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PHP Frameworks

BY

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Certificate

This certify that Seminar entitle "php framework " submitted by SANKET JAIN, 12bce081 toward partial fulfilment of equirement for the degree Bachelor Technology in seminar Nirma University, Ahmedabad record of work carried out him under supervision guidance. In opinion, the submitted work has reache a level required for being accepte for examination. The result em bod in this Seminar, to the best knowledge, haven't been submit to any university or institution award of any degree.

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Abstract

PHP most popular scripting language for many different reasons flexible, ease-to-use, among other – but times coding in PHP can get rather complicated and repetitive. So PHP framework is better to use.

PHP frameworks written in PHP for development of web app. In other word, PHP framework help to rapid application development , which save time, help to in build more stable application, and reduce repetition of code for developer. Frameworks can also help beginner. We build more and more stable web application by using appropriate database operation interaction and coding in presentation layer. This allows you spend more time developing the innovative wed app, instead of wasting time on writing repeated code.

The general idea behind the using the PHP framework is refer Model View Controller . MVC is an architectural best pattern programming that allowing to modifie code separately from the one another. And modification is very easy. With MVC, Model refer to the data fetch from database, View refers to the actual view seen in browser, and Controller to the application or logic and it represent interaction between modal and view. Basically, MVC breaks the development process of web application, so we work on individual parts while others part are not much affected. By this coding in PHP is faster and less complex.

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Introduction

1.1 About PHP Framework?

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1.2 Why we use a PHP Framework?

Developer must use PHP framework for various reason:
One reason is speeding up the web development process.
Second Reuse code.
Third save the developer wasting of time and effort.

A framework offer built-in module performing complicated code task, so the developer can spend time on developing the sometype of innovative web application rather than re-building complex code and function.

Stable is another big reason for use php frameworks. Simple is PHP's great advantage,reason people prefer to use this script language, because of its big downfalls and easy. It's fairly easy, to use beginner, to write bad code & not realize it. With PHP the application opened up security problem in coding that may be open for attacks.

Finally, the available of PHP frameworks is extensives, and there are many different frameworks choose. Even create our own, but many developers choose most well-known framework because their is popular and large support and documentation that help us to interact with another developers who use the same framework. We should always

examine project first decide which framework to use or we have to use framework or not.
Some question::
Will it save time?
Will the app perform better?
Will it improve the stabile of web application?
If answer yes to any of this questions, then go for framework..

1.3 When we have to use PHP Framework?

This is a common question experience and beginner developer like, no direct answer to the question. For beginners, a framework will offer great simple as stable, so it may be a good to use PHP framework to reduce writing code and eliminate bad code and speed up the process.

On the other hand, many experience PHP programmer think that framework is for weak and bad programmer that don't understand how to write good clear clean code. This is true or not debate, but the fact that PHP framework tool that used to save time and complex coding.

When working on a project with perfect deadline, then use framework is a benefit for speed up the work and documentation. These types of frameworks can cause problem coding process. So if you are time bounded, PHP frameworks to use.

1.4 What should we Look in a PHP Framework?

There's many options available to developer who may be search for PHP framework When search for PHP framework best suited for out need. If there are many developer who will be using the application, it will be best to use the popular PHP framework that many developer are known with. On other hand, if wish to build web applications for our own personal use, we are better choose any of PHP framework that we are comfortable with and easy to use.

Various factor search for in a PHP framework include: easy use the framework, rapid app-development and give us the best performance, popular than another developers, strong feature, and support and documentation. It is recommended to first try all PHP frameworks.And find best suit our need. All frameworks are slightly different from another and different strength and weaknesses.

Each type of PHP framework has some advantages, so first trial and error to figure out that which one is work the best for our need. Another way choose a best framework is to talk to colleague to see which ones they use and know advantage and disadvantage from them.

1.5 Mistakes When we Using a PHP Framework?

Mistakes are possible in any prog language, but PHP framework help us to limit those mistake greatly by providing good and clear code. Repetition of code lead us to more and more mistakes. And framework eliminate many problem.

