with Go and React Apress](#)

The Complete Guide to Building Cloud-Based Services Cloud Native Go shows developers how to build massive cloud applications that meet the insatiable demands of today's customers, and will dynamically scale to handle virtually any volume of data, traffic, or users. Kevin Hoffman and Dan Nemeth describe the modern cloud-native application in detail, illuminating factors, disciplines, and habits associated with rapid, reliable cloud-native development. They also introduce Go, a "simply elegant" high-performance language that is especially well-suited for cloud development. You'll walk through creating microservices in Go, adding front-end web components using ReactJS and Flux, and mastering advanced Go-based cloud-native techniques. Hoffman and Nemeth show how to build a continuous delivery pipeline with tools like Wercker, Docker, and Dockerhub; automatically push apps

to leading platforms; and systematically monitor app performance in production. Learn “The Way of the Cloud”: why developing good cloud software is fundamentally about mindset and discipline Discover why Go is ideal for cloud-native microservices development Plan cloud apps that support continuous delivery and deployment Design service ecosystems, and then build them in a test-first manner Push work-in-progress to a cloud Use Event Sourcing and CQRS patterns to react and respond to enormous volume and throughput Secure cloud-based web applications: do’s, don’ts, and options Create reactive applications in the cloud with third-party messaging providers Build massive-scale, cloud-friendly GUIs with React and Flux Monitor dynamic scaling, failover, and fault tolerance in the cloud

Go: Building Web Applications No Starch Press

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.

Echo Quick Start Guide Simon and Schuster

Build real-world, production-ready solutions in Go using cutting-edge technology and techniques About This Book Get up to date with Go and write code capable of delivering massive world-class scale performance and availability Learn to apply the nuances of

the Go language, and get to know the open source community that surrounds it to implement a wide range of start-up quality projects Write interesting and clever but simple code, and learn skills and techniques that are directly transferrable to your own projects Who This Book Is For If you are familiar with Go and are want to put your knowledge to work, then this is the book for you. Go programming knowledge is a must. What You Will Learn Build quirky and fun projects from scratch while exploring patterns, practices, and techniques, as well as a range of different technologies Create websites and data services capable of massive scale using Go's net/http package, exploring RESTful patterns as well as low-latency WebSocket APIs Interact with a variety of remote web services to consume capabilities ranging from authentication and authorization to a fully functioning thesaurus Develop high-quality command-line tools that utilize the powerful shell capabilities and perform well using Go's in-built concurrency mechanisms Build microservices for larger organizations using the Go Kit library Implement a modern document database as well as high-throughput messaging queue technology to put together an architecture that is truly ready to scale Write concurrent programs and gracefully manage the execution of them and communication by smartly using channels Get a feel for app deployment using Docker and Google App Engine In Detail Go is the language of the Internet age, and the latest version of Go comes with major architectural changes. Implementation of the language, runtime, and libraries has changed significantly. The compiler and runtime are now written entirely in Go. The garbage collector is now concurrent

and provides dramatically lower pause times by running in parallel with other Go routines when possible. This book will show you how to leverage all the latest features and much more. This book shows you how to build powerful systems and drops you into real-world situations. You will learn to develop high-quality command-line tools that utilize the powerful shell capabilities and perform well using Go's in-built concurrency mechanisms. Scale, performance, and high availability lie at the heart of our projects, and the lessons learned throughout this book will arm you with everything you need to build world-class solutions. You will get a feel for app deployment using Docker and Google App Engine. Each project could form the basis of a start-up, which means they are directly applicable to modern software markets. Style and approach This book provides fun projects that involve building applications from scratch. These projects will teach you to build chat applications, a distributed system, and a recommendation system.

