

Template Animation

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Why templating?

Because...

working software

We build innovative web based applications

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← Energy for Opportunity website is now live

Thanks Louis now here is my dad →

26 Nov 2011

Your templating engine sucks and everything you have ever written is spaghetti code (yes, you)

Templating is a real hot button in the web development community. The only other topic I think is more prone to sanctimony and religious flame wars is quality control and testing.

The high horses that people usually get on about are the all too familiar TLA MVC (Model/View/Controller) architecture and "separation of presentation and business logic".

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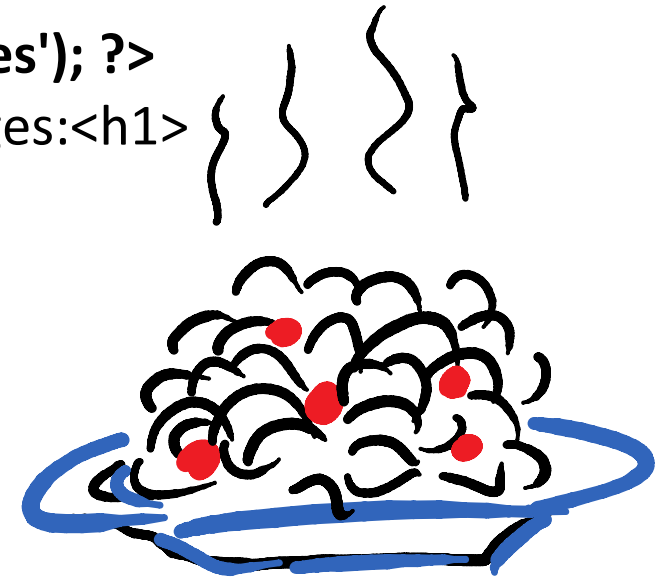
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Spaghetti? Templating Level 1

```
<?php if($db->fetchOne('select count(*) from messages')) { ?>
    <h1>There are no messages</h1>
<?php } else { ?>
    <?php $messages = $db->fetchAll('select * from messages'); ?>
    <h1>There are <?php echo count($messages); ?> messages:<h1>
    <ul>
        <?php foreach ($messages as $message) { ?>
            <li>From <?php echo $message['from']; ?></li>
        <?php } ?>
    </ul>
</php ?>
```



Spaghetti? Templating Level 2

```
<? $messages = $messageStore->getAll(); ?>

<? if (count($messages)) { ?>
    <h1>There are no messages</h1>
<? } else { >
    <h1>There are <?= count($messages) ?> messages:<h1>
    <ul>
        <? foreach ($messages as $message) { ?>
            <li>From <?= $message['from']; ?></li>
        <?php } ?>
    </ul>
<php } ?>
```



Spaghetti? Templating Level 3

View Model



```
$messages = $store->getMessages();  
  
$model = array(  
    'messageCount' => count($messages),  
    'messages' => $messages  
);
```

```
{{^messageCount}}  
    <h1>There are no messages</h1>  
{{/messageCount}}  
{{#messageCount}}  
    <h1>There are {{messageCount}} messages:<h1>  
    <ul>  
        {{#messages}}  
            <li>From {{from}}</li>  
        {{/messages}}  
    </ul>  
{{/messageCount}}
```



Why all the fuss?

Why all the fuss?

Maintainability

How easy is it to understand what it's supposed to do

the code



Maintainability

```
<? $messages = $messageStore->getAll(); ?>
```

```
<? if (count($messages)) { ?>
```

```
    <h1>There are no messages</h1>
```

```
<? } else { >
```

```
    <h1>There are <?= count($messages) ?> messages:<h1>
```

```
    <ul>
```

```
    <? foreach ($messages as $message) { ?>
```

```
        <li>From <?= $message['from']; ?></li>
```

```
    <?php } ?>
```

```
    </ul>
```

```
<php } ?>
```

'cause less
clutter



more readable



```
{{^messageCount}}
```

```
    <h1>There are no messages</h1>
```

```
{{/messageCount}}
```

```
{{#messageCount}}
```

```
    <h1>There are {{messageCount}} messages:<h1>
```

```
    <ul>
```

```
    {{#messages}}
```

```
        <li>From {{from}}</li>
```

```
    {{/messages}}
```

```
    </ul>
```

```
{{/messageCount}}
```

