

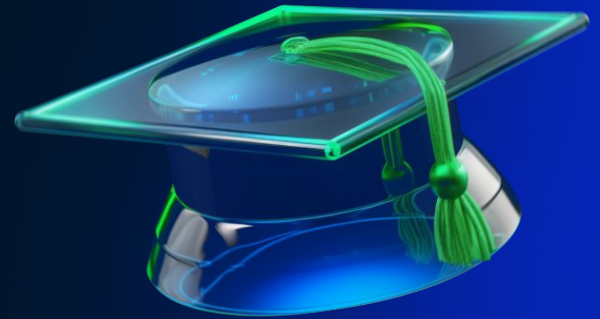
Introduction to **CSS**

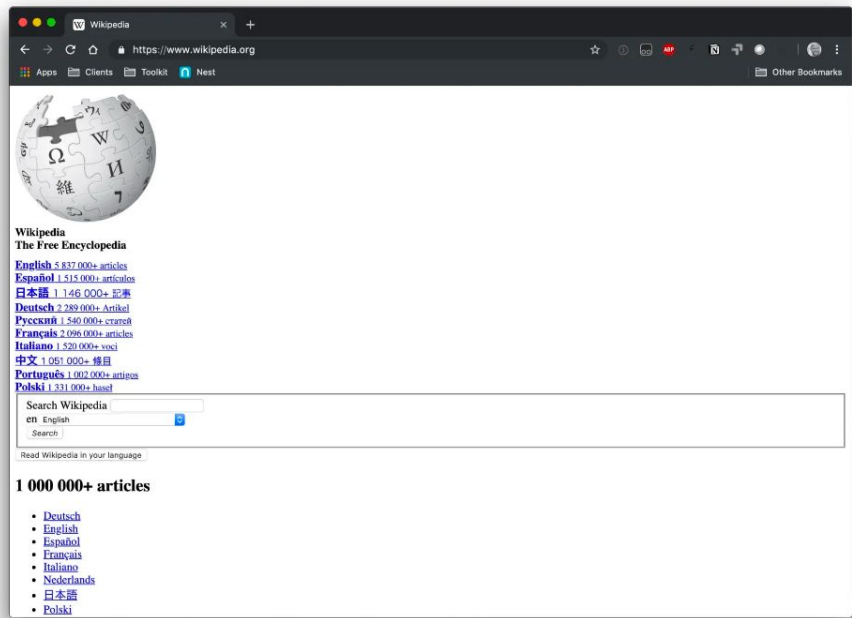
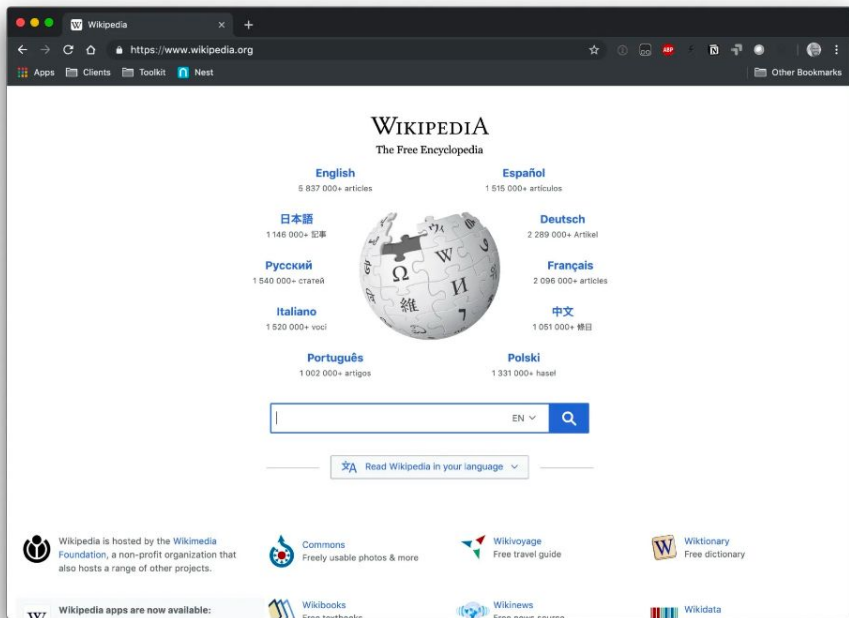
HTML course: Lesson 4



CSS: Lesson Plan

1. What is CSS
2. Where to write
3. How to write
4. How it will be applied





Cascading style sheet

- is a style sheet language used for specifying the presentation and styling of a document written in a markup language such as HTML

Describes how elements should be displayed on various media such as screens, paper, speech, or other media.