Learning Go Apress

Your one-stop guide to the common patterns and practices, showing you how to apply these using the Go programming language About This Book This short, concise, and practical guide is packed with real-world examples of building microservices with Go It is easy to read and will benefit smaller teams who want to extend the functionality of their existing systems Using this practical approach will save your money in terms of maintaining a monolithic architecture and demonstrate capabilities in ease of use Who This Book Is For You should have a working knowledge of programming in Go, including writing and compiling basic applications. However, no knowledge of

RESTful architecture, microservices, or web services is expected. If you are looking to apply techniques to your own projects, taking your first steps into microservice architecture, this book is for you. What You Will Learn Plan a microservice architecture and design a microservice Write a microservice with a RESTful API and a database Understand the common idioms and common patterns in microservices architecture Leverage tools and automation that helps microservices become horizontally scalable Get a grounding in containerization with Docker and Docker-Compose, which will greatly accelerate your development lifecycle Manage and secure Microservices at scale with monitoring, logging, service discovery, and automation Test microservices and integrate API tests in Go In Detail Microservice architecture is sweeping the world as the de facto pattern to build web-based applications. Golang is a language particularly well suited to building them. Its strong community, encouragement of idiomatic style, and statically-linked binary artifacts make integrating it with other technologies and managing microservices at scale consistent and intuitive. This book will teach you the common patterns and practices, showing you how to apply these using the Go programming language. It will teach you the fundamental concepts of architectural design and RESTful communication, and show you patterns that provide manageable code that is supportable in development and at scale in production. We will provide you with examples on how to put these concepts and patterns into practice with Go. Whether you are planning a new application or working in an existing monolith, this book will explain and

illustrate with practical examples how teams of all sizes can start solving problems with microservices. It will help you understand Docker and Docker-Compose and how it can be used to isolate microservice dependencies and build environments. We finish off by showing you various techniques to monitor, test, and secure your microservices. By the end, you will know the benefits of system resilience of a microservice and the advantages of Go stack. Style and approach The step-by-step tutorial focuses on building microservices. Each chapter expands upon the previous one, teaching you the main skills and techniques required to be a successful microservice practitioner. [Level Up Your Web Apps With Go](#) Addison-Wesley Professional *** Make sure to send me a photo of the book via my email shared in the introduction. I'll enroll you to the digital product where you'll have access to additional materials like videos and the source code. If you've never thought of using Go for a web API let me teach you. It's easy, quick and it's fun! Together, we'll build a strong, API-first, reusable code base suitable for building a SaaS or web application. By the end of the book you'll have a solid framework to use as the starting point for future projects. I've built two successful SaaS applications in the last four years using these techniques. They are LeadFuze and Roadmap and I use the same stack, techniques and process that'll I teach in this book. Go is a fantastic language, you'll be productive in less than one week. We'll dive deep in to the excellent HTTP package and you'll learn useful knowledge that can be used with any other language. Pre-requisites: The book assumes you already have Go setup and that you've followed some getting

started tutorials and written at least one function by yourself in Go. Basics knowledge of the HTTP requests/responses life-cycle would be helpful. Knowing what a REST API is, HTTP methods, JSON format. The book would be best if you've already built a web application in another language. *Pro Spring Boot 2* Packt Publishing Ltd

Network Programming with Go teaches you how to write clean, secure network software with the programming language designed to make it seem easy. Go combines the best parts of many other programming languages. It's fast, scalable, and designed for high-performance networking and multiprocessing—in other words, it's perfect for network programming. Network Programming with Go is for developers ready to start leveraging Go's ease of use for writing secure, readable, production-ready network code. Early chapters establish a foundation of networking and traffic-routing know-how upon which the rest of the book builds. You'll put that knowledge to use as author Adam Woodbeck guides you through writing programs that communicate using TCP, UDP, Unix sockets, and other features that ensure reliable data transmission. As you progress, you'll explore higher-level network protocols like HTTP and HTTP/2, then build applications that securely interact with servers, clients, and APIs over a network using TLS. In addition, Woodbeck shows you how to create a simple messaging protocol, develop tools for monitoring network traffic, craft a custom web server, and implement best practices for interacting with cloud providers using their SDKs. Along the way, you'll learn:

