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Vigas Deep

I rely on Open Source..

Zend Framework – First Database Driven Application – Tutorial

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	Written by: **Vigas Deep**	Written on: **September 28, 2011**	Comments **Add One**

Hey Everybody, I'm back with very interesting tutorial, that is a simple Database Driven Application in Zend Framework. Before I begin, I must tell you I am assuming that you are having Ubuntu installed on your system, and you are known to languages HTML and PHP.

The requirements as under ..

1) Latest version of PHP, MySql Database and Apache Web Server(httpd) are installed on your system.

2) **mod_rewrite** extension of Apache must be enabled. To enable, do the following (only for Debian based distros, like Ubuntu) :

```
sudo a2enmod rewrite
```

and don't forget to restart Apache.

```
sudo service apache2 restart
```

3) A BIG Cup of Coffee.

Lets Start, First of all, make a directory structure like this, project/ must be placed inside the /var/www/ Directory :

```
project/
———-application/
——————controllers/
——————forms/
——————models/
——————views/
——————scripts/
————————-error/
————————-index/
```

Directory "project/" is main working directory of the our application. Download Zend Framework minimal package from http://framework.zend.com/download/latest

Then Extract the Library folder inside the archive to our project/ directory, graphically or use following commands (for UBUNTU)
Log in to root and extract ->

```
$ su -i
$ cd /home/your_username_here/Downloads/
$ tar -xf Zend-minimal.tar.gz
```
NOTE : directory name: Zend-minimal.tar.gz can vary according to the version of Zend, you downloaded.
Move library directory to project/
```
$ cd Zend-minimal
$ cp library /var/www/project/library
```

We have placed the required Zend Framework Files, more interesting thing is the next.
create index.php file inside the project/ directory and write the following code also readout the comments given in the code.
————————————————
```
<?php
define('ROOT_DIR', dirname(__FILE__));

//including the MVC (Model-View-Controller) directories and Zend library

set_include_path('.'
. PATH_SEPARATOR . ROOT_DIR . '/library'
```

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```
. PATH_SEPARATOR . ROOT_DIR . '/application/models'
. PATH_SEPARATOR . ROOT_DIR . '/application/forms'
. PATH_SEPARATOR . get_include_path()
);
```

//Autoloading the zend

```
require_once "Zend/Loader/Autoloader.php";
$autoloader = Zend_Loader_Autoloader::getInstance();
$autoloader->setFallbackAutoloader(true)

$frontController = Zend_Controller_Front::getInstance();

$frontController->throwExceptions(true);

$frontController->setControllerDirectory(ROOT_DIR.'/application/controllers');
$frontController->dispatch();
?>
```
───────────────────────────

So this was the index.php file, When we will open this file, Zend will lookout for IndexController.php inside the controllers/ directory which we have defined in the index.php file, therefore create the IndexController.php inside project/application/controllers/ and write the following code in it.

NOTE: Be careful about the case of files and codes, all are case-sensitive.
───────────────────────────

```
// setting up the controller here..
<?php

class IndexController extends Zend_Controller_Action
{
public function indexAction()
{
}}

?>
```
───────────────────────────

and now the inside the IndexController.php we created the class with the same name, and indexAction() is created. indexAction() will look for index.phtml inside the project/application/views/scripts/index/ so just create it, whatever you will write in this file, directly comes to your view. Similarly create error.phtml in project/application/views/scripts/error/ and write anything that will identify you, whenever you faced the error.
Next, create .htacess file in project/ folder and write following code in it

```
RewriteEngine On
RewriteCond %{REQUEST_FILENAME} -s [OR]
RewriteCond %{REQUEST_FILENAME} -l [OR]
RewriteCond %{REQUEST_FILENAME} -d
RewriteRule ^.*$ - [NC,L]
RewriteRule ^.*$ index.php [NC,L]
```

This is the file where mod_rewrite extension of Apache Web Server(httpd) is used to rewrite the URLs, as I will not discuss this now.
Now, I must tell you that we are creating database application to store the basic information of the user into the database and view it. So firstly I'm going to setup the view page. To do so we must create a database and a table inside it
Create a Database and note down the name you created. Create table by executing the following query :

```
CREATE TABLE IF NOT EXISTS `users` (
`id` int(11) NOT NULL AUTO_INCREMENT,
`name` varchar(75) NOT NULL,
`pname` varchar(75) NOT NULL,
`address` varchar(100) NOT NULL,
`contact` varchar(15) NOT NULL,
`hobbies` text NOT NULL,
PRIMARY KEY (`id`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1 AUTO_INCREMENT=10 ;
```

Upto now, the database and table are created, now configure the database settings. Create a file config.ini inside the /project/application/ directory, write the following code, fill in your details and save the file.