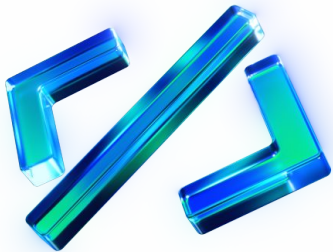
Connecting styles

1. Inline
2. Embedded
3. External

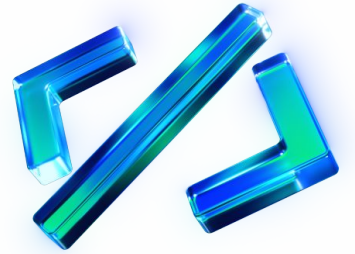


Inline styles

```
<p style="color: red; font-size: 14px;">text</p>
```

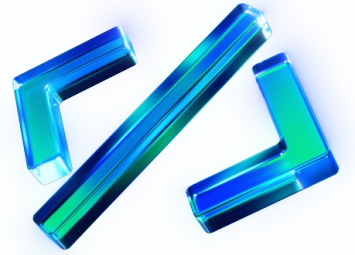


Embedded styles

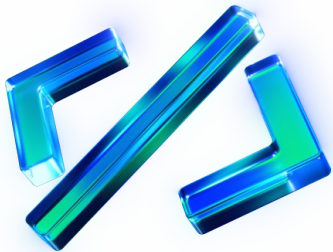


```
<head>
  <style>
    p {
      color: red;
      font-size: 14px;
    }
  </style>
</head>
```

External styles



```
<head>  
  <link rel="stylesheet" href="styles.css">  
</head>
```



Connecting styles

1. Inline
2. Embedded
3. External



CSS Rules

Selectors are expressions that tell the browser which HTML element to apply the CSS properties defined within the style block.

Inside a **rule**, **selectors** and **declaration blocks** are defined, consisting of **properties** and their **values**.



Types of

Selectors

- Tag Selector

`h1 {}`

- Class Selector

`.main-heading {}`

- ID Selector

`#reasons-section {}`

- Attribute Selector

`a[href] {}`

- Pseudo-classes

`a:hover {}`

- Pseudo-elements

`p::first-line {}`

- Universal Selector

`* {}`

- Grouped Selectors

`h1, .heading {}`

Selector Combinators

descendant combinator	space	body article p	elements are nested inside each other	<pre><body> <article> <p></p> </article> </body></pre>	<pre><body> <section> <p></p> </section> <p></p> </body></pre>
child combinator	>	article > p	an element is an immediate child	<pre><article> <p></p> <a> </article></pre>	<pre><article> <div> <p></p> </div> <p></p> </article></pre>
adjacent sibling combinator	+	p + img	an element that comes immediately after	<pre><article> <p></p> <a> </article></pre>	<pre><article> <p></p> <a> </article></pre>
general sibling combinator	~	p ~ img	an element located anywhere below in the code, inside a common parent	<pre><article> <p></p> <a> </article></pre>	<pre><article> <p></p> <a> </article></pre>

Selector

Combinations

<u>p {}</u>	<pre><p class="intro module"></p> <div class="intro"></div> <p class="default-text"></p></pre>
<u>p a {}</u>	<pre><p> <div> <a> <a> </p> </div></pre>
<u>.intro {}</u>	<pre><p class="intro"></p> <div class="intro"></div></pre>
<u>div.intro {}</u>	<pre><p class="intro"></p> <div class="intro"></div></pre>
<u>.intro.module {}</u>	<pre><p class="module"></p> <p class="module intro"></p> <p class="intro module"></p> <p class="intro"></p></pre>

<u>.intro .module {}</u>	<pre><p class="intro module"></p> <div class="intro module"> <p class="module"></p> </div></pre>
<u>.intro .module {}</u>	<pre><p class="intro"></p> <div class="module"></div></pre>
<u>.intro {}</u> \neq <u>.Intro {}</u>	<pre><p class="intro"></p> <div class="Intro"></div></pre>
<u>.nav ul li a {}</u>	<u>.nav a {}</u>
<u>/* comment */</u>	
<p>Selectors are read from right to left</p> <p>nav ul li {}</p>	<p>The rule applies to the li element, which is part of the ul element, which is inside the nav element.</p>

