



A First View of Vue.js

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About Me

- Vince Bullinger (“vbullinger” everywhere)
- Live in St. Paul
- WPI grad ('04)
- Been a consultant/developer since 2005
- Always looking to improve skills

About Me

Married in 5/08



Zina 7/4/11, Felix 7/8/14,
Leo 1/17/16



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Agenda

- What is Vue?
- Looking under the hood
- In-depth Vue
- Peruse the ecosystem
- Who is using it?
- When should I use it?



Who Has Used Vue?



What is Vue?

Vue (pronounced /vju:/, like **view**) is a **progressive framework** for building user interfaces. Unlike other monolithic frameworks, Vue is designed from the ground up to be incrementally adoptable. The core library is focused on the view layer only, and is very easy to pick up and integrate with other libraries or existing projects. On the other hand, Vue is also perfectly capable of powering sophisticated Single-Page Applications when used in combination with **modern tooling** and **supporting libraries**.

Source: <https://vuejs.org/v2/guide/>



Why Another JavaScript Framework?

- Major frameworks have haters
 - React is unintuitive for many
 - Angular isn't as performant as React
- Vue combines best of Angular, React
 - Friendly, MVVM, two-way binding syntax of Angular, Knockout, XAML
 - Virtual DOM of React

How Does It Compare?

- React
 - Virtual DOM
 - Focus on view layer
- Angular
 - 2-way data-binding
 - MV* syntax
 - Not comparable in speed

Source: <https://vuejs.org/v2/guide/comparison.html>

Comprehensive table: <http://stefankrause.net/js-frameworks-benchmark4/webdriver-ts/table.html>

renders 10.000 list items 100 times.

	Vue	React
Fastest	23ms	63ms
Median	42ms	81ms
Average	51ms	94ms
95th Perc.	73ms	164ms
Slowest	343ms	453ms





