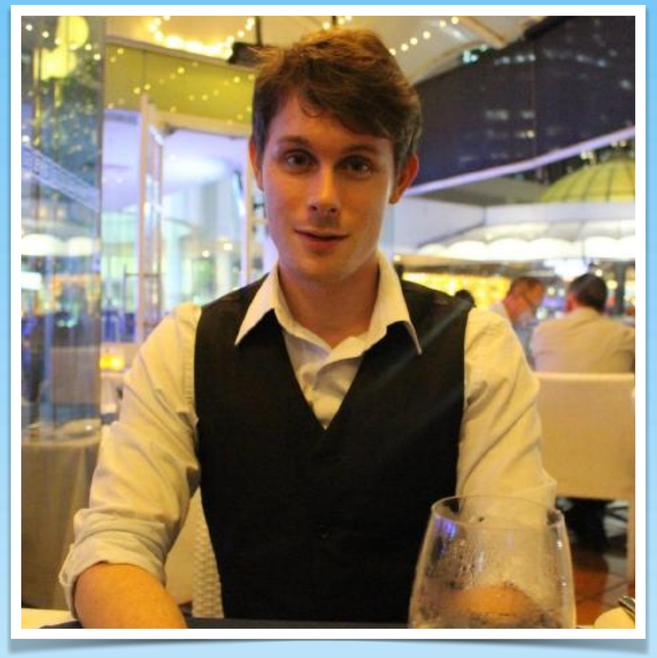
# The State of Vue Testing

**Presented by Lachlan Miller**
**Vue Toronto 2020**

# Who am I

- Hi 👋 I'm Lachlan
- Contributing to **Vue Test Utils** since 2017
- Maintaining since 2019, along with **Vue Jest**
- Author Vue Testing Handbook
- Twitter: @Lachlan19900
- GitHub: lmiller1990



# Agenda

1. State of Vue Test Utils
    1. A new code base
    2. What's new? What's changed?
2. A new philosophy
3. Resources

Get the slides: https://lachlan-miller.me/vue-toronto-2020

# The journey so far...

- Simple "component centric" API for testing Vue components
- Mount components
- Get a "wrapper" with convenient method for testing

```
7   test('renders a messag', () => {
8     const wrapper = mount(Hello, {
9       props: {
10        msg: 'Hello'
11      }
12    })
13    wrapper.find('button').trigger('click')
14    expect(wrapper.html()).toContain('Hello')
15  })
```

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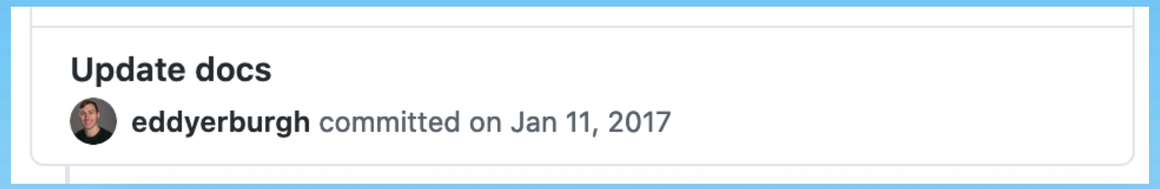
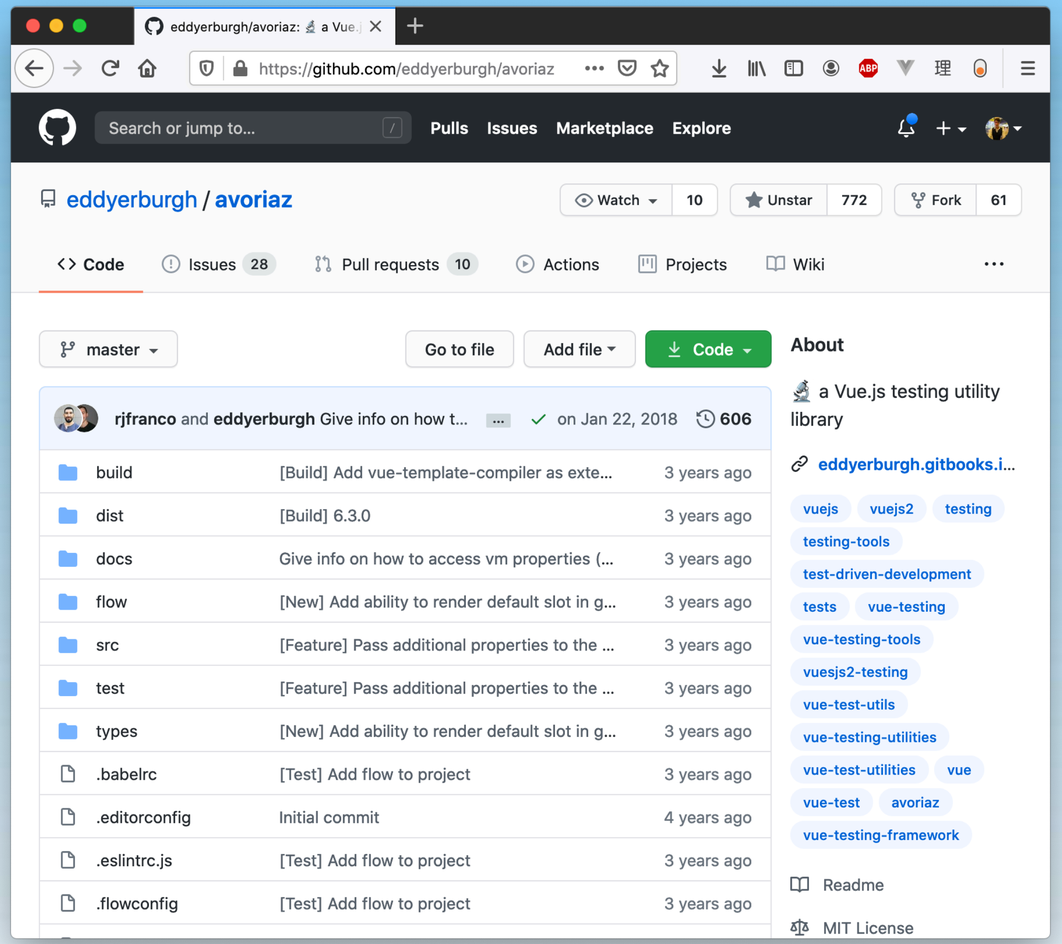
# The journey so far...

- Jan 11, 2017 - "Enzyme for Vue" was born as "Avoriaz"
- A way to render and manipulate a component
- With "mounting options"

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# The journey so far...

