Laravel – A Trending PHP Framework

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ABSTRACT

In this paper we quick study about laravel framework with PHP. Generally, framework is a real or theoretical configuration intended to serve as a support or guide for the webpage programming application. Its provide various pre-defined tools and directory files for make an easy project. PHP is the most frequently used server side scripting language. It designed mainly for web development and also used as building dynamic web pages. Nearly 82% of web developers are use PHP scripting for developing good and comprehensive webpage. Laravel is a framework in PHP. It has a more flexible tool for developing an expensive webpage with short period and more proficient. Laravel is a first framework introducing routing concept.

KEYWORDS: Laravel, framework, MVC, PHP

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I. INTRODUCTION
1.1. Overview
Laravel is an open-source PHP framework, which is robust and easy to understand. It follows a model-view-controller design pattern. Laravel reuses the existing components of different frameworks which helps in creating a web application. The web application thus designed is more structured and pragmatic.

Laravel offers a rich set of functionalities which incorporates the basic features of PHP frameworks like CodeIgniter, Yii and other programming languages like Ruby on Rails. Laravel has a very rich set of features which will boost the speed of web development.

1.2. Features
Laravel offers the following key features which makes it an ideal choice for designing web applications –

Modularity
Laravel provides 20 built in libraries and modules which helps in enhancement of the application. Every module is integrated with Composer dependency manager which eases updates.

Testability
Laravel includes features and helpers which helps in testing through various test cases. This feature helps in maintaining the code as per the requirements.

Routing
Laravel provides a flexible approach to the user to define routes in the web application. Routing helps to scale the application in a better way and increases its performance.

Configuration Management
A web application designed in Laravel will be running on different environments, which means that there will be a constant change in its configuration. Laravel provides a consistent approach to handle the configuration in an efficient way.

E-mail
Laravel includes a mail class which helps in sending mail with rich content and attachments from the web application.

Authentication
User authentication is a common feature in web applications. Laravel eases designing authentication as it includes features such as register, forgot password and send password reminders.

II. ANALYSIS

2.1. Advantages of Laravel

Laravel offers you the following advantages, when you are designing a web application based on it –

➢ The web application becomes more scalable, owing to the Laravel framework.

➢ Considerable time is saved in designing the web application, since Laravel reuses the components from other framework in developing web application.

➢ It includes namespaces and interfaces, thus helps to organize and manage resources.

Composer

Composer is a tool which includes all the dependencies and libraries. It allows a user to create a project with respect to the mentioned framework (for example, those used in Laravel installation). Third party libraries can be installed easily with help of composer.

All the dependencies are noted in composer. Son file which is placed in the source folder.

Artisan

Command line interface used in Laravel is called Artisan. It includes a set of commands which assists in building a web application. These commands are incorporated from Symphony framework, resulting in add-on features in Laravel 5.1

2.2. Installation

Laravel utilizes Composer to manage its dependencies. So, before using Laravel, make sure you have Composer installed on your machine.

Via Laravel Installer
First, download the Laravel installer using Composer:
Composer global require laravel/installer

Make sure to place Composer's system-wide vendor bin directory in your $PATH so the laravel executable can be located by your system. This directory exists in different locations based on your operating system; however, some common locations include:

➢ macOS: $HOME/.composer/vendor/bin
➢ Windows: %USERPROFILE%\AppData\Roaming\Composer\vendor\bin
➢ GNU / Linux Distributions: $HOME/.config/composer/vendor/bin or $HOME/.composer/vendor/bin

You could also find the composer's global installation path by running composer global about and looking up from the first line.
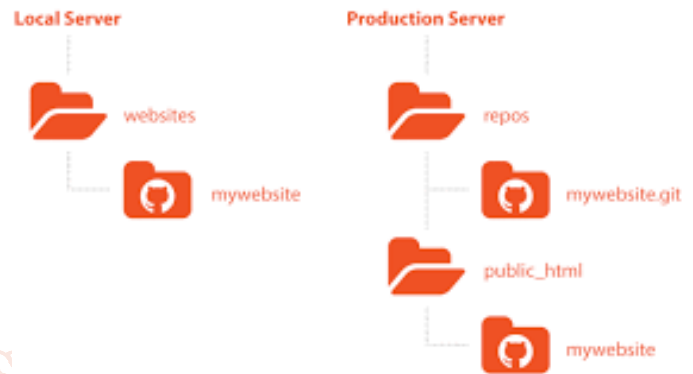
Once installed, the laravel new command will create a fresh Laravel installation in the directory you specify. For instance, laravel new blog will create a directory named blog containing a fresh Laravel installation with all of Laravel's dependencies already installed:
Laravel new blog

2.3. Directory Structure

The default Laravel application structure is to provide a great starting point for both large and small applications. Of course,

we are free to put in order our application however we like that. Laravel imposes almost no boundaries on where any given class is located in code- as long as Composer can auto load the class.

Many programmers are confused by the lack of a models directory. Some programmers refer to an application's "model" as the entirety of all of its business logic, some others are refer to "models" as classes that interrelate with a RDBMS. So in this directory concept eloquent models are followed to the development of webpage.

2.4. Laravel Framework Architecture

➢ **Bundles** and **composer** provide number of bundle modular packaging system and dependencies.

➢ **Routing** - The easiest to manage and abstract way of routing. It just makes everything hassle free and the abstraction provided takes out each and every complexity.

➢ **Eloquent ORM support** - Another service provided to abstract and automate the model part. Relationships and mapping of database with our application with a simple convention over configuration technique.

