Week 1: Recap

Course Description

Learn how to weave a range of online technologies into engaging interactive experiences. This course will teach the basic web technologies that are fundamental to building an online presence for any design project. Students will learn how to identify the current technological possibilities, limitations, and applications that rely on browsers and apps. You will also gain an understanding of the fundamentals of markup languages (HTML, XML) as well as formatting (CSS) and interactivity (JavaScript). 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.

Hypertext Markup Language

Extensible Markup Language

Cascading Style Sheets

JavaScript

Week 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.

Week 1: Recap

Course Breakdown

Readings → (4 × 3.75%)	15%
Short & In-Class Assignments → (4 × 10%)	40%
Major Assignments → (2 × 17.5%)	35%
Attendance and Participation	10%
Total	100%

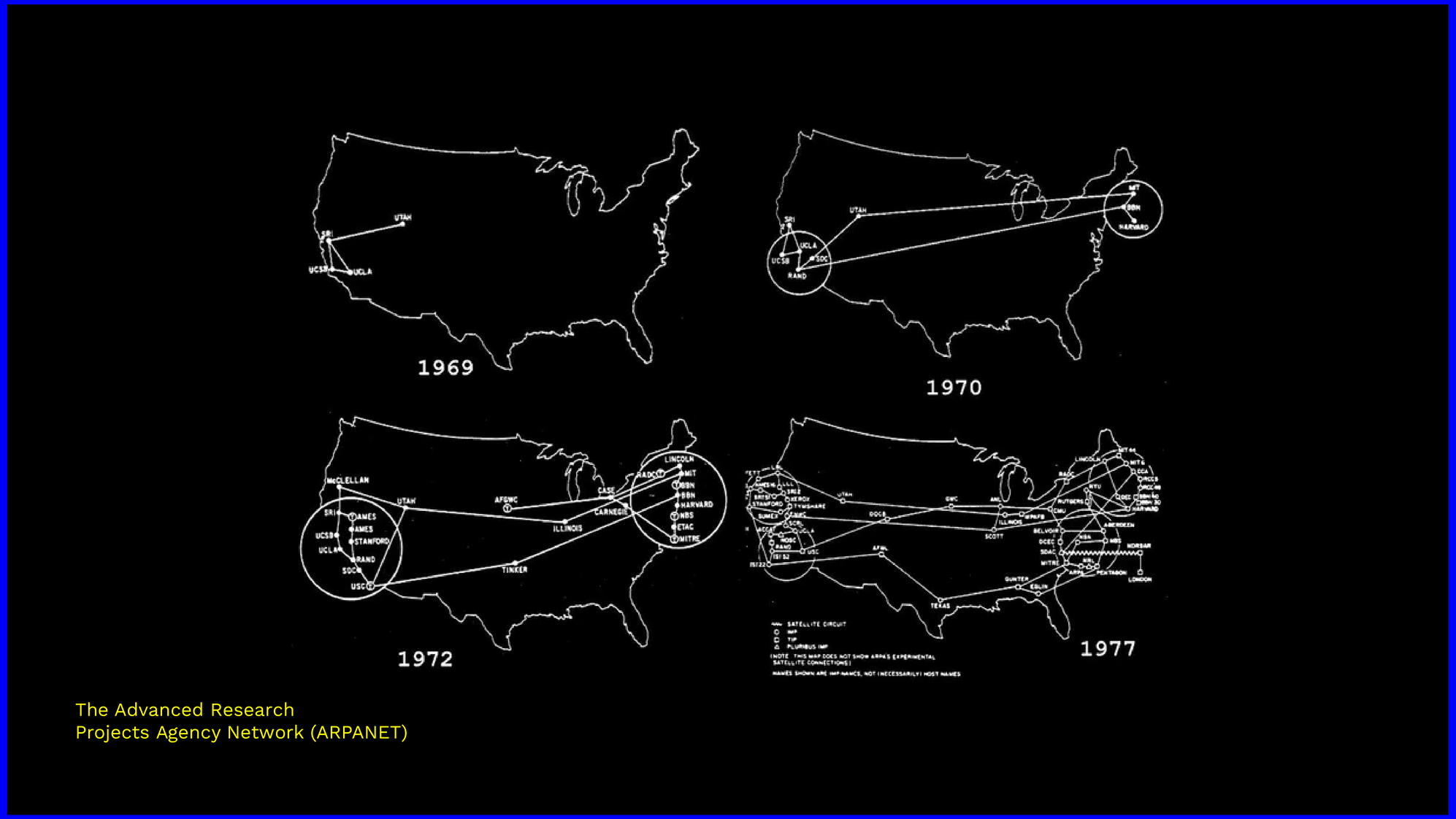
Week 1: Recap

Think of technology as a verb, not a noun

Red Burns

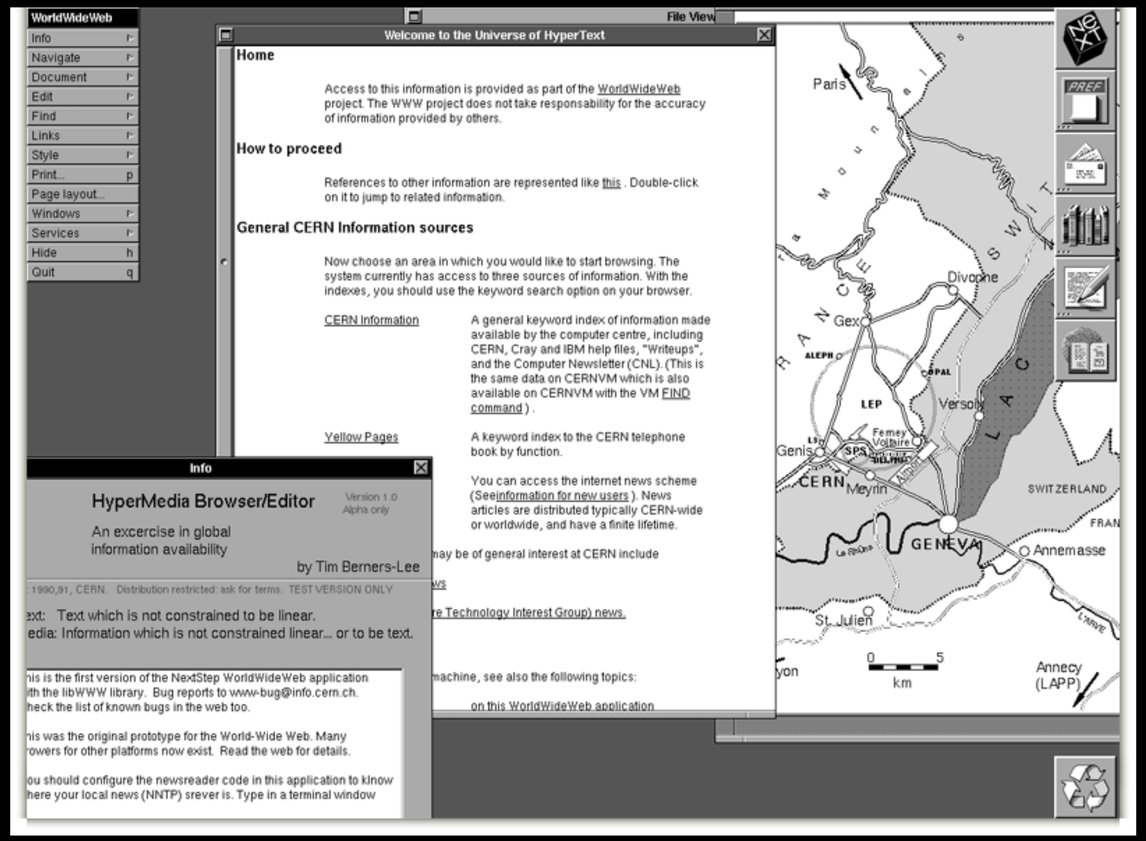
Sharing by default
Open Source by default

Week 1: Recap



The Advanced Research
Projects Agency Network (ARPANET)

Week 1: Recap

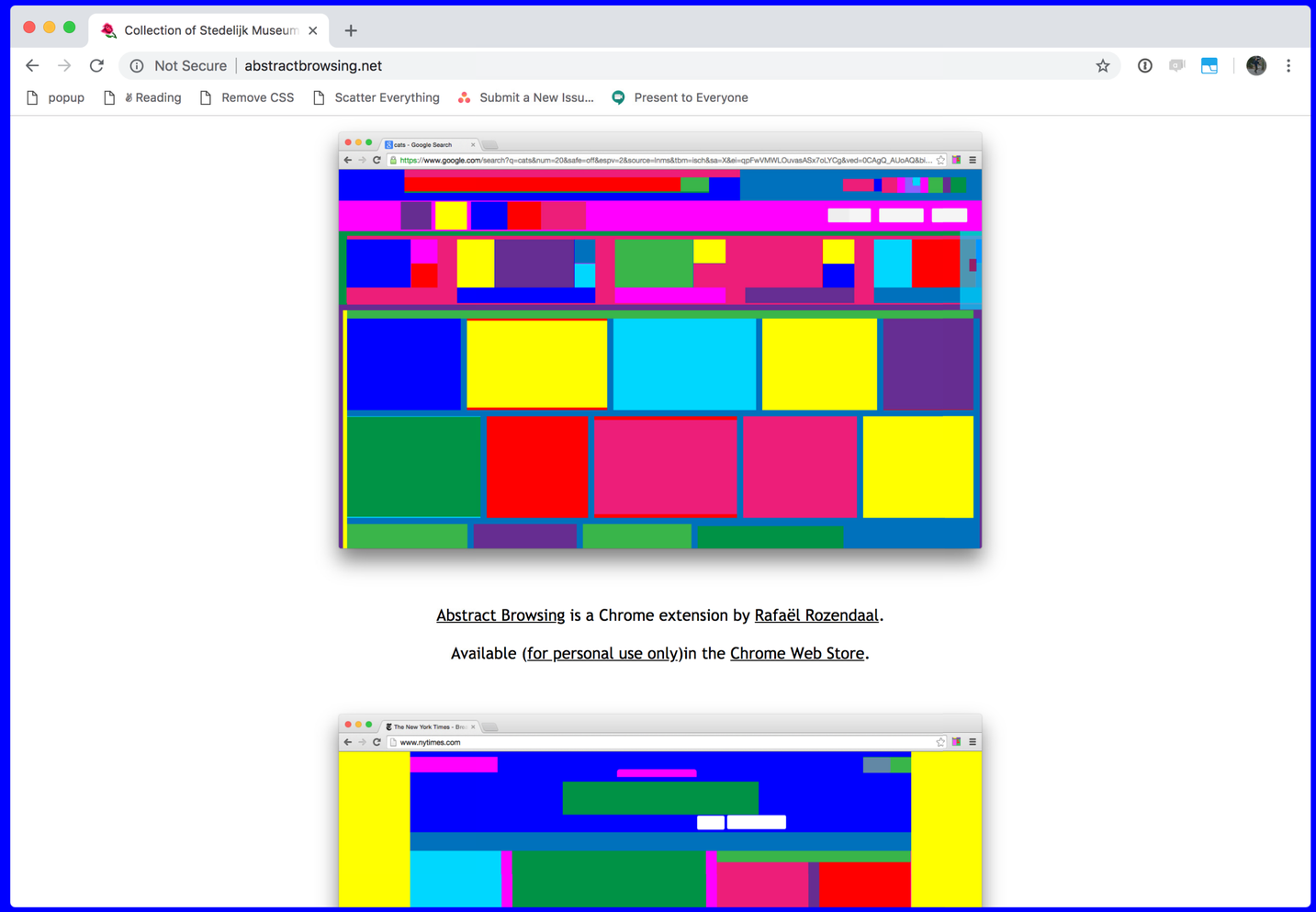


Robert Cailliau
Tim Berners-Lee
WorldWideWeb browser

Week 1: Recap

Networks Land
Ingrid Burrington

Week 1: Recap



Abstract Browsing
Rafaël Rozendaal, 2014

Week 1: Recap

Browsers

→ Chrome
Firefox
Safari
Edge
Opera

Brave
→ Beaker
UC
QQ

Week 1: Recap

Editors

→ Sublime Text
Atom
Visual Studio Code
Brackets
Light Table
Vim
Emacs
TextMate
Notepad++

