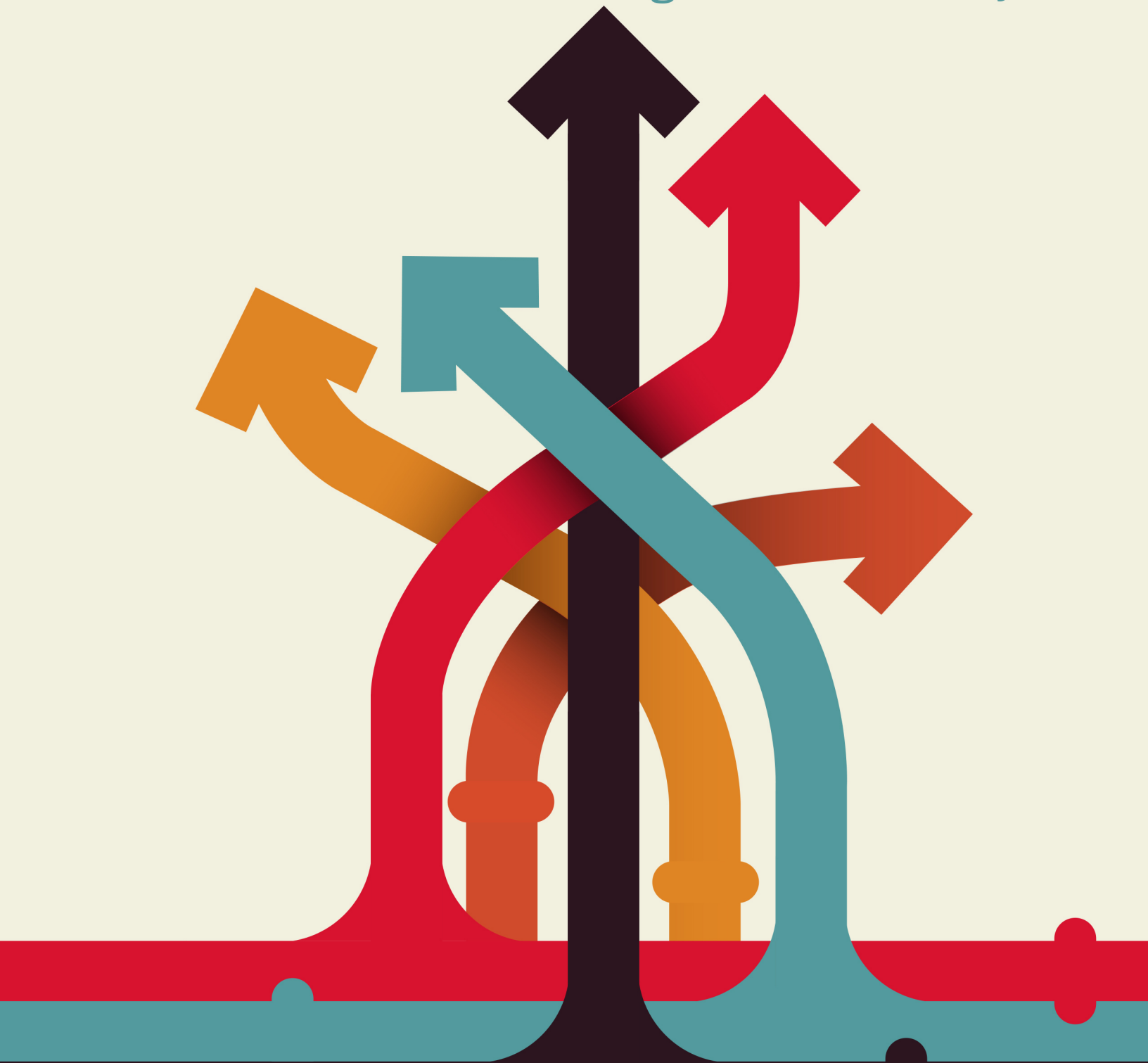


# EASY LARAVEL 5

A Hands On Introduction Using a Real-World Project



W. JASON GILMORE

[easylaravelbook.com](http://easylaravelbook.com)

# Easy Laravel 5

## A Hands On Introduction Using a Real-World Project

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## Also By **W. Jason Gilmore**

Easy Active Record for Rails Developers

*Dedicated to The Champ, The Princess, and Little Winnie. Love, Daddy*

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# Introduction

I've spent the vast majority of the past 15 years immersed in the PHP language. During this time I've written seven PHP-related books, including a bestseller that has been in print for more than ten years. Along the way I've worked on dozens of PHP-driven applications for clients ranging from unknown startups to globally-recognized companies, penned hundreds of articles about PHP and web development for some of the world's most popular print and online publications, and instructed hundreds of developers in the United States and Europe. So you might be surprised to learn that a few years ago I became rather disenchanted with PHP. It felt like there were more exciting developments taking place within other programming communities, and wanting to be part of that buzz, I wandered off. In recent years, I spent the majority of my time working on a variety of projects including among others several ambitious Ruby on Rails applications and even a pretty amazing Linux-powered robotic device.

