

A Survey on different Framework of PHP

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Abstract: As per Current Market, PHP is a widely-used, open source scripting language which support different framework with advance functionality. So it is necessary to identify the best framework for our system or application. This paper will help you to find the best framework for your application. In this paper we also include the advantage and disadvantage of each framework.

Keywords: PHP, CodeIgniter , Cake PHP , MVC , Laravel

I. INTRODUCTION

Hypertext Preprocessor is well known scripting language often associated with web development.[1] there are many frameworks which were popped up during last decade. Few of them are most promising framework as per current market.

The story started when the PHP (PHP: Hypertext Preprocessor) was introduced in 1995. At beginning those who were using PHP have issues regarding performance so it was necessary to making better and faster websites, so therefore few developers have started to develop PHP Frameworks in order to achieve high performance of website. There are two PHP Frameworks that have the most users, one is CodeIgniter [3], which was first released on 28 February 2006 [4]. It is focused on creating clean, fast framework for developers. The other Framework is CakePHP[5], which was released in 2005. CakePHP is mainly inspired by Ruby on Rails. [2]

II. MVC

Model View Controller is a pattern that consisting of 3 different of types of classes, each class summarises what they will do. [1] PHP is a server-side scripting language which is used to develop web applications. databasecontrollers. Frameworks are built to make it even faster to develop a website. The biggest PHP Frameworks with MVC thinking are Code Igniter, **Laravel** and CakePHP.MVC will work following way. A user can access the website, through the controller and Controller needs data from the database so it call a function in the class which is kept in model, The model connects to the database and handles the queries and is returning the data to the controller. Controller then contacts and retrieves View that mostly contains HTML and only uses PHP to loop out the data.

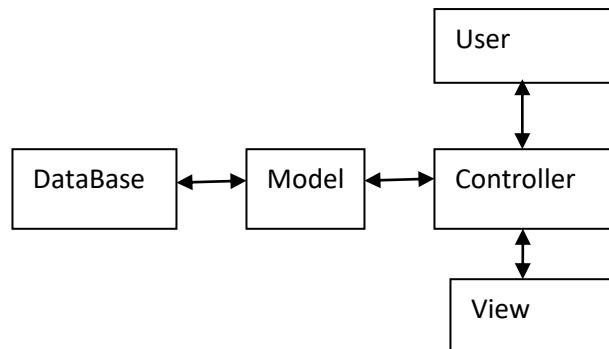


Figure1. Structure of MVC

III. FRAMEWORK OF PHP

3.1 Codeigniter

CodeIgniter is framework of PHP which was released in the beginning of 2006. CodeIgniter is a web application development framework, which can be used to develop websites using PHP. It has a very rich set of functionality, which is used to increase the speed of website development work. CodeIgniter is providing more the security and prevent the application form different attacks. The strongest ability of Codeigniter is the openness where the developers can publish libraries and plugins to Codeigniter.

Any web applications developed based on CodeIgniter framework perform effectively and rapidly. It helps the programmers to build dynamic and custom web applications with an advanced technology platform by offering valuable set of aspects to write code from scratch.

CodeIgniter is an Application Development Framework - a toolkit - for people who build web sites using PHP. Its goal is to enable you to develop projects much faster than you could if you were writing code from scratch, by providing a rich set of libraries for commonly needed tasks, as well as a simple interface and logical structure to access these libraries.

Advantages of CodeIgniter

- It helps web developers to find out the errors in programming codes and fix-up the issues instantly in the web applications.
- It provides you user-friendly interface that help developers to create a dynamic, flexible, secure and

large web applications effectively in a short span of time.

- Web developers can make use of this powerful framework to customize the configuration files easily and it provides hassle-free migration from source to destination service hosting.
- The framework helps the programmer to create both front-end and rear-end of a web application effectively and easily in a secured manner.
- Programmers can create web applications with additional features and high-end functionalities by using in-built resource and libraries of the CodeIgniter.