Getting Started, 101 Demo



Under the Hood

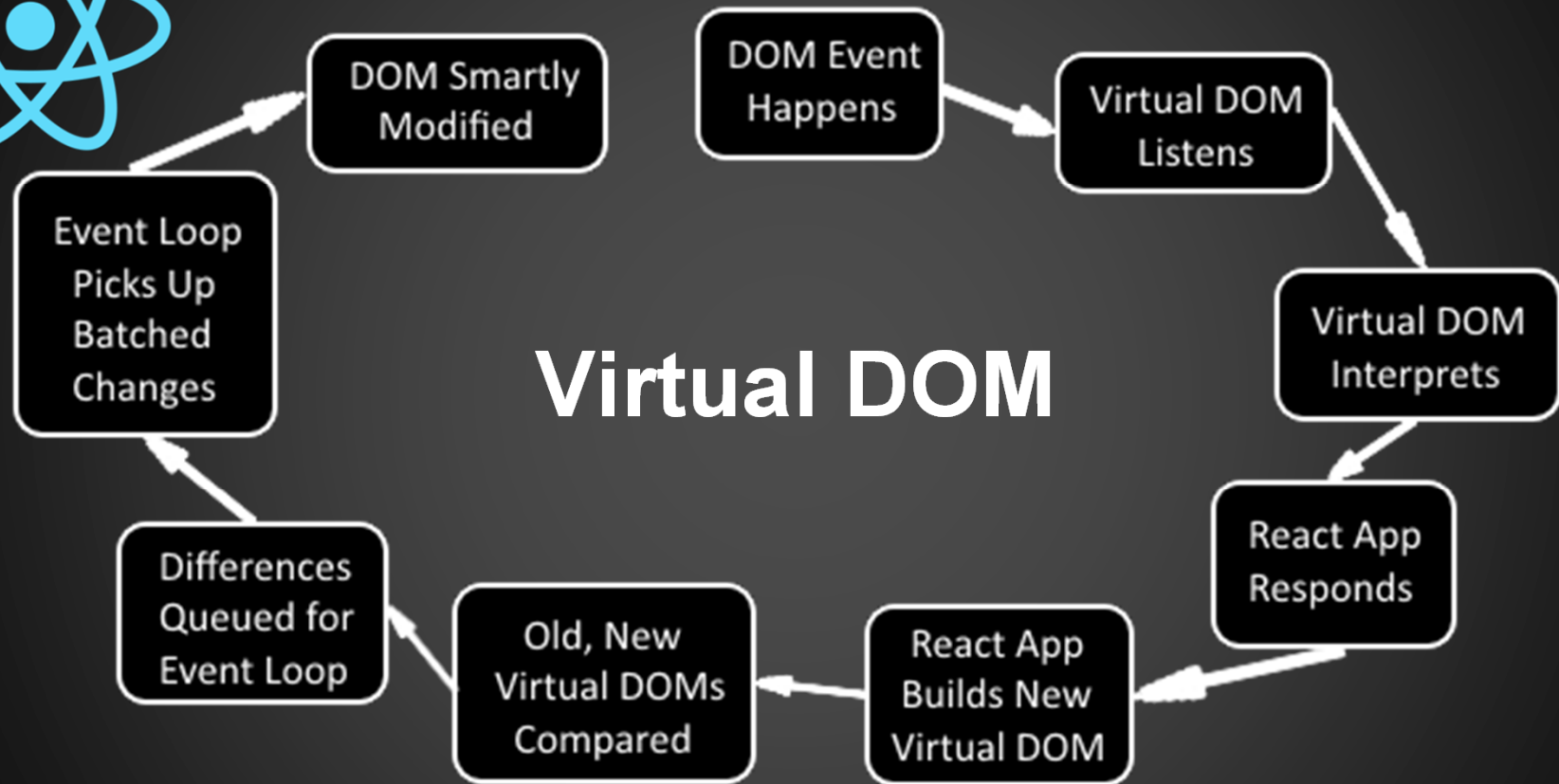
- Virtual DOM
- Vue lifecycle



The Virtual DOM



Virtual DOM

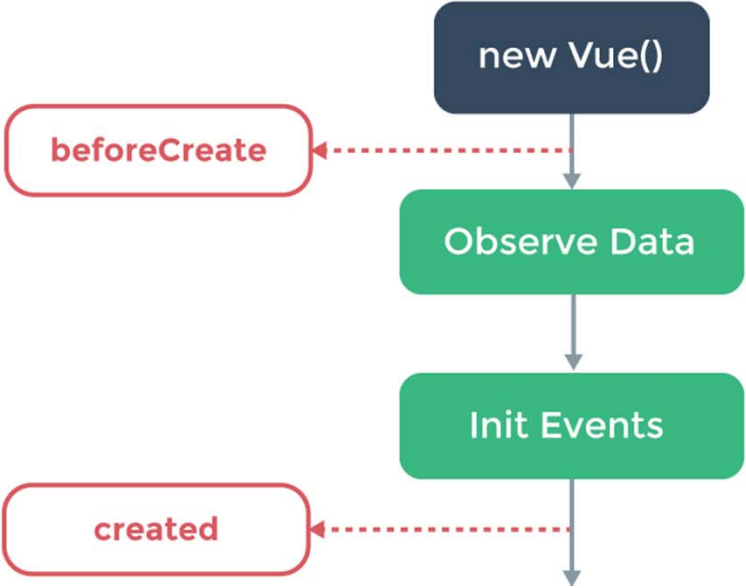




The Vue Lifecycle

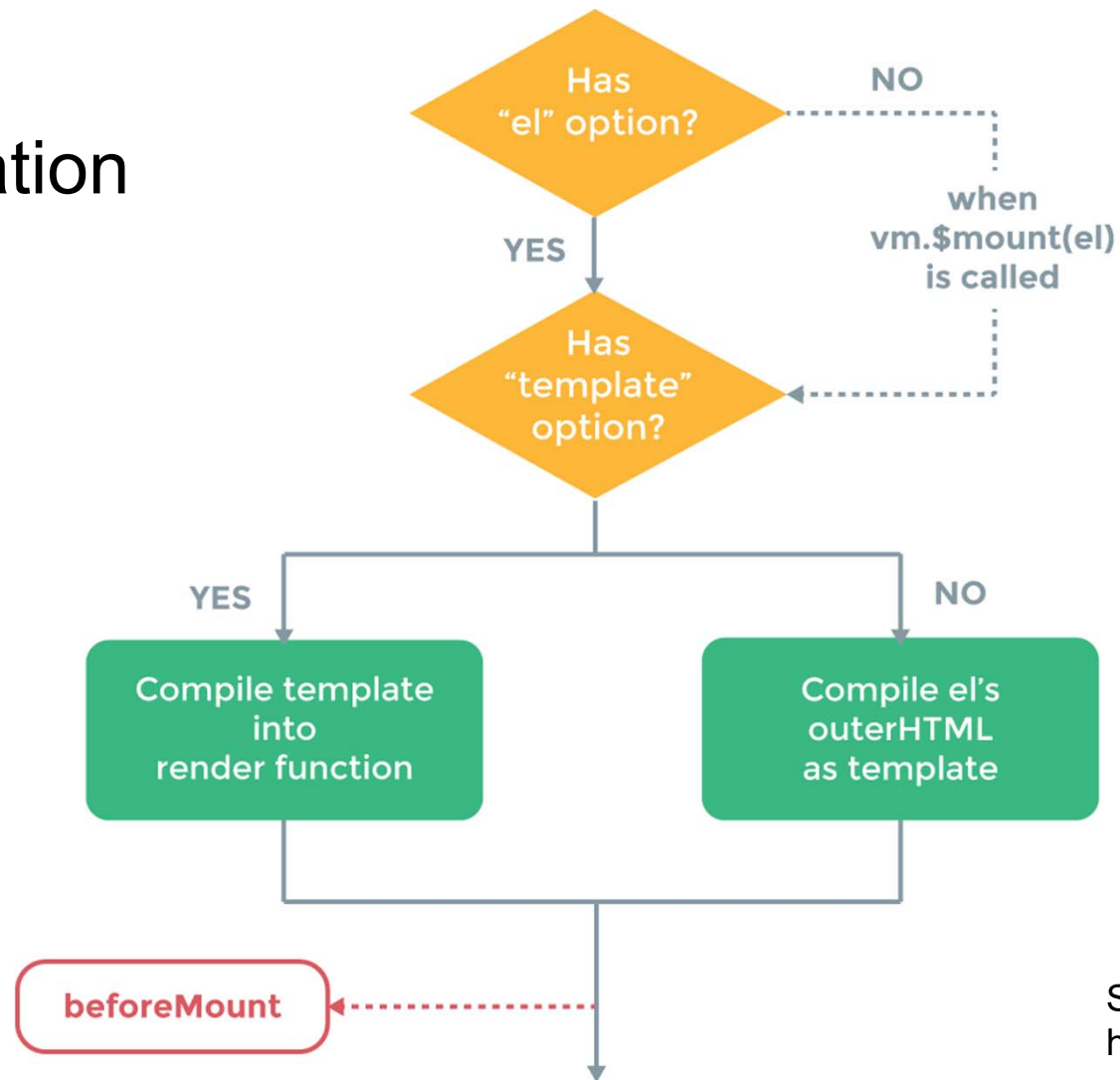


Creation



Source:
<https://vuejs.org/v2/guide/>

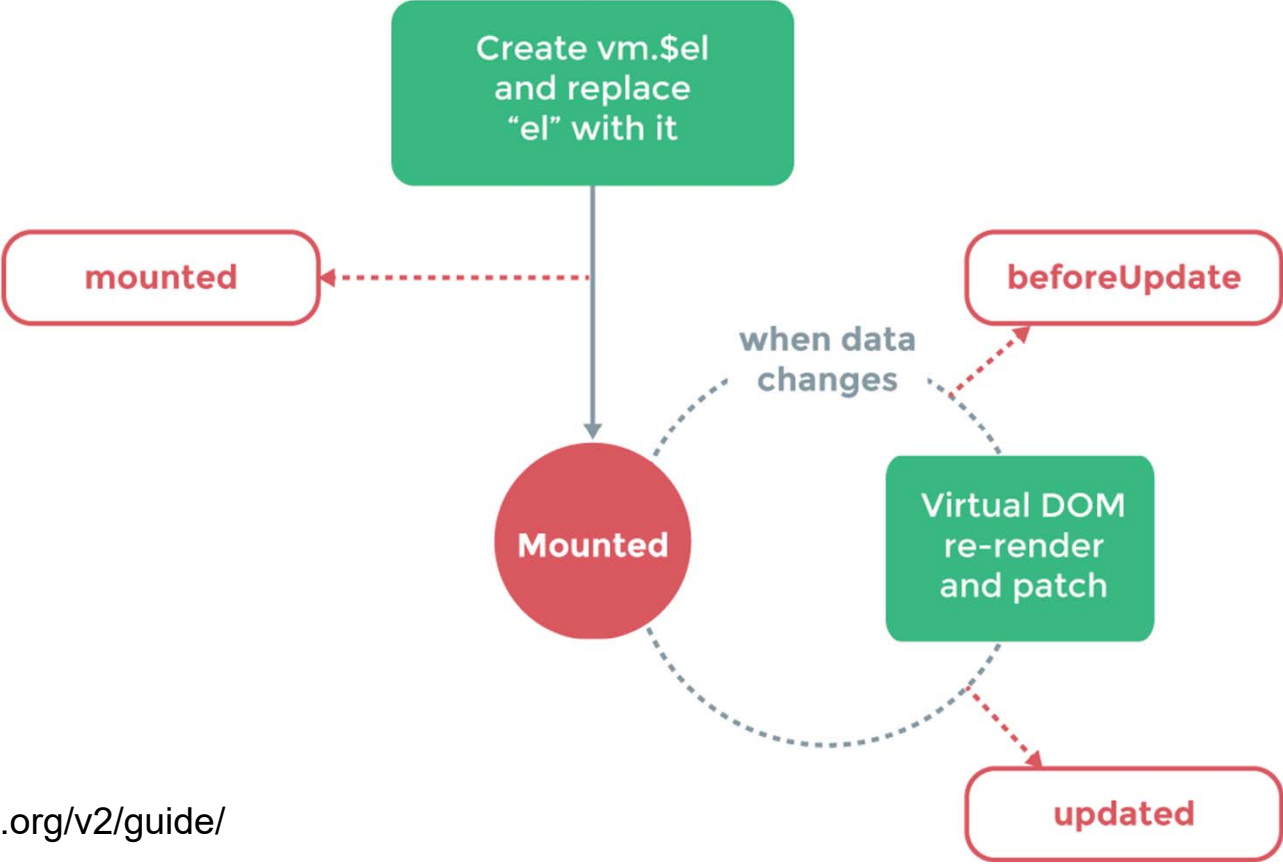
Compilation



Source:
<https://vuejs.org/v2/guide/>