Applying Styles from different sources

1

Browser Styles

2

User Styles

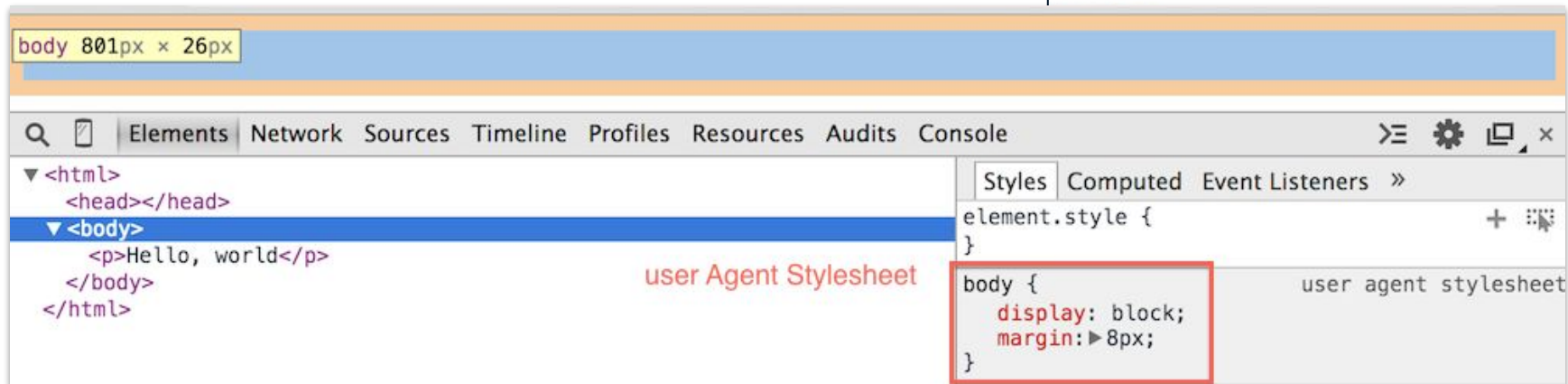
3

Author Styles

Default Browser Styles

User agent stylesheet

– styles present in any browser.



Способ приготовления

Шаг 1



Как получить миндальную муку:

- Миндальная мука можно приготовить следующим образом:
- В магазине, где продают орехи можно попросить, чтобы их смолотли в муку (они это делают в кофемолке).
- Просеять ее.
- Миндаль должен быть очищенным, если вы делаете белые макарруны.
- Если шоколадные макарруны, то можно миндаль брать обычный.

Как делать муку для макаррун:

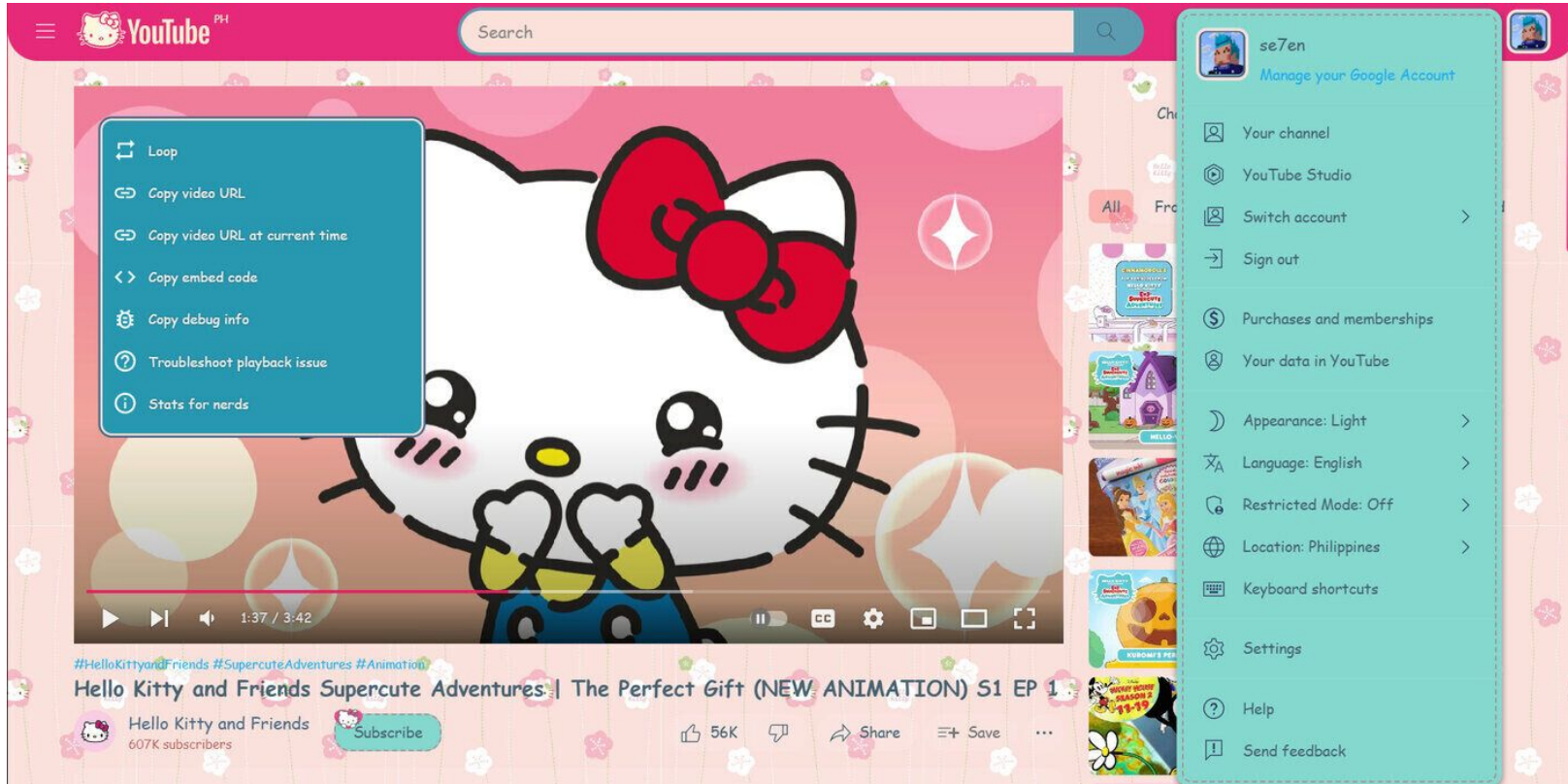
1. Нагреть духовку до 150 градусов.
2. Смешать миндальную муку, сахарную пудру и какао в комбайне, 2 минуты.
3. Противень застелить бумагой для выпечки высыпать сухую смесь на лист, просушить в духовке в течение 5 минут.
4. Просеять через очень мелкое сито.

Шаг 2

- A. Приготовить ганаш.
- B. Сливки подогреть, добавить поломанный на кусочки шоколад.
- C. Размешать до полного растворения.
- D. Дать остыть и поставить в холодильник (желательно на ночь).

