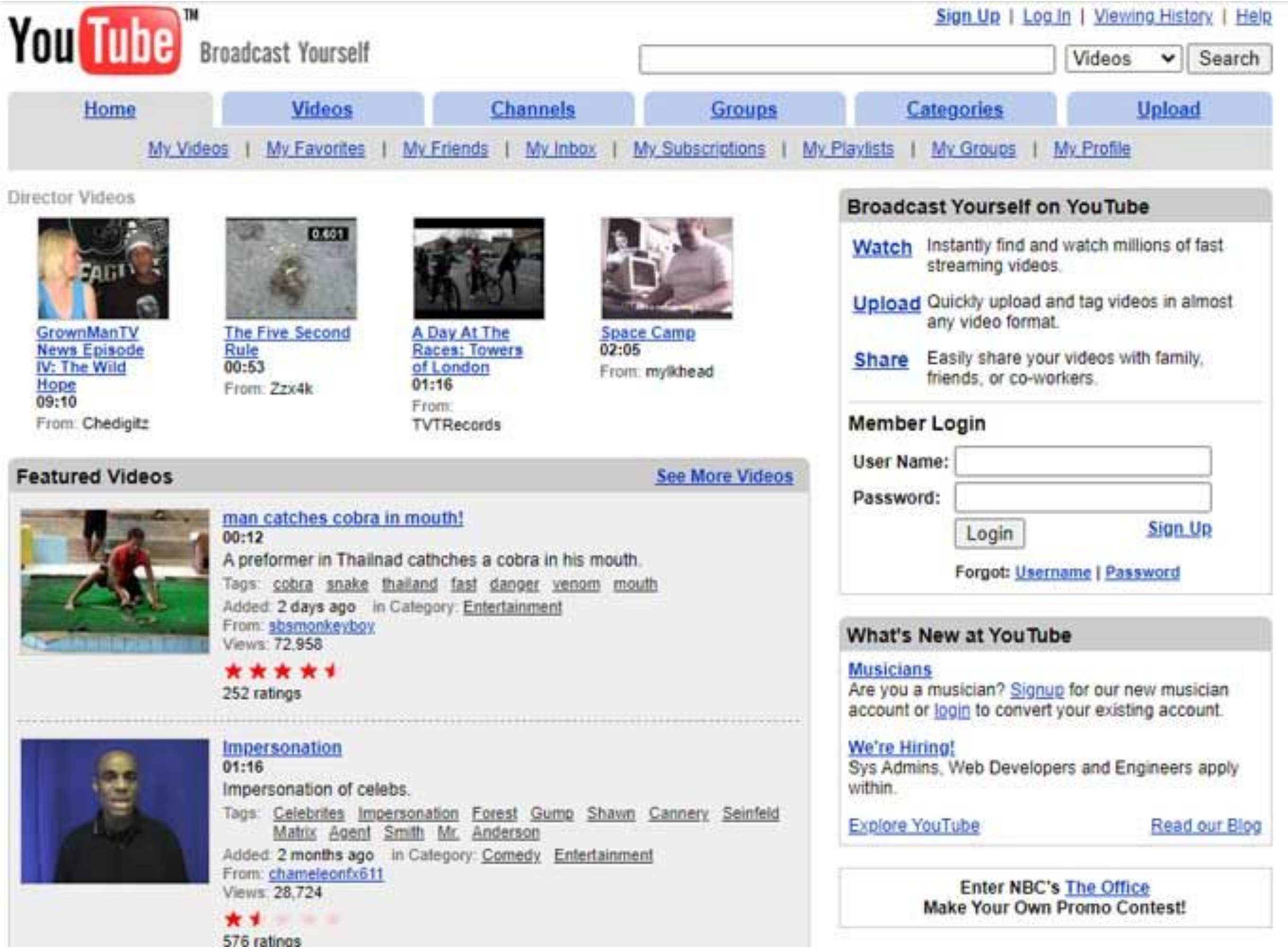
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A preformer in Thailnad cathches a cobra in his mouth.
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Views: 28,724
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mediaire CSS Workshop

Enhancing our Styling Practices for Maintainability & UX

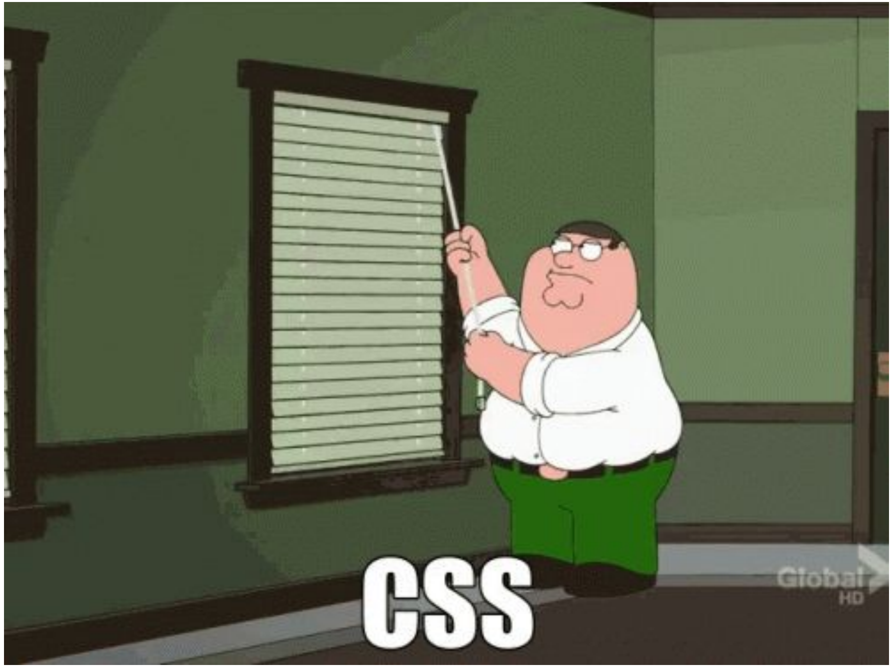
Christopher Nagy - Software Team - mediaire

23.01.2025

Workshop Goals

- Review **CSS basics** and their application
- Understand how **SCSS** enhances CSS maintainability and discuss its downsides
- Explore **Tailwind CSS** as a utility-first alternative to traditional CSS
- Establish shared knowledge about maintainable styling and its importance

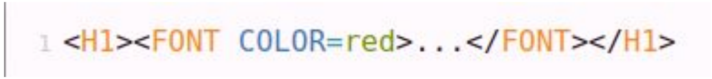
Source: ChatGPT


CSS
Global HD

What is CSS?

Cascading **S**tyle**s**heets: one of the 3 backbones of the web

- selective styling of HTML elements
- Before: styling directly in HTML → cumbersome, hard to maintain



```
<H1><FONT COLOR=red>...</FONT></H1>
```

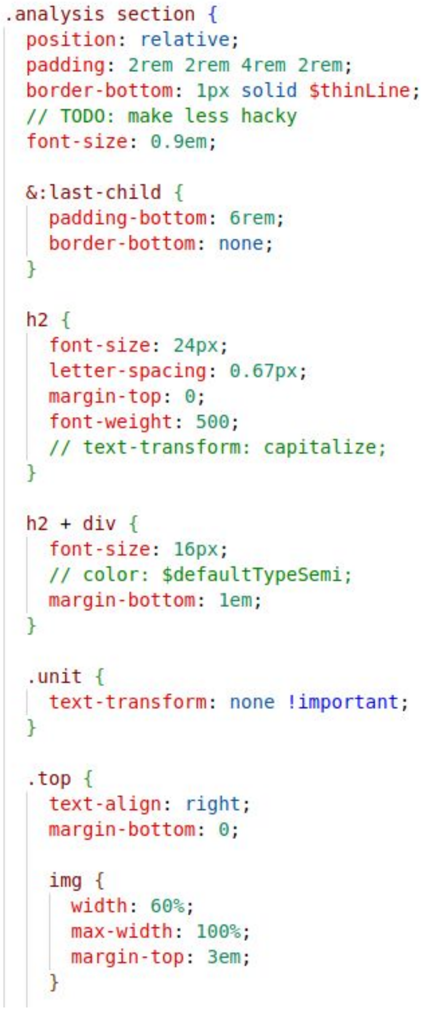
Benefits

- Separation of style and content
- Efficiency: Reusable stylesheets
- Customization & branding
- Improved UX & Accessibility

Why focus on Styling?

It just makes up a huge part of the frontend code.

- **Consistency** in design improves the overall user experience
- **Maintainable** and well-structured styles reduce time spent fixing issues and enhance productivity
- **Adaptability** to new technologies / products ensures scalability as the company grows



```
.analysis section {
  position: relative;
  padding: 2rem 2rem 4rem 2rem;
  border-bottom: 1px solid $thinLine;
  // TODO: make less hacky
  font-size: 0.9em;

  &:last-child {
    padding-bottom: 6rem;
    border-bottom: none;
  }

  h2 {
    font-size: 24px;
    letter-spacing: 0.67px;
    margin-top: 0;
    font-weight: 500;
    // text-transform: capitalize;
  }

  h2 + div {
    font-size: 16px;
    // color: $defaultTypeSemi;
    margin-bottom: 1em;
  }

  .unit {
    text-transform: none !important;
  }

  .top {
    text-align: right;
    margin-bottom: 0;

    img {
      width: 60%;
      max-width: 100%;
      margin-top: 3em;
    }
```

Part 1

CSS Basics

The CSS Box Model

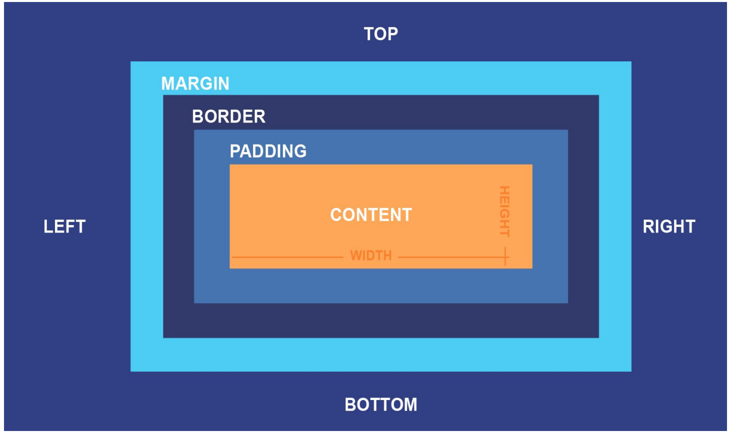
Every element is a rectangular box made of:

Content: The text or image inside the box.

