HTML & CSS

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Day Two

- CSS Rules
- Linking CSS
- CSS Reset
- CSS Media Types
- CSS Selectors
- CSS Specificity
- Units

Repetition Questions

What are the parts of an HTML Tag?

- `<p>` Start Tag
- `</p>` End Tag
- `class="foo"` Attribute
- Content

What is wrong with this example?

```
<img src="popcorn.jpg" alt="popcorn">Popcorn Time</img>
```

- `<img>` is a self-closing tag

Name other self-closing tags?

- `<meta>`
- `<br>`
- `<link>`
- `<input>`
- more ...

How can we improve this example?

```
<div class="container about" id="about">
  <div class="article">
    <p>...</p>
  </div>
  <div class="aside">
    <div class="side-navigation">
      <ul>
        <li><a href="#">Link 1</a></li>
        <li><a href="#">Link 2</a></li>
        <li><a href="#">Link 3</a></li>
      </ul>
    </div>
  </div>
</div>
```

- This is a perfect use case for semantic elements.

CSS

Cascading Style Sheet

- Format templates enable modular design of websites
- Content is separated from format. IMPORTANT!!!
- Cascade means
  - Style sheets are defined on different levels and can be overridden.
  - The specific addressing of an element

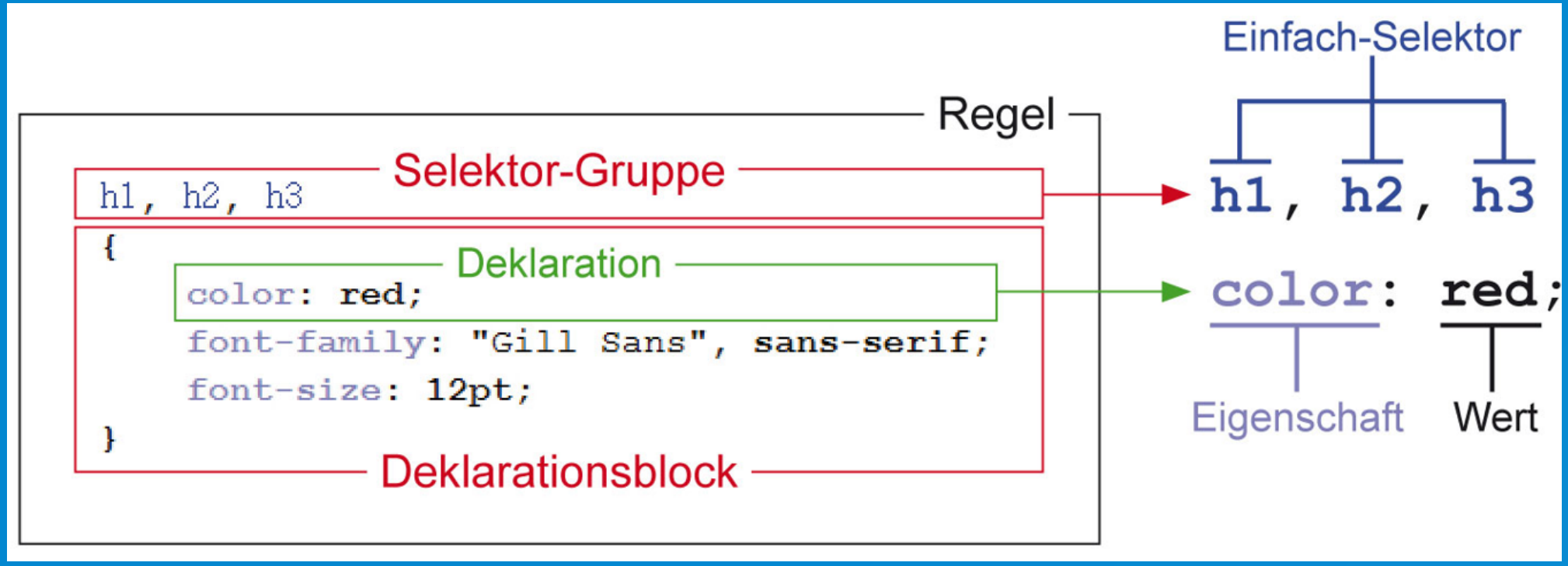
- The specification plays a big role.
  - `element`
  - `id=`
  - `class=`
  - `style=""`
  - `!important`

- CSS can be created in numerous ways:
  - As a separate file (i.e. `style.css`) which is then linked to the HTML using `<link>`
  - Inside the `<head>` element using `<style></style>`
  - As an attribute (inline-style):

```
<p style="color: red;">I am red.</p>
```

- The use of multiple stylesheets help with development
- Styles can be specified for different display sizes
  - By using `media queries`