➢ **Migrations** - A way to version our database scripts in much elegant manner. No need to keep all the checks on migrations. A team working on a project can just pull the given migration and all is set and ready to go.

➢ **Queue management** - To abstract the redundant tasks and get them queued behind the scenes and make user response time much faster.

➢ In-house support for **Redis**. It can also be extended to **memcached**.

➢ **Dependency Injection** - Easy testing and automating craving loading.

➢ **Artisan** - Making power line apps in a moment.

2.5. PHP

The **PHP Hypertext Preprocessor (PHP)** is a programming language that allows web developers to create dynamic content that interacts with databases. PHP is basically used for developing web based software applications. This tutorial helps you to build your base with PHP.

Five important characteristics make PHP's practical nature possible –

➢ Simplicity
➢ Efficiency
➢ Security
➢ Flexibility
➢ Familiarity

III. Laravel vs CodeIgniter

Both are popular choices in the market; let us discuss some of the major difference:

➢ CodeIgniter does not support ORM while Laravel enables us as a developer to take advantage of eloquent object-relational mapping ORM. We can use the ORM system to work with varieties of databases more efficiently by Active Record implementation. Eloquent Object Relational Mapping further allows the developer to interact with databases directly through the specific model of individual database tables. A developer can even use the model to achieve common tasks like inserting new records and running database queries.

➢ CodeIgniter more database compared to Laravel, Database supported by both framework are following MySQL, Microsoft Bi, PostgreSQL and MongoDB Additional database supported by Codeigniter are following ORACLE, Microsoft SQL Server, oriented, IBM DB2, and JDBC compatible.

➢ CodeIgniter required the developer to create and maintain modules by using Modular Extension additionally, while Laravel is designed with built-in modularity features. Which enables developers to divide a large project into small modules through the bundle. We can further reuse these modules across multiple projects.

➢ Many developers have found the issue in CodeIgniter application on PHP 7 platform while these are not found in case of Laravel

➢ CodeIgniter does not provide any specific features to simplify database schema migration. To do it required lots of efforts. Laravel makes it easy by the database agnostic migrations feature provided by it. This makes easier for Developers to modify and share the database schemas of the application without writing complex code to perform this operation. We can further develop database schemas of the application easily by combining the database agnostic migration with the schema builder provided by Laravel Framework.

➢ CodeIgniter does not provide built-in template engine. The programmer needs to integrate the framework with robust template engines like Smarty to do common tasks and boost the performance of web applications. Laravel provides inbuilt support robust template engine Blade. This template engine enables PHP Developers to optimize the performance of the sites by enhancing and manipulating various views

➢ CodeIgniter does not provide features to simplify the development of REST APIs. Developers have to write more code to create custom REST APIs while developing web applications with CodeIgniter framework. In the case of Laravel Restful Controllers provided by it enables Developers to build REST APIs without putting extra time and efforts We can simply set the $restful property as true in the Restful Controller to build custom REST APIs without writing extra code.
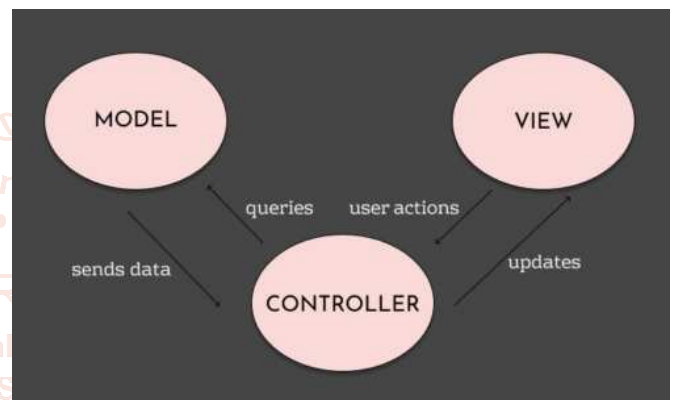
IV. MVC Architecture

MVC is an acronym for 'Model View Controller'. It represents architecture developers adopt when building applications. With the MVC architecture, we look at the application structure with regards to how the data flow of our application works

MVC is a software architecture…that separates domain/application/business…logic from the rest of the user interface. It does this by separating the application into three parts: the model, the view, and the controller.

The model manages fundamental behaviors and data of the application. It can respond to requests for information, respond to instructions to change the state of its information, and even notify observers in event-driven systems when information changes. This could be a database or any number of data structures or storage systems. In short, it is the data and data-management of the application.

The view effectively provides the user interface element of the application. It'll render data from the model into a form that is suitable for the user interface.

The controller receives user input and makes calls to model objects and the view to perform appropriate actions.

V. CONCLUSION

Laravel is a relatively new PHP framework but happens to be the most popular framework among developers. It has a wide series of features. This PHP web app framework with a graceful syntax makes web development quick and effortless. Ordinary processes like sessions, caching and routing are simplified for the user. Since it is built upon robust Symfony components, Laravel has a strong base of reliable and tested code.

The incredible **features of Laravel** have made it one of the most loved frameworks nowadays. Apart from this, extensive community support is provided for its users, which makes it approachable and understandable by all its users. Laravel is scalable and helps in software delivery in a fast and cost-effective manner. It is, therefore, not a big problem finding developers to work on this framework. We at Multidots have skilled taskforce, which can turn your ideas into reality. The incredible **features of Laravel** have made it one of the most loved frameworks nowadays. Apart from this, extensive community support is provided for its users, which makes it approachable and understandable by all its users. Laravel is scalable and helps in software delivery in a fast and cost-effective manner. It is, therefore, not a big problem finding developers to work on this framework. We at Multidots have skilled taskforce, which can turn your ideas into reality.

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