Using VueJS with Moodle

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Who am I?

- Guy Thomas
  - Developing Moodle code since 2004
  - Contractor (Citricity Ltd)
  - Working with Titus Learning (UK Moodle partner).
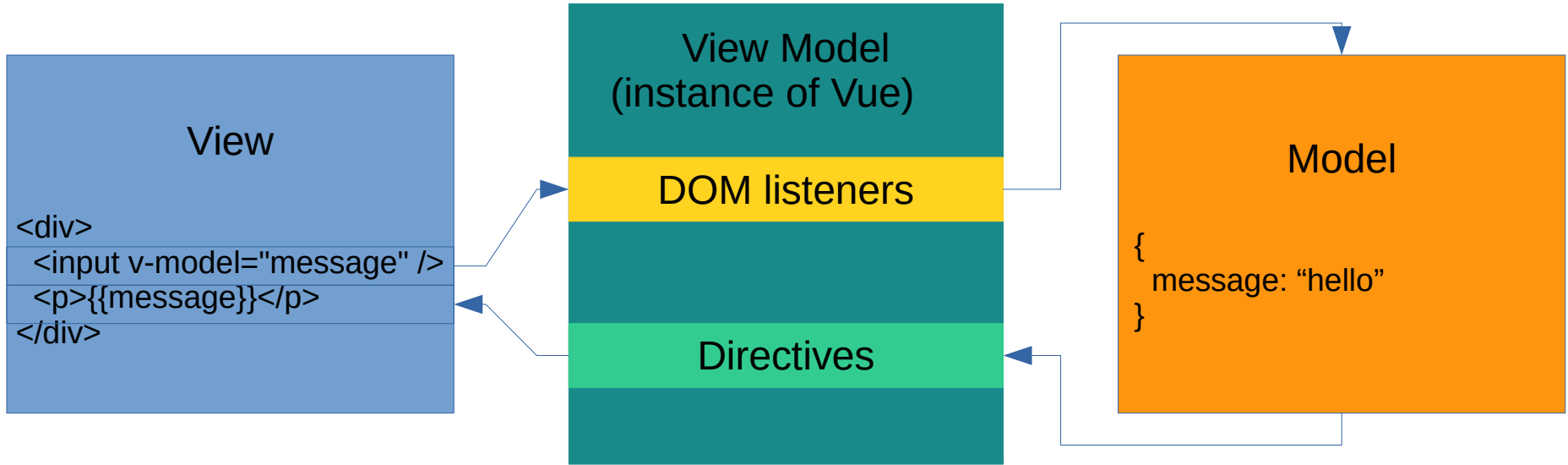- I AM NOT A VUEJS EXPERT!

What is VueJS?

- JS Framework

- Progressive framework / Incrementally adoptable
  - You can start off small – e.g: Just to provide reactivity between data and view template. You can add in routing, or a "store" as and when you need it.

- MVVM framework
  - Data binding can be two way

MVVM

View	View Model (instance of Vue)	Model

`<div>`
  `<input v-model="message" />`
  `<p>{{message}}</p>`
`</div>`
	DOM listeners
	
	Directives
		`{`
		  `message: "hello"`
		`}`

Why VueJs?

- Incrementally adoptable
  - Fits well into existing projects
- Plenty of VueJs components available
- You want to build an interface with many interactions between data and presentation layer
- You want to build a single page experience
- Good documentation

VueJs V Mustache + JS

- Mustache templates + JS
  - Still a very important and useful tool.
  - Perfectly good for static rendering (non reactive).
  - PHP support – backend rendering.
  - Template overrides.
- VueJS
  - A better fit for reactivity.
  - Code can be simpler V Mustache + JS (e.g. no need for event delegation).
  - Better for your career? Better for Moodle HQ / partners?
  - Leverage existing components.
  - Backend rendering????
  - VueX state management

VueJs V Mustache + JS

- Templates / Partials V Components

  – Mustache templates do not have some restrictions that VueJS has – e.g. single root element.

  – A VueJS SFC (single file component) contains the template, script and styles for the component in once place!

```
<template lang="pug">
….
</template>
<script lang="ts">
…
</script>
<style lang="scss">
…
</style>
```

VueJS − Problems

- Issues with asynchronous operations.
  - In Angular we have the async pipe. This isn't present with VueJS out of the box.
    - Example problem: Writing a strings filter.
  - Component lifecycle hooks can't be forced to wait for async tasks to complete.
    - Example problem: We want to do some initialising work in the 'beforeCreate' hook. Loading AMD modules, strings, etc..

VueJS + Moodle in the wild.

- https://github.com/kulmann/moodle-mod_millionaire

- http://github.com/kulmann/moodle-mod_philosophers

- https://github.com/lucaboesch/moodle-local_differentiator

Moodle DACH 2019

- Differentiator plugin
  - Luca Bösch
  - Martin Gauk
  - Christian Wolters
  - Hannes Laimer

  https://moodle.org/plugins/local_differentiator

VueJs via Webpack

- VueJS Demo – using webpack
  - https://github.com/MartinGauk/moodle-mod_vuejsdemo

VueJS via CDN

- Main plugin

  - https://github.com/gthomas2/moodle-local_vuejs

- Demo plugin

  - https://github.com/gthomas2/moodle-local_vuedemo

VueJS Devtools

- Available as an extension for Chrome / Firefox
  - IMPORTANT NOTE: It only works when you include the full dev version of Vue.