

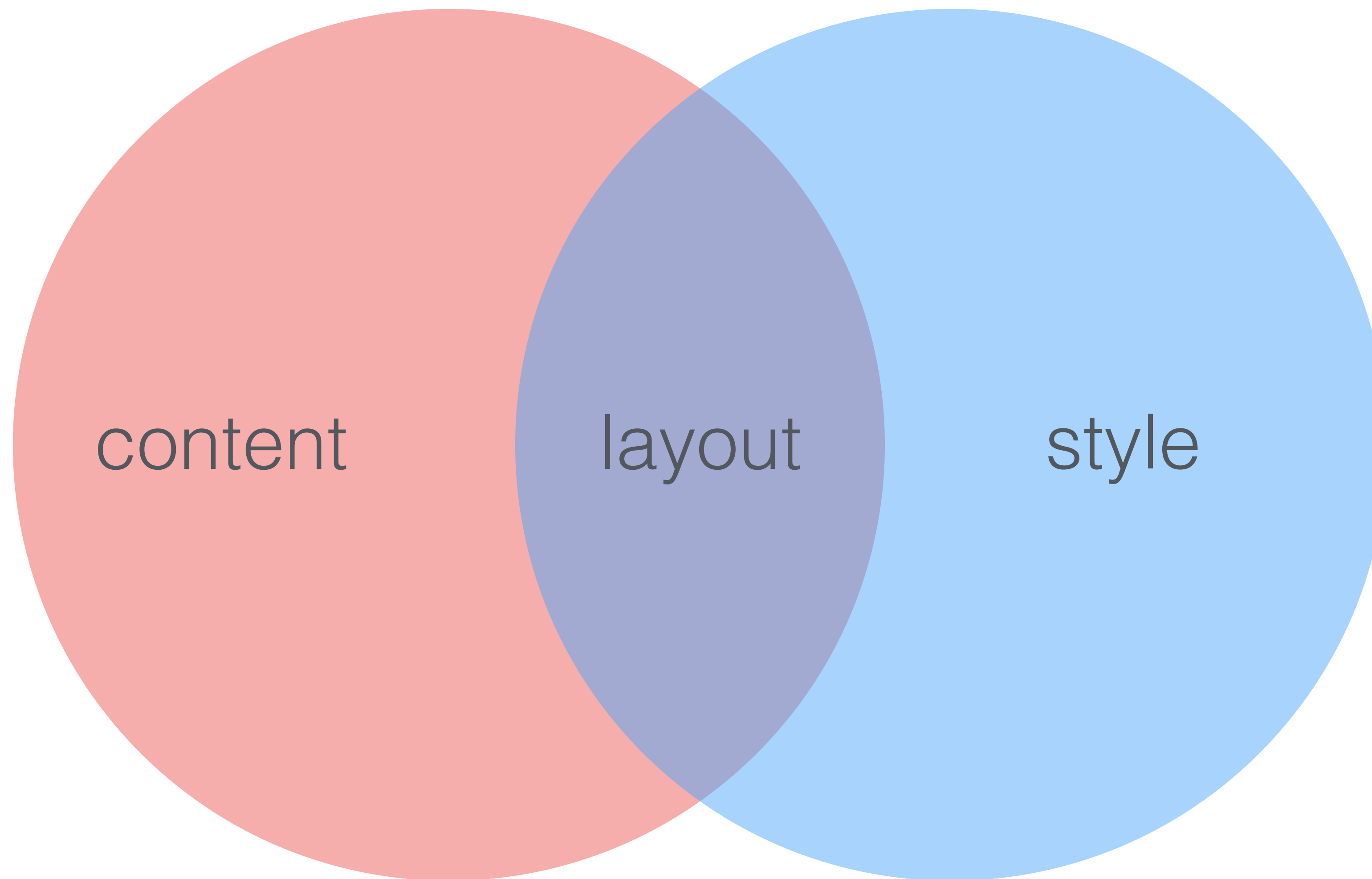
# HTML & CSS

---

*Layout laid out*

# HTML

# CSS



# WHY IS CSS IMPORTANT?

# CSS IS IMPORTANT

- **The web needs to look nice.**
- **It's the only game in town.**
- **Be a triple threat.**

# WITH CSS

Workshop

Shoestring

Overview

Edit

Comments

Tracking

Pairs

Topics

Materials

Videos

Overview & Objectives

Many companies use a CSS framework for development speed & convenience. Popular frameworks are carefully designed, compatible across many browsers, and rich in features. However, there is a contingent of developers who believe that frameworks like Bootstrap are too aggressive or opinionated in what they provide, and that it's better to either build your own framework or write ad-hoc styles for each project.

In this workshop, we're going to try to recreate the look of a certain [Bootstrap Template](#) without actually using Bootstrap. To accomplish this, we'll have to create our own CSS framework — a subset of Bootstrap which we'll affectionately call "Shoestring". Shoestring will have three key components:

- Typography
- Grids
- Forms
- You are also encouraged to implement another major Bootstrap component, the navbar.

Along the way we'll learn about building modern semantic CSS using tools like Sass (a high-quality CSS extension language).

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Overview & Objectives

2. Setup

Get the Repo

Start the App

3. Sass and Grids

Intro to Sass

Using Sass in Our App

Grid Systems

Build It Already

4. Responsive Setup

What Is Responsive Layout?

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5. Responsive Exercise

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# WITHOUT CSS

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- Grids
- Forms
- You are also encouraged to implement another major Bootstrap component, the navbar.

Along the way we'll learn about building modern semantic CSS using tools like Sass (a high-quality CSS extension language).

[Edit](#)

Select Content

- 1510FE
- 1511
- 1511JS
- 1511JS-MTD
- 1601FE
- 1601
- 1601F
- 1601GH

☐ Next

- 1. Introduction
  - [Pre-reading](#)
  - [Overview & Objectives](#)

# TERMS



# RULE EXAMPLE

apply **these** styles → 

```
article li > a:hover {  
  border: 1px solid red;  
  font-style: italic;  
}
```

to any elements matching **this** selector

even for any future changes ***declarative!***

# SELECTORS

tag	<code>input</code>
class	<code>.btn</code>
id	<code>#upload</code>
attribute	<code>[type="file"]</code>
pseudo-element	<code>::after</code>
pseudo-class	<code>:hover</code>
*	*



# COMBINATORS

<b>descendent</b>	(whitespace)
<b>child</b>	>
<b>next sibling</b>	+
<b>later sibling</b>	~

# BEWARE!

- `tag.class` element with BOTH `tag` AND `.class`
- `tag .class` element with `.class` whose ANCESTOR matches `tag`
- `tag, .class` element with EITHER `tag` OR `.class`
- `tag+.class` element with `.class` whose left SIBLING matches `tag`

