

Template Animation

Nikolas.M@rtens.org

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Why templating?

Because . . .

The screenshot shows a website for "Working Software". The header includes the company logo (a grid of squares with the letters "w", "o", "r", "k", "i", "n", "g", "s", "o", "f", "t", "w", "a", "r", "e") and the tagline "We build innovative web based applications". A navigation bar with links to Home, Development, Projects, Clients, Hosting, The Team, and Blog is visible. Below the header, there are two small news items: "Energy for Opportunity website is now live" and "Thanks Louis now here is my dad". The main content features a large green headline: "Your templating engine sucks and everything you have ever written is spaghetti code (yes, you)". To the left of this headline is a timestamp: "26 Nov 2011". Below the headline is a paragraph about templating, mentioning it's a hot topic and comparing it to quality control. At the bottom, there's a note about the MVC architecture. On the right side, there's a sidebar with a "Subscribe" section containing links for RSS and email, and a form for entering an email address.

We build innovative web based applications

Home Development Projects Clients Hosting The Team Blog

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 of more prone to sanctimony and religious flame wars is quality control and testing.

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

Subscribe via RSS

WorkingSoftware

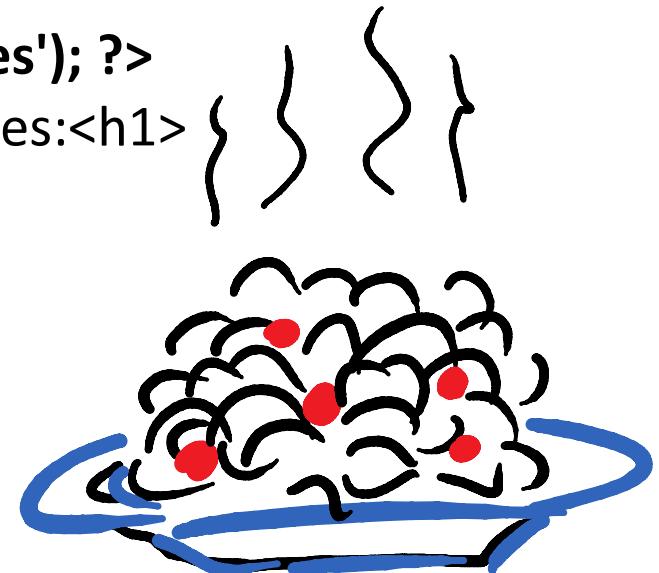
Subscribe to the blog

Email Address *

Subscribe via Email

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? Templatizing 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? Templatizing Level 3

View Mode!

```
$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

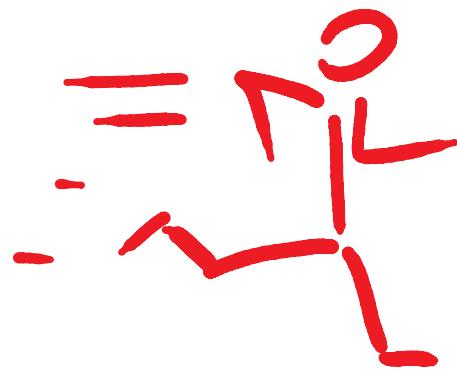
How **easy** is it to **run** the code
to understand what it's supposed to do

Readability



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

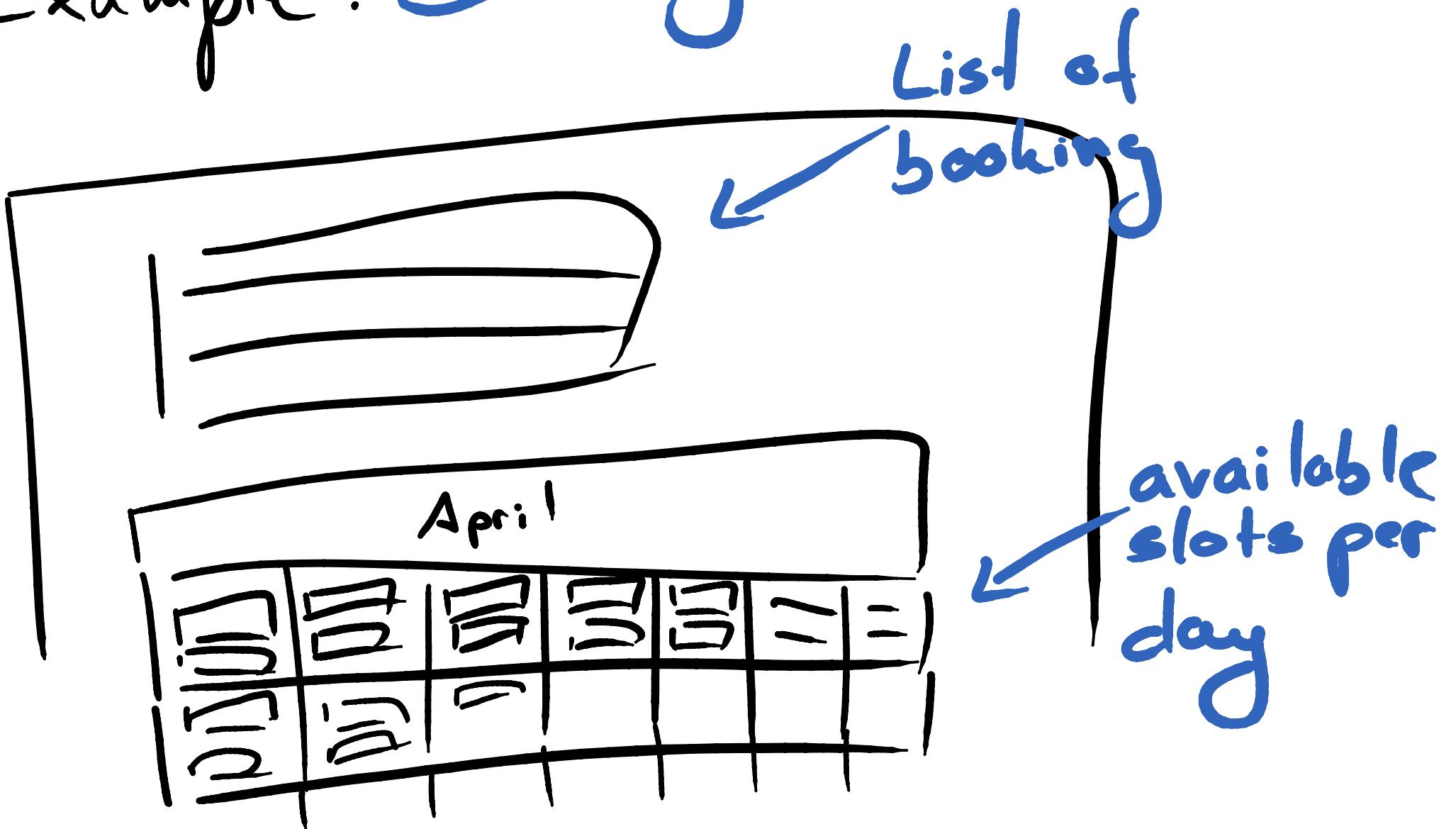
Runability



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

Runability BDD, anyone?

Example : Booking tool