Week 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;
}
```

Week 1: Recap

HTML + CSS: Classes

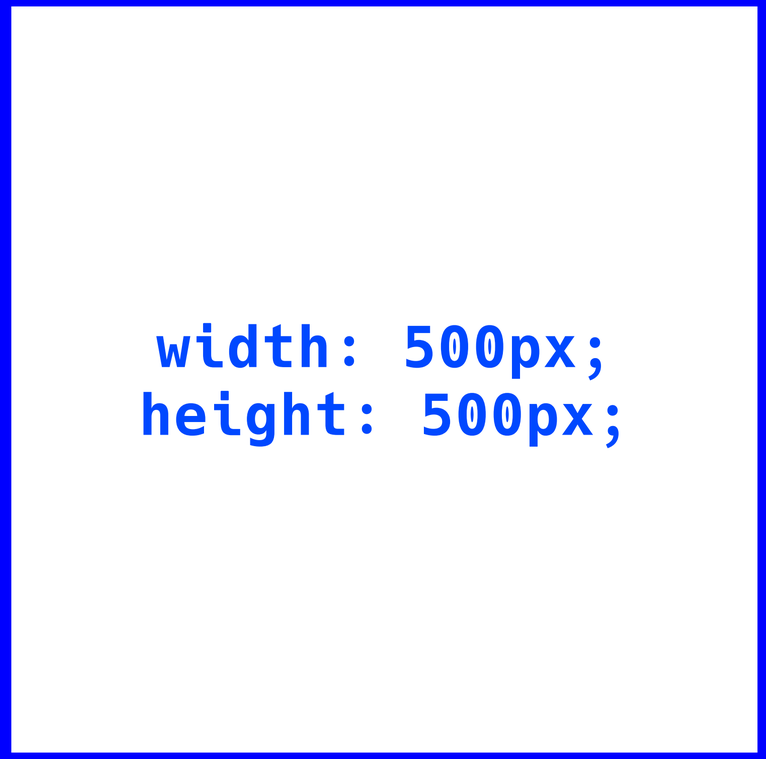
The CSS class selector matches elements
based on the contents of their class attribute.

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

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

Week 2:
Frame and a Mirror

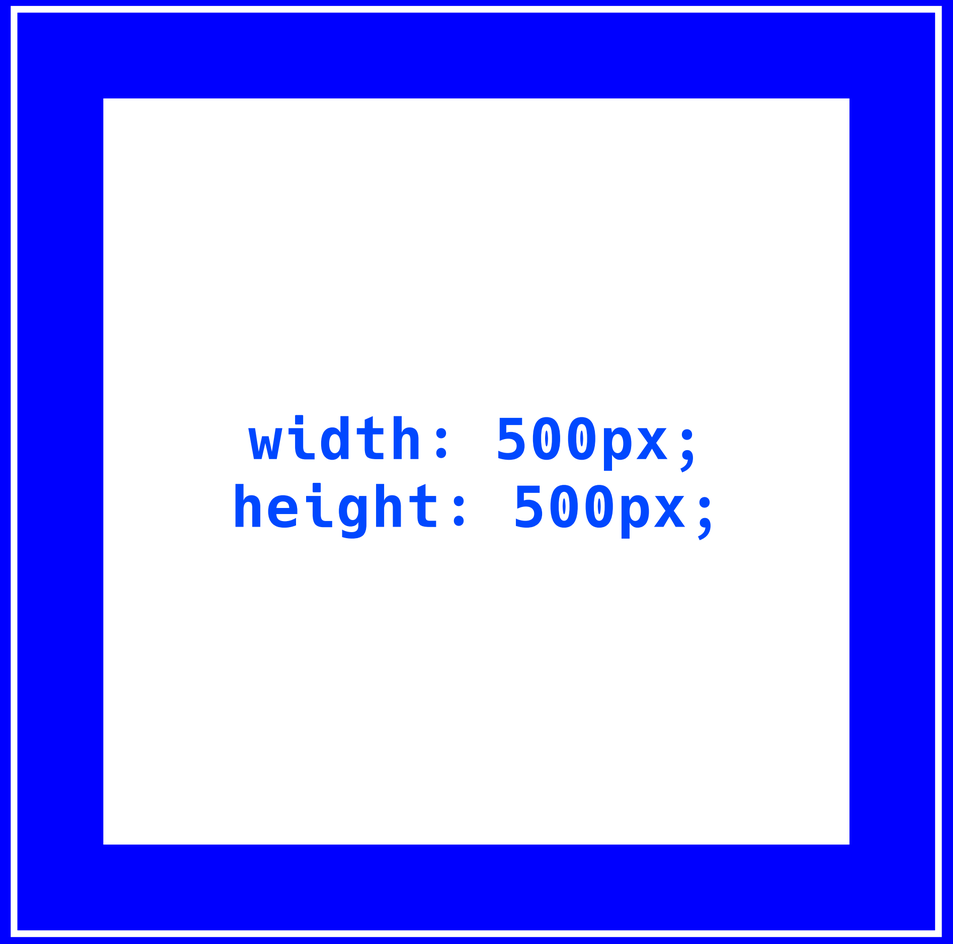
CSS: Box Model



CSS: Box Model

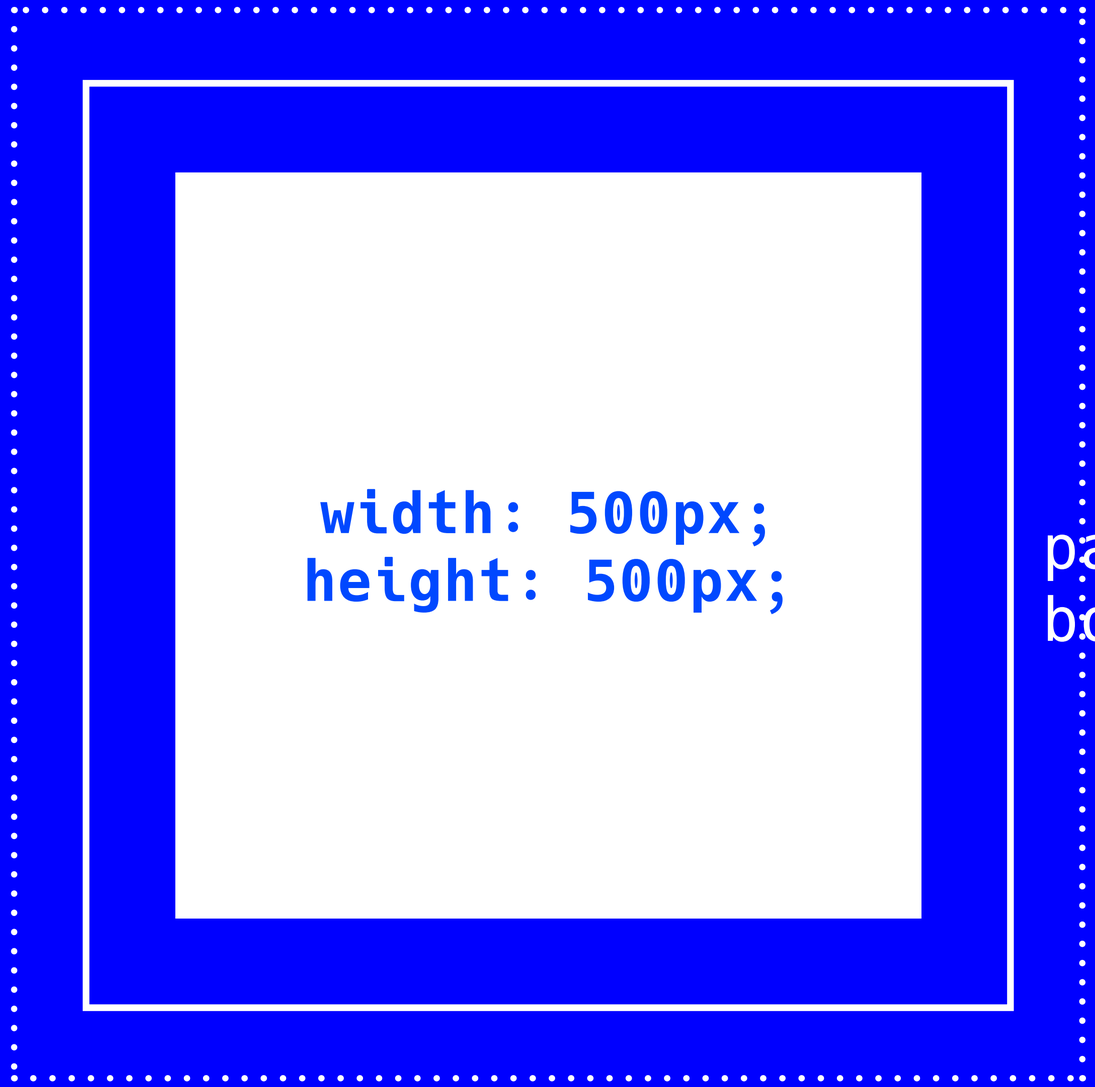
padding: 10px;

CSS: Box Model

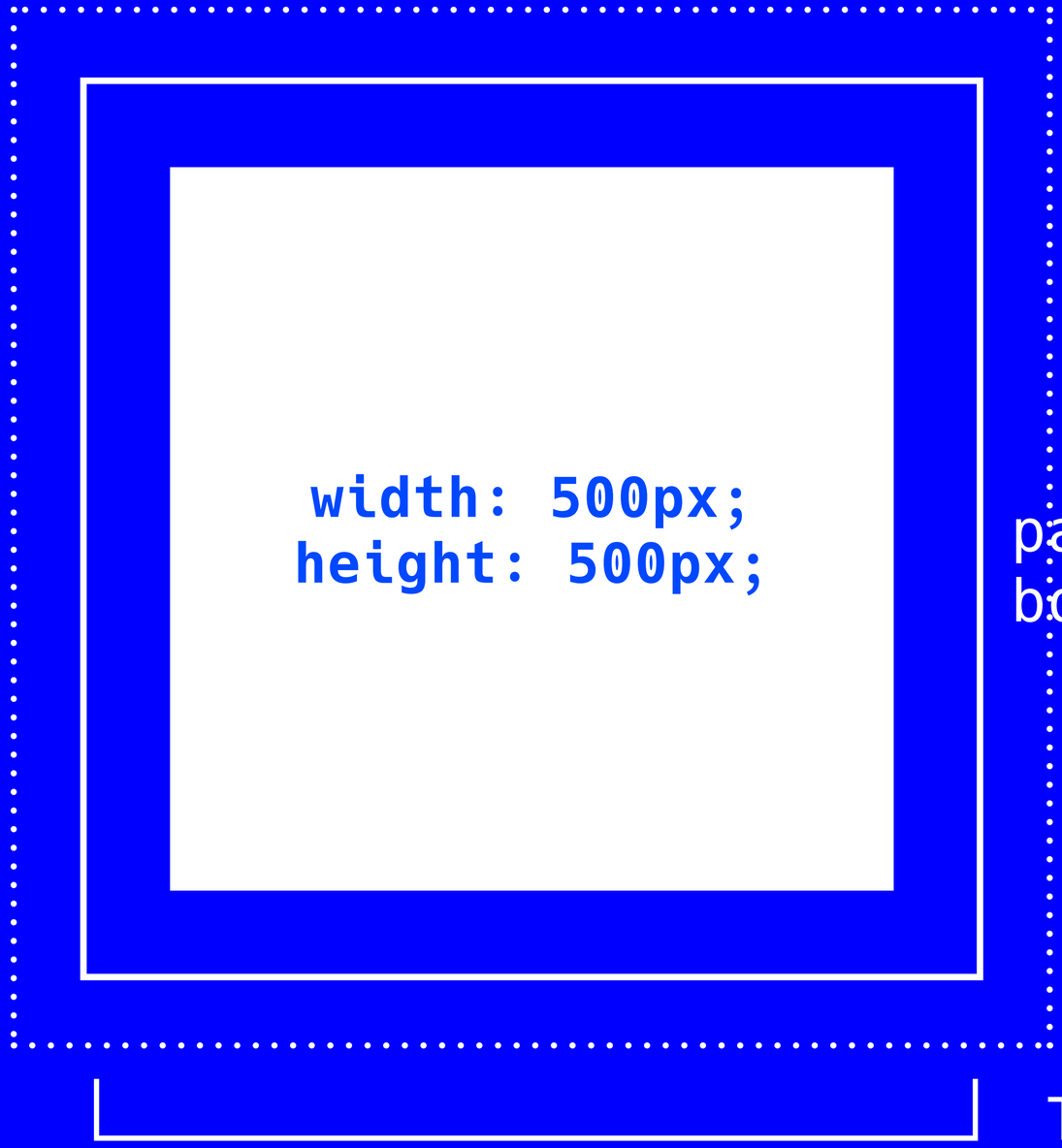



