

Class 1: Recap

Course Description

Learn how to weave a range of online technologies into engaging interactive experiences. In this course, students will learn the basics of web technologies that are fundamental to building an online presence for any design project. Students will learn how to identify the current technologies underlying social media interfaces, mobile web applications that rely on browsers and apps. You will also gain an understanding of the fundamentals of markup languages (HTML, XML) as well as styling (CSS) and client-side programming (JS). These basic skills will be contextualized within a basic overview of interface design. With the knowledge built in this course students will begin to understand how to create responsive web-based projects that adapt to different devices and develop strategies for creating screen-based interfaces.

JavaScript

Class 1: Recap

Course Objectives

1. Demonstrate an understanding of the appropriate use of web technologies.
2. Apply the current standard in web formatting and programming.
3. Integrate technologies from a variety of web-services.
4. Plan and execute the design of a basic web-based application.
5. Develop an appreciation of the current culture and underlying issues of the web as networked medium as well its implications for artists and designers.

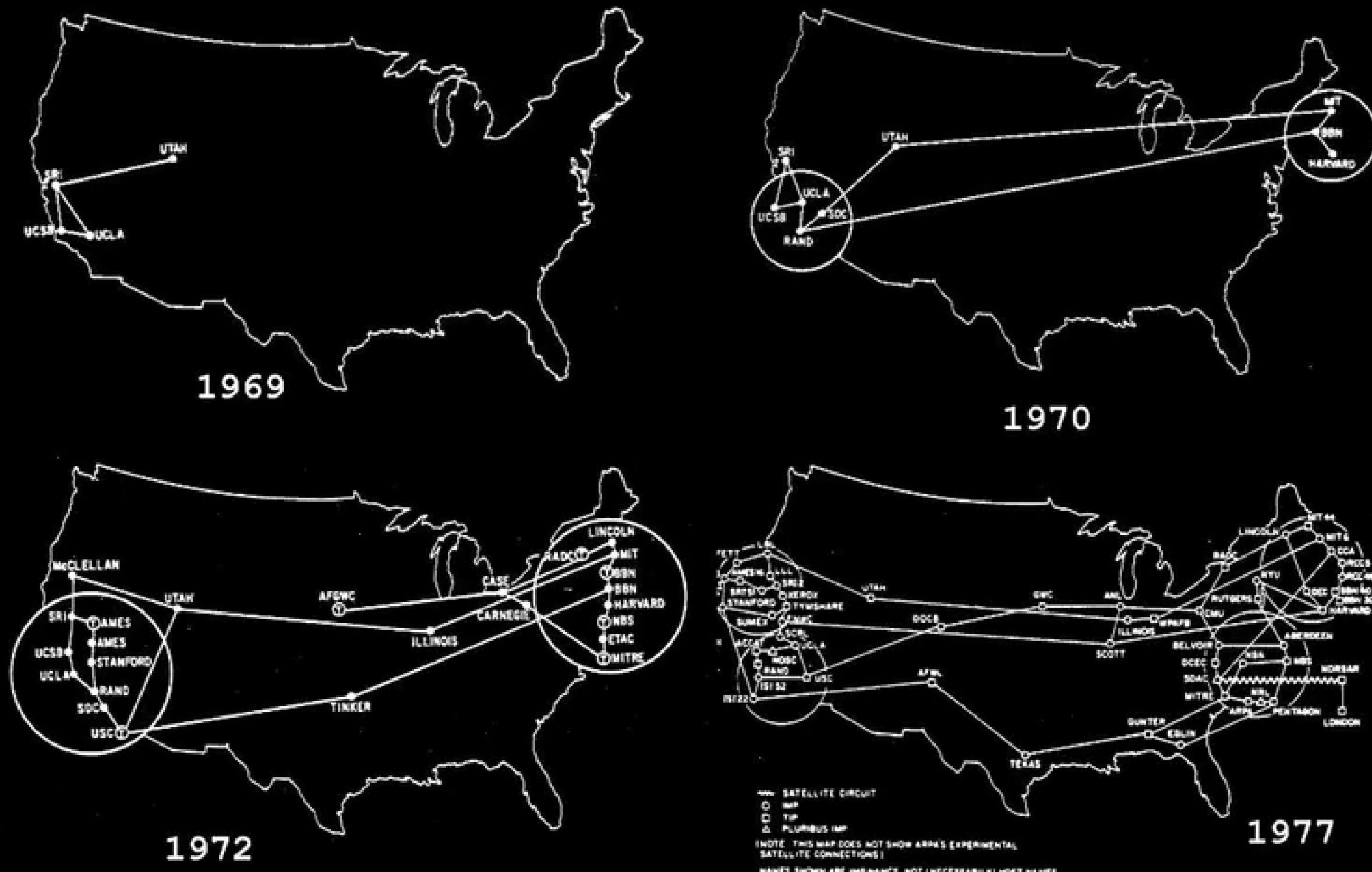
Class 1: Recap

Think of technology as a verb,
not a noun

Red Burns

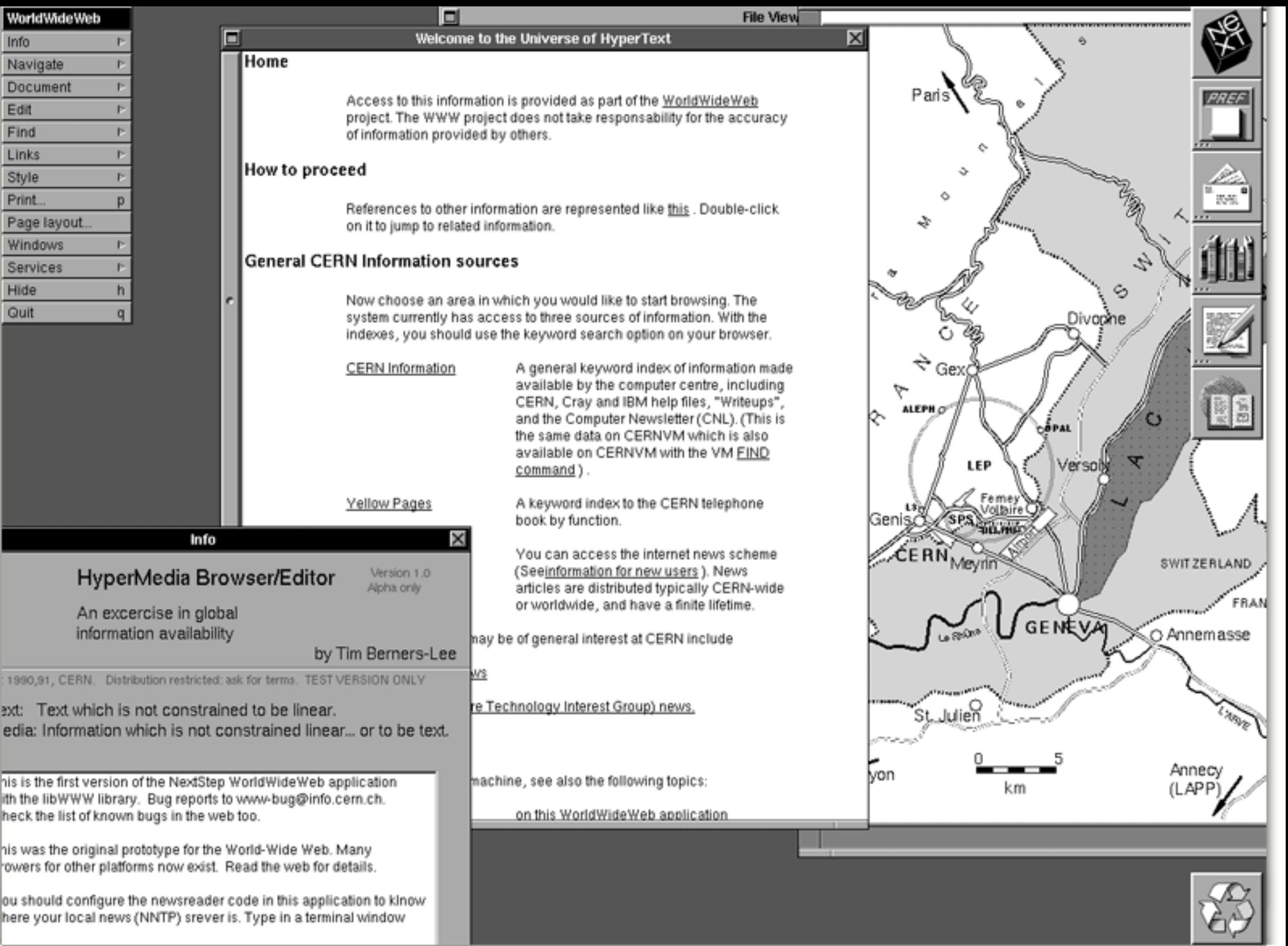
Sharing by default
Open Source by default

Class 1: Recap



The Advanced Research Projects Agency Network (ARPANET)

Class 1: Recap

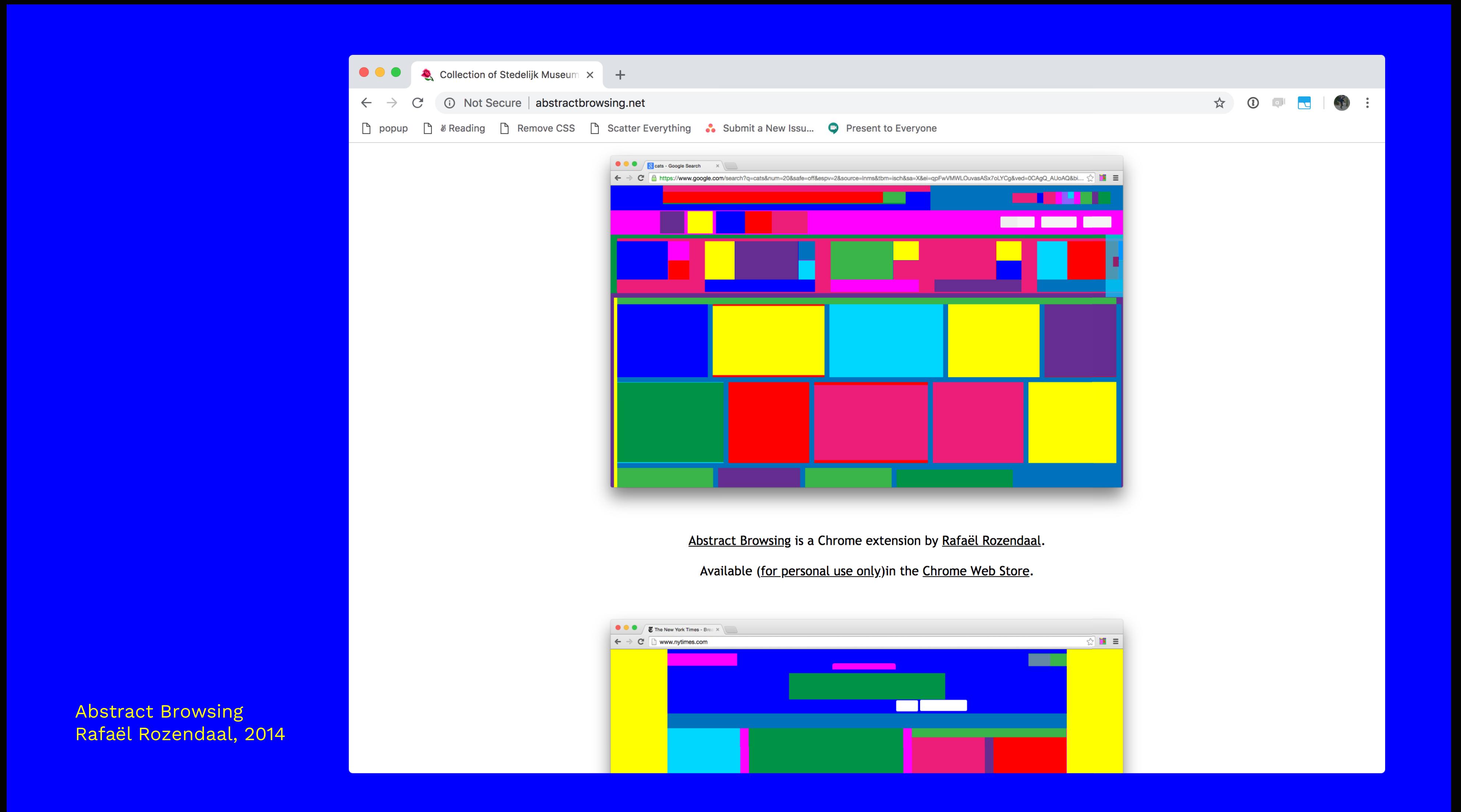


Robert Cailliau
Tim Berners-Lee
WorldWideWeb browser

Class 1: Recap



Class 1: Recap



Class 1: Recap

Browsers

→ Chrome
Firefox
Safari
Edge
Opera

Brave
→ Beaker
UC
QQ

Class 1: Recap

Editors

→ Sublime Text

Atom

Visual Studio Code

Brackets

Light Table

Vim

Emacs

TextMate

Notepad++

Class 1: Recap

HTML Element

Example of three different kinds of elements.

```
<h1>Welcome to My Homepage</h1>
<p class="neat-style">A typical element!</p>
<a href="https://www.ocadu.ca">Enter</a>
```