```
[general]
```

```
db.adapter = "PDO_MYSQL"
db.params.host = "localhost"
db.params.username = "root"
db.params.password = ""
db.params.dbname = "project"
```

We have created the Database configuration file, now add the following lines to index.php

―――――――――――――

```
$config = new Zend_Config_Ini(ROOT_DIR.'/application/config.ini', 'general');
$db = Zend_Db::factory($config->db);
Zend_Db_Table::setDefaultAdapter($db);
```

―――――――――――――

now it should look like ..

―――――――――――――

```
<?php
define('ROOT_DIR', dirname(__FILE__));

set_include_path('.'
. PATH_SEPARATOR . ROOT_DIR . '/library'
. PATH_SEPARATOR . ROOT_DIR . '/application/models'
. PATH_SEPARATOR . ROOT_DIR . '/application/forms'
. PATH_SEPARATOR . get_include_path()
);

require_once "Zend/Loader/Autoloader.php";
$autoloader = Zend_Loader_Autoloader::getInstance();
$autoloader->setFallbackAutoloader(true);

//database configs initialized

$config = new Zend_Config_Ini(ROOT_DIR.'/application/config.ini', 'general');
$db = Zend_Db::factory($config->db);
Zend_Db_Table::setDefaultAdapter($db);

$frontController = Zend_Controller_Front::getInstance();

$frontController->throwExceptions(true);

$frontController->setControllerDirectory(ROOT_DIR.'/application/controllers');
$frontController->dispatch();
?>
```

―――――――――――――

I've also added a form to view the data in specific defined order as desired by the viewer, So create a file named SortForm.php inside /project/application/forms directory and write following code.

―――――――――――――

```
<?php
class SortForm extends Zend_Form
{
public function init()
{

$this->setMethod('post');
$this->addElement('radio', 'sortby', array(
'label' => 'Sort by Column:',
'multioptions' => array(
'name' => 'Name',
'pname' => 'Parent\'s Name',
'address' => 'Address',
'contact' => 'Contact',
'hobbies' => 'hobbies'
),

));

$this->addElement('radio', 'sorttype', array(
'label' => 'Sort Type:',
'multioptions' => array(
'ASC' => 'Aescending',
'DESC' => 'Descending'
),

));
$this->addElement('text','search',array(
```

'label'=>'search name'));
$this->addElement('submit','sortdata',array(
'label'=>'Sort Data'));

}
}
?>
─────────────────────────

so We also update the IndexController.php and so as the index.phtml, the respective updated codes are
embedded below.
IndexController.php
─────────────────────────

```php
<?php
class IndexController extends Zend_Controller_Action
{
public function indexAction()
{

//loading Users model, ans SortForm
$users = new Users();
$form = new SortForm();
$this->view->form = $form;

//searching and sorting logic
if ($this->getRequest()->isPost()) {
$sortData = $this->_request->getPost();

}
if((empty($sortData['search'])==0)){

if(isset($sortData['sortby']) && isset($sortData['sorttype']))
{

$data=$users->fetchAll($users->select()->order($sortData['sortby']." ".$sortData['sorttype'])->where('name
= ?', $sortData['search']));
}
else
{

$data=$users->fetchAll($users->select()->where('name = ?', $sortData['search']));
}

}

elseif(isset($sortData['sortby']) && isset($sortData['sorttype'])){

$data=$users->fetchAll($users->select()->order($sortData['sortby']." ".$sortData['sorttype']));
}

else {

$data = $users->fetchAll($users->select());

}

$this->view->data = $data;
}

}

?>
```
─────────────────────────

index.phtml
─────────────────────────

```
<h3>All Added Entries</h4>

<?php

echo $this->form;
?>

<table border="1″>

<tr>
```

```
<th>Name</th>
<th>Father's Name</th>
<th>Address</th>
<th>Contact</th>
<th>Hobbies</th>
</tr>