# CASCADING STYLE SHEETS

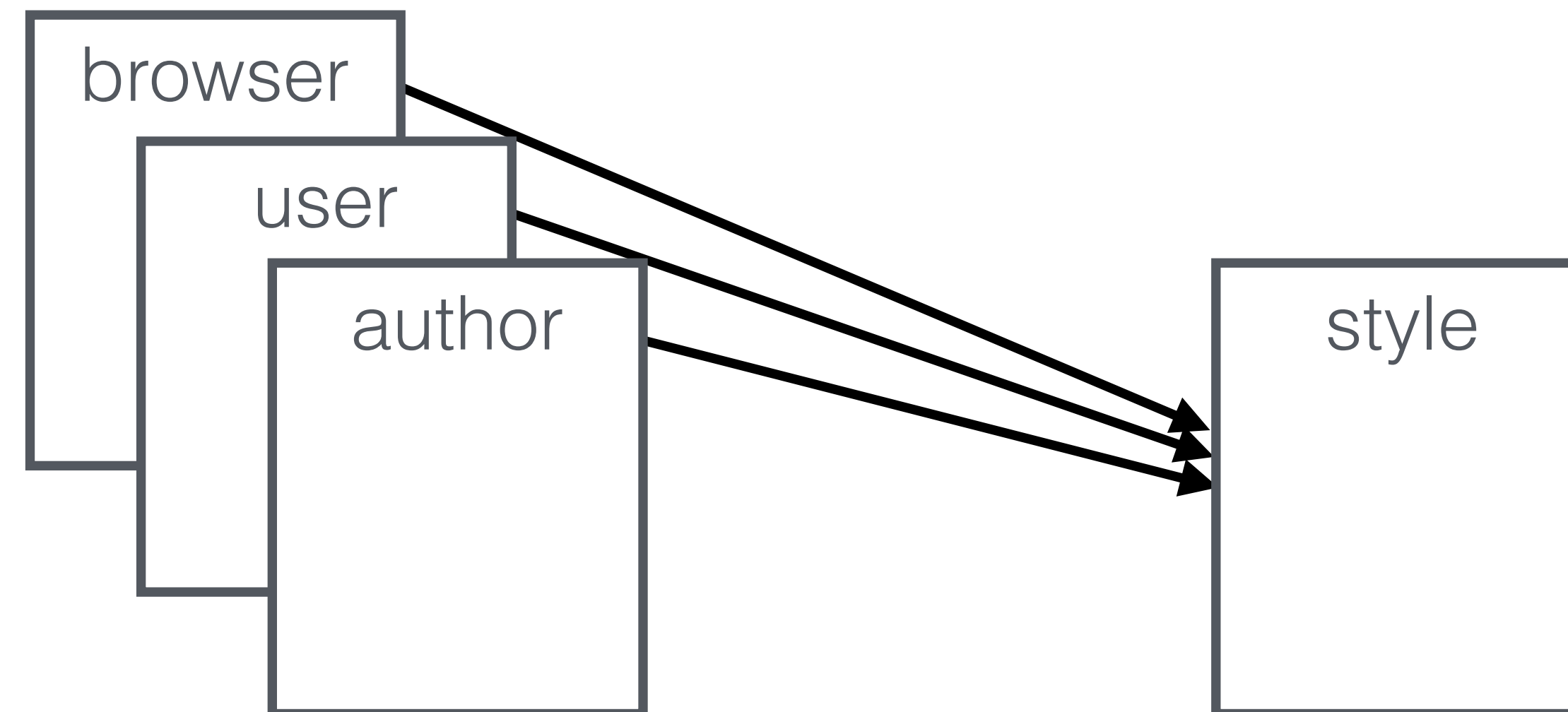
# CASCADING

**In ~1994...** *CSS had one feature that distinguished it from all the [competing style languages]: it took into account that on the Web the style of a document couldn't be designed by either the author or the reader on their own, but that their wishes had to be combined, or "cascaded," in some way.*

CASCADING STYLE SHEETS, DESIGNING FOR THE WEB, BY HÅKON WIUM LIE AND BERT BOS (1999) - CHAPTER 20

# CASCADING

*An element's style is a merge of every rule whose selector matches*



index.html

```
<head>
  <link rel="stylesheet" href="styles-B.css" />
  <link rel="stylesheet" href="styles-A.css" />
</head>
<body>
  <ul>
    <li style="background-color:blue;">A</li>
  </ul>
</body>
```

styles-A.css

```
li {
  color: red;
}
```

styles-B.css

```
li {
  font-size: 40px;
}
```

style

```
element.style {
  background-color: ■ blue;
}
li {
  color: ■ red;
} styles-A.css:1
li {
  font-size: 40px;
} styles-B.css:1
li {
  display: list-item;
  text-align: -webkit-match-parent;
} user agent stylesheet
```

view



# What happens when declarations conflict?





```
<div id="thing"></div>
```

```
div {  
  background: red;  
}
```



```
#thing {  
  background: blue;  
}
```





```
<div class="foo"></div>
```

```
div {  
  background: red;  
}
```

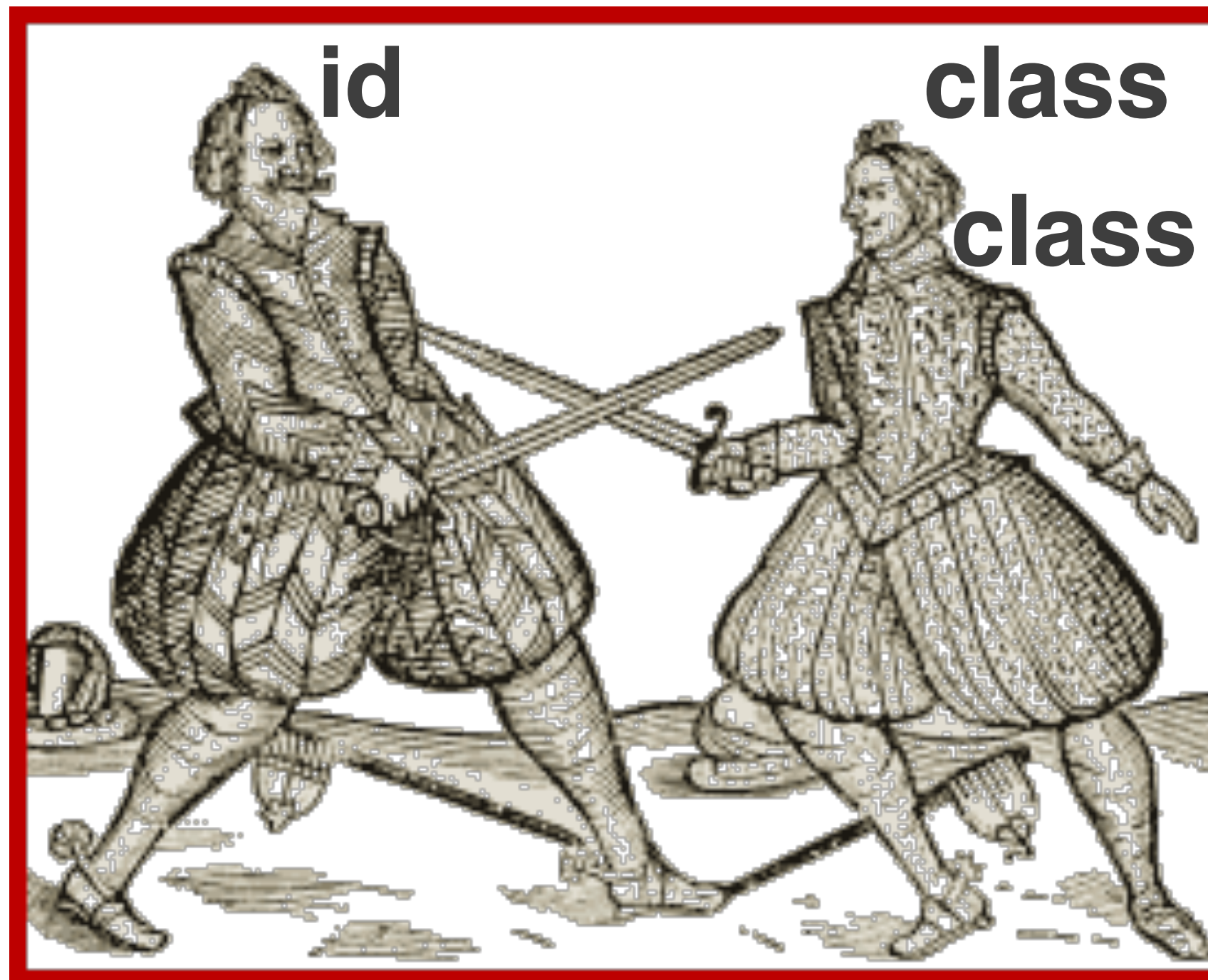


```
.foo {  
  background: green;  
}
```



```
<div id="thing" class="foo bar"></div>
```

```
#thing {  
  background: blue;  
}
```