→ For reference: <https://developer.mozilla.org/en-US/docs/Web/HTML/Element>

CSS Rule

Selector p {
display: block;
background: blue;
width: 500px;
height: 500px;
}

Class 1: Recap

HTML + CSS: Classes

The CSS class selector matches elements based on the contents of their class attribute.

```
.neat-style {  
    display: block;  
    background: blue;  
    width: 500px;  
    height: 500px;  
}
```

```
<p class="neat-style">  
    A typical element!  
</p>
```

Class 2: Frame and a Mirror

CSS: Box Model

```
width: 500px;  
height: 500px;
```

CSS: Box Model



CSS: Box Model

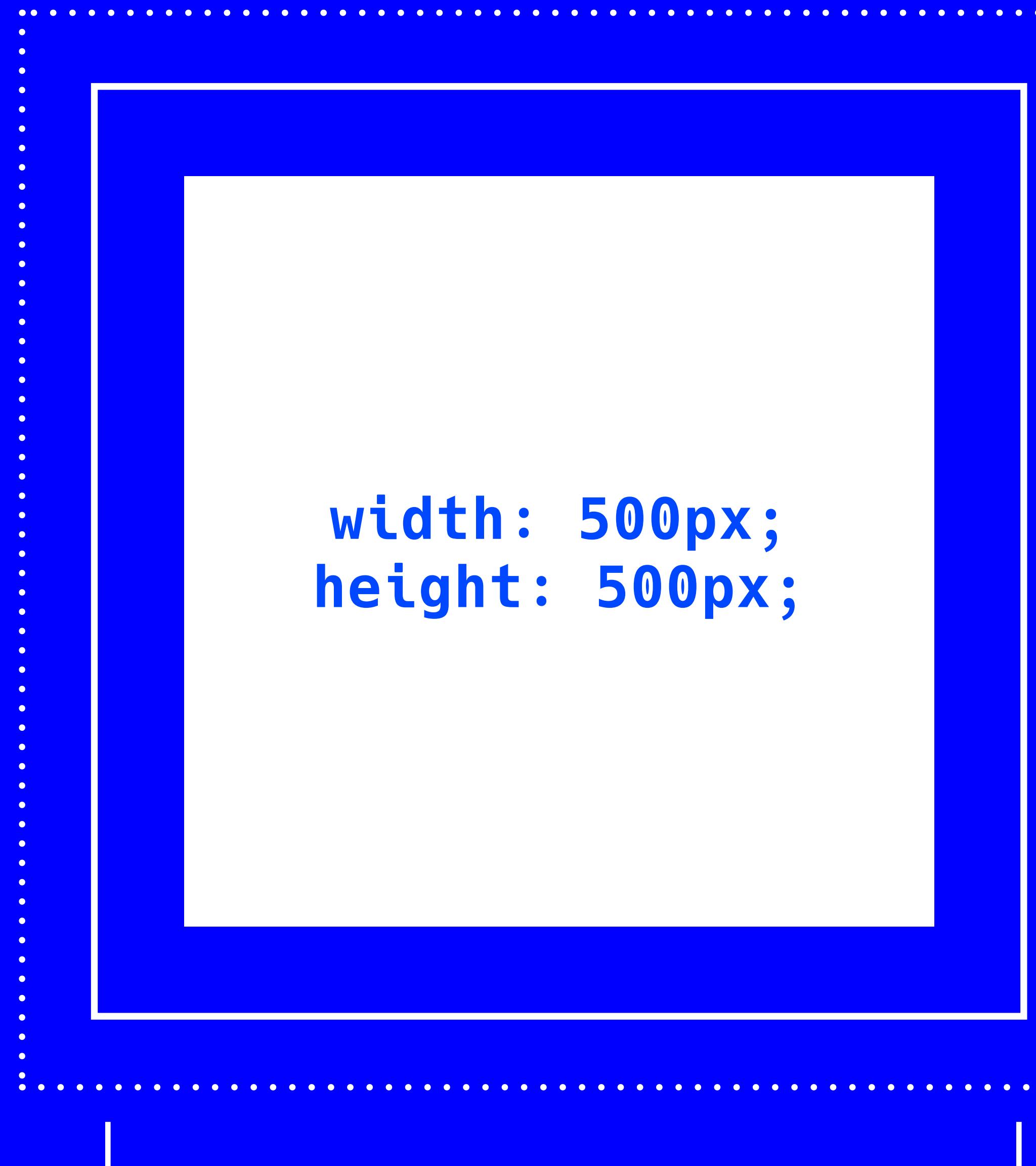


padding: 10px;
border: 1px solid white;

CSS: Box Model



CSS: Box Model

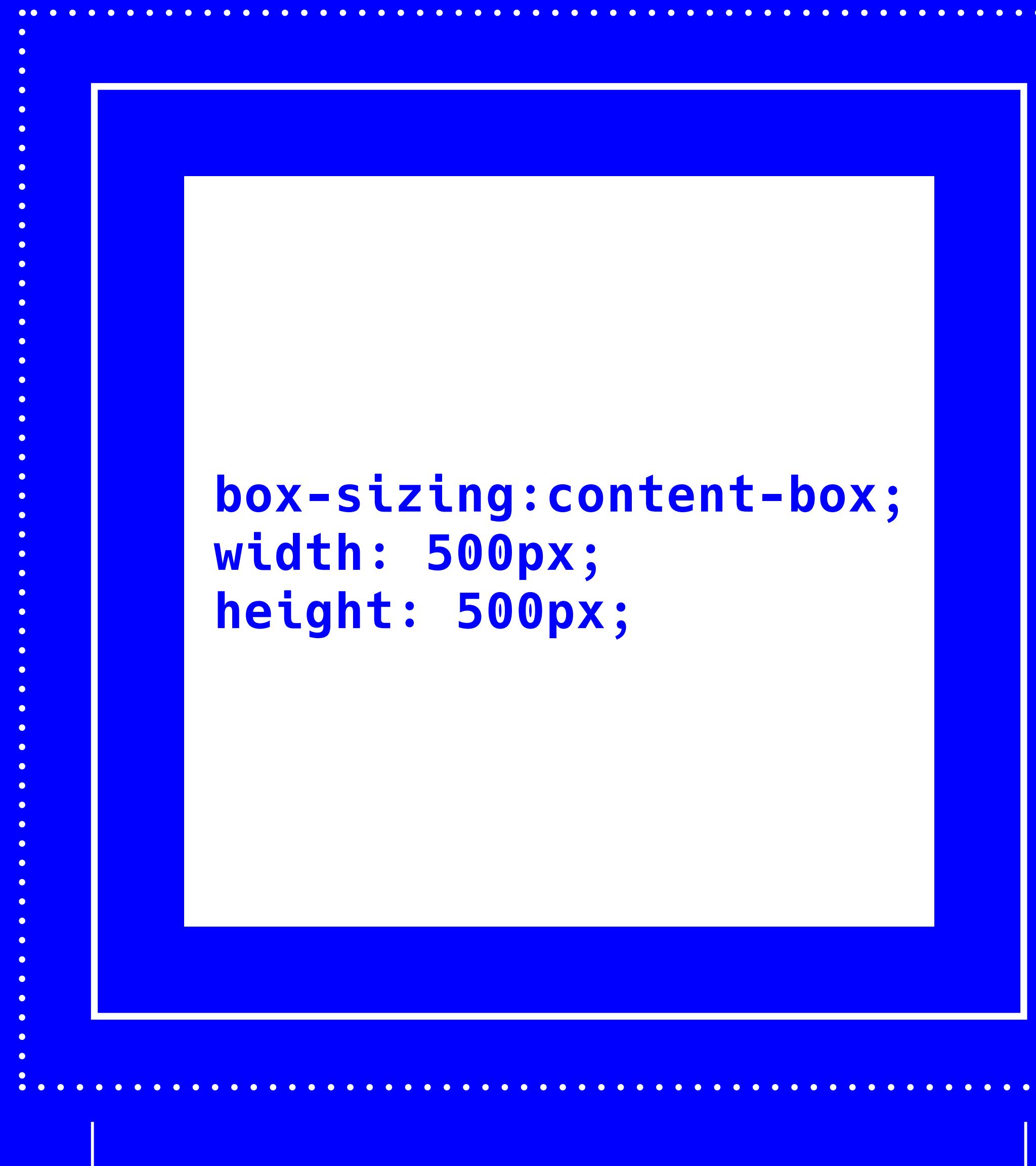


padding: 10px;
border: 1px solid white;

margin: 10px;

Total Width: 520px;

CSS: Box Model

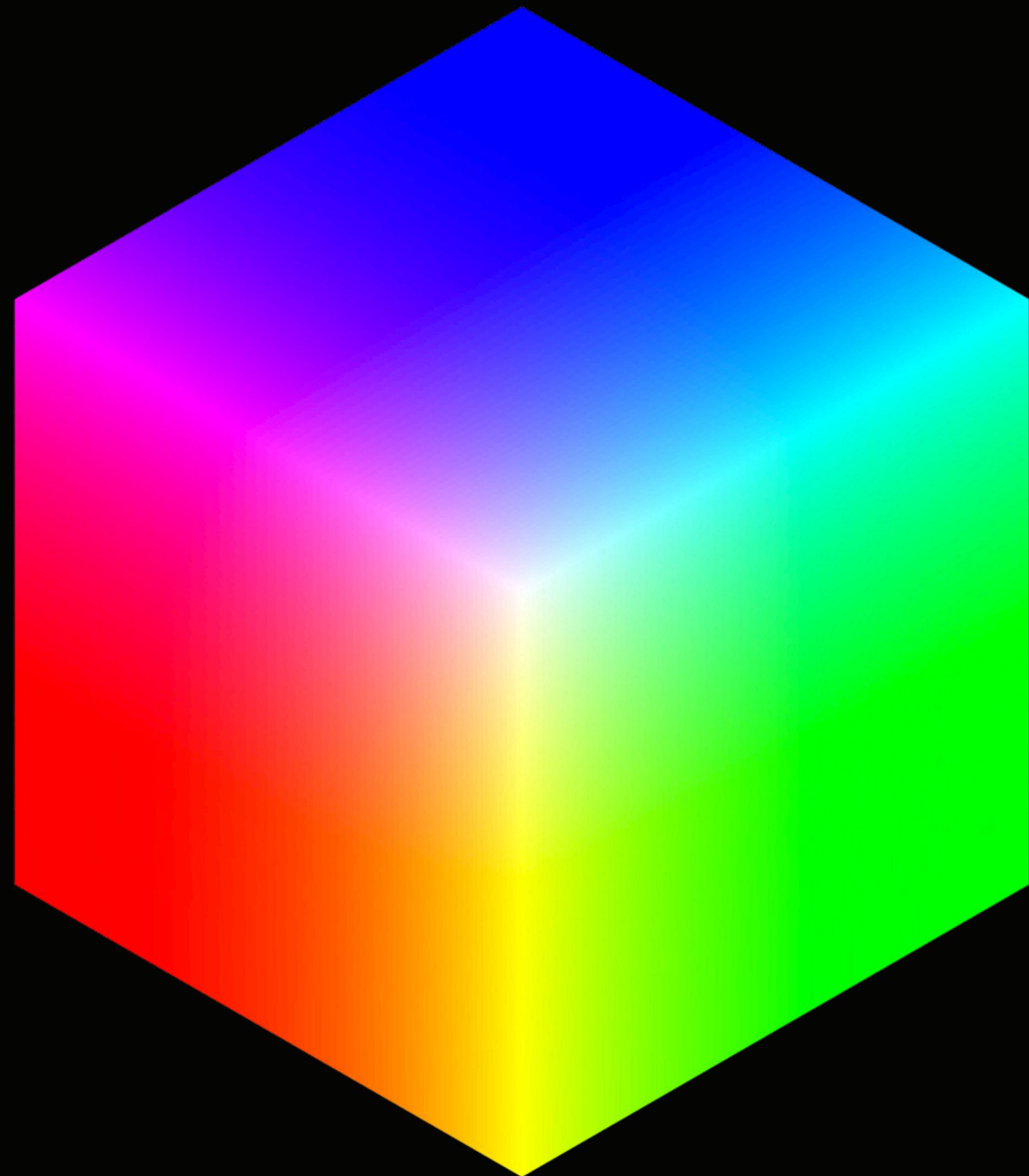


padding: 10px;
border: 1px solid white;