Of course, even during this time in the wilderness I kept tabs on the PHP community, watching with great interest as numerous talented developers worked tirelessly to inject that missing enthusiasm back into the language. Nils Adermann and Jordi Boggiano released the [Composer](https://getcomposer.org/)<sup>1</sup> dependency manager. The [Framework Interoperability Group](http://www.php-fig.org/)<sup>2</sup> was formed. And in 2012 the incredibly talented [Taylor Otwell](http://taylorotwell.com/)<sup>3</sup> created the [Laravel framework](http://laravel.com/)<sup>4</sup> which out of nowhere became the most popular PHP project on GitHub, quickly surpassing projects and frameworks that had been actively developed for years.

At some point I spent some time with Laravel and after a scant 30 minutes knew it was the real deal. Despite being the latest in a string of high profile PHP frameworks, Laravel is incredibly polished, offering a shallow learning curve, convenient PHPUnit integration, a great object-relational mapping solution called Eloquent, and a wide variety of other great features. The reasoning behind this pragmatic approach is laid bare in [the project documentation](http://laravel.com/docs/master)<sup>5</sup>, in which the Laravel development team describes their project goals:

Laravel aims to make the development process a pleasing one for the developer without sacrificing application functionality. Happy developers make the best code. To this end, we've attempted to combine the very best of what we have seen in other web frameworks, including frameworks implemented in other languages, such as Ruby on Rails, ASP.NET MVC, and Sinatra.

Now that's something to get excited about! In the pages to follow I promise to add you to the ranks of fervent Laravel users by providing a wide-ranging and practical introduction to its many features.

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<sup>1</sup><https://getcomposer.org/>

<sup>2</sup><http://www.php-fig.org/>

<sup>3</sup><http://taylorotwell.com/>

<sup>4</sup><http://laravel.com/>

<sup>5</sup><http://laravel.com/docs/master>

## What's New in Laravel 5?

Laravel 5 is an ambitious step forward for the popular framework, offering quite a few new features. In addition to providing newcomers with a comprehensive overview of Laravel's fundamental capabilities, I'll devote special coverage to several of these new features, including:

- **New Project Structure:** Laravel 5 projects boast a revamped project structure. In Chapter 1 I'll review every file and directory comprising the new structure so you know exactly where to find and place project files and other assets..
- **Improved Environment Configuration:** Laravel 5 adopts the [PHP dotenv](https://github.com/vlucas/phpdotenv)<sup>6</sup> package for environment configuration management. I think Laravel 4 users will really find the new approach to be quite convenient and refreshing. I'll introduce you to this new approach in Chapter 1.
- **Route Annotations:** The `routes.php` file remains in place for Laravel 5, however users now have the choice of alternatively using route annotations for route definitions. I'll show you how to use route annotations in Chapter 2.
- **Elixir:** [Elixir](https://github.com/laravel/elixir)<sup>7</sup> offers Laravel users a convenient way to automate various development tasks using [Gulp](http://gulpjs.com/)<sup>8</sup>, among them CSS and JavaScript compilation, JavaScript linting, image compression, and test execution. I'll introduce you to Elixir in Chapter 2.
- **Flysystem:** Laravel 5 integrates [Flysystem](https://github.com/thephpleague/flysystem)<sup>9</sup>, which allows you to easily integrate your application with remote file systems such as Dropbox, S3 and Rackspace.
- **Form Requests:** Laravel 5's new form requests feature greatly reduces the amount of code you'd otherwise have to include in your controller actions when validating and processing form data. In Chapter 5 I'll introduce you to this great new feature.
- **Middleware:** Laravel 5 introduces easy middleware integration. Middleware is useful when you want to interact with your application's request and response process in a way that doesn't pollute your application-specific logic. Chapter 7 is devoted entirely to this topic.
- **Easy User Authentication:** User account integration is the norm these days, however integrating user registration, login, logout, and password recovery into an application is often tedious and time-consuming. Laravel 5 all but removes this hassle by offering these features as a turnkey solution. I'll introduce you to these exciting capabilities in Chapter 6.

## About this Book

This book is broken into eight chapters, each of which is briefly described below.

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<sup>6</sup><https://github.com/vlucas/phpdotenv>

<sup>7</sup><https://github.com/laravel/elixir>

<sup>8</sup><http://gulpjs.com/>

<sup>9</sup><https://github.com/thephpleague/flysystem>

## Chapter 1. Introducing Laravel

In this opening chapter you'll learn how to create and configure your Laravel project both using your existing PHP development environment and Laravel Homestead. I'll also show you how to properly configure your environment for effective Laravel debugging, and how to expand Laravel's capabilities by installing several third-party Laravel packages that promise to supercharge your development productivity. We'll conclude the chapter with an introduction to PHPUnit, showing you how to create and execute your first Laravel unit test!

## Chapter 2. Managing Your Project Controllers, Layout, Views, and Other Assets

In this chapter you'll learn how to create controllers and actions, and define the routes used to access your application endpoints using Laravel 5's new route annotations feature. You'll also learn how to create the pages (views), work with variable data and logic using the Blade templating engine, and reduce redundancy using layouts and view helpers. I'll also introduce Laravel Elixir, a new feature for managing [Gulp](http://gulpjs.com/)<sup>10</sup> tasks, and show you how to integrate the popular Bootstrap front-end framework and jQuery JavaScript library. We'll conclude the chapter with several examples demonstrating how to test your controllers and views using PHPUnit.

