CSS

CSS?

- Stands for **C**ascading **S**tyle**s**heet
- How HTML elements are displayed
    - Formatted to different media

CSS - Files

CSS can be imported (in the head) from a **.css** file

```
<link rel="stylesheet" type="text/css" href="main.css">
```

Or it can be coded in the **<style>** tag

```
<style>
        html {
            margin: 0;
            color: rgb(0,0,0);
        }
</style>
```

CSS - Files

Also it can be added to each tag (in the body) using “**style**” attribute

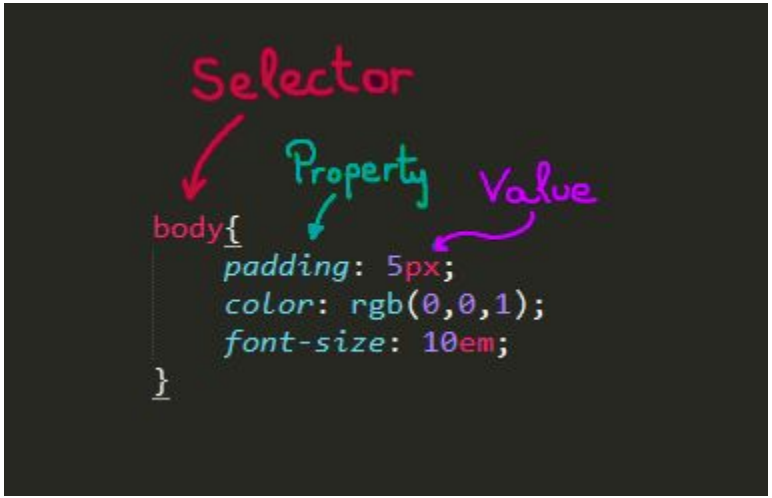
```
<p style="font-size: 10em; margin-left: 30px;">Some text.</p>
```

However, it is **not** recommended because:

- Higher priority
- Organization / visualization of styles
- More difficult to change
- Unnecessarily mix HTML with CSS

CSS - Syntax

- Selectors: HTML elements, classes or IDs
- Property: what is modified (from default)
- Value



CSS - Selectors

- HTML Elements: h1, a, html, body
- ID
  - Unique
  - #container, #img-logo
- Class
  - For groups
  - A tag can have one class or more
  - .highlight, .footer-img

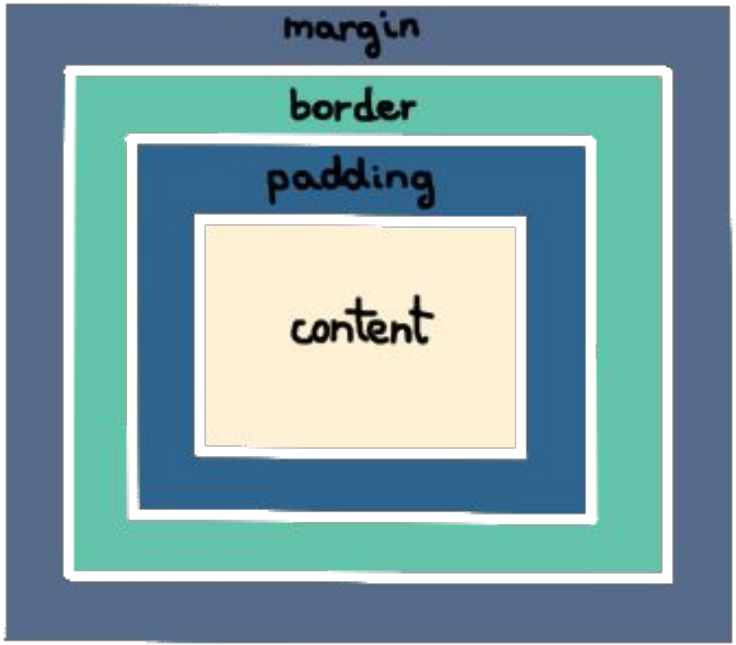
CSS - Selectors

- Priorities
  - Inside the CSS
    - ID
    - Class
    - Element
  - !important
- Loading styles
  - Inline styles
  - Internal stylesheets
  - External stylesheets
  - Browser styles