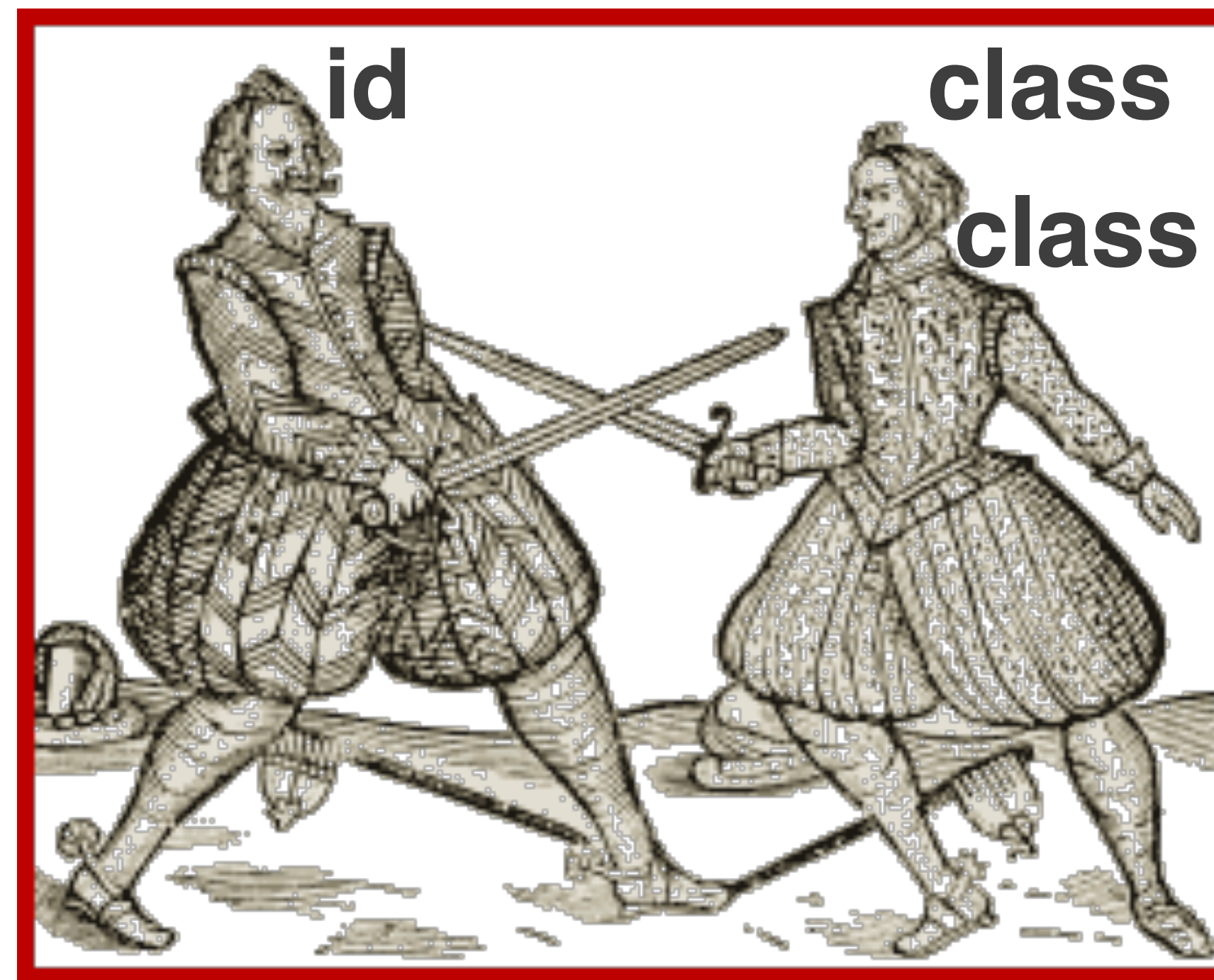
```
.foo.bar {  
  background: green;  
}
```





```
<div class="outer">  
  <div id="thing" class="foo" style="background:orange;"></div>  
</div>
```

```
#thing {  
  background: blue;  
}
```

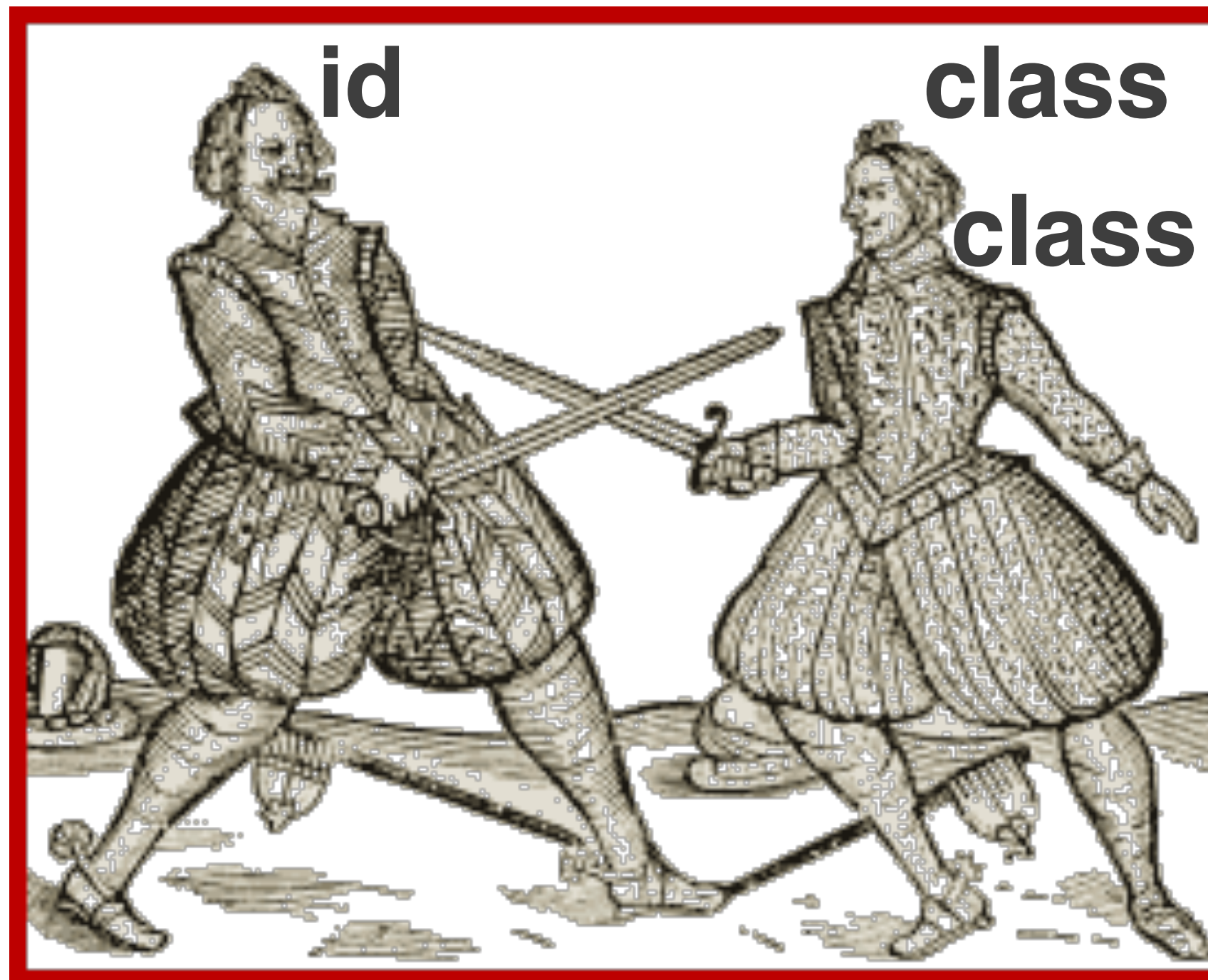


```
.outer .foo {  
  background: green;  
}
```



```
<div class="outer">  
  <div id="thing" class="foo" style="background:orange;"></div>  
</div>
```

```
div {  
  background: red !important;  
}
```



```
.outer .foo {  
  background: green;  
}
```

