VUEDC @ CAPITALONE (JUNE 2019)

VUE.JS 101

WIFI

Network: -

Password: -

GETTING SETUP

Repo: https://github.com/bencodezen/vuejs-101-workshop

Survey: https://bencodezen.typeform.com/to/xTRp6x

A little bit about me…


School Robes
Available Here
Perfect Fit
Winter Cloaks
BREWS & STEWS
FISHY DINNERS
The DAILY PROPHET
SPINDLEWARPS
WAND SHOWROOM
GRINGOTTS BANK

BEN HONG

Senior Frontend Engineer

Meltano in GitLab

@bencodezen

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Senior Frontend Engineer

Meltano in GitLab

@bencodezen

- Vue.js Community Partner
- Google Developer Expert
- Mozilla TechSpeaker

A little bit about you…

Survey Results

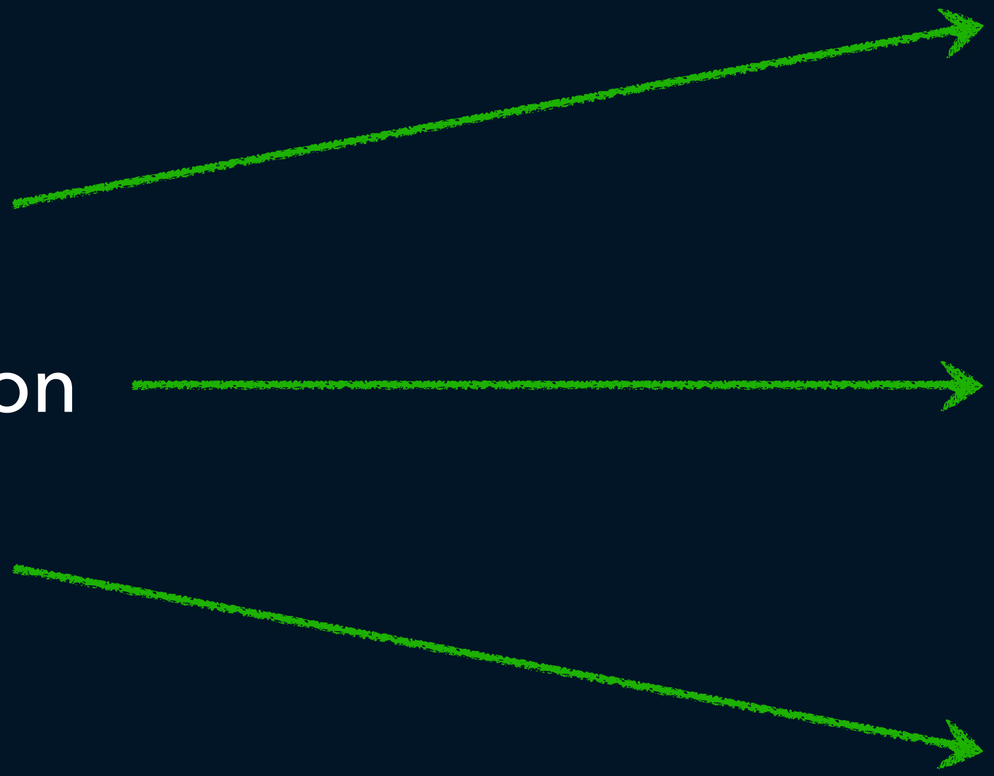
Before we get started...

FORMAT

1. Learn
2. Question
3. Apply

FORMAT

1. Learn
2. Question
3. Apply



Explanations
Examples

Clarifications
What-ifs

Exercises
Experiment

PARTICIPATION TIPS

Raise your hand for **questions** at **any** time!

There are no wrong questions here.

PARTICIPATION TIPS

All slides and examples are **public**.

No need to hurry and copy notes before we switch slides.

PARTICIPATION TIPS

Please **no recording**.

Out of respect for you and your participants' privacy

PARTICIPATION TIPS

These are **guidelines**. Not rules.

Feel free to question and/or disagree.

Your opinion and experience matter too.

Choose what works best for you and your team.

