

# BUILDING WEB APPS WITH GO



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# Table of Contents

Introduction	0
Go Makes Things Simple	1
The net/http package	2
Creating a Basic Web App	3
Deployment	4
URL Routing	5
Middleware	6
Rendering	7
JSON	7.1
HTML Templates	7.2
Using The render package	7.3
Testing	8
Unit Testing	8.1
End to End Testing	8.2
Controllers	9
Databases	10
Tips and Tricks	11
Moving Forward	12

# Introduction

Welcome to **Building Web Apps with Go**! If you are reading this then you have just started your journey from noob to pro. No seriously, web programming in Go is so fun and easy that you won't even notice how much information you are learning along the way!

Keep in mind that there are still portions of this book that are incomplete and need some love. The beauty of open source publishing is that I can give you an incomplete book and it is still of value to you.

Before we get into all the nitty gritty details, let's start with some ground rules:

## Prerequisites

To keep this tutorial small and focused, I'm assuming that you are prepared in the following ways:

1. You have installed the [Go Programming Language](#).
2. You have setup a `GOPATH` by following the [How to Write Go Code](#) tutorial.
3. You are somewhat familiar with the basics of Go. (The [Go Tour](#) is a pretty good place to start)
4. You have installed all the [required packages](#)
5. You have installed the [Heroku Toolbelt](#)
6. You have a [Heroku](#) account

## Required Packages

For the most part we will be using the built in packages from the standard library to build out our web apps. Certain lessons such as Databases, Middleware and URL Routing will require a third party package. Here is a list of all the go packages you will need to install before starting:

Name	Import Path	Description
<a href="#">httprouter</a>	github.com/julienschmidt/httprouter	A high performance HTTP request router that scales well
<a href="#">Negroni</a>	github.com/codegangsta/negroni	Idiomatic HTTP Middleware
<a href="#">Black Friday</a>	github.com/russross/blackfriday	a markdown processor
<a href="#">Render</a>	gopkg.in/unrolled/render.v1	Easy rendering for JSON, XML, and HTML
<a href="#">SQLite3</a>	github.com/mattn/go-sqlite3	sqlite3 driver for go

You can install (or update) these packages by running the following command in your console

```
go get -u <import_path>
```

For instance, if you wish to install Negroni, the following command would be:

```
go get -u github.com/codegangsta/negroni
```

# Go Makes Things Simple

If you have built a web application before, you surely know that there are quite a lot of concepts to keep in your head. HTTP, HTML, CSS, JSON, databases, sessions, cookies, forms, middleware, routing and controllers are just a few among the many things your web app *may* need to interact with.

While each one of these things *can be important* in the building of your web applications, not every one of them *is important* for any given app. For instance, a web API may just use JSON as its serialization format, thus making concepts like HTML not relevant for that particular web app.

## The Go Way

The Go community understands this dilemma. Rather than rely on large, heavyweight frameworks that try to cover all the bases, Go programmers pull in the bare necessities to get the job done. This minimalist approach to web programming may be off-putting at first, but the result of this effort is a much simpler program in the end.

**Go makes things simple**, it's as easy as that. If we train ourselves to align with the "Go way" of programming for the web, we will end up with more **simple**, **flexible**, and **maintainable** web applications.

## Power in Simplicity

As we go through the exercises in this book, I think you will be surprised by how simple some of these programs can be whilst still affording a bunch of functionality.

When sitting down to craft your own web applications in Go, think hard about the components and concepts that your app will be focused on, and use just those pieces. This book will be covering a wide array of web topics, but do not feel obligated to use them all. In the words of our friend Lonestar, "*Take only what you need to survive*".

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