CSS - Selectors

```css
/* NAVIGATING */

article p {} /* All <p> inside <article> */

nav >  ul {} /* All <ul> that are direct children of <nav> */

span.im-text {} /* All <span> with class "im-text" */

.nav-text + span {} /* All <span> immediately after something with class "nav-text" */

ol:first-child {} /* The first child of every <ol> in the document */

/* GROUPING SELECTORS */

li#special, p.head-text {} /* All <li> with ID "special" and all <p> with class "head-text" */
```

CSS - Margin & padding



CSS - Position

- Describes the type of positioning method of the element
  - static: render in order
  - absolute: relative to its first ancestor not static
  - relative: relative to its static position (affected by left, top ...)
  - fixed: relative to browser window
  - sticky: relative + fixed
    - needs a container
    - needs at least one: top, bottom, left, right

CSS - Floats

- To float elements
- Does **not** work with absolute and fixed positions
- Related properties
  - clear: to prevent elements to float around
  - overflow: to fix the element if it overflows outside the container
  - Check **clearfix** hack

CSS - Display

- To change display behavior of a tag
  - inline
  - block
  - inline-block: like inline but with block advantages (resizing, margin,...)
  - flex
  - grid

CSS - Flexible Box

- To organize containers in an easy way
- The container **parent** needs to be “display: flex”
- Children **position** is set in the **parent**

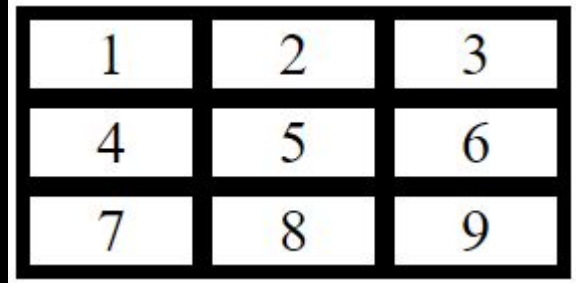
```
#flex-parent {
        display: flex;
        justify-content: center;
        flex-direction: column-reverse;
}
```

CSS - Grid Layout

- To make flexible tables easily with divs

```css
.grid-container {
  display: grid;
  grid-template-columns: auto auto auto;
  padding: 2px;
  background-color: rgb(0,0,0);
}
.grid-container div{
  background-color: rgb(255,255,255);
  margin: 5px;
  font-size: 30px;
  text-align: center;
}
```

```html
<div class="grid-container">
  <div>1</div>
  <div>2</div>
  <div>3</div>
  <div>4</div>
  <div>5</div>
  <div>6</div>
  <div>7</div>
  <div>8</div>
  <div>9</div>
</div>
```



CSS - Pseudo-classes

- To capture events, to get the state of an element
- Order is important!

```
a:link {}  /* Unvisited link */

a:visited {}  /* Visited link */

a:hover {}  /* Mouse over link */

a:active {}  /* Selected link */
```

CSS - @media

- To adapt the content to different media type/devices
  - screen sizes
  - other media
- Rule that checks
  - width and height of viewport and device
  - orientation (landscape/portrait)
  - resolution

```
@media screen and (min-width: 800px) {
    body {
        background-color: rgb(0, 1, 1);
    }
}
```

CSS - Animations

- @keyframe: how the element will change in time
- Animation properties:
  - animation-name
  - animation-duration
  - animation-delay
  - animation-iteration-count
  - animation-direction
  - animation-timing-function
  - animation-play-state

```
@keyframes myanimation {
    from: { background-color: rgb(0, 1, 1); }
    to: { background-color: rgb(1, 1, 0); }
}
div {
  animation-name: myanimation;
  animation-duration: 2s;
  width: 150px;
  height: 150px;
}
```

- animation: name time timing-function delay iteration-count direction

CSS - Other

- Adding fonts

```
@font-face {
    font-family: mywebfont;
    src: url("webfont.woff");
}
```

```
body{
    font-family: mywebfont;
}
```

- Other cool properties

```
div {
    overflow: scroll;
    border-radius: 25px;
    text-shadow: 2px 2px;
    box-shadow: 2px 2px;
    font-smooth: antialiased;
    opacity: 0.5;
    box-sizing: border-box;
}
```