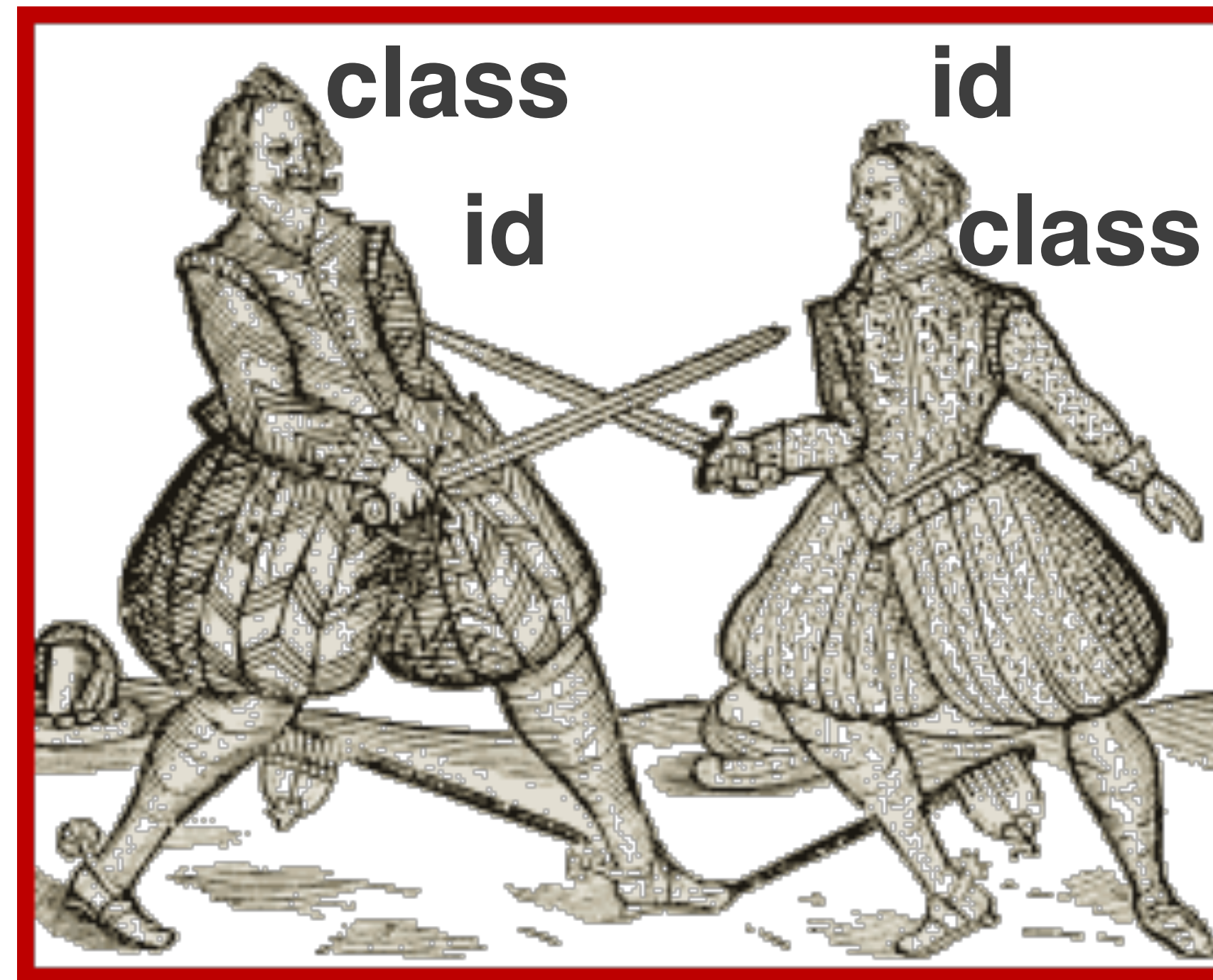
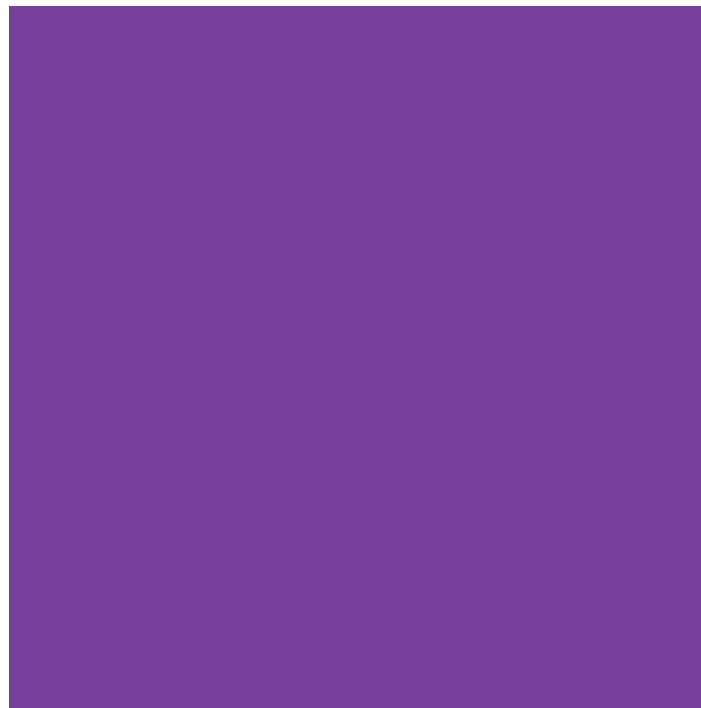




depends on which rule gets defined *last*

```
<div id="profile" class="outer">  
  <div id="thing" class="foo"></div>  
</div>
```

```
.outer #thing {  
  background: purple;  
}
```

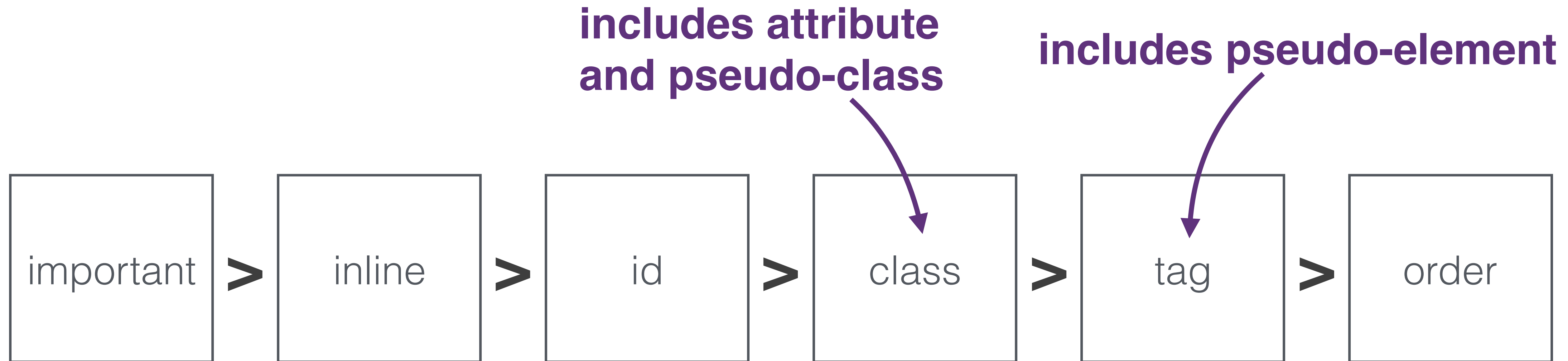


```
#profile .foo {  
  background: brown;  
}
```