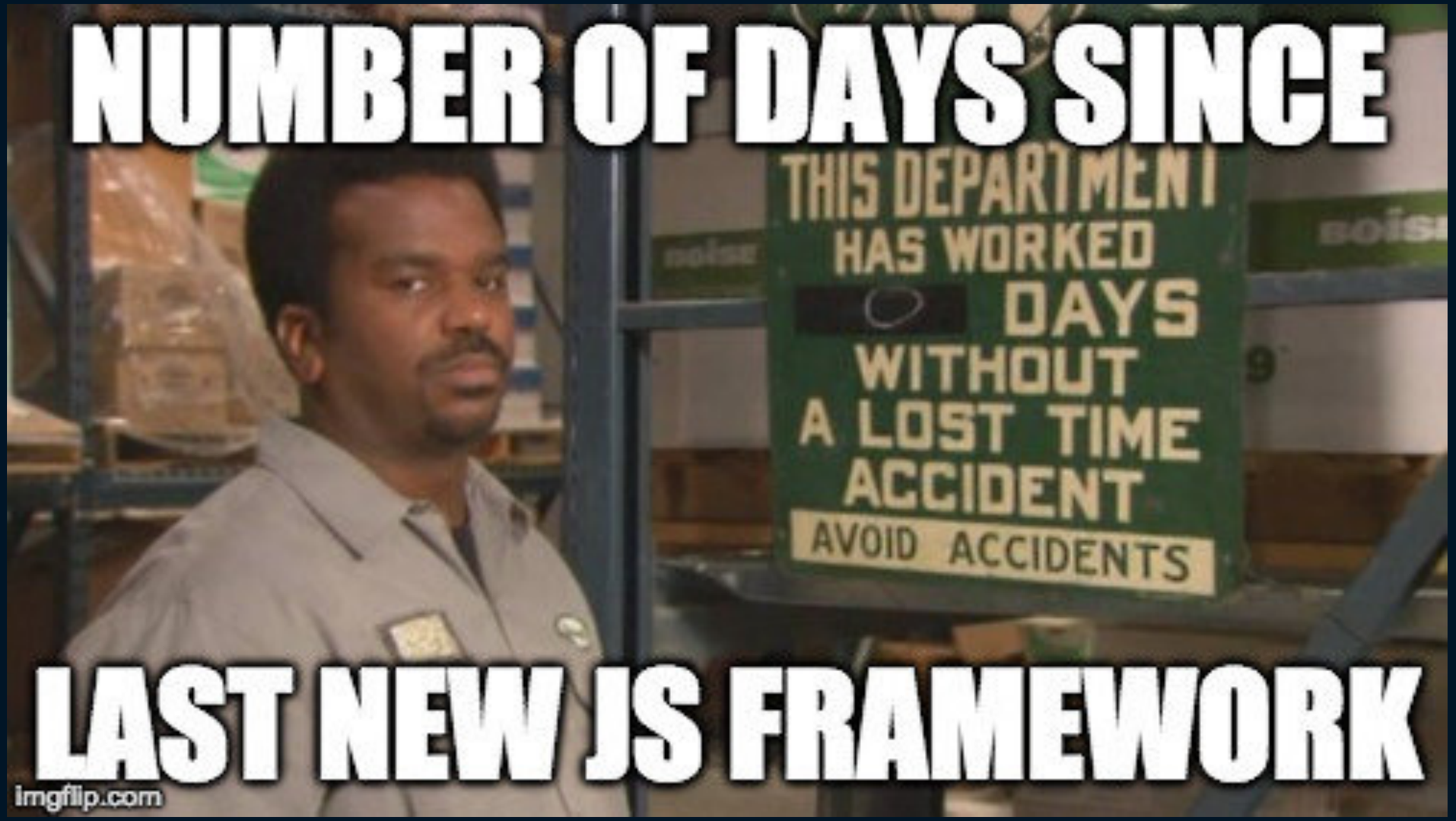
QUESTIONS?

LET'S GET STARTED!

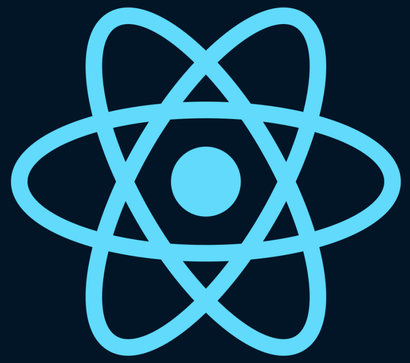
VUE.JS INTRO

WHAT ARE CLIENT-SIDE FRAMEWORKS?

