



# KICKING BUTT WITH VUE.JS

Raymond Camden

# WHO AM I?

Raymond Camden

Developer Evangelist at HERE

Blogging at [raymondcamden.com](http://raymondcamden.com)

Tweeting at [raymondcamden](https://twitter.com/raymondcamden)

[github.com/cfjedimaster/vue-pres0](https://github.com/cfjedimaster/vue-pres0)



# WHY VUE?



Let's back up...



# WHY VUE?





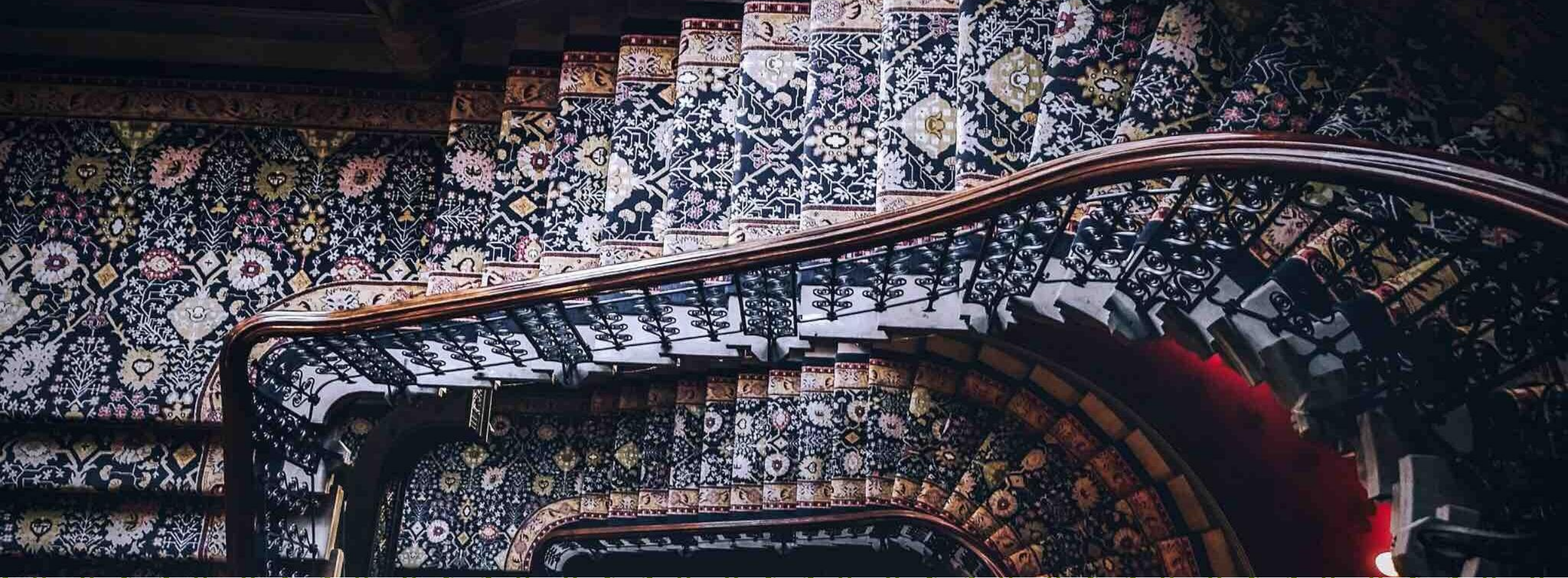
**SIMPLE** |





**NO BUILD PROCESS**





SCALABLE



# QUICK VUE FACTS

Created by Evan You (@youyuxi)

Released in February of 2014

Currently is version 2.6.11

Main site: [vuejs.org](https://vuejs.org)

GitHub: <https://github.com/vuejs>



# WHAT DOES VUE DO?

Two-way binding between your DOM and JavaScript

Template Language (aka Declarative Rendering)

And I know I said this - but it does more. A lot more.

# INSTALLATION

npm install

cli install

Download from site

Copy and paste a script tag FTW!!!!1!





