# Maintainable CSS architecture in the Gutenberg era

## Hi! I’m Sami Keijonen from Finland

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## Talk topics

- Writing scalable and maintainable CSS using ITCSS, BEM and CSS guidelines.
- How to avoid repeating CSS in front-end and in the block editor.
- How to automate block editor styles from front-end styles.

# Many CSS methodologies

- Inverted Triangle CSS (ITCSS)
- Object-Oriented CSS (OOCSS).
- Scalable and Modular architecture for CSS (SMACSS).
- Atomic design.
- Utility-first CSS.

## Many CSS  methodologies

- CSS Modules.
- CSS in JS.

## High level Goals

- No conflicts when updating CSS.
  - How many times we have broke something else when updating one line of CSS.
- Where to add or update CSS.
  - More efficient workflow when CSS structure is clear. Avoid guessing is this the correct place.

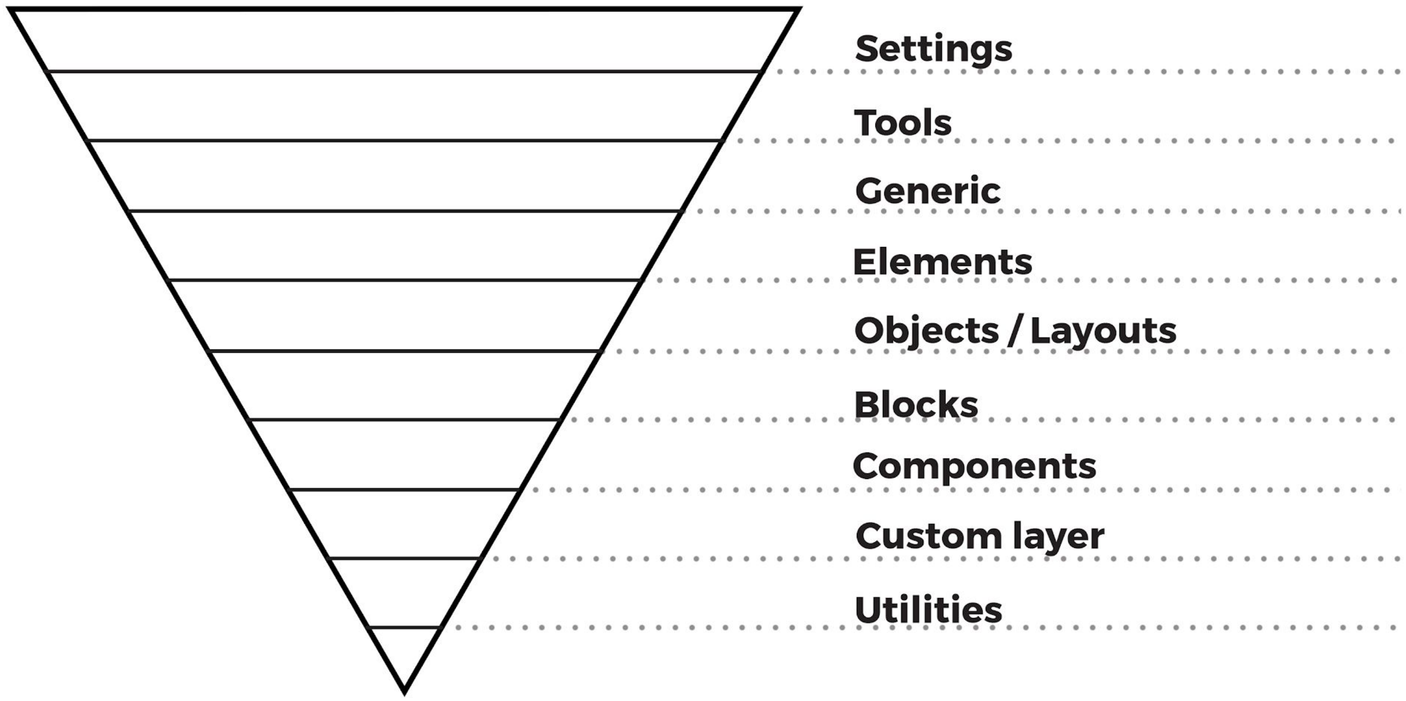
## High level Goals

- No deep specificity.
    - How many times we have added more specificity to modify components. And then more. And then more. And then more. This needs to stop.
- No conflicts with JS.
    - If component uses JS, developers should instantly know about it.