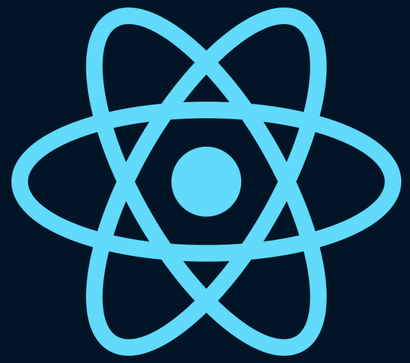
Allows frontend developers to take granular control of a site or application's user experience.


NUMBER OF DAYS SINCE
THIS DEPARTMENT
HAS WORKED
DAYS
WITHOUT
A LOST TIME
ACCIDENT
AVOID ACCIDENTS
LAST NEW JS FRAMEWORK
imgflip.com

MOST POPULAR FRAMEWORKS



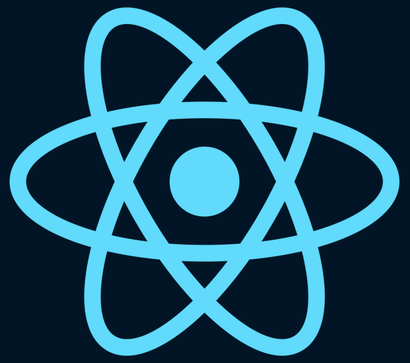
MOST POPULAR FRAMEWORKS



ANGULAR OVERVIEW

- \+ Developer and maintained by Google
- \+ Easy to get something up and running pretty quickly
- − Most of what was happening seemed like magic
- − Opinionated on how you should built your app

REACT OVERVIEW



- \+ Developed by Facebook and has an MIT license
- \+ Great performance due to the use of the virtual DOM
- \+ You got a lot better at vanilla JavaScript really quickly
- − Just getting started had a high learning curve
- − Unfriendly to non-JavaScript developers
- − High pace of development resulting in unexpected bugs

JSX EXAMPLE

```jsx
import React from 'react';
import { render } from 'react-dom';
import HelloWorld from './HelloWorld';

const styles = {
  fontFamily: 'Avenir, Helvetica, Arial, sans-serif',
  textAlign: 'center',
  color: '#2c3e50',
  marginTop: '60px'
};

const App = () => {
  <div style={styles} className="app">
    <h1>This is a React.js component file!</h1>
  </div>
};

export default App;
```

COMPARING FRAMEWORKS

COMPARING FRAMEWORKS

*As of April 11th, 2018

VUE OVERVIEW

- \+ Open-source framework with no corporate influence
- \+ Takes the best of both worlds and bring them together
- \+ It does not alienate non-JavaScript developers
- \+ Great performance that is on par if not better than React.js
- \+ Flexible and accommodating to how you prefer to build apps
- − No corporate backing and has a “smaller” community compared to React / Angular

Creating and Combining Views

developer.apple.com/tutorials/swiftui/creating-and-combining-views

Developer Discover Design Develop Distribute Support Account

SwiftUI Tutorials | Creating and Combining Vie...

SwiftUI Essentials

Creating and Combining Views

This tutorial guides you through building *Landmarks* — an iOS app for discovering and sharing the places you love. You'll start by building the view that shows a landmark's details.

To lay out the views, Landmarks uses *stacks* to combine and layer the image and text view components. To add a map to the view, you'll include a standard MapKit component. As you refine the view's design, Xcode provides real-time feedback so you can see how those changes translate into code.

Download the project files to begin building this project, and follow the steps below.

40min
Estimated Time

Project files

Xcode 11 beta ›

Elements Console Sources Network Performance Memory Application Security Audits Vue

Ready. Detected Vue 2.5.17.

Filter components

```
<Root>
  <App>
    <ProjectDetail> router-view: /tutorials/:id/*
      <Project key='topic://com.apple.SwiftUI/creating-and-co
        <NavigationBar>
        <ProjectSection key=0>
          <Hero>
        <ProjectSection key=1>
          <TaskList>
        <ProjectSection key=2>
        <ProjectSection key=3>
```

Select a component instance to inspect.

