

Zend Framework

Zend Framework provides rich and flexible MVC components built using the object-oriented features of PHP 5.



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Part II : Different types of Web Framework for PHP

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Part I

Basics of Framework

What is a framework?

In software development, a framework is a defined support **structure** in which another software project can be organized and developed.

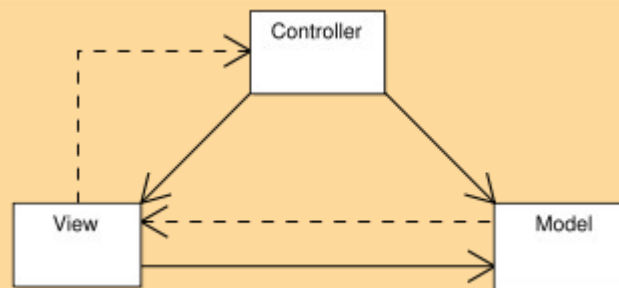
- An abstract design
- Set of common functionalities
- Developed for a particular domain

Why should we use framework?

- Framework is a structured system
- Source codes become more manageable
- Easy to extend features
- Rapid application development

What is MVC?

- Model-View-Controller development pattern.
- MVC is a software approach that separates application logic from presentation.



Model: The "stuff" you are using in the application – data, web services, feeds.

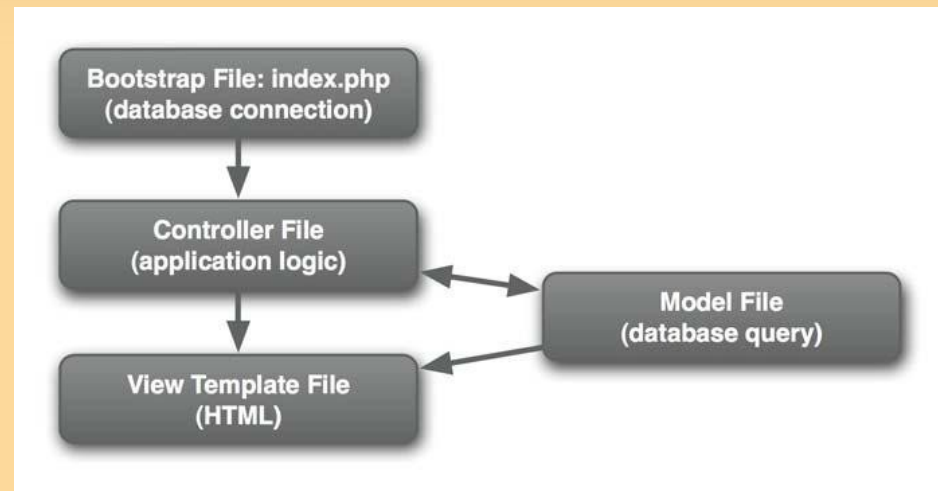
View : The display returned to the user.

Controller: Manages the request environment, and determines what happens.

Applying MVC in Web-Based Application

- The business world is heavily investing into the evolution of their services and product lines; both presentation and customer interaction are becoming Internet centric.
- Today, practically every bank offers online banking; every financial institution, brokerage house, and hedge fund is rewriting their trading systems to allow global access and trading from any internet-enabled location. Airline, defense, pharmaceutical, document management, and other industries are all adding Web interfaces to their business models.

Applying MVC in Web-Based Application



Part II

Different types of Web Framework for PHP

Some Popular Web Frameworks

- **CakePHP** modeled after the concepts of Ruby on Rails.
- **CodeIgniter** A PHP MVC framework.
- **Drupal Community plumbing**: open source modular framework and content management system.
- **KohanaPHP** A powerful, lightweight, easily extendable PHP 5 MVC Framework.
- **PRADO** A PHP 5 MVC framework.
- **Qcodo** is an open-source PHP 5 web application framework
- **Symfony Framework** PHP 5 MVC Framework.
- **Zend Framework** A PHP 5-based MVC framework.
- **ZNF PHP5** MVC framework for enterprise web applications

Benchmark of different Web Frameworks

The Tools

The tests were run on a 1.8Ghz AMD sempron computer with 512Mb RAM running Ubuntu Gutsy (7.10) Desktop.

The author used httperf to run the tests although I did run some of them again using apachebench and the results were consistent.

