

Routing

lesson #basic06

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Agenda

1. [Routing](#)
2. [Hooks](#)
3. [Loose Ends](#)

Routing

The controller folder convention can be over-ridden by specifying [routing rules](#), in application/config/routes.php

An example such rule lets you change the default controller:
`$route['default_controller'] = 'welcome';`

If you specify multiple rules, they are tested consecutively until one fits.

Wildcard Routing

A routing rule can use a "wildcard" token, (:num) to match a numeric segment value, or (:any) to match any segment value.

Specify an expression using these as the "key" for a routing rule, and specify the proper destination as the "value".

You can use the substitution token \$n to reference a URI segment in the original request.

Some examples of routing rules:

```
$route['blog/joe'] = "blogs/users/34";
```

```
$route['product/(:num)'] =  
"catalog/product_lookup_by_id/$1";
```

```
$route['page/(:any)'] = 'welcome/page/$1';
```

```
$route['secret'] = 'youllneverfindme/$1/$2';
```

Regular Expression Routing

You can also use a regular expression in a routing rule.

For instance:

```
$route['products/([a-z]+)/(\d+)'] = "$1/id_$2";  
would remap /products/banana/eat to /eat/id_banana
```

Another example:

```
$route['([a-z]+)/register'] = 'assimilate/$0';  
would remap /jim/register to /assimilate/jim
```

Callback Routing

If you are using PHP >= 5.3 you can use callbacks in place of the normal routing rules to process the back-references.

For instance:

```
$route['products/([a-zA-Z]+)/edit/(\d+)'] =  
function ($product_type, $id)  
{  
    return 'catalog/product_edit/' . strtolower($product_type) . '/' . $id;  
};
```

Author's note: this is new to me, and I don't have a good explanation for it (yet).

HTTP Verb Routing

You can specify routing rules that apply to specific HTTP request types. This would be applicable to utility and service controllers.

Some examples, in a RESTful fashion:

```
$route['products']['PUT'] = 'product/insert';  
$route['products/(:num)']['DELETE'] = 'product/delete/$1';
```

Hooks

The CodeIgniter framework, internally, performs the following steps to handle a request:

1. Apply routing rules to determine the controller and method to use
2. Instantiate the controller
3. Invoke the appropriate method, capturing output
4. Return the output to the browser

CodeIgniter also provides "hooks", to let you inject processing at various pre-defined stages of the request handling.

Refer to the [user guide](#) for details!

Hook Points

The following are some of the "hook points" that you can use:

- pre_system
- pre_controller
- post_controller_constructor
- post_controller
- display_override
- post_system

Hooks are configured similarly to routes, and you can have multiple hooks for the same hook point.

Adding Hooks

Configure your hooks in application/config/hooks

An example:

```
$hookie = array(
    'class'=>...,
    'function'=>...,
    'filename'=>...,
    'filepath'=>...,
    'params'=>...
);

$hooks[entrypoint][] = $hookie;
```

Loose Ends

Upcoming lessons will address some more exotic controller issues:

- Webapp error handling (avoid getting fired)
- Handling AJAX requests
- Handling service requests
- Handling plugins for additional resources

Caution: Before using a feature, eg. hooks or routing, RTFM!

Coding Conventions

Required:

- Class and file naming - "ucfirst"

Allowed:

- deviations from the suggested, for good reason
- multiple classes (related) in file

Bad ideas:

- PHP namespaces (for now)

Suggested (for methods & variables):

- words separated by underscores
- underscores in front of internal items
- Allman style braces & indenting
- commenting, Javadoc style!
- value & type comparison (===)!
- don't use closing PHP tag at end of file!

Congratulations!

You have completed lesson #basic06: Routing

If you would take a minute to [provide some feedback](#), we would appreciate it!

The next activity in sequence is: [lab03](#) Website Conversion

You can use your browser's back button to return to the page you were on before starting this activity, or you can jump directly to the course [homepage](#), [organizer](#), or [reference](#) page.