

UDC 004.021

ANALYSIS OF THE MOST COMMON PHP FRAMEWORKS

VLADISLAV RADCHENKO, DMITRY PYATKIN

Polotsk State University, Belarus

In this article we review the pros and cons of PHP frameworks using.

PHP Framework Review. Currently, PHP is one of the most popular scripting programming languages that allows you to create a large number of different Internet projects: from simple websites to large high-loaded e-commerce projects. Fast Internet development has led to the creation of numerous sites: business cards, corporate sites, promotional sites, portfolios, blogs, catalogs, portals, forums, online stores, large individual projects.

To facilitate the development of sites, programmers begin to reuse pieces of code, grouping them into various modules and components, and combining into special sets of ready-made tools, which are called frameworks.

Framework is a ready frame with a set of modules, components, extensions for quick, simple and high-quality software development.

PHP frameworks allow you to:

- accelerate the development of web applications;
- write simple and high-quality code;
- reuse code in projects;
- scale projects easily;
- use modern programming practices;
- test software code effectively;
- ensure project safety.

In this article we will consider PHP Laravel framework and Yii framework and analyse their pros and cons.

Laravel. Laravel is a free open source PHP framework created by Taylor Otwell for developing web applications using the MVC architectural pattern.

We can say that the rest of the PHP frameworks have affected Laravel's emergence.

Laravel is based on the components of Symfony framework (which will also be described below).

The Laravel framework is very popular among Western web application developers.

With the help of the Composer package manager, Laravel framework makes it easy to install and connect various components for use in a web application.

The implementation of the ActiveRecord - Eloquent ORM template allows you to establish relations between database objects of a web application and build convenient queries for data manipulation.

The class auto-loading mechanism allows you to load class files when they are needed without explicitly loading or including them. This gives you ease in running your application by loading those files automatically which are needed every time.

A convenient migration system helps simplify the deployment and updating of a web application.

Laravel has built-in support for the Blade template engine, with the help of which you can make simple representations of a web application using a special syntax.

When creating an application, you can use Artisan, a command line interface for entering embedded commands, as well as creating your own.

Laravel has many useful features that allow you to make the process of developing web applications quick, simple and of high quality.

Regarding these functions we can highlight `dd()` which is a convenient analogue of the standard PHP function `var_dump()`. The function displays the variable information in a more understandable form, dividing the data into a tree of attributes and values, with the ability to search and navigate through them.

Pros:

- Fairly good and understandable documentation.
- A powerful ecosystem has been created around the framework. Various courses, conferences, training materials allow you to gather around the framework a large number of developers and sponsors who are interested in developing the tool and are taking part in it.

ITC, Electronics, Programming

- One of the most obvious advantages of Laravel is a flexible routing system, which provides you with a great number of ways to check the route of a web application. You can allocate routes to special groups, use a namespace, specify route parameters, use regular expressions, configure subdomain routing, etc.
- There is a lot of syntactic sugar in Laravel. The framework API syntax is fairly simple and straightforward. There are no long and complex structures, but only brief and thought-over names of functions.
- Laravel provides a convenient mechanism for handling errors and exceptions.
- The framework includes built-in user authentication and authorization mechanisms, which can be re-configured to fit your needs.
- Laravel provides out-of-box mechanisms for caching a web application using Memcached and Redis. In addition, there are convenient features for using simple file data caching.
- Laravel provides a clean and simple API over the popular SwiftMailer library with drivers for SMTP, Mailgun, SparkPost, Amazon SES, and sendmail to send mail through a local or cloud service according to your choice. Besides there is a mechanism for building mail sending queues.
- Laravel Cashier provides an expressive, free interface to Stripe and Braintree subscription billing services.

Cons:

- For Russian-speaking developers, whose English language skills are limited, a small number of articles, code samples, official documentation translations can be attributed to the cons of the framework. For those who can read documents in technical English, this one can be omitted.
- Syntactic sugar in Laravel can be both a plus and a minus. It is very easy to get used to it and forget how clean requests and functions are written.
- Backward compatibility violation between versions of the framework.
- The illogical location of directories and files. For example, by default, the User.php model is located directly in the / app directory, which it would be more logical to place in the / app / Models directory. The resources directory with presentation files is located in the application root, although it would be more logical to place it in / app / resources.