Console What's New

top Filter Default levels

vue-devtools Detected Vue v2.5.17 backend.js:1585

›

WHICH FRAMEWORK SHOULD YOU CHOOSE?

IT DEPENDS

CHOOSE VUE


NO WAY!
TELL ME MORE!
imgflip.com

QUESTIONS?

AN OVERVIEW OF

VUE.JS BASICS

AN INSTANCE OF VUE.JS

```
const app = new Vue({
  el: '#app',
  data: {
    firstName: 'Ben',
    lastName: 'Hong',
    event: ‘Intro to Vue.js’
  }
})
```

AN INSTANCE OF VUE.JS

```
const app = new Vue({
  el: '#app',
  data: {
    firstName: 'Ben',
    lastName: 'Hong',
    event: ‘Intro to Vue.js’
  }
})
```

Uses a CSS selector to determine where this Vue Instance will live.

AN INSTANCE OF VUE.JS

```
const app = new Vue({
  el: '#app',
  data: {
    firstName: 'Ben',
    lastName: 'Hong',
    event: ‘Intro to Vue.js’
  }
})
```

A data store for the Vue to access in the app.

EXPRESSIONS IN VUE.JS

```
const app = new Vue({
  el: '#app',
  data: {
    firstName: 'Ben',
    lastName: 'Hong',
    event: ‘Intro to Vue.js’
  }
})
```

```
<!-- Using data in your template is easy! -->
<div id="app">
  <p>{{ firstName }} {{ lastName }} is at {{ event }}!</p>
</div>
```

EXPRESSIONS IN VUE.JS

```
const app = new Vue({
  el: '#app',
  data: {
    firstName: 'Ben',
    lastName: 'Hong',
    event: ‘Intro to Vue.js’
  }
})
```

```
<!-- This is how it renders! -->
<div id="app">
  <p>Ben Hong is at Intro to Vue.js!</p>
</div>
```

EXPRESSIONS IN VUE.JS

```
<!-- Using data in your template is easy! -->
<p>{{ firstName }} {{ lastName }} is at {{ conference }}!</p>

<!-- You can even do math! -->
<p>Let's perform calculations! {{ 12 * 12 / 4 }}</p>

<!-- Any simple expression just works -->
<p>{{ firstName.toUpperCase() }} IS EXCITED!</p>

<!-- Basic logic works too! -->
<p>{{ onSale ? price * 0.8 : price }}</p>
```

COMPUTED PROPERTIES

```
<p>{{ onSale ? price * 0.8 : price }}</p>
```

COMPUTED PROPERTIES

```
<script>
const app = new Vue({
  el: '#app',
  data: {
    price: 100,
    onSale: false
  },
  computed: {
    salePrice() {
      if (this.onSale) {
        return this.price * 0.8
      } else {
        return this.price
      }
    }
  }
})
</script>
```

```
<p>{{ onSale ? price * 0.8 : price }}</p>
```

METHODS IN VUE.JS

```
const app = new Vue({
  el: '#app',
  data: {
    potion: 300,
    antidote: 100,
    revive: 1500,
    onSale: true
  },
  methods: {
    generatePrice(itemPrice) {
      if (this.onSale) {
        return itemPrice * 0.8
      } else {
        return itemPrice
      }
    }
  }
})
```

```
<div id="app">
  <ul>
    <li>{{ generatePrice(potion) }}</li>
    <li>{{ generatePrice(antidote) }}</li>
    <li>{{ generatePrice(revive) }}</li>
  </ul>
</div>
```

QUESTIONS?

EXERCISE #1: CAPTAIN MARVEL

INSTRUCTIONS

1. Create a new Vue instance that will live in the `<main>` element.
2. Create a data store that will have:
   - Captain Marvel's first name
   - Captain Marvel's last name
   - Captain Marvel's hero name
3. Create a computed property for her full name
4. Create a method to calculate how many years has passed
5. Refactor static data on site using Vue

LET'S TALK ABOUT DIRECTIVES

Directives are the part of
Vue.js that are a bit magical...