- Mid 2017 - Avoriaz used a base for Vue Test Utils
- We have a nice little library that seems to be working great - what could go wrong?

```
commit 309d802b60673310cb2a9461c902255d6821335c
Author: Edd Yerburgh <edward.yerburgh@gmail.com>
Date:   Wed May 31 19:54:49 2017 +0100

    Initial commit 🚀
```

```
 7  test('renders a messag', () => {
 8    const wrapper = mount(Hello, {
 9      props: {
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# Vue renders async; runners are not

- This test fails! 🤔
- Test runner will execute the assertion before Vue has re-rendered the DOM
- Unintuitive!


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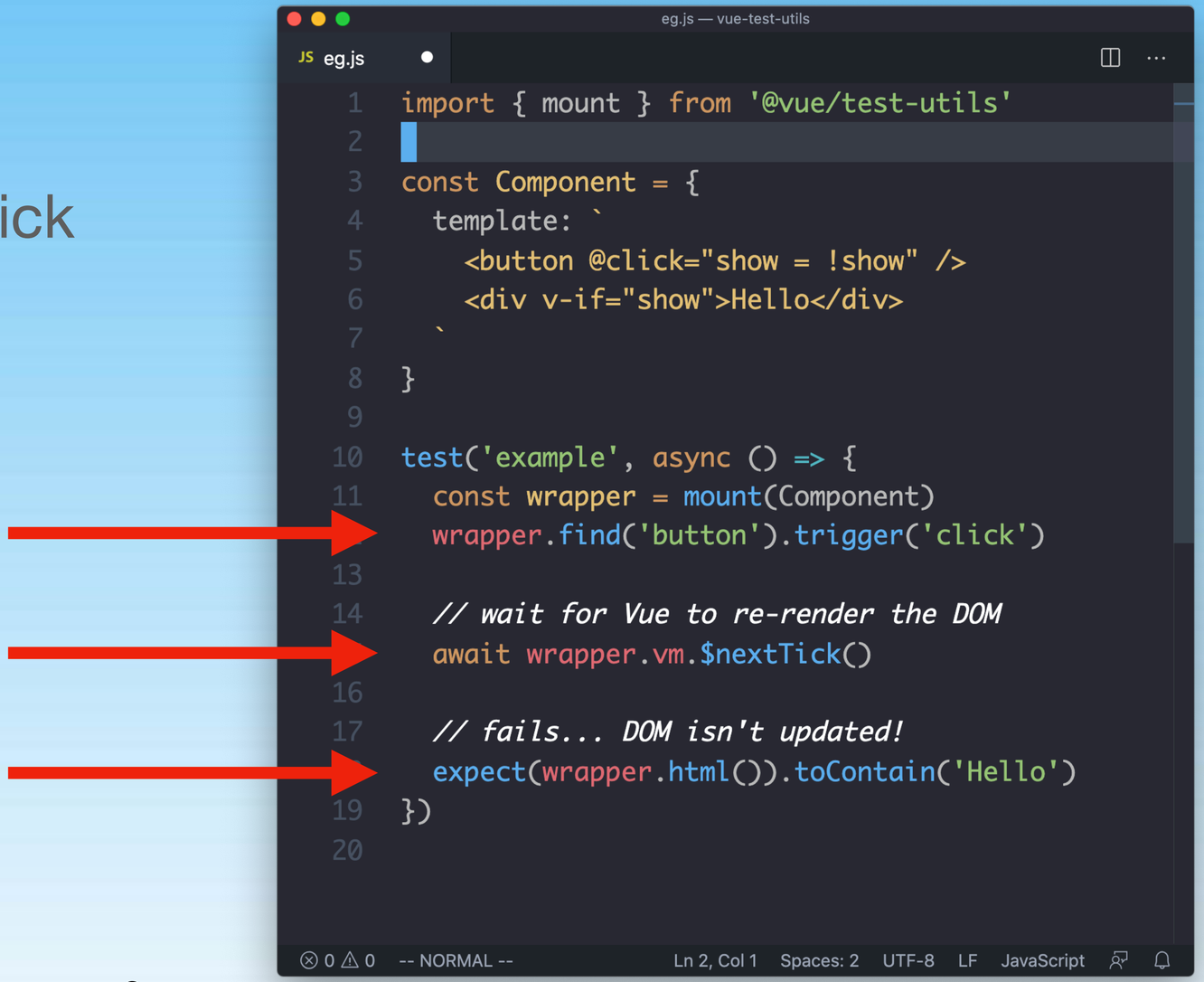
# Vue renders async; runners are not

- Solution is to wait for the nextTick
- Un-necessary overhead

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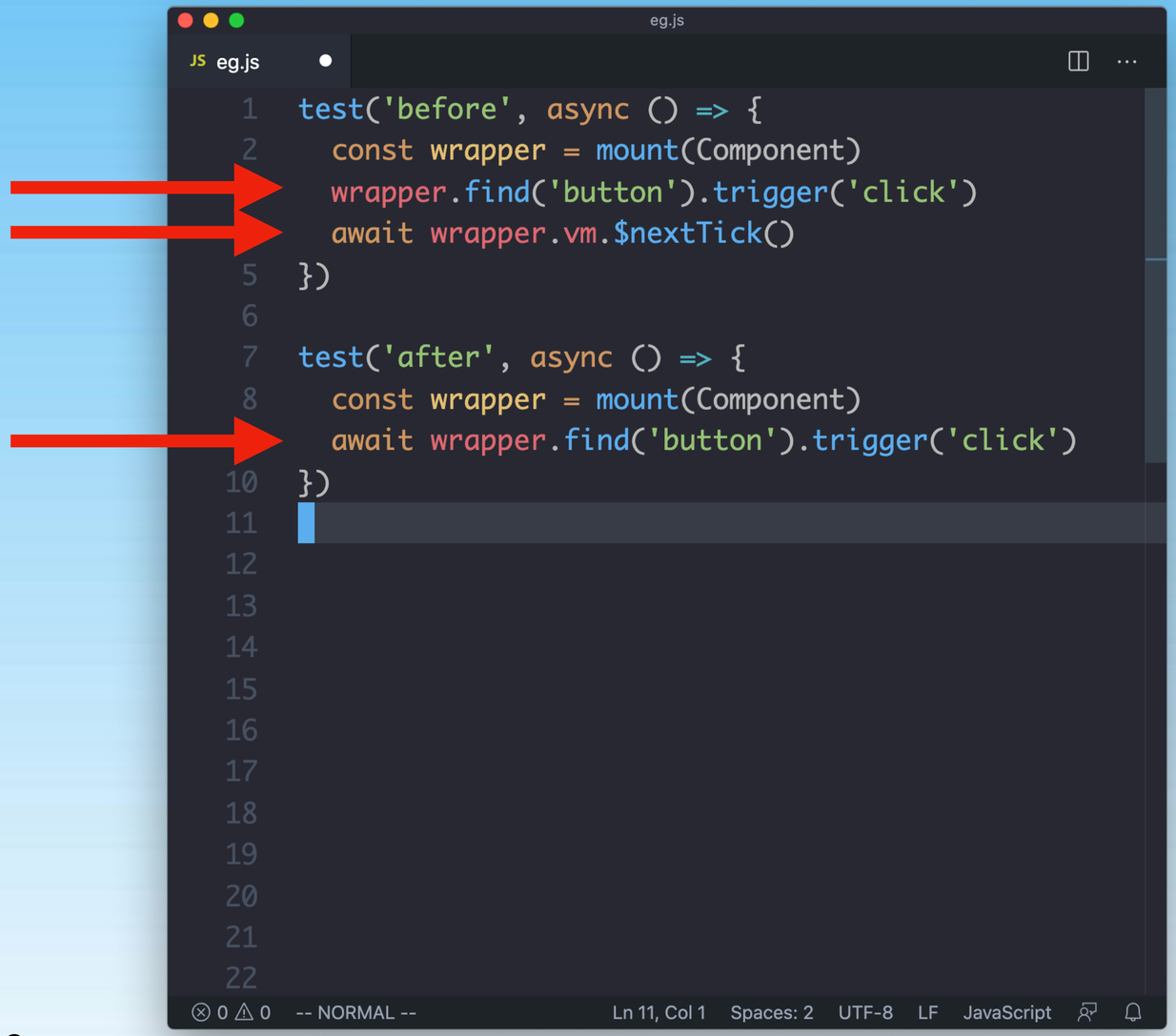
# nextTick shorthand

- You can now `await` anything that mutates the DOM
- trigger
- setProps
- setData

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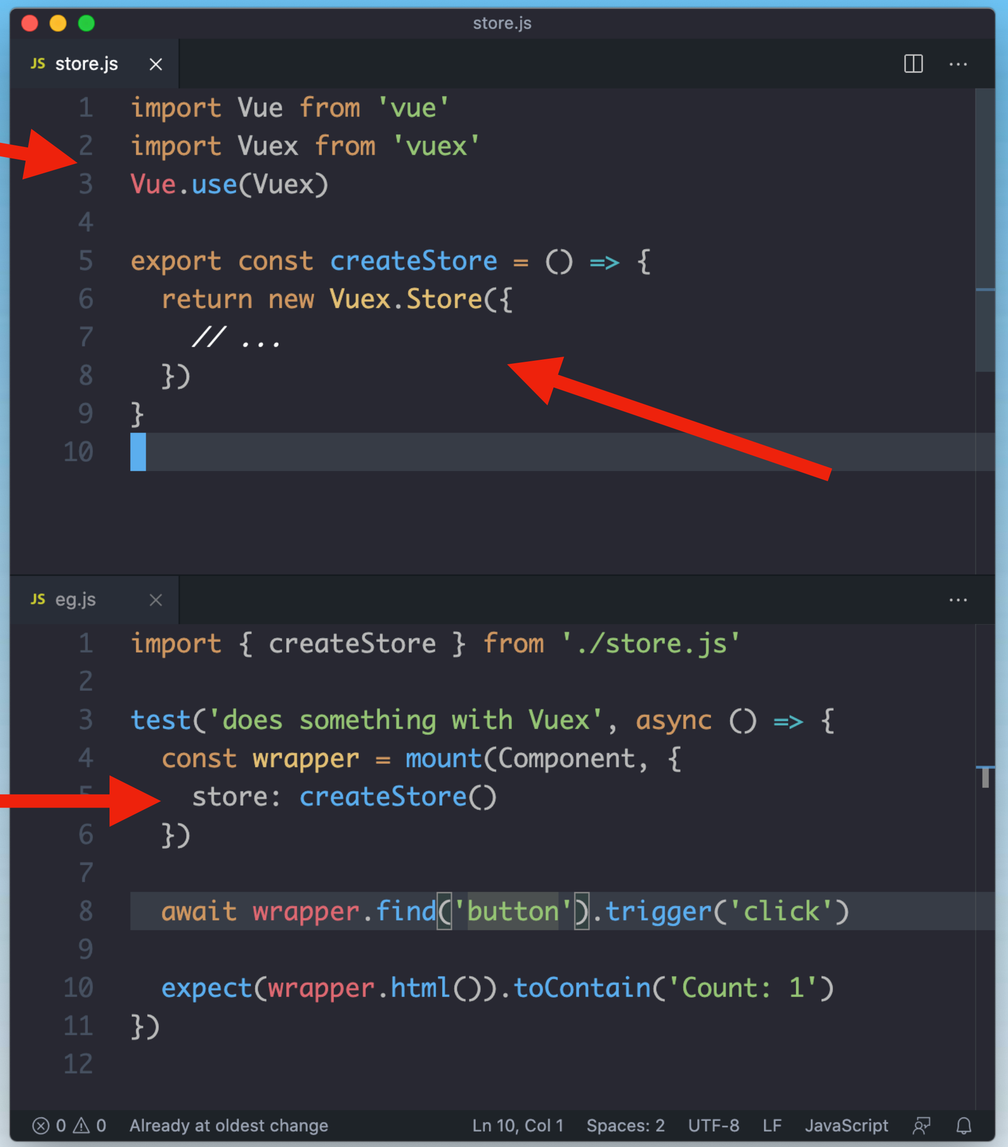
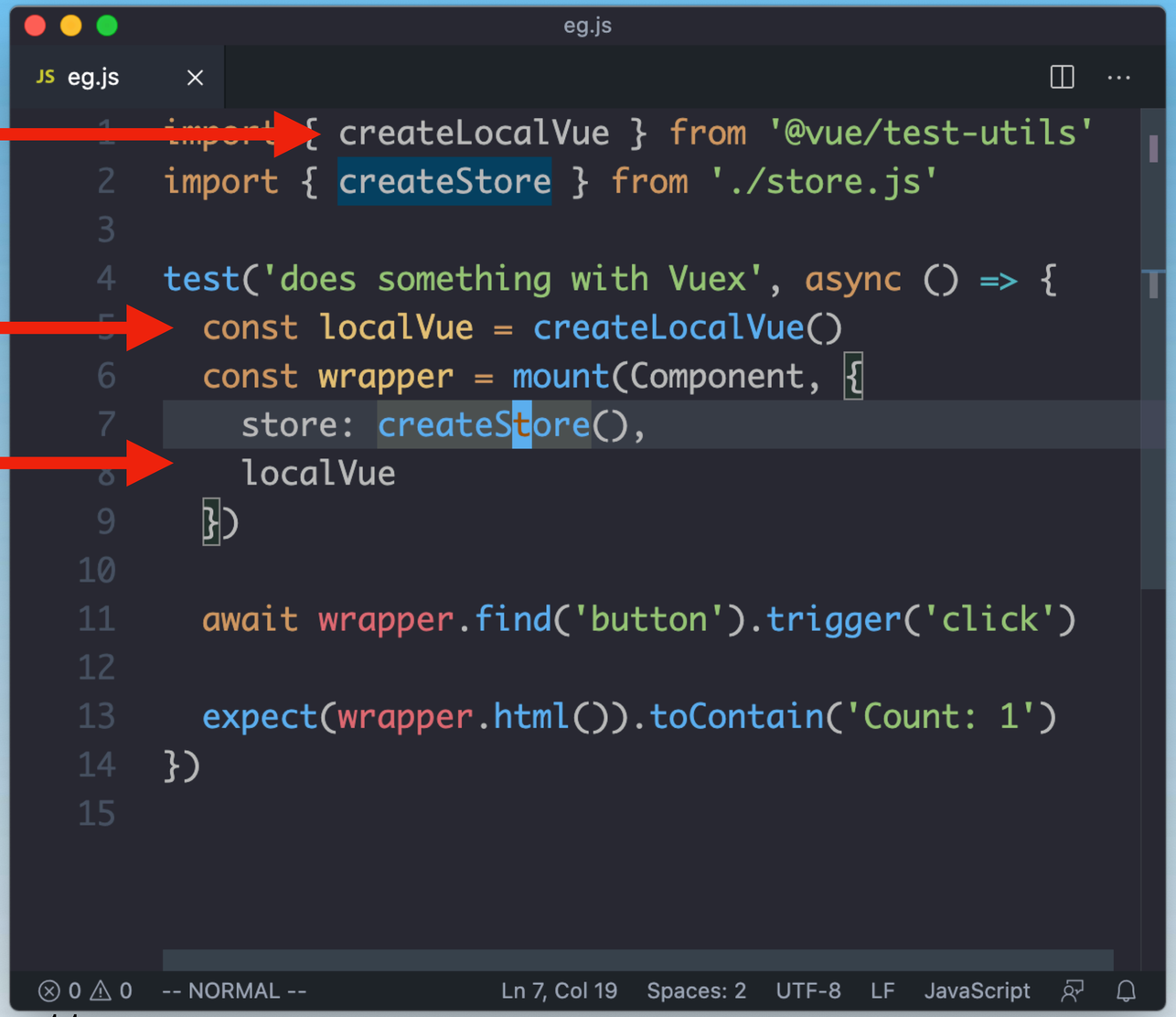
# No more createLocalVue (1)

- Vue 2: plugins are installed by *mutating* the global Vue instance
- Not ideal; when we unit test, we want to *isolate*.