**THAT WAS CSS SPECIFICITY**

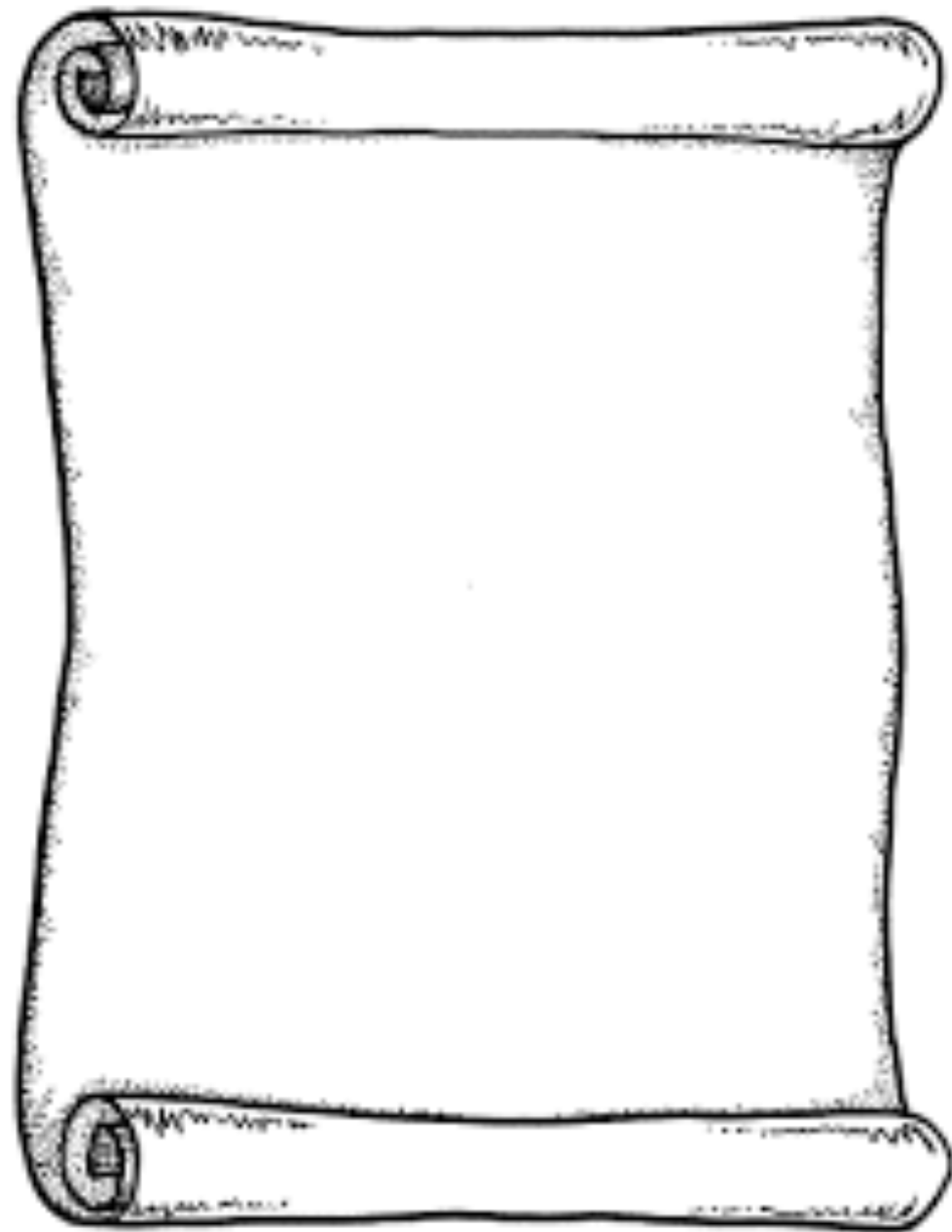
# DECLARATION SPECIFICITY



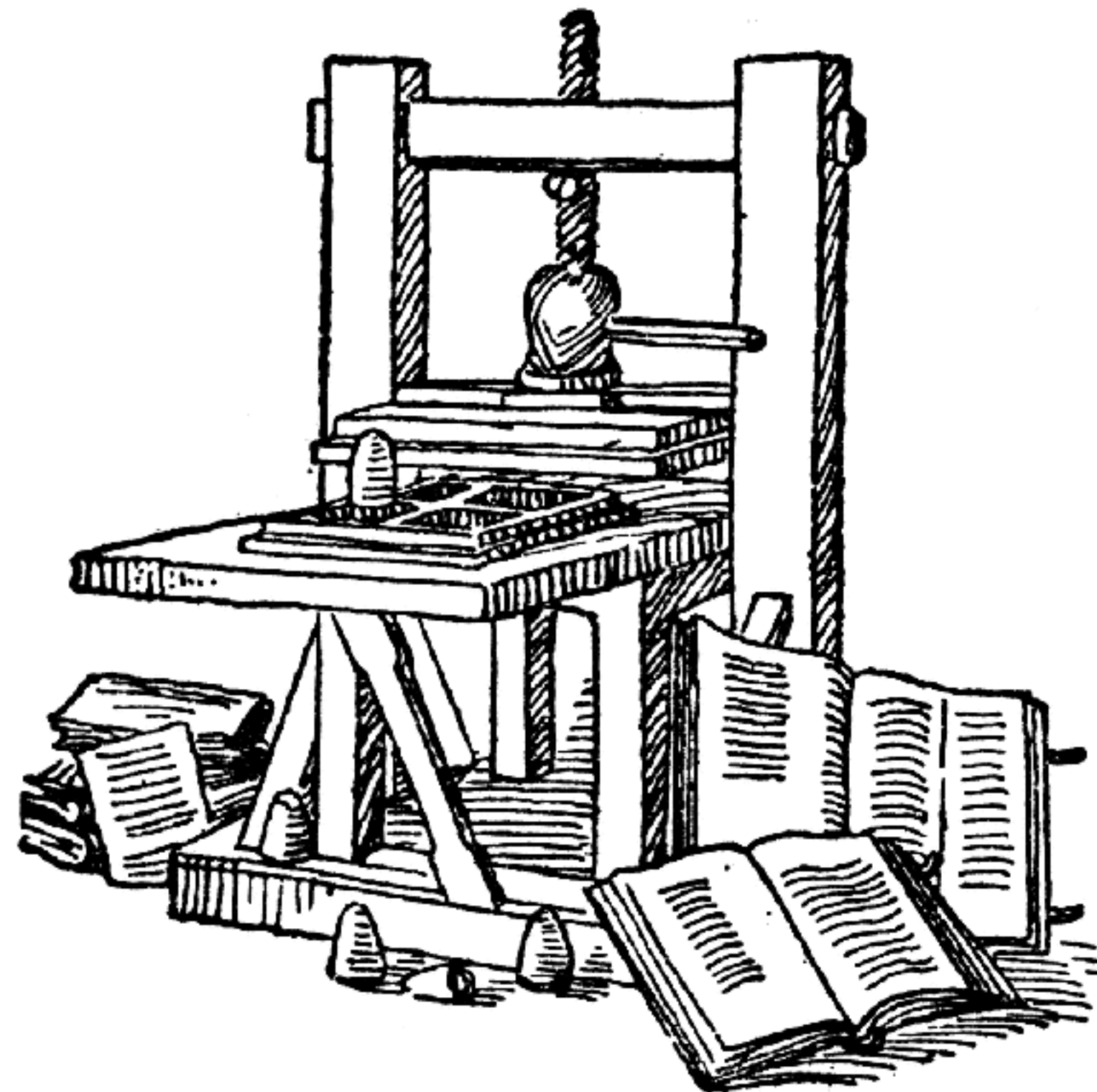
**Combinators don't affect specificity!**



# LAYOUT



[HTTP://WWW.CLIPARTBEST.COM/CLIPART-9I4O55P6T](http://www.clipartbest.com/clipart-9I4O55P6T)



[HTTP://ETC.USF.EDU/CLIPART/44800/44880/44880\\_GUTEN\\_PRESS\\_LG.GIF](http://etc.usf.edu/clipart/44800/44880/44880_GUTEN_PRESS_LG.GIF)



[HTTP://ASSETS.UXBOOTH.COM/UPLOADS/2009/11/MYSPACE.PNG](http://assets.uxbooth.com/uploads/2009/11/myspace.png)