WHAT ARE DIRECTIVES?

They are Vue specific syntax that flow you to accomplish common goals without worrying about how it is implemented

- `v-if`
- `v-else-if`
- `v-else`
- `v-show`
- `v-for`
- `v-bind`
- `v-on`
- `v-model`

V-IF / V-ELSE-IF / V-ELSE

Allows you to determine whether an element on the page should **exist**

```
<article>
  <h1>Dashboard</h1>
  <section v-if="userPermission === 'admin'">
    ...
  </section>
  <section v-else-if="userPermission === 'user'">
    ...
  </section>
  <section v-else>
    <p>Please login.</p>
  </section>
</article>
```

V-SHOW

Allows you to determine whether an element on the page should be **visible**

```
<article>
  <h1>Dashboard</h1>

  <button>Trigger Modal</button>

  <aside v-show="showModal">
    <p>I toggle on and off quite a bit.</p>
  </aside>
</article>
```

V-SHOW

Allows you to determine whether an element on the page should be **visible**

VS

V-IF / V-ELSE-IF / V-ELSE

Allows you to determine whether an element on the page should **exist**

QUESTIONS?

V-ON

Allows us to attach methods to HTML elements
when a certain event occurs

```
<!-- The long version -->
<button v-on:click="alert('Alohomora')">Unlock</button>

<!-- The more common shorthand -->
<button @click="alert('Alohomora')">Unlock</button>

<!-- Built in modifiers! -->
<input type="text" @v-on.enter="submit" />
```

QUESTIONS?

V-MODEL

Allows us to use two-way binding

```
<div id="app">
  <h1>Live Message Updates!</h1>
  <p>{{ message }}</p>
  <input type="text" v-model="message">
</div>

<script>
const app = new Vue({
  el: '#app',
  data: {
    message: ''
  }
})
</script>
```

CODE DEMO

CodePen - That Was Easy

https://codepen.io/bencodezen/pen/GOarKO

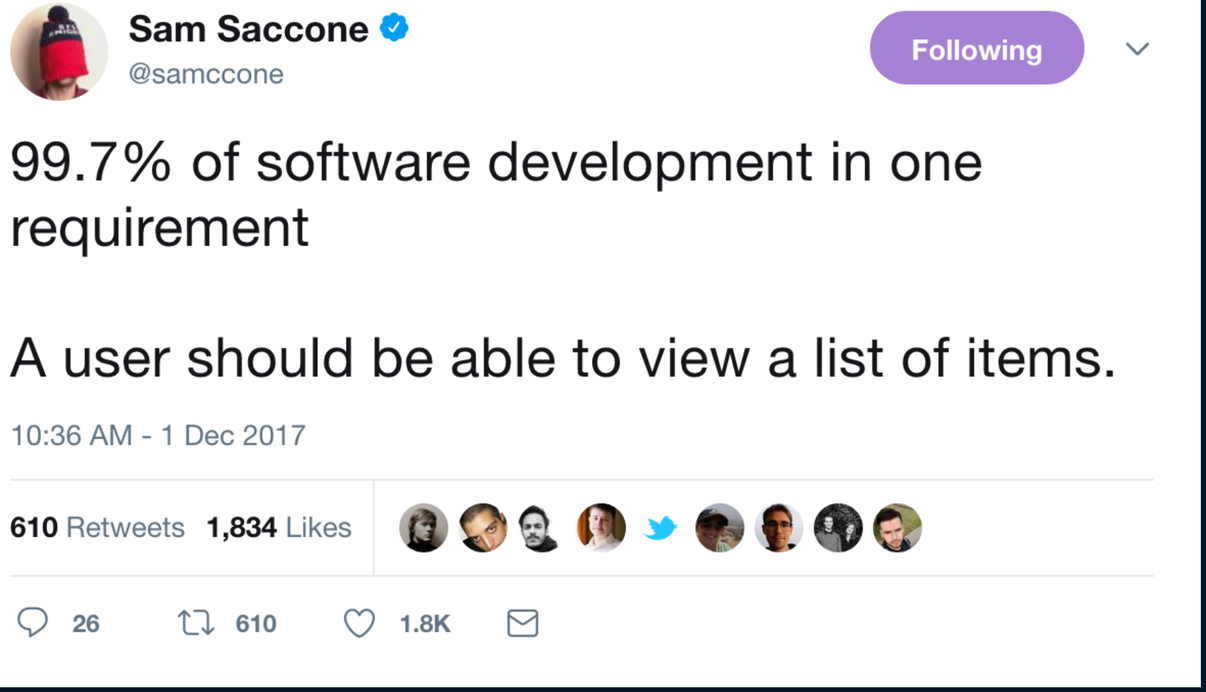
QUESTIONS?