```
padding: 10px;
border: 1px solid white;
```

CSS: Box Model

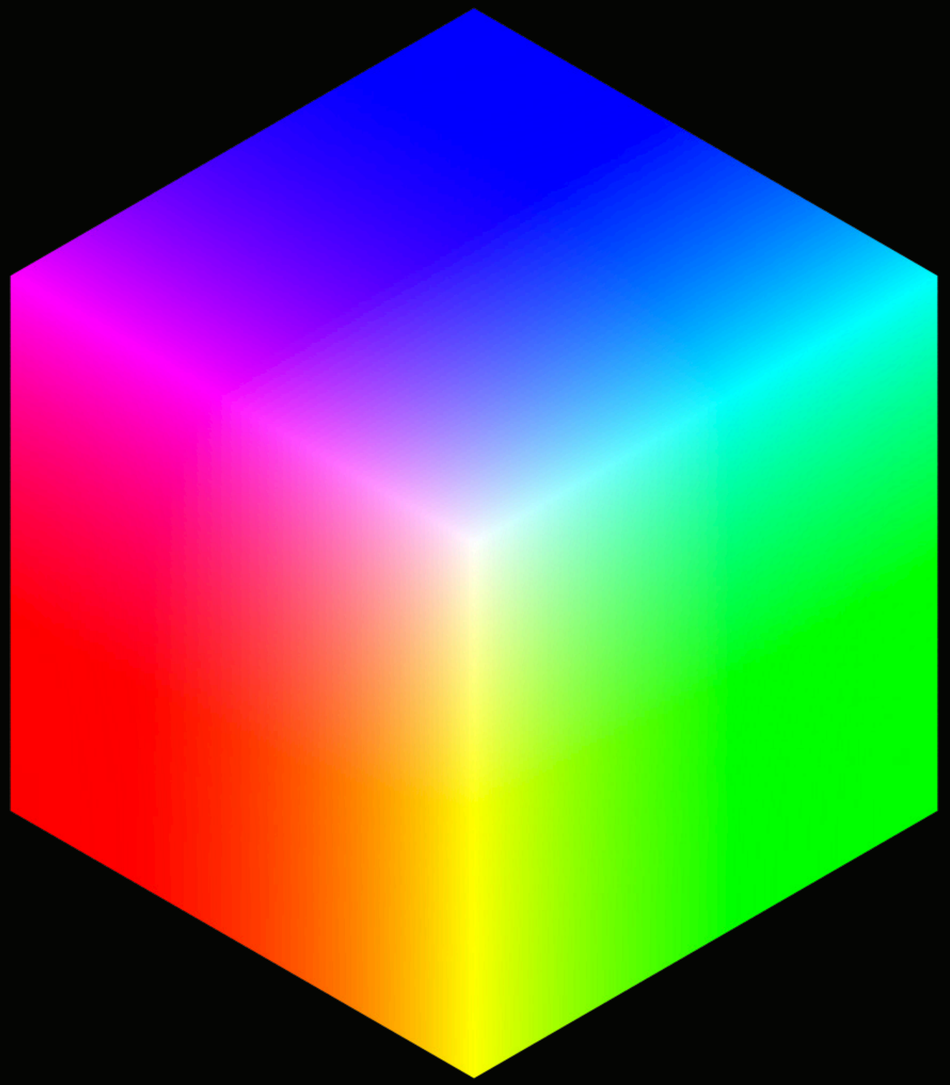


CSS: Box Model

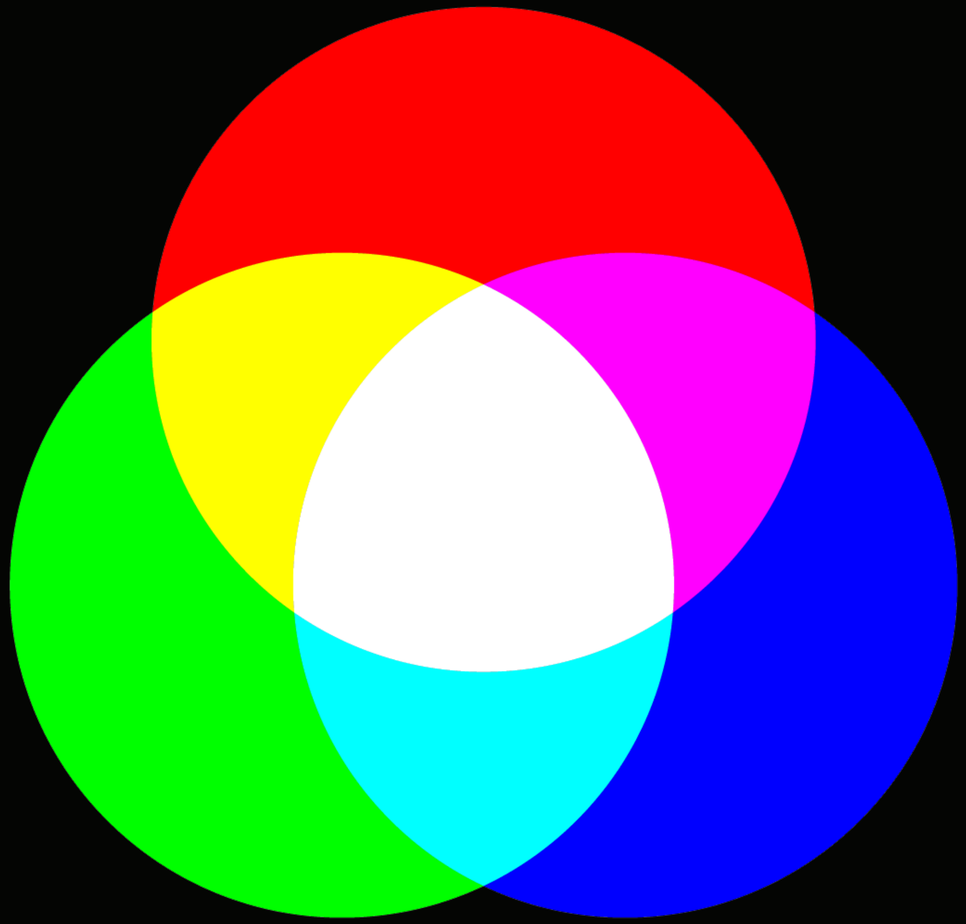


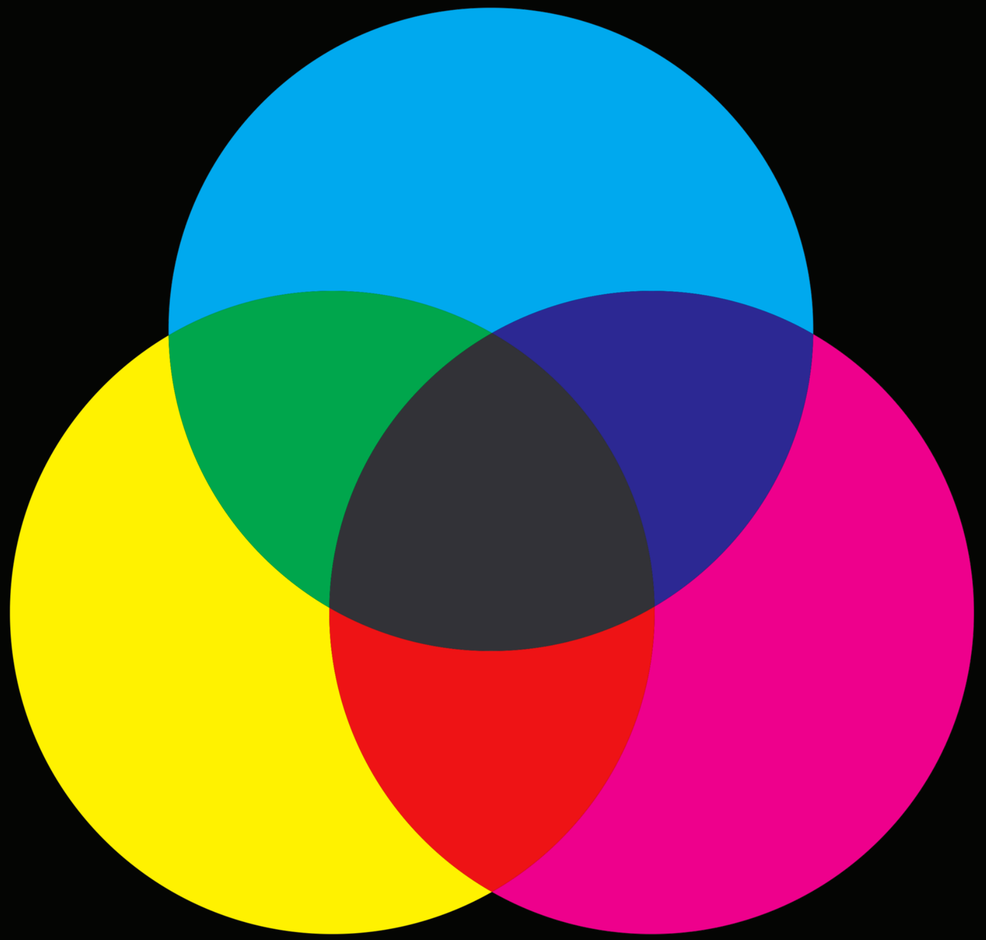
CSS: Box Model

CSS: Color (American Spelling)

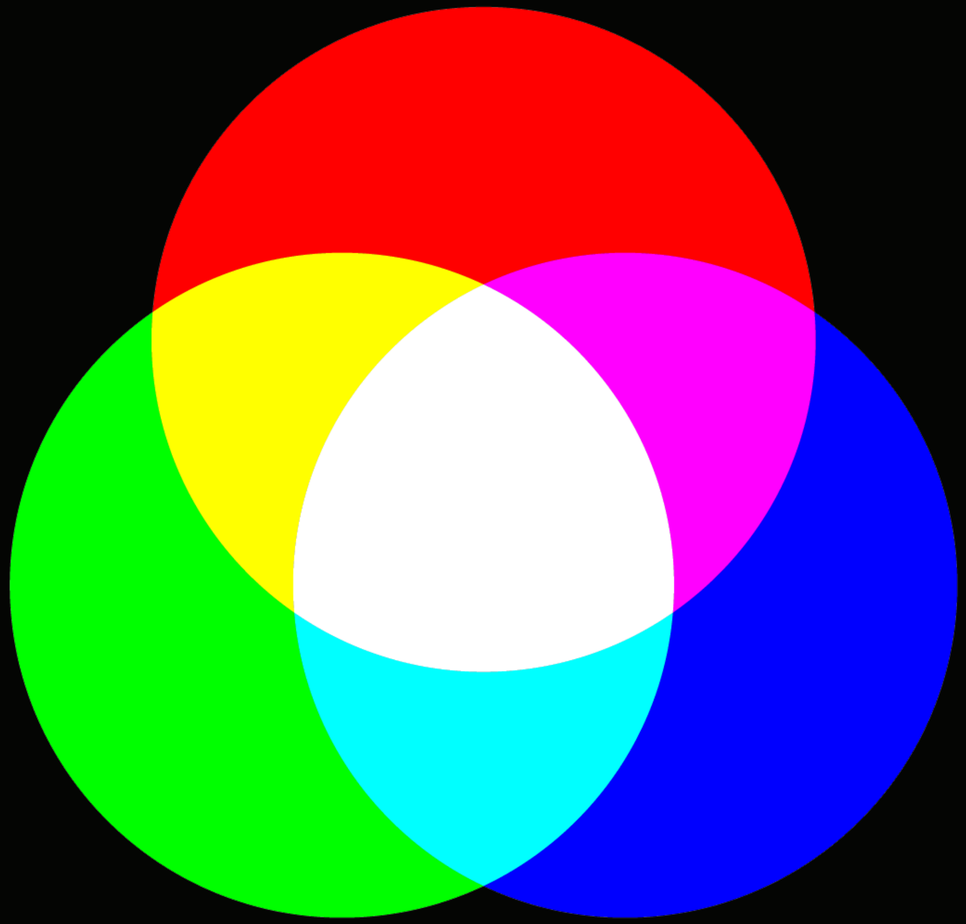


CSS: Color



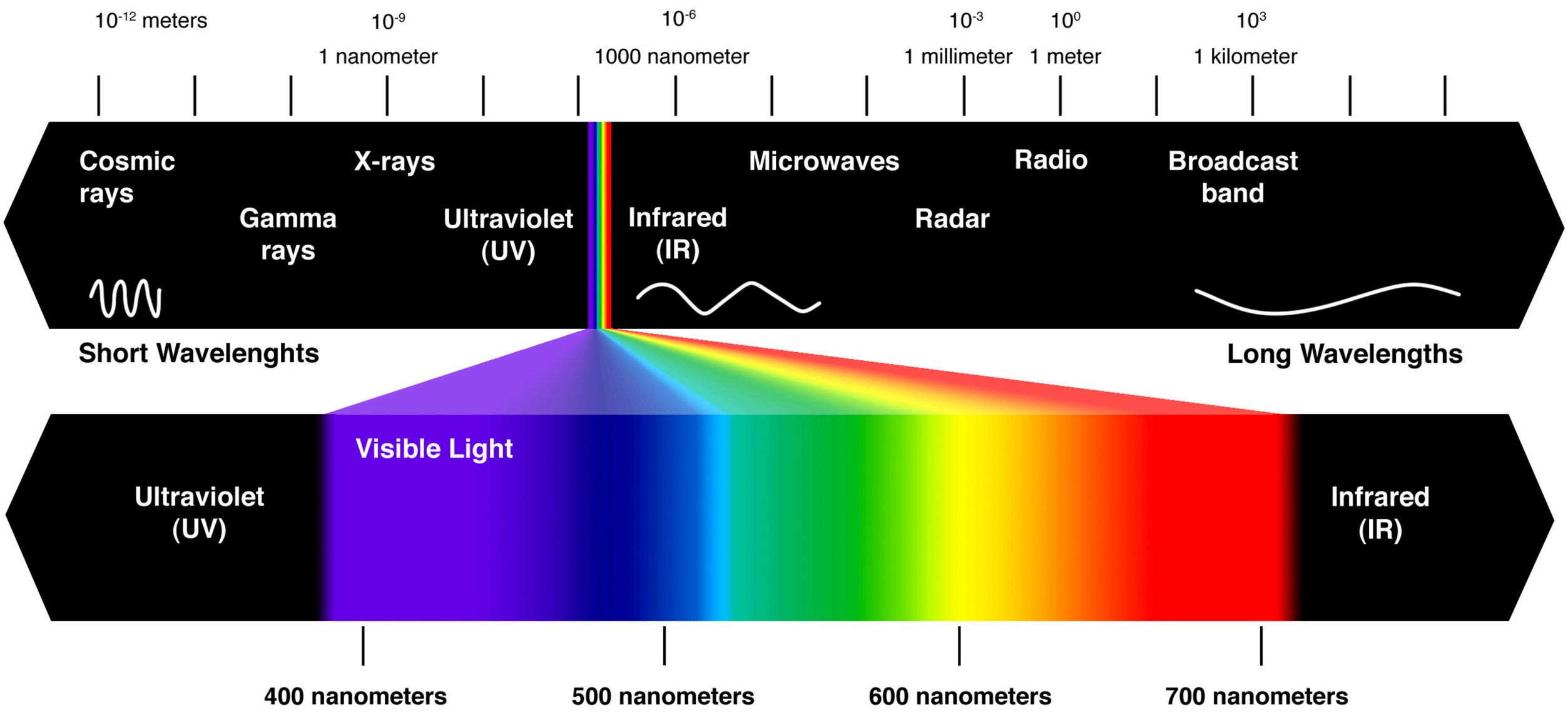


CSS: Color

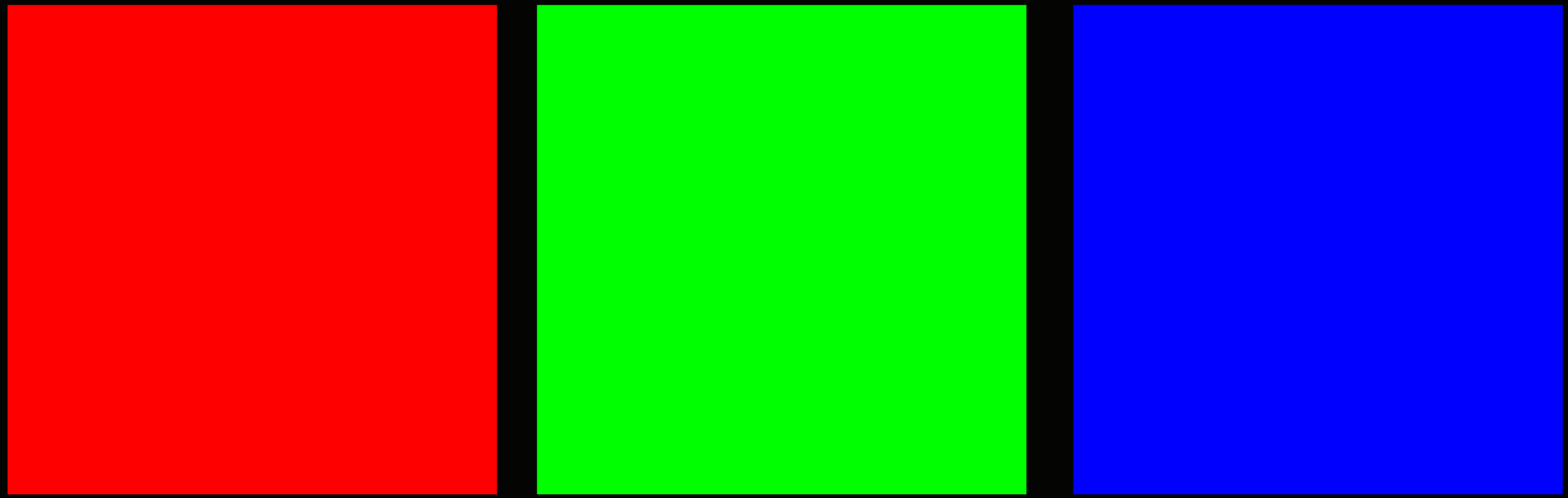


Additive

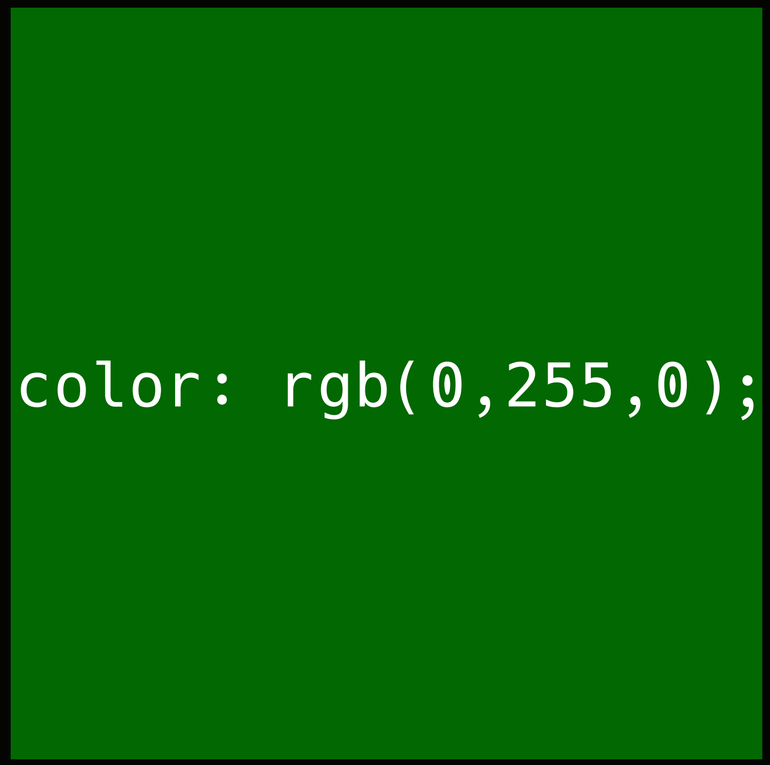
Subtractive


10^{-12} meters
10^{-9}
1 nanometer
10^{-6}
1000 nanometer