# <SCRIPT> STYLE

```
<script src="https://unpkg.com/vue"></script>
```

# WRITE SOME CODE!

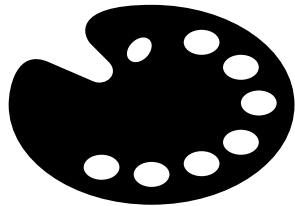
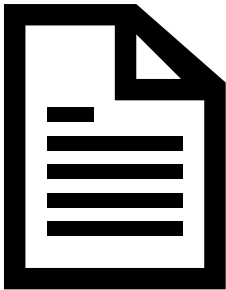
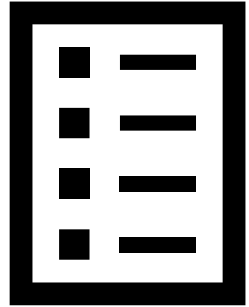
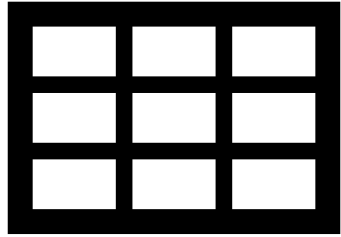
Identify where you're going to render stuff

Setup some data

Render that data

Add events (ie on this do that) and other fancy stuff

## Willy Nilly DOM Manipulation



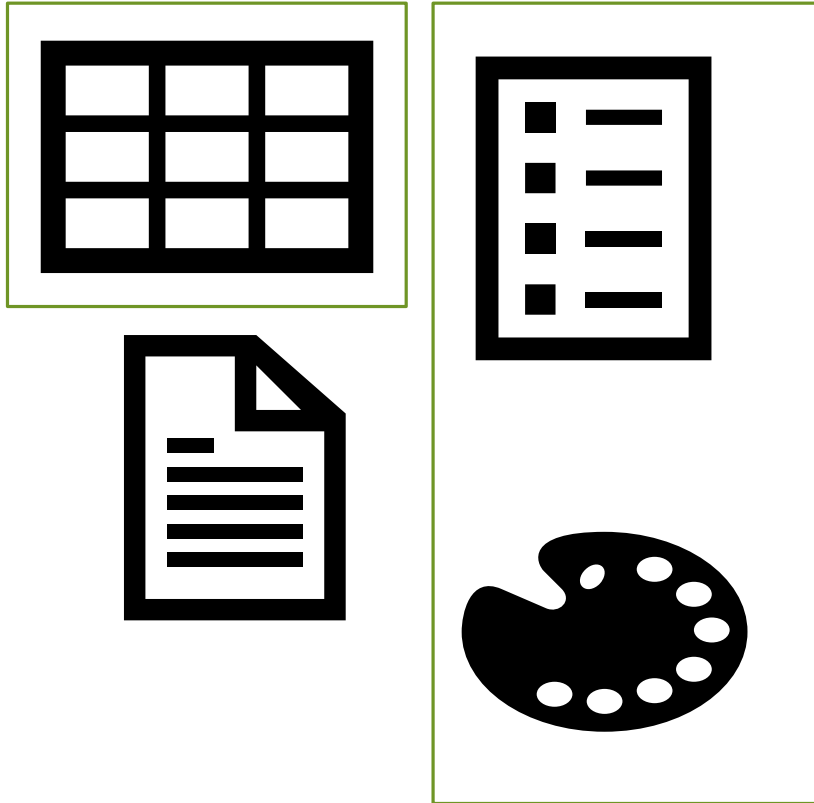
`$('#somediv').html('woot');`

`$('#someotherdiv').val(2);`

`$('#yetanotherdiv').html('<b>This is awesome</b>');`



## Defining Vue's Place...





# EXAMPLES

<http://bit.ly/rayvuedemos>

```
<!-- header stuff -->  
<div id="app">  
</div>  
<!-- footer stuff -->
```

```
var app = new Vue({  
  el: '#app',  
  data: {  
    name: "Ray",  
    age: 44  
  }  
});
```

SOME CODE...



```
<!-- header stuff -->
<div id="app">
My name is {{name}} and
I'm {{age}} years old.
</div>
<!-- footer stuff -->
```

```
var app = new Vue({
  el: '#app',
  data: {
    name: "Ray",
    age: 44
  }
});
```

# SOME MORE CODE...

```
<div id="app">
  My name is {{name}}.
  <span v-if="age > 40">
    I remember floppies.
  </span>
</div>
```

```
<div id="app">
  My name is {{name}}.
  <span v-if="age > 40">
    I remember floppies.
  </span><span v-else>
    What's a floppy?
  </span>
</div>
```

# TEMPLATE DIRECTIVES - CONDITIONALS

```
<div id="app">
  My name is {{name}}. Here
  are things I like:
  <ul>
    <li v-for="thing in things">
      {{thing}}
    </li>
  </ul>
</div>
```

```
var app = new Vue({
  el: '#app',
  data: {
    name: "Ray",
    things: [
      "cats",
      "star wars",
      "beer"
    ]
  }
});
```