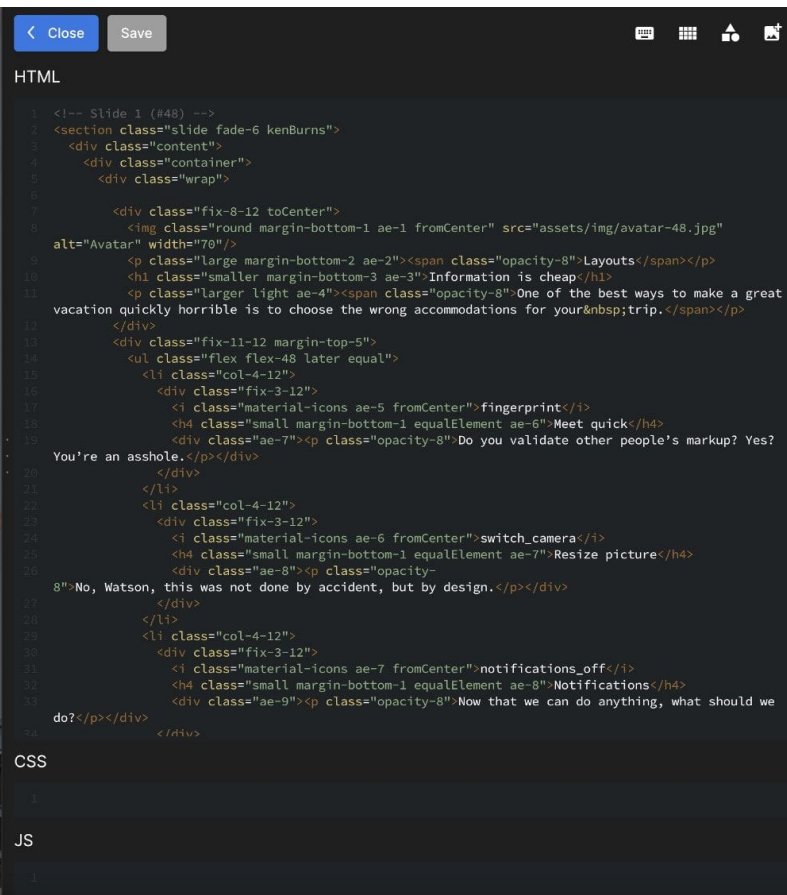
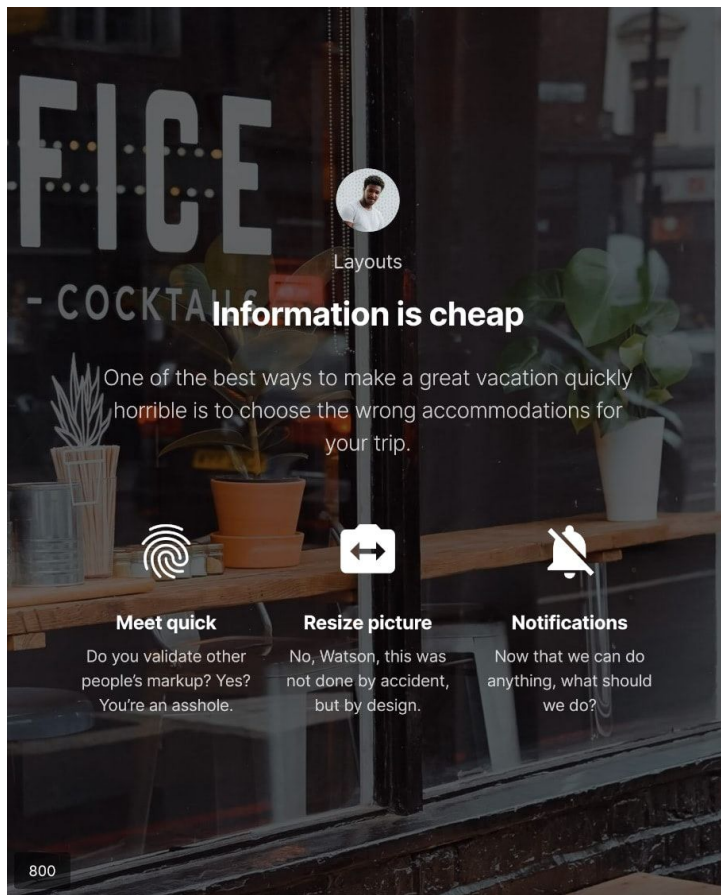
User styles

The user can customize fonts, colors, positions of links in the margins, and many other things.



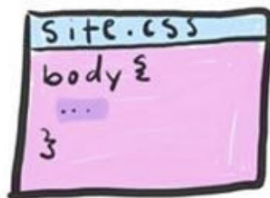
Author Styles

Site styles.





user
agent



author
styles



local
user

least
specific



most
specific

Reset and Normalize CSS

normalize.css

~~reset.css~~

- Saves useful default styles
- Makes styles equal for each browser
- Makes default styles more accessible
- Includes comments and documentation

Connects to your style file:

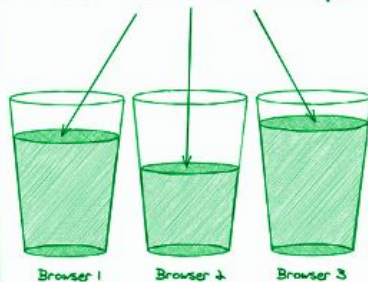
```
<link rel="stylesheet" type="text/css"
href="https://necolas.github.io/normalize.css">
```

Visualizing CSS Resets

Resets bring sanity when dealing with cross-browser style inconsistencies.

Imagine that browsers were glasses and default styles were water...

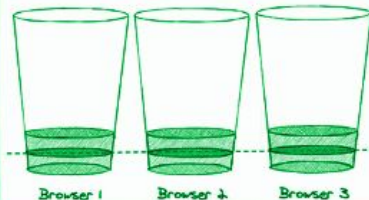
Each browser applies a slightly different set of default styles



CSS Reset

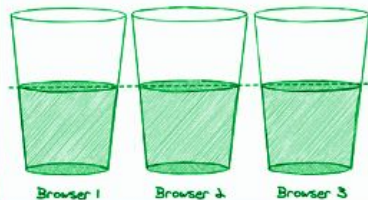
Removes most styles requiring devs to add consistent styles

