# SSW

## Enterprise Software Development

Getting Started with

# Vue.js

December 2018

Join the Conversation #Vue @JasonGtAu

# Jason Taylor

SSW Solution Architect

Started programming with BASIC on C64,

Keeping it simple since 1994!

jasongtau

codingflow.net

github.com/jasongt

youtube.com/jasongt

Join the Conversation #Vue @JasonGtAu

# History

Dynamic HTML 199...                          ...December 2011

jQuery August 200...                          ...lay 2013

Knockout.js July 20...                        **...bruary 2014**

AngularJS October...                          ...eptember 2016

Backbone.js Octob...

I figured, what if I could just extract the part that I really liked about Angular and build something really lightweight.

Evan You, *Creator of Vue*

# What is Vue?

A progressive JavaScript framework

Incrementally adoptable, core is focused on view only

Additional libraries support more sophisticated features

Includes component system

# Why choose Vue?

## Approachable

Already know HTML, CSS and JavaScript? Read the guide and start building things in no time!

## Versatile

An incrementally adoptable ecosystem that scales between a library and a full-featured framework

## Performant

20KB min+gzip Runtime, Blazing Fast Virtual DOM, Minimal Optimization Efforts

# Features

Reactivity

Data Binding

Components

Events Handling

Animation / Transition

Computed Properties

Templates

Directives

Routing

State Management

Lightweight

Much more!

# Part 1

Building small applications and prototypes

# Essential Skills

# Recommended Tools



Visual Studio Code



Vue VS Code
Snippets



Vue
Dev Tools

Join the Conversation #Vue @JasonGtAu

# Demo

Building small applications and prototypes

# The Vue Instance

Started with a root Vue instance

Passed in an options object:

- el
- data
- methods
- computed

Additional options

```
var app = new Vue({
    el: '#app',
    data: {
    },
    methods: {
    },
    computed: {
    },
})
```

# Template Syntax

Text

{{ message }}

Attributes

v-bind:id="…" *or* :id="…"

Events

v-on:click="…" *or* @click="…"

Modifiers

@submit.prevent="…"

# Computed Properties

Reactive aware methods

```
computed: {

    itemCount: function() {

        return this.items.length;

    }

}
```

Bind just like a normal property

```
{{ itemCount }}
```

# Class and Style Bindings

Class

:class="{ done: t.done }"

Multiple Classes

:class="{ done: t.done, ... }"

Styles

:style="{ color: todoColor }"

# Conditional Rendering

v-if

v-else-if

v-else

v-show

```
<div v-if="items.length > 10">

    {{ remaining }} item(s) remaining.

</div>

<div v-else-if="items.length === 1">

    Last item, get it done!

</div>

<div v-else>

    All done!

</div>
```

# List Rendering

v-for

```
<a v-for="filter in filters">
 {{ filter }}
</a>
<a v-for="(filter, index) in filters">
   {{ index }} - {{ filter }}
</a>
```

# Event Handling

v-on *or* @

```
<a @click="activeFilter = filter">

  {{ filter }}

</a>
```

# Form Input Bindings

v-model

<input *v-model*="todo" />

# Summary

Easy to build small apps or prototypes

No special tools required

No build step required

No server required

Only basic skills required

# Part 2

Building enterprise applications

# Recommended Tools



Node.js



Vue CLI

Join the Conversation #Vue @JasonGtAu

# Vue CLI

A full system for rapid development with Vue.js

Support for TypeScript and Babel

Support for progressive web apps

Support for unit and e2e testing

Prototype with single Vue file (.vue)

Future ready (ES2015 / ES6 support)