<?php foreach ($this->data as $d) {?>
<tr>
<td><?php echo $d['name'];?></td>
<td><?php echo $d['pname'];?></td>
<td><?php echo $d['address'];?></td>
<td><?php echo $d['contact'];?></td>
<td><?php echo $d['hobbies'];?></td>
</tr>
<?php }?>

</table>
```
─────────────────────────────

We have to setup a model for the Database table which we are using, which is also used in indexAction() of IndexController.php file so, create a file Users.php which resides in /project/application/models/ directory and write the corresponding code.
─────────────────────────────

```
<?php class Users extends Zend_Db_Table {    protected $_name = "users"; } ?>
```
─────────────────────────────

also create ErrorController.php inside project/application/controllers/ and write the code, which we are using to display errors if any occurs.
─────────────────────────────

```
<?php

class ErrorController extends Zend_Controller_Action {

public function errorAction() {
$errors = $this->_getParam('error_handler');
$exception = $errors->exception;

echo $exception->getMessage();
echo "<br /><pre>";
echo $exception->getTraceAsString();
}
}
?>
```
─────────────────────────────

NOTE: If you are a beginner with PHP application or you're facing problems in understanding, you must take a break here, try reading next after sometime.
Next is the Data Entry form for user, create a form named CustomForm.php inside project/application /forms/ directory and write the following code to create a form for Data Entry.
─────────────────────────────

```
<?php
class CustomForm extends Zend_Form
{
public function init()
{
$this->setMethod('post');

$id = $this->createElement('hidden','id');
$name = $this->createElement('text','name');
$name->setLabel('Name:')
->setAttrib('maxlength',75);
$pname = $this->createElement('text','pname');
$pname->setLabel('Father\'s Name')
->setAttrib('maxlength',75);
$address = $this->createElement('text','address');
$address->setLabel('Address:')
->setAttrib('maxlength',100)
->setAttrib('size',75);
$contact = $this->createElement('text','contact');
$contact->setLabel('Contact:')
->setAttrib('maxlength',15)
->setAttrib('size',15);
```

```
$hobbies = $this->createElement('textarea','hobbies');
$hobbies->setLabel('Hobbies (seprate with coma(,)):')
->setAttrib('size',255)
->setAttrib('rows',10)
->setAttrib('cols',40);
$addentry = $this->createElement('submit','addentry');
$addentry->setLabel("Add Entry")
->setIgnore(true);

$this->addElements(array(
$name,
$pname,
$address,
$contact,
$hobbies,
$id,
$addentry
));
}
}
?>
```
————————————————

also we have to create an addAction in IndexController to make the data entry work, updates version of
IndexController.php is following, please make corresponding changes.
————————————————
```
<?php
class IndexController extends Zend_Controller_Action
{
public function indexAction()
{
$users = new Users();
$form = new SortForm();
$this->view->form = $form;
if ($this->getRequest()->isPost()) {
$sortData = $this->_request->getPost();

}
if((empty($sortData['search'])==0)){

if(isset($sortData['sortby']) && isset($sortData['sorttype']))
{

$data=$users->fetchAll($users->select()->order($sortData['sortby']." ".$sortData['sorttype'])->where('name
= ?', $sortData['search']));
}
else
{

$data=$users->fetchAll($users->select()->where('name = ?', $sortData['search']));
}

}

elseif(isset($sortData['sortby']) && isset($sortData['sorttype'])){

$data=$users->fetchAll($users->select()->order($sortData['sortby']." ".$sortData['sorttype']));
}

else {

$data = $users->fetchAll($users->select());

}

$this->view->data = $data;
}

//add action

public function addAction()
{
$users = new Users();
$form = new CustomForm();
```

```
$this->view->form = $form;

if ($this->getRequest()->isPost()) {
$formData = $this->_request->getPost();
if ($form->isValid($formData)) {
unset($formData['addentry']);
$users->insert($formData);
echo "Data Successfully stored";
}
}
}

}
?>
```
_____

The only thing left is, create add.phtml file in project/application/views/scripts/index/ and write the following code in it.

_____

