

# Creating a Site with CSS Grid and Bootstrap 4

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## SETTING UP OUR PROJECT



**Mario Macari**

PROFESSOR, DEVELOPER & ARTIST

Safari File Edit View History Bookmarks Develop Window Help

w3.org

471 Tests

W3C

W3C Candidate Recommendation

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# CSS Grid Layout Module Level 1

W3C Candidate Recommendation, 14 December 2017

**This version:**

<https://www.w3.org/TR/2017/CR-css-grid-1-20171214/>

**Latest published version:**

<https://www.w3.org/TR/css-grid-1/>

**Editor's Draft:**

<https://drafts.csswg.org/css-grid/>

**Previous Versions:**

<https://www.w3.org/TR/2017/CR-css-grid-1-20170509/>

<https://www.w3.org/TR/2016/WD-css-grid-1-20160519/>

<https://www.w3.org/TR/2015/WD-css-grid-1-20150917/>

<https://www.w3.org/TR/2015/WD-css-grid-1-20150806/>

<https://www.w3.org/TR/2015/WD-css-grid-1-20150317/>

<https://www.w3.org/TR/2014/WD-css-grid-1-20140513/>

<https://www.w3.org/TR/2014/WD-css-grid-1-20140123/>

<https://www.w3.org/TR/2013/WD-css3-grid-layout-20130402/>

<https://www.w3.org/TR/2012/WD-css3-grid-layout-20121106/>

**Test Suite:**

[http://test.csswg.org/suites/css-grid-1\\_dev/nightly-unstable/](http://test.csswg.org/suites/css-grid-1_dev/nightly-unstable/)

**Issue Tracking:**

[Disposition of Comments](#)

[Inline In Spec](#)

[GitHub Issues](#)

<https://www.w3.org/TR/css-grid-1/>

# The CSS Grid module

The CSS Grid module defines a two-dimensional grid-based layout system, optimized for user interface design. In the grid layout model, the children of a grid container can be positioned into arbitrary slots in a predefined flexible or fixed-size layout grid.

— <https://www.w3.org/TR/css-grid-1/>



# Bootstrap

Build responsive, mobile-first projects on the web with the world's most popular front-end component library.

Bootstrap is an open source toolkit for developing with HTML, CSS, and JS. Quickly prototype your ideas or build your entire app with our Sass variables and mixins, responsive grid system, extensive prebuilt components, and powerful plugins built on jQuery.

[Get started](#)[Download](#)

Currently v4.1.3

<http://getbootstrap.com>

# Bootstrap 4

Bootstrap is an open source toolkit for developing with HTML, CSS, and JS. Quickly prototype your ideas or build your entire app with our responsive grid system, extensive prebuilt components, and powerful plugins built on jQuery.

<http://getbootstrap.com>

[Brackets](#)[Contribute](#)[API Docs](#)[Blog](#)[Extensions](#)[Support](#)

# A modern, open source text editor that understands web design.

[Download Brackets 1.13](#)[Other Downloads](#)

```
index.html — Brackets
Working Files
index.html
brackets.io [ larz/v1 ]
.gitignore
404.html
blog.html
CNAME
contribute.html
103 <div id="hero-wrapper">
104   <div id="hero" class="row">
105     <div class="large-12 columns">
106       <h1>Brackets is an open source code editor for web designers and front-end developers. <a class="nobr" href="https://github.com/adobe/brackets/releases/latest">Get It Now!</a>
107       <div id="download">
108         <a id="hero-cta-button" href="https://github.com/adobe/brackets/releases/latest" class="large rounded">Download</a>
109       </div>
brackets.io.css : 378 New Rule
378 #hero-cta-button {
379   font: 400 18px source-sans-pro, sans-serif;
380   text-align: center;
381   padding-left: 1.5em;
382   padding-right: 1.5em;
383 }
```