# ITCSS CSS architecture

- Separate main style.css codebase to several sections (layers).
- Every sections add more specificity to CSS in the right order.

# Example layers in ITCSS



## Settings

Global variables like fonts and colors.

```
:root {
   --font-family-sans: "Roboto", sans-serif;
   --font-family-serif: "Playfair Display", serif;
}
```

## Tools

Mixins and functions.

```
@define-mixin button-block {
   background-color: var(--color-primary);
   ...
}
```

## Generic

Resets, box-sizing etc.

```
@import "normalize.css";
```

## Elements

Unclassed HTML elements like **`<h1>`** and **`<blockquote>`**

```
blockquote {
    border-left: var(--spacing-s) solid;
    ...
}
```

## Layouts

Undecorated design patterns, such as global layouts and wrappers.

```
.grid {
   display: grid;
   ...
}
```

## Blocks

Styles for Core and custom blocks.

**Note**: I **dequeue Core block styles** from front-end and editor.

This way we don’t have to fight specificity war with Core styles.

## Components

Styles for components, such as navigation and pagination.

```
.menu {
    display: flex;
    ...
}
```

## Custom layer

If there is need for custom layer, feel free to add it. It’s OK to be before blocks and components.

## Utilities

Utility classes like **`.screen-reader-text`** and **`prefers-reduced-motion`**

```
.screen-reader-text {
   clip-path: inset(50%);
   ...
}
```

## Class prefixes

- When working on large dev team with different backgrounds, class prefixes can help understanding what job classes are doing.
- And in what layer they belong.

## Example class prefixes

- **`.l-`** for layouts, such as **`.l-grid`**
- **`.c-`** for components, such as **`.c-menu`**
- **`.u-`** for utilities, such as **`.u-reset-list`**

## Example class prefixes

- **`.is-`** and **`.has-`** for specific states, such as **`.is-opened`** or **`.has-primary-color`**
- **`.js-`** for targeting JavaScript-specific functionality, such as **`.js-menu-toggle`**
  - These classes are never used for styling, only for JS behaviour

## CSS guidelines and linting

- Follow (some) CSS guidelines.
- Use stylelint to enforce those guidelines.

## BEM naming convention

- BEM stands for “Block Element Modifier”.
- Helps with our goals.

# BEM syntax

- **Block** is the primary component block, such as `.menu`
- **Element** is a child of the primary block, such as `.menu__item`

## BEM syntax

- **Modifier** is a variation of a component style, such as **`.menu--primary`**

## BEM in HTML

```
<nav class=”menu menu--primary”>
   <ul class=”menu__items”>
      <li class=”menu__item”><a class=”menu__anchor”>Home</a></li>
      <li class=”menu__item”><a class=”menu__anchor”>About</a></li>
   </ul>
</nav>
```

# BEM in CSS

```
// CSS
.menu {

   &--primary {}

   &__items {}

   &__item {}

   &__anchor {}

}
```

```
// Compiled CSS
.menu {}

.menu--primary {}

.menu__items {}

.menu__item {}

.menu__anchor {}
```

## It’s OK to not nest selectors

```
// Written CSS
.menu {}

.menu--primary {}

.menu__items {}

.menu__item {}

.menu__anchor {}
```

## How about block editor styles

- **Dequeue Core block styles** from front-end and editor.
- Enqueue almost the same stylesheet for editor than in front-end. Not much manual work.

## How about block editor styles

- Use SASS nesting or PostCSS plugins to add **`.editor-styles-wrapper`** class automatically.

## Nesting in SASS

```
@import "settings/variables.css";

@import "tools/mixins.css";

// Editor CSS wrapper.
.editor-styles-wrapper {

   @import "elements/index.css";

   @import "blocks/index.css";

}
```

# Plugins in PostCSS

```
// Styles for editor almost the same as in front-end.
@import "settings/variables.css";
@import "tools/mixins.css";
// .editor-styles-wrapper prefix class added automatically.
@import "elements/index.css";
@import "blocks/index.css";
...
```

## Plugins in PostCSS

- PostCSS Editor Styles

## CSS added manually to editor

- Typography.
- Post title.
- Block width, wide, and full widths.
- Search block, code block

## Example theme

WC Nordic 2019

# Thank you!

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