Padding: Space between the content and the border.

Border: Surrounds the padding (optional).

Margin: Space outside the border, separating the box from others.



`box-sizing` CSS property: determines how total width/height of the box is calculated (includes padding/border or not)

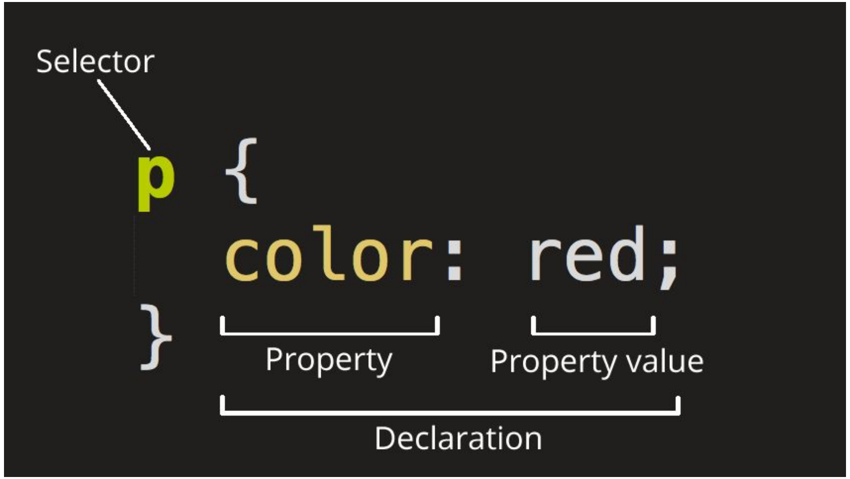
CSS Rules

CSS is a rule-based language for styling HTML.
Rules consist of:

Selector: Targets an element or group of elements (e.g. via ID or class)

Declaration: Maps a **property** to a value, changing the element's styling

Property: keyword that can take on a range of values (e.g. color)



```
p {
  color: red;
}
```

Note: Sometimes rule & selector are used as synonyms.

A

- abs()
- accent-color
- acos()
- :active
- additive-symbols (@counter-style)
- ::after (:after)
- align-content
- align-items
- align-self
- align-tracks
- all
- <an-plus-b>
- anchor()
- anchor-name
- anchor-scope
- anchor-size()
- <angle>
- <angle-percentage>
- animation
- animation-composition
- animation-delay
- animation-direction
- animation-duration
- animation-fill-mode
- animation-iteration-count
- animation-name
- animation-play-state
- animation-range
- animation-range-end
- animation-range-start
- animation-timeline
- animation-timing-function
- @annotation
- :any-link
- appearance
- ascent-override (@font-face)
- asin()
- aspect-ratio
- atan()
- atan2()
- attr()

B

- ::backdrop
- backdrop-filter
- backface-visibility
- background
- background-attachment
- background-blend-mode
- background-clip
- background-color
- background-image
- background-origin
- background-position
- background-position-x
- background-position-y
- background-repeat
- background-size
- base-palette (@font-palette-values)
- <blend-mode>
- block-size
- blur()
- border
- border-block
- border-block-color
- border-block-end
- border-block-end-color
- border-block-end-style
- border-block-end-width
- border-block-start
- border-block-start-color
- border-block-start-style
- border-block-start-width
- border-block-style
- border-block-width
- border-bottom
- border-bottom-color
- border-bottom-left-radius
- border-bottom-right-radius
- border-bottom-style
- border-bottom-width
- border-collapse
- border-color
- border-end-end-radius
- border-end-start-radius
- border-image
- border-image-outset
- border-inline
- border-inline-color
- border-inline-end
- border-inline-end-color
- border-inline-end-style
- border-inline-end-width
- border-inline-start
- border-inline-start-color
- border-inline-start-style
- border-inline-start-width
- border-inline-style
- border-inline-width
- border-left
- border-left-color
- border-left-style
- border-left-width
- border-radius
- border-right
- border-right-color
- border-right-style
- border-right-width
- border-spacing
- border-start-end-radius
- border-start-start-radius
- border-style
- border-top
- border-top-color
- border-width
- bottom
- @bottom-left-corner
- box-decoration-break
- box-shadow
- box-sizing
- break-after
- break-before
- break-inside
- brightness()

C

- calc()
- calc-size()
- caption-side
- caret
- caret-color
- caret-shape
- @character-variant
- @charset
- :checked
- circle()
- clamp()
- clear
- clip-path
- clip-rule
- <color>
- color
- color-interpolation-filters
- color-scheme
- column-count
- column-fill
- column-gap
- column-rule
- column-rule-color
- column-rule-style
- column-rule-width
- column-span
- column-width
- columns
- conic-gradient()
- contain
- contain-intrinsic-block-size
- contain-intrinsic-height
- contain-intrinsic-inline-size
- contain-intrinsic-size
- contain-intrinsic-width
- container
- container-name
- container-type
- content
- content-visibility
- contrast()
- cos()
- <counter>
- counter-increment
- counter-reset
- counter-set
- @counter-style
- counters()
- cross-fade()
- cubic-bezier()
- ::cue
- ::cue-region
- :current
- cursor
- <custom-ident>
- cx
- cy
- length#cap
- length#ch
- length#cm

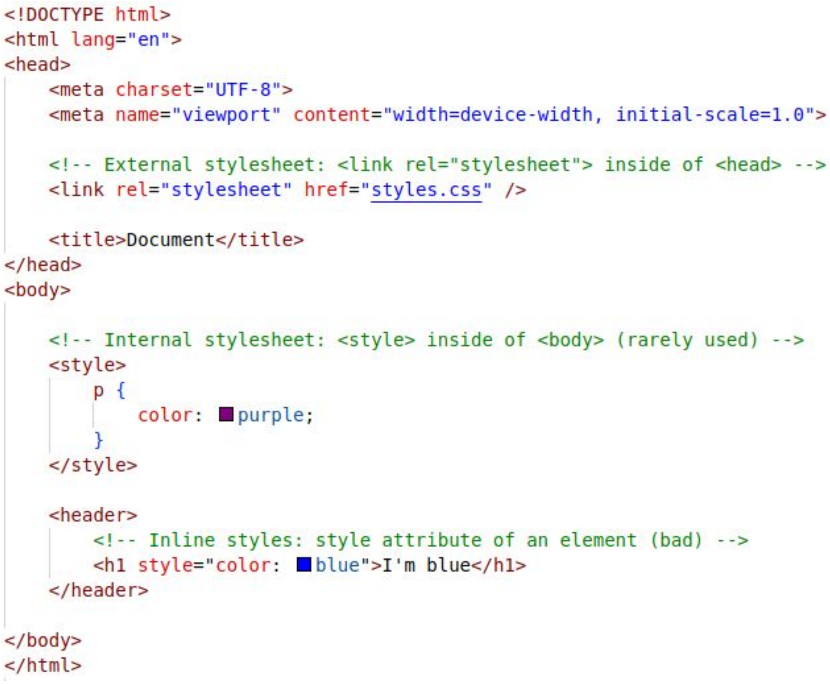
How to apply CSS

1. **External** stylesheet (most common)

2. **Internal** stylesheet

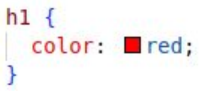
3. **Inline** styles (to avoid - why?)

index.html



```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <!-- External stylesheet: <link rel="stylesheet"> inside of <head> -->
    <link rel="stylesheet" href="styles.css" />

    <title>Document</title>
</head>
<body>

    <!-- Internal stylesheet: <style> inside of <body> (rarely used) -->
    <style>
        p {
            color: purple;
        }
    </style>

    <header>
        <!-- Inline styles: style attribute of an element (bad) -->
        <h1 style="color: blue">I'm blue</h1>
    </header>

</body>
</html>
```

styles.css



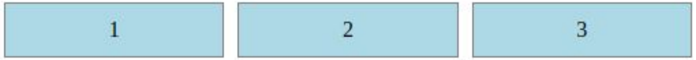
```css
h1 {
  color: red;
}
```

CSS Basics: Flexbox

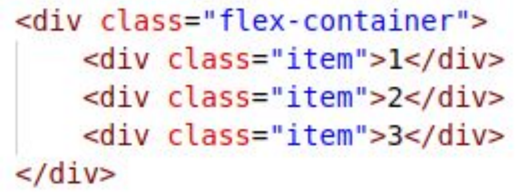
One-dimensional layouts: horizontal/vertical

→ simple and easy to use for most layouts
→ frequently used

Result

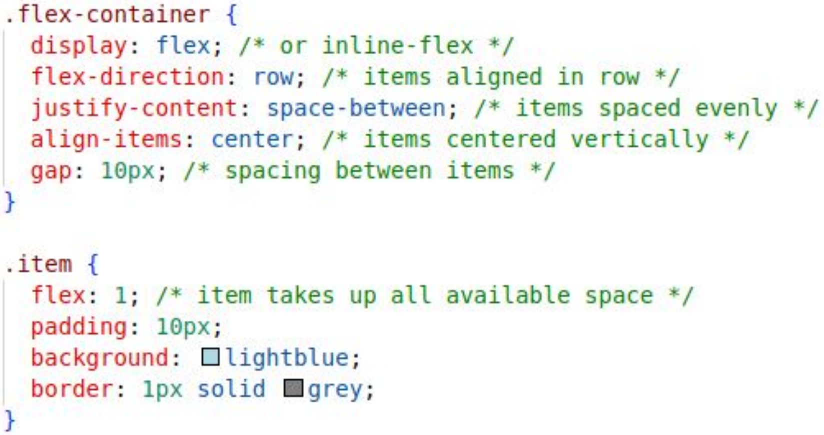


Index.html (excerpt)



```
<div class="flex-container">
    <div class="item">1</div>
    <div class="item">2</div>
    <div class="item">3</div>
</div>
```

styles.css



```
.flex-container {
  display: flex; /* or inline-flex */
  flex-direction: row; /* items aligned in row */
  justify-content: space-between; /* items spaced evenly */
  align-items: center; /* items centered vertically */
  gap: 10px; /* spacing between items */
}

.item {
  flex: 1; /* item takes up all available space */
  padding: 10px;
  background: □lightblue;
  border: 1px solid ■grey;
}
```