Yii framework. Yii is a free object-aimed component full-stack PHP framework. Yii is based on PRADO framework, written in ASP.NET and later transferred to PHP. Shortly after building a new architecture, PRADO framework was renamed Yii. The name of the framework is an abbreviation of the word "Yes It Is!". The progenitor of the framework is a Chinese developer Qiang Xue.

Yii can be used to develop any kind of web application. Due to its component base, architecture and complex caching support, the framework is suitable for developing large-scale projects such as portals, forums, content management systems (CMS), e-commerce systems, RESTful web services, etc.

Yii implements an architectural template for using MVC (Model-View-Controller) and contributes to organizing code based on this template.

Yii is a full-stack framework, providing many proven and ready-to-use functions: query builder and ActiveRecord for relational and NoSQL databases, RESTful API, support for multi-level caching, etc.

Yii is an extremely extensible framework in which you can replace almost every piece of code and develop the necessary extensions.

Yii provides Gii, a visual interface for automatically generating controllers, models and mappings.

Pros:

- For Russian-speaking developers, a great advantage of the framework is good documentation. There are many articles with code examples and the community.
- Yii is not an indicator of one person, the framework is supported by a strong team of core developers, as well as a large community of professionals who constantly contribute to its development.
- Yii facilitates rapid prototyping of a web application. It is a RAID development tool.
- Built-in mechanisms for creating presentation widgets, for example, for placing various blocks on a site: recent posts, categories, navigation, blocks of advertising, etc.
- The i18n application component allows automatic translation of web application messages.
- Built-in support for automatic form validation and error reporting based on data from web application models.
- Active Record mechanism for building relational database query processing.

- Many ready-made extensions on Github and their installation via Composer
- Built-in widgets for displaying data: DetailView (rows in a table), ListView (List), GridView (tables)
- Built-in authentication, authorization, user registration mechanisms
- Contains a built-in and very convenient debug panel.

Cons:

- Weak ecosystem: the community is scattered across different places (several forums with little activity, stackoverflow, etc.)
- The framework allows you to make the code simple, but it is far from elegant. Its syntax is inferior to Laravel framework.
- Yii lags behind language, standards and other frameworks. New updates with really useful features are released not so often.
- The backend and frontend parts of Yii2 are too interconnected. The framework implies using the jQuery library and Bootstrap, which are built in by default into the framework. This minus is planned to be corrected in the new version of the framework Yii 3, making its components less connected.
- Not very flexible routing system: there is no possibility to group routes.

Conclusion. Laravel is currently the most promising PHP framework and is suitable for creating both small and large web projects.

We can still develop new projects on Yii2, just as we can continue to manage existing projects. Version 3 is still in development, so Yii is in the span and it is better to take another framework for this, for example, Laravel.

A very important aspect in the development of frameworks is the commercial side around the framework. If it has no sponsors, then sooner or later, the development team will simply lose all interest in participating in the framework development. A significant role in the framework development belongs to marketing. If there is no popularity and PR around the framework, there will be no developers interested in the framework development.

PHP frameworks are an indispensable tool for building the foundation of any site quickly. They will help to speed up the development process and make a quality project, avoiding programming all parts from scratch.

REFERENCES

1. Framework [Электронный ресурс] / Wikipedia – The Free Encyclopedia. – Режим доступа: https://en.wikipedia.org/wiki/Software_framework. – Дата доступа: 14.02.2019.
2. PHP [Электронный ресурс] / Wikipedia – The Free Encyclopedia. – Режим доступа: <https://en.wikipedia.org/wiki/PHP>. – Дата доступа: 14.02.2019.
3. Laravel [Электронный ресурс] / Wikipedia – The Free Encyclopedia. – Режим доступа: <https://en.wikipedia.org/wiki/Laravel>. – Дата доступа: 14.02.2019.
4. Yii [Электронный ресурс] / Wikipedia – The Free Encyclopedia. – Режим доступа: <https://en.wikipedia.org/wiki/Yii>. – Дата доступа: 14.02.2019.
5. Сравнительный анализ фреймворков PHP [Электронный ресурс] / Habr. – Режим доступа: <https://habr.com/ru/company/nixsolutions/blog/329718/>. – Дата доступа: 14.02.2019.