10^{-3}
1 millimeter
10^{0}
1 meter
10^{3}
1 kilometer
Cosmic rays
Gamma rays
X-rays
Ultraviolet (UV)
Infrared (IR)
Microwaves
Radar
Radio
Broadcast band
Short Wavelenghts
Long Wavelengths
Ultraviolet (UV)
Visible Light
Infrared (IR)
400 nanometers
500 nanometers
600 nanometers
700 nanometers

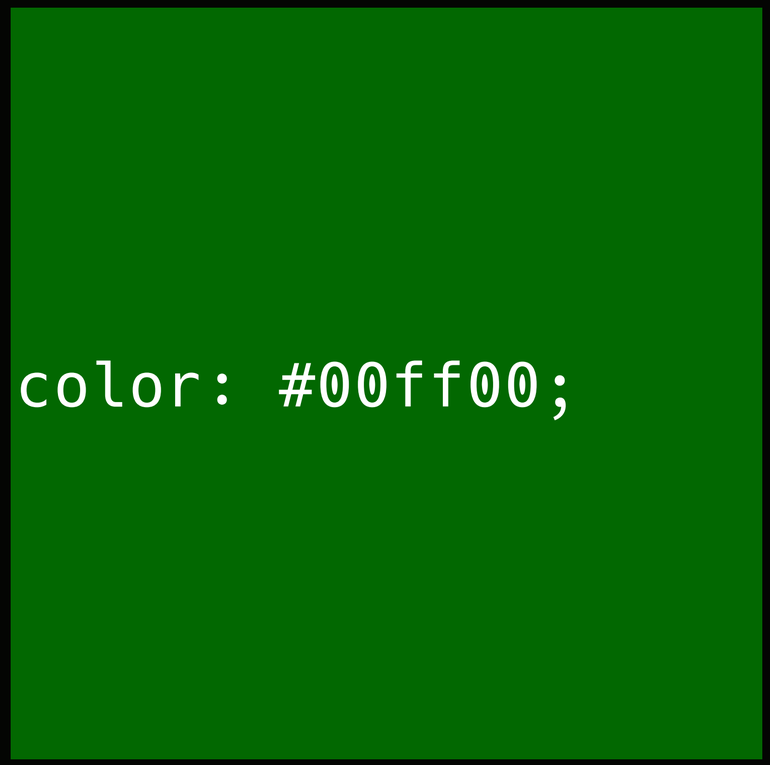
CSS: Color

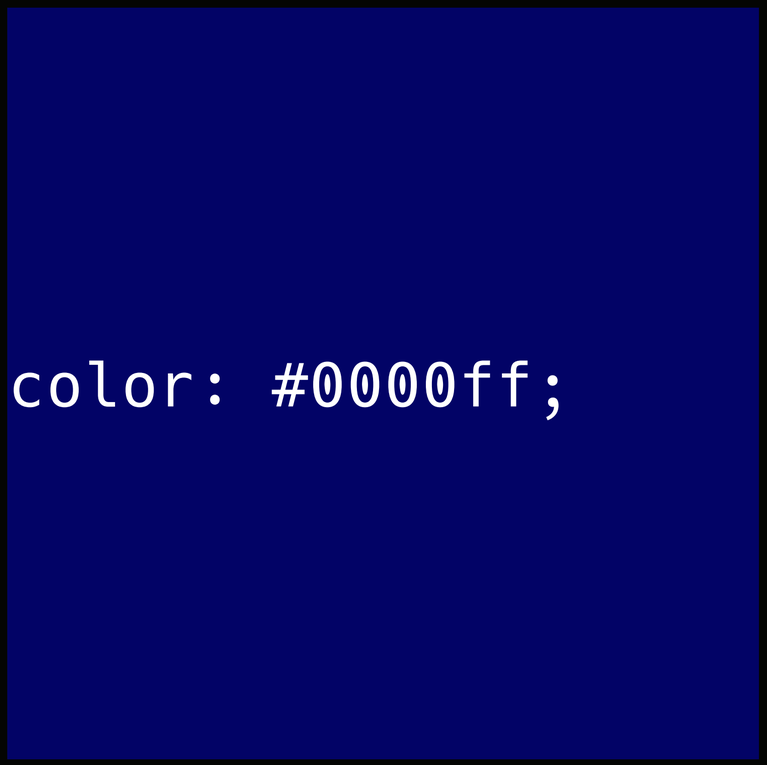


CSS: Color

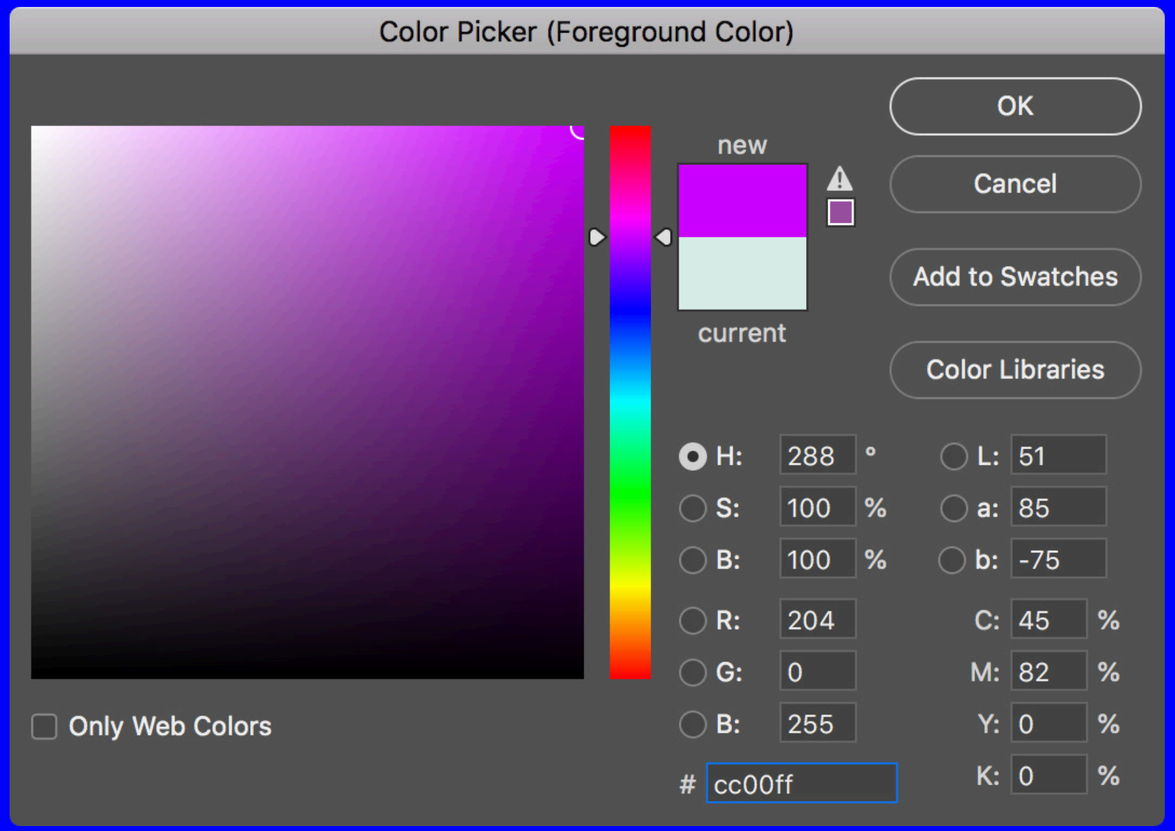


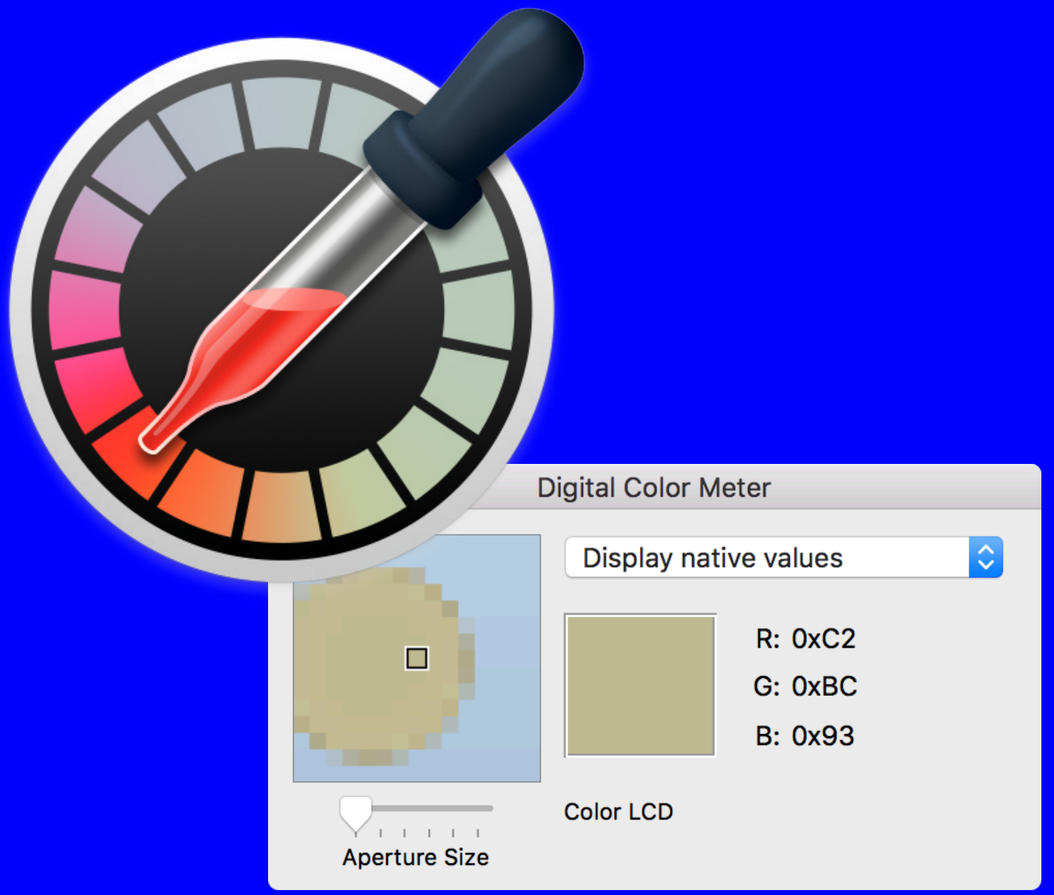
CSS: Color



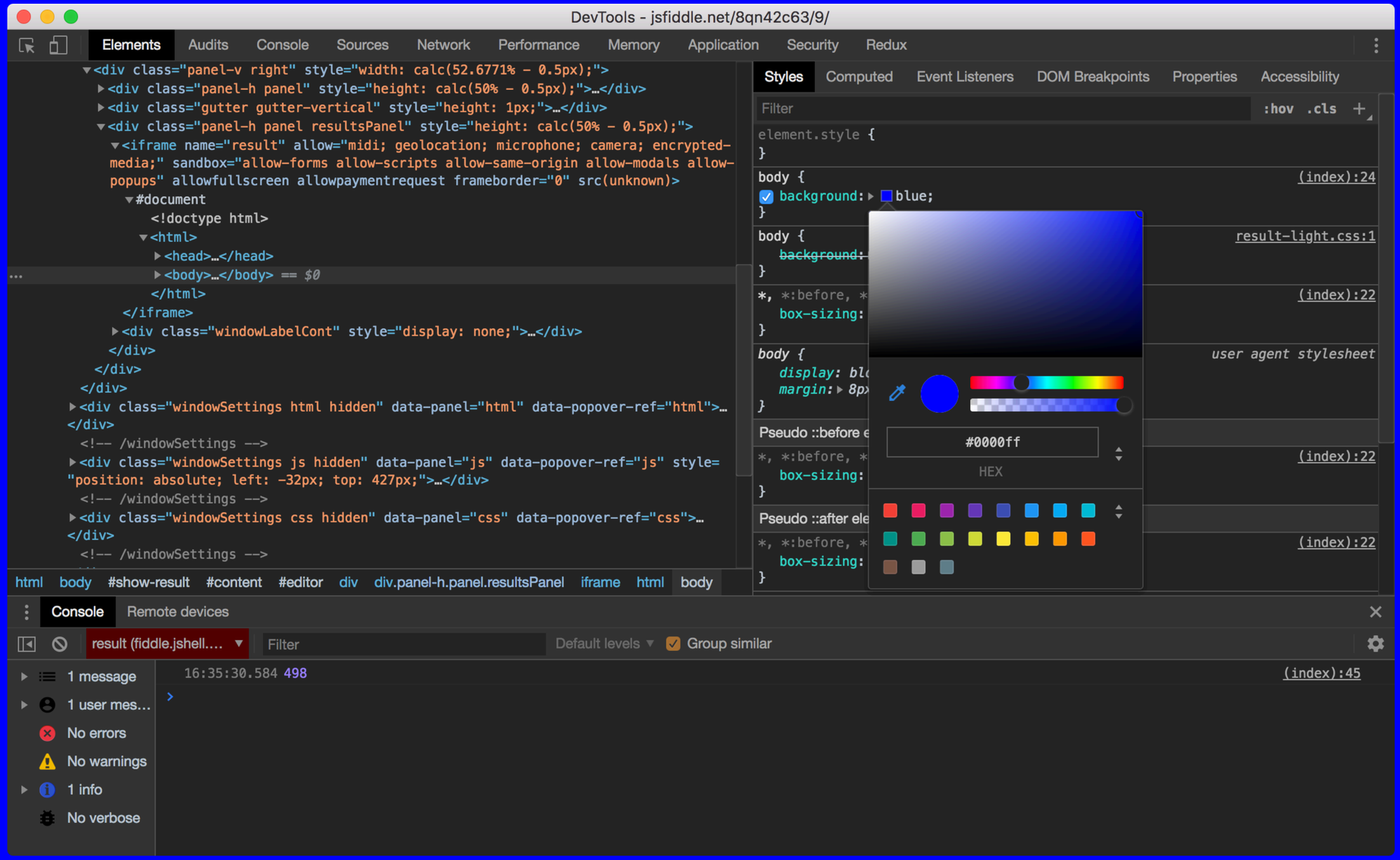