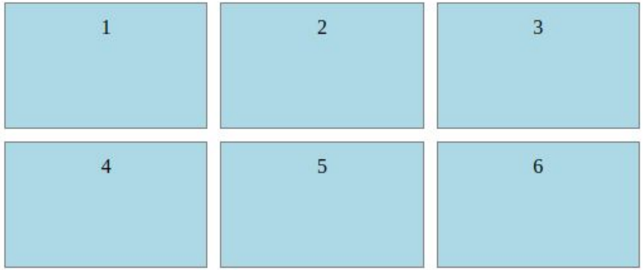
Cool visual guide: https://css-tricks.com/snippets/css/a-guide-to-flexbox/

CSS Basics: Grid

Two-dimensional: rows & columns

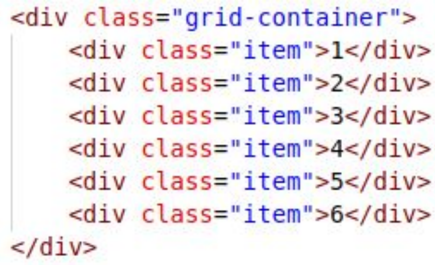
→ for more complex layouts
→ less used, but has its use cases

Result



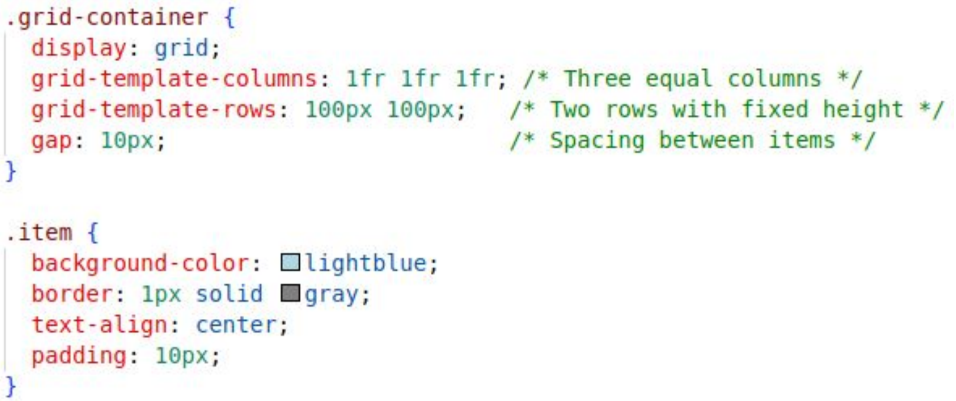
1	2	3
4	5	6

Index.html (excerpt)



```html
<div class="grid-container">
    <div class="item">1</div>
    <div class="item">2</div>
    <div class="item">3</div>
    <div class="item">4</div>
    <div class="item">5</div>
    <div class="item">6</div>
</div>
```

styles.css



```css
.grid-container {
  display: grid;
  grid-template-columns: 1fr 1fr 1fr; /* Three equal columns */
  grid-template-rows: 100px 100px;   /* Two rows with fixed height */
  gap: 10px;                         /* Spacing between items */
}

.item {
  background-color: □lightblue;
  border: 1px solid ■gray;
  text-align: center;
  padding: 10px;
}
```

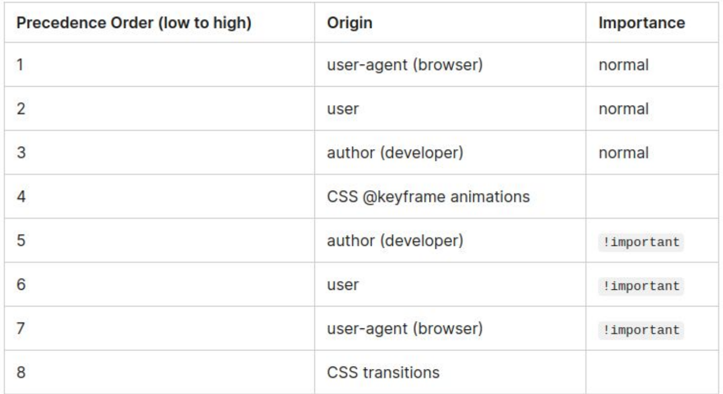
Why is my CSS not applied?

Common problem: multiple CSS rules target the same element → which properties to apply?

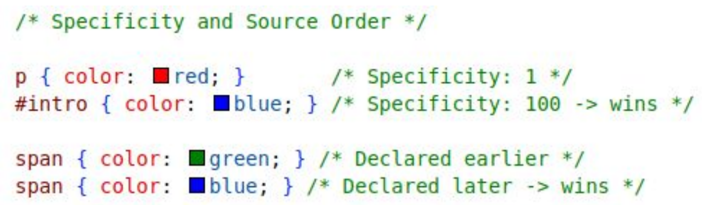
→ **Cascade** Algorithm: “origin and order matter”

Properties are applied based on:

1. **Origin (Precedence)**: Where the style comes from (browser < user < developer)
2. **Specificity (“priority”)**: more specific selectors override less specific ones
3. **Source Order**: Later rules in the CSS override earlier rules



Precedence Order (low to high)	Origin	Importance
1	user-agent (browser)	normal
2	user	normal
3	author (developer)	normal
4	CSS @keyframe animations	
5	author (developer)	`!important`
6	user	`!important`
7	user-agent (browser)	`!important`
8	CSS transitions	



```
/* Specificity and Source Order */

p { color: 🟥red; }       /* Specificity: 1 */
#intro { color: 🟦blue; } /* Specificity: 100 -> wins */

span { color: 🟩green; } /* Declared earlier */
span { color: 🟦blue; } /* Declared later -> wins */
```

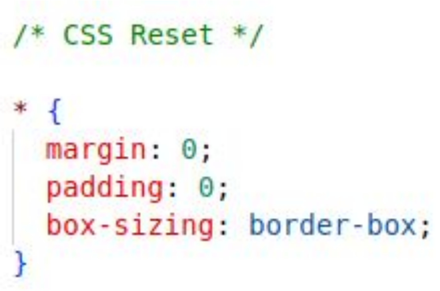
Browser Defaults & CSS Reset

Browsers add default styles to every HTML they render (User Agent Styles)

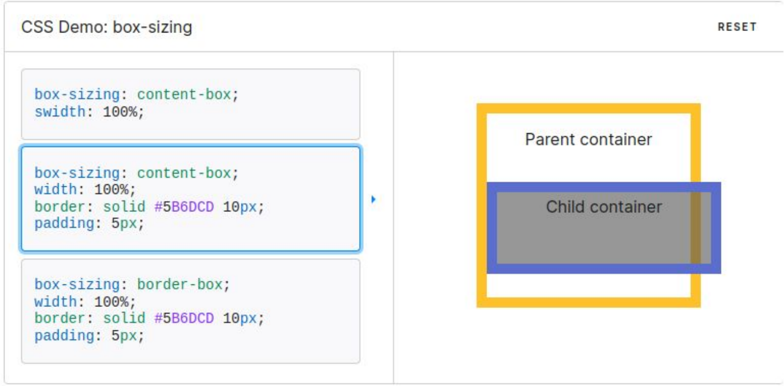
→ Readability, Accessibility, Consistency

However: may clash with custom CSS or introduce unwanted side-effects (e.g. `box-sizing: content-box`)

→ Usually new projects should use a “CSS Reset” stylesheet or a library (like normalize.css or Tailwind)



```
/* CSS Reset */

* {
  margin: 0;
  padding: 0;
  box-sizing: border-box;
}
```



CSS Demo: box-sizing

```
box-sizing: content-box;
swidth: 100%;
```

```
box-sizing: content-box;
width: 100%;
border: solid #5B6DCD 10px;
padding: 5px;
```

```
box-sizing: border-box;
width: 100%;
border: solid #5B6DCD 10px;
padding: 5px;
```

Task 1

Basic CSS

Clone repo: css-workshop

→ task1-css

(~15 min)

Task 1

Basic CSS

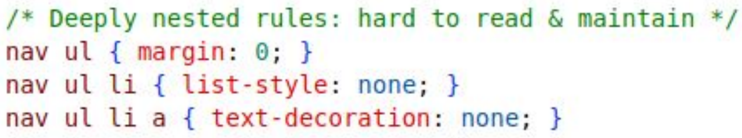
Reflection Questions

- How was the experience, were there any issues?
- What would change for bigger code bases?
- Would you use native CSS in our frontend projects? Why or why not?
- What issues can you imagine in larger projects?