How **easy** is it to **read** the code
to understand what it's supposed to do

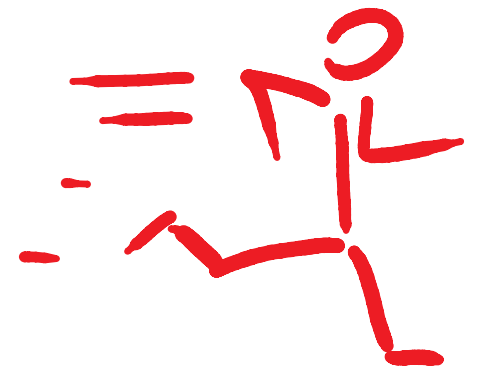
Readability 

How **easy** is it to **run** ^{my approach} the code
to understand what it's supposed to do

Readability 

How **easy** is it to **run** the code
to understand what it's supposed to do

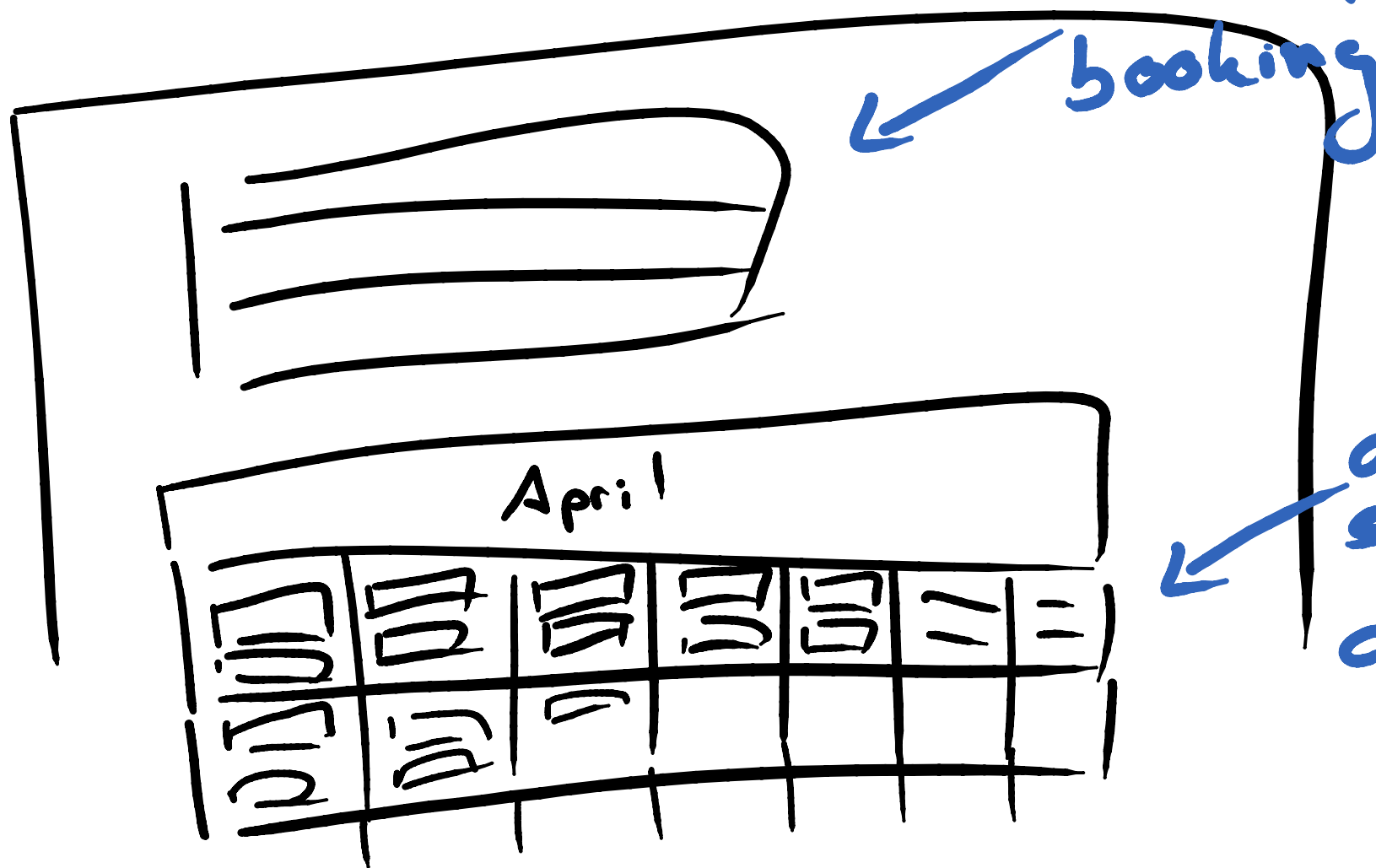
Runability



How **easy** is it to **run** the code
to understand what it's supposed to do

Runability ^{BDD, ?}
anyone?

Example: Booking tool



List of
booking

available
slots per
day

Let's use `{{mustache}}`

```
<div>
  {{^hasBookings}}
  <div class="alert">You have no bookings.</div>
  {{/hasBookings}}

  {{#hasBookings}}
  <table class="open-bookings table table-striped">
    {{#bookings}}
    <tr>
      <td>{{date}}</td>
      <td>{{slot}}</td>
      <td><a href="#">cancel</a></td>
    </tr>
    {{/bookings}}
  </table>
  {{/hasBookings}}
</div>
```

looks quite
readable...

Let's use `{{mustache}}`

```
<div>
  {{^hasBookings}}
  <div class="alert">You have no bookings.</div>
  {{/hasBookings}}

  {{#hasBookings}}
  <table class="open-bookings table table-striped">
    {{#bookings}}
    <tr>
      <td>{{date}}</td>
      <td>{{slot}}</td>
      <td><a href="#">cancel</a></td>
    </tr>
    {{/bookings}}
  </table>
  {{/hasBookings}}
</div>
```

looks quite
readable...

but is it **runnable**?

Your bookings

Let's run it!

{{^hasBookings}}

You have no bookings. Click on an available slot below to book it.

{{/hasBookings}} {{#hasBookings}} {{#bookings}} {{/bookings}}

Date	Slot	
{{date}}	{{slot}}	cancel

{{/hasBookings}}

Availability

available 1 spot left full booked by you

{{#months}}