There are still thing careful of when using any PHP framework. For instance, expert in PHP programming, should always use a popular framework with much of support and documentation. There many framework have little or no support and documentation. These type framework cause problem and our web applications to not func properly, lead to security issue with yhe website.

Another mistake not ensuring to see database operation and web server is compatible.

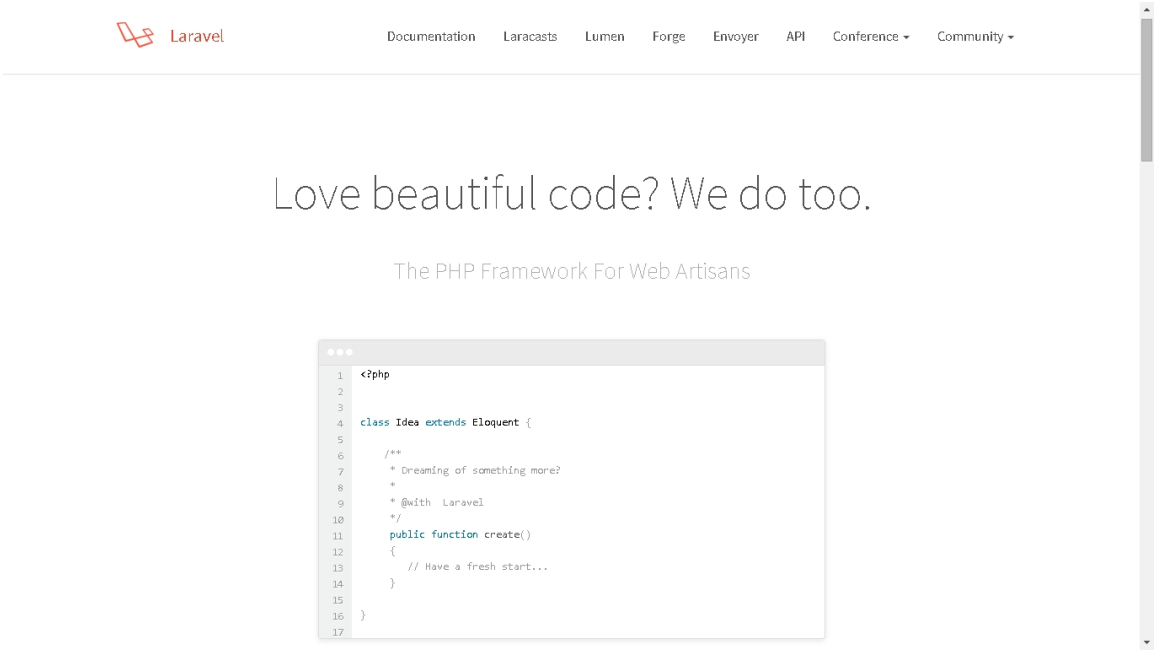
Another common mistake, not follow the installation process.

Chapter 2

Best Frameworks Available

PHP has best script language to choice by many of the developers. There is a debate on the best PHP framework, because not for every framework is built for everyone. Here's is some most popular and best framework:

2.1 Laravel:



Laravel is open source and free PHP web application framework. Laravel is designed for development of web application in model–view–controller (MVC). In survey Laravel was listed as the most and best popular PHP framework, among the Phalcon, Symfony2, CodeIgniter.

The following features of Laravel's:

- ✓ Application logic is an integral part of developed applications, implement either by using route or controller .

- ✓ Reverse route define relationship between the link and route and , making it automatically propagated into relevant link.