Includes graphical user interface

# Getting Started with Vue CLI

Install:

```
npm install -g @vue/cli
```

Create a project:

```
vue create todo-app
```
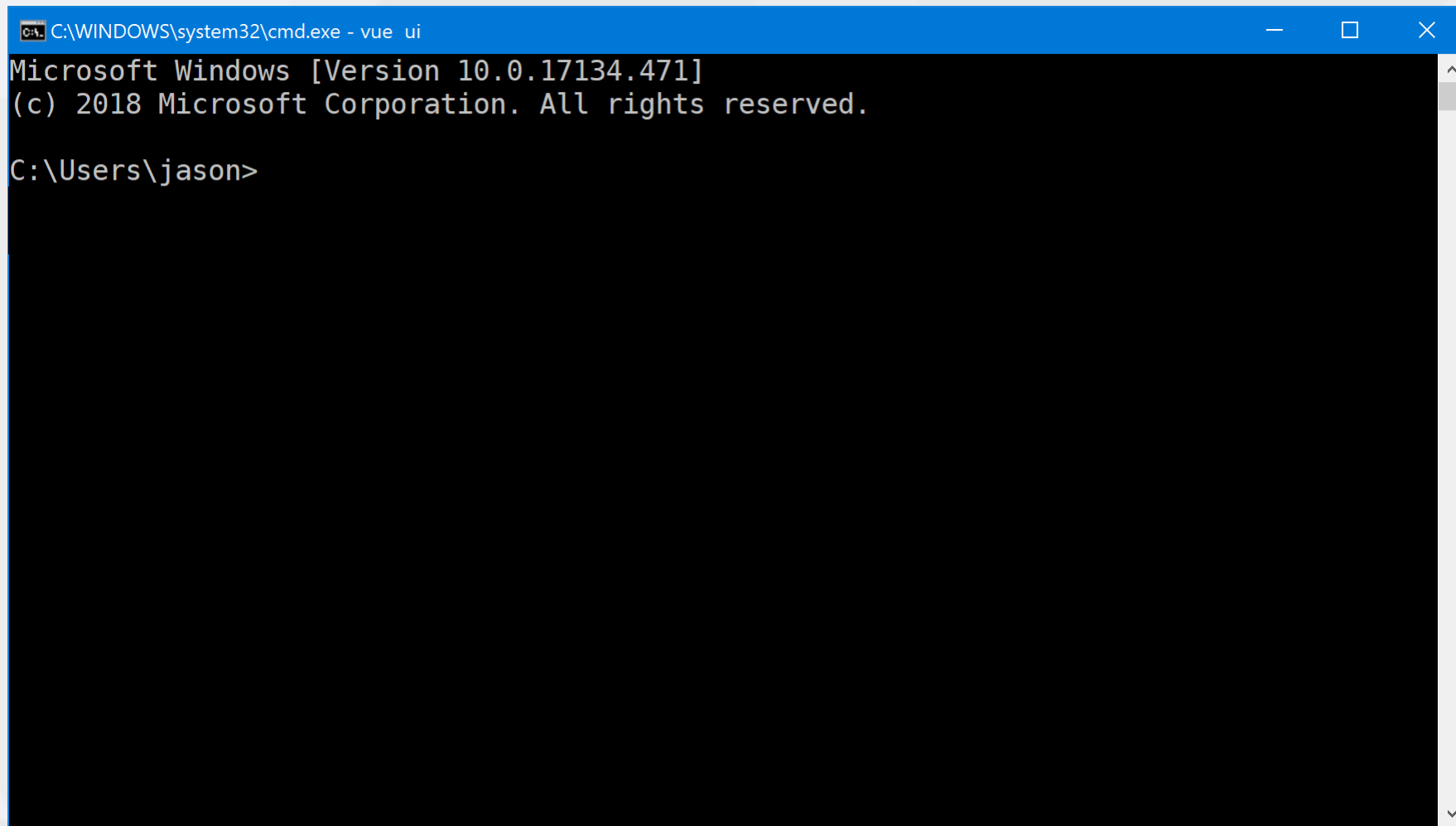
*or*

```
vue ui
```