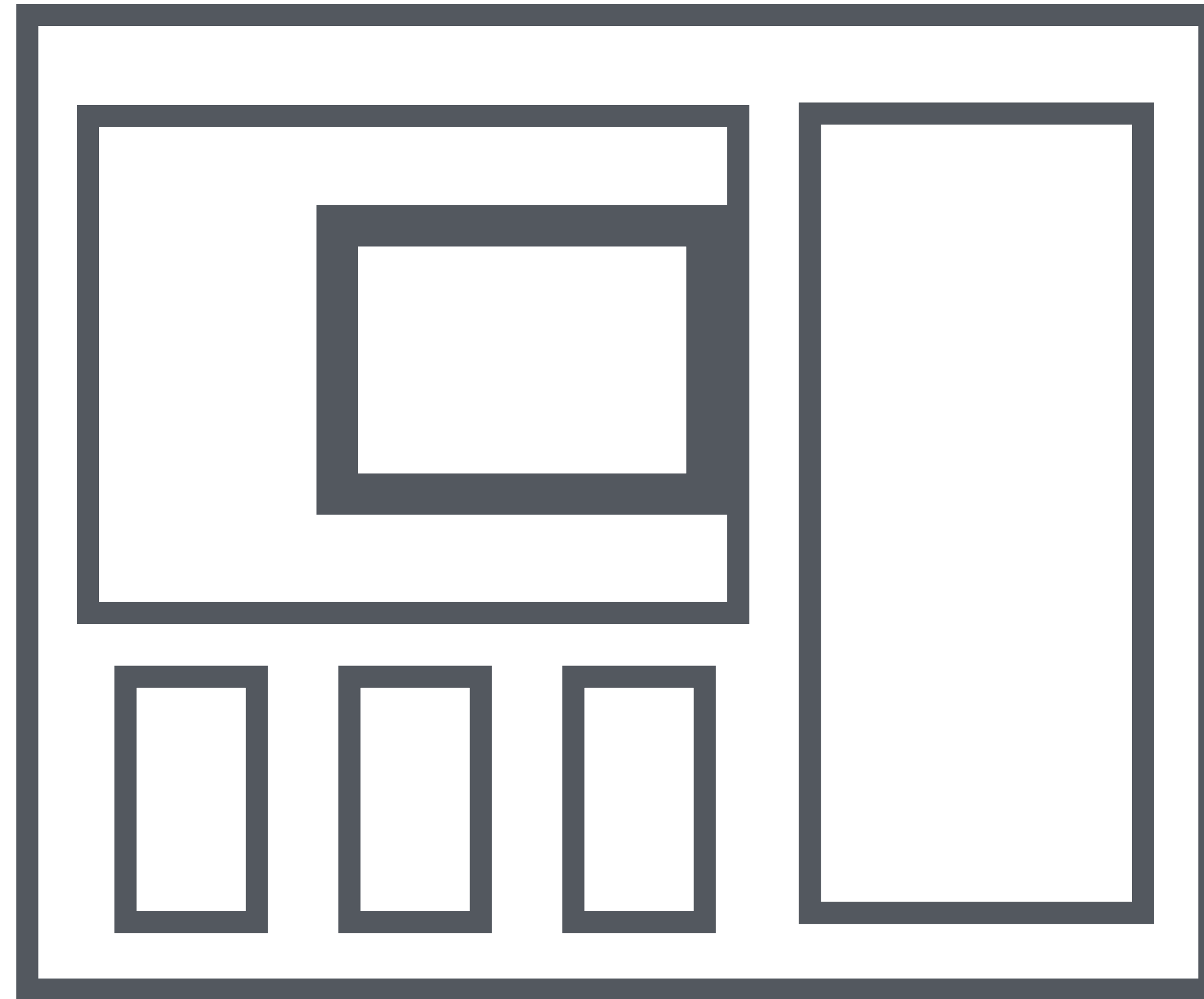


# THE BOX MODEL

*“Everything on the DOM is a rectangle”*

JOE ALVES

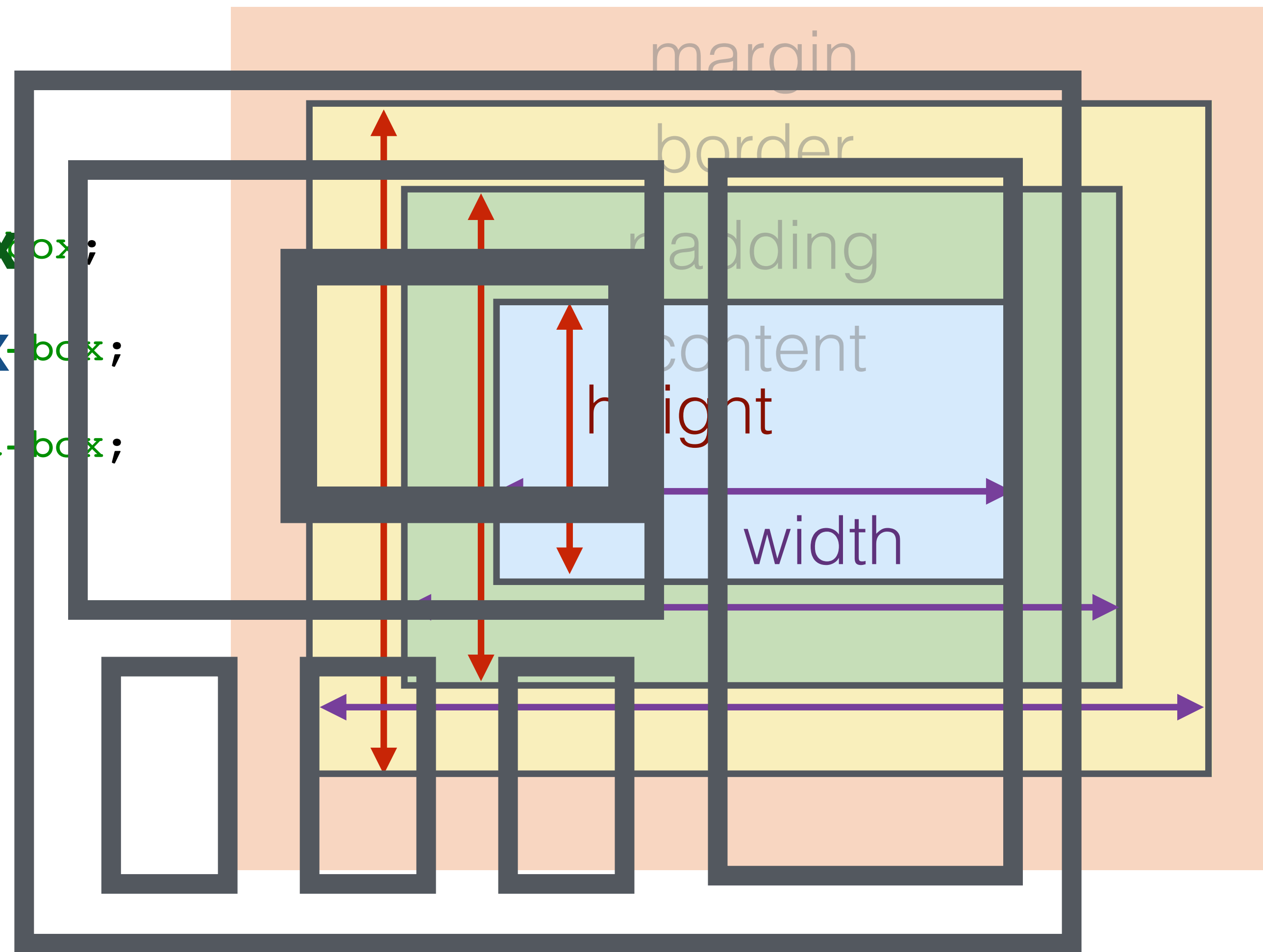
# BOX MODEL



# BOX MODEL

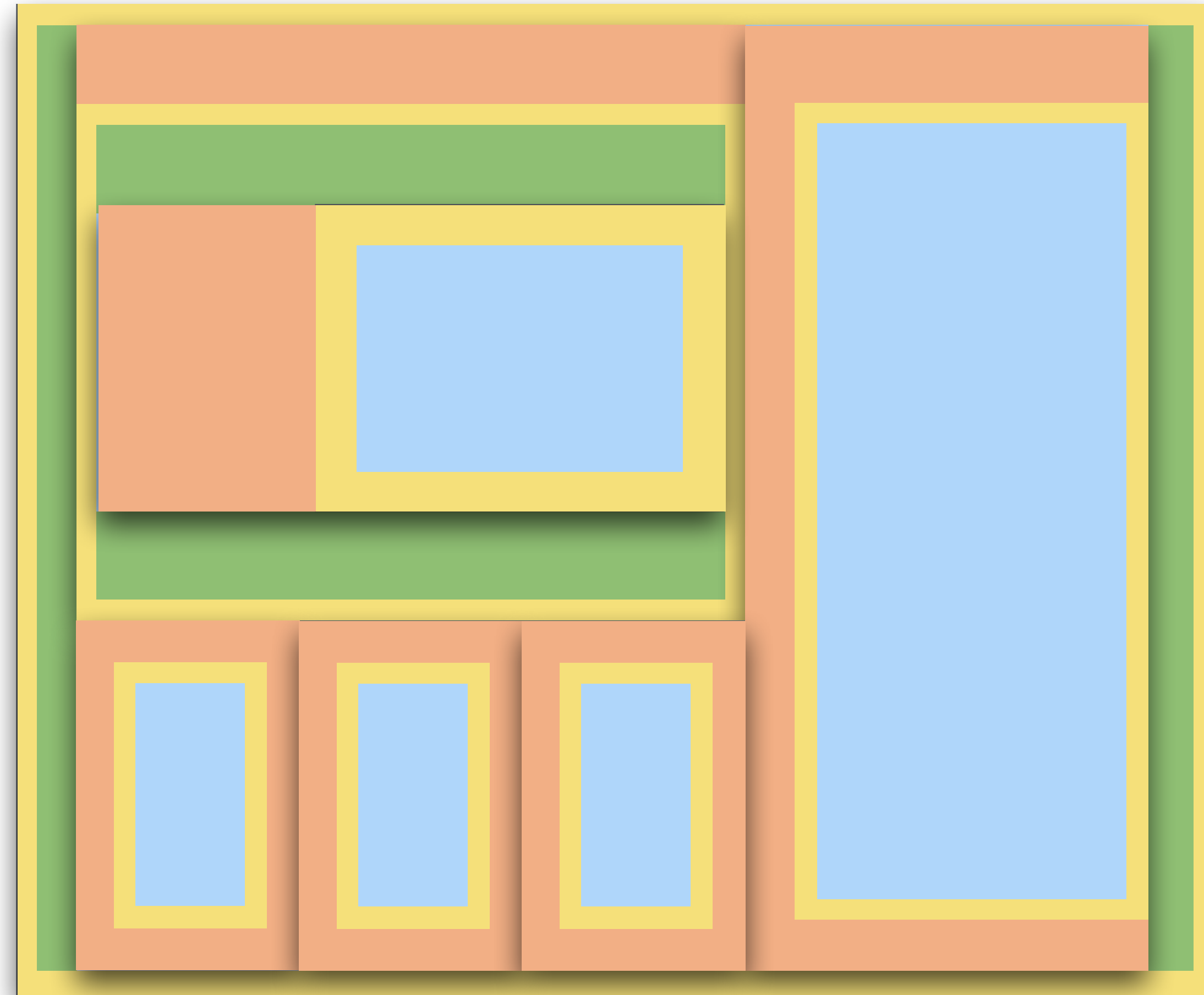
**border box**  
**padding box**  
**content box**

```
{  
  box-sizing: border-box;  
}  
  
{  
  box-sizing: padding-box;  
}  
  
{  
  box-sizing: content-box;  
}
```