CSS: Color


Color Picker (Foreground Color)
OK
Cancel
Add to Swatches
Color Libraries
new
current
H: 288 °
S: 100 %
B: 100 %
R: 204
G: 0
B: 255
L: 51
a: 85
b: -75
C: 45 %
M: 82 %
Y: 0 %
K: 0 %
cc00ff
Only Web Colors


Digital Color Meter
Display native values
R: 0xC2
G: 0xBC
B: 0x93
Color LCD
Aperture Size

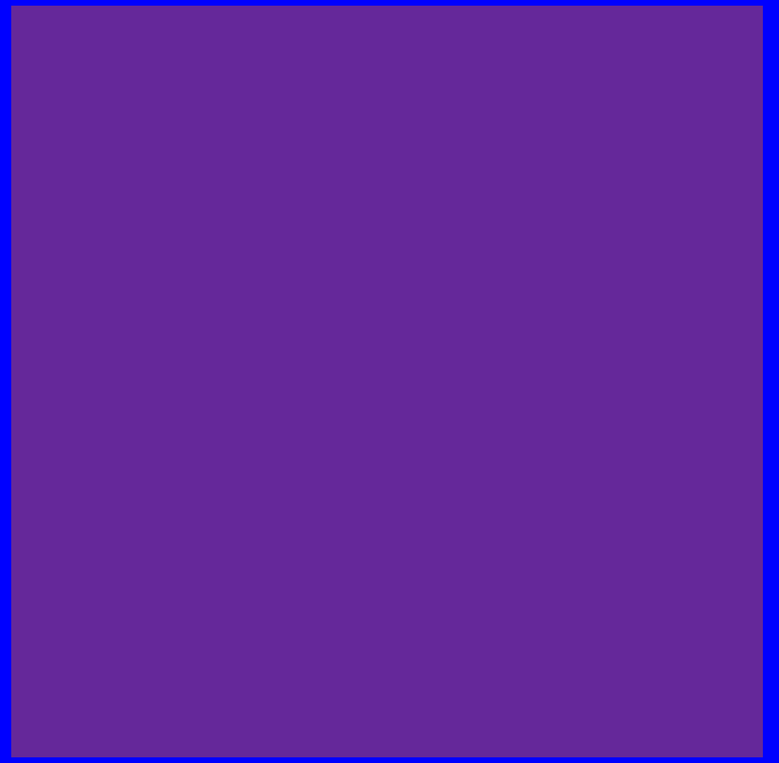
CSS: Color


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;
}
(index):24
result-light.css:1
(index):22
user agent stylesheet
Pseudo ::before
Pseudo ::after