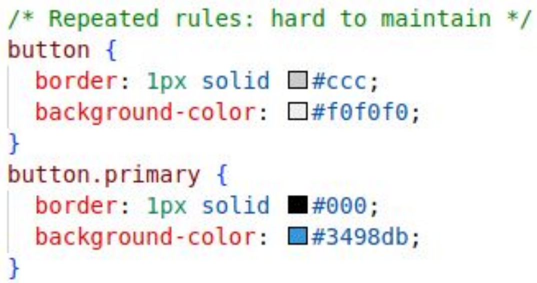
Challenges using Pure CSS

- Deeper HTML nesting → complex CSS
- No mixins: reusable rules with slight value variations need to be duplicated
- No modularity: no built-in way to organize code into reusable modules
- Limited calculation functionalities
- No variables → doesn't apply anymore (since 2017)

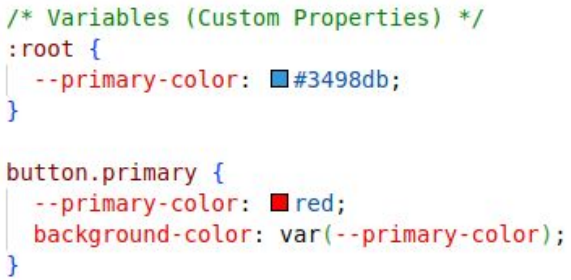
→ **Hard to maintain,** especially for large teams & projects with a lot of style changes / complex HTML



```css
/* Deeply nested rules: hard to read & maintain */
nav ul { margin: 0; }
nav ul li { list-style: none; }
nav ul li a { text-decoration: none; }
```



```css
/* Repeated rules: hard to maintain */
button {
  border: 1px solid ▨#ccc;
  background-color: ⬜#f0f0f0;
}
button.primary {
  border: 1px solid ⬛#000;
  background-color: 🟦#3498db;
}
```



```css
/* Variables (Custom Properties) */
:root {
  --primary-color: 🟦#3498db;
}

button.primary {
  --primary-color: 🟥red;
  background-color: var(--primary-color);
}
```

Part II

Preprocessors & Sass

CSS Preprocessors

Idea: extend CSS features to improve maintainability

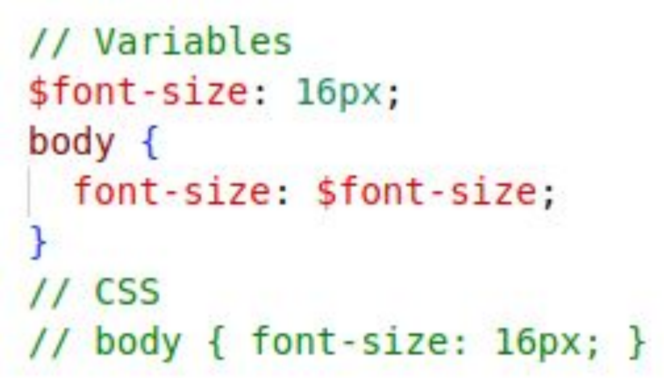
- Provide features like variables, mixins, nested rules
- Custom language is compiled to CSS before runtime

Popular examples:

1. **Sass** (Syntactically Awesome Stylesheets)
2. Less
3. Stylus

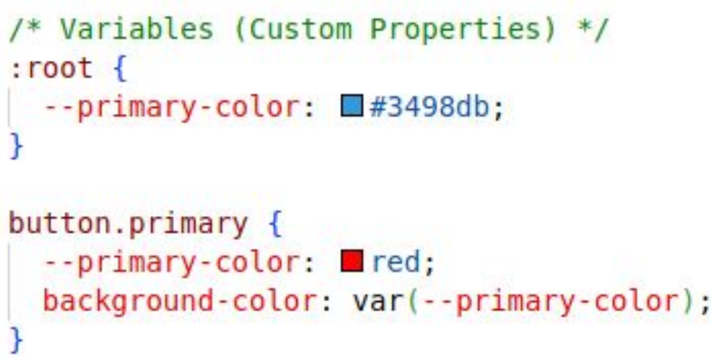
SCSS: Variables

SCSS



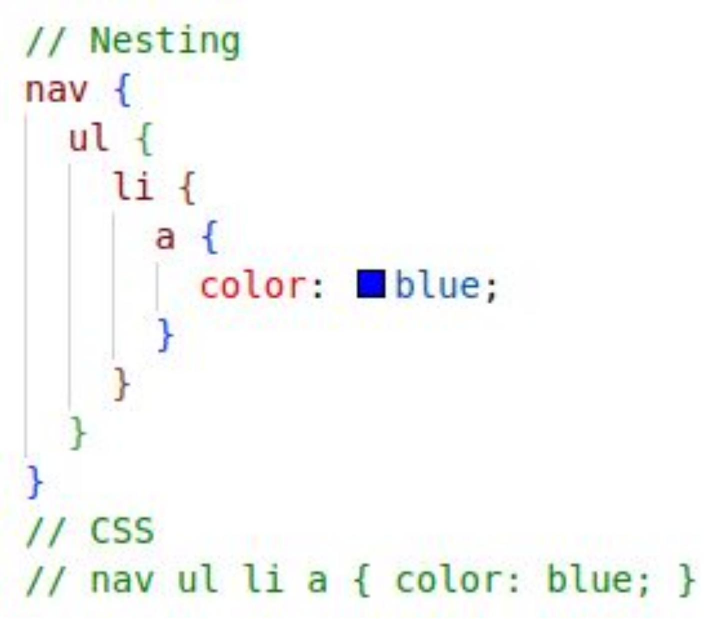
```scss
// Variables
$font-size: 16px;
body {
  font-size: $font-size;
}
// CSS
// body { font-size: 16px; }
```

CSS



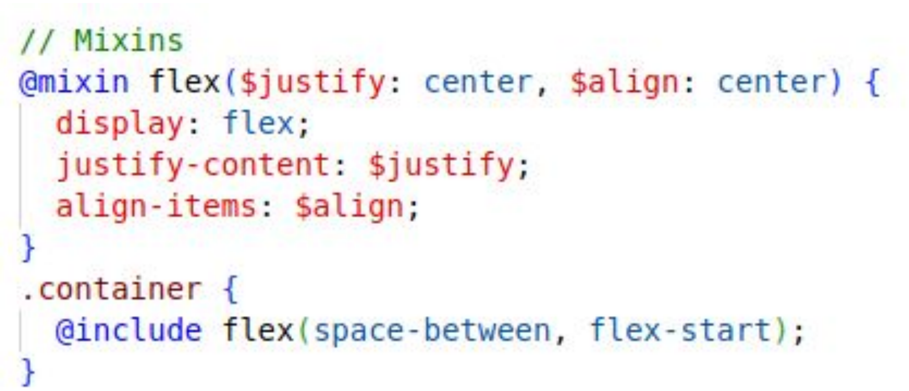
```css
/* Variables (Custom Properties) */
:root {
  --primary-color: 🟦#3498db;
}

button.primary {
  --primary-color: 🟥red;
  background-color: var(--primary-color);
}
```

SCSS: Nesting

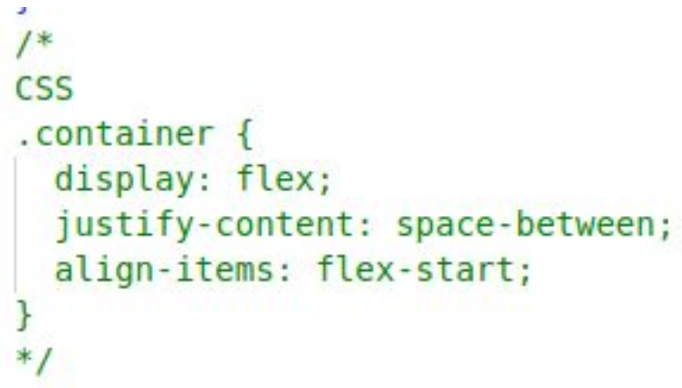


```
// Nesting
nav {
  ul {
    li {
      a {
        color: blue;
      }
    }
  }
}
// CSS
// nav ul li a { color: blue; }
```

SCSS: Mixins

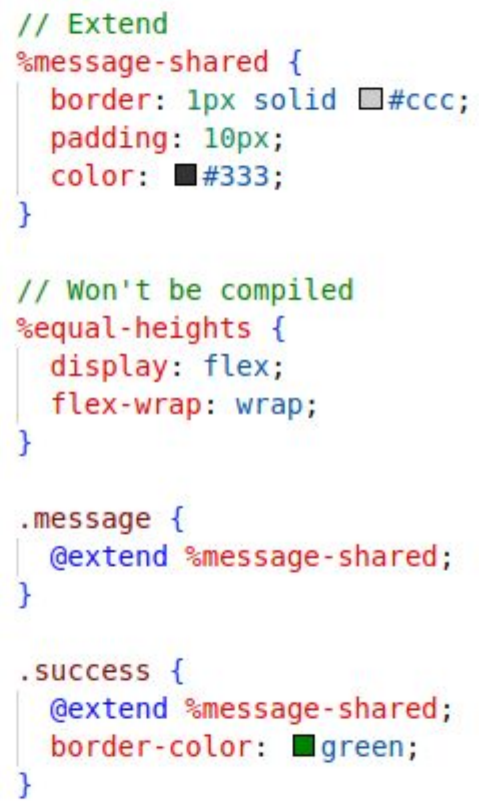


```
// Mixins
@mixin flex($justify: center, $align: center) {
  display: flex;
  justify-content: $justify;
  align-items: $align;
}
.container {
  @include flex(space-between, flex-start);
}
```

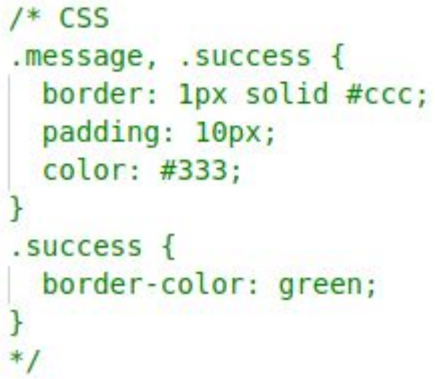


```
/*
CSS
.container {
  display: flex;
  justify-content: space-between;
  align-items: flex-start;
}
*/
```

SCSS: Extends

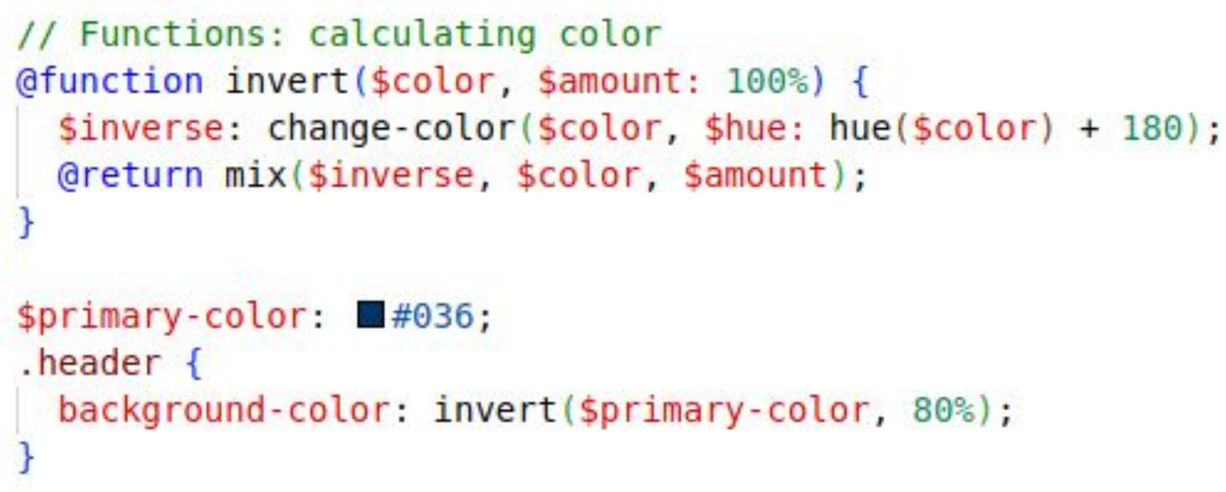


```scss
// Extend
%message-shared {
  border: 1px solid #ccc;
  padding: 10px;
  color: #333;
}

// Won't be compiled
%equal-heights {
  display: flex;
  flex-wrap: wrap;
}

.message {
  @extend %message-shared;
}

.success {
  @extend %message-shared;
  border-color: green;
}
```



