

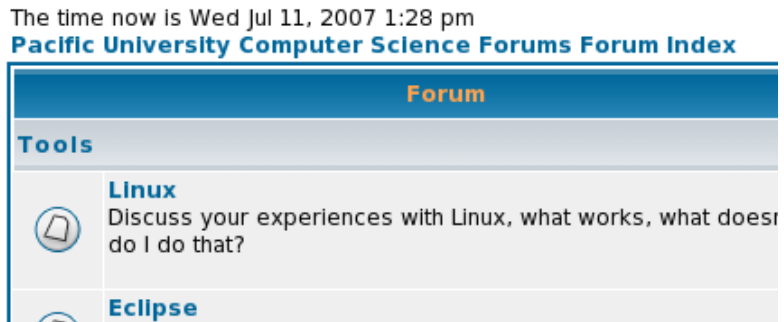
Web Application Server CakePHP

April 19, 2013

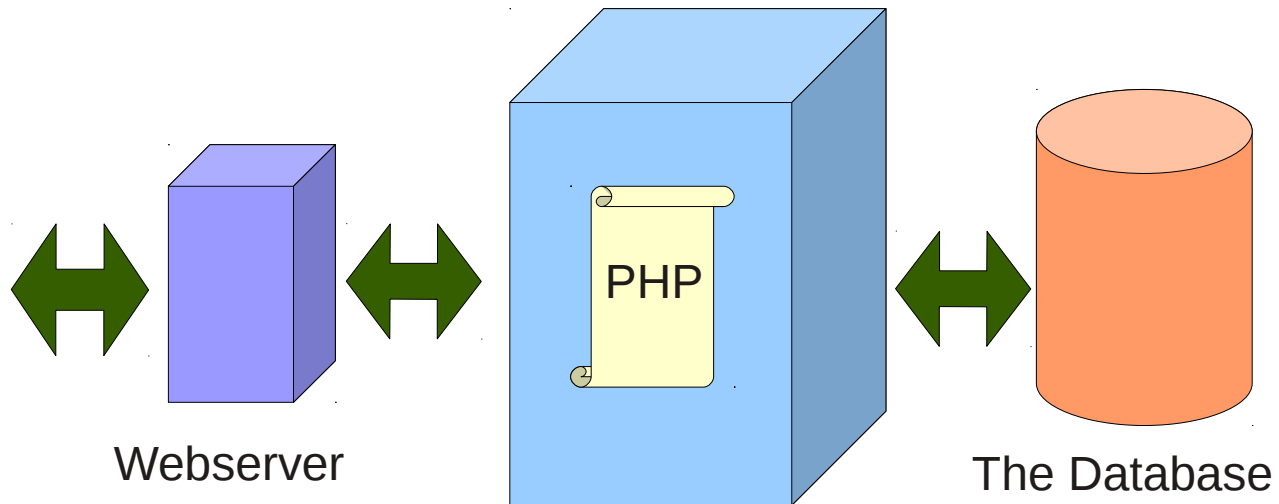


www.cakephp.org
<http://book.cakephp.org/>

More Complicated Database Usage Scenario



User



Application Server



Application Server

- The Application server helps put your code into the **Model-View-Controller** Design Pattern
 - Model: the data
 - View: display the data
 - Controller: connect a Model to a View
- M: Write code to produce a single row of data
 - many ways
- V: Write code to display a single row of data
 - many ways
- C: Mix and match!

CakePHP

- Application Server for small to medium size web sites
- Easy to install and configure!
- Great on-line tutorial
- Free!

- URL driven
<https://gray.cs.pacificu.edu/chadd/cake/Employees>
<https://.../cake/Employees/highestSalary>

- I was able to get up and running in two afternoons

Example

- We have data in a MySQL database

```
mysql> select * from employees;
+----+-----+-----+-----+
| id | FName      | LName      | ....
+----+-----+-----+-----+
|  1 | Emerald    | Wilkerson  | ....
```

- We want to display the data in different ways
 - filter differently
- Naming conventions!
 - in order to cut down on config files, CakePHP relies on standard naming conventions.
 - <http://book.cakephp.org/2.0/en/getting-started/cakephp-conventions.html>

