

Building MVC Web Applications

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Today

Building MVC
Web
Applications

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Models

Views

Controllers

Assets

TwitterNiter

- ▶ models
- ▶ views
- ▶ controllers
- ▶ assets
- ▶ TwitterNiter

Models

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TwitterNiter

- ▶ the **M** in MVC
- ▶ `application/models/`
- ▶ models access the database
 - ▶ and nothing else

Documentation

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- ▶ `http://codeigniter.com/user_guide/database/active_record.html`
 - ▶ **your new best friend**
- ▶ `http://codeigniter.com/user_guide/database/`
 - ▶ **even more friends**
- ▶ **read the documentation.**

Query Building

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- ▶ `$this->db` is an object with query-building methods
 - ▶ nicer than writing SQL yourself
- ▶ `$results =`
`$this->db->get('table')->result();`
 - ▶ get entire table as array of objects

Active Record

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- ▶ CodeIgniter is NOT Active Record
- ▶ `http://en.wikipedia.org/wiki/Active_record_pattern`
 - ▶ the Internet is always right

Reading

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- ▶ `$this->db->where_in('column', array(1, 2, 3))->get('table')->result();`
 - ▶ `SELECT * FROM table WHERE column IN (1, 2, 3)`
- ▶ `$this->db->get_where('table', array('column' => 'value'))->result();`
 - ▶ `SELECT * FROM table WHERE column = 'value'`

Writing

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- ▶ `$this->db->insert('table',
array('column' => 'value'));`
 - ▶ `INSERT INTO table (column) VALUES
('value')`
- ▶ `$this->db->where('id',
1')->update('table', array('column' =>
'value'));`
 - ▶ `UPDATE table SET column = 'value' WHERE
id = 1`

Tweet Model

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- ▶ `tweets` table, each row is a tweet
- ▶ `tweets` table has a `Tweet` model in `application/models/tweet.php`

Tweet Model

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- ▶ `application/models/tweet.php`
 - ▶ `add()`
 - ▶ `get_newsfeed()`

Views

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- ▶ the **V** in MVC
- ▶ `application/views/`
- ▶ views display data
 - ▶ and nothing else

Views

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- ▶ views contain both HTML and PHP
- ▶ use objects from model to display data, iterate over data, etc.

Tweets View

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▶ `application/views/tweets/index.php`

Controllers

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TwitterNiter

- ▶ the **C** in MVC
- ▶ `application/controllers/`
- ▶ controllers connect views to models
 - ▶ and nothing else

Controllers

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- ▶ I go to the URL `/courses/view/1`
- ▶ CodeIgniter instantiates `Courses` in `application/controllers/courses.php`
- ▶ CodeIgniter calls the `view` function and passes `1` as parameter

Things that Happen

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- ▶ requests come from browser to controller
- ▶ controller calls model
- ▶ model accesses database and returns data to controller
- ▶ controller sends model data to view

Things that do NOT Happen

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- ▶ model does NOT call controller methods
- ▶ view does NOT call controller methods
- ▶ JavaScript does NOT call controller methods
- ▶ view does NOT call model methods

Tweets Controller

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- ▶ `application/controllers/tweets.php`
 - ▶ `index()`
 - ▶ `add()`

Assets

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- ▶ JavaScript (yay!), CSS, images, etc.
 - ▶ NOT PHP code
- ▶ belong in `html/`
 - ▶ only files under `html/` can be displayed by web browser

Referencing Assets

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- ▶ `path/to/file` is relative to the current file
 - ▶ where's the current file? I dunno.
- ▶ `/path/to/file` is relative to the `DocumentRoot`
 - ▶ where's the `DocumentRoot`? `html/`

Assets

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▶ `html/js/tweets/index.js`

.htaccess

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- ▶ makes your URLs pretty
 - ▶ automatically sends everything to `index.php`
 - ▶ (so you don't have to)
- ▶ don't forget to `chmod 644 .htaccess!`

.htaccess

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▶ `html/.htaccess`

Adding Tags

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- ▶ new feature request! tagging posts

Model

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- ▶ tags table
- ▶ Tag model to interact with table
 - ▶ add tag associated with tweet
 - ▶ fetch tags for tweets on homepage

View

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- ▶ display tags in newsfeed

Controller

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- ▶ account for adding tags to a tweet
- ▶ make sure tags are fetched for tweets

Tags

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- ▶ `application/models/tag.php`
- ▶ `application/models/tweet.php`
- ▶ `application/controllers/tweets.php`
- ▶ `application/views/tweets/index.php`
- ▶ `html/js/tweets/index.js`

One More Thing

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▶ **search!**

Search

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▶ `application/controllers/tweets.php`