EXERCISE #2: COUNTER

INSTRUCTIONS

1. Make the count a dynamic data property
2. Hide the text based on whether the count is even
3. Write a method to increment the count dynamically
4. Write a method to decrement the count dynamically
5. Use two way binding to change the amount that the counter can change by

QUICK BREAK


Sam Saccone
@samccone
Following
99.7% of software development in one requirement
A user should be able to view a list of items.
10:36 AM - 1 Dec 2017
610 Retweets 1,834 Likes
26
610
1.8K

V-FOR

Allows us to “render a list of items based on an array (or object).”

```
<script>
const app = new Vue({
  el: '#app',
  data: {
    Hogwarts: [
      'Ravenclaw',
      'Hufflepuff',
      'Slytherin',
      'Gryffindor'
    ]
  }
})
</script>
```

```
<!-- Given the data in the Vue instance -->
<div id="app">
  <ul>
    <li v-for="house in Hogwarts">
      {{ house}}
    </li>
  </ul>
</div>

<!-- Will be rendered as... -->
<ul>
  <li>Ravenclaw</li>
  <li>Hufflepuff</li>
  <li>Slytherin</li>
  <li>Gryffindor</li>
</ul>
</template>
```

QUESTIONS?

V-BIND

Allows us to manipulate HTML attributes
with dynamic data

```
<!-- The long form -->
<a v-bind:class="{ active: isActive }">...</a>

<!-- The more common shorthand -->
<a :class="{ active: isActive }">...</a>

<!-- If isActive is true, it will render as... -->
<a class="active">...</a>
```

QUESTIONS?

EXERCISE #3: HP WORLD

INSTRUCTIONS

1. Convert all "Static {property}" to data properties
2. Loop through the data property `wallet` to generate the same markup as the flat HTML version
3. Dynamically bind a class name that will be identical to the key as your looping through your data
4. Write methods to wire up buttons to do function commented above each button

LET'S TALK CLI

AS WE COME TO A CLOSE…

FINAL THOUGHTS

Photo by Katie Moum on Unsplash

#1. ACCESSIBLE TO DEVELOPERS OF PRACTICALLY ALL ABILITIES

JSX EXAMPLE

```
import React from 'react';
import { render } from 'react-dom';
import HelloWorld from './HelloWorld';

const styles = {
  fontFamily: 'Avenir, Helvetica, Arial, sans-serif',
  textAlign: 'center',
  color: '#2c3e50',
  marginTop: '60px'
};

const App = () => {
  <div style={styles} className="app">
    <h1>This is a React.js component file!</h1>
  </div>
};

export default App;
```