# BOX MODEL

**fractal!**



# BLOCK

vs

# INLINE

vs

# INLINE-BLOCK

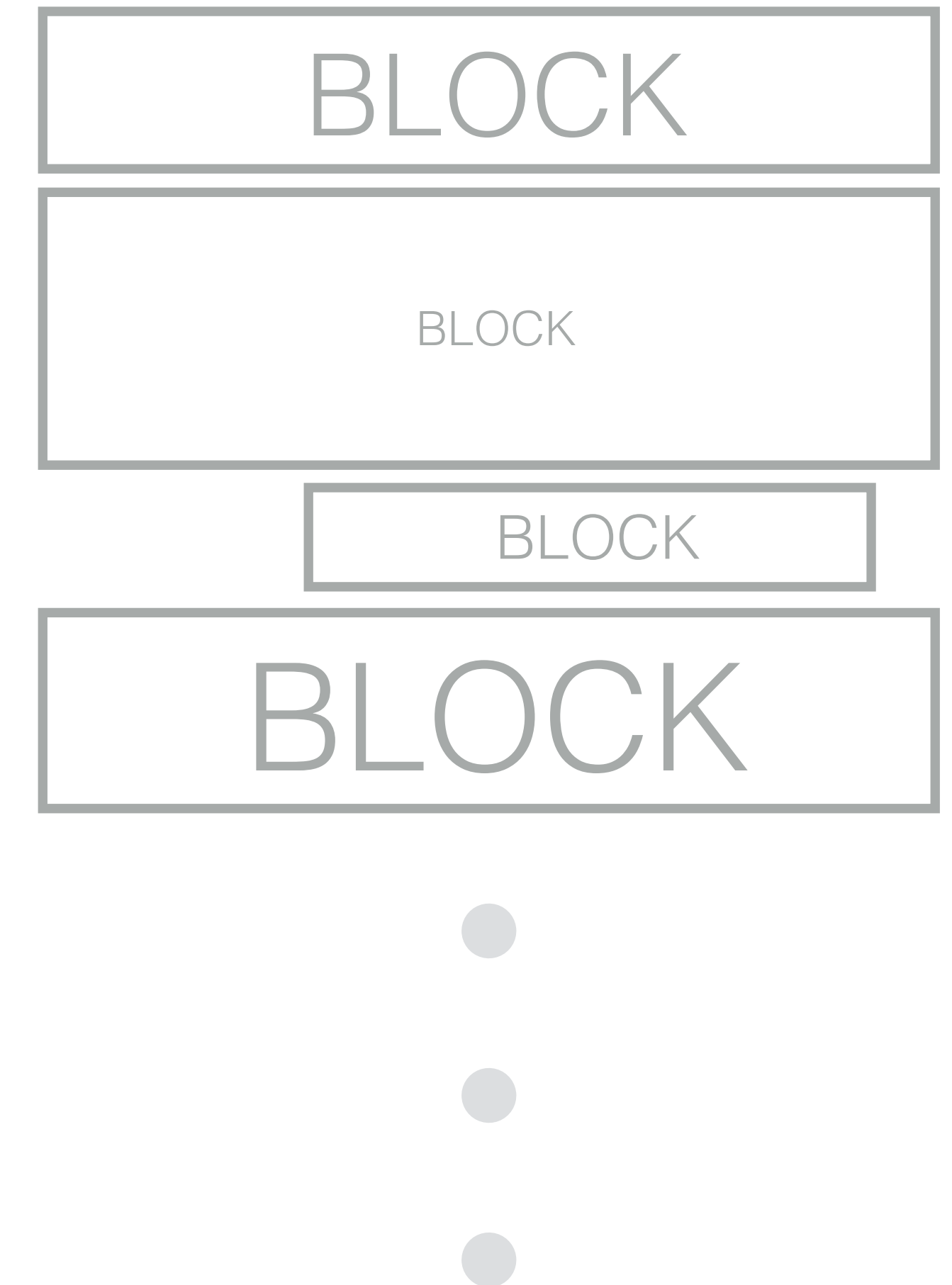
- ◉ `<div>`
- ◉ `<h1>`, `<h2>`, etc.
- ◉ `<p>`
- ◉ `<form>`
- ◉ `<header>`, `<footer>`,  
`<main>`, `<section>`, `<nav>`