Features of CodeIgniter

Codeigniter support inbuilt library classes with functionalities. Following are the features of codegniter.

- It is based on MVC.
- It is a light weight.
- It support Active record database.
- It supports form and data validation.
- It supports security and session management.
- It provides inbuilt class for sending a mail.
- It supports paging and Data Encryption.
- **It provide following inbuilt classes.**
 - ✓ Calendaring Class
 - ✓ User Agent Class
 - ✓ Zip Encoding Class
 - ✓ Template Engine Class
 - ✓ Trackback Class
 - ✓ Unit Testing Class

Codeigniter is more secure than other PHP Framework.

- <? php if (! defined('BASEPATH')) exit('No direct script access allowed'); This ensures that the PHP file is not accessible directly by manipulating or running a script, which would compromise the system
- A SQL injection occurs when an attacker exploits the front-end and the post data to retrieve secure data from the database. According to CodeIgniter manual, it becomes evident that your web application is automatically safe from SQL injection as the POST data is retrieved in the controller using \$this->input->post(''); which is automatically filtered by CodeIgniter. CodeIgniter User Manual excerpt proves this fact: "Beyond simplicity, a major benefit to using the Active Record features is that it allows you to create database independent applications, since the query syntax is generated by each database adapter. It also allows for safer queries, since the values are escaped automatically by the system."

- An XSS or Cross Site scripting attack is unarguably the common reason for the demise of web applications. A XSS attack works by a hacker crafting a malicious URL into the browser in order to compromise the security of the application. CodeIgniter has a built in XSS filter which is initialized automatically. In order to double check the security threats against XSS attacks, a Firefox add-on called XXS Me (download here) can be used to test the sample application against 96 different types of attacks. The results are shown in the image below. It shows that the all form input fields were not found unencoded, which means the XSS filter within CodeIgniter did its job.
- there are a few minor security features that web application developers can apply. For example, make sure your web application does not allow any two different user groups to access each other's accounts on the same session. This is possible by having the session data encoded with user id and user type so it can be used to determine if the account belongs to the user whose user data is in the active session. When it comes to storing passwords, the MD5 algorithm should be used to encrypt passwords. Also, if you are using file uploads, make sure the file names are encoded with a random 32-bit string so that private or sensitive information is anonymous. In addition, CodeIgniter's form validation library can prove to be very useful. Form validation ensures that invalid information is not entered into the database. To provide a double layer of security, the SQL structure can be as such that it each field conforms to the incoming form data by a) type and b) length.

3.2 Laravel

Laravel was first released in June 9, 2011. According to Laravel's creator Taylor Otwell, the reason for creation the framework was the lack of some essential functionality, like user authentication in the CodeIgniter framework [6]. Laravel is an Open Source framework. It has a very rich set of features which will boost the speed of Web Development. If you familiar with Core PHP and Advanced PHP, Laravel will make your task easier.

Laravel is built on the shoulders of giants. It uses components from other time tested frameworks like Symfony. If populating is anything to go by, Laravel MVC has the Lion's share in the PHP MVC frameworks market share. According to a survey done by SitePoint, Laravel MVC framework is the most used framework in both personal projects and at work. Since it manages to do all essential tasks ranging from web serving and database management right to HTML generation, Laravel is called a full stack framework. This vertically integrated web development environment is

meant to offer an improved and smooth workflow for the developer.

Features of LARAVEL

- It Supports Rapid Application Developing (RAD):
- It support Blade template: this is a built in template engine Built in features for common web application tasks such as authentication, routing, database managing, sending emails Class auto loading.
- It support RESTful controllers that allows you to take advantage of HTTP verbs such as GET, POST, PUT, and DELETE etc.
- It support Unit Testing which built in unit testing features that can be run from the artisan command line.