box-sizing:
#0000ff
HEX
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
1 user mes...
No errors
No warnings
1 info
No verbose
16:35:30.584 498
(index):45

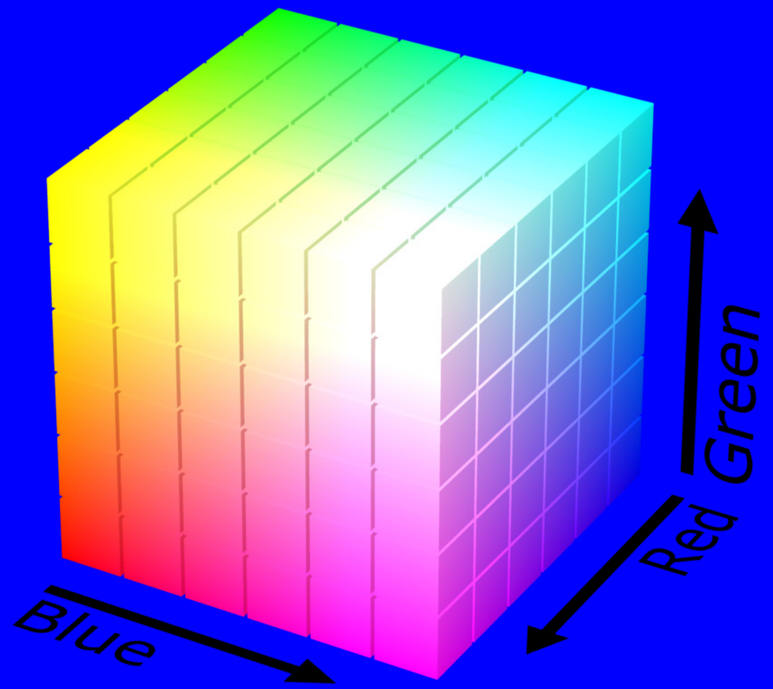
CSS: Color + Alpha

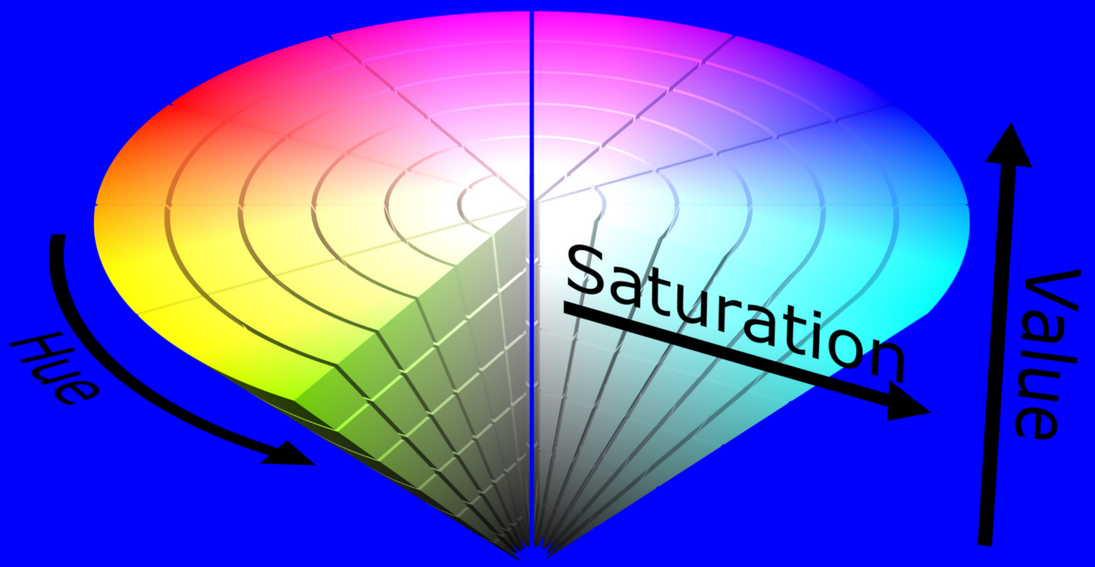
```
color: rgba(255, 102, 0, 0.4);
```

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

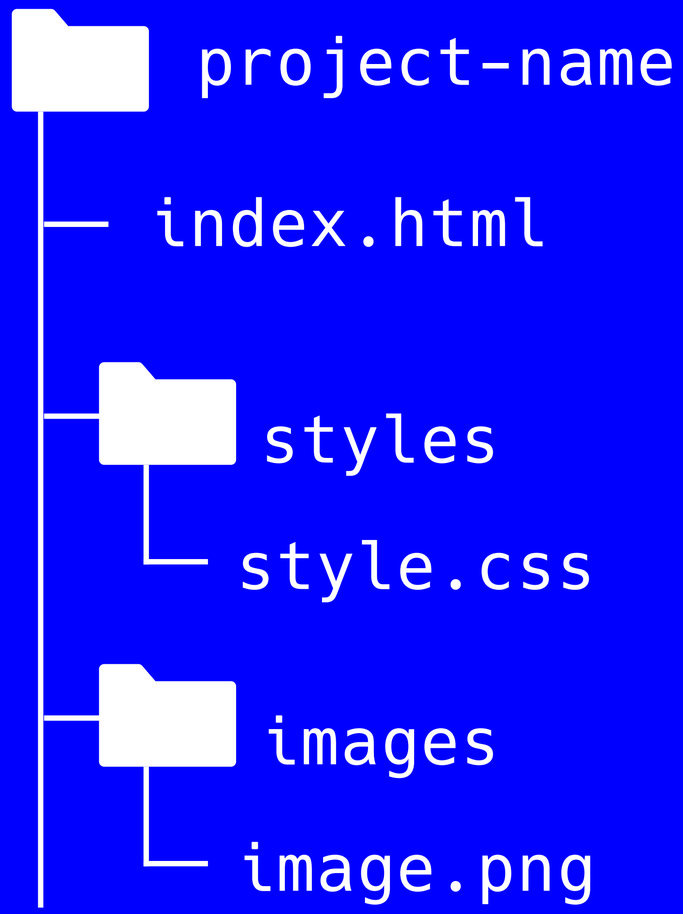
Files: HTML + CSS + JS + Images

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">

<img alt="Neat image" src="image.png">
```