The Results

All scores are requests per second. **Higher is better.**

Ref: <http://www.avnetlabs.com/php/php-framework-comparison-benchmarks>

Benchmark of different Web Frameworks

- **No PHP code cache**

All frameworks used an ORM (of sorts, in the case of codeigniter). The Zend Framework used Zend_DB_Table and CodeIgniter used ActiveRecord.

	Run 1	Run 2	Run 3	Run 4	Average
Baseline HTML	1327.5	1326.5	1328.6	1329.1	1327.9
Baseline PHP	331.6	332.1	331.4	332.0	331.8
CakePHP	3.6	3.7	3.8	3.5	3.7
CodeIgniter	21.5	21.2	21.7	21.7	21.5
Zend Framework	9.3	9.1	9.2	9.3	9.2

Ref: <http://www.avnetlabs.com/php/php-framework-comparison-benchmarks>

Benchmark of different Web Frameworks

- **With eAccelerator PHP code cache**

All frameworks used an ORM (of sorts, in the case of CodeIgniter). The Zend Framework used Zend_DB_Table and CodeIgniter used ActiveRecord.

	Run 1	Run 2	Run 3	Run 4	Average
CakePHP	8.0	8.0	8.0	7.2	7.8
CodeIgniter	98.2	98.1	98.3	98.3	98.2
Zend Framework	33.2	33.3	33.5	33.6	33.4

Ref: <http://www.avnetlabs.com/php/php-framework-comparison-benchmarks>

Part III

Overview of Zend Framework

What is Zend Framework?

- PHP 5 library for web development productivity
- Open source
 - New BSD license is business-friendly
 - Free for development and distribution
 - CLA process assures that the code is free of legal issues
- Class library – over 150,000 lines of code
- Documentation – over 500 pages
- Quality & testing – over 4,200 unit tests 84%+ code coverage
 - Deployed on many websites already

Zend Framework Philosophy

- **“Extreme simplicity”**
 - Easy solutions for the 80% most commonly-used functionality for web applications
 - Extensibility enables easy customization, to solve the remaining 20%
 - No complex XML configuration files
- **Good object-oriented and agile practices**
 - Use-at-will architecture
 - Design for extensibility
 - Frequent testing
 - Frequent interaction with user community

Zend Framework Technology Partners

Zend Framework aims to be a one-stop shop for web services and APIs from a variety of partners.

Reference: <http://framework.zend.com/partners/technology>



- Google contributes to the Zend_Gdata component of the Zend Framework.
- which enables easy access to Google Data APIs for products like YouTube, Google Calendar, Picasa Web Photos, Google Docs, Blogger, and more.

Zend Framework Technology Partners



IBM Research & Development Labs' Emerging Internet Technologies, led by CTO David Boloker, has chosen Zend Framework to build and deliver several ambitious projects on.

The IBM Software Group contributed to the Zend Framework with a couple of key components:

- The Zend Framework JSON support
- Some of the code for ZF's database support.

David Boloker is a Distinguished Engineer and Chief Technical Officer for Emerging Internet Technologies in IBM Software Group.

Zend Framework Technology Partners



In October 2007, Microsoft Corp. announced a strategic collaboration with Zend Technologies Inc. that will ultimately provide people with better control over their personal information on the Web and greatly improve the trustworthiness of Web-based interactions.

The team developed Zend Framework



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Spelen Media



Rob Allen
Akrabat



Darby Felton
Zend
Technologies



Wez Furlong
OmniTI



Gaylord Aulke
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Technologies



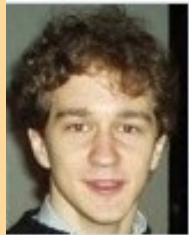
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The team developed Zend Framework



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The team developed Zend Framework



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Individual Contributor



Steven Van Poeck
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Alexander Veremyev
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Thomas Weidner
Voxtronic Technology



Matthew Weier O'Phinney
Zend Technologies

Who are using Zend Framework?



bwin Games AB

bwin Interactive AG's subsidiary bwin Games AB based in Stockholm, has completely re-architected their site [PokerRoom.com](http://www.pokerroom.com) using PHP 5 and Zend Framework.

The bwin Games team makes extensive use of the model-view-controller (MVC) industry-standard for designing web applications. Their multi-tier design uses Zend Framework's MVC implementation

ref1: <http://www.bwin.ag/page.aspx?view=aboutus&lang=en>

ref2: <http://www.pokerroom.com/>

Who are using Zend Framework?