- IP basics for writing effective network programs, such as IPv4 and IPv6 multicasting,

- ports, and network address translation
- How to use handlers, middleware, and multiplexers to build capable HTTP-based applications with minimal code
- The OSI and TCP/IP models for layered data architectures
- Methods for reading data from/writing data to a network connection, like the type-length-value encoding scheme
- Tools for incorporating authentication and encryption into your applications using TLS, like mutual authentication
- How to serialize data for storage or transmission in Go-friendly formats like JSON, Gob, XML, and protocol buffers
- How to Leverage Go's code generation support to efficiently communicate with gRPC-based network services

So get ready to take advantage of Go's built-in concurrency, rapid compiling, and rich standard library. Because when it comes to writing robust network programs, it's Go time.

Cloud Native Go Pragmatic Bookshelf
Go Web Programming Simon and Schuster

Build full stack web applications with Go, React, Gin, and GopherJS
Pragmatic Bookshelf

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

[Build responsive, cross-platform, graphical applications with the Go programming language](#) "O'Reilly Media, Inc."

This book is a short, concise introduction to computer programming using the language Go. Designed by Google, Go is a general purpose programming language with modern features, clean syntax and a robust well-documented common library, making it an ideal language to learn as your first programming language.

[Develop elegant RESTful APIs with Golang for microservices and the cloud, 2nd Edition](#) Packt Publishing Ltd

An effective guide to learning how to build a large-scale distributed application using the wide range of functionalities in Gin Key Features

Explore the commonly used functionalities of Gin to build web applications Become well-versed with rendering HTML templates with the Gin engine Solve commonly occurring challenges such as scaling, caching, and deployment Book Description Gin is a high-performance HTTP web framework used to build web applications and microservices in Go. This book is designed to teach you the ins and outs of the Gin framework with the help of practical examples. You'll start by exploring the basics of the Gin framework, before progressing to build a real-world RESTful API. Along the way, you'll learn how to write custom middleware and understand the routing mechanism, as well as how to bind user data and validate incoming HTTP requests. The book also demonstrates how to store and retrieve data at scale with a NoSQL database such as MongoDB, and how to implement a caching layer with Redis. Next, you'll understand how to secure and test your API endpoints with authentication protocols such as OAuth 2 and JWT. Later chapters will guide you through rendering HTML templates on the server-

side and building a frontend application with the React web framework to consume API responses. Finally, you'll deploy your application on Amazon Web Services (AWS) and learn how to automate the deployment process with a continuous integration/continuous delivery (CI/CD) pipeline. By the end of this Gin book, you will be able to design, build, and deploy a production-ready distributed application from scratch using the Gin framework. What you will learn

- Build a production-ready REST API with the Gin framework
- Scale web applications with event-driven architecture
- Use NoSQL databases for data persistence
- Set up authentication middleware with JWT and Auth0
- Deploy a Gin-based RESTful API on AWS with Docker and Kubernetes
- Implement a CI/CD workflow for Gin web apps

Who this book is for This book is for Go developers who are comfortable with the Go language and seeking to learn REST API design and development with the Gin framework. Beginner-level knowledge of the Go programming language is required to make the most of this book.

Build SaaS Apps in Go SitePoint

Web scraping is the process of extracting information from the web using various tools that perform scraping and crawling. Go is emerging as the language of choice for scraping using a variety of libraries. This book will quickly explain to you, how to scrape data data from various websites using Go libraries such as Colly and Goquery.

Practical Go Manning

Deep dive into the essential topics in Go programming

KEY FEATURES

- Understand the fundamentals of Go language, its history, purpose and success stories.
- Learn how to work with Variables, Constants, Data types, Operators, Control structures and

- Functions.
- Get familiar and work with the standard Golang libraries.
- Learn how to create custom packages and third-party package installation.
- Understand how concurrency is achieved in Go with the use of Goroutines, Mutex and Channels.
- Understand how an error is handled in Golang and supported libraries.