■ REMAINING STYLES ■ DEV ADDED STYLES



CSS Normalize

Removes only inconsistent styles and keeps as many common styles as possible



elijahmanor.com/css-resets

@elijahmanor

Applying Styles from one source

1

Inheritance

2

Specificity

3

Cascading

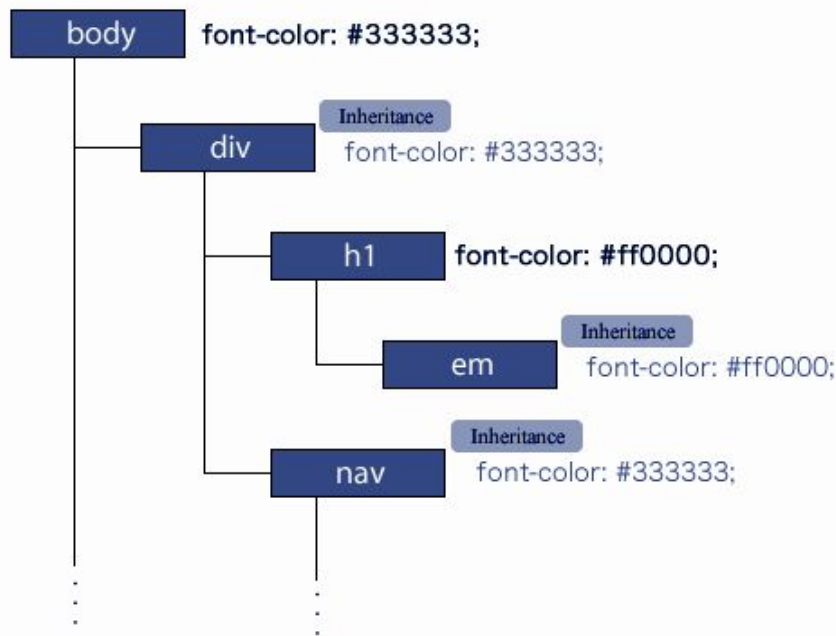
Style

Inheritance

- + Styles don't need to be applied to every element.
- + Styles don't need to define every property for each element.
- + CSS files can be smaller, easier to read, and load faster.
- + Only properties that simplify the developer's work are inherited.



– check manual to find inherited styles

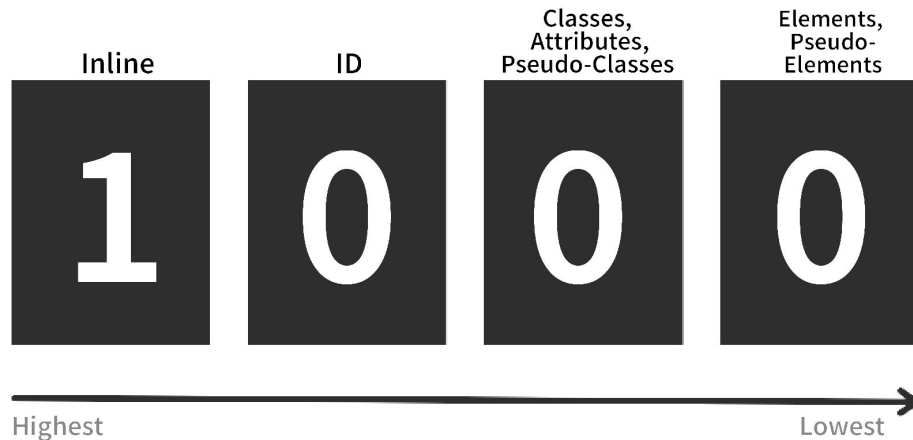


Specificity of selectors

Determines which styles will be applied to an element based on the selector's weight.

Avoid overusing weight; try to create lightweight selectors.

Selector nesting should be no more than three levels.



specificity = weight

universal selector * has no specificity weight (0)

What will be applied?

	important	inline styles	id	class, attribute, pseudo-class	elements, pseudo-elements	
	10000	1000	100	10	1	
<code>.card a:hover</code>	0	0	0	10+10	1	21
<code>.card .heading:before</code>	0	0	0	10*2	1	21
<code>body #block > .card</code>	0	0	100	10	1	111
<code>.card .heading .highlight + a[href]</code>	0	0	0	10*3+10	1	-
<code>body main #block .card h2 ~ a</code>	0	0	100	10	1*4	114
<code>.default-link {...!important}</code>	10000	0	0	10	0	10010
<code></code>	0	1000	0	0	0	1000
<code></code>	10000	1000	0	0	0	11000


Specificity of selectors

Examples

```
<body>
  <main>
    <section id="block">
      <article class="card">
        <h2 class="heading">
          <span class="highlight"></span>
        </h2>
        <a class="default-link">
```