← {{caption}}		{{#prevAction}} {{/prevAction}} {{#nextAction}} {{/nextAction}}					{{caption}} →						
{{name}}													
Monday		Tuesday		Wednesday		thursday		Firday		Saturday		Sunday	
{{#weeks}}													
{{number}}		{{#days}} {{/days}}											
{{#slots}}													
{{name}}													
{{available}}													
{{/slots}}													
{{/weeks}}													

{{/months}}

Your bookings

{{^hasBookings}}

You have no bookings. Click on an available slot below to book it.

{{/hasBookings}} {{#hasBookings}} {{#bookings}} {{/bookings}}

Date	Slot	
{{date}}	{{slot}}	cancel

{{/hasBookings}}

everything is mixed up

Availability

- available
- 1 spot left
- full
- booked by you

{{#months}}

← {{caption}}

{{#prevAction}} {{/prevAction}} {{#nextAction}} {{/nextAction}}

→ {{caption}}

{{name}}

MondayTuesdayWednesdaythursdayFirdaySaturdaySunday

{{#weeks}}

{{number}}

{{#days}} {{/days}}

{{#slots}}

{{name}}

{{{available}}}

{{/slots}}

{{/weeks}}

{{/months}}

Your bookings

{{^hasBookings}}

You have no bookings. Click on an available slot below to book it.

{{/hasBookings}} {{#hasBookings}} {{#bookings}} {{/bookings}}

Date	Slot	
{{date}}	{{slot}}	cancel

everything is mixed up

Availability

available1 spot leftfullbooked by you

{{#months}}

← {{caption}}

{{#prevAction}} {{/prevAction}} {{#nextAction}} {{/nextAction}}

→ {{caption}}

{{name}}

Monday	Tuesday	Wednesday	thursday	Firday	Saturday	Sunday
{{#weeks}}						
{{number}} {{#days}} {{/days}}						
{{#slots}}						
{{name}}						
({{available}})						
{{/slots}}						
{{/weeks}}						

{{/months}}

ah glay!

Your bookings

You have no bookings. Click on an available slot below to book it.