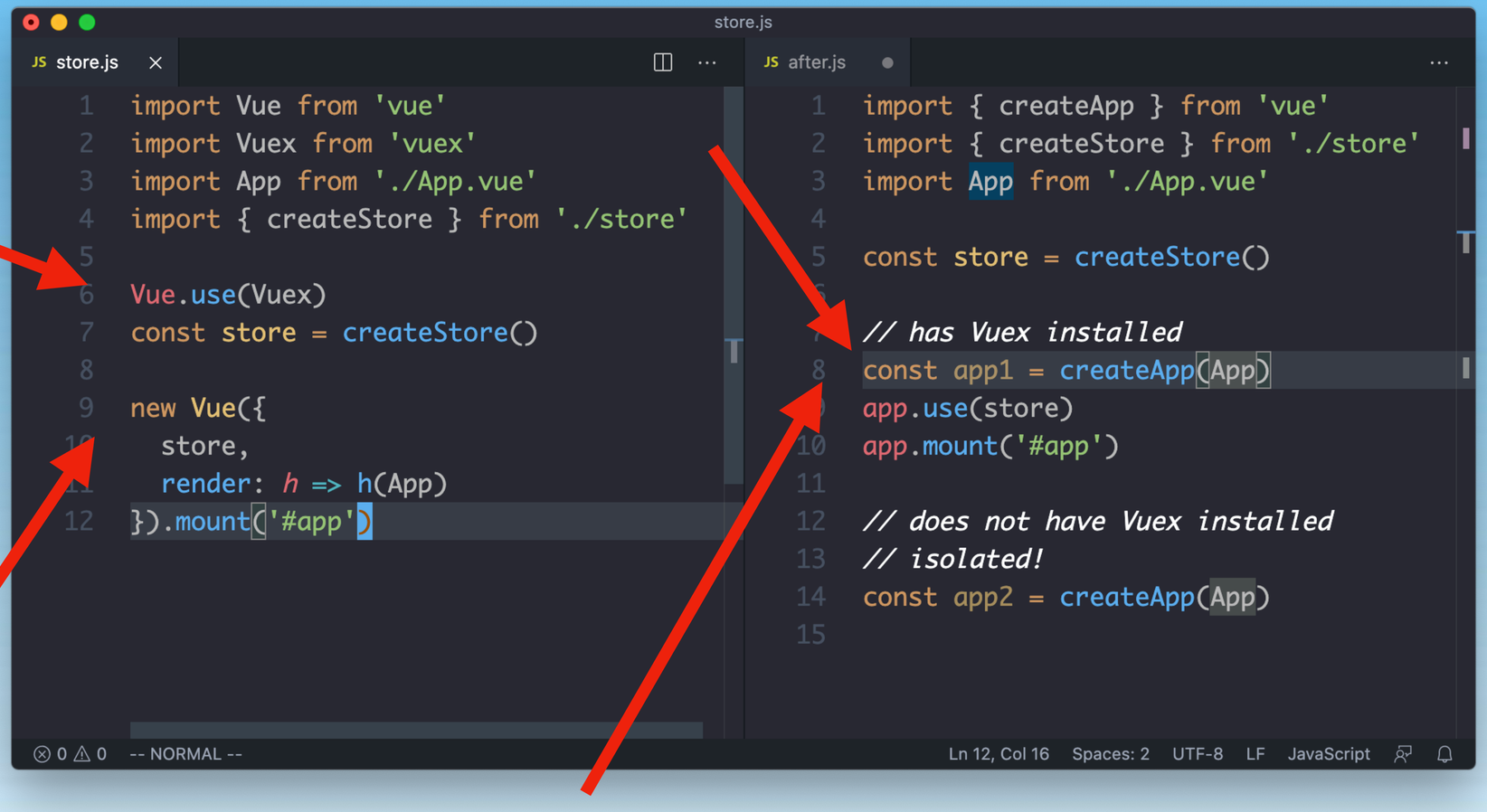
# No more createLocalVue (2)

- localVue was introduced to solve this problem
- worked pretty well



# No more createLocalVue (3)

- Each Vue app and its plugins, directives etc are now *local by default*

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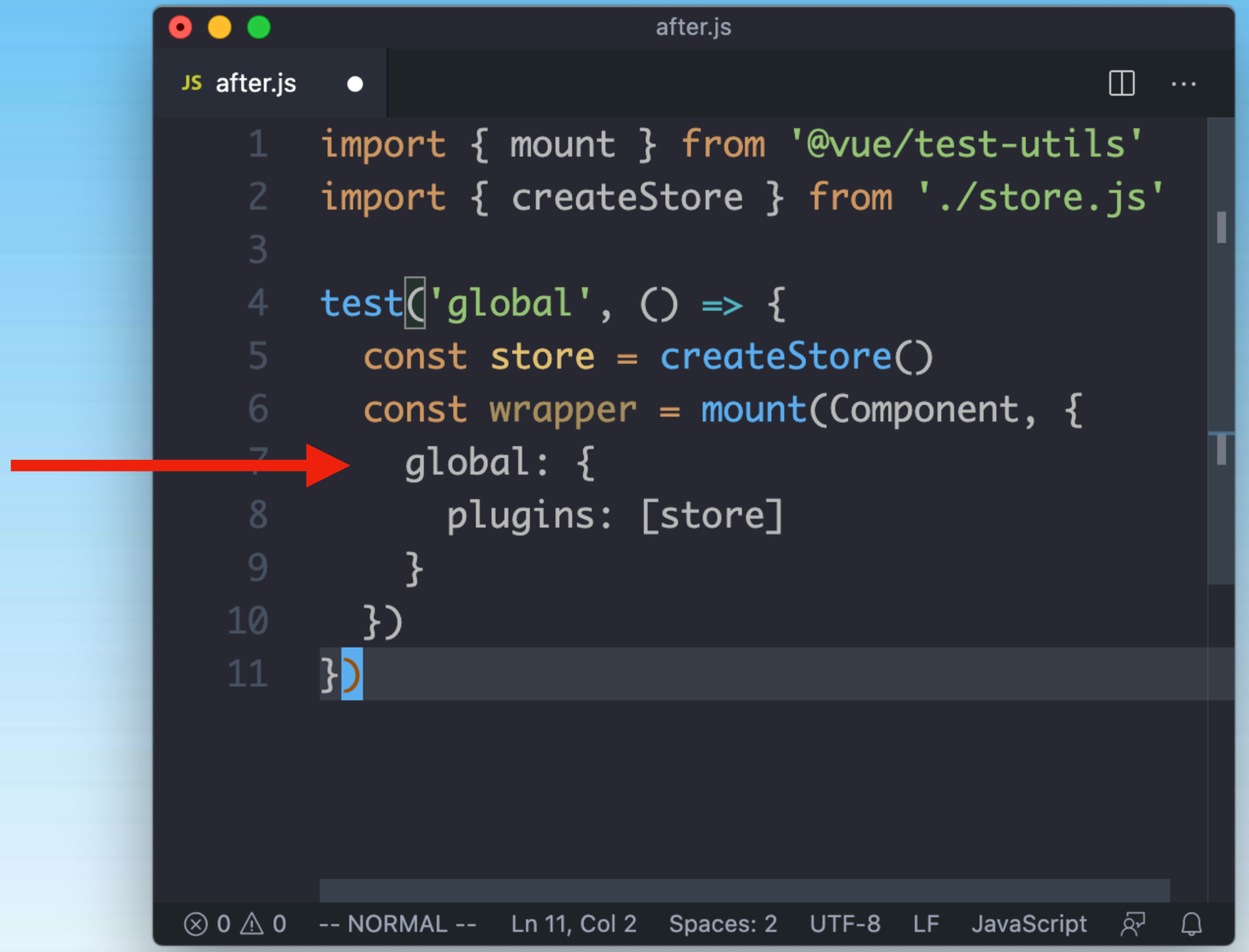
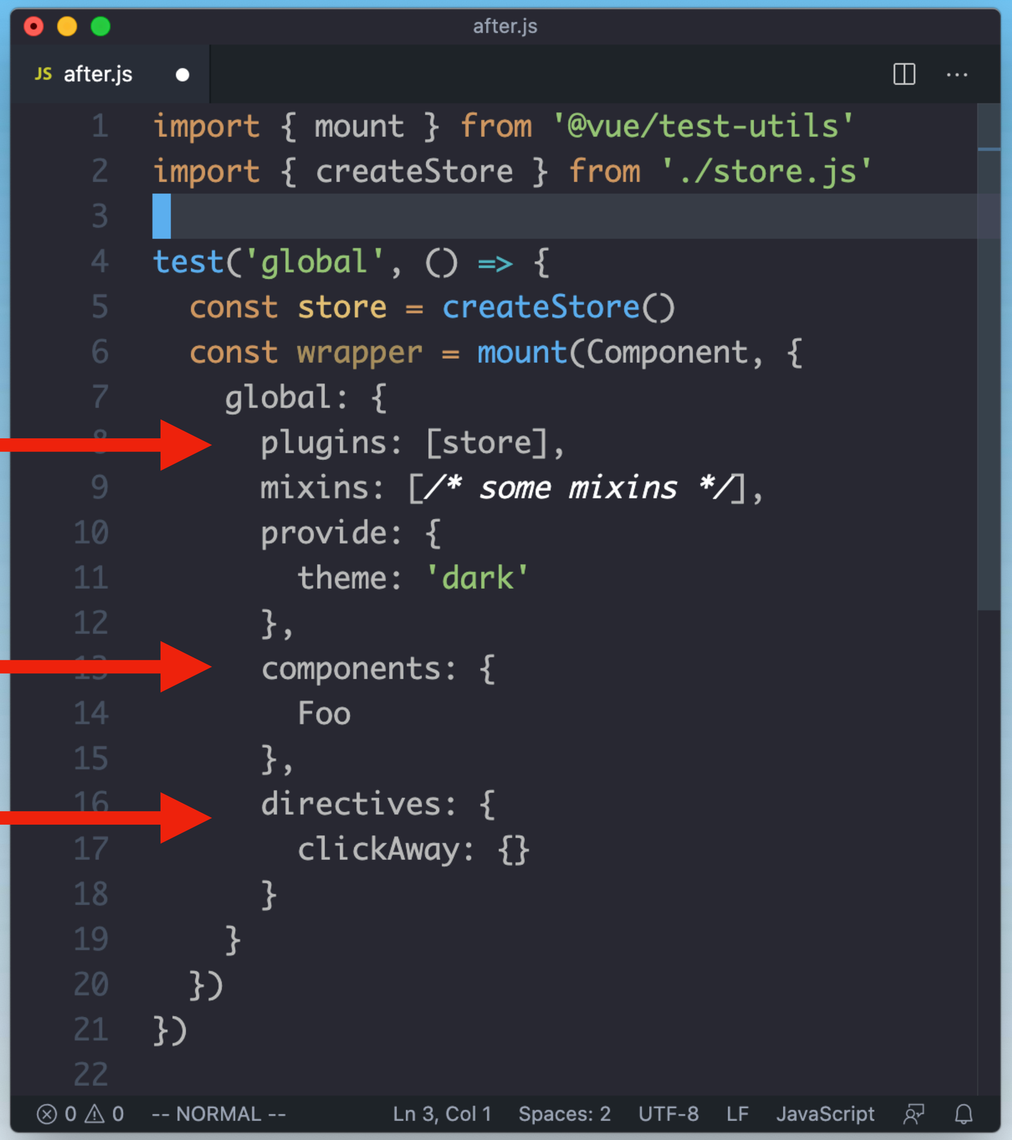
# No more createLocalVue (4)

- Now you install plugins using the global mounting option.



# No more createLocalVue (5)

- This is where anything installed on app goes
- mixins