DESCRIPTION This book is a unique read for both beginners and developers as it extensively covers topics ranging from fundamentals to advanced topics in Go programming. Basics such as Data types, Control structures and Loops in have been explained in-depth. A detailed description of Structs, Interfaces, Polymorphism and Concurrency will enable you to write professional codes using Golang. You will get an idea of error data type and how to recover it in Golang. You will be capable of using standard libraries, create custom packages and install third party packages in Go. Creation of functions and invoking them in Go have been vividly explained. By the end, you will be able to write advanced Golang code and at the same time, develop an application with Golang server.

WHAT YOU WILL LEARN

- Learn how to write codes using Control structures and Loops in Go
- Get familiar with the type of Operators in Go
- Learn how to work with Arrays and Slices in Go
- Get familiar and work with the functions in Go
- Learn how to implement Concurrent programming in Go

WHO THIS BOOK IS FOR This book is for anyone who wants to learn the Golang programming language. Programmers and developers who are currently using Golang can use this book as a reference guide.

TABLE OF CONTENTS

1. Introduction to Go
2. Environment Setup
3. Beginning With Go
4. Variables, Data Types and Constants

5. Operators 6. Control Structures 7. Functions 8. Packages in Go 9. Arrays and Slices 10. Strings 11. Pointers 12. Structures 13. Composition 14. Interfaces and polymorphism 15. Maps 16. Concurrency with Go 17. Mutex & Channels 18. Error Handling 19. Reflection 20. Build Web Application
Get Programming with Go Packt Publishing Ltd

This is the book for Gophers who want to learn how to build distributed systems. You know the basics of Go and are eager to put your knowledge to work. Build distributed services that are highly available, resilient, and scalable. This book is just what you need to apply Go to real-world situations. Level up your engineering skills today. Take your Go skills to the next level by learning how to design, develop, and deploy a distributed service. Start from the bare essentials of storage handling, then work your way through networking a client and server, and finally to distributing server instances, deployment, and testing. All this will make coding in your day job or side projects easier, faster, and more fun. Create your own distributed services and contribute to open source projects. Build networked, secure clients and servers with gRPC. Gain insights into your systems and debug issues with observable services instrumented with metrics, logs, and traces. Operate your own Certificate Authority to authenticate internal web services with TLS. Automatically handle when nodes are added or removed to your cluster with service discovery. Coordinate distributed systems with replicated state machines powered by the Raft consensus algorithm. Lay out your applications and libraries to be modular and easy to maintain. Write CLIs to configure and run your

applications. Run your distributed system locally and deploy to the cloud with Kubernetes. Test and benchmark your applications to ensure they're correct and fast. Dive into writing Go and join the hundreds of thousands who are using it to build software for the real world. What You Need: Go 1.13+ and Kubernetes 1.16+

Go Web Programming

Discover practical techniques to build cloud-native apps that are scalable, reliable, and always available. Key Features Build well-designed and secure microservices. Enrich your microservices with continuous integration and monitoring. Containerize your application with Docker Deploy your application to AWS. Learn how to utilize the powerful AWS services from within your application Book Description Awarded as one of the best books of all time by BookAuthority, Cloud Native Programming with Golang will take you on a journey into the world of microservices and cloud computing with the help of Go. Cloud computing and microservices are two very important concepts in modern software architecture. They represent key skills that ambitious software engineers need to acquire in order to design and build software applications capable of performing and scaling. Go is a modern cross-platform programming language that is very powerful yet simple; it is an excellent choice for microservices and cloud applications. Go is gaining more and more popularity, and becoming a very attractive skill. This book starts by covering the software architectural patterns of cloud applications, as well as practical concepts regarding how to scale, distribute, and deploy those applications. You will also learn how to build a JavaScript-based front-end for

your application, using TypeScript and React. From there, we dive into commercial cloud offerings by covering AWS. Finally, we conclude our book by providing some overviews of other concepts and technologies that you can explore, to move from where the book leaves off. What you will learn