CSS Syntax



- rule, selector(group), declaration
- property, value

Linking CSS

Type	Example
As external file	`<link href="style.css" rel="stylesheet">`
In the `<head>` as `<style>`	`<style> p{color:red} </style>`
Inline as style attribute	`<p style="color:red">hello</p>`

CSS Reset

CSS Reset

As developers it is important to remove the browsers standard styles

- Simple CSS Reset
  - ```
    * {
      margin: 0;
      padding: 0;
      box-sizing: border-box;
    }
    ```
- normalize.css
- Modern CSS Reset
    ```

CSS Media Types

- Media types can be defined as HTML or as CSS
- HTML `<link rel="stylesheet" href="style.css" media="all">`
- CSS `@media all{}`
- Important Media types are: `all`, `screen`, `print`
- List of recognized media types

CSS Selectors

Elements, Classes, ID's

CSS	Description
`p {}`	All `<p>` elements
`p, a {}`	All `<p>` and `<a>` elements
`p a {}`	All `<a>` elements inside `<p>` elements [ALL*]
`.foo`	All elements with the `foo` class
`#foo`	All elements with the `foo` id
`div.foo`	All `<div>` elements with the `foo` class
`section div.foo`	All `<div>`s with class `foo` inside `<section>`s

Attributes, Children, Siblings

CSS	Description
`a[title]`	All `<a>` elements with a `title` attribute
`a[title="click"]`	`<a>` elements with a `title="click"` attribute
`p > a`	`<a>`s which are direct descendants of `<p>`s *Child Selector*
`h1 + p`	The first `<p>`s which are adjacent to `<h1>`s *Adjacent Sibling Selector*
`h1 ~ p`	All `<p>`s which come after `<h1>`s *General Sibling Selector*

Pseudo Classes *[Pseudoklassen]*

CSS	Description
`a:hover`	`<a>` elements on mouse contact
`a:focus`	`<a>` elements when they are focused
`a:visited`	`<a>` elements when they have been visited
`a:first-child`	The first `<a>` element
`a:nth-child(3)`	The third `<a>` element
`a:nth-child(odd/even)`	Odd/even `<a>` element
`a:nth-child(3n + 4)`	Each 3rd `<a>` starting after the 4th
`a:last-child`	The last `<a>` element

Pseudo Elements *[Pseudoelementen]*

CSS	Description
`p::first-line`	The first line of all `<p>` elements
`p::first-letter`	The first letter of all `<p>` elements
`p::before`	Content before all `<p>` elements
`p::after`	Content after all `<p>` elements

Classes vs. ID's

- Defined by `class=` in the HTML and selected using `.` in CSS
- Can be used multiple times

```
<style>
.red {
  color: red;
}
.crossed {
  text-decoration: line-through ;
}
</style>
<p class="red">I am red</p>
<p class="red">I am red</p>
<p class="blue">I am blue</p>
<p class="red crossed">I am red and crossed</p>
```

Classes vs. ID's

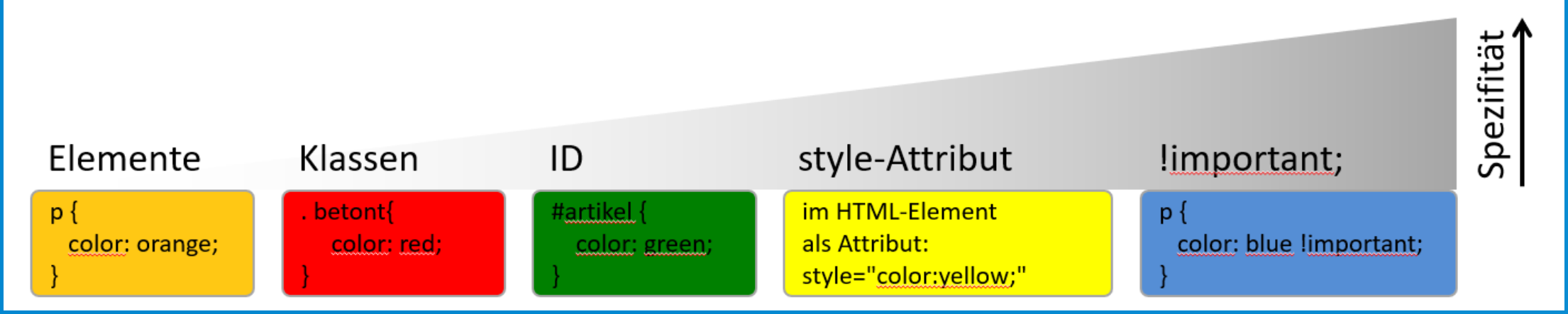
- Defined by `id=` in the HTML and selected using `#` in CSS
- Can be used once per document