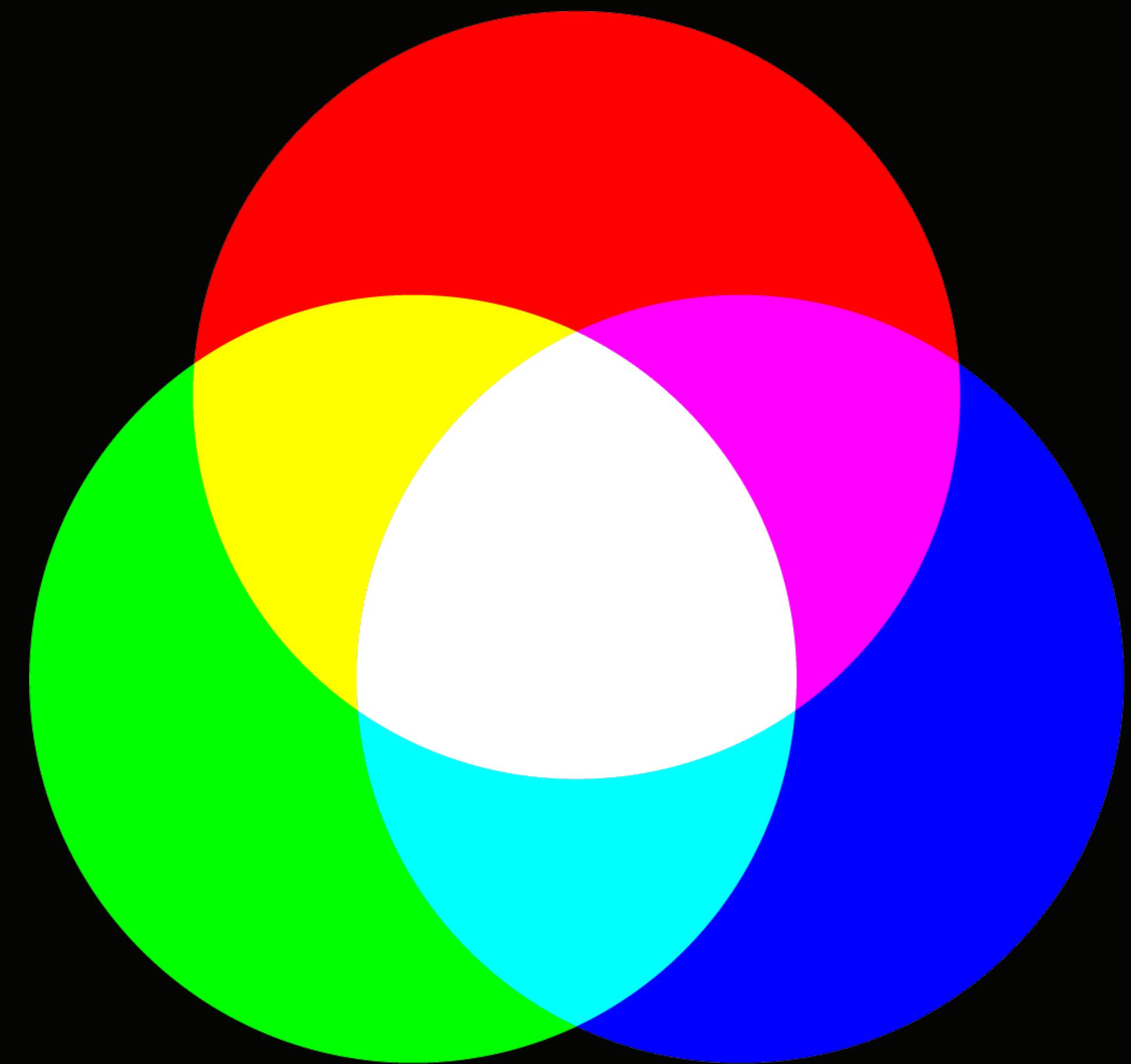
margin: 10px;

Total Width: 498px;

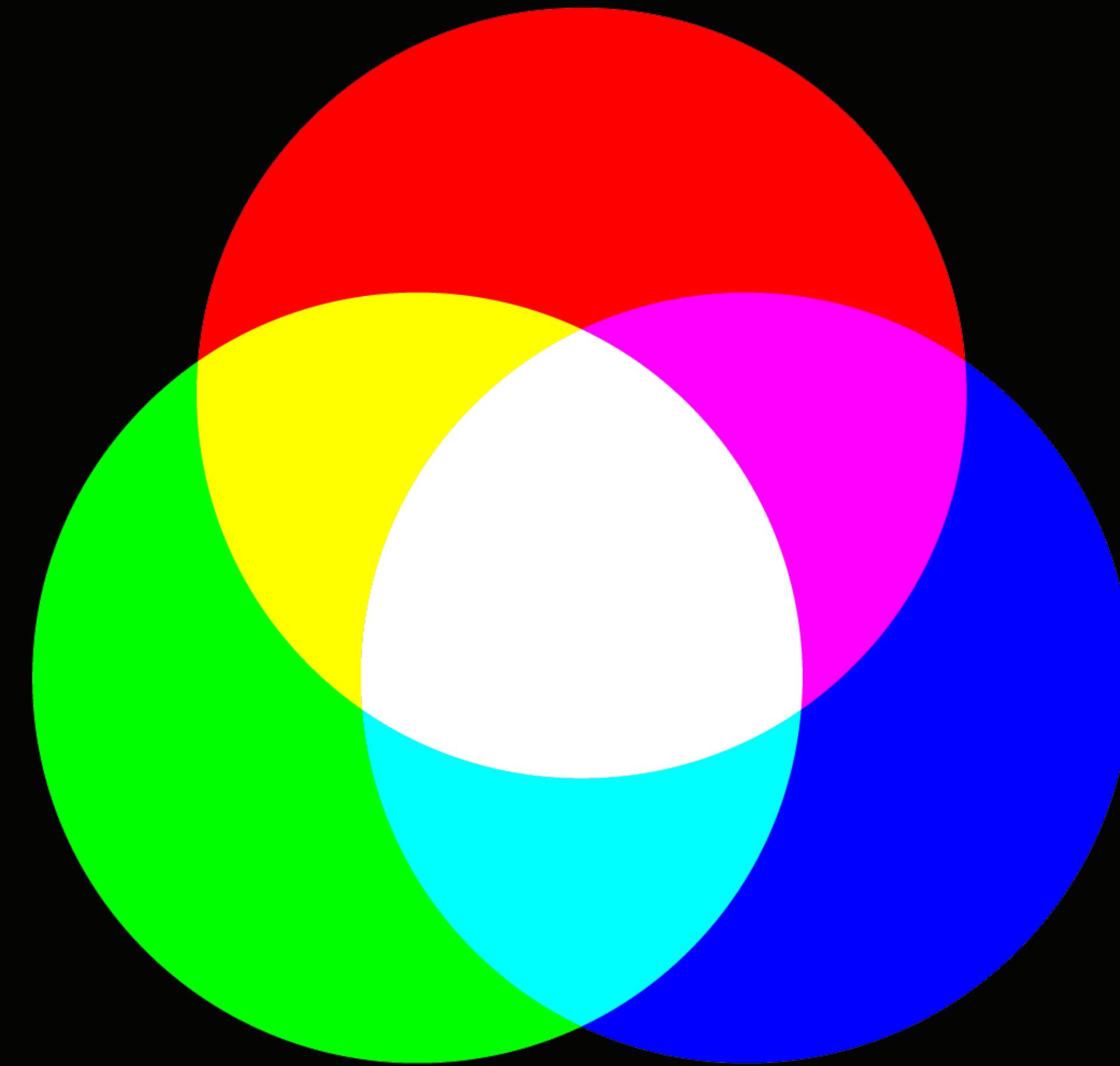
CSS: Color (American Spelling)



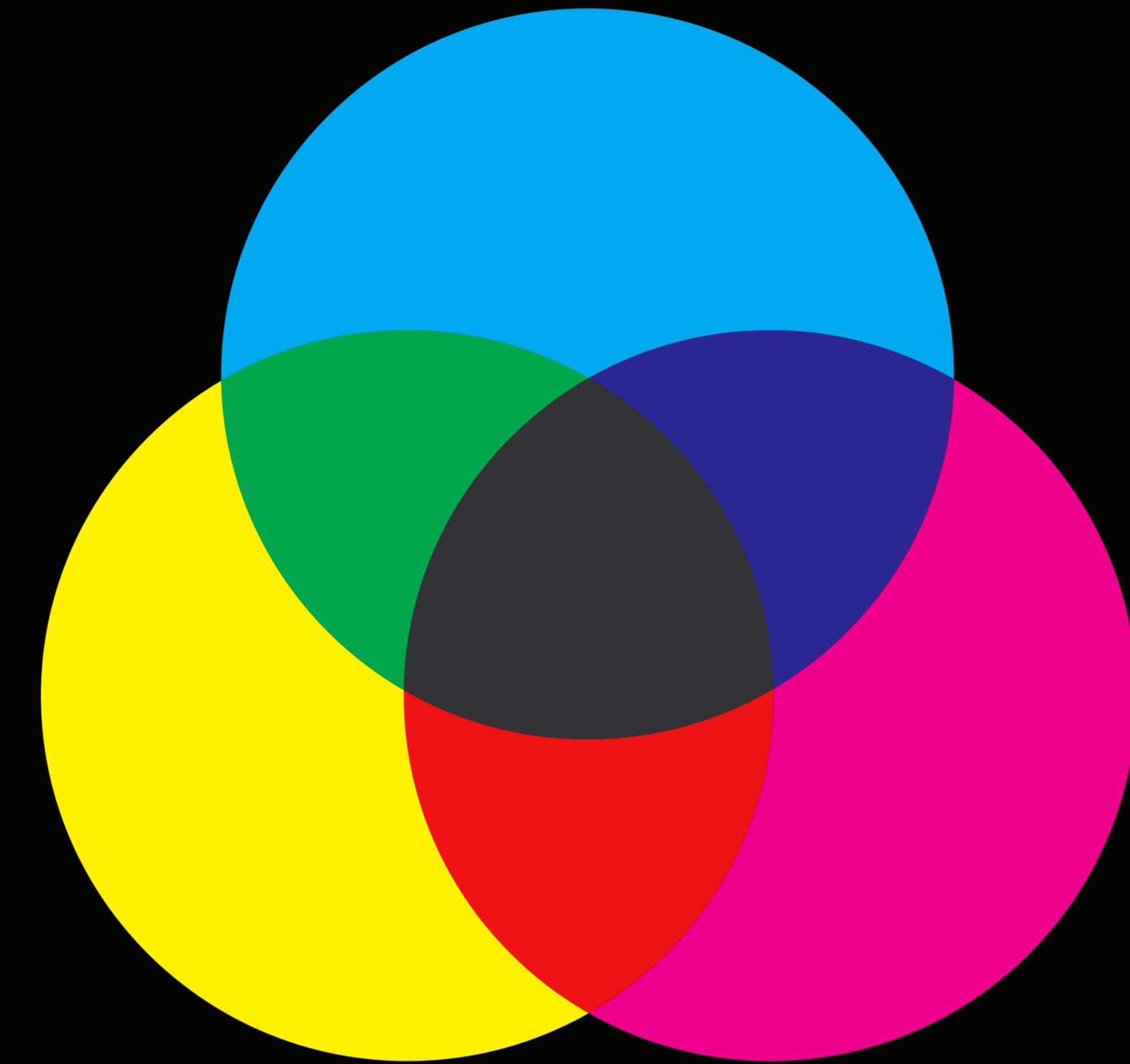
CSS: Color



CSS: Color



Additive



Subtractive

10^{-12} meters 10^{-9} 10^{-6} 10^{-3} 10^0 10^3

1 nanometer

1000 nanometer

1 millimeter 1 meter

1 kilometer

Cosmic rays

X-rays

Gamma rays

Ultraviolet (UV)