<http://brackets.io>



Google Chrome

Do More with Chrome

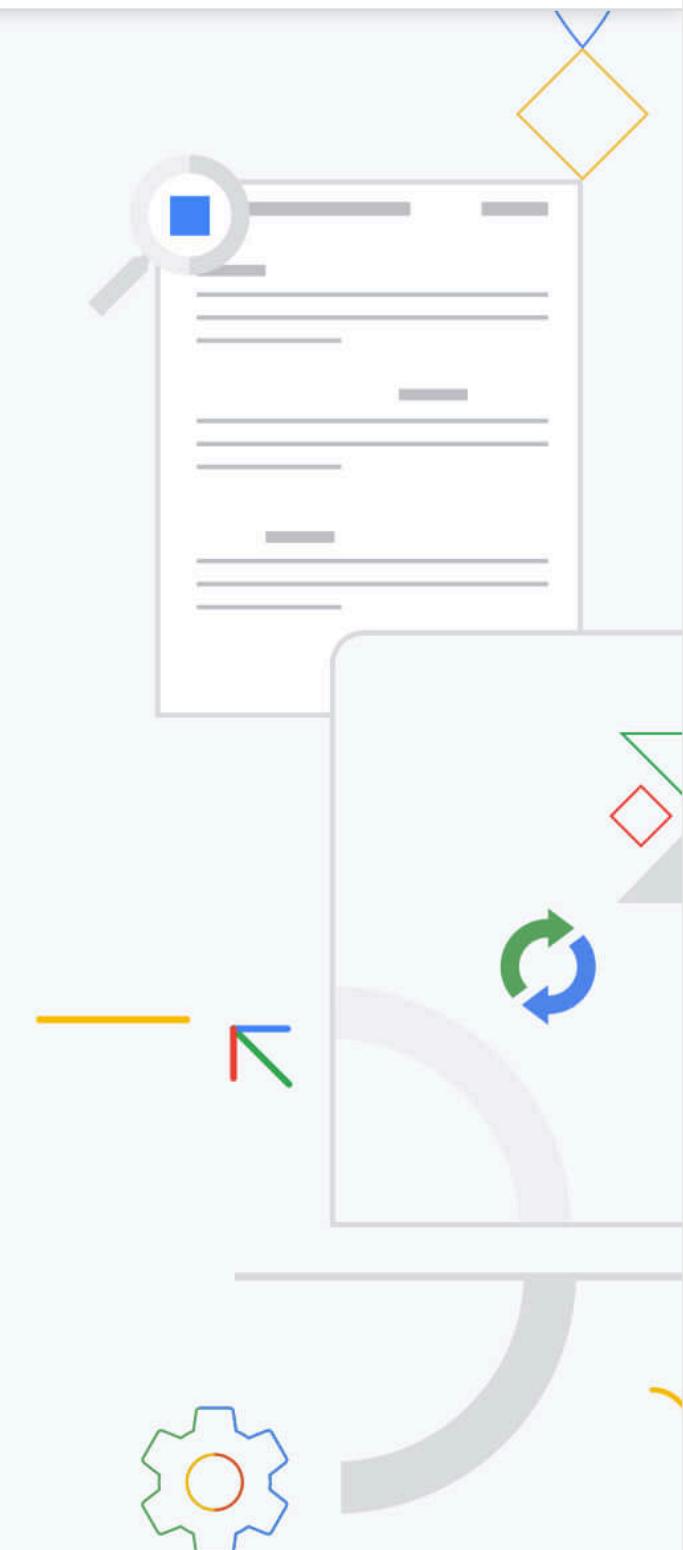
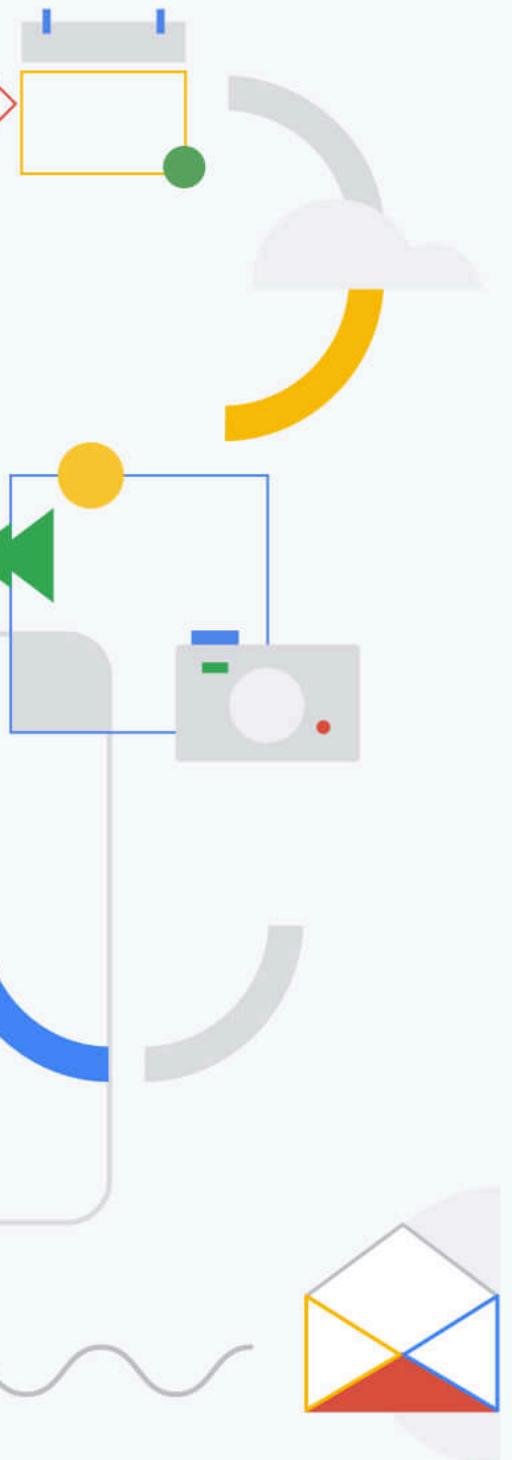
Extensions

Enterprise



# Get more done with the new Chrome

Now more simple, secure, and faster than ever - with Google's smarts  
built-in.

[Download Chrome](#)

<https://www.google.com/chrome/>



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# Font Awesome

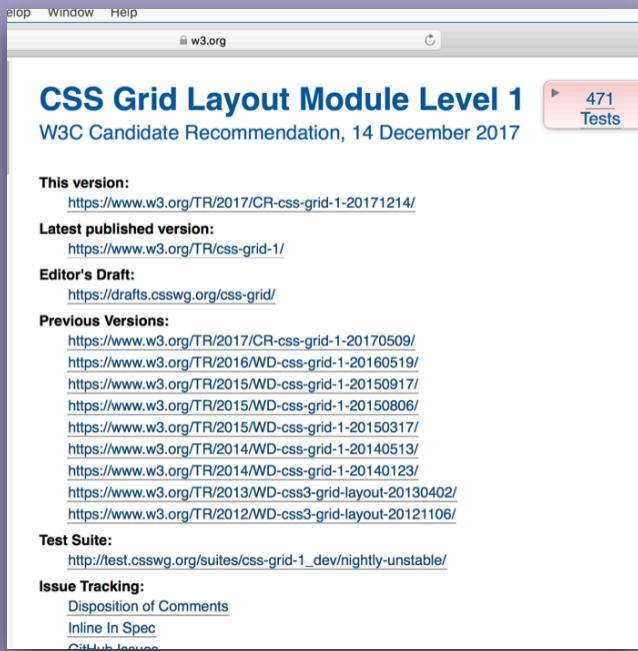
Get vector icons and social logos on your website  
with Font Awesome, the web's most popular icon set  
and toolkit.