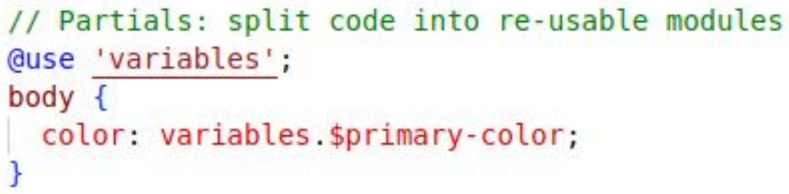
```css
/* CSS
.message, .success {
  border: 1px solid #ccc;
  padding: 10px;
  color: #333;
}
.success {
  border-color: green;
}
*/
```

SCSS: Functions

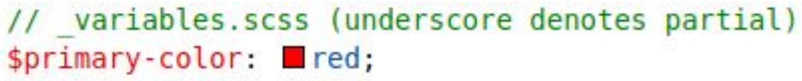


```scss
// Functions: calculating color
@function invert($color, $amount: 100%) {
  $inverse: change-color($color, $hue: hue($color) + 180);
  @return mix($inverse, $color, $amount);
}

$primary-color: ■#036;
.header {
  background-color: invert($primary-color, 80%);
}
```

SCSS: Partials

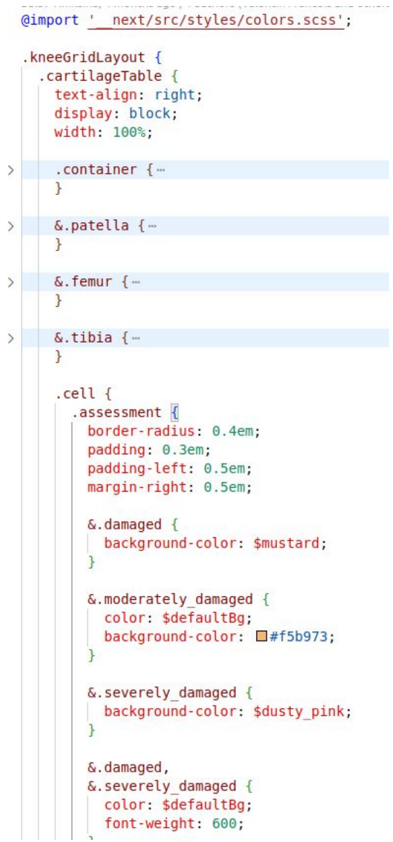


```scss
// Partials: split code into re-usable modules
@use 'variables';
body {
  color: variables.$primary-color;
}
```

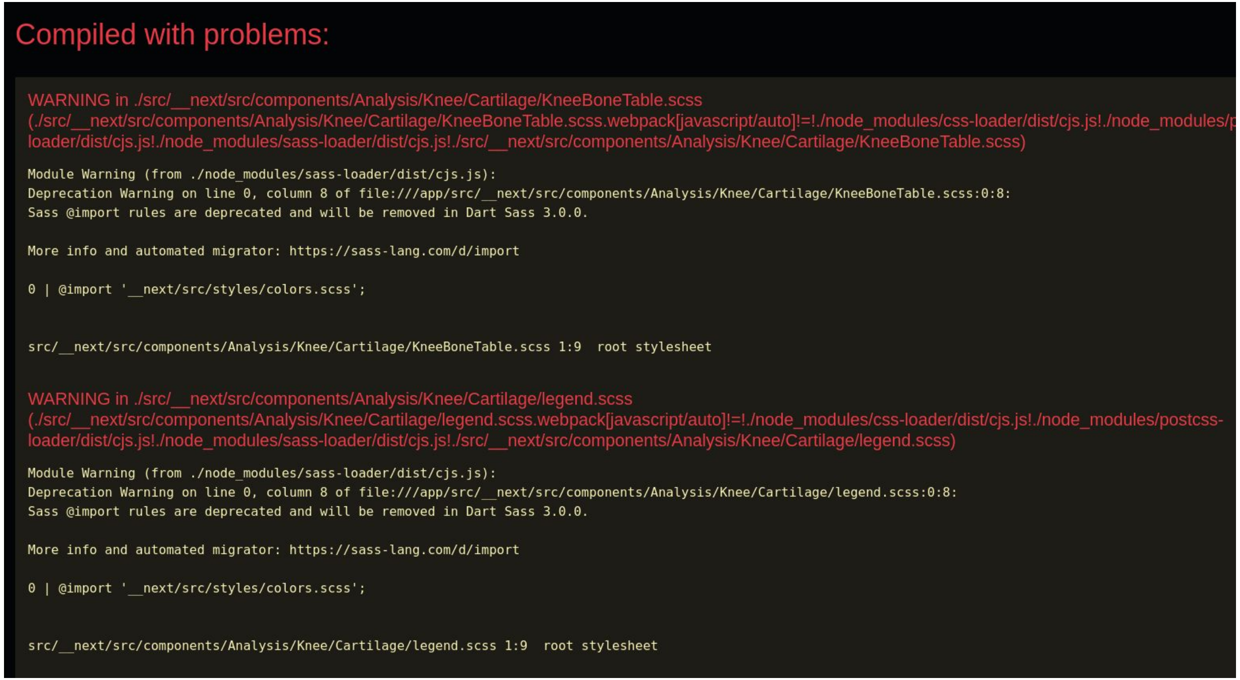


```scss
// _variables.scss (underscore denotes partial)
$primary-color: 🟥 red;
```

SCSS: Partials



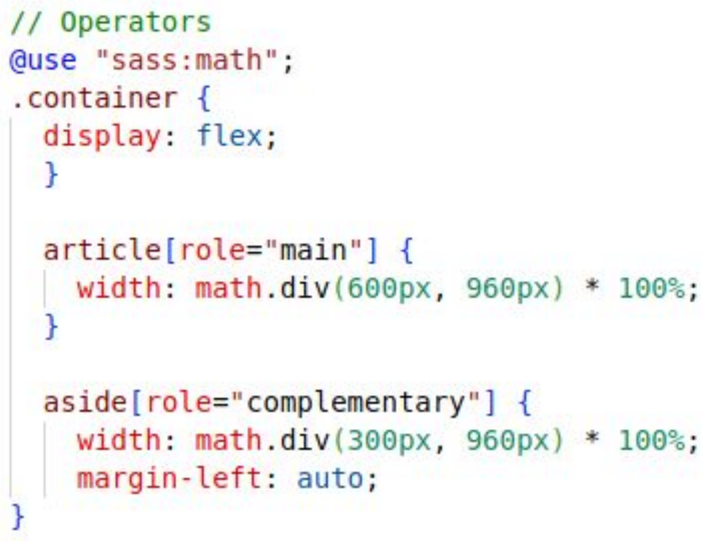
```
@import '__next/src/styles/colors.scss';

.kneeGridLayout {
  .cartilageTable {
    text-align: right;
    display: block;
    width: 100%;

    .container {⋯
    }

    &.patella {⋯
    }

    &.femur {⋯
    }

    &.tibia {⋯
    }

    .cell {
      .assessment {
        border-radius: 0.4em;
        padding: 0.3em;
        padding-left: 0.5em;
        margin-right: 0.5em;

        &.damaged {
          background-color: $mustard;
        }

        &.moderately_damaged {
          color: $defaultBg;
          background-color: #f5b973;
        }

        &.severely_damaged {
          background-color: $dusty_pink;
        }

        &.damaged,
        &.severely_damaged {
          color: $defaultBg;
          font-weight: 600;
```



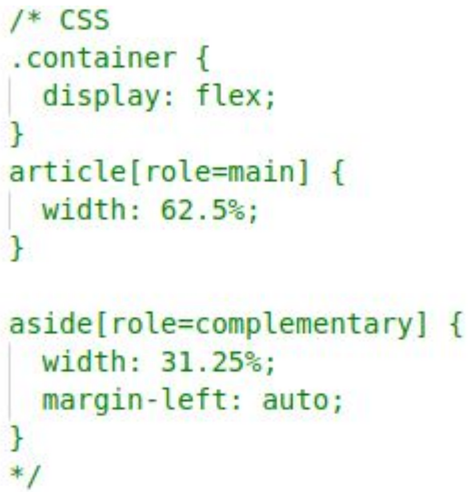
Compiled with problems:

```
WARNING in ./src/__next/src/components/Analysis/Knee/Cartilage/KneeBoneTable.scss
(./src/__next/src/components/Analysis/Knee/Cartilage/KneeBoneTable.scss.webpack[javascript/auto]!=!./node_modules/css-loader/dist/cjs.js!./node_modules/p
loader/dist/cjs.js!./node_modules/sass-loader/dist/cjs.js!./src/__next/src/components/Analysis/Knee/Cartilage/KneeBoneTable.scss)

Module Warning (from ./node_modules/sass-loader/dist/cjs.js):
Deprecation Warning on line 0, column 8 of file:///app/src/__next/src/components/Analysis/Knee/Cartilage/KneeBoneTable.scss:0:8:
Sass @import rules are deprecated and will be removed in Dart Sass 3.0.0.

More info and automated migrator: https://sass-lang.com/d/import

0 | @import '__next/src/styles/colors.scss';


src/__next/src/components/Analysis/Knee/Cartilage/KneeBoneTable.scss 1:9  root stylesheet

WARNING in ./src/__next/src/components/Analysis/Knee/Cartilage/legend.scss
(./src/__next/src/components/Analysis/Knee/Cartilage/legend.scss.webpack[javascript/auto]!=!./node_modules/css-loader/dist/cjs.js!./node_modules/postcss-
loader/dist/cjs.js!./node_modules/sass-loader/dist/cjs.js!./src/__next/src/components/Analysis/Knee/Cartilage/legend.scss)

Module Warning (from ./node_modules/sass-loader/dist/cjs.js):
Deprecation Warning on line 0, column 8 of file:///app/src/__next/src/components/Analysis/Knee/Cartilage/legend.scss:0:8:
Sass @import rules are deprecated and will be removed in Dart Sass 3.0.0.

More info and automated migrator: https://sass-lang.com/d/import

0 | @import '__next/src/styles/colors.scss';


src/__next/src/components/Analysis/Knee/Cartilage/legend.scss 1:9  root stylesheet
```