Microwaves

Infrared (IR)

Radio

Radar

Broadcast band



Short Wavelengths

Long Wavelengths

Ultraviolet (UV)

Visible Light

Infrared (IR)

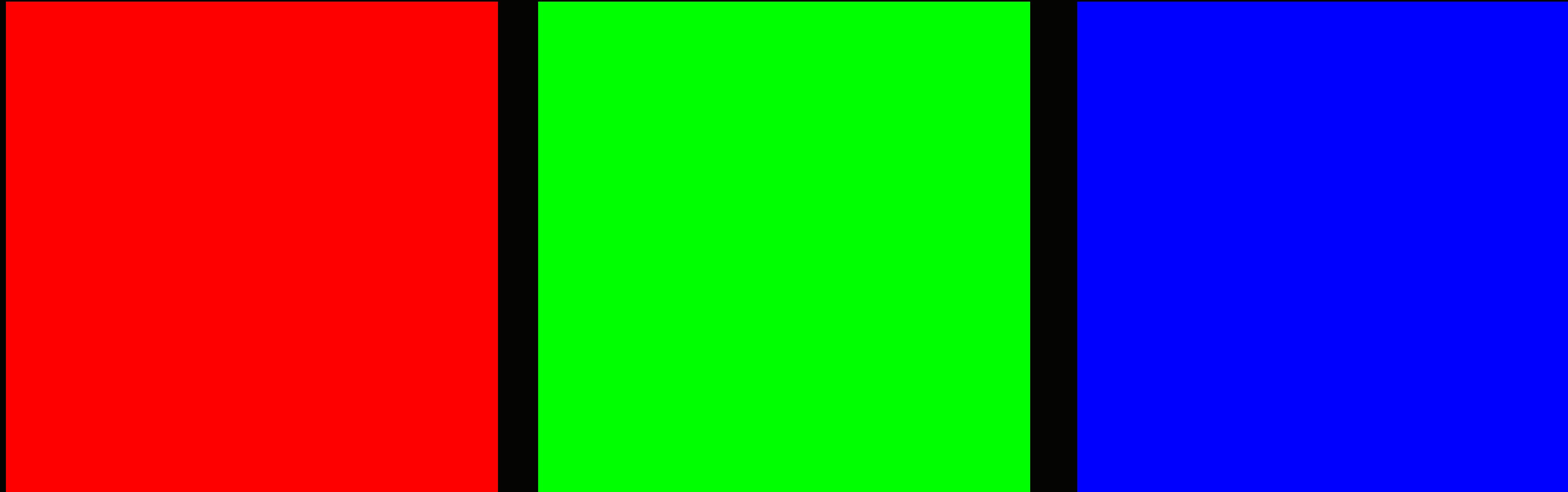
400 nanometers

500 nanometers

600 nanometers

700 nanometers

CSS: Color



CSS: Color

```
color: rgb(255,0,0);
```

```
color: rgb(0,255,0);
```

```
color: rgb(0,0,255);
```

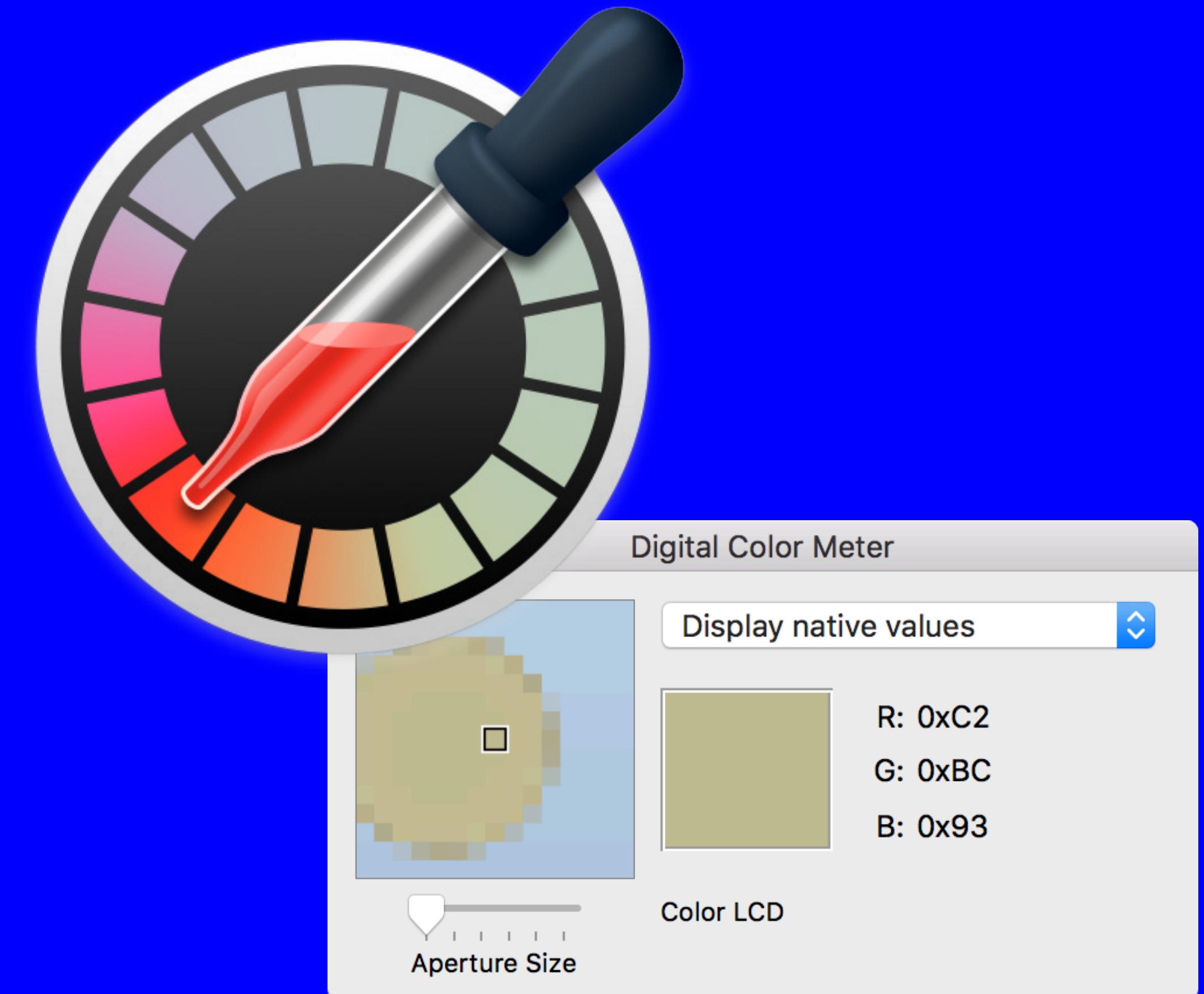
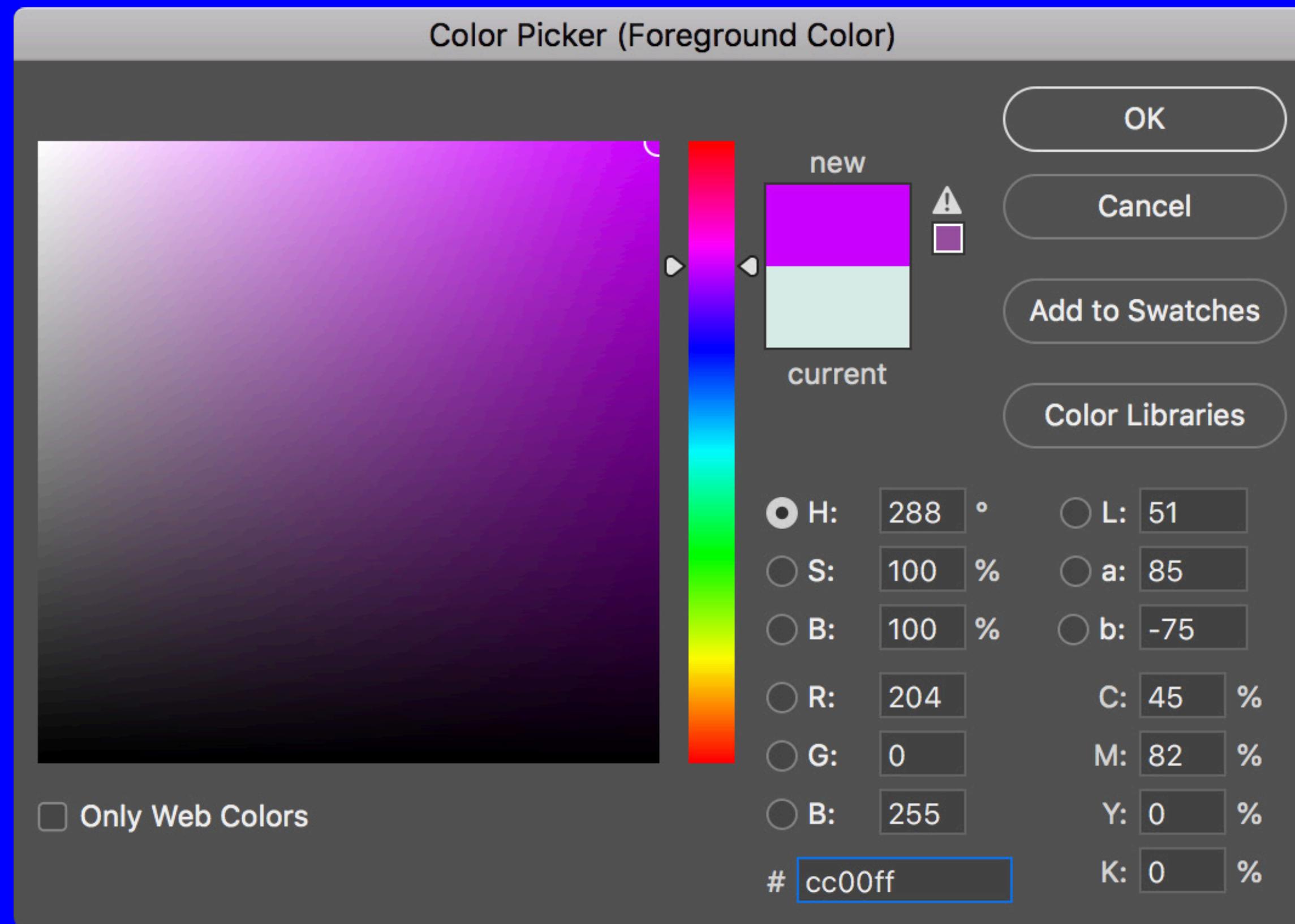
CSS: Color

color: #ff0000;

color: #00ff00;

color: #0000ff;

CSS: Color



CSS: Color

DevTools - jsfiddle.net/8qn42c63/9/

Elements Audits Console Sources Network Performance Memory Application Security Redux

Styles Computed Event Listeners DOM Breakpoints Properties Accessibility

Filter :hov .cls +

element.style { }
body { background: blue; }
body { background: black; }
*, *:before, *:after { box-sizing: border-box; }
body { display: block; margin: 8px; }
Pseudo ::before element { }
*, *:before, *:after { box-sizing: border-box; }
Pseudo ::after element { }
*, *:before, *:after { box-sizing: border-box; }

result-light.css:1
(index):24
(index):22
user agent stylesheet
(index):22
(index):22

html body #show-result #content #editor div div.panel-h.panel.resultsPanel iframe html body