- provide
- components
- directives
- plugins

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# No more createLocalVue (6)

- This also now includes *stubs* and *mocks*, since those affect all the components, not just the one you are testing, but all of it's children, too.


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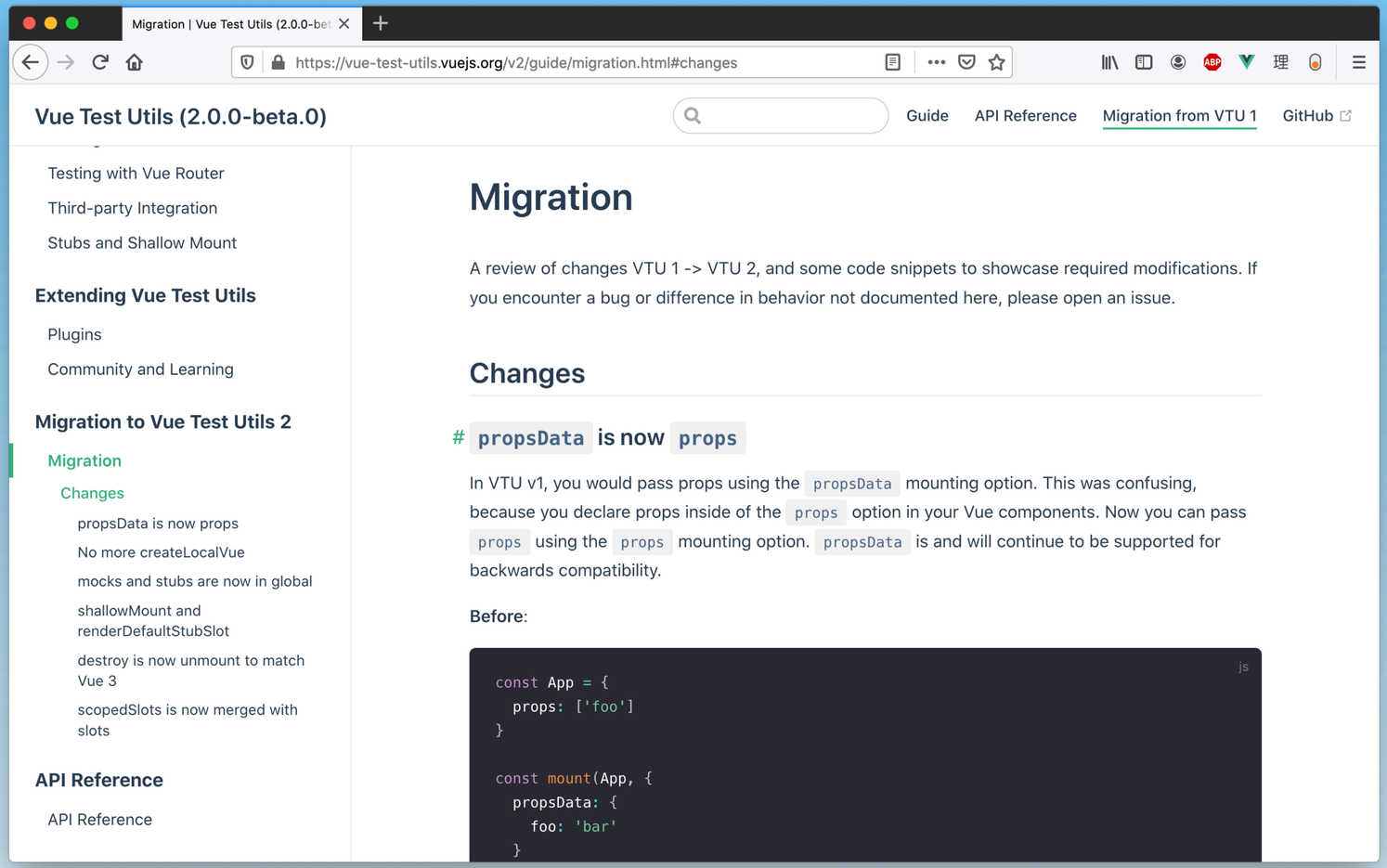
# Migration Guide

- Some other small, trivial changes
- See "migration guide" in the VTU next docs

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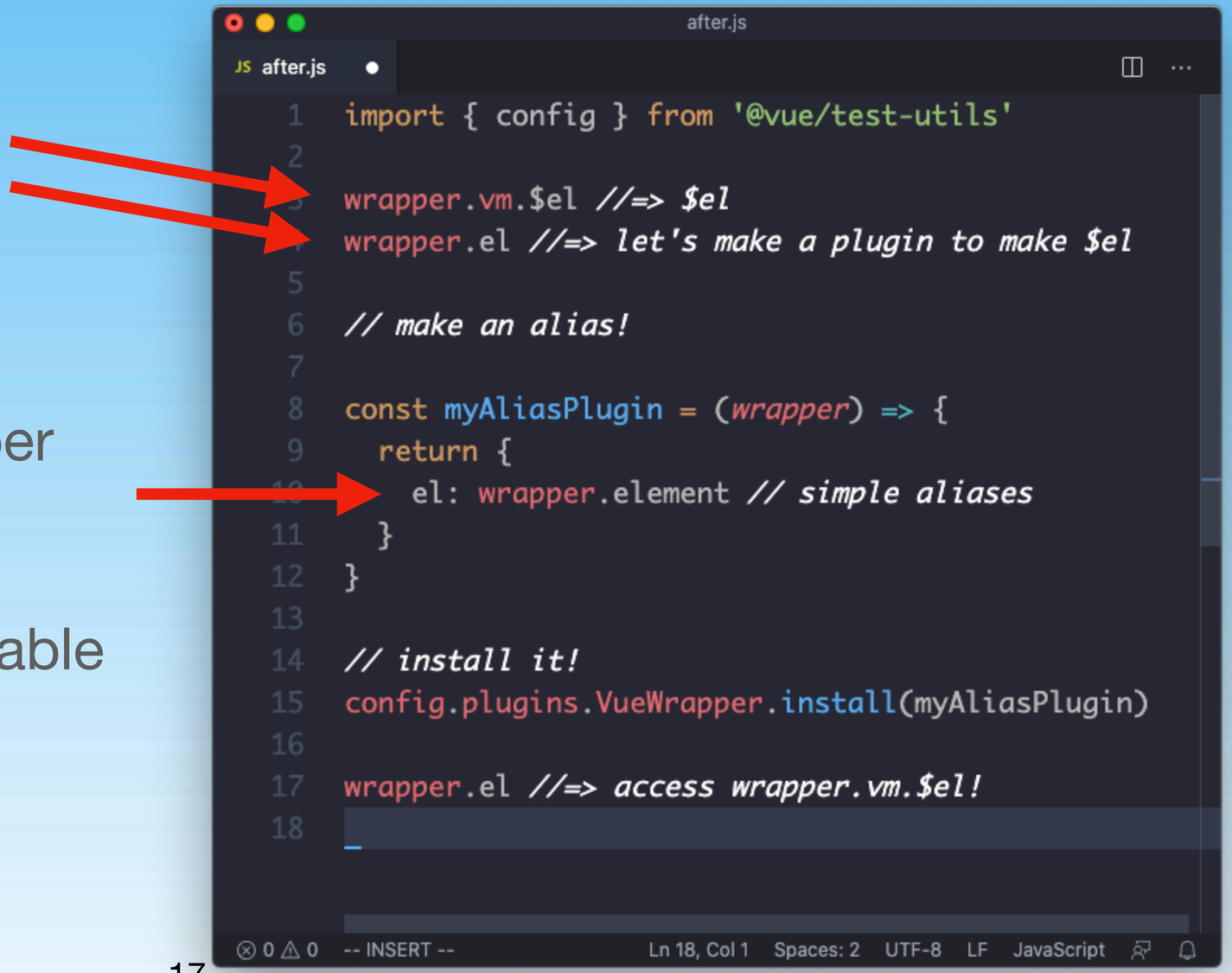