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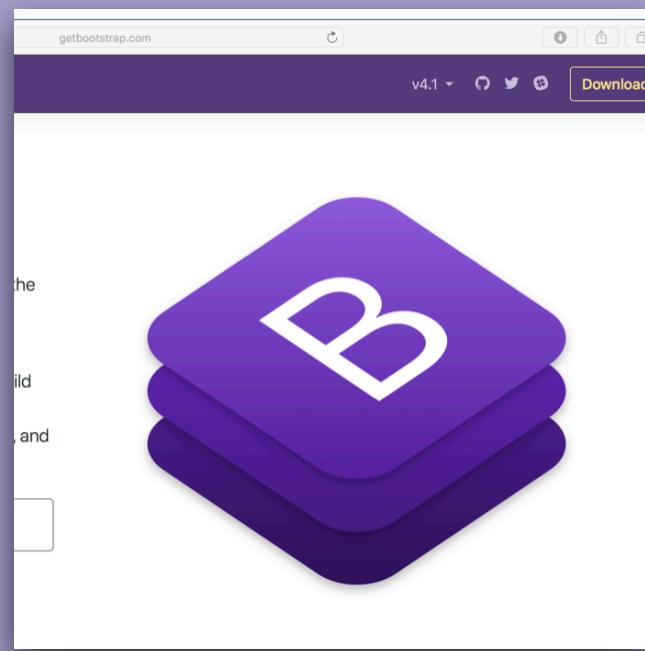
Version 5.5.0 • [1,409 Free Icons](#) • [4,566 Pro Icons](#) • [Download](#)



