Interoperable CSS

Handling modular CSS in JavaScript

Sky Front End Guild, 10/02/2016

Hello! I'm Aaron.

Front End Developer in Digital Trading

Sky Mobile

New Web Toolkit (#web-toolkit)

Interoperable CSS

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I know nothing about Interoperable CSS.

This talk

A bit about **CSS**

A bit of **JavaScript**

The **relationship** between **CSS** and **Javascript**

Writing good CSS

Good CSS should be **scalable**

Good CSS should be **maintainable**

Good CSS should be **sharable**

How do we write CSS that meets all these requirements?

We use preprocessors

We use naming conventions

We use CSS “methodologies”

We use build tools

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Doing all this sucks.

But we're getting there.

What about JavaScript?

CSS in JavaScript

React-style

JSS

Radium

jsxstyle

Modules in JavaScript

```
import React, { Component } from 'react';

class Buttons extends Component {

  render() {
    return (
      <section>
          <a classname="btn" href="#">A plain button</a>
          <a classname="btn btn--primary" href="#">A primary button</a>
          <a classname="btn btn--inactive" href="#">An inactive button</a>
      </section>
    );
  }
}

export default Buttons;
```

Importing CSS in JavaScript

```
import React, { Component } from 'react';
import styles from './buttons.css';

class Buttons extends Component {

  render() {
    return (
      <section>
          <a className="btn" href="#">A plain button</a>
          <a className="btn btn--primary" href="#">A primary button</a>
          <a className="btn btn--inactive" href="#">An inactive button</a>
      </section>
    );
  }
}

export default Buttons;
```

Importing CSS in JavaScript

buttons.css

```
.btn {
    padding: .25em 1em;
    border: 1px solid red;
}

.btn--primary {
    border-radius 5px;
    background-color: blue;
}

.btn--disabled {
    background-color: grey;
}
```

Importing CSS in JavaScript

buttons.css

```
.normal {
    padding: .25em 1em;
    border: 1px solid red;
}

.primary {
    border-radius 5px;
    background-color: blue;
}

.disabled {
    background-color: grey;
}
```

What if CSS had scope?

What if CSS was immutable?

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What if CSS could export variables to JavaScript?

Interoperable CSS

```
.normal_afd97dfs867 {
    padding: .25em 1em;
    border: 1px solid red;
}

.primary_97fd867fsfg {
    border-radius 5px;
    background-color: blue;
}

.disabled_345abg452 {
    background-color: grey;
}

:export {
  normal:   normal_afd97dfs867;
  primary:  normal_afd97dfs867 primary_97fd867fsfg;
  disabled: normal_afd97dfs867 disabled_345abg452
}
```

Interoperable CSS

```
import React, { Component } from 'react';
import styles from './buttons.css';

class Buttons extends Component {

  render() {
    return (
      <section>
          <a classname={styles.normal} href="#">A plain button</a>
          <a classname={styles.primary} href="#">A primary button</a>
          <a classname={styles.inactive} href="#">An inactive button</a>
      </section>
    );
  }
}

export default Buttons;
```

Interoperable CSS

```
<section>
    <a classname="normal_afd97dfs867" href="#">A plain button</a>
    <a classname="normal_afd97dfs867 primary_97fd867fsfg" href="#">A primary button</a>
    <a classname="normal_afd97dfs867 disabled_345abg452" href="#">An inactive button</a>
</section>
```

Interoperable CSS

A standard for **modular CSS**

A **compile target**, not human authored

ICSS files are **compiled separately**

Bundled and delivered via a **loader**

CSS MODULES

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“

A CSS Module is a CSS file in which all class names and animation names are scoped locally by default and all URLs and @imports are in module request format.