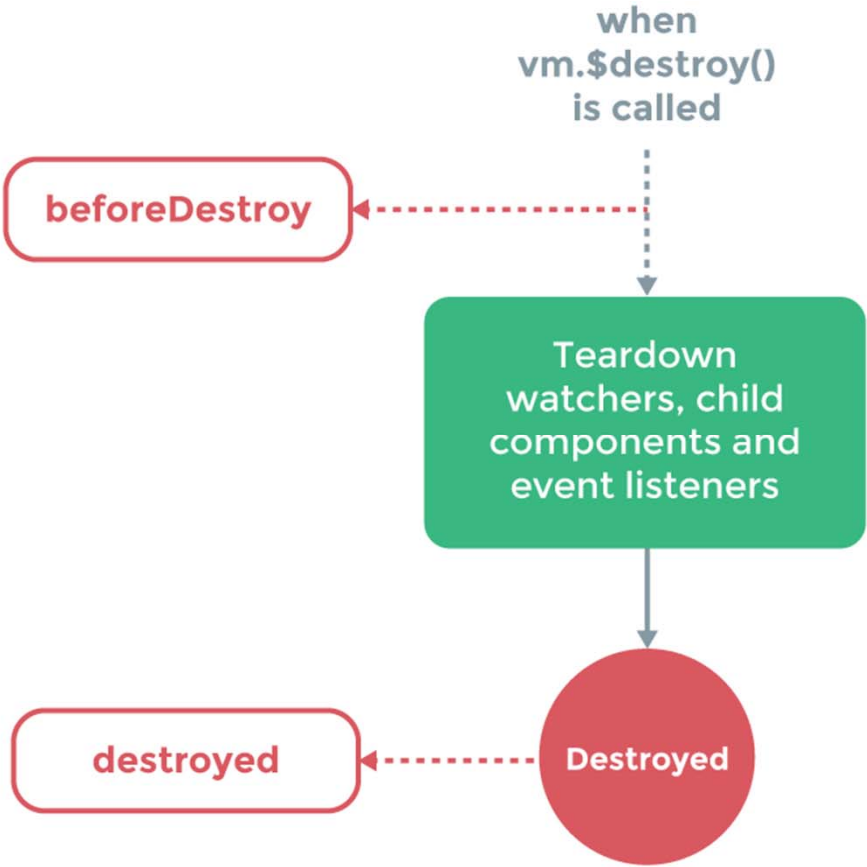
Rendering



Source: <https://vuejs.org/v2/guide/>



Destruction



Source:
<https://vuejs.org/v2/guide/>



Vue Templates Deep-Dive



Templates Topics

- One-time binding
- Raw HTML
- Attribute binding
- Conditionals
- Loops
- Events
- Modifiers
- Filters



How Vue Templates Work

- Declaratively bind HTML to DOM
- Valid HTML
- Compiles to virtual DOM “render” function



Templates Demo



Templates Recap

- One-time binding
- Raw HTML
- Attribute binding
- Conditionals
- Loops
- Events
- Modifiers
- Filters



Vue Routing Deep-Dive



Routing Topics

- Parameters
- Events
- Nested routes
- JavaScript routing



Routing Demos



Routing Recap

- Parameters
- Events
- Nested routes
- JavaScript routing



Vue State Management Overview



State Management Topics

- Vuex
- State
- Mutations
- Actions
- Modules



Vuex

- Official state management system for Vue
- Very flux-y
- Very Redux-y



State

- Data for app
- No, really like: all of it (or at least most of it)
- Singleton used across app (“store”)



Mutations

- Collection of methods in store
- Only way to change state
- They have two parts:
 - Types
 - Handlers
- To invoke: `store.commit('typename', payload)`