```
<style>
#main-navi {
  display: inline-block;
}

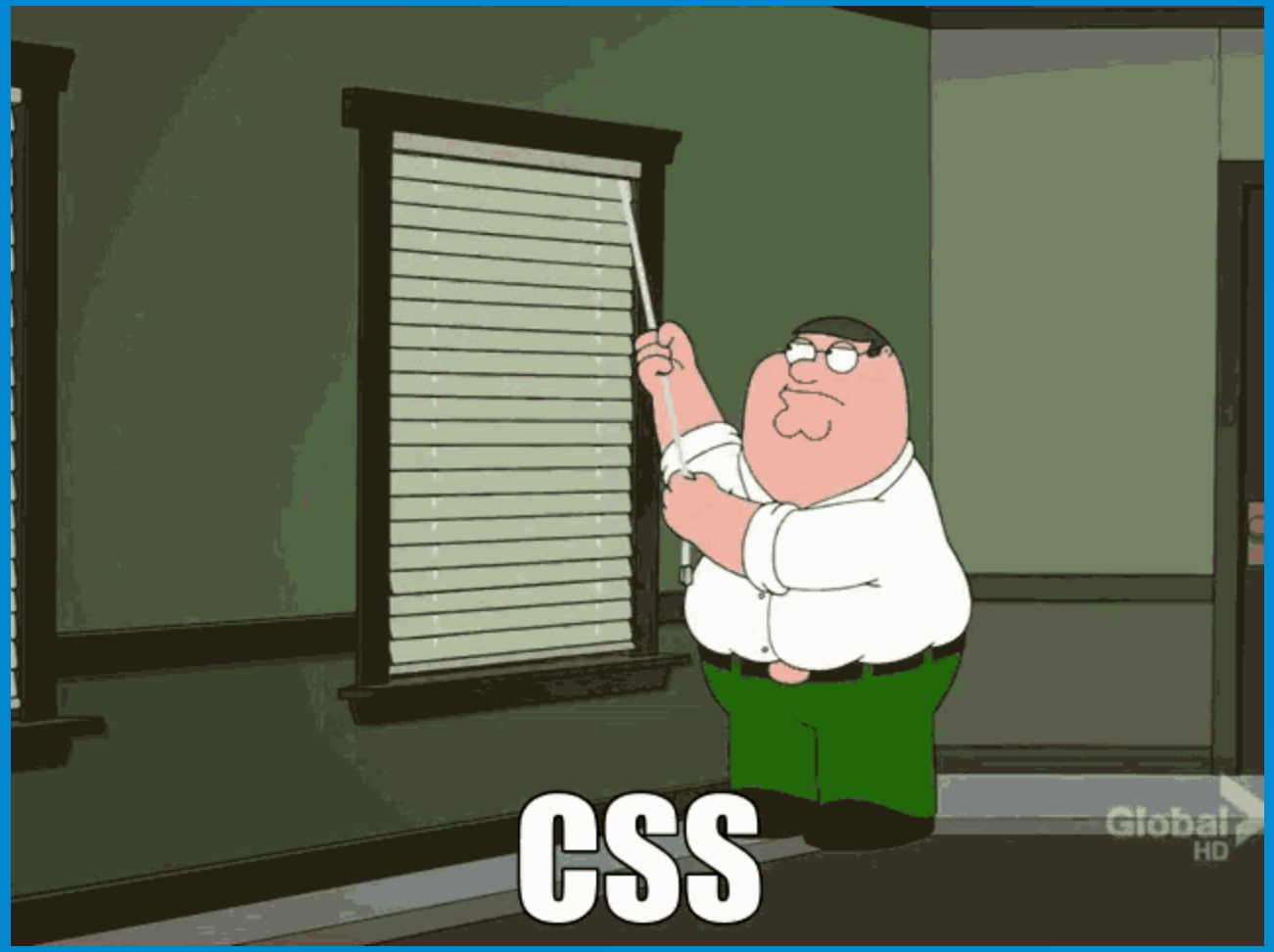
</style>
<nav id="main-navigation">
  <ul>
    ...
  </ul>
</nav>
```

CSS Specificity

- Cascading means that rules overwrite other rules.This does not only apply to the order the rules were defined in.
- Specificity *[Spezifität]* in CSS means priority.



Units



Units *[Masseinheitent]* in CSS

Relative units :

- `px` Pixels (relative to the display density of the respective output medium
- `em` Relative to the font size of the parent element
- `rem` Relative to the font size of the body (16px standard)
- `%` Relative to current Size **OR** size of parent element
- `vh` Relative to the height of the viewport (1vh = 1% of viewport height)
- `vw` Relative to the width of the viewport

Homework