SCSS: Math Operators



```scss
// Operators
@use "sass:math";
.container {
  display: flex;
  }

  article[role="main"] {
    width: math.div(600px, 960px) * 100%;
  }

  aside[role="complementary"] {
    width: math.div(300px, 960px) * 100%;
    margin-left: auto;
}
```



```css
/* CSS
.container {
  display: flex;
}
article[role=main] {
  width: 62.5%;
}

aside[role=complementary] {
  width: 31.25%;
  margin-left: auto;
}
*/
```

Sass for the win…?

- **Reusability**: variables, mixins
- **Readability**: nested rules
- **Modularity**: split code into partials
- Programming features: if, for, each, functions
- Backwards compatibility (CSS)
- Integration into libraries like Vite / Webpack

→ fosters **maintainability**

→ made for large projects

Sass Downsides

- Preprocessing step → +build time & complexity
- Learning curve: specific syntax and paradigms (e.g. @use and namespaces)
- Risk of overuse/”unintended” use → bad maintainability
- Debugging styles can be challenging due to additional step
- Native CSS is evolving
- Dependency on Sass compiler

Conclusion: When (not) to use Sass?

- Useful tool for big projects and teams
- Prerequisite: developer needs to understand its paradigms and syntax
- Sass should not be the default choice, but depend on project requirements & size
- Don't use SCSS for simple projects. Native CSS fulfills most use cases

Task 2
Refactoring w/ Sass

task2-sass

(~20 min)

Task 2

Refactoring w/ Sass

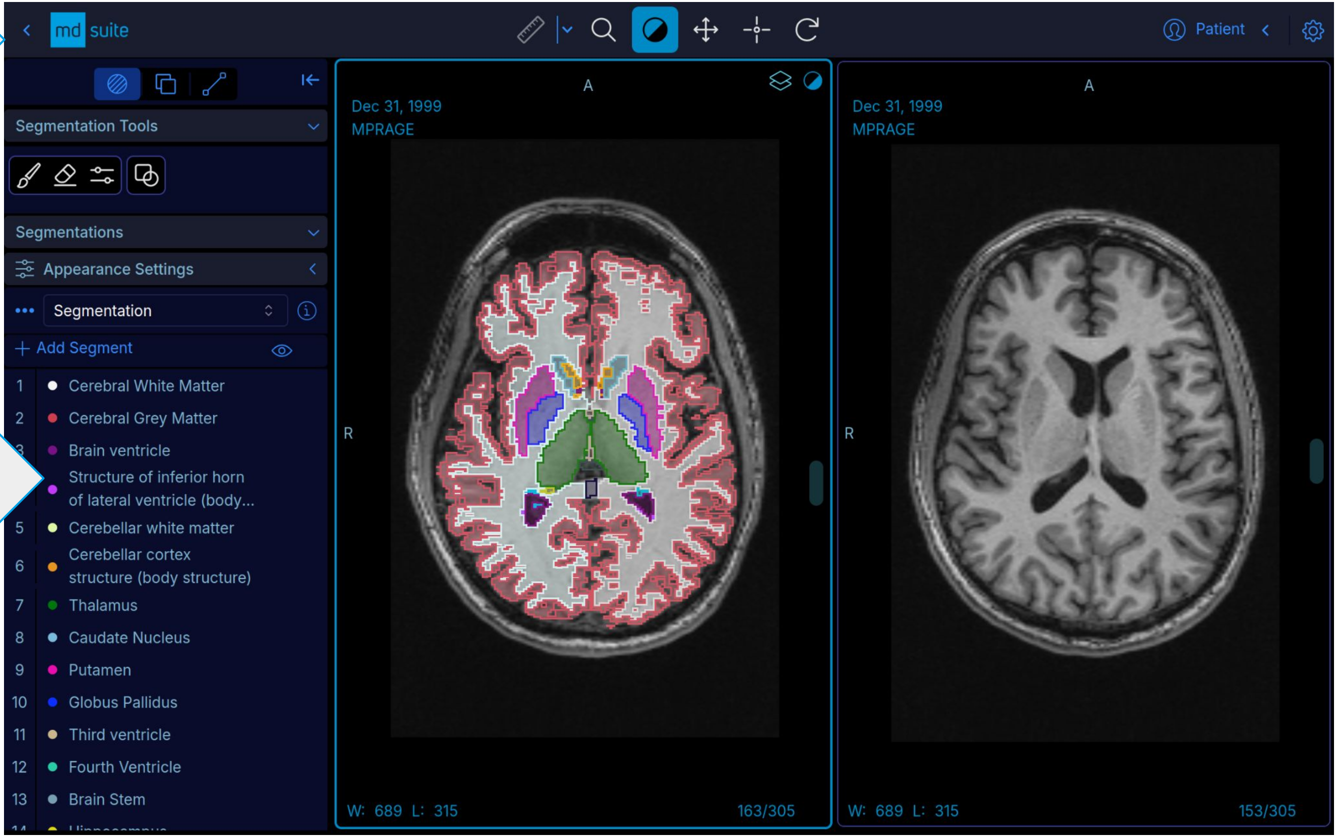
Reflection Questions

- How easy/difficult was the refactoring?
- Personally, what are the main benefits of Sass?
- When would you choose Sass over pure CSS? Why?
- Did you learn anything we can apply for our projects?

Part III

Utility-first & Tailwind CSS

Business Case: Viewer Rewrite



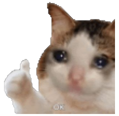
1 Cerebral White Matter
2 Cerebral Grey Matter
3 Brain ventricle
4 Structure of inferior horn of lateral ventricle (body...
5 Cerebellar white matter
6 Cerebellar cortex structure (body structure)
7 Thalamus
8 Caudate Nucleus
9 Putamen
10 Globus Pallidus
11 Third ventricle
12 Fourth Ventricle
13 Brain Stem
14 Hippocampus

How we usually write CSS

Semantic CSS: define HTML and CSS based on element structure & meaning

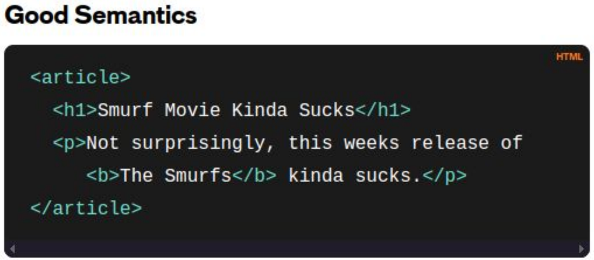
Separate files for structure and styles

Separation of concerns, maintainability, collaboration



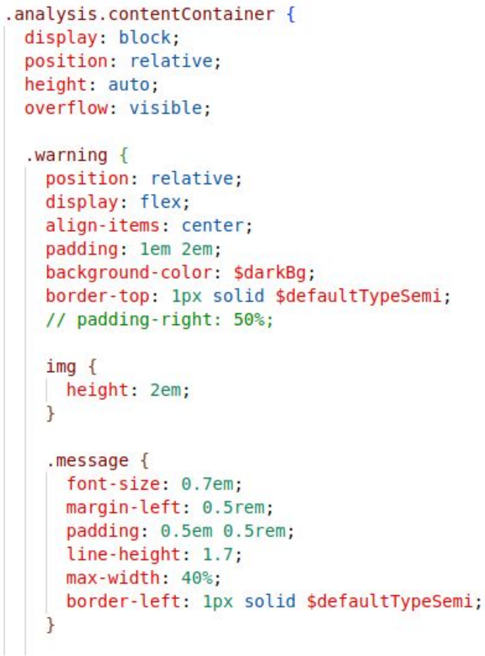
Problems

- Lacks scalability, unwanted side-effects (global scope)
- Naming conventions required
- No real separation between HTML and CSS
- New styles -> more CSS (re-using requires effort)
- Slower development from scratch



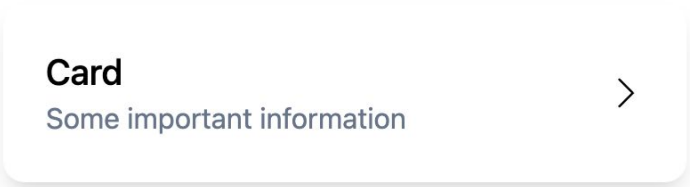
Good Semantics

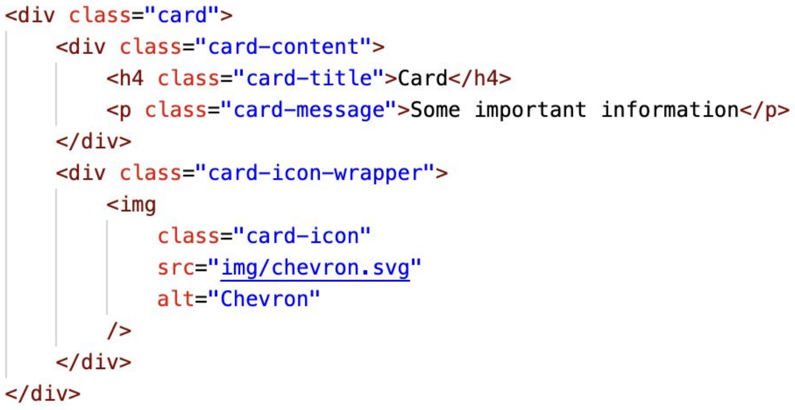
```html
<article>
  <h1>Smurf Movie Kinda Sucks</h1>
  <p>Not surprisingly, this weeks release of
     <b>The Smurfs</b> kinda sucks.</p>
</article>
```