# Demo
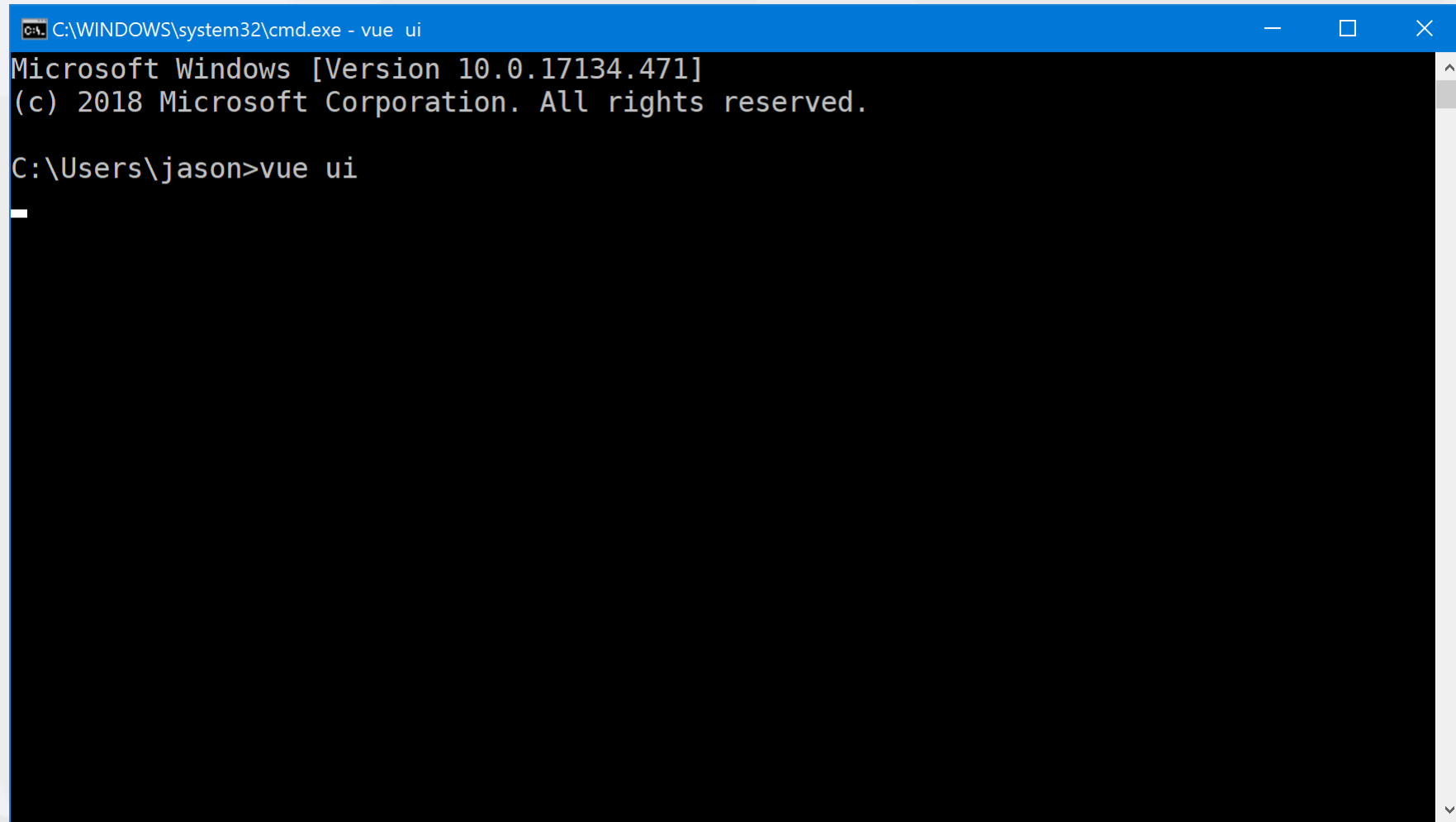
Creating a project using the Vue CLI with `vue ui`

```
C:\WINDOWS\system32\cmd.exe - vue ui

Microsoft Windows [Version 10.0.17134.471]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\jason>
```

```
C:\WINDOWS\system32\cmd.exe - vue ui

Microsoft Windows [Version 10.0.17134.471]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\jason>vue ui
```

# Vue Project Manager

☰ **Projects**  　 ➕ Create 　 ⬆ Import

No existing projects

🏠 No project open　📁 C:\Code\JasonGT　📋 ✏ Ready on http://localhost:8000　　15/12/2018, 14:29:27

# Vue Project Manager

⌃    C:    Code    JasonGT                                        ✏    ↻    ☆    ▾    ⋮

+ Create a new project here

🏠 No project open        📁 C:\Code\JasonGT        📄 ✏ Ready on http://localhost:8000        15/12/2018, 14:29:27    💧 🐞 📑 🔄

