

CSS in Native

CSSConf Guangzhou 2016

Self Introduction

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- twitter.com/zhaojinjiang
- **weex** 
-



[clock]

weeX



What is Weex ?

weex

A close-up photograph of a woman's hands holding a silver smartphone. She has pink-painted fingernails. She is wearing a dark, sleeveless dress with vertical stripes. The background is blurred, showing city lights and a bridge at night.

1

Build Dynamic Mobile App

```
<template lang="jade">
  div.my-component
    h1 {{ msg }}
    other-component
</template>

<script>
  import OtherComponent from './other-component.vue'

  export default {
    components: { OtherComponent },
    data() {
      return {
        msg: 'Hello Vue.js!'
      }
    }
  }
</script>

<style lang="sass" scope>
  $font-stack: Helvetica, sans-serif;
  $primary-color: #333;

  .my-component {
    font: 100% $font-stack;
    color: $primary-color;
  }
</style>
```

Line 1, Column 23 Spaces: 2 Vue Component

2

Using HTML / CSS / JavaScript Actually Vue 2.0 by default



3

Native View & Device Power

4

Free to Extend



GitHub - alibaba/weex: A fr

GitHub, Inc. [US] https://github.com/alibaba/weex

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alibaba / weex Watch 1,823 Star 5,086 Fork 539

Code Issues 82 Pull requests 10 Wiki Pulse Graphs

A framework for building Mobile cross-platform UI <http://alibaba.github.io/weex>

1,834 commits 24 branches 2 releases 41 contributors

Branch: dev ▾ New pull request Find file Clone or download ▾

lvscar committed on GitHub Merge pull request #954 from zhoukekestar/dev ... Latest commit 21d54bd 18 hours ago

.github * [doc] comment p template content 8 days ago

android * [android] optimize WXResourceUtils class (#954) 6 days ago

bin + [jsfm] added some files into js-framework dist 27 days ago

build * [html5] fix e2e test ci 12 days ago

dist [jsfm] v0.15.2 (reopen again) (#909) 9 days ago

doc * [doc] fix #101 2 days ago

examples Android feature clipboard, with html5(but not work now), example, doc... 6 days ago

html5 Android feature clipboard, with html5(but not work now), example, doc... 6 days ago

ios Merge pull request #939 from pythons/ios-feature-localstorage 2 days ago

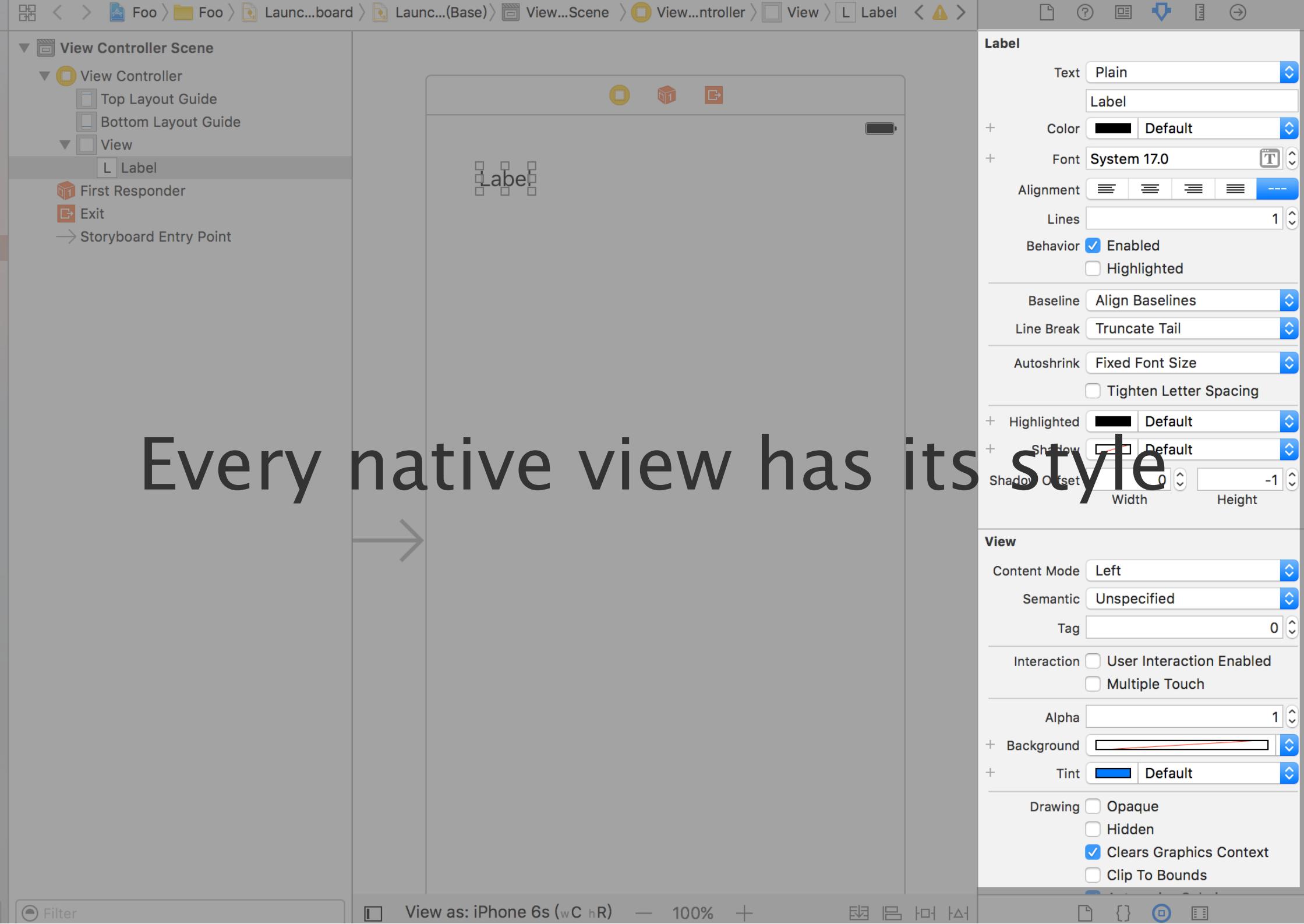
test Merge branch 'dev' into android-feature0607-mergedev a month ago