How it's supposed
to look like:

Availability

available

1 spot left

full

booked by you

← February

March

April →

Monday

Tuesday

Wednesday

thursday

Firday

Saturday

Sunday

1

2

9h - 13h (3)

9h - 13h (1)

14h - 18h (0)

14h - 18h (0)

Your bookings

You have no bookings. Click on an available slot below to book it.

Date	Slot	
2.3.2013	14h - 19h	cancel
3.3.2013	14h - 19h	cancel

Availability

available 1 spot left full booked by you

← February		March					April →
Monday	Tuesday	Wednesday	thursday	Firday	Saturday	Sunday	
1	2						
9h - 13h (3)	9h - 13h (1)						
14h - 18h (0)	14h - 18h (0)						

How it's supposed to look like:

Let's use THIS as template

I can see and modify it without PHP !!

How?

How?

Template Animation!



How does this work?

1. Create template

Your bookings

You have no bookings. Click on an available slot below to book it.

Date	Slot	
2.3.2013	14h - 19h	cancel
3.3.2013	14h - 19h	cancel

Availability

available 1 spot left full booked by you

← February

March

April →

Monday	Tuesday	Wednesday	thursday	Friday	Saturday	Sunday
1	2					
9h - 13h (3)	9h - 13h (1)					
14h - 18h (0)	14h - 18h (0)					

How does this work?

1. Create template
2. Infer ^{view} model

Your bookings

You have no bookings. Click on an available slot below to book it.

Date	Slot	
2.3.2013	14h - 19h	cancel
3.3.2013	14h - 19h	cancel

Availability available 1 spot left full booked by you

← February **March** April →

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1	2					
9h - 13h (3)	9h - 13h (1)					
14h - 18h (0)	14h - 18h (0)					

```
bookings: [  
  { date: '2010-05-10',  
    slot: '9h - 14h' }  
],  
months: [  
  { name: 'April'  
    ... }  
] ...
```

How does this work?

1. Create template

2. Infer ^{view} model

3. Annotate template

Your bookings

You have no bookings. Click on an available slot below to book it.

Date	Slot	
2.3.2013	14h - 19h	cancel
3.3.2013	14h - 19h	cancel

Availability available 1 spot left full booked by you

← February **March** April →

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1	2					
9h - 13h (3)	9h - 13h (1)					
14h - 18h (0)	14h - 18h (0)					

```
bookings: [  
  { date: '2010-05-10',  
    slot: '9h - 14h' }  
],  
months: [  
  { name: 'April'  
    ... }  
] ...
```

Your bookings ✓ if no bookings

You have no bookings. Click on an available slot below to book it.

Date	Slot	
2.3.2013	14h - 19h	cancel
3.3.2013	14h - 19h	cancel

← for each booking

Availability available 1 spot left full booked by you ← month

← February **March** April →

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1	2					
9h - 13h (3)	9h - 13h (1)					
14h - 18h (0)	14h - 18h (0)					

← slot

↑ day

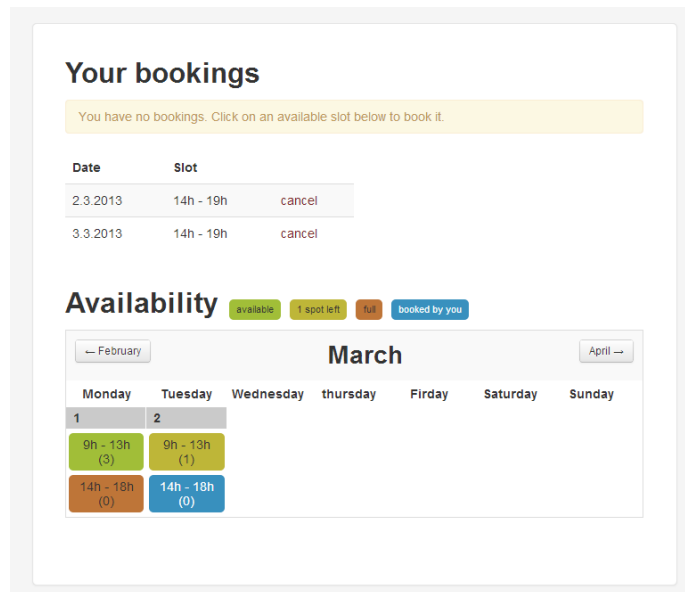
← weeks

How does this work?