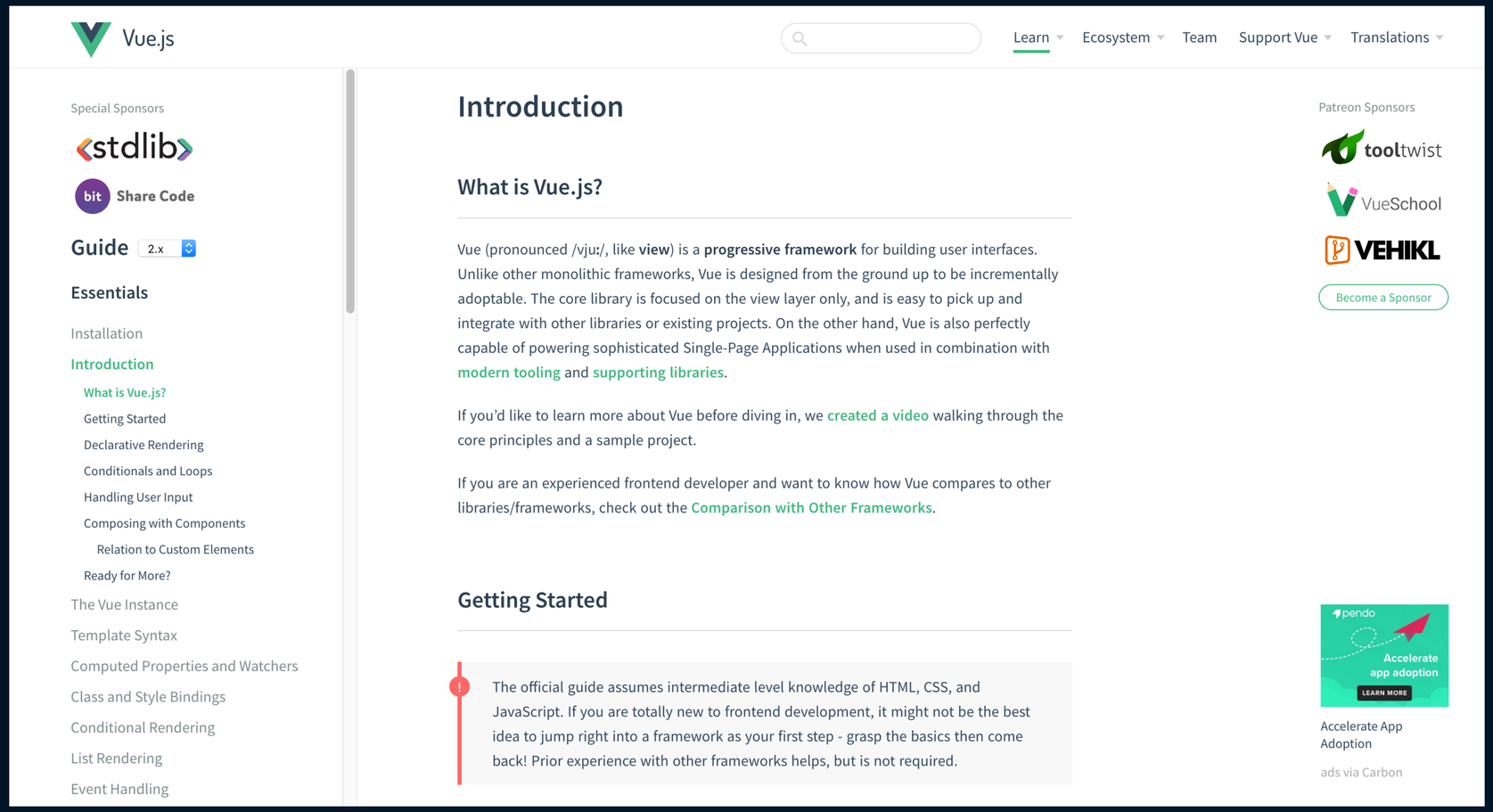
SFC EXAMPLE

```
<template>
  <div>
    <h1>This is a Vue Single File Component (SFC) file!</h1>
  </div>
</template>

<script>
export default {
  name: 'App'
}
</script>

<style>
  #app {
    font-family: 'Avenir, Helvetica, Arial, sans-serif';
    text-align: center;
    color: #2c3e50;
    margin-top: 60px;
  }
</style>
```