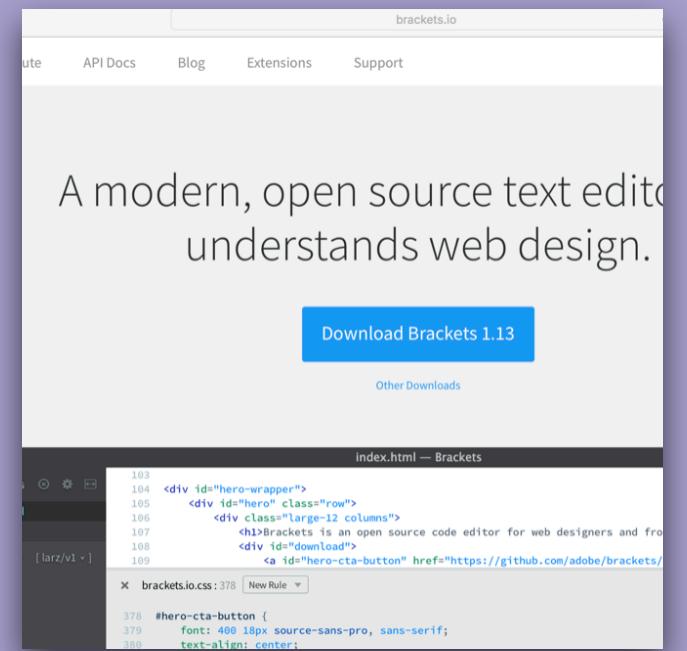
<https://fontawesome.com>



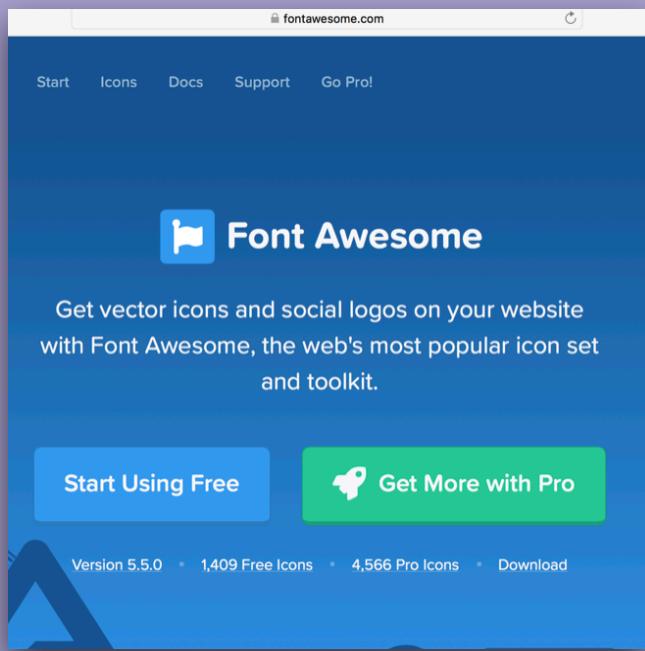
## CSS Grid



## Bootstrap 4



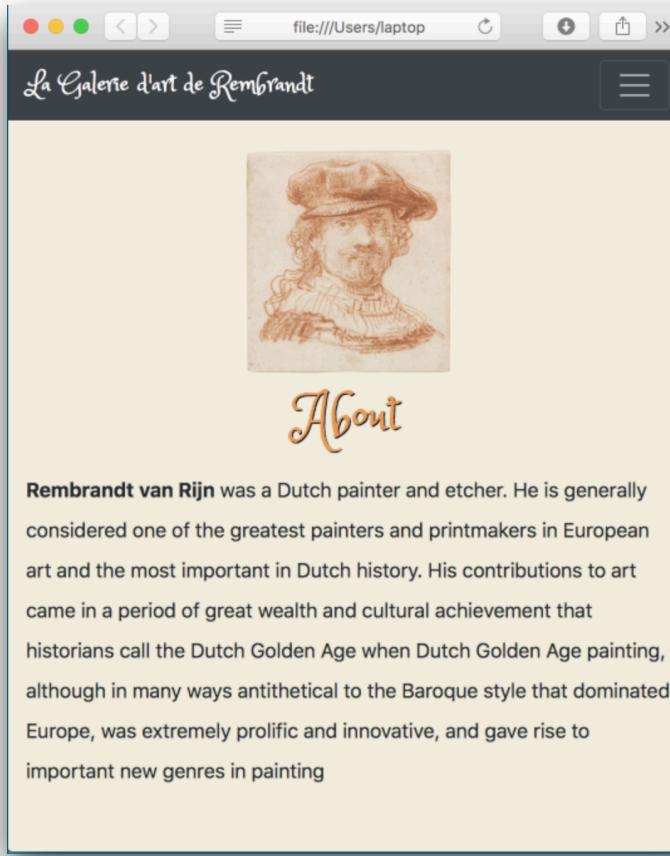
## Brackets/Chrome



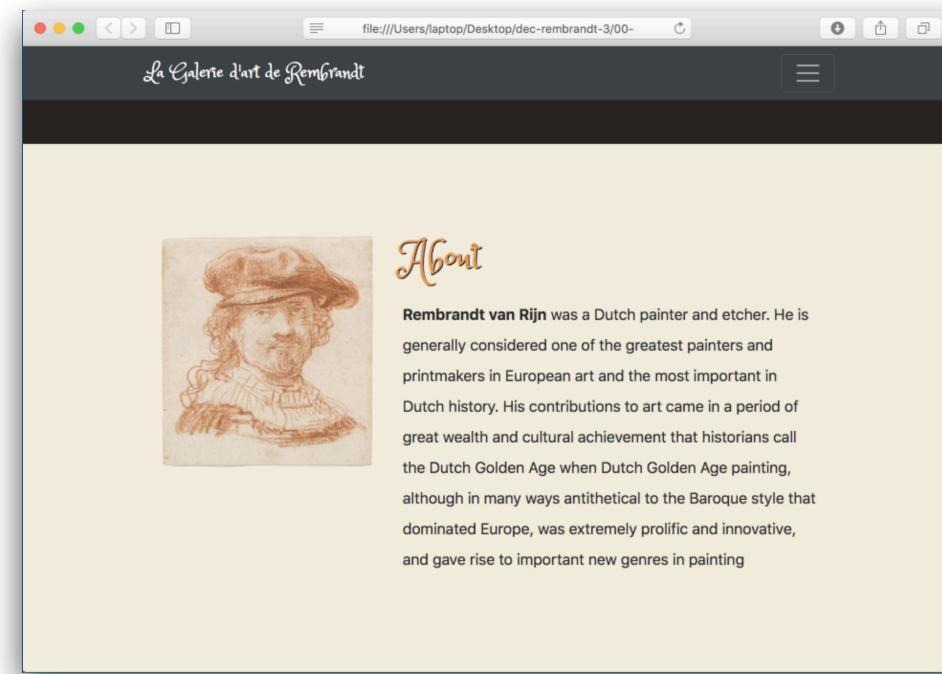
## Font Awesome

See you there.

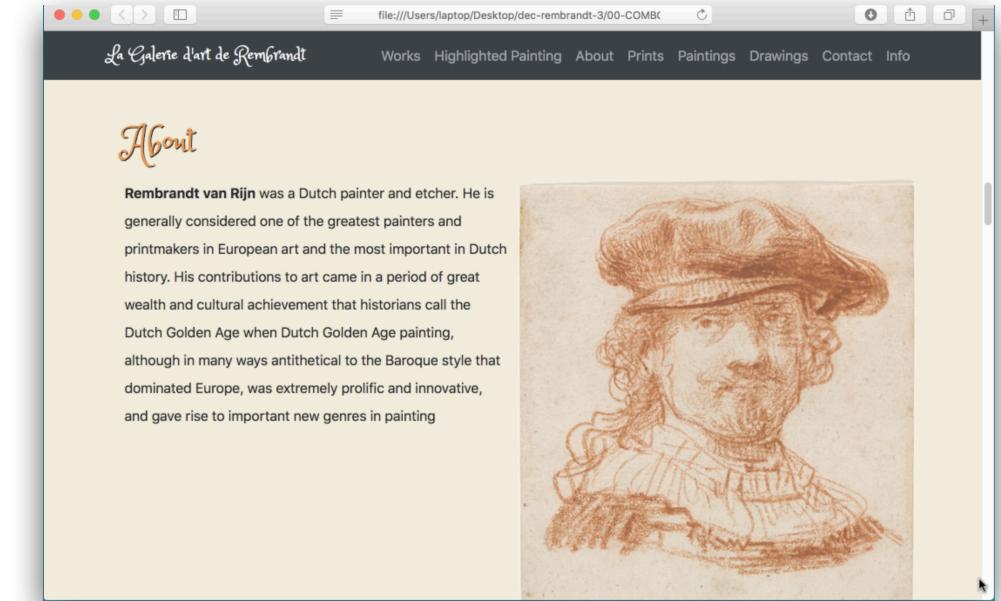
# 3 Different Layout Designs Based on Width



Phone Size



Tablet Size



Desktop/Laptop Size

# Grid and Flexbox Differences

The basic difference is that flexbox was designed for layout in one dimension - either a row or a column. Grid was designed for two-dimensional layout - rows, and columns at the same time.

