

The
Pragmatic
Programmers

Effective Go Recipes

Fast Solutions to Common Tasks



Miki Tebeka

edited by Margaret Eldridge

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Preface

Cooking with Go

Go is a simple language. The Go 1.20 language specification¹ is about 105 pages; in contrast, the Java 20 language specification² comes to 854 pages. But even though Go is simple, it doesn't mean you can't do a lot with it.

As any TV chef will repeatedly tell you, you can make amazing dishes with a few basic, simple ingredients. The same goes for software—you can build sleek, fast, and useful applications using a simple language like Go.

A good way to learn to cook is by following recipes. These recipes might be from professionals or handed down from generation to generation. At the beginning, you'll follow recipes to the letter. But once you get more experience, you'll start to diverge and add your own touch.

The same goes for programming recipes. If you're a novice, you'll probably want to follow the recipes almost to the letter. But once you gain experience, you'll develop your own way of doing things. Hopefully, once at the expert level, you'll share your own recipes.

Who Are You?

This book is written for Go developers (doh!). The recipes in this book vary in difficulty. Some recipes will be a good fit for a Go beginner, while others will help more advanced developers.

This book won't teach you Go—you'll find many good books, tutorials, and courses out there for that (I teach some of them). To use this book, you should also be familiar with working in the terminal and know some client-server terms and technologies, such as HTTP and sockets.

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1. <https://go.dev/ref/spec>
 2. <https://docs.oracle.com/javase/specs/jls/se20/jls20.pdf>

Reading This Book

This book is a collection of recipes. For each recipe, I tried to set the stage for when it is applicable, provide some context, light some candles ... (strike the last one, it's not that kind of book).

The recipes are split into sections, but there is overlap—you can talk about errors without knowing about interfaces. In each section, the recipes are sorted according to their difficulty level. Feel free to roam around; what I think as difficult might be easy for you.

A Foolish Consistency Is the Hobgoblin of Little Minds

We use some conventions in this book.

Code samples and terminal sessions look like this:

```
fmt.Println("Hello Gophers ♥")
```

Modern terminals are much wider than the common page width. In some cases I had to truncate output using ... or break long lines using \. For example:

```
$ go test -run NONE -fuzz . -fuzztime 10s
fuzz: elapsed: 0s, gathering baseline coverage: 0/2 completed
fuzz: elapsed: 0s, gathering baseline coverage: 2/2 completed, \
    now fuzzing with 12 workers
...
```

The code and examples show output from Go version 1.20. Some of the output might change in the future, but Go has a compatibility promise—things shouldn't change that much.

Wait! There's More! (online)

At the book's website³ you can find the full source code used in this book. You'll also find a link to the errata page—please help your fellow readers and report any issues you find. And finally, you'll find a link to a discussion forum about the book.

Let's get cooking!

3. <https://pragprog.com/titles/mtgo>