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CSS



# CASCADING STYLESHEETS

- HTML is used to define the structure and semantics of the content
- CSS is used to style the content and make it's layout
- CSS is designed to enable the separation of presentation and content
- With CSS you can
  - Change fonts, color, size and spacing
  - Add multiple columns
  - Add animations and transitions
  - And more



# CASCADING STYLESHEETS

- Cascading = procedure that determines which style will apply to a certain section
- Style = the look of a certain element
- Sheets = set of rules to determine how the web page will look
- Latest version CSS3
  - Versioning is a bit complicated

# INSERTING CSS TO HTML

## 1. External style sheet

- Styles are specified in an external CSS file.
- Most common practice.
- You can define the look of an entire website with single CSS file.
- Insert to the <head> part of HTML document:

```
<link href="style.css" rel="stylesheet">
```

## 2. Internal style sheet

- Apply specific styles to a single HTML document
- Insert to the <head> part of HTML document:

```
<style>
  p {
    color: blue;
  }
</style>
```

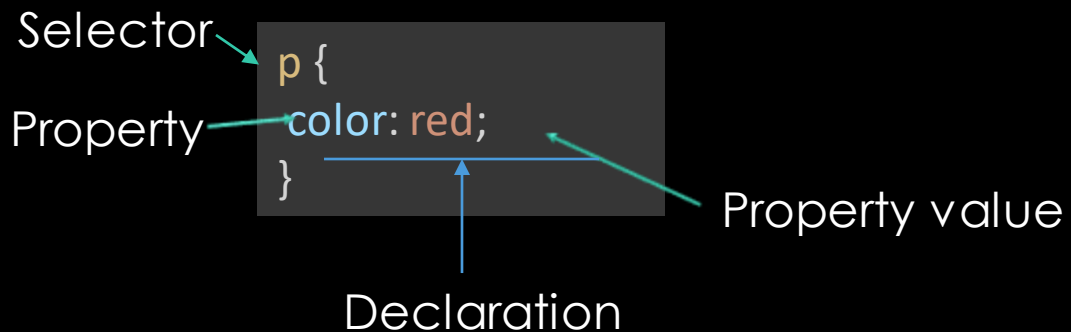
## 3. Inline styles

- Styles are defined in an HTML element:

```
<a href="https://metropolia.fi" style="color: red; size: 2rem;">Example link</a>
```

# RULESET

- Ruleset (or just rule) is a grouping of one or more CSS properties which are to be applied to one or more target HTML elements
- Ruleset consists of
  - Selector
  - Declaration(s)
    - Combination of property and property value



- Don't forget to add semicolon ( ; ) to the end of each declaration



# SELECTOR

- Pattern used to select the element you want to style
- CSS selectors can be divided into five categories
  1. Simple selectors
  2. Combinator selectors
  3. Pseudo-class selectors
  4. Pseudo-elements selectors
  5. Attribute selectors

# SIMPLE SELECTORS

- Select elements based on tag name, id or class

- Tag name:

```
p {  
  color: green;  
}
```

- Id:

```
#nav-button {  
  color: blue;  
}
```

- Class:

```
.button {  
  color: red;  
}
```

# EXAMPLE

- Open CSS1 folder from HTML + CSS Examples in IDE/editor



# COMBINATOR SELECTORS

- A CSS selector can contain more than one simple selector
  - descendant selector (space)
  - child selector (>)
  - adjacent sibling selector (+)
  - general sibling selector (~)
- [Child/parent/sibling \(DOM\)](#)
- [Link to examples](#)

# PSEUDO-CLASSES AND PSEUDO-ELEMENTS

- A pseudo-class is used to define a special state of an element.
- It can be used to
  - Style an element when a user mouses over it
  - Style visited and unvisited links differently
  - Style an element when it gets focus
- A CSS pseudo-element is used to style specified parts of an element.
  - It can be used to
    - Style the first letter, or line, of an element
    - Insert content before, or after, the content of an element
- [Link to examples](#)