Files: HTML + CSS + JS + Images

Files in a subdirectory:

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

<img alt="Neat image"
src="images/image.png">

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

Files: HTML + CSS + JS + Images

Files above a directory

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

<img alt="Neat image"
src="../image.png">

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

Files: Hyperlinks

Link to an external (internet) page/resource:

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

<img alt="Neat image"
src="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 -->
```

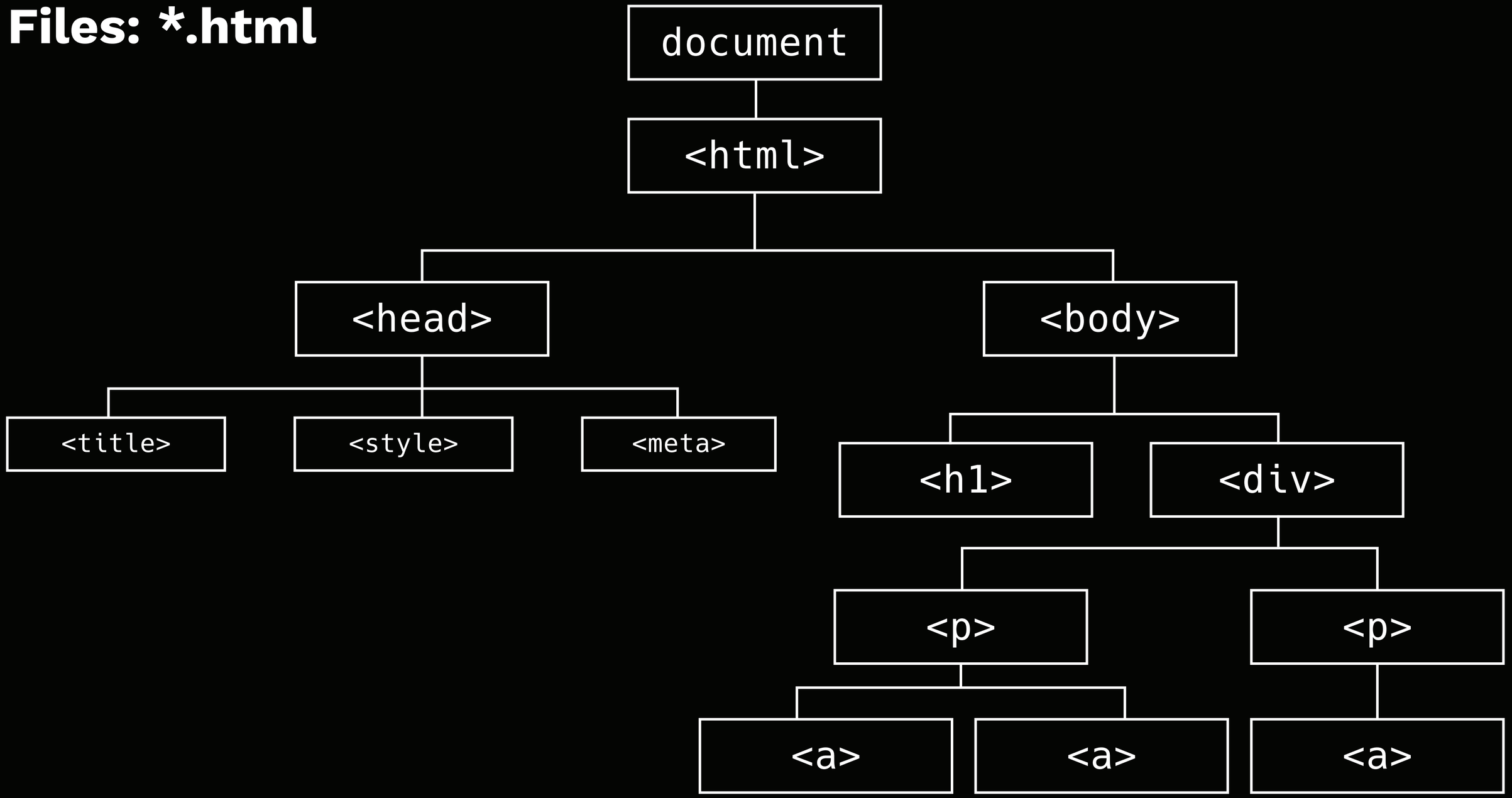
In CSS:

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

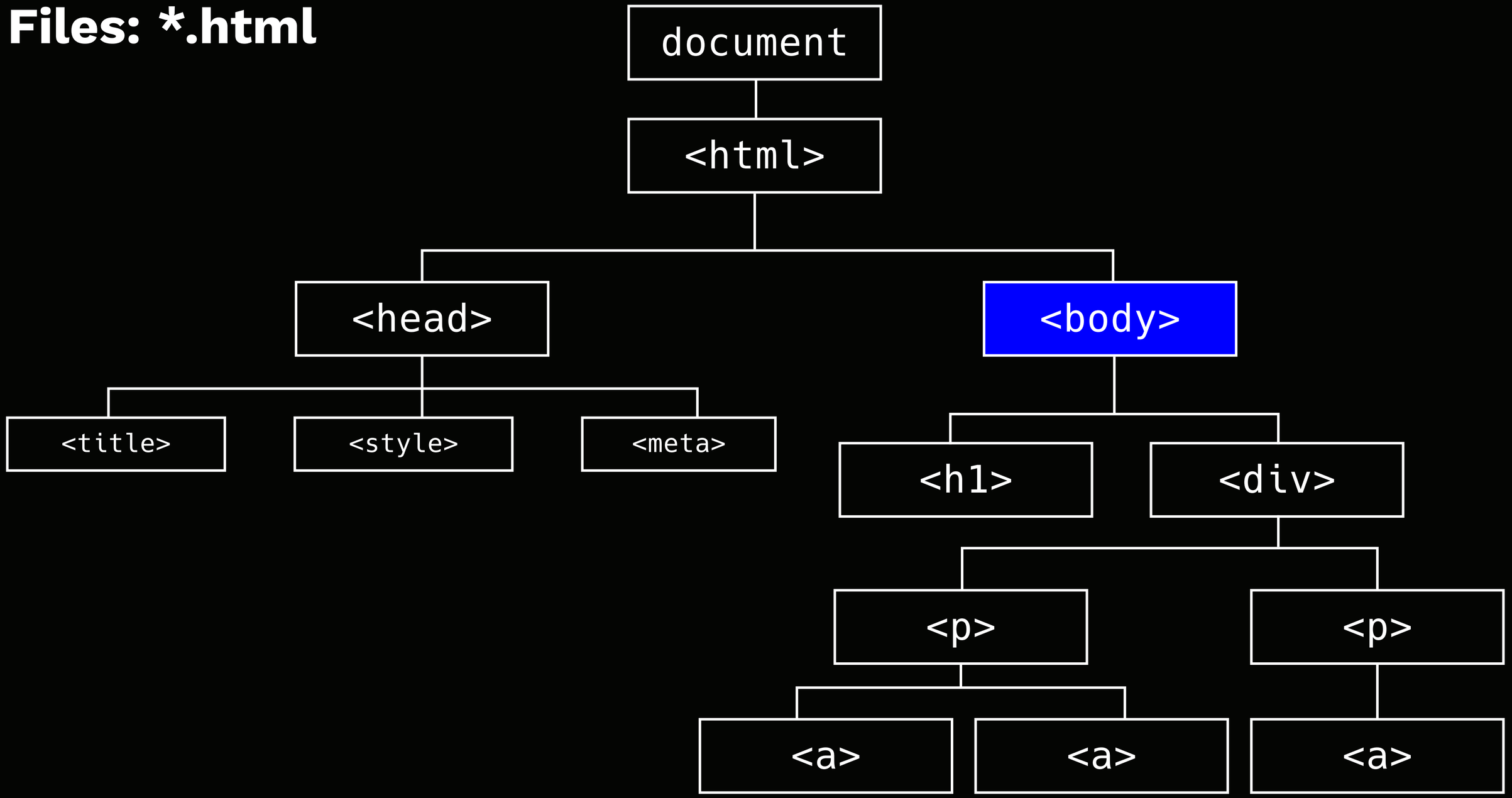
In JavaScript:

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

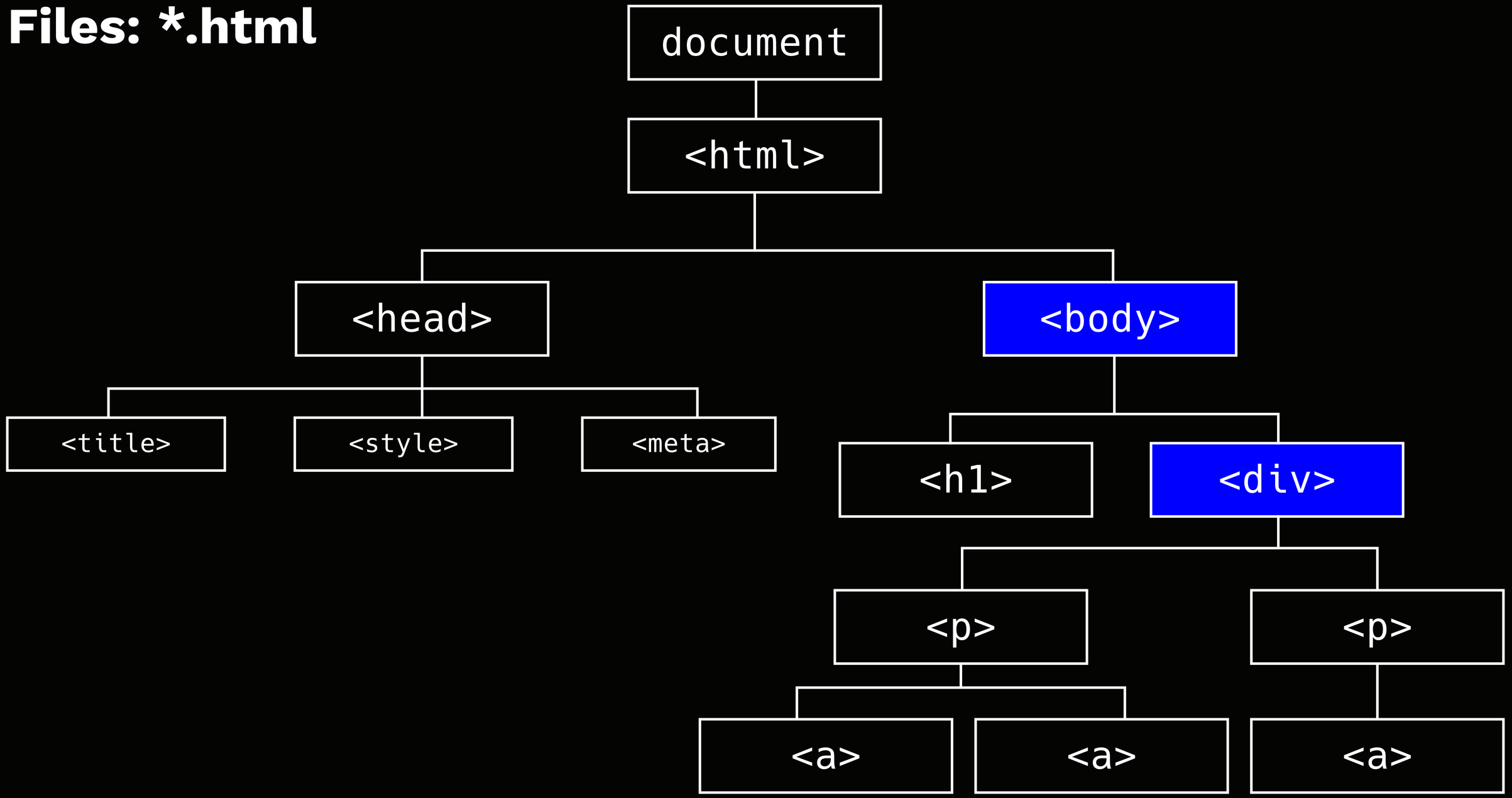
Files: *.html



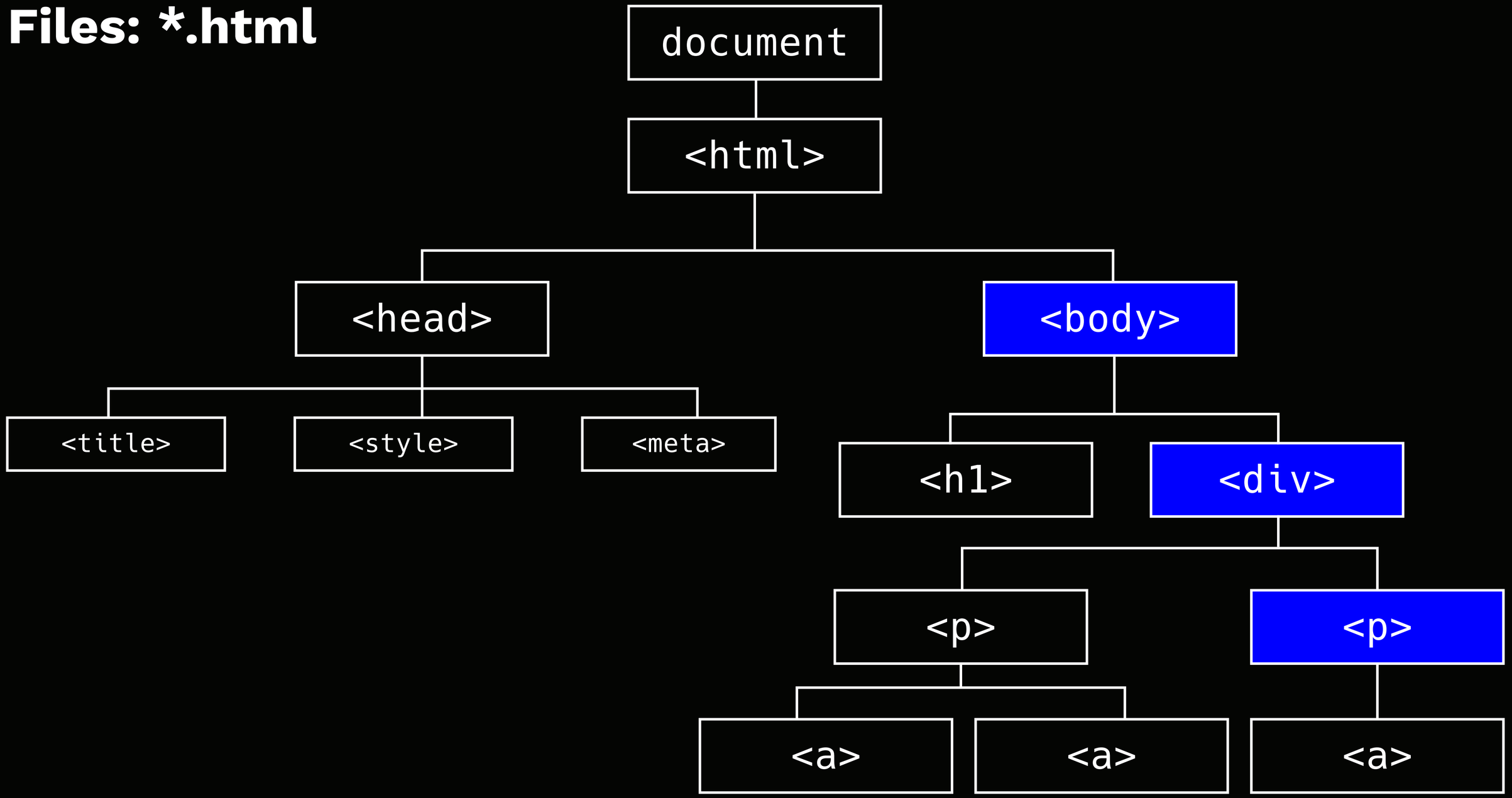
Files: *.html



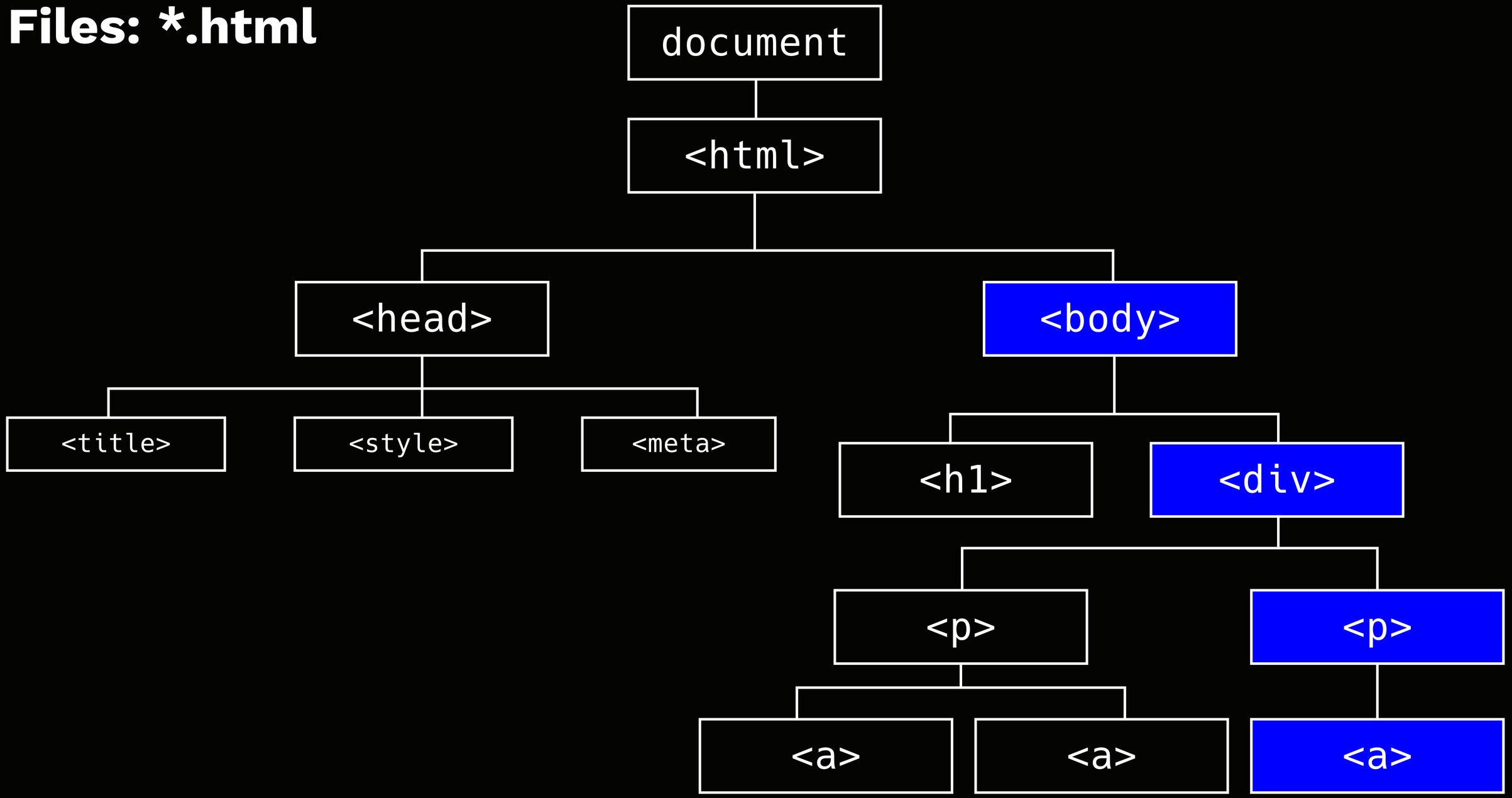
Files: *.html