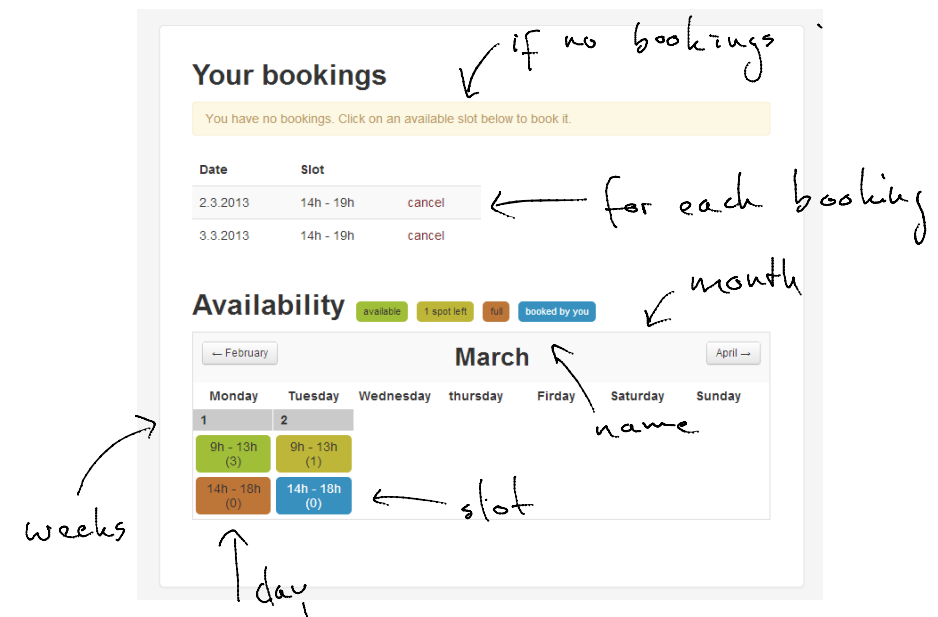
1. Create template

2. Infer ^{view} model

3. Annotate template



```
bookings: [  
  { date: '2010-05-10',  
    slot: '9h - 14h' }  
],  
months: [  
  { name: 'April'  
    ... }  
] ...
```



4. Animate it !

Annotate?

```
<div>
```

```
  Name: <span>John Wayne</span>
```

```
  Homepage: <a href="http://johnwayne.com">
```

```
    <span>johnwayne.com</span>
```

```
  </a>
```

```
</div>
```

```
{
  person: {
    name: "John Wayne",
    url : {
      href: "http://johnwayne.com",
      caption: "johnwayne.com"
    }
  }
}
```

← View Model

```
<div>
  Name: <span>John Wayne</span>
  Homepage: <a href="http://johnwayne.com">
    <span>johnwayne.com</span>
  </a>
</div>
```

```
{
  person: {
    name: "John Wayne",
    url : {
      href: "http://johnwayne.com",
      caption: "johnwayne.com"
    }
  }
}
```

← View Model

Annotations

```
<div property="person">
  Name: <span property="name">John Wayne</span>
  Homepage: <a property="url" href="http://johnwayne.com">
    <span property="caption">johnwayne.com</span>
  </a>
</div>
```

View Model

```
{
  person: {
    name: "John Wayne",
    url : {
      href: "http://johnwayne.com",
      caption: "johnwayne.com"
    }
  }
}
```

Annotated Template

```
<div property="person">
  Name: <span property="name">John Wayne</span>
  Homepage: <a property="url" href="http://johnwayne.com">
    <span property="caption">johnwayne.com</span>
  </a>
</div>
```


View
Model

~ Animation ~>
?

Annotated
Template

```
{
  person: {
    name: "John Wayne",
    url : {
      href: "http://johnwayne.com",
      caption: "johnwayne.com"
    }
  }
}
```

```
<div property="person">
  Name: <span property="name">John Wayne</span>
  Homepage: <a property="url" href="http://johnwayne.com">
    <span property="caption">johnwayne.com</span>
  </a>
</div>
```

View
Model

~ Animation ~
?

