

Making Moves

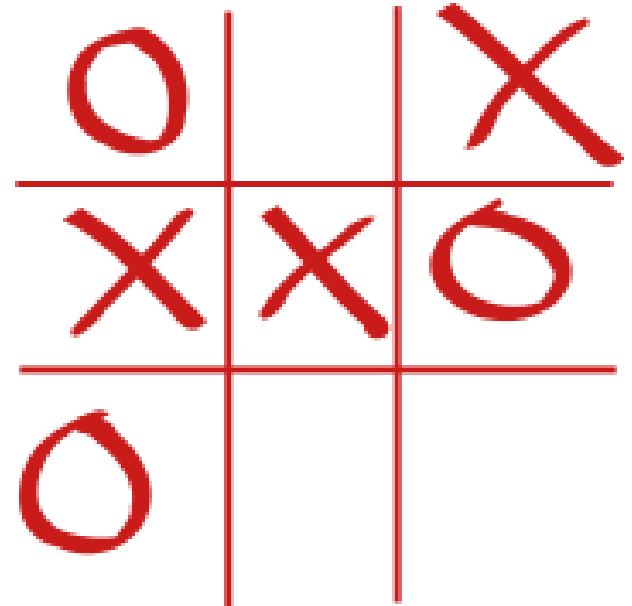
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Overview

- **Finish the tictactoe app**
- **Make a move**
 - With a Move form
 - Custom Validation
- **Game Logic**
 - Fat Models
- **Advanced Template Features**



Fat Models, Skinny Views

- **Fat Models: Django Best Practice**
- **Logic goes in Models, keep Views (and Templates) simple.**
- **Why?**
 - DRY
 - Testing
 - Readability

URLs: Reverse and `get_absolute_url`

- **Implement `get_absolute_url()` on a Model**
 - Provides the canonical URL for a Model instance
- **`django.core.urlresolvers.reverse`**
 - Get the URL for a specific view
 - Works like `{% url %}` template tag
 - Pass it arguments: `reverse('someview', args=[4])`

Templates: Lookup

- `{{ user.name }}` or `{% for m in game.move_set %}`
- A dot causes:
 - Dictionary lookup
 - Attribute lookup
 - Method call
 - List-index lookup

```
{{ list.5 }} # list[5]

{% if dict.key == "somevalue" %}

    # dict["key"]

{% if g.move_set.count > 3 %}

    # g.move_set.count()
```

Templates: Lookup

- But you can NOT pass arguments to methods from a template
 - `{% if game.is_users_turn(user) %}`
 - `{% for i in range(10) %}`
- Write this kind of logic in the model or view

Template Inheritance: Super

- `{{ block.super }}`
 - Includes the block contents from the parent template

Model Meta Class

```
class Meta:  
    get_latest_by = "timestamp"
```

- Add options to your Model
- Ordering
- Latest/earliest
- Table name
- And more: <http://goo.gl/fN4wjF>

ModelForm Validation

- **Validate a single field: use a validator**

- Django provides a set of validators

```
y = models.IntegerField(validators=[MinValueValidator(0)])
```

- Or write your own validator (it's easy)
- <http://goo.gl/L5iGK2>

- **Not for a specific field: overwrite clean() from Form**

- This is a little more advanced
- See <http://goo.gl/qbS0ZG>

Summary

- **Finish the tictactoe app**
- **Make a move**
 - With a Move form
 - Custom Validation
- **Game Logic**
 - Fat Models
 - Instance URLs
- **Templates**
 - Field lookup
 - `block.super`
 - Forms