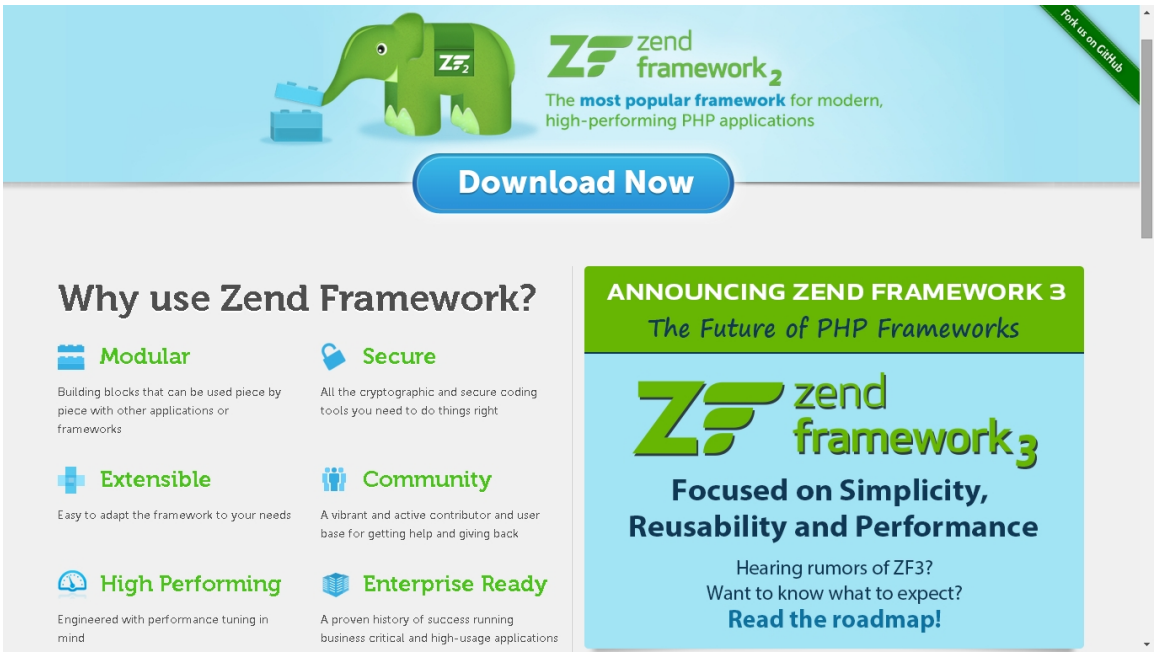
- ✓ Restful controller provide us an optional way for separate the logic behind serve HTTP GET and POST requests

- ✓ Auto loading class provide automate load of PHP classes without the need for manual load.

- ✓ Migrations provide version control to database, making it required changes in the database layout.

- ✓ Unit test detect & prevent regressions in the framework.

2.2 The Zend Framework



Zend framework open source for php web development and use php5.3. Zend framework object-oriented code and use new feature php5.3. Zend Framework 2 next version of ZF1, is successful PHP framework 15 million downloads.

The component structure ZF2 unique; each component designed with some dependencies. This loosely coupled architecture which allow php developers to use any component they want.

ZF2 component have lib form powerful & extensible web app development. It offer the high performance robust and MVC implementation, database operation is simple use, and have built in HTML5 form validation and filtering.