Fox Interactive Media's IGN Entertainment division is one of the premier providers of online digital entertainment, with properties such as [IGN.com](http://www.ign.com/), [RottenTomatoes.com](http://www.rottentomatoes.com/), and [AskMen.com](http://www.askmen.com/).

IGN Entertainment's team at IGN community sites manages over 50 different community-based sites and has built an entirely new platform based on Zend Framework. Things the team wanted to accomplish with this new platform included:

ref1: <http://www.ign.com/>

ref2: <http://www.rottentomatoes.com/>

ref3: <http://www.askmen.com/>

Who are using Zend Framework?



IBM Software Group

IBM Research & Development Labs' Emerging Internet Technologies, led by CTO David Boloker, has chosen Zend Framework to build and deliver their ambitious QEDWiki project on.

The QEDWiki browser-based assembly canvas lets business users build mash-ups and situational applications from their own data sources and to design UI and business logic components onscreen. It has been engineered by IBM using many Zend Framework components.

Ref: <http://services.alphaworks.ibm.com/qedwiki/>

Who are using Zend Framework?



Indianapolis Motor Speedway

Home of the Indy 500 race and owned by the Clabber Girl corporation (est. 1879), the Indianapolis Motor Speedway (IMS) maintains over two dozen sites and they have chosen to standardize their PHP website development on Zend Framework.

ref1: <http://www.clabbergirl.com/>

ref2: <http://indianapolismotorspeedway.com/>

What's in the Zend Framework?

- MVC
- Database
- I18N
- Authentication
- Web Services
- Mail, Formats, Search
- Utility
- Zend_Controller
 - Front controller
 - Routers
 - Action handling
 - Plugins and Helpers
 - Request
 - Response
- Zend_View
 - PHP template class
 - Helpers
 - Filters
- Zend_Json (helps Ajax)

What's in the Zend Framework?

- MVC
 - Database
 - I18N
 - Authentication
 - Web Services
 - Mail, Formats, Search
 - Utility
- Zend_Db_Adapter
 - IBM DB2
 - MS SQL Server
 - MySQL
 - Oracle
 - PostgreSQL
 - SQLite
 - Zend_Db_Profiler
 - Zend_Db_Select
 - Zend_Db_Table
 - Zend_Db_Table_Rowset
 - Zend_Db_Table_Row
 - like ActiveRecord

What's in the Zend Framework?

- MVC
 - Database
 - I18N
 - Authentication
 - Web Services
 - Mail, Formats, Search
 - Utility
- Zend_Locale
 - Zend_Translate
 - Array
 - Csv
 - Gettext
 - Qt
 - Tmx
 - Xliff
 - Zend_Date
 - Zend_Measure

What's in the Zend Framework?

- MVC
 - Database
 - I18N
 - Authentication
 - Web Services
 - Mail, Formats, Search
 - Utility
- Zend_Auth
 - DbTable
 - Digest
 - Http
 - Zend_Session
 - Persist identity, other data
 - Zend_Acl
 - Manage roles, privileges

What's in the Zend Framework?

- MVC
 - Database
 - I18N
 - Authentication
 - Web Services
 - Mail, Formats, Search
 - Utility
- Zend_Http_Client
 - Zend_Rest_Client
 - Zend_Service
 - Akismet
 - Amazon
 - Audioscrobbler
 - Delicious
 - Flickr
 - Simpy
 - Strikelron
 - Yahoo
 - Zend_Feed (RSS and Atom)
 - Zend_Gdata (Google Data API)
 - Zend_XmlRpc_Client

What's in the Zend Framework?

- MVC
 - Database
 - I18N
 - Authentication
 - Web Services
 - Mail, Formats, Search
 - Utility
- Zend_Mail
 - Zend_Mime
 - Read or send email