```
<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>
```

Let's use {{mustache}}

looks quite
readable...

```
<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>
```

Let's use {{mustache}}

looks quite
readable...
but is it runnable?

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}}

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}}

Let's run it!

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}}

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}}



everything is
mixed up



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}}

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}}

uh glay!

everything is
mixed up



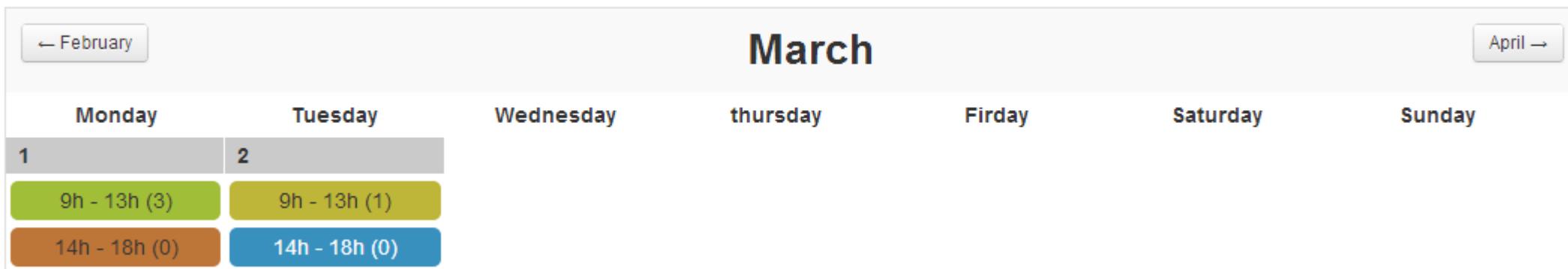
Your bookings

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



How it's supposed
to look like:

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 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	Action
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

Your bookings

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

Date	Slot	cancel
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)					

2. Infer ^{view} model

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

How does this work?

1. Create template

Your bookings

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

Date	Slot	cancel
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)					

2. Infer view model

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

3. Annotate template

Your bookings

if no bookings

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

Date	Slot	cancel
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)					

← weeks ↑ day ← slot ← month ← for each booking

How does this work?

1. Create template

Your bookings

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

Date	Slot	cancel
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)					

2. Infer view model

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

3. Annotate template

Your bookings

if no bookings

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

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

Availability

available 1 spot left full booked by you

← for each booking month

← weeks name

← day slot

← February March April →

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

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 |

```
<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>
```

Annotations

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

View Model → Mapping → Annotated Template

my project

```
{  
  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

tempan

tempa n



template animation

watoki/tempan



template animation

web application toolkit



watoki/tempan



template animation

web application toolkit



github.com/watoki/tempan



template animation

RD+α?

```
<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>
```



```
<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/tempan