```
<h3>Add User</h3>
<?php
if ($this->errorMsg) {
echo $this->errorMsg;
}
?>
<?php

echo $this->form;
?>
```
_____

Now we are done with all the coding. You must try running your application now at
Viewing the Entries :http://localhost/project/index
Adding Entries :http://localhost/project/index/add
While looking at the links you me seem that how http://localhost/project/index/add will run, you have created to add/ Directory inside the index/ Directory, then I must tell you that, It is the Magic of Rewrite_mod.
Try running your application, if your face any error, just make sure following things are right again ->
1) Rewrite_mod is enabled
2) your directories and files are readable to you.
3) Re-check the braces, most of the times Errors are with the braces.
4) check your configuration paths in index.php.
5) Also, Try refilling your cup of coffee.

Being Lazy ? huh ? Download the Source
I hope I have not missed something.
Good Luck.

System.out.print("Vigas Deep");

In category: Tutorial, Ubuntu, Zend Framework
Tags: Tutorial , Ubuntu , Zend Framework

Fedora 15 (LoveLock) – Things to do after installation

| Written by:
Vigas Deep | Written on:
September 24, 2011 | **0** |

Recently I shifted from ubuntu 11.04 to fedora 15 (64 Bit), the graphics of fedora are pretty nice. As>
Fedora is redhat based, so its very different from ubuntu and hard to operate likely for basic users. I
faced many problem regarding the installing the basic software, I found solutions by searching so
hereby I share with everyone. 1) Adobe Flash Player only for 64 bit. Download -> wget
http://download.macromedia.com/pub/labs/flashplatformruntimes/flashplayer11
/flashplayer11_b2_install_lin_64_080811.tar.gz…

Read more...

In category: Fedora 15 (LoveLock), Linux
Tags: 64 bit , Adobe Flash player , Broadcom wireless Drivers , F15 , Fedora 15 , GNOME 3 , LoveLock , Nvidia Graphic
Drivers

Linux User Group Ludhiana (LUG)

>

Written by: Written on: **1**
Vigas Deep   **August 28, 2011**

Howdy, Recently, I was interviewed for joining of Linux User Group Ludhiana (LUG), which is a group
of all the linux users in our College. I am so much excited to Work n' Learn in this group. Actually this
Group is inspiring me to work more hard and making me think more logically. Personally, I really got a
good feeling about this Group, so I want to dedicate my time…

Read more...

In category: Linux, Personal
Tags: LUG Linux User Group Ludhiana

Java Love

Written by: Written on: **0**
Vigas Deep   **May 26, 2011**

Hello Everybody, after exploring the field of Web Designing and Web Development, I am moving onto>
the Software Development in Java and started learning Core Java from now. I tried my first application
today, the famous HELLO WORLD. Environment used are Ubuntu 11.04, JDK 6 and Eclipse. Though
the application is small, but the happiness behind that is much more. Lets see how this goes on. Till
then, Buhbyee, Take…

Read more...

In category: Java
Tags: Hello World , Java

Editing Ubuntu Menu

Written by: Written on: **0**
Vigas Deep   **March 24, 2011**

Hello Everyone ! Okay, today I'am going to show how to edit menus in ubuntu 10.04 LTS. Yesterday I>
was facing the problem that my application menu in the menu bar not showing the child nodes/options
on clicking, I found a solution for this problem and I want to share this with you guys. Here , checkout
the application menu, no options are appearing. So to make it work goto…

Read more...

In category: Ubuntu
Tags: Menu Editing , Ubuntu 10.04 LTS

Just an update..

Written by: Written on: **0**
Vigas Deep   **August 22, 2010**

Hello Friends, These Days I am done with my College Projects , Now looking forward towards my own>
works and gaining expertise. I'm now working on HTML5 with advanced features of JavaScript, side
apart i'm also learning PHP, the days are damn busy ! Recently i joined new college for the Degree
of Bachelor of Technology under the Information Technology (I.T.) Branch ! I'll post some new tips and
secrets in my…

Read more...

In category: Personal

Hello World !!

>

Written by:
Vigas Deep

Written on:
February 25, 2010

0

Hey People, its 25 Feb 2010.. Very Important day of my life.. Launched My own First Domain…. OMG, I am damn excited ! See You then, Keep Checking Out the Site for further Updates ! Thanks !

Read more...

In category: Uncategorized
Tags: 25 feb 2010 , Launch

About

I am Vigas Deep, Freelance Developer. I work on Web and Desktop (J2SE) Applications. Currently, pursuing Degree of Bachelor of Technology under Information Technology (IT) stream. Already done with three year Diploma of Computer Engineering.