 - Zend_Pdf
 - Read, edit & create PDF documents

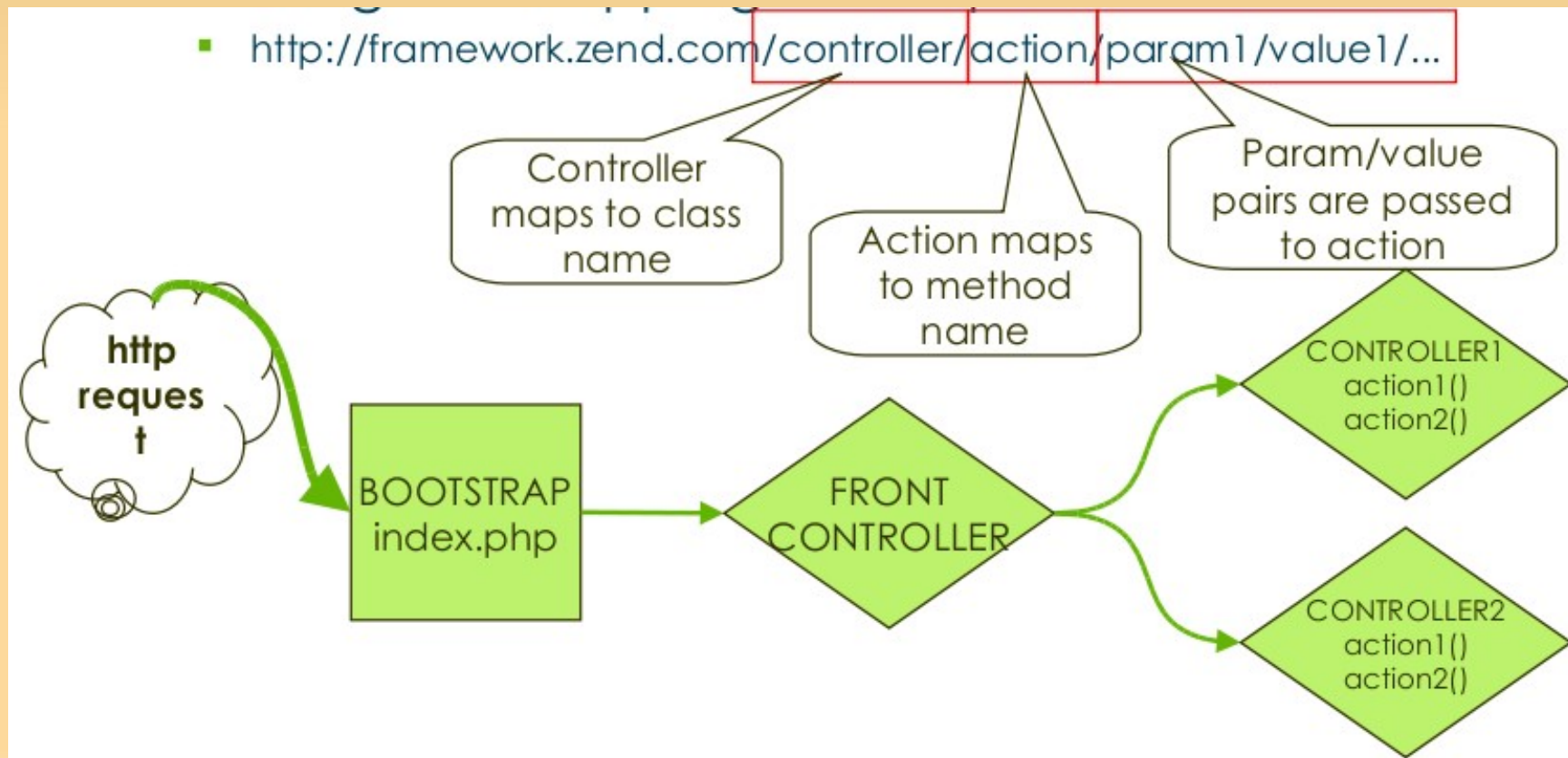
 - Zend_Search_Lucene
 - Search engine
 - Apache Lucene compatible

What's in the Zend Framework?

- MVC
 - Database
 - I18N
 - Authentication
 - Web Services
 - Mail, Formats, Search
 - Utility
- Zend_Cache
 - Zend_Config
 - Zend_Console_Getopt
 - Zend_Filter
 - Zend_Filter_Input
 - Zend_Loader
 - Zend_Log
 - Zend_Memory
 - Zend_Registry
 - Zend_Validate

Features of MVC in Zend Framework

- The Front Controller routes requests to controllers
- Routing is a mapping of URL parts to controllers



Features of MVC in Zend Framework

- Declare custom routing rules
 - Not limited to “controller/action/param” format
- Optional Controller Plugins, Action Helpers, and View Helpers
 - ErrorHandler plugin handles exceptions, 404 errors, etc.
 - FlashMessenger, Redirector, ViewRenderer helpers
 - Output common HTML elements in views
- Extensible interfaces
 - Write your own plugins and helpers

Part IV

Practical Example of Zend Framework

Please see attached PDF

Thank You