Actions

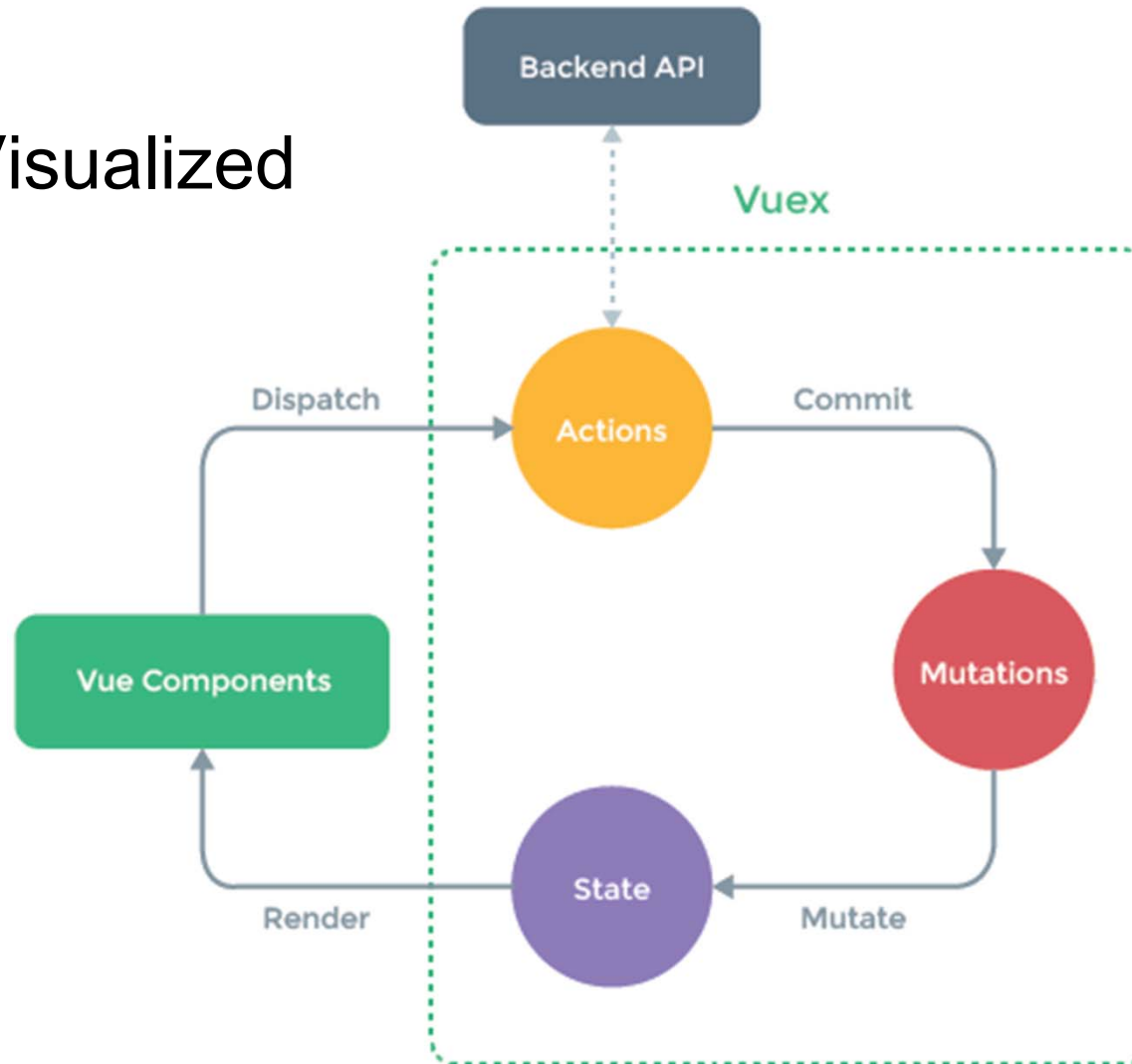
- Collection of methods in store
- Commit mutations
- Asynchronous stuff goes here
- Invoked by `store.dispatch('actionname', payload)`



Modules

- Segments of a store
- Can have separate:
 - Mutations
 - Actions
 - State

Vuex Visualized





State Management Recap

- Vuex
- State
- Mutations
- Actions
- Modules



Who Is Using Vue?

<https://github.com/vuejs/awesome-vue#projects-using-vuejs>



When Should I Use Vue?

- You like Angular's syntax
- You like React's performance
- You have a site that has visual updates
- You're willing to try something new
- Maybe not the best for most extreme enterprise development right at the moment, but keep watching!



References - Time to Ask Softballs

- Vue docs: <https://vuejs.org/v2/guide/>
- Vuex: <http://vuex.vuejs.org/en/>
- Chrome extension for debugging Vue apps: <https://github.com/vuejs/vue-devtools>
- This slide deck: <http://bit.ly/FirstViewOfVue>
- Awful Github repo: <https://github.com/vbullinger/HelloVue>