3.3 CakePHP

CakePHP is an open-source framework which is intended to make developing, deploying and maintaining applications much easier. Architechture of CakePHP is based on an MVC

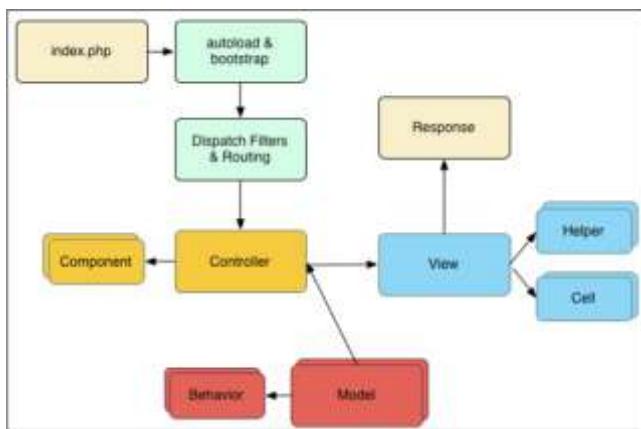


Figure 2 Cycle of CakePHP

Following are the step which will represent the Lifecycle of CakePHP.

- The webserver rewrite rules direct the request to webroot/index.php.
- Your application's autoloader and bootstrap files are executed.
- Any dispatch filters that are configured can handle the request, and optionally generate a response.
- The dispatcher selects the appropriate controller & action based on routing rules.
- The controller's action is called and the controller interacts with the required Models and Components.
- The controller delegates response creation to the View to generate the output resulting from the model data.
- The view uses Helpers and Cells to generate the response body and headers.
- The response is sent back to the client[6]

Feature of CakePHP

- It is a secure framework and helps in authenticating users with ease.
- The framework is easy to learn and helps in simplified development of applications
- The framework is useful for large sites and applications as it is an MVC driven framework
- The site location and configuration are all done by the framework automatically. One only has to connect the database.
- One of the key advantages of cake PHP is that it provides ready to use templates. This makes the process of web application development faster
- The framework is easy to manage and even a lesser experienced developer can work on it with ease.
- The framework provides custom testing features which makes the testing task quick and simple for developers.[8]

IV. COMPARISON OF LARAVEL AND CAKEPHP FRAMEWORK OF PHP [9]

- CakePHP has an incredible built-in ORM, and building queries is very easier and simpler. Much like CakePHP, Laravel also offers eloquent ORM that makes database relations simple.
- When compared to Laravel, CakePHP comes with robust plugins, using which, the code can be reused very easily, and the app folder can be kept clean. Also, class inheritances of CakePHP are highly understandable.
- The foremost reason why Laravel is the best framework and has an edge over other frameworks is that it is very configurable, and has an inbuilt, fast and extendable blade template engine, making it easier for Laravel developers to add the features with no need of hacking the core.
- Better peer support can be expected by developers who use CakePHP. By virtue of being in existence for a longer period than Laravel, obviously, it has a wide community, helping the peers to find answers and solutions to their queries. Developers can submit questions to the CakePHP website.
- Amongst some major reasons to choose CakePHP as the framework, the primary one is its flexible and has strong reverse routing. It helps developers to easily maintain links in an application. To elaborate on that, developers are entitled to adjust the URL structure at one place rather than searching for each calling of the change. This feature is really a wonderful time saver.
- With respect to ease of use, Laravel is the winner. Its ease of use is attributed to its easy to use Artisan

command-line- interface, easy readability and scope for developer's creativity.

- Pagination in Laravel is very easier, as it generates clever "range" of links. In Laravel, some of the methods used to access pagination are – currentpage, lastpage, perpage, url and total.
- While CakePHP is more famous with blog sites, Laravel, on the other hand, is ideal for bigger projects and also for projects that need continuous maintenance even after they are launched.

V. CONCLUSION

As mentioned earlier Codeigniter is MVC architecture based framework, secure than core php and easy to use. CakePHP is competitive with blog sites. Laravel is a used new php5 concept which helps in easy development.

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