2.3 CakePHP

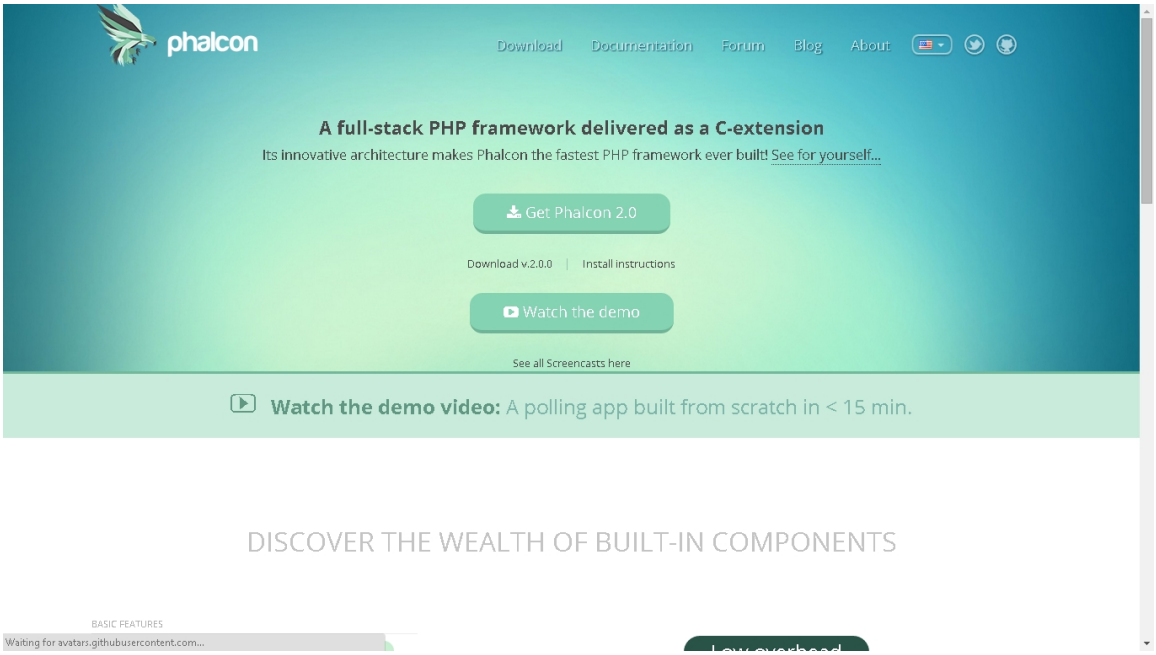
CakePHP make build web applications fast simple and require less coding.

CakePHP is based on PHP 5.4+ framework with a flexible Database operation and access layer and a powerful scaffold system that make to build both small and complex system easily .

CakePHP is best choice for beginner to develope advanced PHP web application. It is based Ruby on Rails. And it is heavily focus on rapid development of web application. Its

rapidly grow support system, for simple, and scalable make CakePHP one of the best popular PHP frameworks.