# TEMPLATE DIRECTIVES - LOOPS



# WORKING WITH FORM FIELDS

v-model links to data field

Works in all kinds of form fields

<https://www.raymondcamden.com/2020/01/27/vue-and-form-fields>

```
<div id="app">  
  <input type="text" id="name" v-model="name"><br/>  
  My name is {{name}}.  
</div>
```

```
var app = new Vue({
  el: '#app',
  data: {
    count: 0
  },
  methods: {
    doIt: function() {
      this.count++;
    }
  }
})
```

# EVENTS

v-on:click="something"

Defined in methods block of Vue instance

Easy to do modifiers (v-on:submit.prevent)

@click="something"

```
<div id="app">
  <button v-on:click="doIt">Do It</button><br/>
  You did it {{count}} times.
</div>
```

# ATTRIBUTE BINDING

`v-bind:attribute="value"`

`:attribute="value"`

`v-bind:style="{bgcolor:curColor, font-style:textStyle}"`

`v-bind:class="{highlighted:isActive, color:appStatus}"`

```
<div id="app">  
    
</div>
```

# COMPUTED PROPERTIES

Virtual properties

Property X is based on real data A and B

Defined in the `computed` part of the Vue instance



```
<div id="app">
  <h2>Male Cats</h2>
  <ul>
    <li v-for="cat in cats"
        v-if="cat.gender === 'Male'">{{cat.name}}</li>
  </ul>

  <h2>Female Cats</h2>
  <ul>
    <li v-for="cat in cats"
        v-if="cat.gender === 'Female'">{{cat.name}}</li>
  </ul>
</div>
```

```
var app = new Vue({
  el: '#app',
  data: {
    cats: [
      { "name": "Alred", "gender": "Male" },
      { "name": "Barry", "gender": "Male" },
      { "name": "China", "gender": "Female" },
      { "name": "Dolores", "gender": "Female" },
      { "name": "Enya", "gender": "Female" },
      { "name": "Franke", "gender": "Male" },
      { "name": "Georgia", "gender": "Female" }
    ]
  }
})
```

EXAMPLE (BEFORE)

```
<div id="app">
  <h2>Male Cats</h2>
  <ul>
    <li v-for="cat in maleCats">{{cat.name}}</li>
  </ul>

  <h2>Female Cats</h2>
  <ul>
    <li v-for="cat in femaleCats">{{cat.name}}</li>
  </ul>
</div>
```

```
var app = new Vue({
  el:'#app',
  data:{
    cats:[
      {"name":"Alred", "gender":"Male"},
      {"name":"Barry", "gender":"Male"},
      {"name":"China", "gender":"Female"},
      {"name":"Dolores", "gender":"Female"},
      {"name":"Enya", "gender":"Female"},
      {"name":"Franke", "gender":"Male"},
      {"name":"Georgia", "gender":"Female"}
    ]
  },
  computed:{
    maleCats:function() {
      return this.cats.filter(c => c.gender === 'Male' );
    },
    femaleCats:function() {
      return this.cats.filter(c => c.gender === 'Female' );
    }
  }
})
```

# EXAMPLE (AFTER)

# VUE LIFECYCLE EVENTS

Events that occur while a Vue instance is doing stuff

beforeCreate, created, beforeMount, mounted, beforeUpdate, updated, activated, deactivated, beforeDestroy, destroyed, errorCaptured

<https://vuejs.org/v2/api/#Options-Lifecycle-Hooks>

# EXAMPLE

```
var app = new Vue({
  el: '#app',
  data: {
    films: []
  },
  created: function() {
    fetch('https://swapi.co/api/films/')
      .then(res => res.json())
      .then(res => {
        this.films = res.results;
      })
  }
})
```

```
<div id="app">
  <ul>
    <li v-for="film in films">
      {{film.title}}
    </li>
  </ul>
</div>
```



# FILTERS

Allow you to define a "formatter" for a value

```
{{ birthDate | formatDate }}
```

```
v-bind:something="someValue | changeValue"
```

```
Chainable: {{ birthdate | makeMeNotOld | formatDate }}
```

```
Arguments: {{ birthdate | formatDate('short') }}
```

# EXAMPLE

```
const app = new Vue({
  el: '#app',
  data: {
    theDate: new Date()
  },
  filters: {
    formatDate(d) {
      if(!window.Intl) return d;
      return new Intl.DateTimeFormat('en-US').format(new Date(d));
    }
  }
})
```

```
<div id="app" v-cloak>
  The date is {{ theDate | formatDate }}
</div>
```

# FULL EXAMPLE: FORM VALIDATION

Do I need to explain this?