- Understand modern software applications architectures
- Build secure microservices that can effectively communicate with other services
- Get to know about event-driven architectures by diving into message queues such as Kafka, Rabbitmq, and AWS SQS.
- Understand key modern database technologies such as MongoDB, and Amazon's DynamoDB
- Leverage the power of containers
- Explore Amazon cloud services fundamentals
- Know how to utilize the power of the Go language to access key services in the Amazon cloud such as S3, SQS, DynamoDB and more.
- Build front-end applications using ReactJS with Go
- Implement CD for modern applications

Who this book is for
This book is for developers who want to begin building secure, resilient, robust, and scalable Go applications that are cloud native. Some knowledge of the Go programming language should be sufficient. To build the front-end application, you will also need some knowledge of JavaScript programming.

Go Web Programming O'Reilly Media

Explore the fundamentals of systems programming starting from kernel API and filesystem to network programming and process communications

Key Features

- Learn how to write Unix and Linux system code in Golang v1.12
- Perform inter-process communication using pipes, message queues, shared memory, and semaphores
- Explore modern Go features such as goroutines and channels that facilitate systems

programming

Book Description

System software and applications were largely created using low-level languages such as C or C++. Go is a modern language that combines simplicity, concurrency, and performance, making it a good alternative for building system applications for Linux and macOS. This Go book introduces Unix and systems programming to help you understand the components the OS has to offer, ranging from the kernel API to the filesystem, and familiarize yourself with Go and its specifications. You'll also learn how to optimize input and output operations with files and streams of data, which are useful tools in building pseudo terminal applications. You'll gain insights into how processes communicate with each other, and learn about processes and daemon control using signals, pipes, and exit codes. This book will also enable you to understand how to use network communication using various protocols, including TCP and HTTP. As you advance, you'll focus on Go's best feature-concurrency helping you handle communication with channels and goroutines, other concurrency tools to synchronize shared resources, and the context package to write elegant applications. By the end of this book, you will have learned how to build concurrent system applications using Go

What you will learn

- Explore concepts of system programming using Go and concurrency
- Gain insights into Golang's internals, memory models and allocation
- Familiarize yourself with the filesystem and IO streams in general
- Handle and control processes and daemons' lifetime via signals and pipes
- Communicate with other applications effectively using a network
- Use various encoding formats to serialize complex data structures
- Become well-versed in concurrency with

channels, goroutines, and sync Use concurrency patterns to build robust and performant system applications Who this book is for If you are a developer who wants to learn system programming with Go, this book is for you. Although no knowledge of Unix and Linux system programming is necessary, intermediate knowledge of Go will help you understand the concepts covered in the book

Hands-On Full Stack Development with Go Simon and Schuster

Go is rapidly becoming the preferred language for building web services. There are plenty of tutorials available that teach Go's syntax to developers with experience in other programming languages. But tutorials aren't enough. They don't teach Go's idioms, so developers end up recreating patterns that don't make sense in a Go context. This practical guide provides the essential background you need to write clear and idiomatic Go. No matter your level of experience, you'll learn how to think like a Go developer. Author Jon Bodner reveals design patterns that experienced Go developers have adopted and the rationale for them. You'll learn how to structure your project and choose the proper tools and libraries to create successful software. Learn how to write idiomatic code in Go and design a Go project Understand the reasons for the design decisions in Go Set up a Go development environment for a solo developer or team Learn how and when to use reflection, unsafe, and CGo Learn how Go's features allow the language to run efficiently Know which Go features you should use sparingly, or not at all Learn the future of Go, including Generics

Go Programming Blueprints Addison-Wesley Professional

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.