Practice: Calculating specificity


#header h1 span a { }

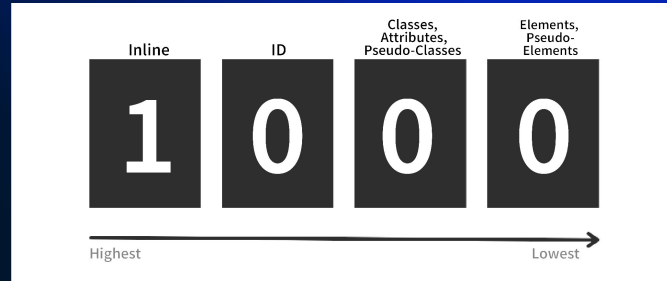
a =  x inline styles

$$b = \begin{bmatrix} 1 \\ A \end{bmatrix} \times ID$$

$c = 1 \times \text{classes}$

$d = 1 \times \text{elements}$

Specificity = 




```
.intro ::first-letter {
```

a =  x inline styles

$$b = 1 \times \text{IDs}$$

c =  x class


$d = \begin{bmatrix} 1 \\ \lambda \end{bmatrix}$ x pseudo-element

Specificity = 


```
a[href^="http:"] { }
```

a =  x inline styles

$$b = \begin{bmatrix} 1 \\ \vdots \\ 1 \end{bmatrix} \times \text{IDs}$$

c =  x attribute selector

$d = 1 \text{ \AA}$ x element

Specificity = 

Practice: Calculating specificity

`#header h1 span a { }`

a = 0 x inline styles
b = 1 x ID (*#header*)
c = 0 x classes
d = 3 x elements (*h1,span,a*)
Specificity = 0,1,0,3

`.intro ::first-letter { }`

a = 0 x inline styles
b = 0 x IDs
c = 1 x class (*.intro*)
d = 1 x pseudo-element (*::first-letter*)
Specificity = 0,0,1,1

`a[href^="http:"] { }`

a = 0 x inline styles
b = 0 x IDs
c = 1 x attribute selector (*[href^="http:"]*)
d = 1 x element (*a*)
Specificity = 0,0,1,1

Practice:

● What color will be applied to the text

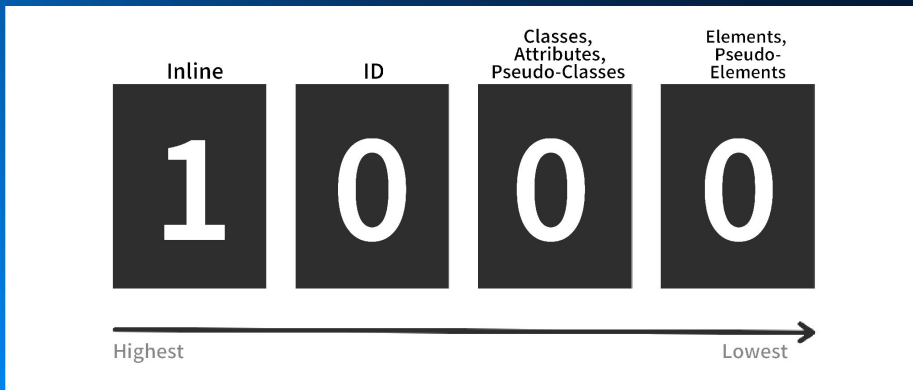
```
<div id="container">  
  <nav class="nav">  
    <p class="intro">
```

```
.nav p { color: yellow; }
```

```
p { color: blue; }
```

```
div#container p { color: purple; }
```

```
p.intro { color: orange; }
```



Practice:

● What color will be applied to the text

<code>.nav p { color: lime; }</code>	<code>0,0,1,1</code>
--------------------------------------	----------------------

<code>p { color: blue; }</code>	<code>0,0,0,1</code>
---------------------------------	----------------------

<code>div#container p { color: purple; }</code>	<code>0,1,0,2</code>
---	----------------------

<code>p.intro { color: green; }</code>	<code>0,0,1,1</code>
--	----------------------

Cascading

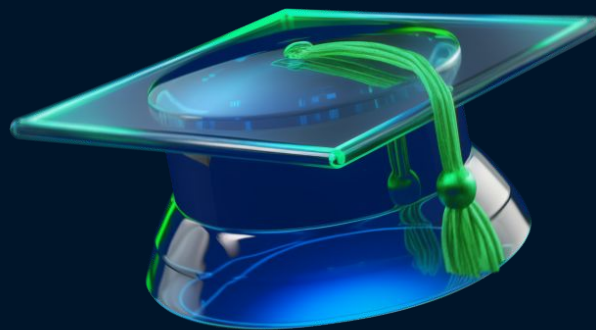
Styles

When selectors have the same weight,
the one defined later will be applied

```
/* green will be applied */  
h1 {  
    background-color: red;  
}  
h1 {  
    background-color: green;  
}
```