## Chapter 3. Talking to the Database

In this chapter we'll turn our attention to the project's data. You'll learn how to integrate and configure the database, create and manage models, and interact with the database through your project models. You'll also learn how to deftly configure and traverse model relations, allowing you to greatly reduce the amount of SQL you'd otherwise have to write to integrate a normalized database into your application.

## Chapter 4. Model Relations, Scopes, and Other Advanced Features

Building and navigating table relations is an standard part of the development process even when working on the most unambitious of projects, yet this task is often painful when working with many web frameworks. Fortunately, using Laravel it's easy to define and traverse these relations. In this chapter I'll show you how to define, manage, and interact with one-to-one, one-to-many, many-to-many, has many through, and polymorphic relations. You'll also learn about a great feature known as scopes which encapsulate the logic used for more advanced queries, thereby hiding it from your controllers.

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<sup>10</sup><http://gulpjs.com/>



## Chapter 5. Forms Integration

Your application will almost certainly contain at least a few web forms, which will likely interact with the models, meaning you'll require a solid grasp on Laravel's form generation and processing capabilities. While creating simple forms is fairly straightforward, things can get complicated fast when implementing more ambitious solutions such as forms involving multiple models. In this chapter I'll go into extensive detail regarding how you can integrate forms into your Laravel applications, introducing Laravel 5's new form requests feature, covering both Laravel's native form generation solutions as well as several approaches offered by popular packages. You'll also learn how to test your forms in an automated fashion, meaning you'll never have to repetitively complete and submit forms again!

## Chapter 6. Integrating Middleware

Laravel 5 introduces middleware integration. In this chapter I'll introduce you to the concept of middleware and the various middleware solutions bundled into Laravel 5. You'll also learn how to create your own middleware solution!

## Chapter 7. Authenticating and Managing Your Users

Most modern applications offer user registration and preference management features in order to provide customized, persisted content and settings. In this chapter you'll learn how to integrate user registration, login, and account management capabilities into your Laravel application.

## Chapter 8. Deploying, Optimizing and Maintaining Your Application

"Deploy early and deploy often" is an oft-quoted mantra of successful software teams. To do so you'll need to integrate a painless and repeatable deployment process, and formally define and schedule various maintenance-related processes in order to ensure your application is running in top form. In this chapter I'll introduce the Laravel 5 Command Scheduler, which you can use to easily schedule rigorously repeating tasks. I'll also talk about optimization, demonstrating how to create a faster class router and how to cache your application routes. Finally, I'll demonstrate just how easy it can be to deploy your Laravel application to the popular hosting service Heroku, and introduce Laravel Forge.

## Introducing the TODOParrot Project

Learning about a new technology is much more fun and practical when introduced in conjunction with real-world examples. Throughout this book I'll introduce Laravel concepts and syntax using code found in [TODOParrot](http://todoparrot.com)<sup>11</sup>, a web-based task list application built atop Laravel.

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<sup>11</sup><http://todoparrot.com>

The TODOParrot code is available on GitHub at <https://github.com/wjgilmore/todoparrot><sup>12</sup>. It's released under the MIT license, so feel free to download the project and use it as an additional learning reference or in any other manner adherent to the licensing terms.

## About the Author

W. Jason Gilmore<sup>13</sup> is a software developer, consultant, and bestselling author. He has spent much of the past 15 years helping companies of all sizes build amazing solutions. Recent projects include a Rails-driven e-commerce analytics application for a globally recognized publisher, a Linux-powered autonomous environmental monitoring buoy, and a 10,000+ product online store.

Jason is the author of seven books, including the bestselling “Beginning PHP and MySQL, Fourth Edition”, “Easy Active Record for Rails Developers”, and “Easy PHP Websites with the Zend Framework, Second Edition”.

Over the years Jason has published more than 300 articles within popular publications such as Developer.com, JSMag, and Linux Magazine, and instructed hundreds of students in the United States and Europe. Jason is cofounder of the wildly popular [CodeMash Conference](http://www.codemash.org)<sup>14</sup>, the largest multi-day developer event in the Midwest.

Away from the keyboard, you'll often find Jason playing with his kids, hunched over a chess board, and having fun with DIY electronics.

Jason loves talking to readers and invites you to e-mail him at [wj@wjgilmore.com](mailto:wj@wjgilmore.com).

## Errata and Suggestions

Nobody is perfect, particularly when it comes to writing about technology. I've surely made some mistakes in both code and grammar, and probably completely botched more than a few examples and explanations. If you would like to report an error, ask a question or offer a suggestion, please e-mail me at [wj@wjgilmore.com](mailto:wj@wjgilmore.com).

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<sup>12</sup><https://github.com/wjgilmore/todoparrot>

<sup>13</sup><http://www.wjgilmore.com>

<sup>14</sup><http://www.codemash.org>