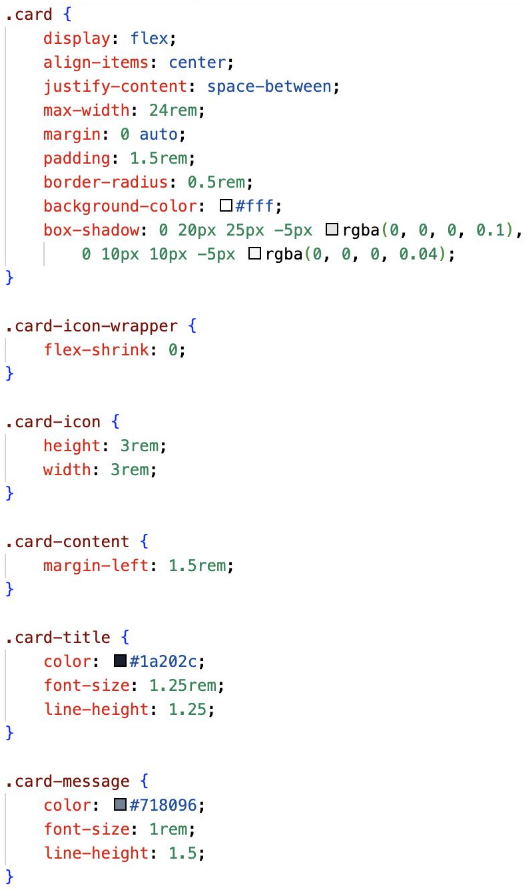
```css
.analysis.contentContainer {
  display: block;
  position: relative;
  height: auto;
  overflow: visible;

  .warning {
    position: relative;
    display: flex;
    align-items: center;
    padding: 1em 2em;
    background-color: $darkBg;
    border-top: 1px solid $defaultTypeSemi;
    // padding-right: 50%;

    img {
      height: 2em;
    }

    .message {
      font-size: 0.7em;
      margin-left: 0.5rem;
      padding: 0.5em 0.5rem;
      line-height: 1.7;
      max-width: 40%;
      border-left: 1px solid $defaultTypeSemi;
    }
```

Traditional Workflow





```html
<div class="card">
    <div class="card-content">
        <h4 class="card-title">Card</h4>
        <p class="card-message">Some important information</p>
    </div>
    <div class="card-icon-wrapper">
        <img
            class="card-icon"
            src="img/chevron.svg"
            alt="Chevron"
        />
    </div>
</div>
```



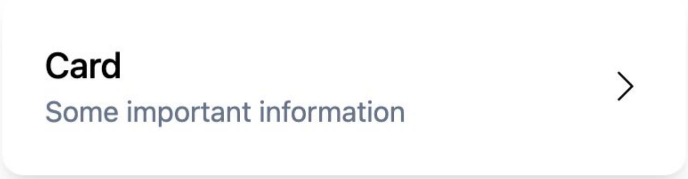
```css
.card {
    display: flex;
    align-items: center;
    justify-content: space-between;
    max-width: 24rem;
    margin: 0 auto;
    padding: 1.5rem;
    border-radius: 0.5rem;
    background-color: □#fff;
    box-shadow: 0 20px 25px -5px □rgba(0, 0, 0, 0.1),
        0 10px 10px -5px □rgba(0, 0, 0, 0.04);
}

.card-icon-wrapper {
    flex-shrink: 0;
}

.card-icon {
    height: 3rem;
    width: 3rem;
}

.card-content {
    margin-left: 1.5rem;
}

.card-title {
    color: ■#1a202c;
    font-size: 1.25rem;
    line-height: 1.25;
}

.card-message {
    color: ■#718096;
    font-size: 1rem;
    line-height: 1.5;
}
```

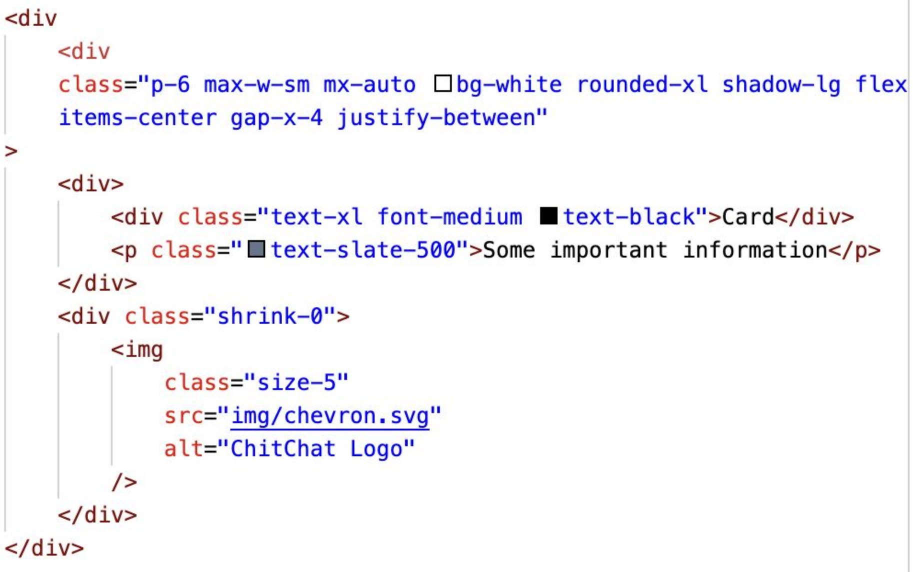
Alternative: Utility-first Approach

Idea: don't write CSS; instead apply atomic utility classes to HTML

Atomic: each class represents a single CSS property

No custom CSS needed for most solutions!





```
<div
    <div
    class="p-6 max-w-sm mx-auto □bg-white rounded-xl shadow-lg flex
    items-center gap-x-4 justify-between"
>
    <div>
        <div class="text-xl font-medium ■text-black">Card</div>
        <p class="■text-slate-500">Some important information</p>
    </div>
    <div class="shrink-0">
        <img
            class="size-5"
            src="img/chevron.svg"
            alt="ChitChat Logo"
        />
    </div>
</div>
```

connect
KEYNOTE 2023

Tailwind CSS

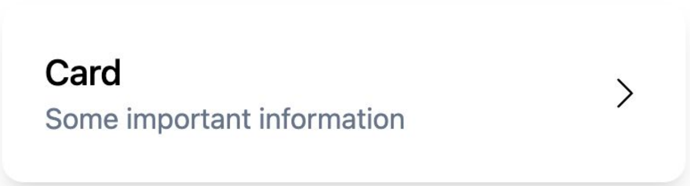
Utility-first CSS framework: pre-defined utility-classes

Idea: Instead of writing CSS, you use the classes like building blocks

Benefits

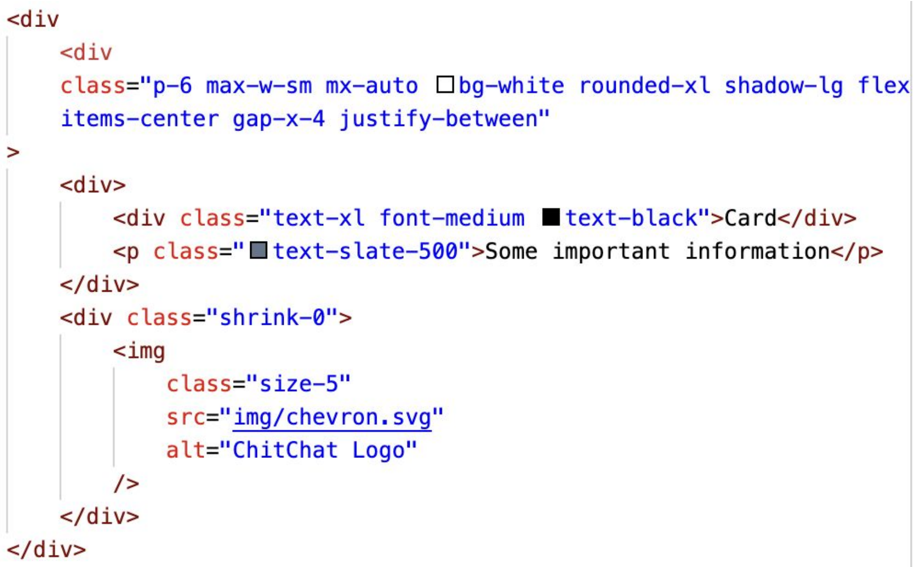
- Pre-defined class names: no name guessing + consistency
- Maintainability: no more growing CSS
- No global changes on local edits (remember Peter Griffin)
- Most popular CSS framework (used by Netflix, OpenAI, Shopify, …)
- Customizable: allows to change colors or overwrite/define classes
- UI libraries and toolkits ready to be used or draw inspiration from (TailwindUI, shadcn/ui)

Tailwind CSS: Example



Card

Some important information

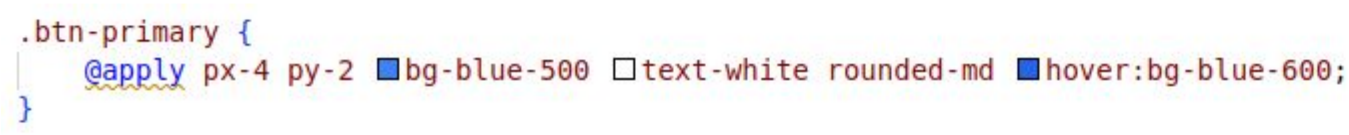


```
<div
    <div
    class="p-6 max-w-sm mx-auto □bg-white rounded-xl shadow-lg flex
    items-center gap-x-4 justify-between"
>
    <div>
        <div class="text-xl font-medium ■text-black">Card</div>
        <p class="■text-slate-500">Some important information</p>
    </div>
    <div class="shrink-0">
        <img
            class="size-5"
            src="img/chevron.svg"
            alt="ChitChat Logo"
        />
    </div>
</div>
```