# New Feature: Plugins!

- Extending Vue Test Utils by writing a plugin
- Function that receives wrapper as the first arg
- Returns methods made available on wrapper

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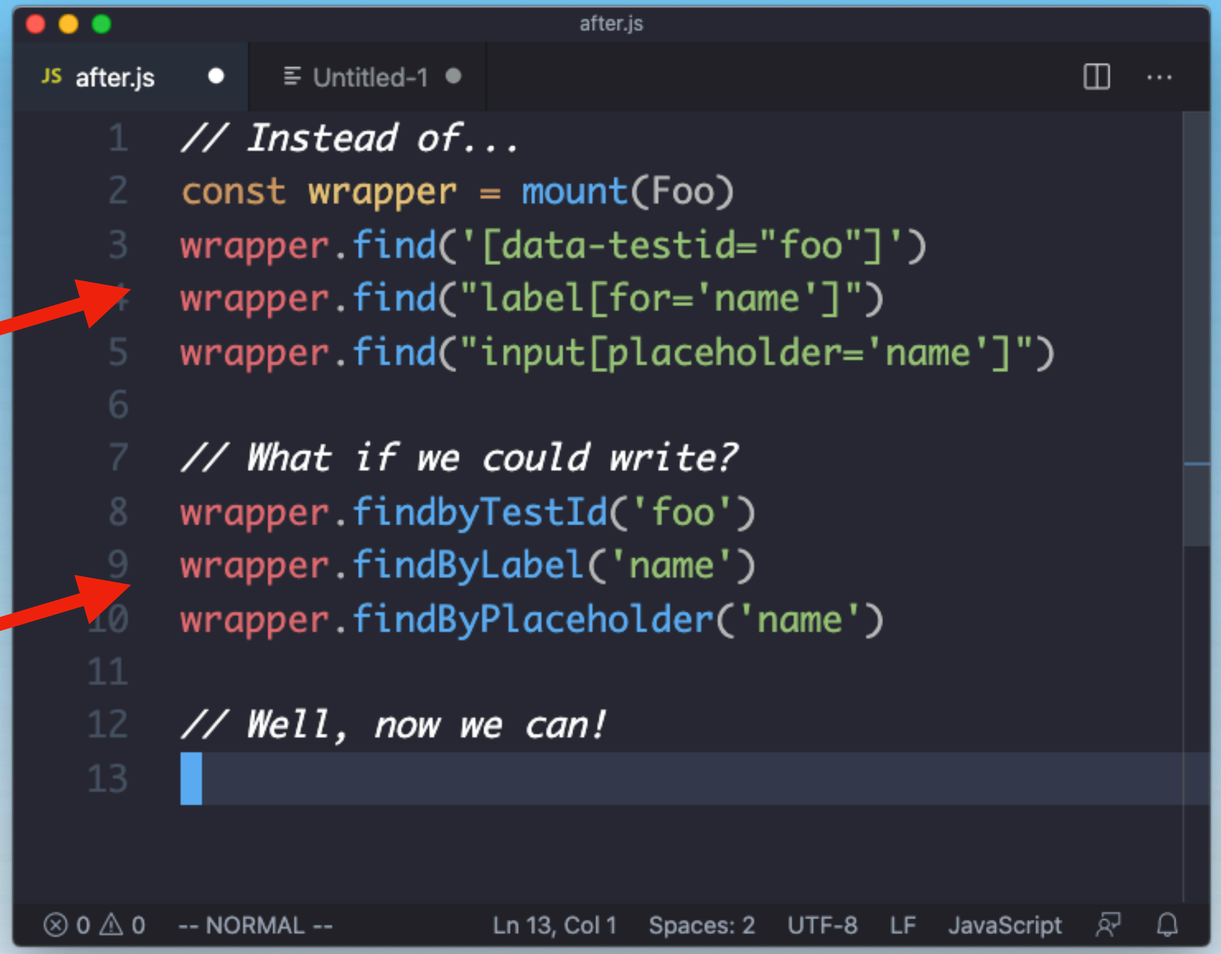
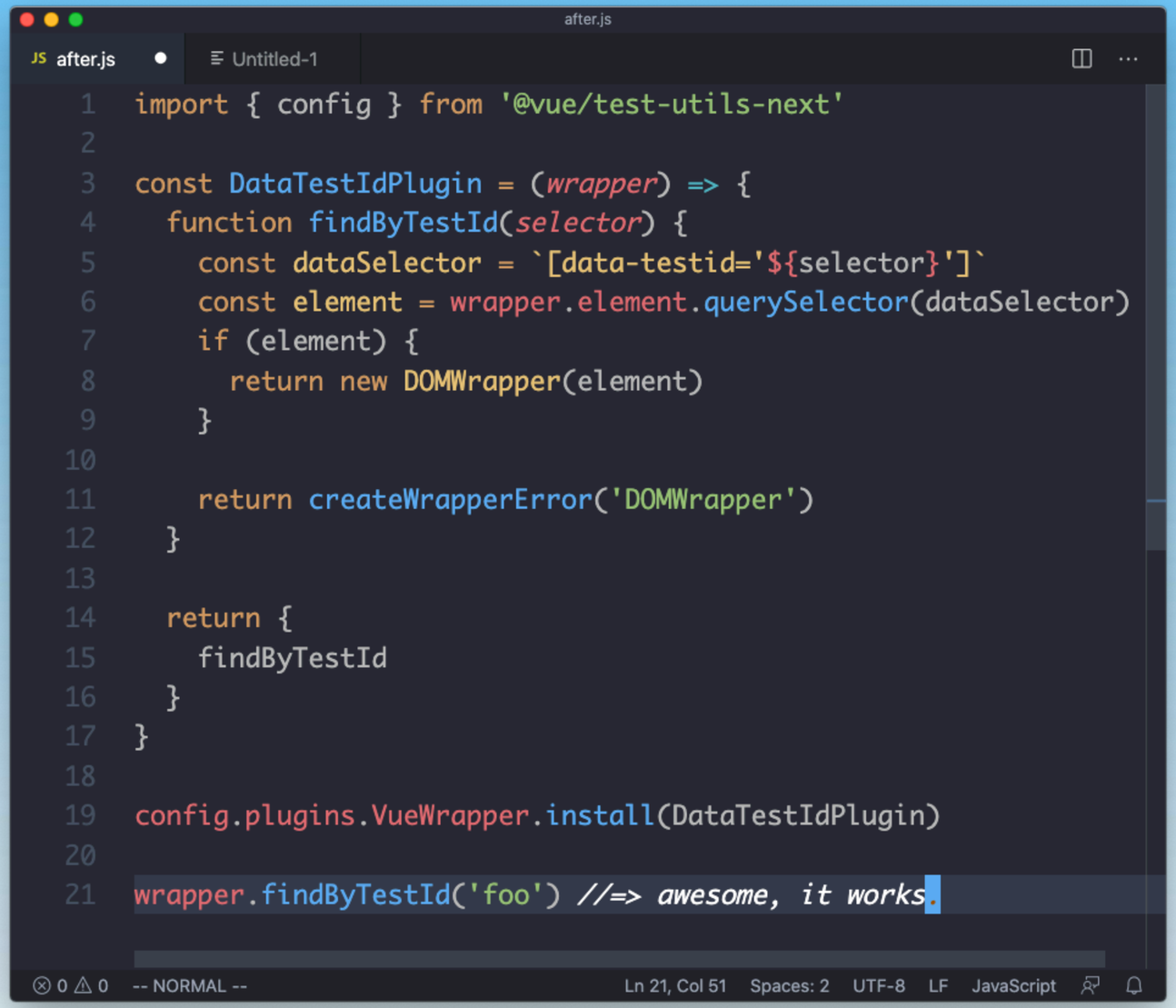
# New Feature: Plugins!

- Can also add new methods to make your tests more *expressive*.



# Example: findByTestId

- VueWrapper, DOMWrapper and other utilities are exposed, so you can be very creative.