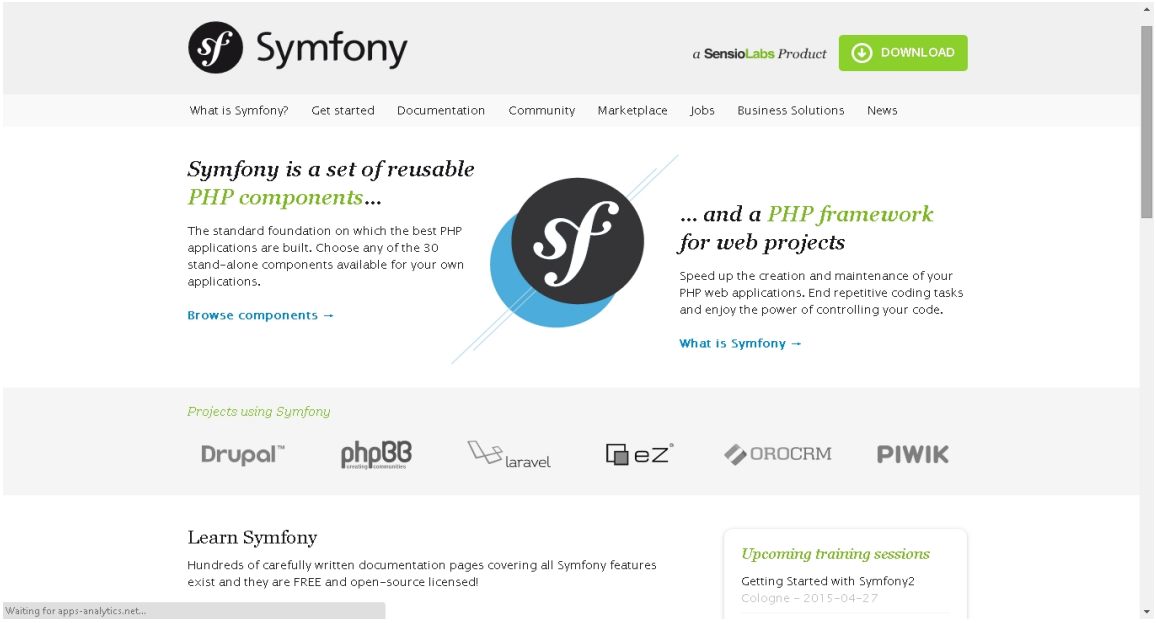
2.4 Phalcon



Phalcon is based on MVC pattern and gives a high-performance web framework for PHP. Release in 2012, it is open-source framework.

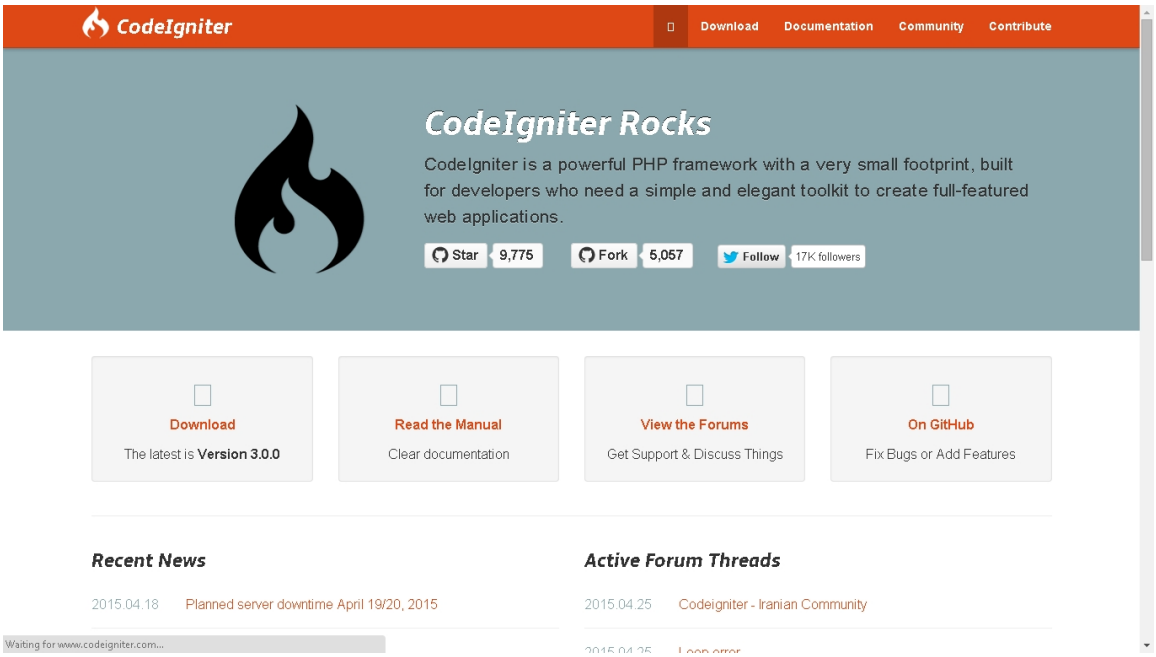
Phalcon implemented & extension written C in order optimize the performance of framework. This boost the execution speed and resource usage and handle more requests per second.

2.5 Symfony



Symfony is used for advanced developers of php web application. This is an open source PHP framework and full featured , but main disadvantage is that it is a slow than other frameworks.