Check on submit, report on top

More examples: <https://vuejs.org/v2/cookbook/form-validation.html>

# FULL EXAMPLE: AJAX SEARCH

Accept user input

Send to remote API...

- <https://itunes.apple.com/search?term=TERM&limit=10&media=music>

Render responses

# COMPONENTS

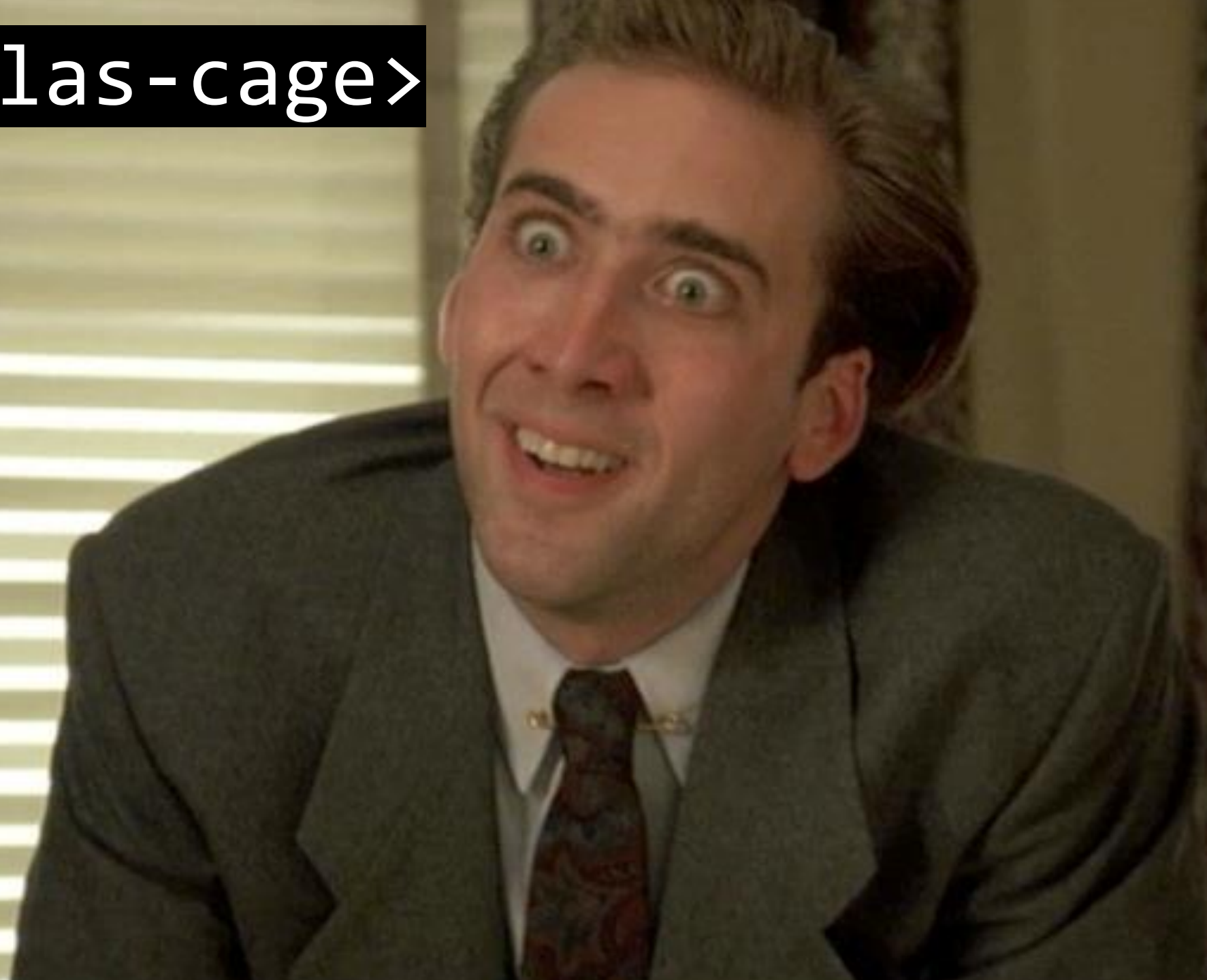
Re-usable objects of awesome-ness

Template + Logic + Style = Component

Also solves one of HTML's most glaring problems...