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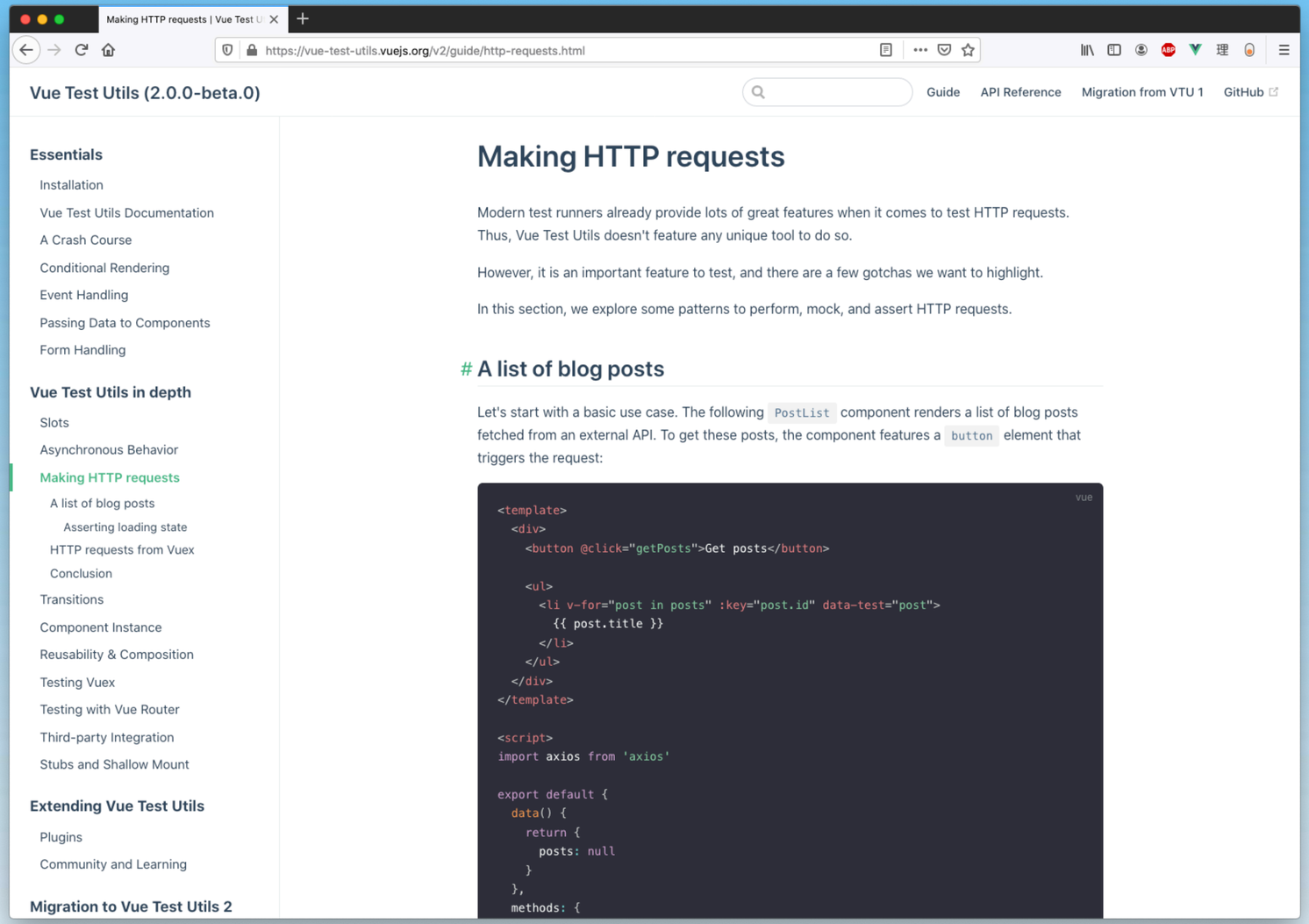
# Updated Docs

- Greatly simplified.
- More focus on *how, why* and *what* to test.

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# A New Philosophy

- Stable API.
  - Use RFC process for changes.
- Vue Test Utils are *utilities for testing.*
- Unopinionated, so you can write opinionated tests.
- Support for extending and building on.



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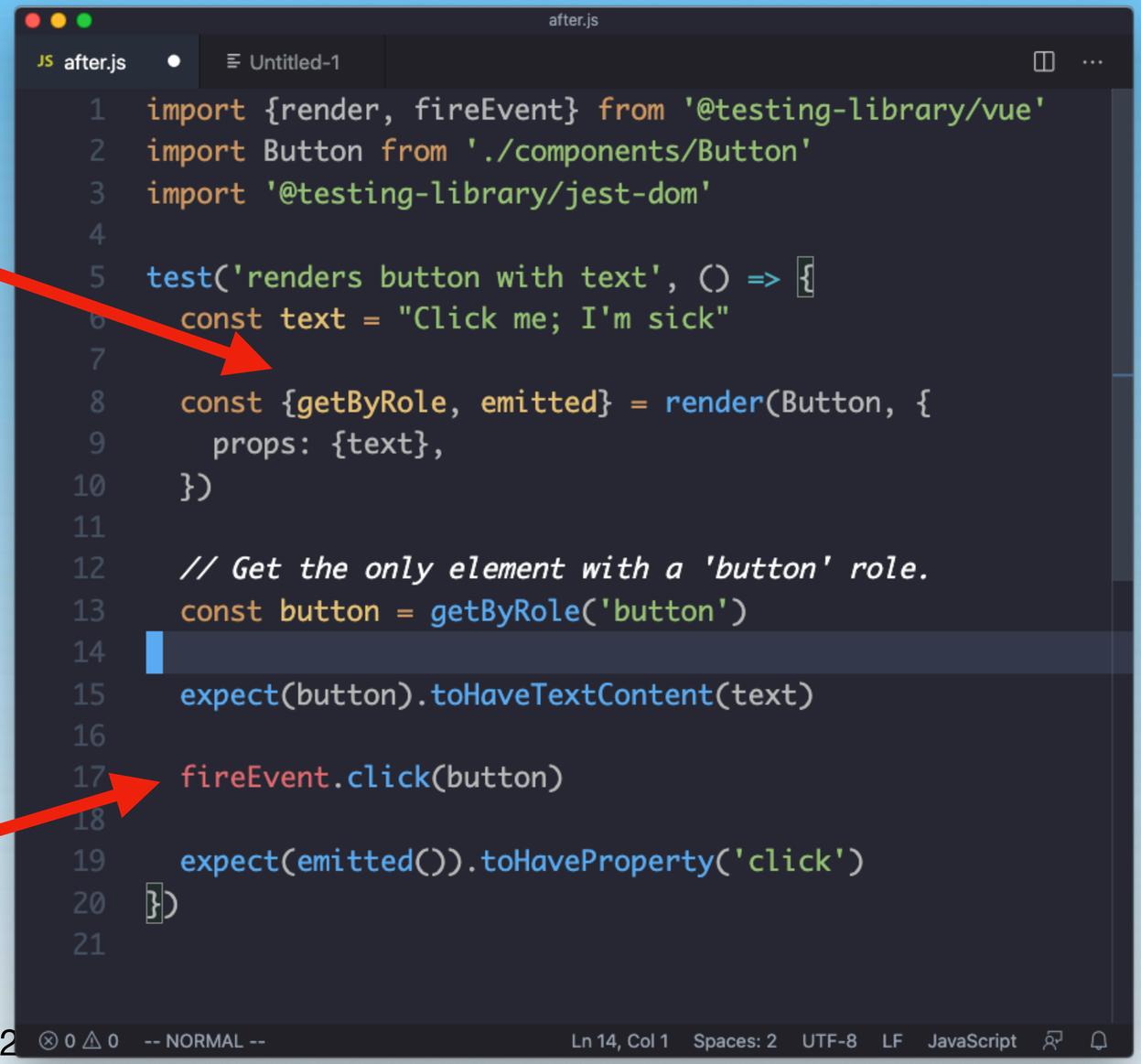
# Case Study: Testing Library

- Write maintainable tests
- Develop with confidence
- Accessible by default
- Opinionated

- Vue Integration by Adria Fontcuberta (@afontq)
- https://github.com/testing-library/vue-testing-library

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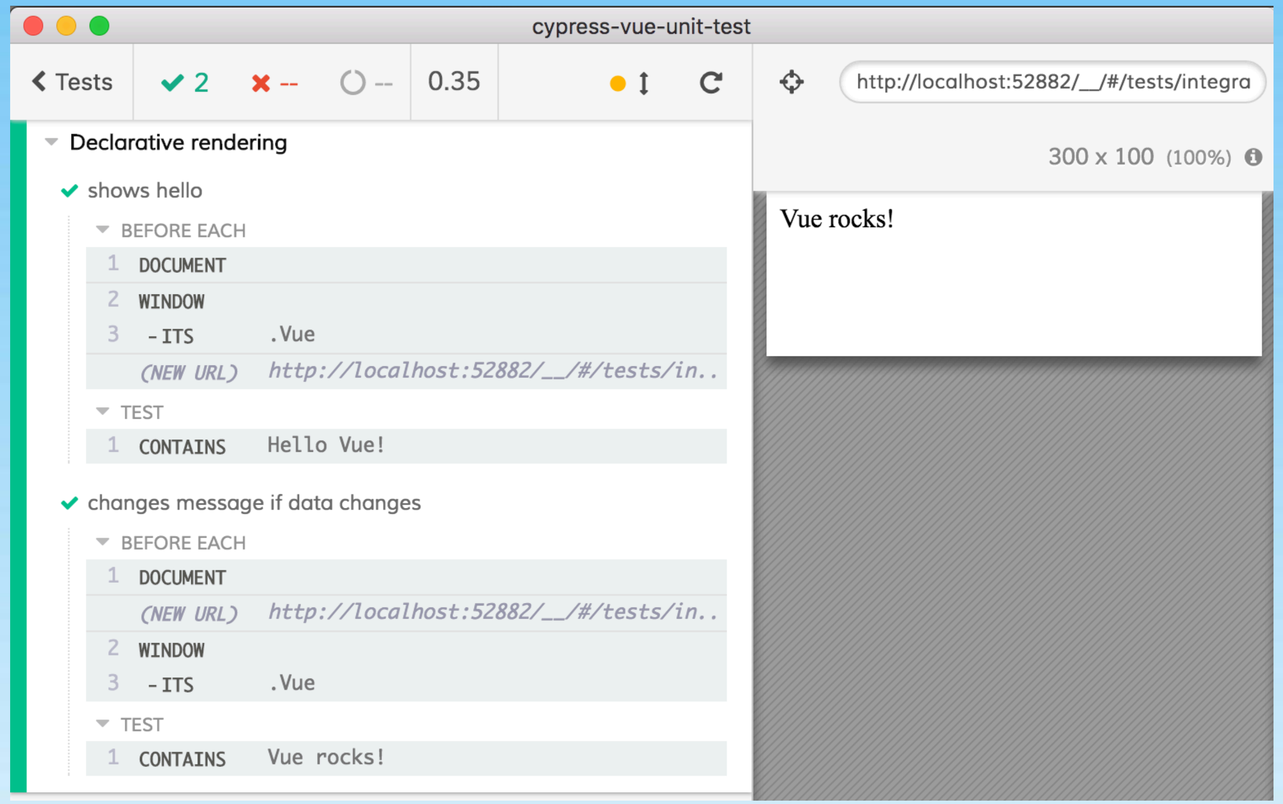
# Case Study: Cypress

- Runs in a real browser
- Opinionated. *Tests like your users do.*
- Powered by Test Utils.