2.6 Codelgniter

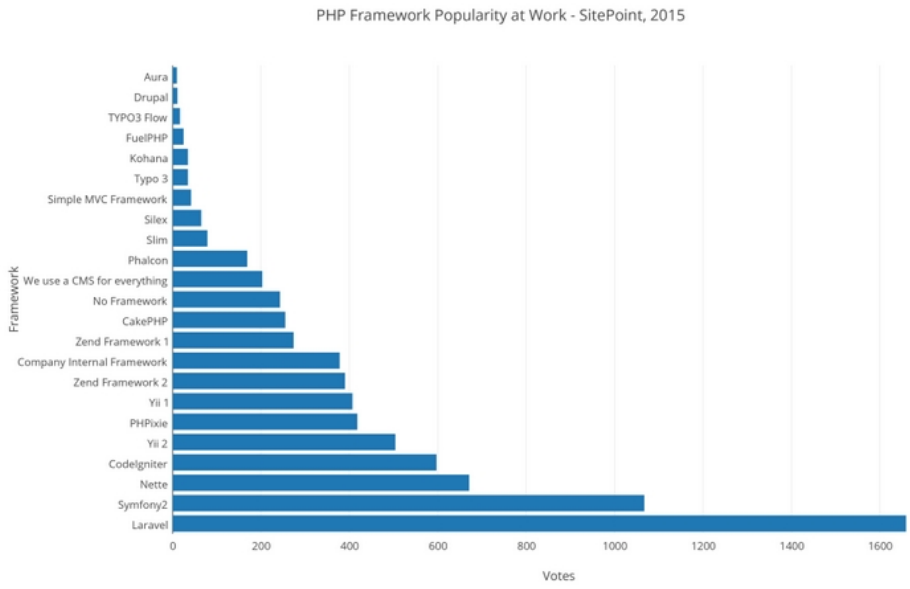


Codelgniter is ease-of-use, high performance and greater speed. It an extensive library and helper and video tutorial, forums, a user guide and documentation and wiki available for support.

2.7 Seagull:

Seagull well-established PHP framework use for build web applications, and GUI app command line. It is an extremely easy use this framework for beginners. For beginner, Seagull feature a lib can be customized to fit our need, Seagull offer host option to building web applications quick and easy. Seagull has many active developer and many of support documentation.

2.8 conclusion:



Chapter 3

CodeIgniter

3.1 Introduction:

Codeigniter is open source for rapid development web application for web developers, it is use to build dynamic web sites and web application in PHP. Codeigniter is a best and most popular framework. It is simple to use and full-featured web applications.

Popularity:
Codeigniter is based on the popular Model-View-Controller development. Where controller classes are a must be develope in CodeIgniter, models and views are optional. CodeIgniter is most known for speed when we compared with other PHP frameworks.

Version and history:
The first public version of Codeigniter was release by EllisLab. and the latest stable version 3.

3.2 Why CodeIgniter?

- ✓ Framework has very small footprint: CodeIgniter 3 has a 2MB download only it is zip file only we have extract and some configuration and start coding it also include the user guide.

- ✓ Clear documentation: The CodeIgniter User Guide is with the downloaded zip. It contain an intro, tutorial to use and configure.

- ✓ Compatibility with standard hosting: CodeIgniter 3 work on PHP 5.2.4, and works well with all shared and dedicated host platform. Many web app need database, and CodeIgniter support the most common database.

- ✓ No restrictive coding rules: Use we our own coding and give our own naming.

- ✓ Simple solutions over complexity.

- ✓ Exceptional performance

- ✓ No large-scale monolithic libraries: It has enough capabilities to improve our productivity. It provide for third-party add on /plugins for additional functionality.

- ✓ Nearly zero configuration

- ✓ No need for template language: CodeIgniter built in simple, substitution based, templating tool. Addons and plugin are available.

- ✓ Spend more time away from the computer

- ✓ Easy to install and configure.Clean and elegant MVC implementation. It use Active Record for database operation and access and modification.

3.3 MVC:

- ✓ CodeIgniter is built on MVC.
- ✓ MVC stands for Model View Controller.
- ✓ Models encapsulate data.
- ✓ Views handle presentation of the Models that the user see in his browser.
- ✓ Controllers handle routing,lib , and it make decision that which Model it's going to send data to which View.
- ✓ Controllers should take any number of parameters and use them to create a Model.
- ✓ This Model is passed to the View.
- ✓ Do all Views have Models? Ideally, yes.
- ✓ We use private functions to encapsulate repetitive logic.
- ✓ Models are objects. They are interface with a data source.
- ✓ Active Record give us database connectivity and query ability.
- ✓ Views are almost HTML content.
- ✓ A view takes information and pass those values into the HTML document.
- ✓ Views are modular, we can load multiple view for any given request.
- ✓ We can load views from other views also.