Model app/models/employee.php

```
class Employee extends AppModel
{
    // var $name = 'employees';           // unnecessary if
                                        // the naming conventions are used.
    var $useDbConfig = 'a1';             // from database.php

    function findFirst()
    {
        return $this->find('first'); // SQL is auto generated
    }

    function findLowestSalary()
    {
        return $this->find('first',
            array('order'=>array('salary ASC')));
    }

    function findHighestSalary()
    {
        return $this->find('first',
            array('order'=>array('salary DESC')));
    }
}
```

**Three ways to
produce one row
from table
employee**

Model employee.php

```
function findManagers()  
{  
    // select employees.*  
    // from employees, software  
    // where employees.id = Manager  
    // order by id ASC;  
  
    $options['joins'] = array  
    (  
        array  
        (  
            'table' => 'software',  
            /* 'alias' => 'newName', */  
            /* specify alias to rename the table software*/  
  
            /* 'type' => 'LEFT', */  
            /* don't specify type so use a plain join */  
            'conditions' => array(  
                'Employee.id = software.Manager',  
            )  
        )  
    )  
);  
    $options['order'] = array('id ASC');  
    return $this->find('all', $options); // 1 = 1  
}
```

```
SELECT *  
FROM `employees` AS `Employee`  
    JOIN `software`  
    ON (`Employee`.`id` =  
        `software`.`Manager`)  
WHERE 1 = 1  
ORDER BY `id` ASC
```

View app/views/employees/index_single.ctp

Display one row of data

```
<tr>
  <td>
    <?php echo $theData['Employee']['id']; ?>
  </td>
  <td>
    <?php echo $theData['Employee']['FName']; ?>
  </td>
  <td>
    <?php echo $theData['Employee']['LName']; ?>
  </td>
  <td>
    <?php echo $theData['Employee']['Salary']; ?>
  </td>
</tr>
```


view index.ctp

Display a table of rows.

```
<?php foreach ($theData as $employee): ?>
  <tr>
    <td><?php echo $employee['Employee']['id']; ?></td>
    <td><?php echo $employee['Employee']['FName']; ?></td>
    <td><?php echo $employee['Employee']['LName']; ?></td>
    <td><?php echo $employee['Employee']['Salary']; ?></td>
  </tr>
<?php endforeach; ?>
```

Controller app/controllers/employees_controller.php

```
class EmployeesController extends ApplicationController {

    // var $name = 'employees'; // not necessary

    function index() { // default
        // employees is the name of the variable to be set in the
        // view that is used to display the result of find('all');

        $this->set('theData', $this->Employee->find('all'));
        // implicitly invoke index.ctp
    }

    function lowestSalary() {
        $this->set('theData', $this->Employee->findLowestSalary());
        $this->render('index_single');
    }

    function highestSalary() {
        $this->set('theData', $this->Employee->findHighestSalary());
        $this->render('index_single');
    }
}
```

Controller employees_controller.php

```
function salaryChartAll()
{
    $this->set('filter', 'All');

    $this->set('theData', $this->Employee->find('all'));
    $this->render('salary_chart');
}

function salaryChartManagers()
{
    $this->set('filter', 'Manager');

    $this->set('theData', $this->Employee->findManagers());
    $this->render('salary_chart');
}

function view($id) {
    $this->Employee->id = $id;
    $this->set('theData', $this->Employee->read());
    // implicitly invokes view.ctp
}
```

URLs

- `https://gray.cs.pacificu.edu/chadd/cake/EmployeesEmployeesController->index()`
- `https://.../cake/Employees/view/2EmployeesController->view(2)`
- `https://.../cake/Employees/highestSalaryEmployeesController->highestSalary()`
- `https://.../cake/Employees/salaryChartAllEmployeesController->salaryChartAll()`

Nuts & Bolts

- Configure database access
 - app/config/database.php
- cake/libs/view/layouts/default.ctp
 - wraps around your view
- app/webroot
 - space for .html files

```
class DATABASE_CONFIG {  
  
    var $default = array(  
        'driver' => 'mysql',  
        'persistent' => false,  
        'host' => 'localhost',  
        'login' => 'chadd',  
        'password' => 'xxxxx',  
        'database' => 'chadd_a1',  
        'prefix' => "",  
  
    );  
  
    var $a1 = array(  
        'driver' => 'mysql',  
        'persistent' => false,  
        'host' => 'localhost',  
        'login' => 'chadd',  
        'password' => 'xxxxx',  
        'database' => 'chadd_a1',  
        'prefix' => "",  
  
    );  
}
```