[https://developer.mozilla.org/en-US/docs/Web/CSS/CSS\\_Grid\\_Layout/Relationship\\_of\\_Grid\\_Layout](https://developer.mozilla.org/en-US/docs/Web/CSS/CSS_Grid_Layout/Relationship_of_Grid_Layout)

# About

**Rembrandt van Rijn** was a Dutch painter and etcher. He is generally considered one of the greatest painters and printmakers in European art and the most important in Dutch history. His contributions to art came in a period of great wealth and cultural achievement that historians call the Dutch Golden Age when Dutch Golden Age painting, although in many ways antithetical to the Baroque style that dominated Europe, was extremely prolific and innovative, and gave rise to important new genres in painting.

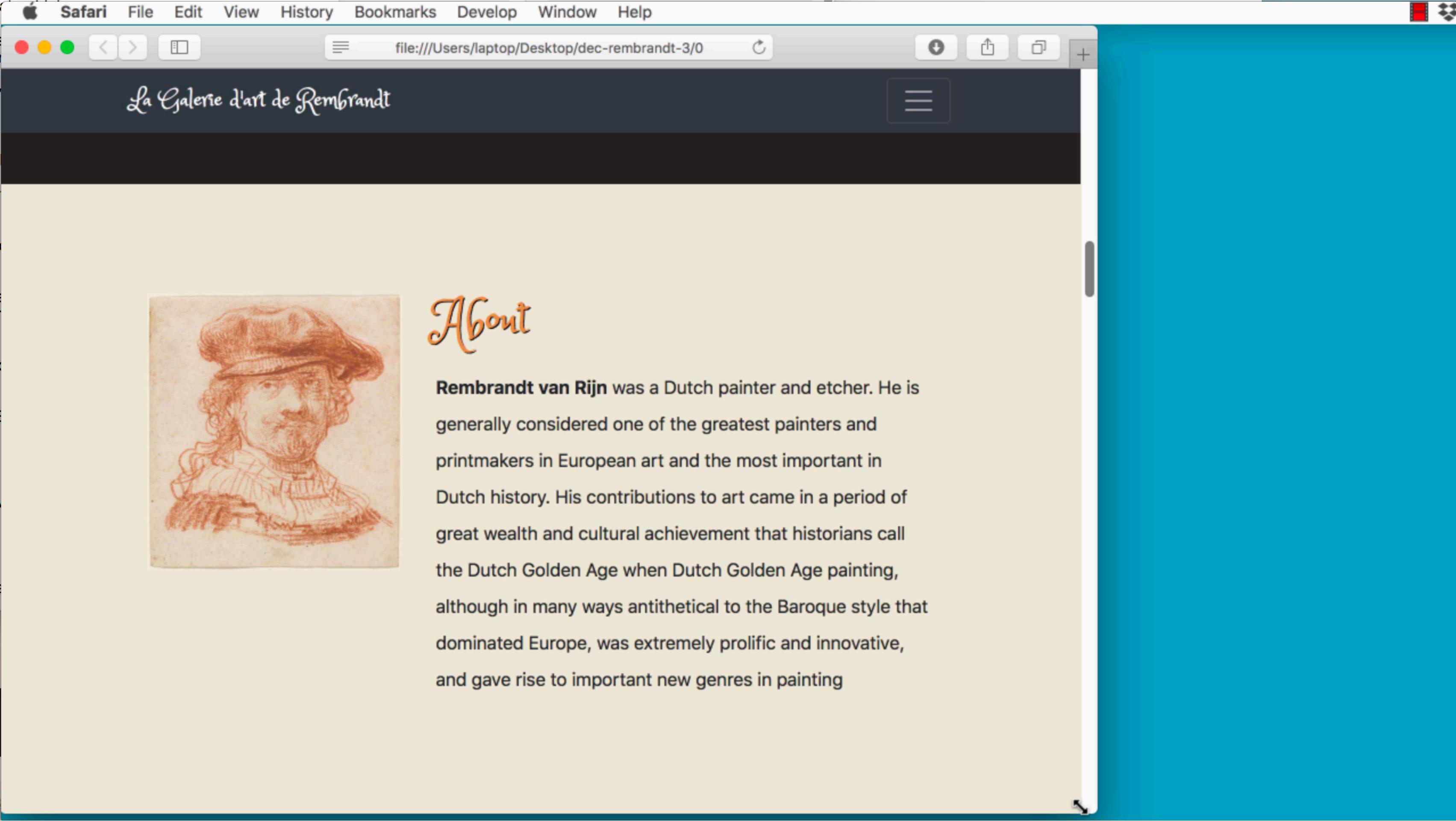


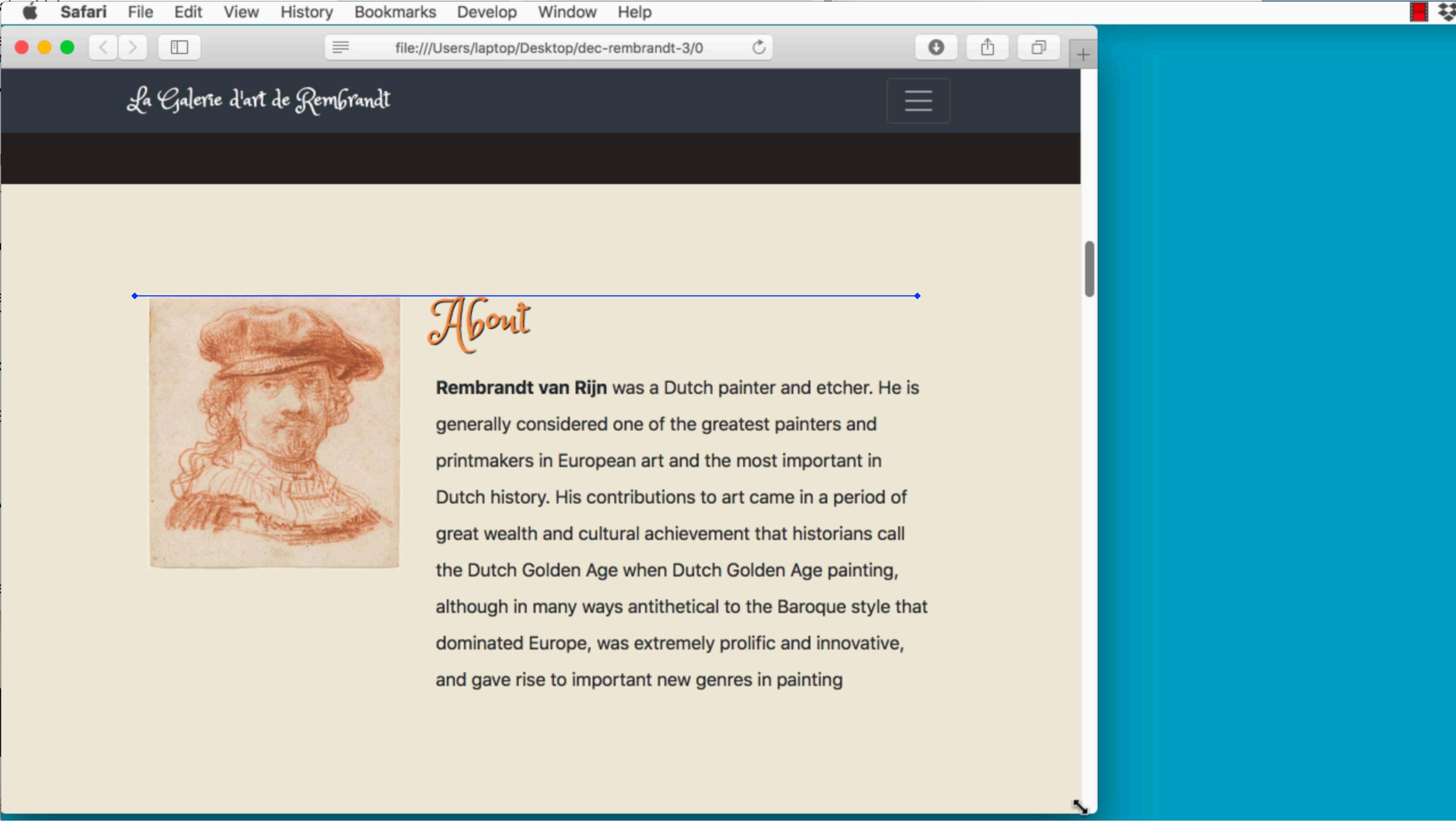


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# Bootstrap 4 Breakpoints



**Small devices** (landscape phones, 576px and up)

`@media (min-width: 576px) { ... }`



**Medium devices** (tablets, 768px and up)

`@media (min-width: 768px) { ... }`



**Large devices** (desktops, 992px and up)

`@media (min-width: 992px) { ... }`



**Extra large devices** (large desktops, 1200px and up)

`@media (min-width: 1200px) { ... }`



Search...

Getting started

Layout

Content

Components

Utilities

Borders

clearfix

Close icon

Colors

Display

Embed

Flex

Float

Image replacement

Position

Screenreaders

# Flex

Quickly manage the layout, alignment, and sizing of grid columns, navigation, components, and more with a full suite of responsive flexbox utilities. For more complex implementations, custom CSS may be necessary.