3.4 Installation Instructions:

There are four steps to insatll CodeIgniter:

1. Unzip the downloaded package.
2. Upload the unzip package files to the server.
3. Open the application/config/config.php file in the text editor and set base URL. If

to use encryption or sessions, set the encryption key.

4. If to use a database, open the application/config/database.php file in the text editor and set database settings like database name and username and password.

If to increase security we have hide the location of CodeIgniter files or we can rename the system and application folders to private. If we rename them, we must open the main index.php file and set the $system_folder and $application_folder variables with the new name we chosen.

For best security, both the system and any application folder should be placed above the web root so they are not directly accessible through browser. By default, .htaccess file include in each folder to prevent from direct access. It is best to remove them from public access.

3.5 Using CodeIgniter Libraries

Location of all the in your system/libraries folder. To use the libraries classes involves initializing it within controller.

Use following initialization use library:

$this->load->library('class name');

Where class name is the name of the class we has to invoke. Example, to load the session class:

$this -> load -> library('session');

Once initialized we an use it.

Load multiple lib at the same time by passing an array of lib.

$this->load->library(array('table', 'email'));

3.6 Helpers Reference:

Helpers help us with tasks. Each helper file is collection of functions. There are URL Helpers, which creating links, Form Helpers help in create form elements, Text Helpers perform text formatting, Cookie Helpers set and read cookies effectively, File Helpers help to deal with files easily, and other helper are Array Helper and CAPTCHA Helper and Cookie Helper and Date Helper and Directory Helper and Download Helper and Email Helper and File Helper and Form Helper and HTML Helper and Inflector Helper and Language Helper and Number Helper and Path Helper and Security Helper and Smiley Helper and String Helper and Text Helper and Typography Helper and URL Helper and XML Helper all this helpers help us to easy our task.

In CodeIgniter, Helpers are not written in an Object Oriented format. They are written

procedural function. Each helper func perform one specific task, with not dependence on another functions.

CodeIgniter does not load Helper Files default, so the first steps in using a Helper is to load . Once load, it become globle available in your controller and views.

Helpers are typically stored in your system_helpers, and application_helpers directory. CodeIgniter will look first in your application_helpers directory. If directory not exist or the specific helper is not locate there CI will instead look in your global system/helpers folder.

Loading a Helper:

Loading a helper file is simple using the following function:

```
$this->load->helper('name');
```

Where name is the file name of the helper, without .php .

For example, to load the URL Helper file:

```
$this->load->helper('url');
```

A helper can be loaded anywhere in our controller functions or within our View files, that's not a good practice, as long as load it before you use it. Load helpers in controller constructor so they available automatically in any function, load the helper in a specific func.

