Building MVC Web Applications

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Models

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

▶ 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.
$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

- CodeIgniter is NOT Active Record
- [http://en.wikipedia.org/wiki/Active_record_pattern](http://en.wikipedia.org/wiki/Active_record_pattern)
  - the Internet is always right
$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'
$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

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

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

- the V in MVC
- application/views/
- views display data
  - and nothing else
Views

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

- application/views/tweets/index.php
Controllers

- the C in MVC
- application/controllers/
- controllers connect views to models
  - and nothing else
Controllers

- 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

- 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

▶ 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

- application/controllers/tweets.php
  - index()
  - add()
Assets

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

▶ 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

▶ html/js/tweets/index.js
.htaccess

▶ makes your URLs pretty
  ▶ automatically sends everything to index.php
  ▶ (so you don’t have to)
▶ don’t forget to chmod 644 .htaccess!
html/.htaccess
Adding Tags

- new feature request! tagging posts
Model

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

- display tags in newsfeed
Controller

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

- 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

▶ search!
application/controllers/tweets.php