Console Remote devices

result (fiddle.jshell....) Filter Default levels ▾ Group similar

1 message 16:35:30.584 498 (index):45

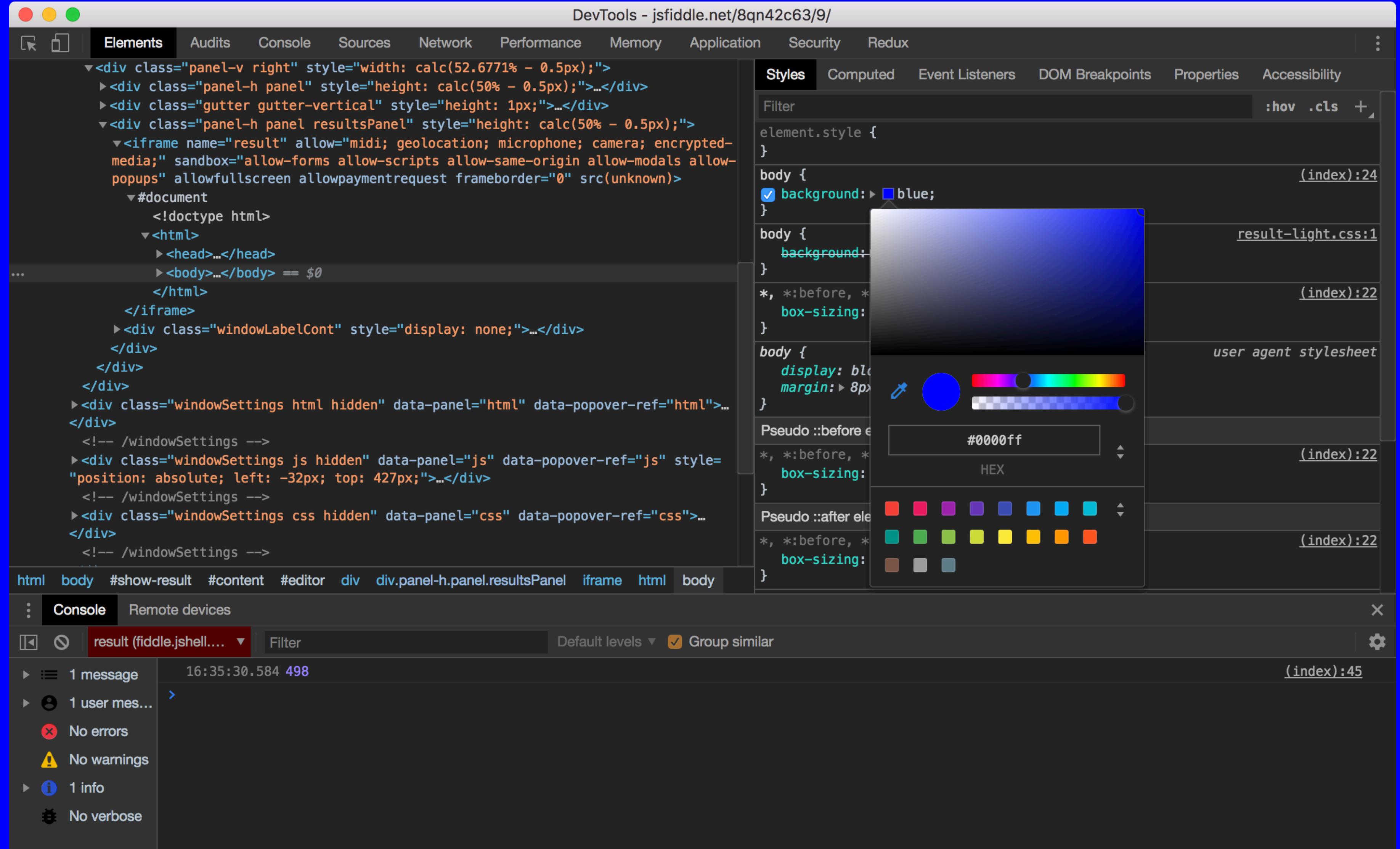
1 user message >

No errors

No warnings

1 info

No verbose



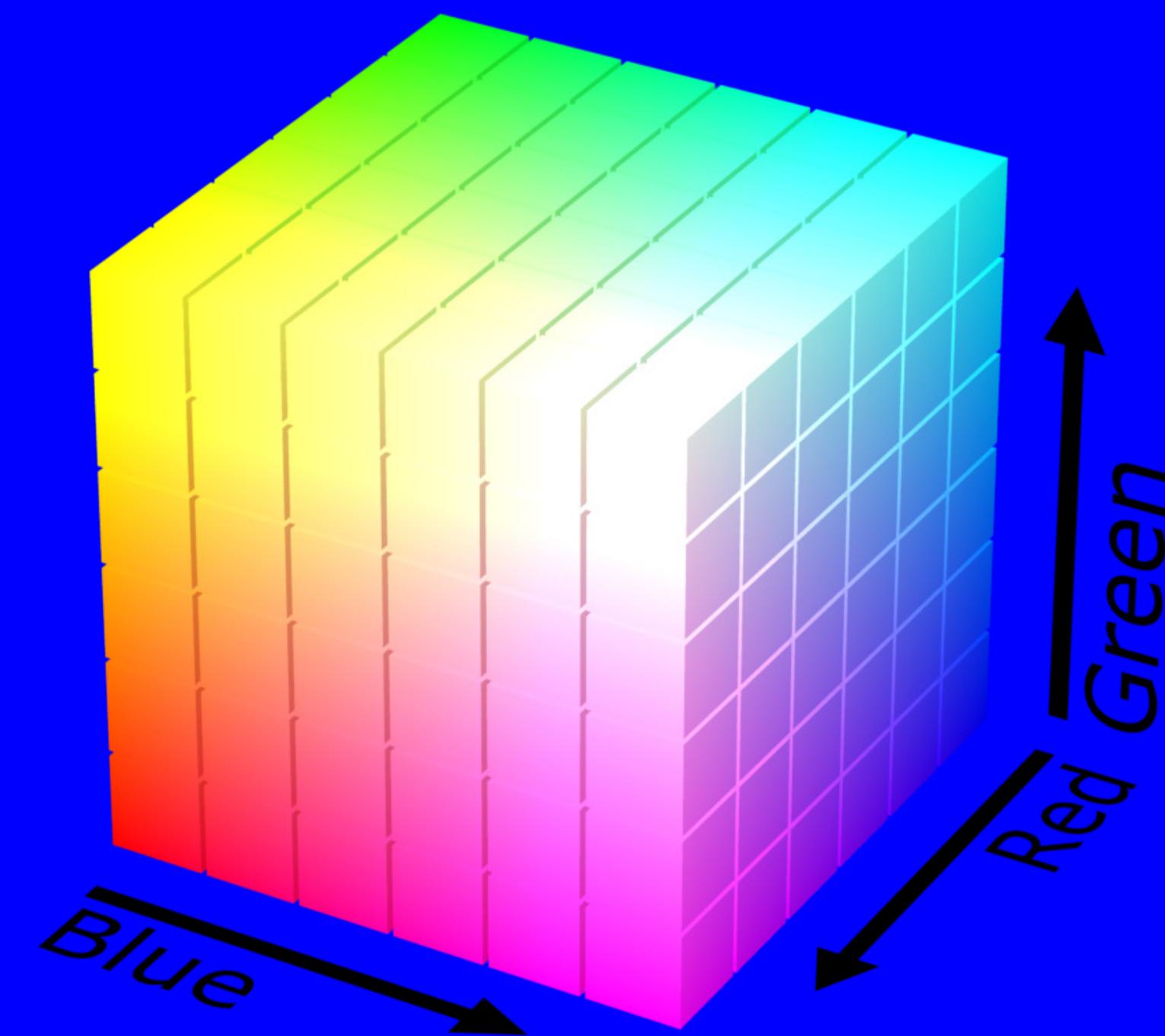
CSS: Color + Alpha

```
color: rgba(255, 102, 0, 0.4);
```