- Early days, but promising! Cypress is awesome.

- Vue Integration by Jess Sachs (@_jessicasachs)
- https://www.youtube.com/watch?v=a-9axZxTFZU

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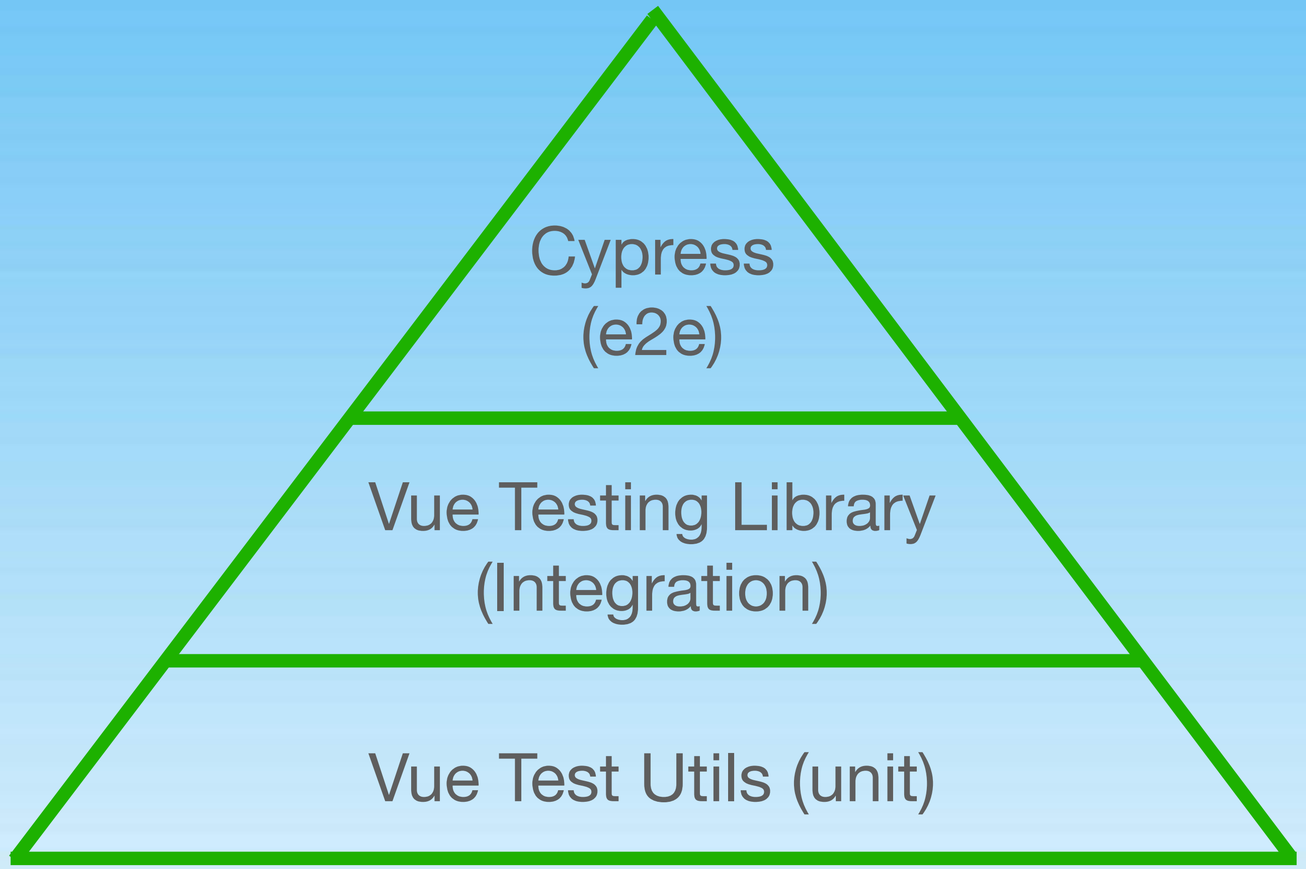
# Which tool should I use?

- Vue Testing Pyramid
- You can basically write the same tests with any of these tools
- Personal preference
- Simple utilities library vs opinionated testing platform

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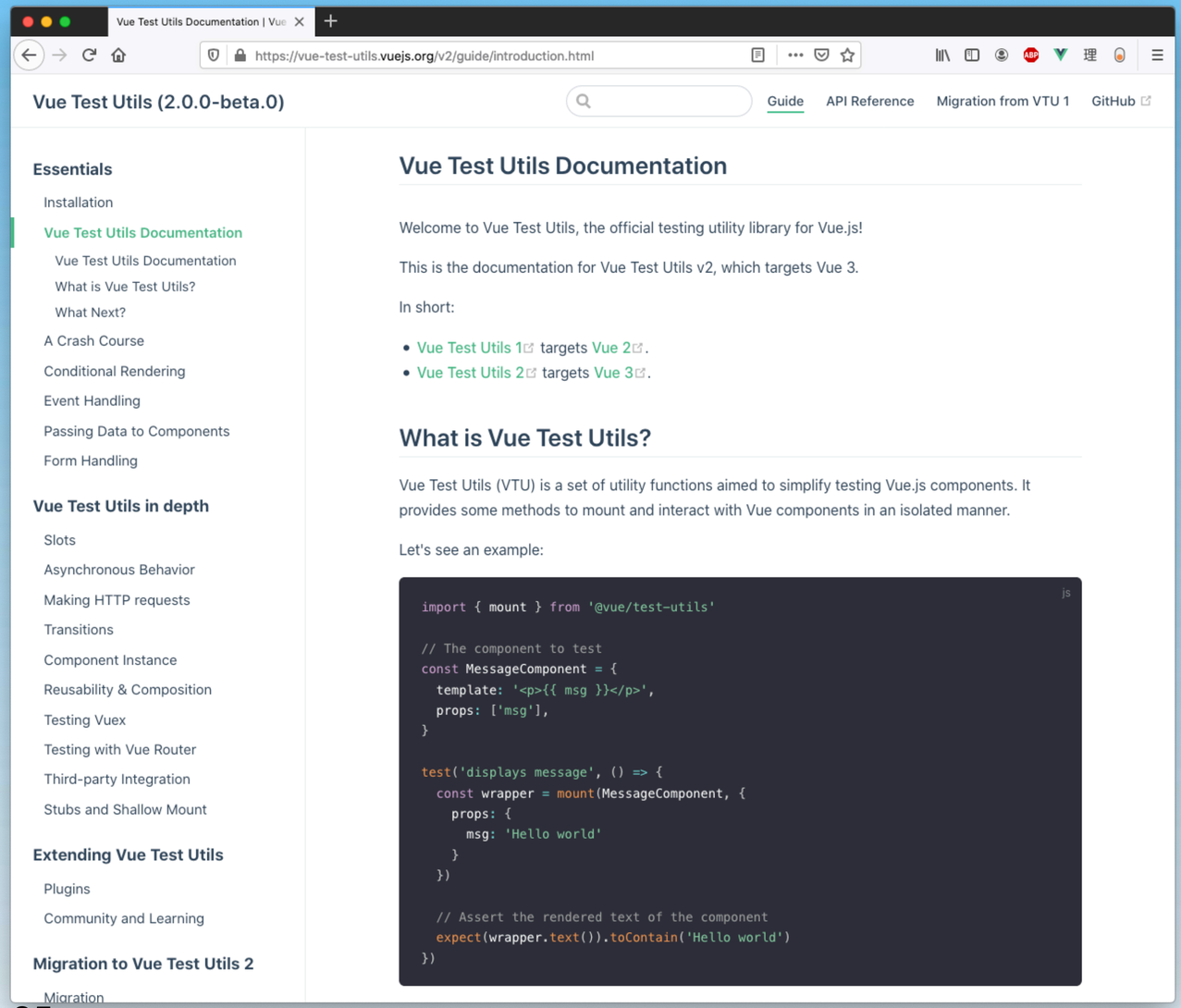