Annotated
Template

```
{  
  person: {  
    name: "John Wayne",  
    url : {  
      href: "http://johnwayne.com",  
      caption: "johnwayne.com"  
    }  
  }  
}
```

nested
objects

//

```
<div property="person">  
  Name: <span property="name">John Wayne</span>  
  Homepage: <a property="url" href="http://johnwayne.com">  
    <span property="caption">johnwayne.com</span>  
  </a>  
</div>
```

nested
elements

View Model

→ mapping →

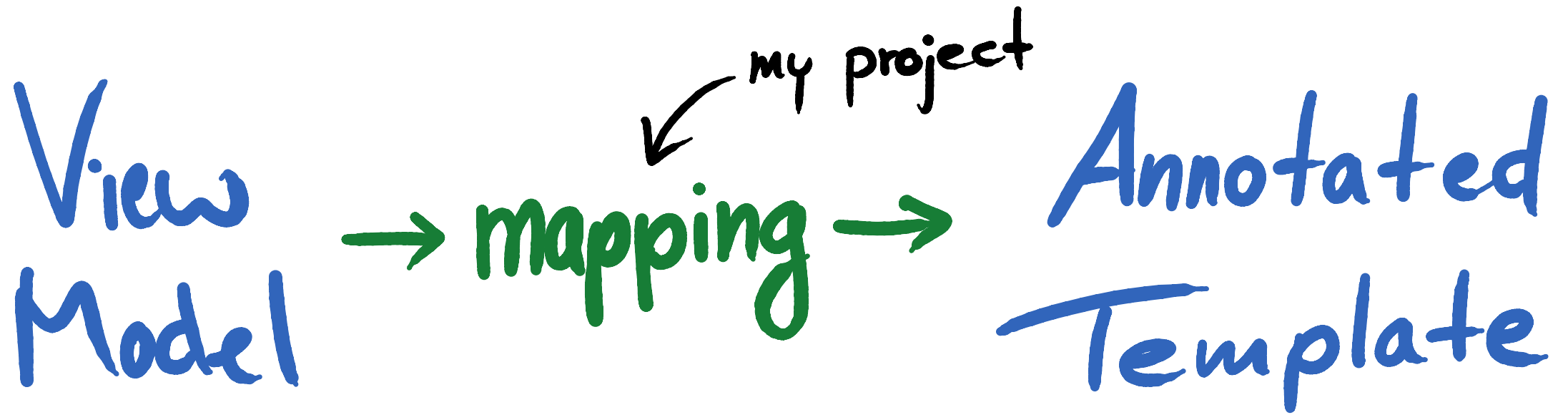
Annotated Template

```
{  
  person: {  
    name: "John Wayne",  
    url : {  
      href: "http://johnwayne.com",  
      caption: "johnwayne.com"  
    }  
  }  
}
```

nested
objects

```
<div property="person">  
  Name: <span property="name">John Wayne</span>  
  Homepage: <a property="url" href="http://johnwayne.com">  
    <span property="caption">johnwayne.com</span>  
  </a>  
</div>
```

nested
elements



```
{
  person: {
    name: "John Wayne",
    url : {
      href: "http://johnwayne.com",
      caption: "johnwayne.com"
    }
  }
}
```

nested objects

```
<div property="person">
  Name: <span property="name">John Wayne</span>
  Homepage: <a property="url" href="http://johnwayne.com">
    <span property="caption">johnwayne.com</span>
  </a>
</div>
```

nested elements

tempa n

tempa n



template animation

watoki/tempa n



template animation

web application toolkit



watoki/tempa n



template animation

web application toolkit



github.com/watoki/tempan



template animation

RDFa?

```
<div property="person">
```

```
  Name: <span property="name">John Wayne</span>
```

```
  Homepage: <a property="url" href="http://johnwayne.com">
```

```
    <span property="caption">johnwayne.com</span>
```

```
  </a>
```

```
</div>
```

RDFa

```
<div vocab="http://schema.org/">  
  <div property="person" typeof="Person">  
    Name: <span property="name">John Wayne</span>  
    Homepage: <a property="url" href="http://johnwayne.com">  
      <span property="caption">johnwayne.com</span>  
    </a>  
  </div>  
</div>
```

One last thing:

One last thing:

You ain't gonna need it.

github.com/watoki/tempa