Enable flex behaviors

Direction

Justify content

Align items

Align self

Fill

Grow and shrink

Auto margins

With align-items

Wrap

Order

Align content

## Enable flex behaviors

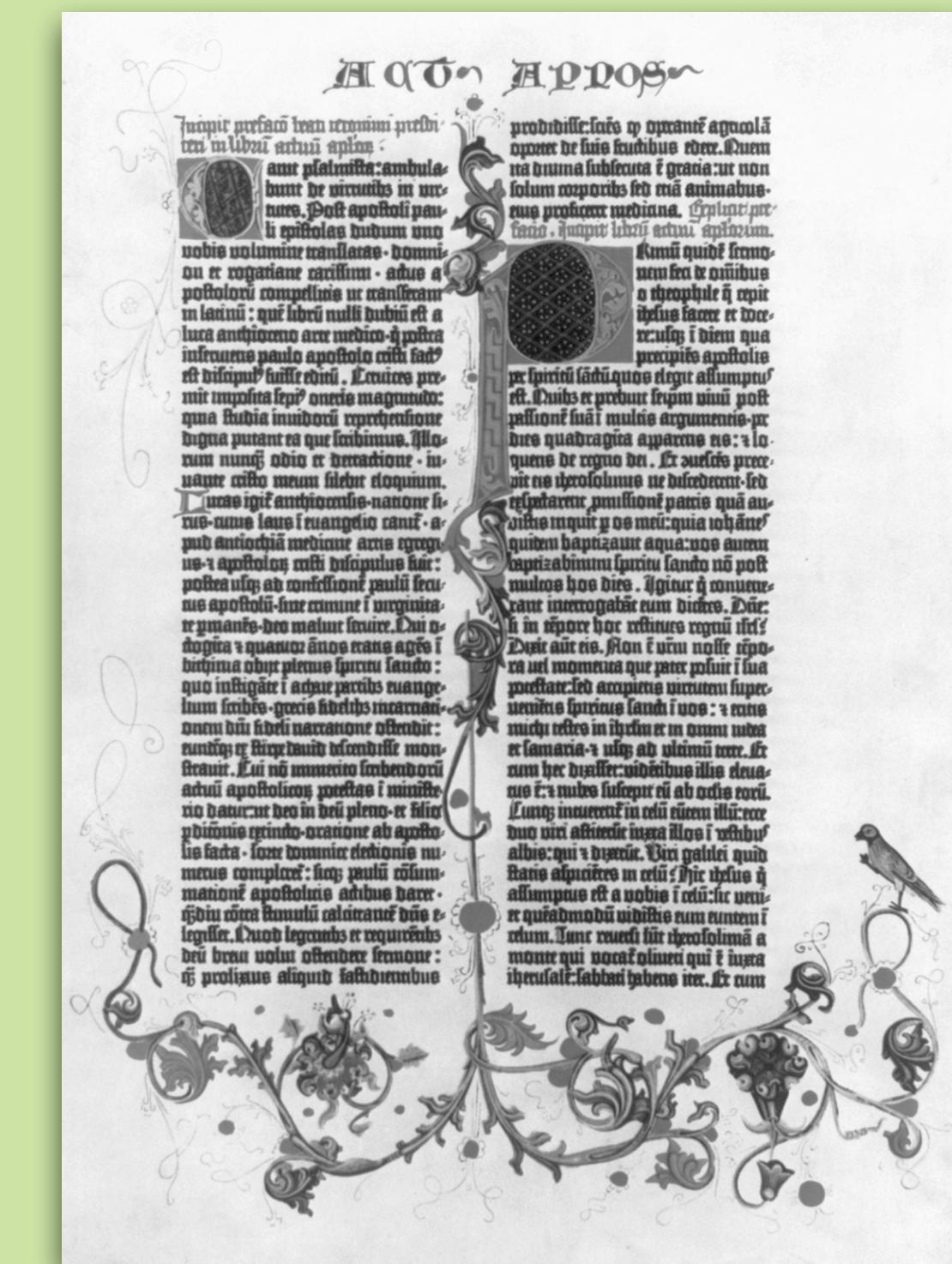
Apply `display` utilities to create a flexbox container and transform **direct children elements** into flex items. Flex containers and items are able to be modified further with additional flex properties.