Tailwind CSS: @apply

@apply allows to combine different utility-classes into one

→ reuse common patterns



```css
.btn-primary {
    @apply px-4 py-2 bg-blue-500 text-white rounded-md hover:bg-blue-600;
}
```

However: you need to write CSS again…

Task 3
Tailwind CSS

task3-tailwindcss

(~20 min)

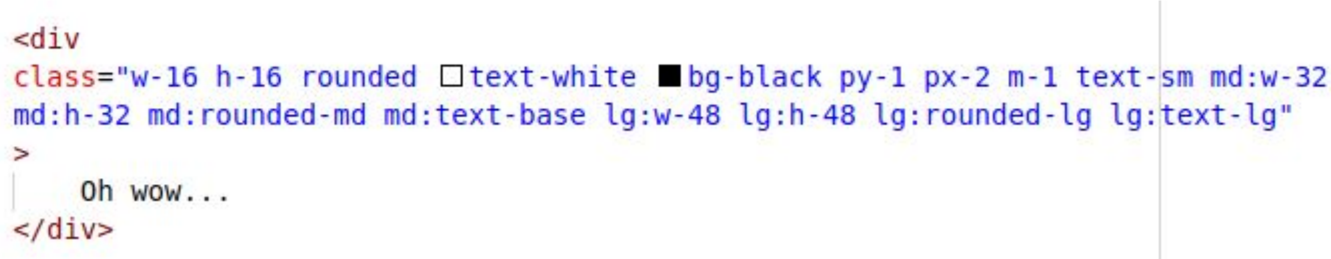
Task 3
Tailwind CSS

Reflection:

- How was the experience of styling using utility classes instead of CSS rules?
- Why do you think Tailwind is so popular?
- What were drawbacks you noticed or what can you imagine when the code grows?
- Could you imagine using it in our projects?

Tailwind CSS Drawbacks

- Cluttered HTML / difficult to read
- Learning curve (abbreviated class names like `mt-3`)
- Adds complexity compared to CSS (check which classes are printed in the final bundle)



```
<div
class="w-16 h-16 rounded □text-white ■bg-black py-1 px-2 m-1 text-sm md:w-32
md:h-32 md:rounded-md md:text-base lg:w-48 lg:h-48 lg:rounded-lg lg:text-lg"
>
    Oh wow...
</div>
```

However: This fosters using components / @apply to encapsulate reusable parts as much as possible.

Tooling exists to help organize the classes.

Part IV
Discussion & Conclusion

Discussion

- What were your main learnings today?
- Do you have any ideas how / where we improve our current styles?
  - Web Interface tables (party done via SCSS, and partly copied from some JS file as inline styles)
  - In general: consolidate duplicate styles → reduce bundle size
- What paradigm & framework should we use for the future?
- What are the most important factors for you personally when it comes to styling?
- Do you have further suggestions how we can improve our styles (maintainability & UX)?
  - Mediaire UI Library (next slide)

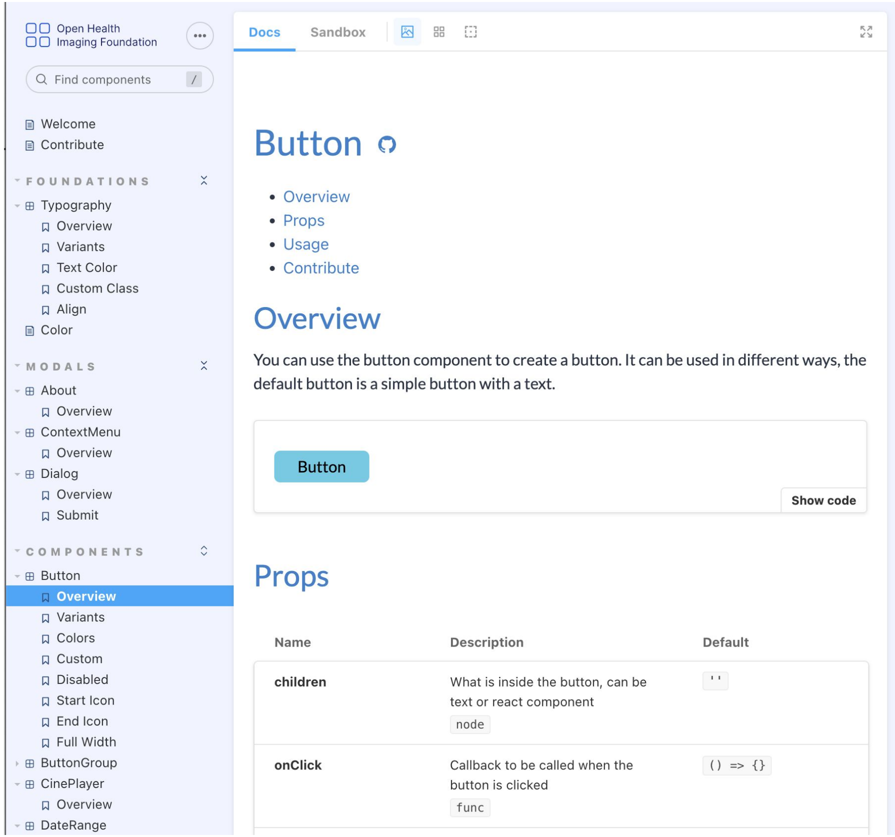
Idea Pitch: Mediaire UI Library

- Extract commonly used components & styles into a shared repo
- Use TailwindCSS for quick implementation & high maintainability
- Document components using Storybook
  - “Single source of truth” for our company styles
  - easy to browse components, colors, typography
  - collaborative tool for designers, devs, QA (test in isolation)

→ Collection of re-usable components that are pre-styled according to our mediaire brand (e.g. buttons, nav bar, modal dialogs, …)

→ **no duplicate styles, quick development of new features or products**

Example: OHIF UI



Button

- Overview
- Props
- Usage
- Contribute

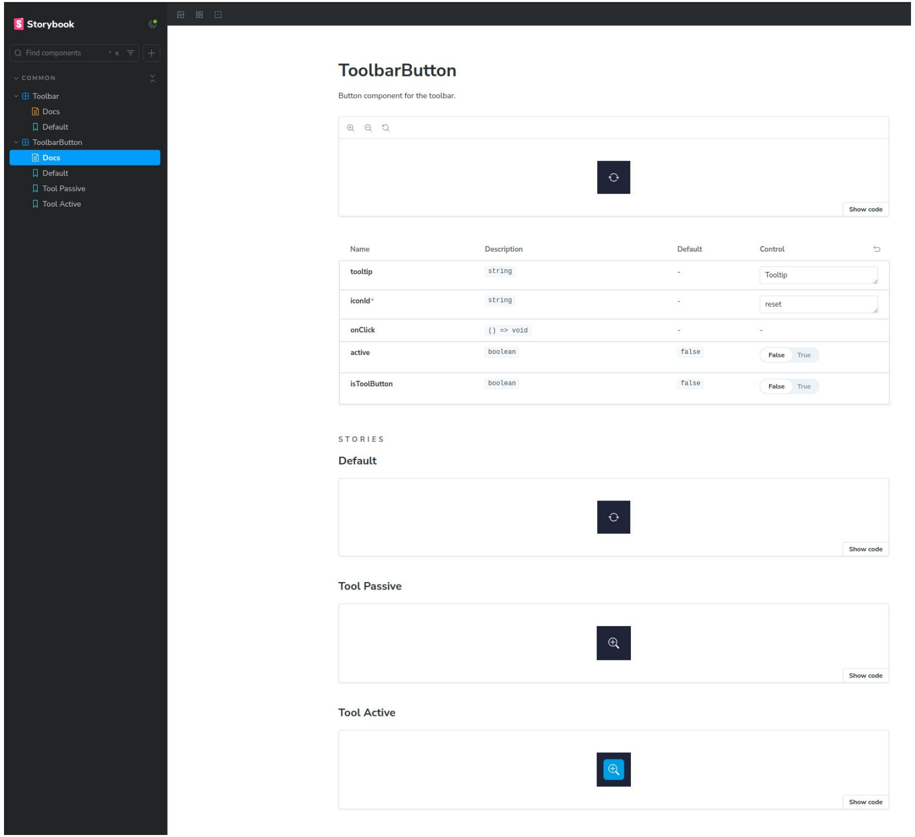
Overview

You can use the button component to create a button. It can be used in different ways, the default button is a simple button with a text.

Props

Name	Description	Default
children	What is inside the button, can be text or react component `node`	`''`
onClick	Callback to be called when the button is clicked `func`	`() => {}`

First Draft: Viewer Components



ToolbarButton

Button component for the toolbar.

Name	Description	Default	Control
tooltip	`string`	-	Tooltip
iconId*	`string`	-	reset
onClick	`() => void`	-	-
active	`boolean`	`false`	False True
isToolButton	`boolean`	`false`	False True

STORIES

Default

Tool Passive

Tool Active

Conclusion

- Basic CSS solves a lot of problems with reduced complexity
- Frameworks / preprocessors should have a clear use case
- Two major paradigms of CSS
    - **Semantic CSS**: great for readability, collaboration, and long-term maintainability in simple or medium-complexity projects
    - **Utility-first CSS:** excels in fast prototyping, scalability, and consistency, making it ideal for larger or fast-paced projects

Next steps:

- First draft of mediaire component library (based on viewer components)
- Tailwind CSS: great opportunity for our projects to have more maintainable styles and code in general

Q&A / Feedback

I’m happy to hear your opinions on this workshop!
Was it helpful? Did you like the format? …

Sources

1. https://developer.mozilla.org/en-US/docs/Learn_web_development/Core/Styling_basics/Getting_started
2. https://developer.mozilla.org/en-US/docs/Learn_web_development/Core/Styling_basics/Handling_conflicts
3. https://sass-lang.com/guide/
4. https://css-tricks.com/semantic-class-names/
5. https://www.infoq.com/articles/no-need-css-framework/
6. https://adamwathan.me/css-utility-classes-and-separation-of-concerns/
7. https://www.aleksandrhovhannisyan.com/blog/why-i-dont-like-tailwind-css
8. https://eev.ee/blog/2020/02/01/old-css-new-css/
9. https://raygun.com/blog/css-preprocessors-examples/