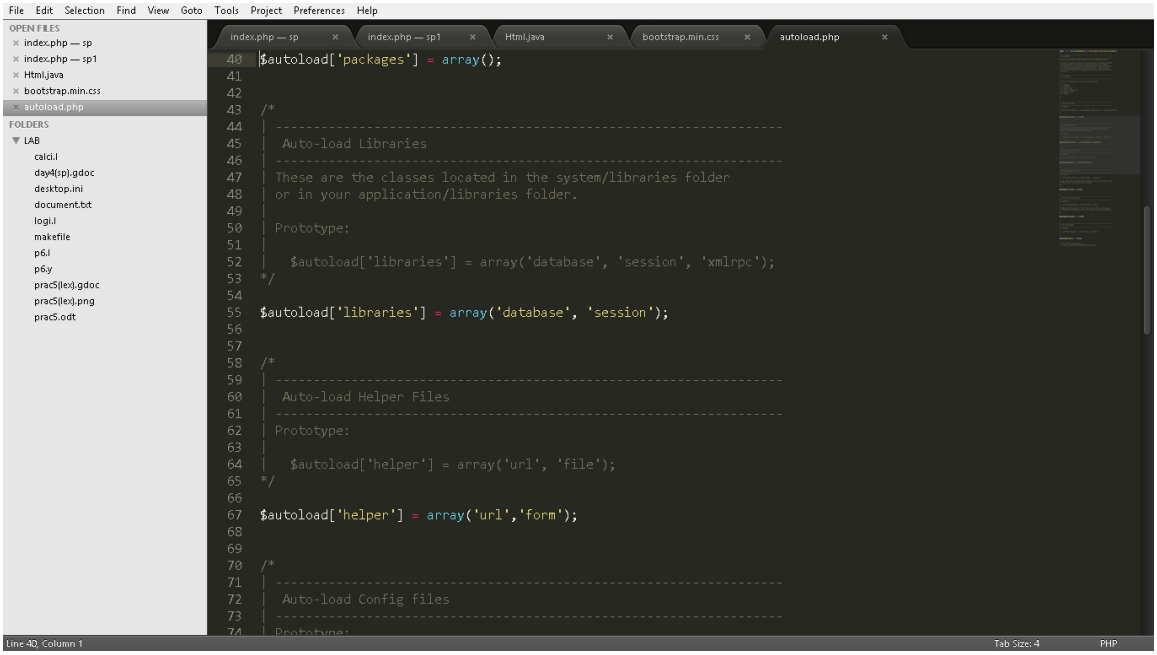
Loading Multiple Helpers:

If load more than one helper we can specify in an array:

```
$this->load->helper( array('helper_1', 'helper_2', 'helper_3') );
```

Auto-loading Helpers:

If we need a particular helper globally present throughout the application,tell CodeIgniter to auto-load it during system initialization. This is done by opening the file application/config/autoload.php file and adding the helper to the autoload array.



Using a Helper:

Once our Helper is loaded the File containing the function that we have use by calling as we would do in php.

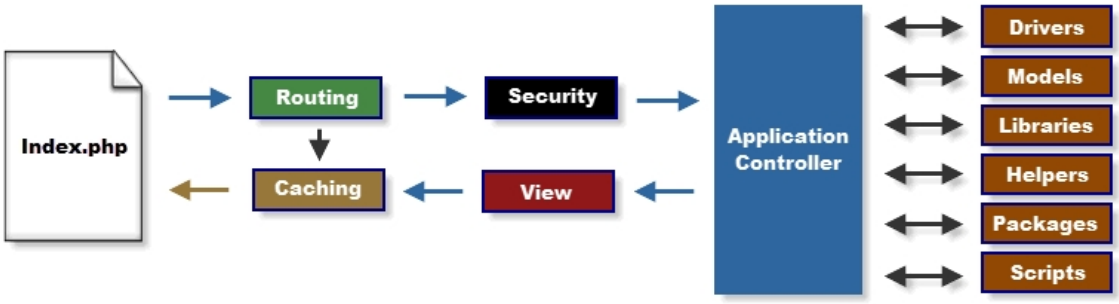
For example, to create a link using the anchor() helper function:

```
<?php
echo anchor('blog/comments', 'Click to see comment');
?>
```

Where "Click to see comment" is the name of the link, and "blog/comments" is URI to the controller/function.

3.7 Application Flow Chart

The following graphic illustrates how data flows throughout the system:



1. The index.php is the front controller, initializing basic resources to run Codeigniter.
2. The Router examines the HTTP request to determine what to do.
3. If a cache file exists, it is sent directly to the browser.
4. Security. Before the controller is loaded, HTTP request is filtered for security.
5. The Controller loads the model, libraries and helpers, and other resources needed to process request.
6. The finalized View is sent to the web browser to be seen by user. If caching is enabled, the view is cached first so requests it can be served faster.

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