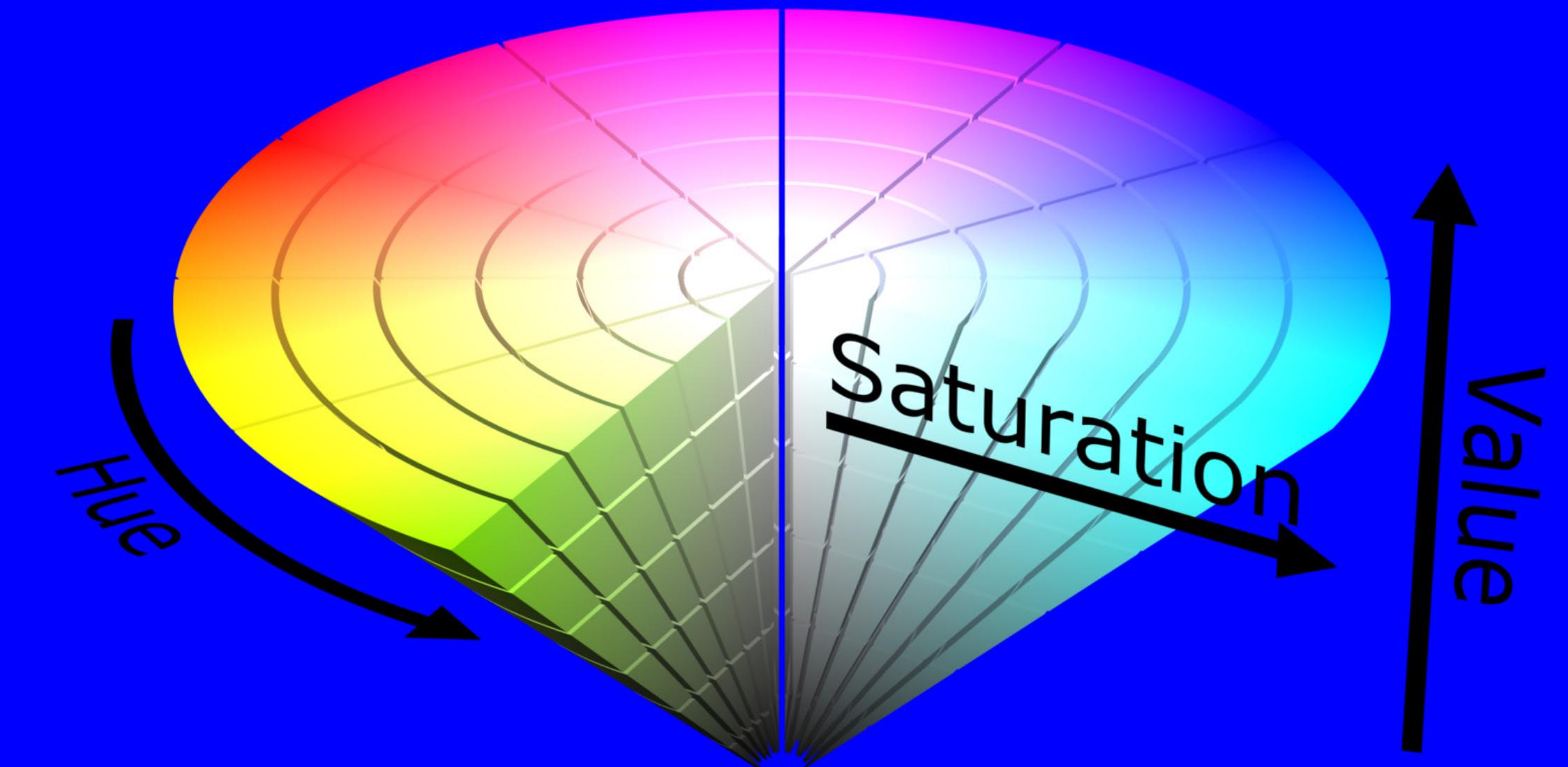
Value between 0-1



CSS: Color



color: `rgb(255, 102, 0);`



color: `hsl(24, 100%, 50%);`

CSS: Units of Measure

px the number of pixels

% relative to the parent element

em relative to the font size of the parent element

rem relative to the font size of the root element

vh relative to the height of the viewport

vw relative to the width of the viewport

→ For reference: <https://developer.mozilla.org/en-US/docs/Web/CSS/length>

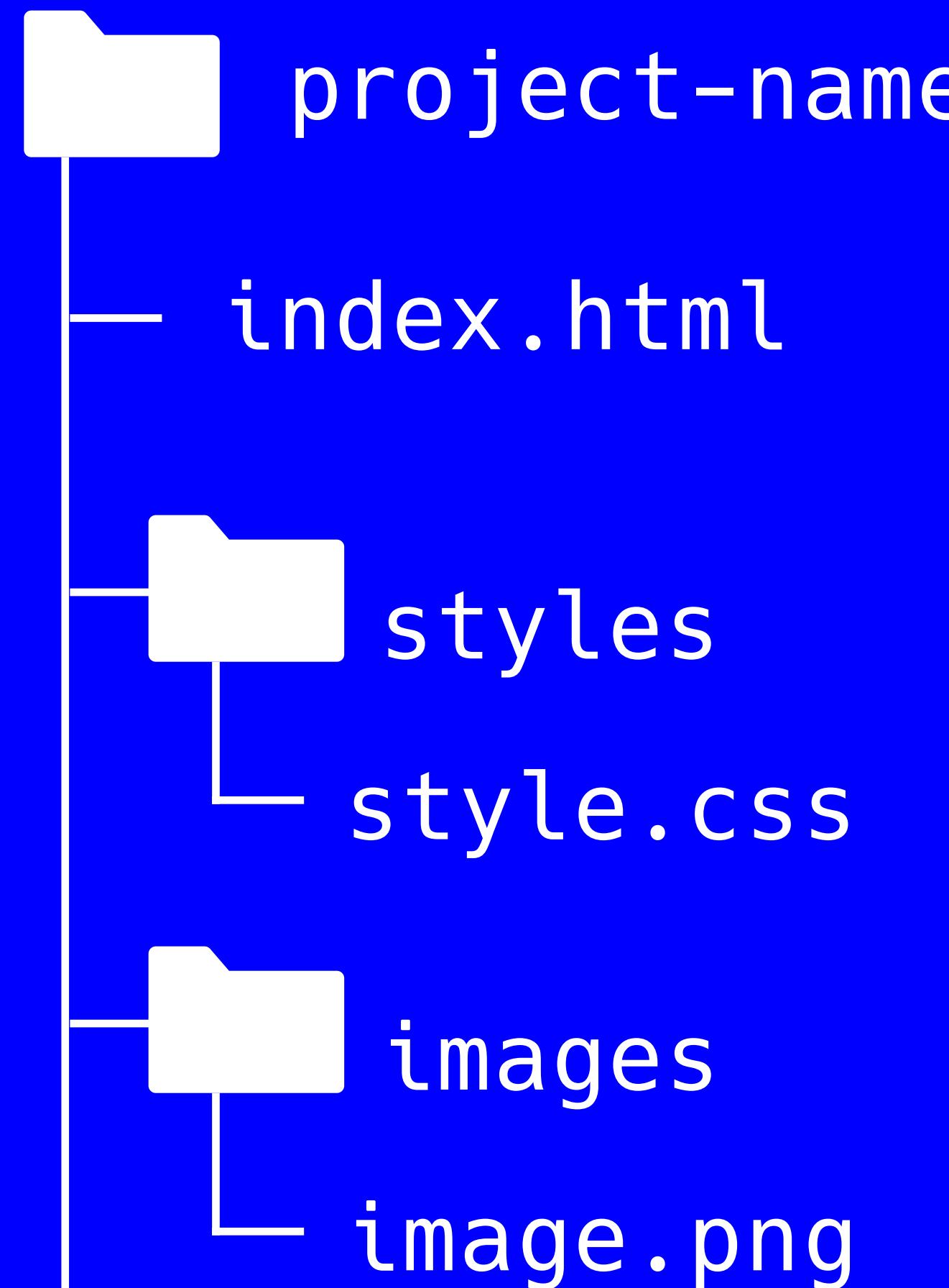
Files: HTML + CSS + JS + Images

Avoid developing projects on your desktop

Create a dedicated folder for each project

Create subfolders for your images, CSS, JavaScript, and fonts

Files: HTML + CSS + JS + Images



Files: HTML + CSS + JS + Images

Files in the same directory:

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

```
<a href="contact.html">
```

```

```

Files: HTML + CSS + JS + Images

Files in a subdirectory:

```
<link href="styles/style.css">
```

```

```

```
background:  
url('images/bg.jpg');
```

Files: HTML + CSS + JS + Images

Files above a directory

```
<a href=". /home.html">
```

```

```

```
background:  
url(' . /images/bg.jpg' )
```

Files: Hyperlinks

Link to an external (internet) page/resource:

```
<a href="http://[ . . . ]">
```

```

```

```
background:  
url('http://[ . . . ]')
```

→ Could be https://

Files: Naming Best Practices

camelCase.html

maybe-some-dashes.css

avoid spaces.jpg

BE CONSISTENT

Files: Comments

In HTML:

```
<!-- hidden from view -->
```

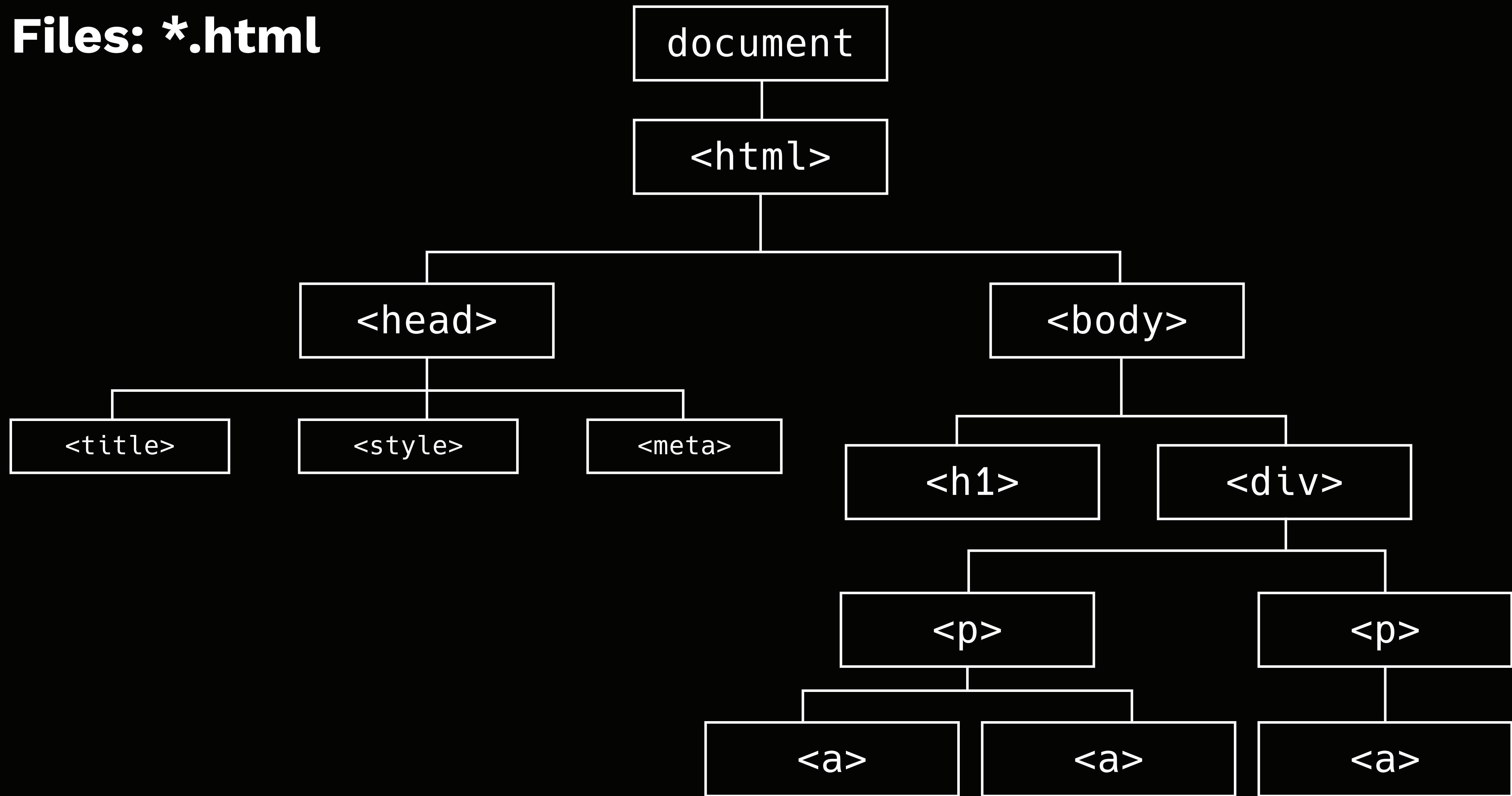
In CSS:

```
/* nothing here */
```

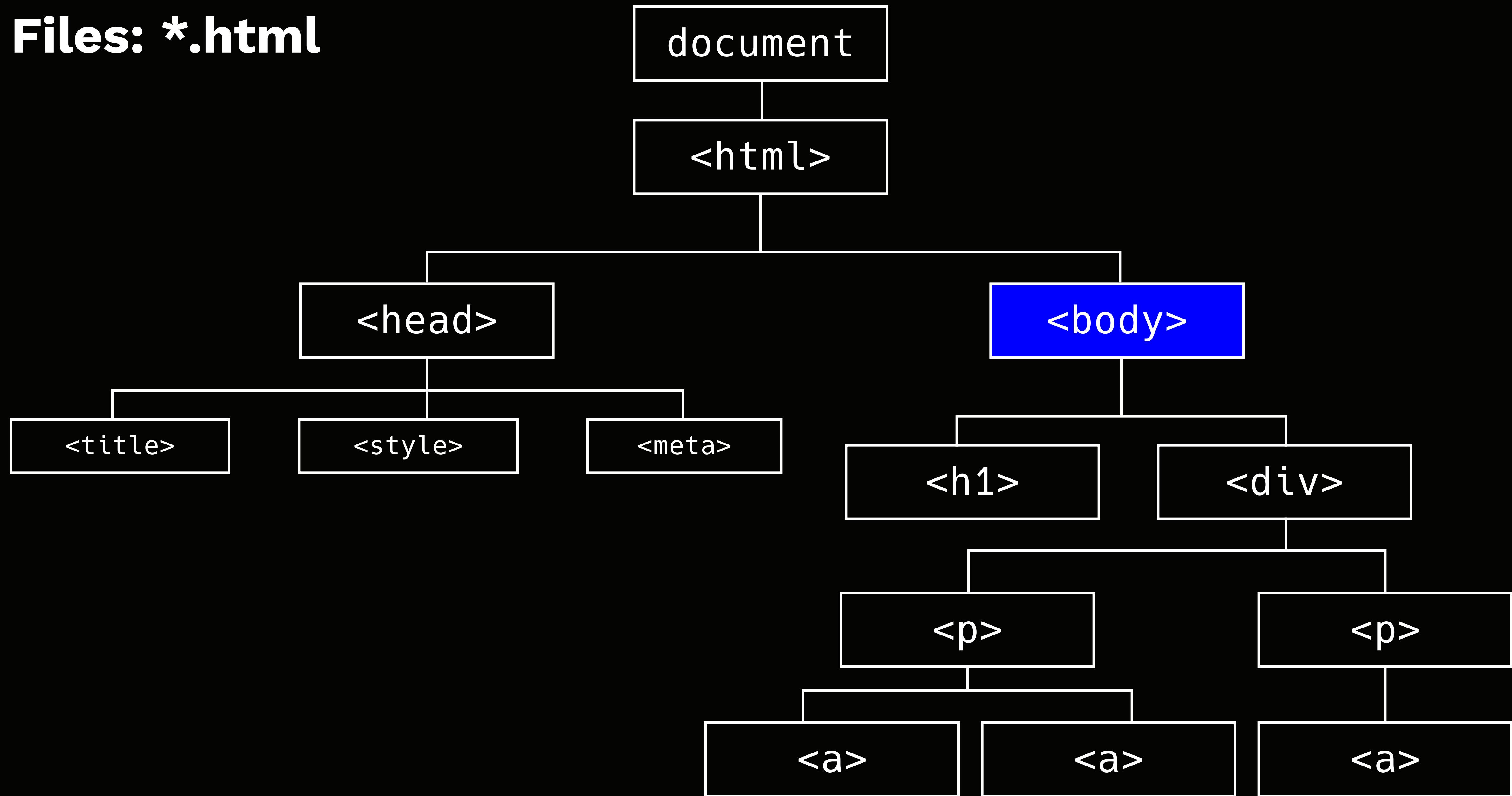
In JavaScript:

```
// at the start of each line
```