Learning Go Programming John Wiley & Sons

Summary Get Programming with Go introduces you to the powerful Go language without confusing jargon or high-level theory. By working through 32 quick-fire lessons, you'll quickly pick up the basics of the innovative Go programming language! Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Go is a small programming language designed by Google to tackle big problems. Large projects mean large teams with people of varying levels of experience. Go offers a small, yet capable, language that can be understood and used by anyone, no matter their experience. About the Book Hobbyists, newcomers, and professionals alike can benefit from a fast, modern language; all you need is the right resource! Get Programming with Go provides a hands-on introduction to Go language fundamentals, serving as a solid foundation for your future programming projects. You'll master Go syntax, work with types and functions, and explore bigger ideas like state and concurrency, with plenty of exercises to lock in what you learn. What's inside Language concepts like slices, interfaces, pointers, and concurrency Seven capstone projects featuring spacefaring gophers, Mars rovers, ciphers, and simulations All examples run in the Go Playground - no installation required! About the Reader This book is for anyone familiar with computer programming, as well as anyone with the desire to learn. About the Author Nathan Youngman organizes the Edmonton Go meetup and is a mentor with Canada Learning Code. Roger Peppé contributes

to Go and runs the Newcastle upon Tyne Go meetup. Table of Contents Unit 0 - GETTING STARTED Get ready, get set, Go Unit 1 - IMPERATIVE PROGRAMMING A glorified calculator Loops and branches Variable scope Capstone: Ticket to Mars Unit 2 - TYPES Real numbers Whole numbers Big numbers Multilingual text Converting between types Capstone: The Vigenère cipher Unit 3 - BUILDING BLOCKS Functions Methods First-class functions Capstone: Temperature tables Unit 4 - COLLECTIONS Arrayed in splendor Slices: Windows into arrays A bigger slice The ever-versatile map Capstone: A slice of life Unit 5 - STATE AND BEHAVIOR A little structure Go's got no class Composition and forwarding Interfaces Capstone: Martian animal sanctuary Unit 6 - DOWN THE GOPHER HOLE A few pointers Much ado about nil To err is human Capstone: Sudoku rules Unit 7 - CONCURRENT PROGRAMMING Goroutines and concurrency Concurrent state Capstone: Life on Mars [Build modern and concurrent applications for Unix and Linux systems using Golang](#) Simon and Schuster Learn to build, secure, deploy, and manage your serverless application in Golang with AWS Lambda Key Features Implement AWS lambda to build scalable and cost-efficient applications in Go Design and set the data flow between cloud services and custom business logic Learn to design Lambda functions using real-world examples and implementation scenarios Book Description Serverless architecture is popular in the tech community due to AWS Lambda. Go is simple to learn, straightforward to work with, and easy to read for other developers; and now it's been heralded as a supported language for AWS Lambda. This book is your optimal guide to designing a Go serverless application

and deploying it to Lambda. This book starts with a quick introduction to the world of serverless architecture and its benefits, and then delves into AWS Lambda using practical examples. You'll then learn how to design and build a production-ready application in Go using AWS serverless services with zero upfront infrastructure investment. The book will help you learn how to scale up serverless applications and handle distributed serverless systems in production. You will also learn how to log and test your application. Along the way, you'll also discover how to set up a CI/CD pipeline to automate the deployment process of your Lambda functions. Moreover, you'll learn how to troubleshoot and monitor your apps in near real-time with services such as AWS CloudWatch and X-ray. This book will also teach you how to secure the access

with AWS Cognito. By the end of this book, you will have mastered designing, building, and deploying a Go serverless application. What you will learn

- Understand how AWS Lambda works and use it to create an application
- Understand how to scale up serverless applications
- Design a cost-effective serverless application in AWS
- Build a highly scalable and fault-tolerant CI/CD pipeline
- Understand how to troubleshoot and monitor serverless apps in AWS
- Discover the working of APIs and single page applications
- Build a production-ready serverless application in Go

Who this book is for This book is for Go developers who would like to learn about serverless architecture. Go programming knowledge is assumed. DevOps and Solution Architects who are interested in building serverless applications in Go can also choose this book.