”

github.com/css-modules/css-modules

CSS Modules

buttons.css

```
.normal {
    padding: .25em 1em;
    border: 1px solid red;
}

.primary {
    border-radius 5px;
    background-color: blue;
}

.disabled {
    background-color: grey;
}
```

CSS Modules

buttons.css

```
.normal {
    padding: .25em 1em;
    border: 1px solid red;
}

.primary {
    border-radius 5px;
    background-color: blue;
}

.disabled {
    background-color: grey;
}
```

```
{
  normal: "normal_afd97dfs867",
  primary: "primary_97fd867fsfg",
  disabled: "disabled_345abg452"
}
```

CSS Modules

buttons.css

```
.normal {
    padding: .25em 1em;
    border: 1px solid red;
}

.primary {
    composes: normal;
    border-radius: 5px;
    background-color: blue;
}

.disabled {
    composes: normal;
    background-color: grey;
}
```

CSS Modules

buttons.css

```
{
  normal: "normal_afd97dfs867",
  primary: "normal_afd97dfs867 primary_97fd867fsfg",
  disabled: "normal_afd97dfs867 disabled_345abg452"
}
```

CSS Modules

```
import React, { Component } from 'react';
import styles from './buttons.css';

class Buttons extends Component {

  render() {
    return (
      <section>
          <a classname={styles.normal} href="#">A plain button</a>
          <a classname={styles.primary} href="#">A primary button</a>
          <a classname={styles.inactive} href="#">An inactive button</a>
      </section>
    );
  }
}

export default Buttons;
```

CSS Modules

```
<section>
    <a classname="normal_afd97dfs867" href="#">A plain button</a>
    <a classname="normal_afd97dfs867 primary_97fd867fsfg" href="#">A primary button</a>
    <a classname="normal_afd97dfs867 disabled_345abg452" href="#">An inactive button</a>
</section>
```

CSS Modules

buttons.css

```
.normal {
    padding: .25em 1em;
    border: 1px solid red;
}

.primary {
    composes: normal;
    composes: brand from "global/colors.css";
    border-radius: 5px;
    background-color: blue;
}

.disabled {
    composes: normal;
    composes: secondary from "global/colors.css";
    background-color: grey;
}
```

CSS Modules

buttons.css

```
{
  normal: "normal_afd97dfs867",
  primary: “normal_afd97dfs867 colors_brand_355fgaa primary_97fd867fsfg",
  disabled: "normal_afd97dfs867 colors_secondary_355fgaa disabled_345abg452"
}
```

CSS Modules

```
<section>
    <a classname="normal_afd97dfs867" href="#">A plain button</a>
    <a classname="normal_afd97dfs867 colors_brand_355fgaa primary_97fd867fsfg" href="#">A
primary button</a>
    <a classname="normal_afd97dfs867 colors_secondary_355fgaa disabled_345abg452"
       href="#">An inactive button</a>
</section>
```

CSS Modules

```
.panel {
  composes: large from "./typography.css";
  composes: dark-text from "./colors.css";
  composes: padding-all-medium from "./layout.css";
  composes: subtle-shadow from "./effect.css";
}
```

“

[CSS Modules] opens up the possibility of using extremely granular classes to give aliases for every visual trait your site uses

”

Glen Maddern

http://glenmaddern.com/articles/css-modules

CSS Modules

```
.article {
  composes: flex vertical centered from "./layout.css";
}

.masthead {
  composes: serif bold 48pt centered from "./typography.css";
  composes: paragraph-margin-below from "./layout.css";
}

.body {
  composes: max720 paragraph-margin-below from "layout.css";
  composes: sans light paragraph-line-height from "./typography.css";
}
```

CSS Modules

A high-level format for **modular CSS**

Compiles to **ICSS**

Enforces **local scope** by default

Files are **loaded independently**

CSS Modules today

Webpack's CSS-loader has a 'modules' mode which enforces the CSS Modules spec

JSPM & **Browserify** also have implementations

PostCSS can compile to ICSS **independently of your loader**

Theres a whole lot more to this

Interoperable CSS

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Further reading

Interoperable CSS
http://glenmaddern.com/articles/interoperable-css

CSS Modules
http://glenmaddern.com/articles/css-modules

GitHub project
https://github.com/css-modules/

Glen Maddern on ICSS
https://www.youtube.com/watch?v=aIyhhHTmsXE

Thanks!

Aaron Thomas

Sky Digital Trading Tribe