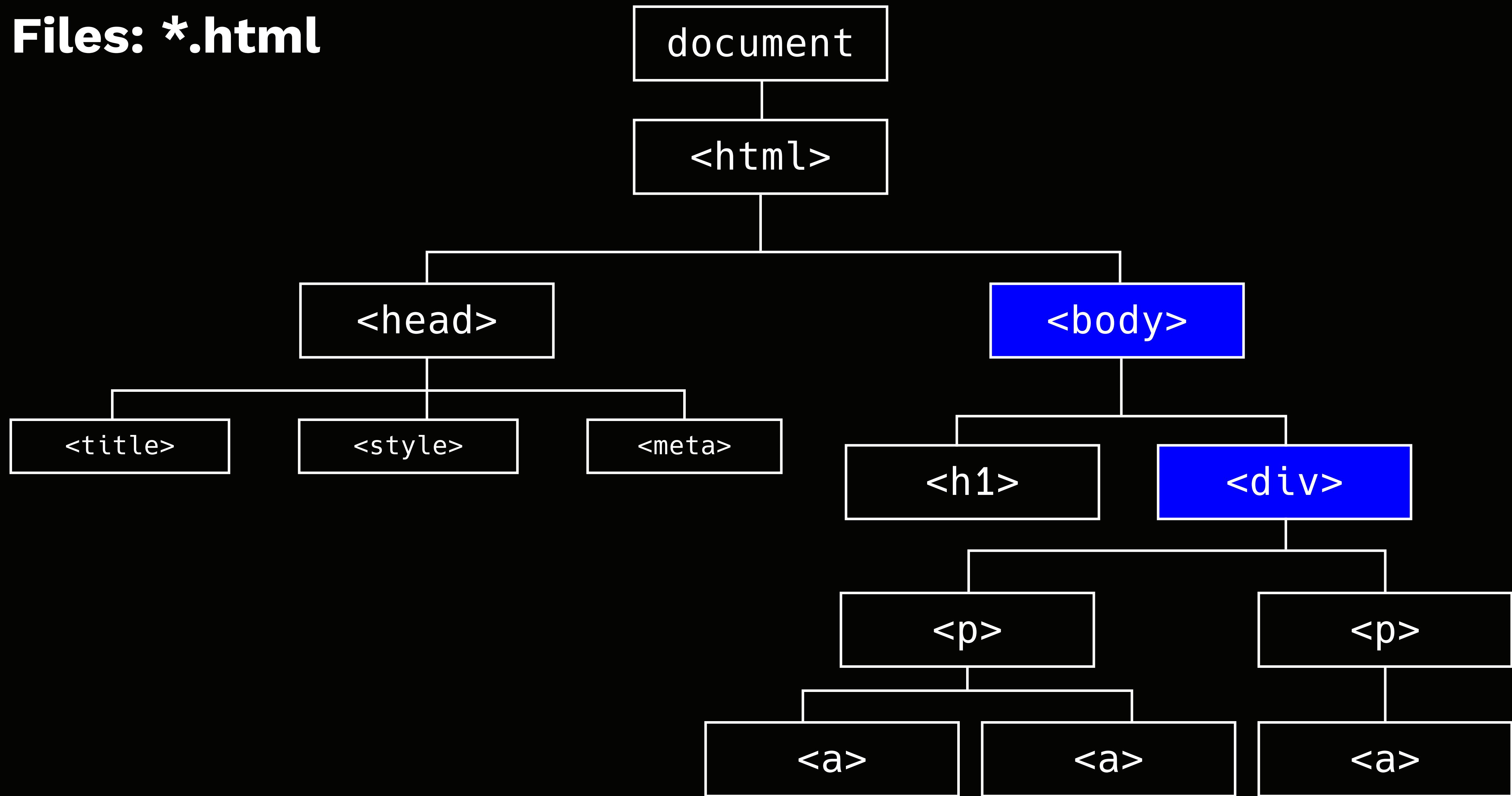
Files: *.html



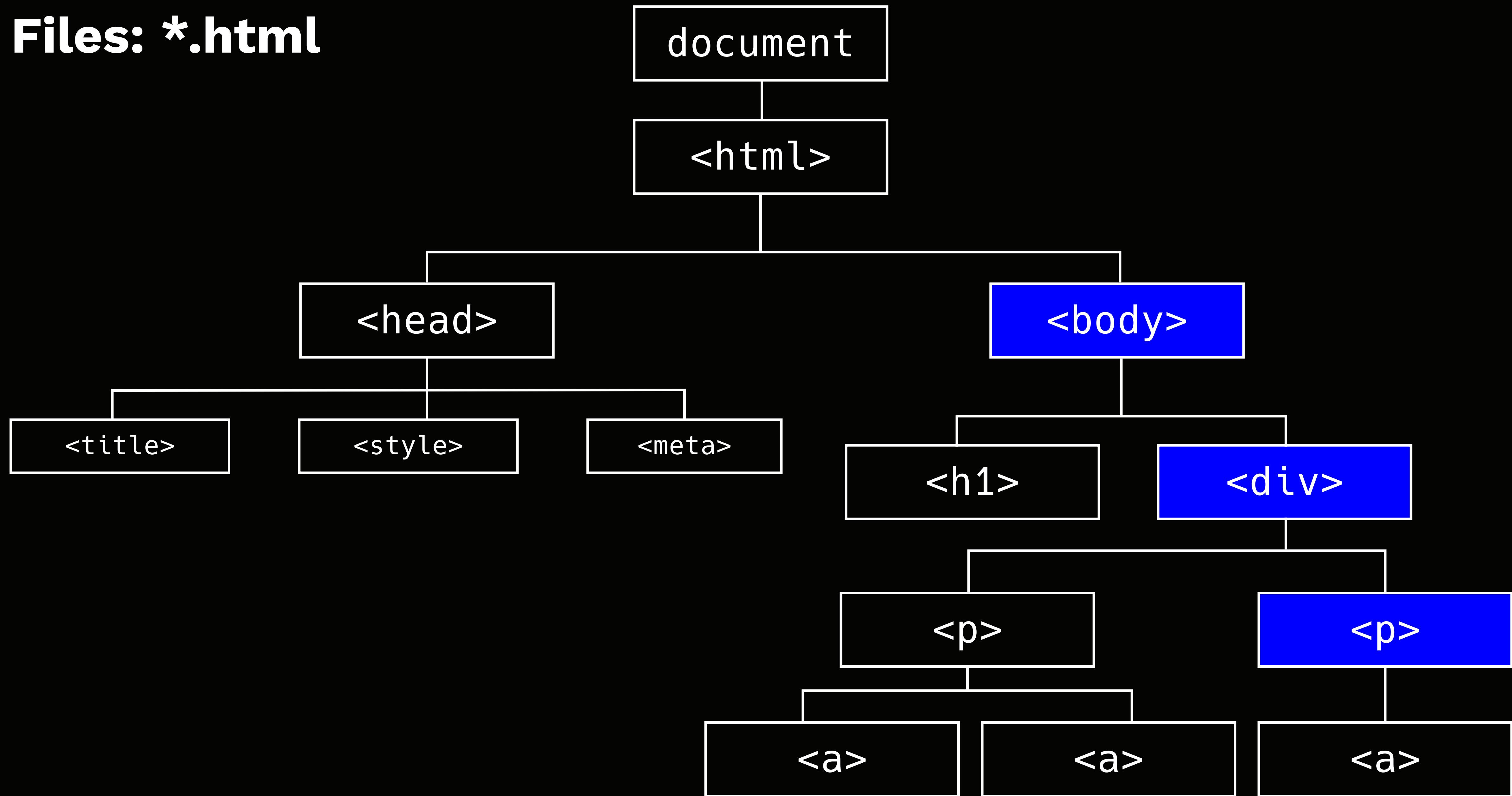
Files: *.html



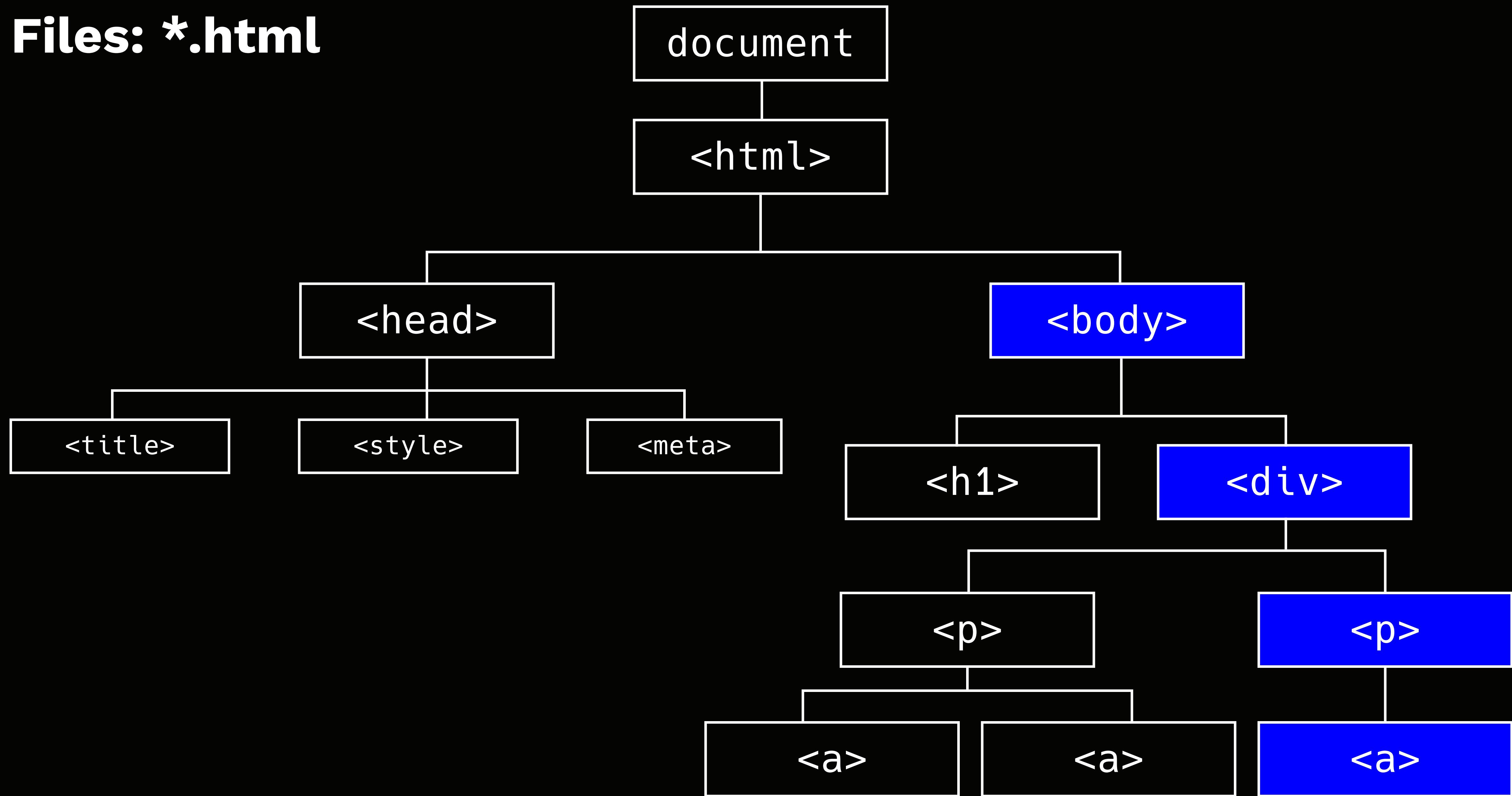
Files: *.html



Files: *.html



Files: *.html



```
index.html UNREGISTERED
< > index.html x
1 <!doctype html>
2 <html lang="en">
3
4 ..<head>
5 ....<meta charset="utf-8">
6 ....<title>Title of this site</title>
7 ....<link rel="stylesheet" href="css/main.css">
8 ..</head>
9
10 ..<body>
11
12 ....<header>
13 .....<h1>Title of my page</h1>
14 ....</header>
15
16 ....<div class="paragraph">
17 .....<p>This is a starting paragraph with a like.
18 .....<a href="https://www.ocadu.ca">Visit OCAD U</a>.</p>
19 ....</div>
20 ...
21 ..</body>
22
23 </html>
```

ok, Line 23, Column 8 Spaces: 2 Liquid HTML

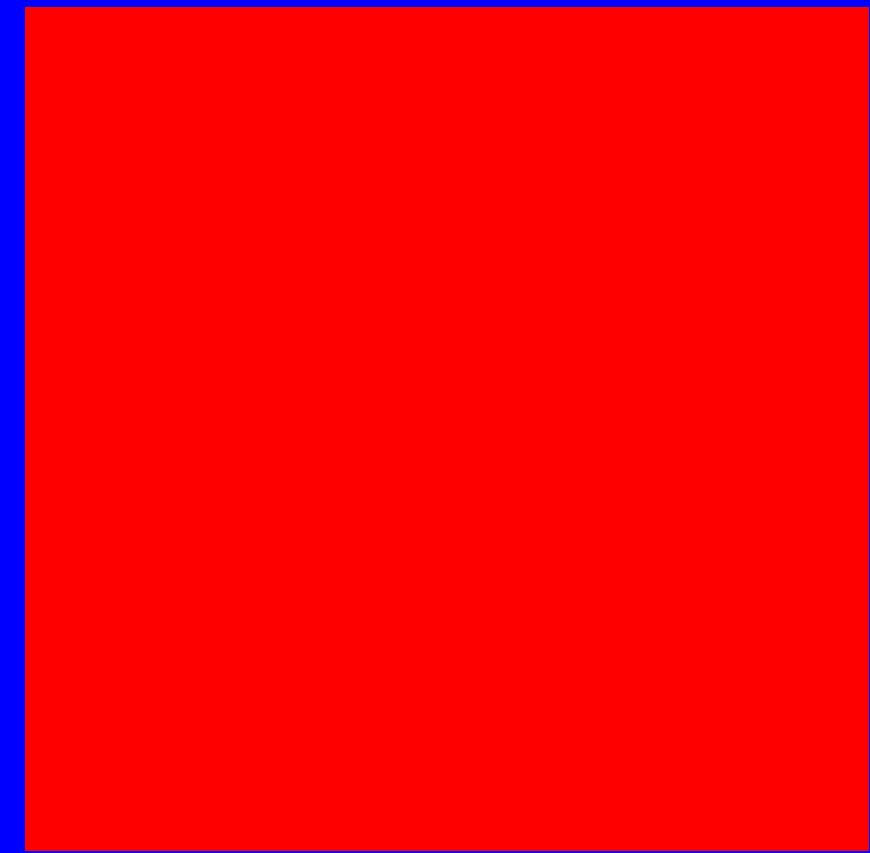
Structure: Layout

What we will see most often:

- Blocks
- Flexbox
- FLOATS
- Inline
- Inline Block
- Tables
- Grid

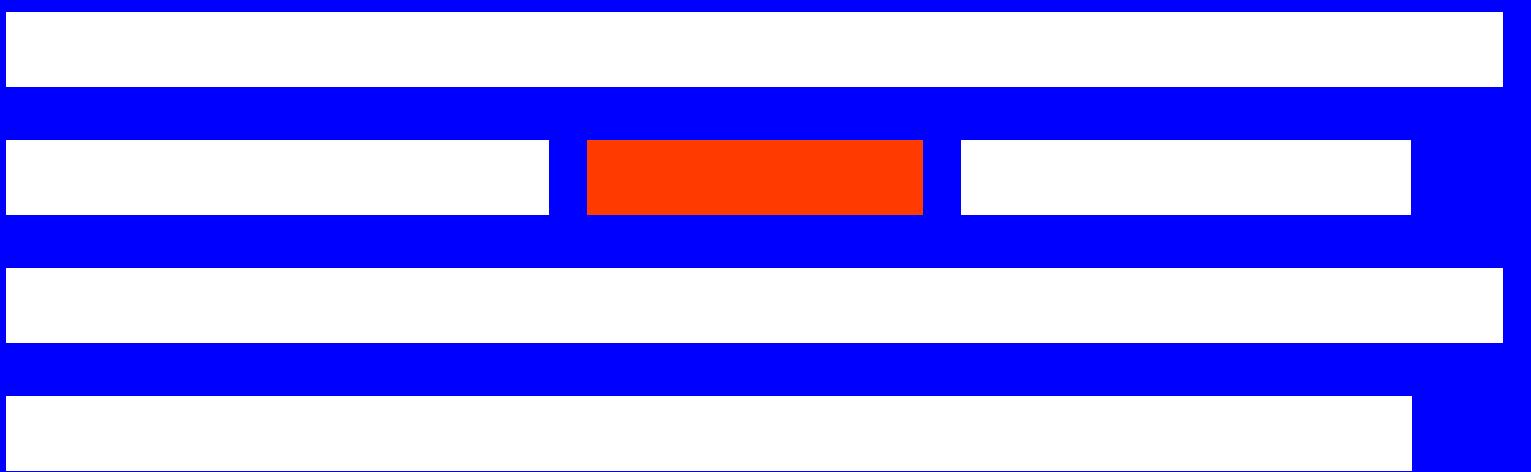
Structure: Layout

```
.box-one {  
    display: block;  
    width: 200px;  
    height: 200px;  
}
```



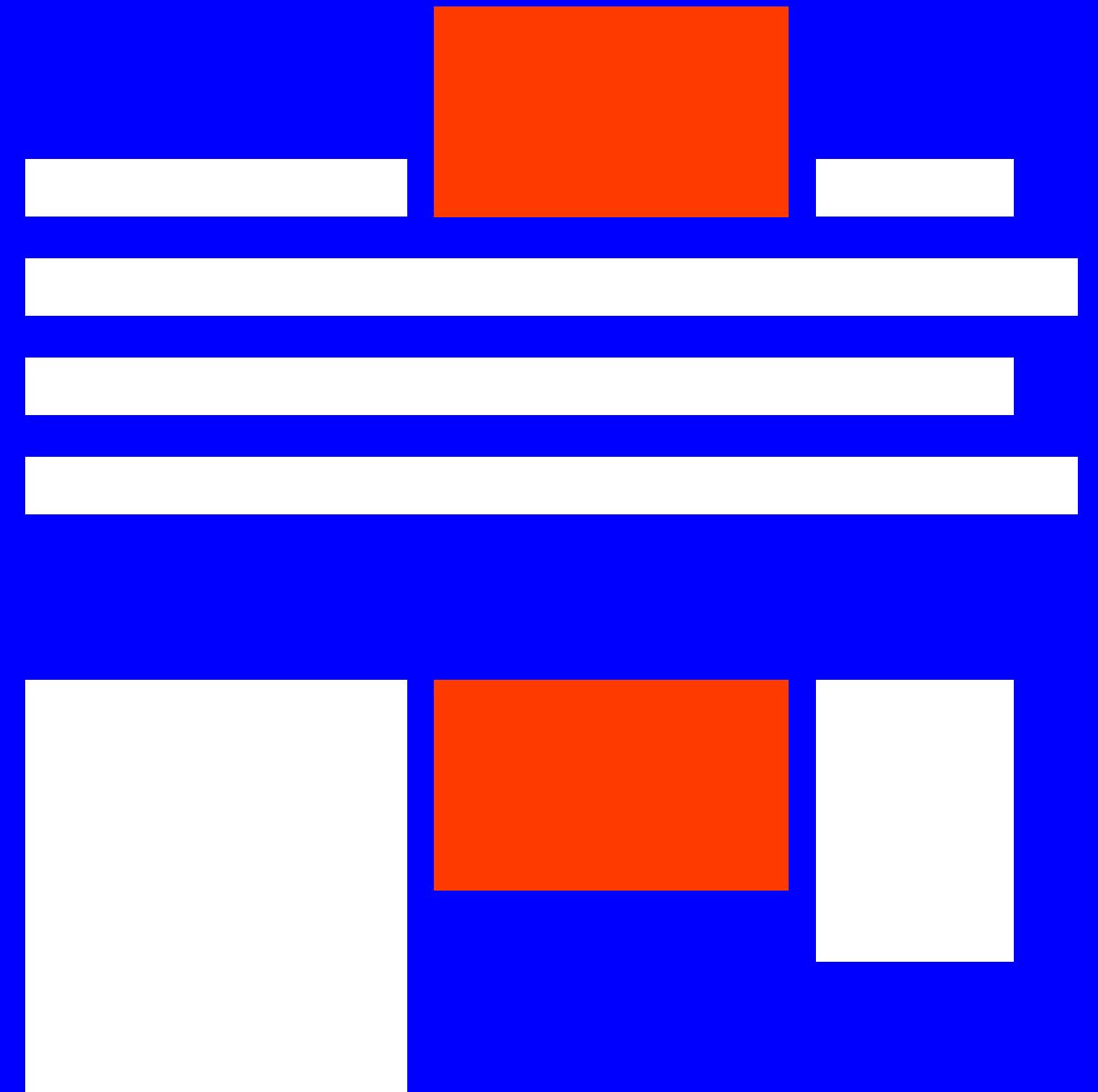
Structure: Layout

```
.line-highlight {  
    display: inline;  
}
```



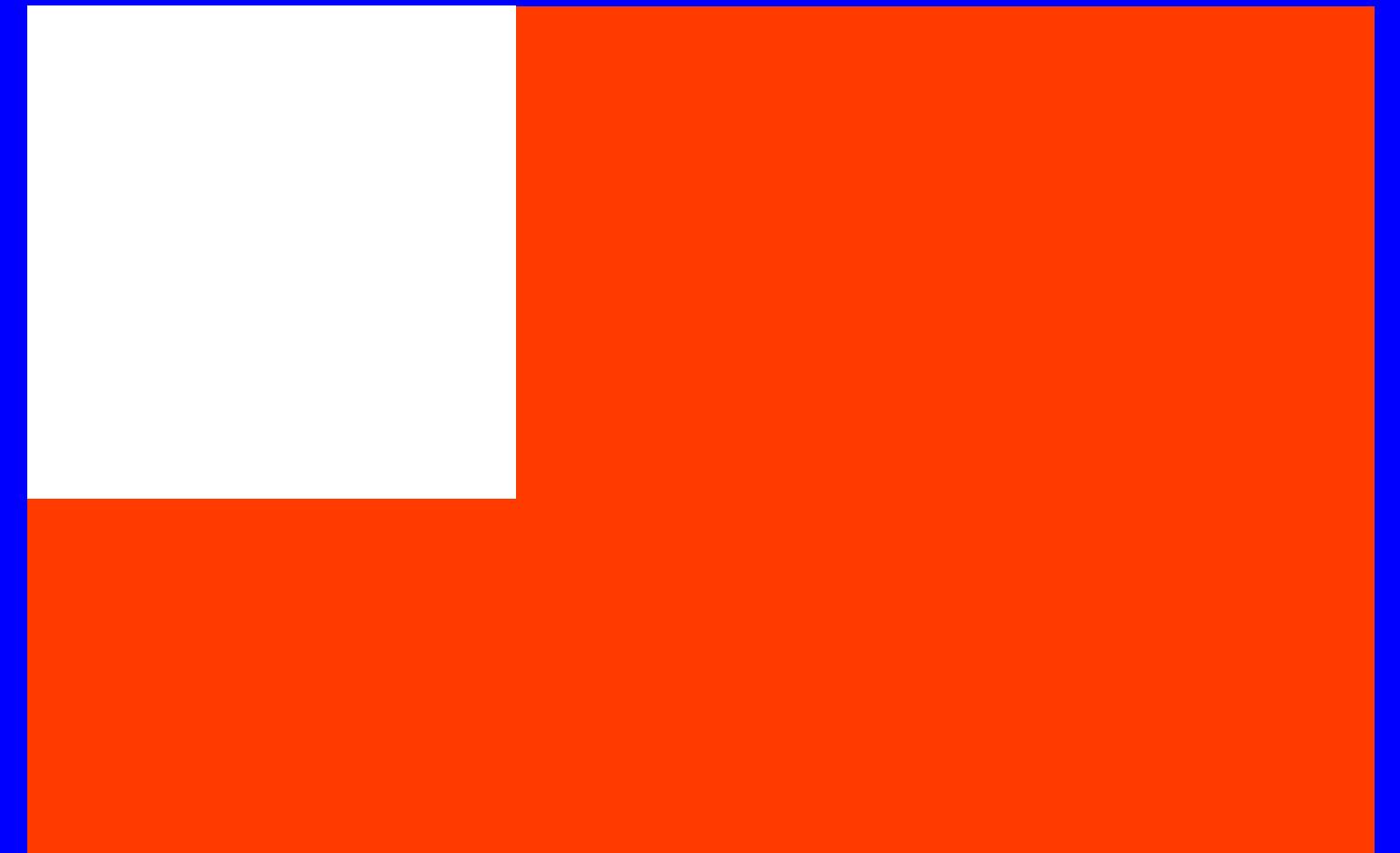
Structure: Layout

```
.box-one {  
    display: inline-block;  
    width: 200px;  
    height: 100px;  
}
```



Structure: Layout

```
.box-one {  
  display: flex;  
  width: 300px;  
  height: 200px;  
}
```



Structure: Layout

```
.box-one {  
    display: none;  
    width: 300px;  
    height: 200px;  
}
```

Reference

Guide and Reference to Flexbox:

→ <https://css-tricks.com/snippets/css/a-guide-to-flexbox/>

Flexbox Froggy (Learning Flexbox game):

→ <https://flexboxfroggy.com/>

CSS Grid Layout Examples and Patterns:

→ <https://gridbyexample.com/>

CSS Grid Layout Reference:

→ <http://grid.malven.co/>

Reference

CSS Display Reference:

→ <https://developer.mozilla.org/en-US/docs/Web/CSS/display>

More on Box-Sizing Border-Box:

→ <https://www.paulirish.com/2012/box-sizing-border-box-ftw/>

More on Floats:

→ <https://alistapart.com/article/css-floats-101>