Open Source: alibaba/weex

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How We use CSS?



In Compiler

Transform HTML/CSS code
into JSON first.

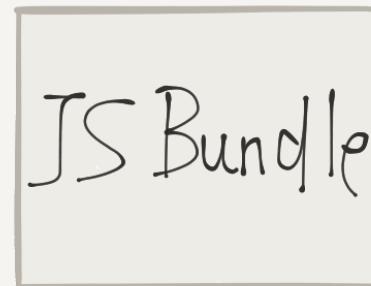
In JS Runtime

Send JSON to native render
through JavaScript

Dev *.we



↓ transform



Deploy *.js

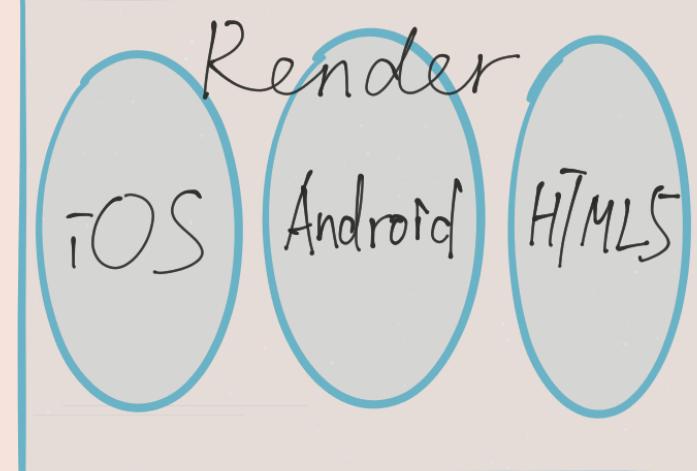
Client

create instance

↓ evaluate

JS Runtime

↓ virtual-DOM



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We Have Two Ways

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Mode A: inline style

```
<template>  
  <div style="width: 200">  
</template>
```

Final native call

```
nativeDom.createBody({  
  type: 'div',  
  style: {  
    width: 200  
  }  
})
```

Mode B: <style>

```
<template>
  <div class="foo">
</template>
<style>
  .foo { width: 200; }
</style>
```

```
const $style = {  
    foo: { width: 200 }  
}  
  
nativeDom.createBody({  
    type: 'div',  
    style: $style.foo  
})
```

Final native call

```
nativeDom.createBody({  
  type: 'div',  
  style: {  
    width: 200  
  }  
})
```

Mode A & Mode B

CSS → JSON → Native View

Mode A & Mode B

- familiar [smile]
- fast [smile]
- scoped [smile]

[clock]

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Something Else

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Support More Length Units?

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```
<template>  
  <div style="width: 100vw;"></div>  
</template>
```

define CSS_UNIT

in runtime

VW: <px of viewport> / 100

Compile CSS Values

before runtime

$100\text{vw} \rightarrow 100 * \text{CSS_UNIT.VW}$

Final native call

```
nativeDom.createBody({  
  type: 'div',  
  style: {  
    width: 100 * CSS_UNIT.VW  
  }  
})
```

How much CSS does Weex support?

weex

| percentage | name | supported |
|------------|------------------|---|
| 90.5115% | display | ✗ flex by force |
| 89.8243% | margin | ✓ (not support combo) |
| 88.7012% | width | ✓ |
| 88.6468% | overflow | ✓ iOS only, hidden by force for Android |
| 88.6432% | background-color | ✓ |
| 88.0803% | height | ✓ |
| 87.7648% | font-size | ✓ |
| 87.3837% | padding | ✓ |
| 87.2721% | color | ✓ |
| 86.9788% | text-align | ✓ |
| 86.6841% | position | ✓ relative by default, static not supr |
| 86.6039% | font-family | ✓ |
| 86.5943% | font-weight | ✓ |

Weex CSS Status

Some Details

- flexbox
- border-box only
- position: sticky | fixed
- no float

Feature Requested Most

- display: none
- background-image
- flex-wrap
- text-shadow | box-shadow

CSS Inheritance?



Ref: [Fix Global CSS with PostCSS](#)

Weex do not inherit anything.

all: initial by default

Support PostCSS

by vue-loader



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Demo

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In Developing...

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1) Viewport