# Where to next?

- Official documentation
- Some simple guides on getting started
- API reference

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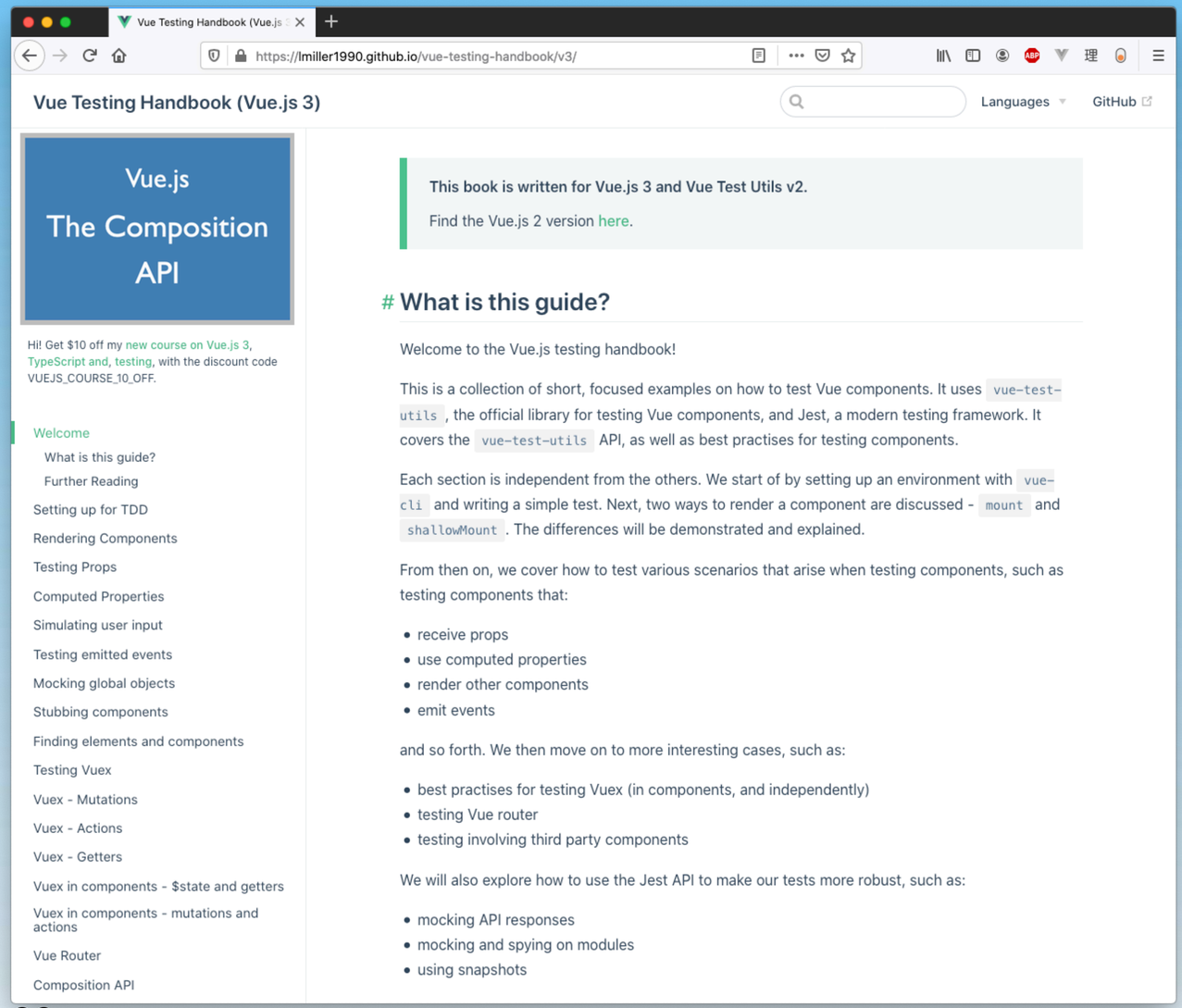
# Where to next?

- Vue Testing Handbook
- Updated for Vue 3 + Vue Test Utils v2
- https://lmiller1990.github.io/vue-testing-handbook/v3/

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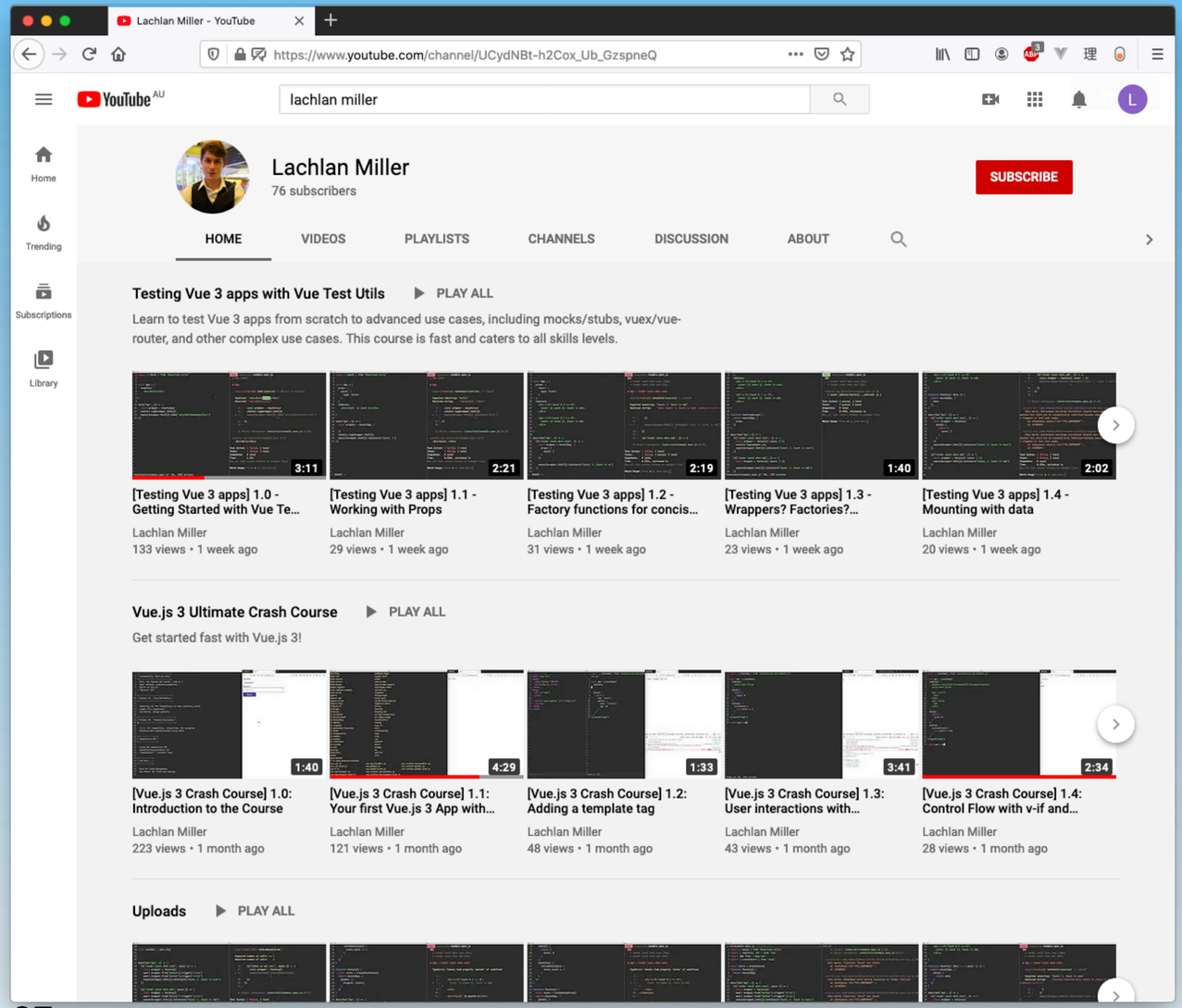
# Where to next?

- Video lectures on YouTube
- https://www.youtube.com/watch?v=0lV4dVYOyBw&list=PLC2LZCNWKL9ahK1IoODqYxKu5aA9T5IOA

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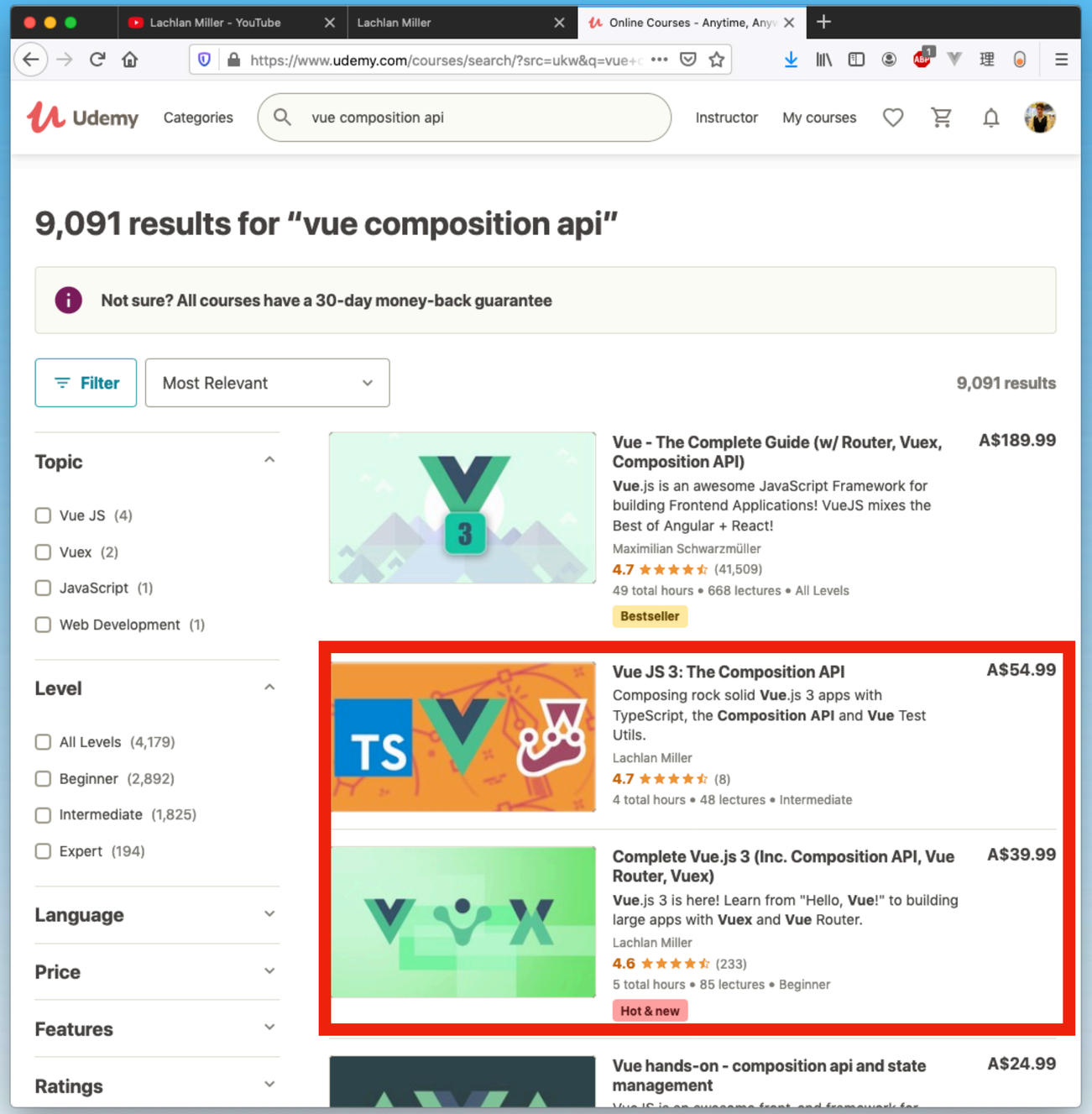
# Where to next?

- I made a course about TypeScript, Composition API.
- Write tests for EVERYTHING!
- https://vuejs-course.com/
- VUE_TORONTO_25_OFF
- Also on Udemy, if you like Udemy. But you should support independent creators!

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