- ◉ `<a>`
- ◉ `<span>`
- ◉ `<strong>`, `<em>`

- ◉ `<img>`
- ◉ `<input>`
- ◉ `<textarea>`

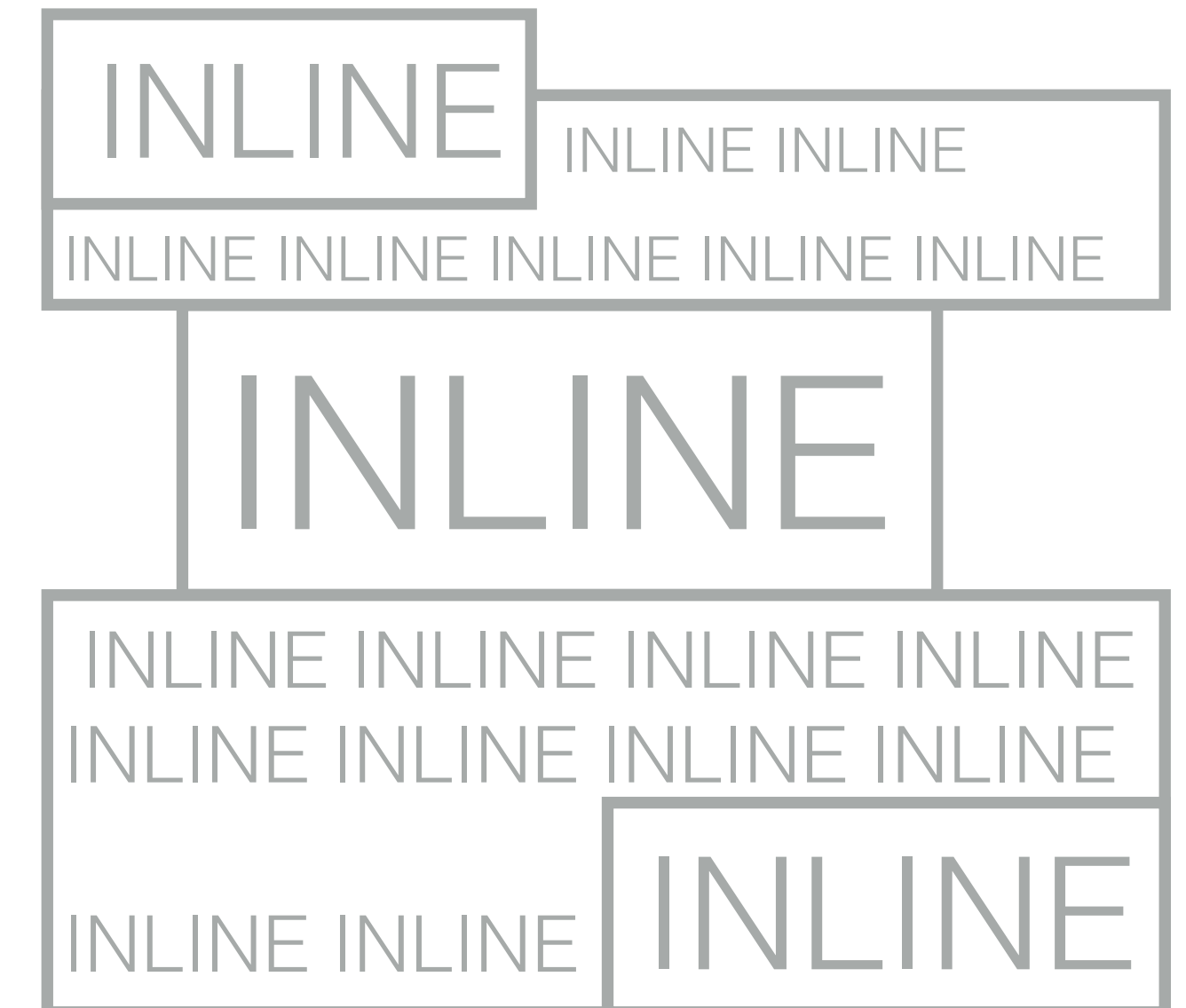
# BLOCK-LEVEL

- By default will try to **clear** their own line
- Default width is 100% of parent
- Default height will expand to fit all children
- Can have margins on all sides
- Can set height and width



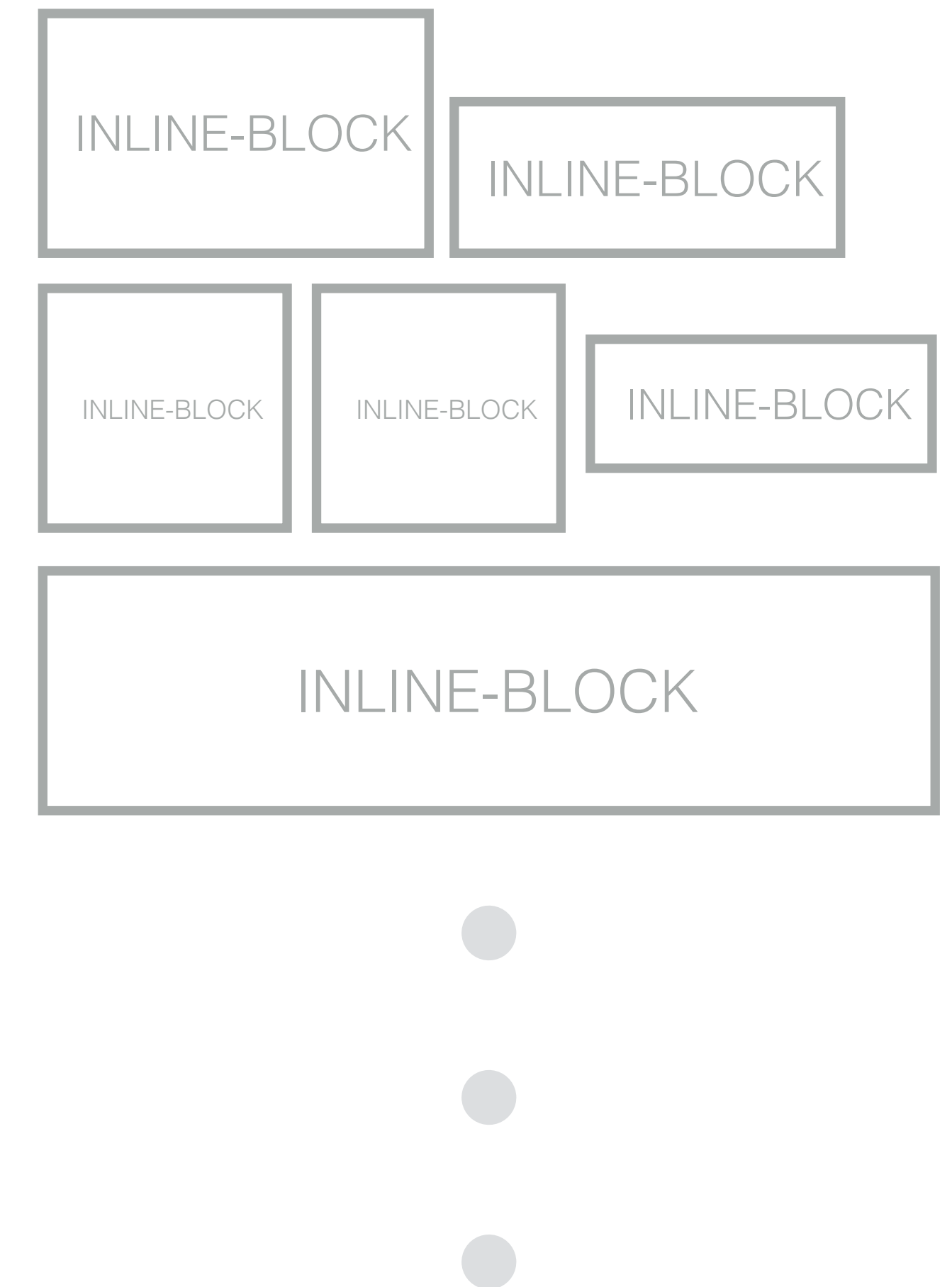
# INLINE-LEVEL

- Flows with content (does **not** clear line)
- Ignores top and bottom margins
- Height and width fit content
- Cannot set height or width



# INLINE-BLOCK

- ◉ Flows with content (does **not** clear line)
- ◉ Default width will expand to fit all children
- ◉ Default height will expand to fit all children
- ◉ Can have margins on all sides
- ◉ Can set height and width







S Y N S A C T I C A L L Y  
A W E S O M E  
S S Y E E  
S H E E T S  
Y A E T  
D S  
I  
N  
G

# SCSS

- “nesting”
- “variables”
- “loops”
- “functions”
- “modules”

# HOW DOES SCSS WORK?

# SCSS COMPILES TO CSS

# NESTING

## SCSS

```
article {  
  border: 1px solid red;  
  li {  
    background: gray;  
  }  
}
```

## CSS

```
article {  
  border: 1px solid red;  
}  
article li {  
  background: gray;  
}
```

# VARIABLES

## SCSS

```
$deep-red: #990000;
a {
    color: $deep-red;
}
.warning {
    border-color: $deep-red;
}
```

## CSS

```
a {
    color: #990000;
}
.warning {
    border-color: #990000;
}
```

# LOOPS

## SCSS

```
@for $i from 1 through 3 {  
  h#{ $i } {  
    font-size: $i * 10px;  
  }  
}
```

## CSS

```
h1 {  
  font-size: 10px;  
}  
h2 {  
  font-size: 20px;  
}  
h3 {  
  font-size: 30px;  
}
```



# MIXINS

## SCSS

```
@mixin border-radius ($r) {  
    -webkit-border-radius: $r;  
    -moz-border-radius: $r;  
    border-radius: $r;  
}  
  
.thing {  
    @include border-radius(10px);  
}
```

## CSS

```
.thing {  
    -webkit-border-radius: 10px;  
    -moz-border-radius: 10px;  
    border-radius: 10px;  
}
```

# MODULES

## SCSS

```
/* pulls in normalize.scss */  
@import 'normalize';
```

## CSS

```
/* ... */  
/**  
 * 1. Set default font family to sans-serif  
 * 2. Prevent iOS text size adjust after orientation change, without disabling  
 *    user zoom.  
 */  
html {  
  font-family: sans-serif;  
  /* 1 */  
  -ms-text-size-adjust: 100%;  
  /* 2 */  
  -webkit-text-size-adjust: 100%;  
  /* 2 */  
}  
/**  
 * Remove default margin.  
 */  
body {  
  margin: 0; }  
/* =====  
   Links  
   ===== */  
/**  
 * Remove the gray background color from active links in IE 10.  
 */  
a {  
  background: transparent; }  
/* ... */
```