```
<head>  
  <meta  
    name="viewport"  
    content="width=device-width">  
</head>
```

Final native call

```
nativeMeta.setViewport({  
    width: 'device-width'  
})
```

```
<head>  
  <meta  
    name="viewport"  
    content="width=750">  
</head>
```

Final native call

```
nativeMeta.setViewport({  
    width: 750  
})
```

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2) Pseudo Class

Problem

```
<template>  
  <div>  
    <text  
      style="color: red;"  
      ontouchstart="start"  
      ontouchend="end">Touch!</text>  
  </div>  
</template>
```

And bind events:

```
function start (e) {  
    e.target.style.color = 'blue'  
}  
  
function end (e) {  
    e.target.style.color = 'red'  
}
```



How About Using Pseudo Class
to remove JS Events?

Step 1

Support **color:active** style in
native view.

Respond natively.
(without JS events)

Step 2

And **transform** pseudo class into
them ...

```
<template>
  <div>
    <text class="foo"></text>
  </div>
</template>
<style>
  .foo { color: red; }
  .foo:active { color: blue; }
</style>
```

After **transform** ...

```
<template>
  <div>
    <text class="foo"></text>
  </div>
</template>
<style>
  .foo { color: red; }
  .foo { color:active: blue; }
</style>
```

Final native call

```
nativeDom.createBody({  
  type: 'div',  
  style: {  
    color: 'red',  
    'color:active': 'blue'  
  }  
})
```

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3) Pseudo Element?

to draw a triangle

in Web Platform

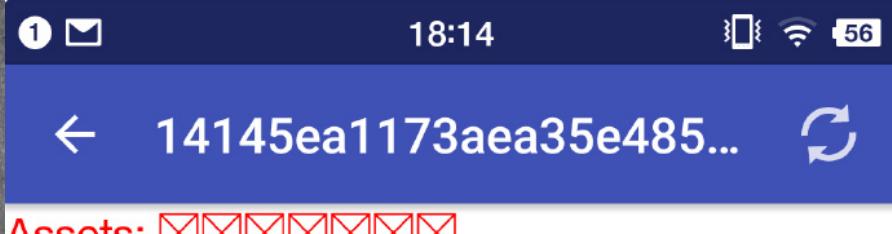
```
tooltip::after {  
    content: "";  
    position: absolute;  
    border: 5px solid transparent;  
    border-left-color: black;  
}
```



We Recommend SVG!

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```
<svg height="10" width="10">  
  <polygon  
    points="0,0 0,10 5,5"  
    style="fill:black;">  
  </polygon>  
</svg>
```



Assets: ☐☐☐☐☐☐☐☐
http ttf: ⊕C♥♥¥<>
http woff: ☑☐☐☐☐☐☐☐
file: ☐☐☐☐☐☐☐☐

4) Icon Font



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5) Transition

Demo 2

Conclusion

- familiar / fast / scoped
- more units
- status of CSS support
- no inheritance
- PostCSS
- Viewport[ing]/ Pseudo Class[ing]
- SVG[ing]/ IconFont[ing]/ Transition[ing]

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One More Thing...



incubator-general mailing list archives: November 2016

[Site index](#) · [List index](#)

Box list

| | |
|--------------------------|-----|
| Dec 2016 | 20 |
| Nov 2016 | 661 |
| Oct 2016 | 306 |
| Sep 2016 | 689 |
| Aug 2016 | 342 |
| Jul 2016 | 306 |
| Jun 2016 | 540 |
| May 2016 | 408 |
| Apr 2016 | 395 |
| Mar 2016 | 472 |
| Feb 2016 | 380 |
| Jan 2016 | 521 |
| Dec 2015 | 362 |
| Nov 2015 | 902 |
| Oct 2015 | 702 |

Message list

Mattmann, Chris A (3010)

[Re: Github tagging, was Re: \[VOTE\] Release A](#)

Jim Apple

[Re: Github tagging, was Re: \[VOTE\] Release Apa](#)

Ian Dunlop

[Re: Github tagging, was Re: \[VOTE\] Release A](#)

Edward J. Yoon

[\[RESULT\]\[VOTE\] Weex to enter the Apache Incubator](#)

John D. Ament

[\[DISCUSS\] Moving new podling requests to a dedicated](#)

John D. Ament

[\[DISCUSS\] Revisions to Policy](#)

Nicolas Bellot

[SCA vs. CLA](#)

Permalink (Message view)

From "Edward J. Yoon" <edward.y...@samsung.com>
Subject [RESULT][VOTE] Weex to enter the Apache Incubator
Date Tue, 29 Nov 2016 21:46:15 GMT

Thanks all.

This vote passes with 8 binding +1s, 9 non-binding +1s, and no -1.

--



Thanks

github: alibaba/weex

weex