<nicholas-cage>



# EXAMPLE

---

```
Vue.component('nicolas-cage', {
  template: '',
  data() {
    return {
    }
  },
  computed: {
    url: function() {
      let theUrl = 'https://placecage.com/' + this.width + '/' + this.height;
      return theUrl;
    }
  },
  props: {
    height: {
      default: 400,
    },
    width: {
      default: 400
    }
  }
});
```

# EXAMPLE

```
<div id="app">
  <h2>Default</h2>
  <nicolas-cage></nicolas-cage>
  <p>
    <h2>H/W</h2>
    <nicolas-cage width="199" height="199"></nicolas-cage>
  </p>
</div>
```

# COMPONENT EXAMPLES

Google Static Maps: <https://www.npmjs.com/package/vue-static-map>

Bootstrap: <https://bootstrap-vue.js.org/>

Vuetify: <https://vuetifyjs.com/en/>

```
<b-tabs>
  <b-tab title="first" active>
    <br>I'm the first fading tab
  </b-tab>
  <b-tab title="second" >
    <br>I'm the second tab content
  </b-tab>
  <b-tab title="disabled" disabled>
    <br>Disabled tab!
  </b-tab>
</b-tabs>
```

# MORE COMPONENT STUFF

You can pass data in from the parent

You can listen for events from the component

"Sub children" (Slots)

```
<mything>
```

```
<template v-slot:thankyou>
```

```
Hey, I want to <i>really</i> thank you for taking  
the time to do whatever. We here at Mega Corp truly  
care that you took the time. Oh, and here, please  
take a kitten!
```

```
</template>
```

```
</mything>
```

# FULL EXAMPLE: PLACEHOLDER

Create an `<image-placeholder>` tag

Use [placeholder.com](https://placeholder.com) (or any other service)

Accept height and width (with defaults)



# ROUTING

Not a part of Vue

Official library: vue-router (<https://router.vuejs.org>)

Maps URL paths to components

Supports dynamic paths

# EXAMPLE (FROM THE DOCS)

```
const routes = [
  { path: '/foo', component: Foo },
  { path: '/bar', component: Bar }
]

const router = new VueRouter({
  routes // short for `routes: routes`
});

const app = new Vue({
  el: '#app',
  router
});
```

# EXAMPLE (STILL FROM THE DOCS)

```
<div id="app">
  <h1>Hello App!</h1>
  <p>
    <router-link to="/foo">Go to Foo</router-link>
    <router-link to="/bar">Go to Bar</router-link>
  </p>
  <router-view></router-view>
</div>
```



# FULL EXAMPLE: MASTER/DETAIL

First page - list of data

Second page - detail

# STATE MANAGEMENT

Solves a problem you may not have!

One component, one set of data = easy

Two components, two set of data = mostly easy

Many components, one set of data = um....

# VUEX

(Another) library for Vue (deeply integrated)

"Store"

Components can read from the store

Components cannot change data in the store (directly)



# VUEX EXAMPLE

## Stocks

IBM	\$87.74
Amazon	\$80.45
Microsoft	\$118.94
Disney	\$109.11

## Holdings

IBM	0
Amazon	0
Microsoft	0
Disney	0

Total value of holdings: \$0.00

## Purchase and Sell Stocks

Buy  shares of  Purchase

Sell  shares of  Sell

You currently have \$1000.00 in cash.