# Create a new project

Project folder

📁 VueTodoPro

C:/Code/JasonGT/**VueTodoPro**   ✏

Package manager

npm ⌄

✕ Cancel          Next →

🏠 No project open   📁 C:\Code\JasonGT   🗒 ✎ Ready on http://localhost:8000          15/12/2018, 14:29:27

# Create a new project

Additional options

Overwrite target folder if it exists                    ⬤○

Git repository

Initialize git repository (recommended)                 ◯⬤

Initial commit message (optional)

✕ Cancel                                    Next →

# Create a new project

ⓘ A preset is an association of plugins and configurations. After you've selected features, you can optionally save it as a preset so that you can reuse it for future projects, without having to reconfigure everything again.

## Select a preset

○ **Default preset**
babel, eslint

○ **Manual**
Manually select features

← Previous        ✔ Create Project

# Create a new project

## Select a preset

○ **Default preset**
babel, eslint

◉ **Manual**
**Manually select features**

○ **Remote preset**
Fetch a preset from a git repository

← Previous          Next →

# Create a new project

ⓘ You will be able to add features after the project is created by installing plugins.

Enable features

**Babel**
Transpile modern JavaScript to older versions (for compatibility) ↗ More Info

**TypeScript**
Add support for the TypeScript language ↗ More Info

← Previous      Next →

# Create a new project

## Router
Structure the app with dynamic pages [↗] More Info

## Vuex
Manage the app state with a centralized store [↗] More Info

## CSS Pre-processors
Add support for CSS pre-processors like Sass, Less or Stylus [↗] More Info

## Linter / Formatter
Check and enforce code quality with ESLint or Prettier [↗] More Info

← Previous     Next →

# Create a new project

Linter / Formatter
Check and enforce code quality with ESLint or Prettier ↗ More Info

Unit Testing
Add a Unit Testing solution like Jest or Mocha ↗ More Info

E2E Testing
Add an End-to-End testing solution to the app like Cypress or Nightwatch ↗ More Info

Use config files
Use specific configuration files (like '.babelrc') instead of using 'package.json'.

← Previous        Next →

# Create a new project

Use history mode for router? (Requires proper server setup for index fallback in production)
By using the HTML5 History API, the URLs don't need the '#' character anymore. ⧉ More Info

← Previous    ✓ Create Project

Details        Presets        Features        Configuration

# Save as a new preset                                    ✕

### Preset name

🏷

Save the features and configuration into a new preset

Cancel        Continue without saving        💾 Create a new preset

← Previous        ✓ Create Project

🏠 No project open        📁 C:\Code\JasonGT        📄 ✎ Ready on http://localhost:8000        15/12/2018 , 14:29:27

Installing Vue CLI plugins. This might take a while...

# Project dashboard

✏ Customize

Welcome tips

Kill port

⚡ Ready to kill

Enter a network port

# Welcome to your new project!

You are looking at the project dashboard where your can put widgets. Use the 'Customize' button to add more! Everything is automatically saved.

🏠 📁 C:\Code\JasonGT\VueTodoPro 📄 👉 Get started with the following commands: $ cd VueTo…15/12/2018, 14:52:17

# Single File Components

Vue-specific file with a .vue extension

Includes view, logic, and styles

What about separation of concerns?

Template, logic, and styles already

coupled

Collocating makes the component more

cohesive and maintainable

```
<template>
    ...
</template>
<script>
    ...
</script>
<style scoped>
    ...
</script>
```

# Vue Router

Official router for Vue.js

Supports all essential and advanced features, including:

Navigation guards

Scroll behaviour

Lazy loading

Easy to build single page applications

# Vuex

State management pattern for Vue.js

Centralised store of state for the application

Ensures changes to state are predictable

Similar to Redux or Ngrx

Integrates with Vue's official dev tools extension

# Demo

Review Vue CLI app with advanced features

# Next steps

Code & Slides
bit.ly/getting-started-vue

Vue.js Resources
bit.ly/awesome-vue

Comparison with other Frameworks
bit.ly/compare-vue

# Thank you!

## Code & Slides

[bit.ly/getting-started-vue](bit.ly/getting-started-vue)

[info@ssw.com.au](info@ssw.com.au)

www.ssw.com.au

Sydney | Melbourne | Brisbane