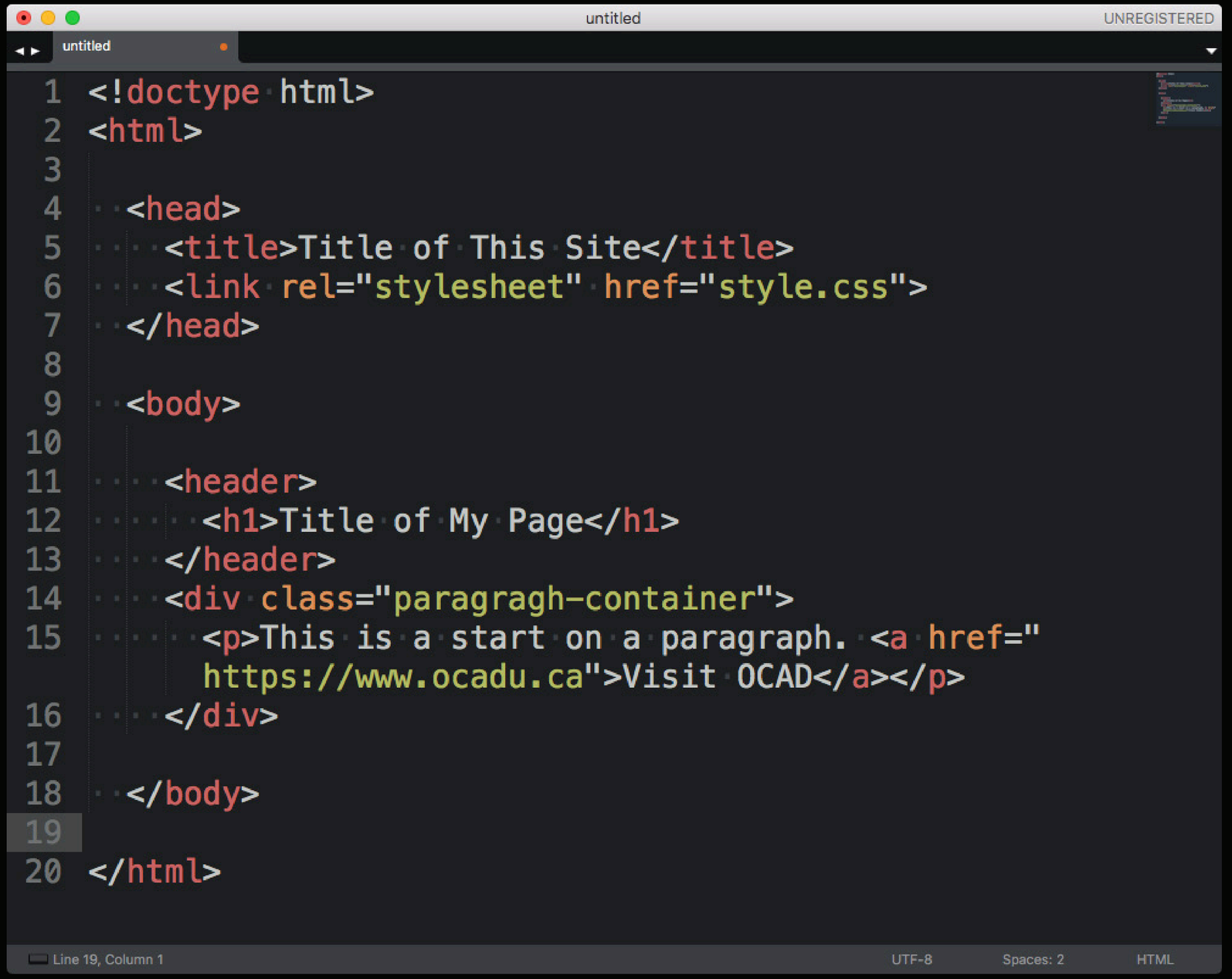


Files: *.html



Files: *.html




untitled
UNREGISTERED
untitled
<!doctype html>
<html>
<head>
<title>Title of This Site</title>
<link rel="stylesheet" href="style.css">
</head>
<body>
<header>
<h1>Title of My Page</h1>
</header>

This is a start on a paragraph. <a href="
https://www.ocadu.ca">Visit OCAD

</body>
</html>
Line 19, Column 1
UTF-8
Spaces: 2
HTML

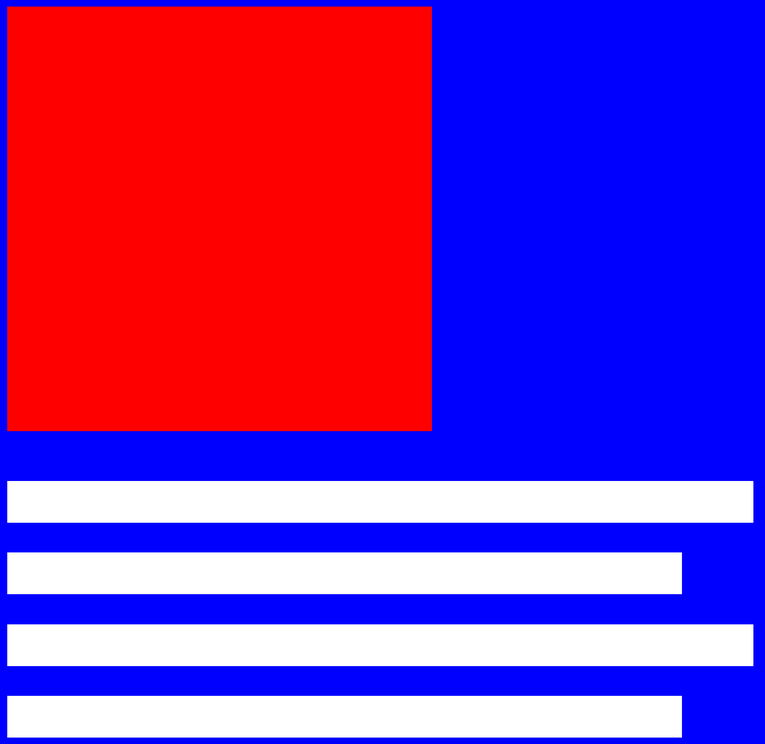
Structure: Layout

What we will see most often:

Blocks
Flexbox
Floats
Inline
Inline Block
Tables
Grid

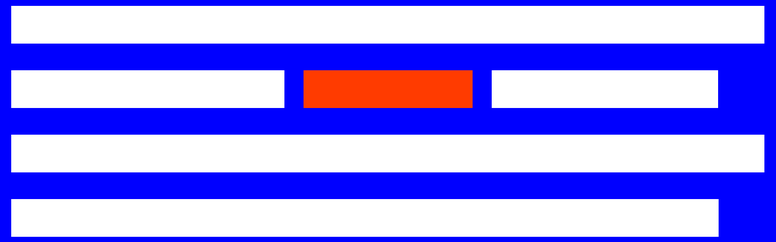
Structure: Layout

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



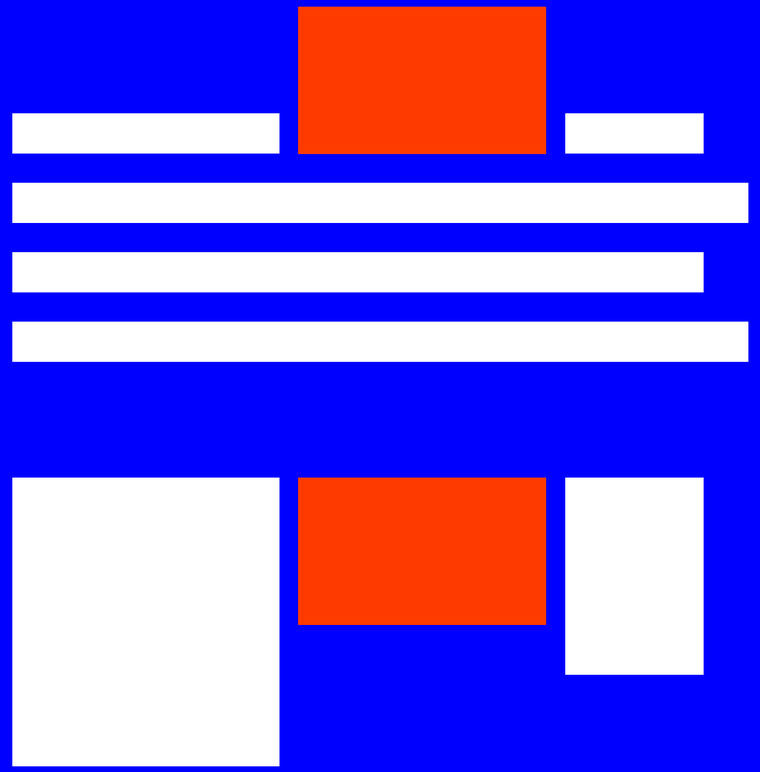
Structure: Layout

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



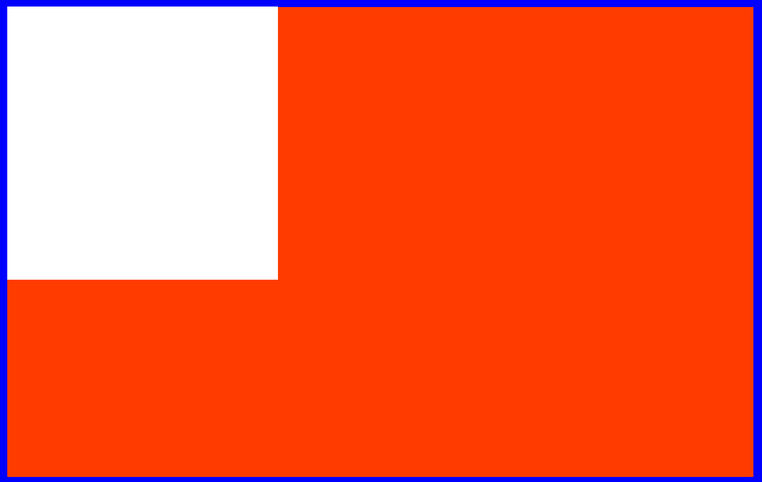
Structure: Layout

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



Structure: Layout

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



Structure: Layout

```
.box {
  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