# THE CLI

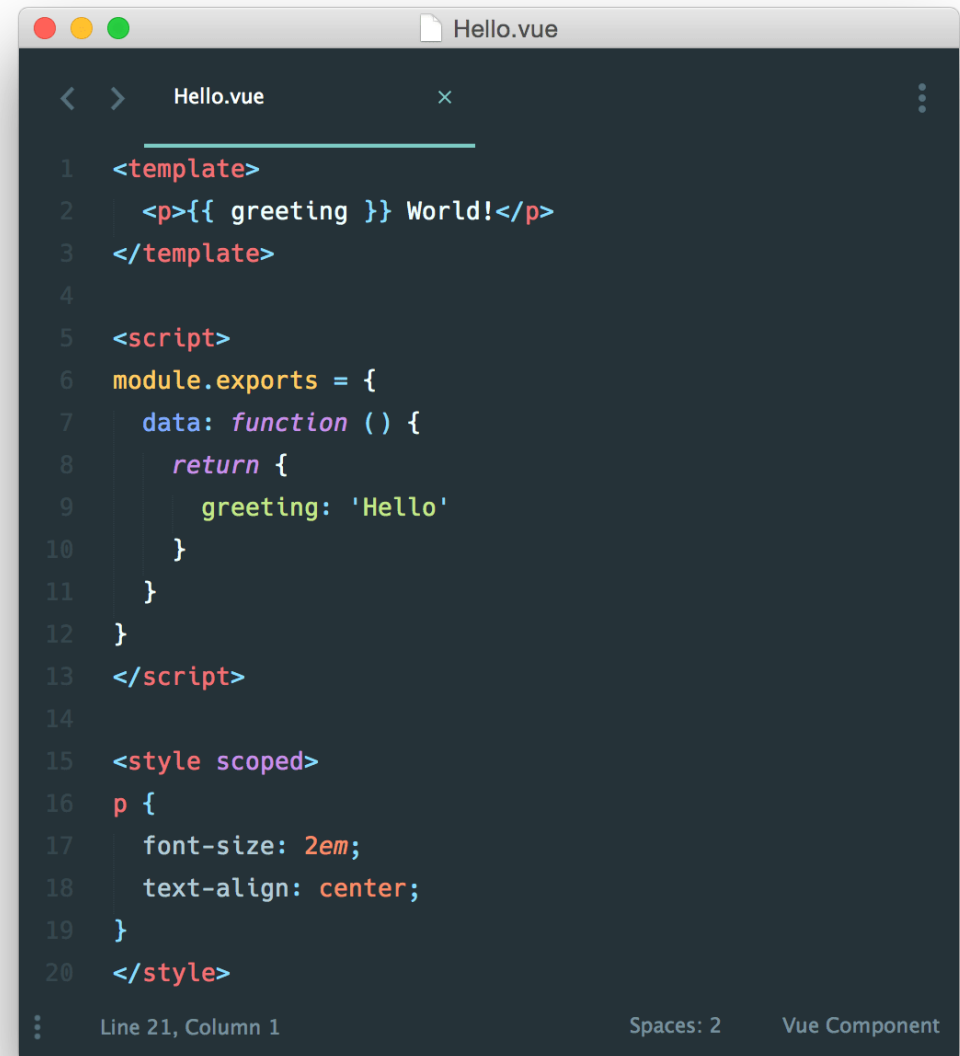
Scaffolding tool

Focused on SPAs (but also does prototyping well)

<https://cli.vuejs.org>

Supports Single File Components

# SINGLE FILE COMPONENTS



The image shows a code editor window titled "Hello.vue". The code is written in Vue.js single-file component syntax, consisting of three blocks: `<template>`, `<script>`, and `<style scoped>`. The `<template>` block contains a paragraph element with a binding for `greeting` and the text "World!". The `<script>` block defines the component's data, with a `module.exports` object containing a `data` function that returns an object with `greeting: 'Hello'`. The `<style scoped>` block contains CSS rules for the `p` element, setting `font-size: 2em` and `text-align: center`. The editor interface includes a file explorer on the left, a toolbar at the top, and a status bar at the bottom showing "Line 21, Column 1", "Spaces: 2", and "Vue Component".

```
1 <template>
2   <p>{{ greeting }} World!</p>
3 </template>
4
5 <script>
6 module.exports = {
7   data: function () {
8     return {
9       greeting: 'Hello'
10    }
11  }
12 }
13 </script>
14
15 <style scoped>
16 p {
17   font-size: 2em;
18   text-align: center;
19 }
20 </style>
```

Line 21, Column 1      Spaces: 2      Vue Component

# WALKTHROUGH

FYI, install via: `npm i -g @vue/cli`

Then: `vue create foo`

Or: `vue serve (with App.vue)`

BUT WAIT —  
THERE'S MORE!



# EVEN MOAR!!!

Devtools Extension (Chrome, Firefox, Electron, Apple Keynote Browser)

- <https://github.com/vuejs/vue-devtools>

Sarah Drasner on CSS-Tricks: <https://css-tricks.com/intro-to-vue-1-rendering-directives-events/>

Vue docs has a cool cookbook: <https://vuejs.org/v2/cookbook/>

Newsletters:

- <https://news.vuejs.org>
- <https://vuejsdevelopers.com/newsletter/>

My Stuff: <https://www.raymondcamden.com/tags/vuejs>

# STUFF I DIDN'T COVER

Unit Testing (<https://vuejs.org/v2/guide/unit-testing.html>)

Transitions (<https://vuejs.org/v2/guide/transitions.html>)

Custom Directives (<https://vuejs.org/v2/guide/custom-directive.html>)

More....



ANY QUESTIONS?

---