#2. THEIR DOCS ARE ONE OF THE BEST OUT THERE

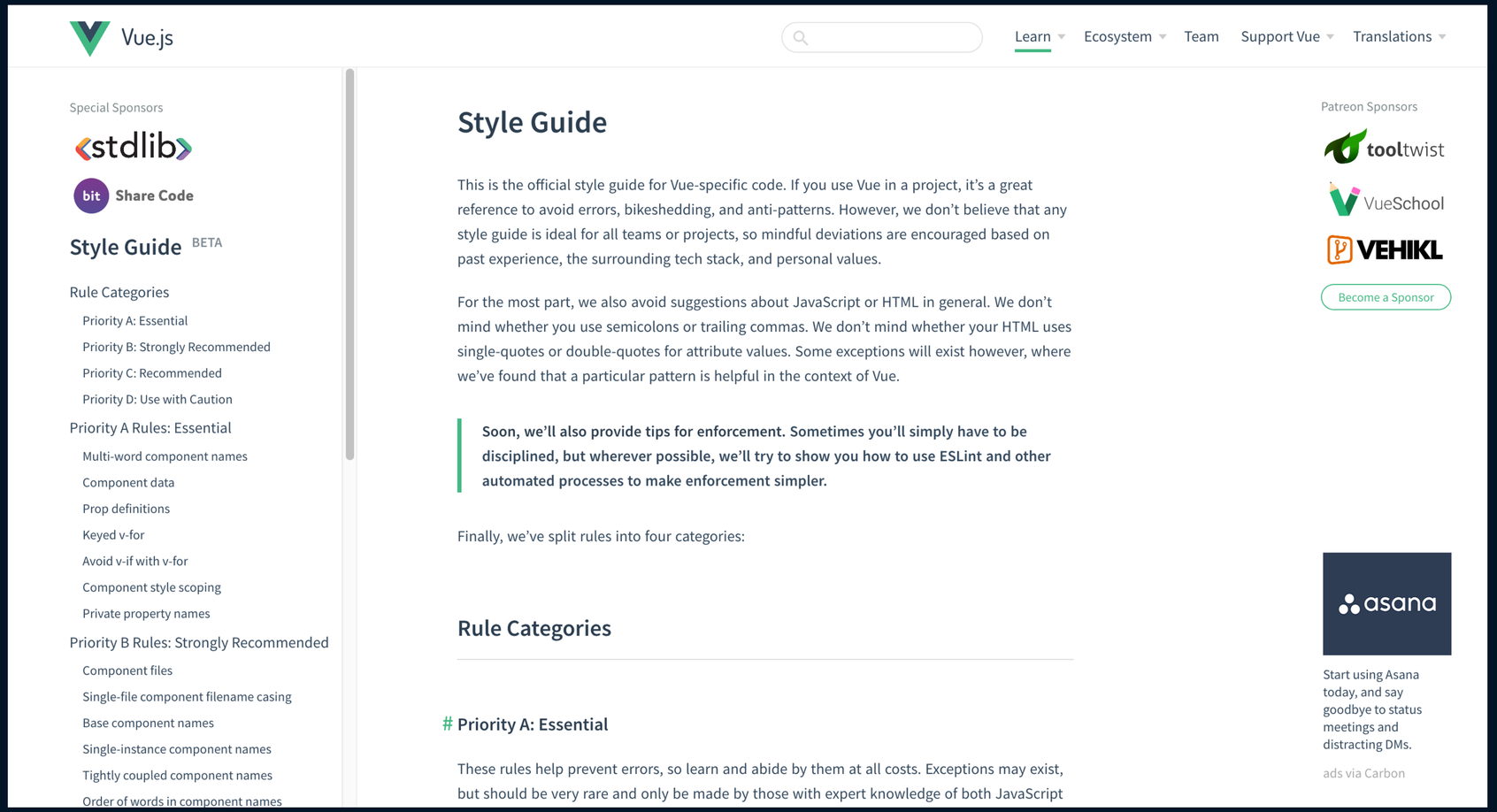


VUE.JS DOCS

https://vuejs.org/v2/guide/

#3. GIVES YOU WHAT YOU WANT WHEN YOU NEED IT, THEN IT GETS OUT OF YOUR WAY.

Paraphrased from Sarah Drasner



VUE.JS STYLE GUIDE

https://vuejs.org/v2/style-guide/

Vue.js is the most compassionate framework in the market right now.

SO WHAT ELSE IS THERE TO LEARN ABOUT?

- Props
- Slots
- Watch Property
- Custom Events
- Lifecycle Hooks
- Managing CSS in Vue.js
- State Management
- Animations
- Render Function
- Component Libraries
- Testing
- And much more!

RECOMMENDED RESOURCES

Paid

- Vue Mastery
- Vue School
- Frontend Masters: Introduction to Vue.js
- Udemy: Vue.js 2 - The Complete Guide

Free

- Official Vue.js Guide
- VueMastery: Intro to Vue.js

QUESTIONS?

THANKS EVERYONE!

@BENCODEZEN

https://bencodezen.typeform.com/to/IhZjnU