# ATTRIBUTE SELECTORS

- The attribute selector is used to select elements with a specified attribute.
- Presence and value selectors
  - enable the selection of an element based on the presence of an attribute or the value of the attribute
- Substring matching selectors
  - advanced matching of substrings inside the value of the attribute
- [Link to examples](#)

# WORKING WITH TEXT

- Font
  - a set of letters and symbols in a particular design and size
- Font-family
  - a collection of fonts that share particular design features within a specific style of typeface
  - Web safe fonts
  - Custom fonts
  - Google Fonts
    - GDPR -> download Google Fonts

- Setting font:

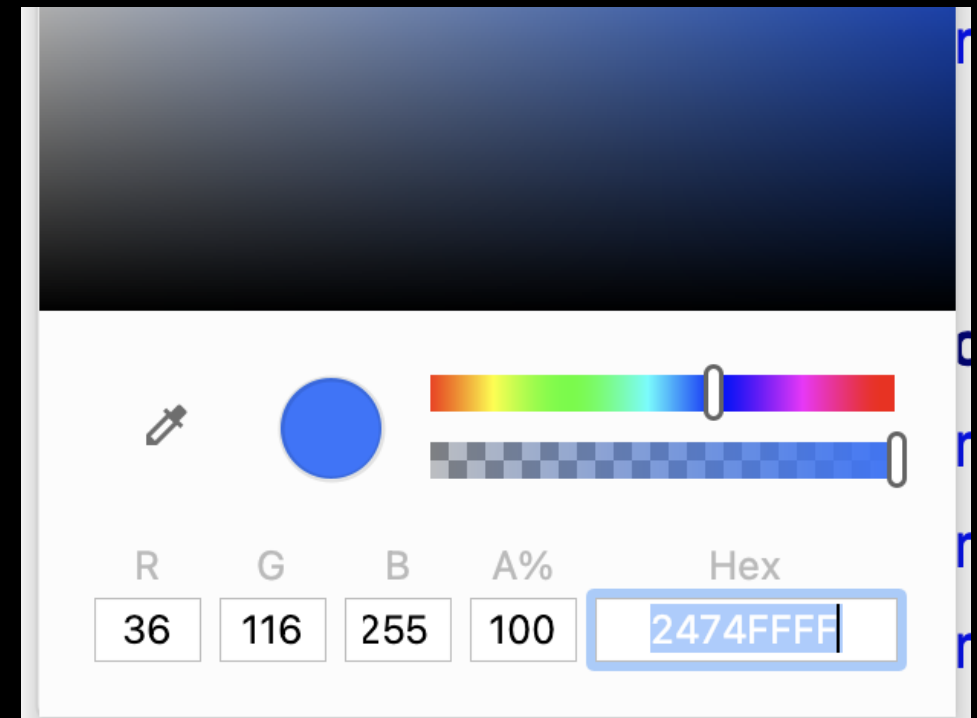
```
p {  
  font-size: 1.5rem;  
  color: red;  
  font-family: Helvetica, Arial, sans-serif;  
}
```

# UNITS

- Numbers, lengths, and percentages
  - Integer
  - Number = decimal number
  - Dimension = number with a unit attached to it.
  - Percentage = a fraction of some other value
- Lengths

# COLOR

- Common properties
  - color = text color
  - background-color = background color
- Color values
  - Keywords
    - white, red, black
  - Hexadecimal RGB values
    - #RRGGBB
    - #RRGGBBAA (with alpha channel)
  - RGB and RGBA values
    - rgb(2, 121, 139)
    - A stands for alpha channel = transparency
    - rgba(2, 121, 139, .3)



# EXAMPLE

- Open CSS2 folder from HTML + CSS Examples in IDE/editor



# MORE ABOUT TEXT

- Fundamental text and font styling
- Styling lists
- Styling links
- Web fonts