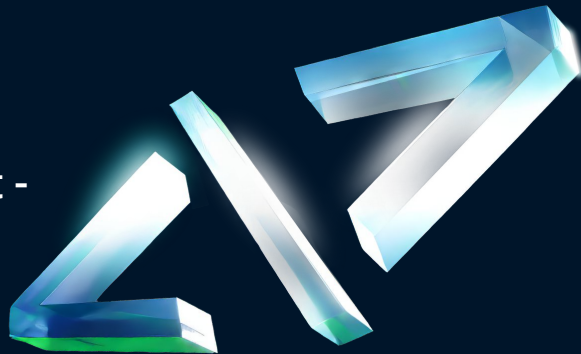
Summary

1. CSS syntax
2. What selectors are
3. The order in which styles are applied
4. How to link styles to a page
5. The purpose of a style normalizer



Homework

1. Add a font using Google Fonts.
2. Write basic styles for the marked-up blocks of the layout using Emmet right away:
 - font size / Line height / Font type / Font weight - font-*
 - Text color
 - Background color
3. **Optional:** Connect `normalize.css` to Binabox project as a separate file.



Quality Criteria for HTML Course

❤️ Mandatory for passing the course

💛 Required for the highest grade

💚 Optional

❤️ Single CSS File.

❤️ All fonts used in the design are connected to the pages.

❤️ Provide fallback fonts and family types at the end of the font list.

❤️ Do not use !important in CSS.

❤️ Do not use #id for styling.

💛 Include Normalize.css

💛 Avoid nesting selectors more than two levels deep.

💛 Avoid styling tags directly

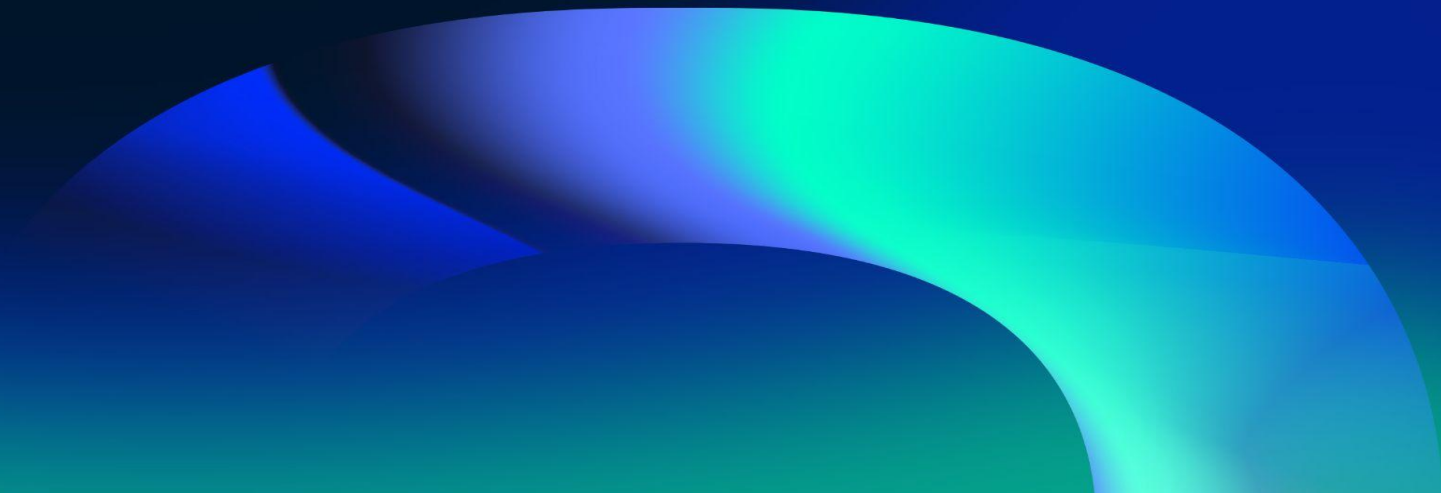
💛 Colors should be in a consistent format (hex or rgba).

B Academy
RO



QUESTIONS?

Please fill out the feedback form
It's very important for us





THANK YOU!

Have a good evening!