2 column - Illuminated  
Hand Drawn Manuscript

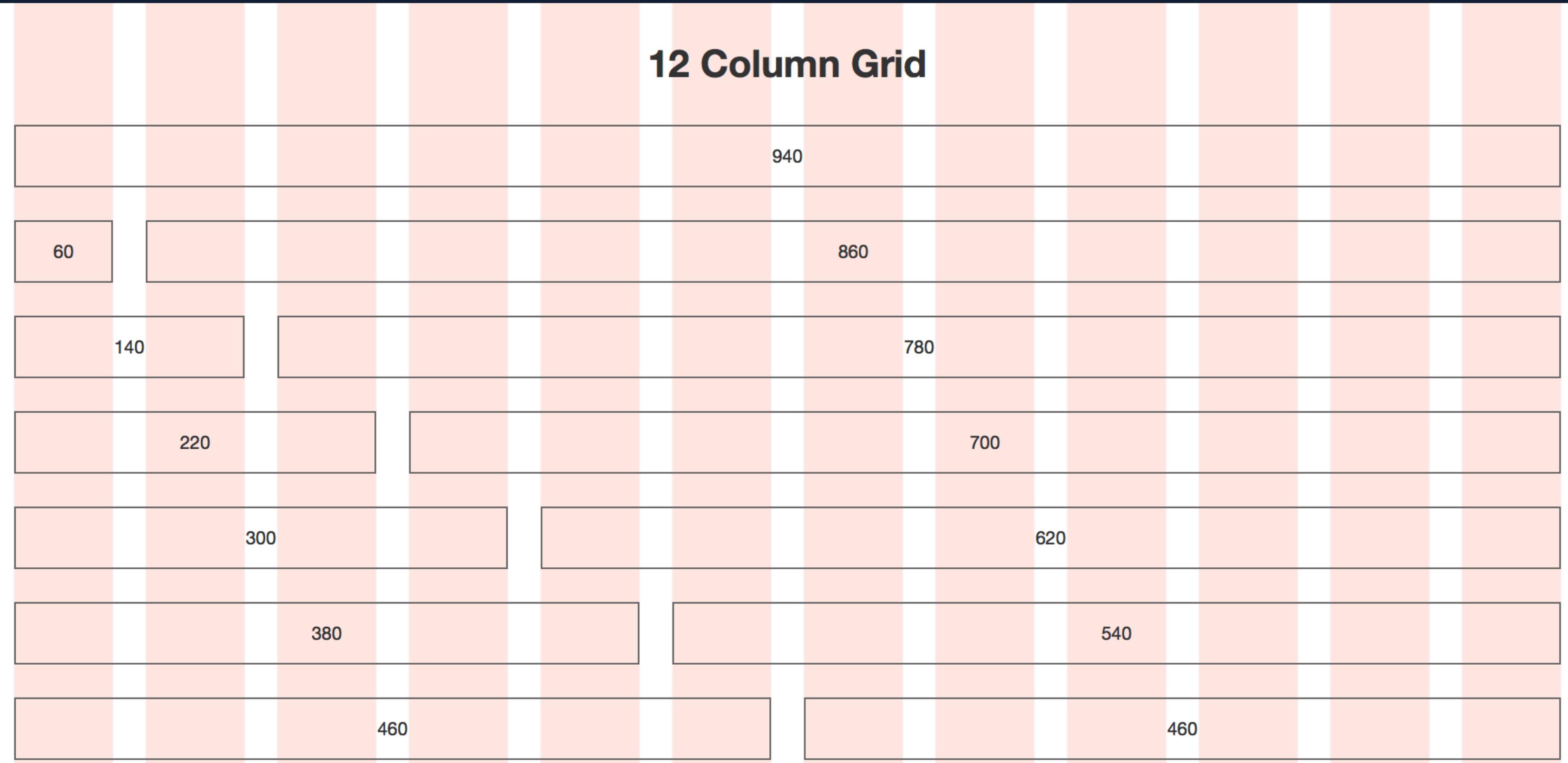


2 column - Gutenberg  
Printed Page

# Multi-column Newspaper Layouts

# 960 Grid System

## 12 Column Grid



Element 1

Element 2

Element 3






# Brackets

Brackets is a lightweight, yet powerful, modern text editor.

<http://brackets.io>

<https://emmet.io>

# Emmet

The essential toolkit for web-developers

<http://emmet.io>

So what can you do with Emmet?

<https://fonts.google.com>

<https://fontawesome.com>

[https://github.com/FezVrasta/  
popper.js/](https://github.com/FezVrasta/popper.js/)

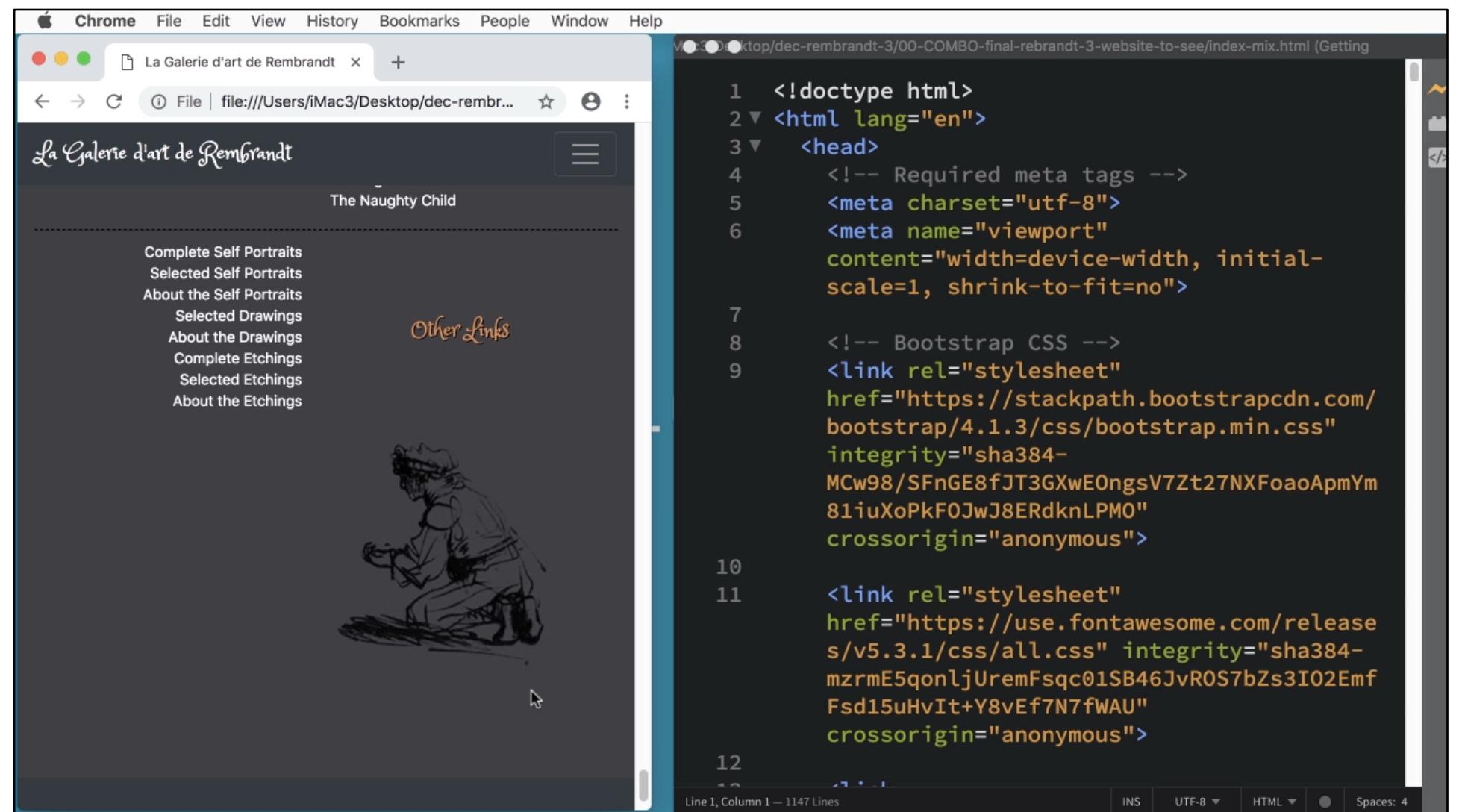
# Popper.js

Popper.js is a positioning engine; its purpose is to calculate the position of an element to make it possible to position it near a given reference element.

<https://github.com/FezVrasta/popper.js/>

# Summary

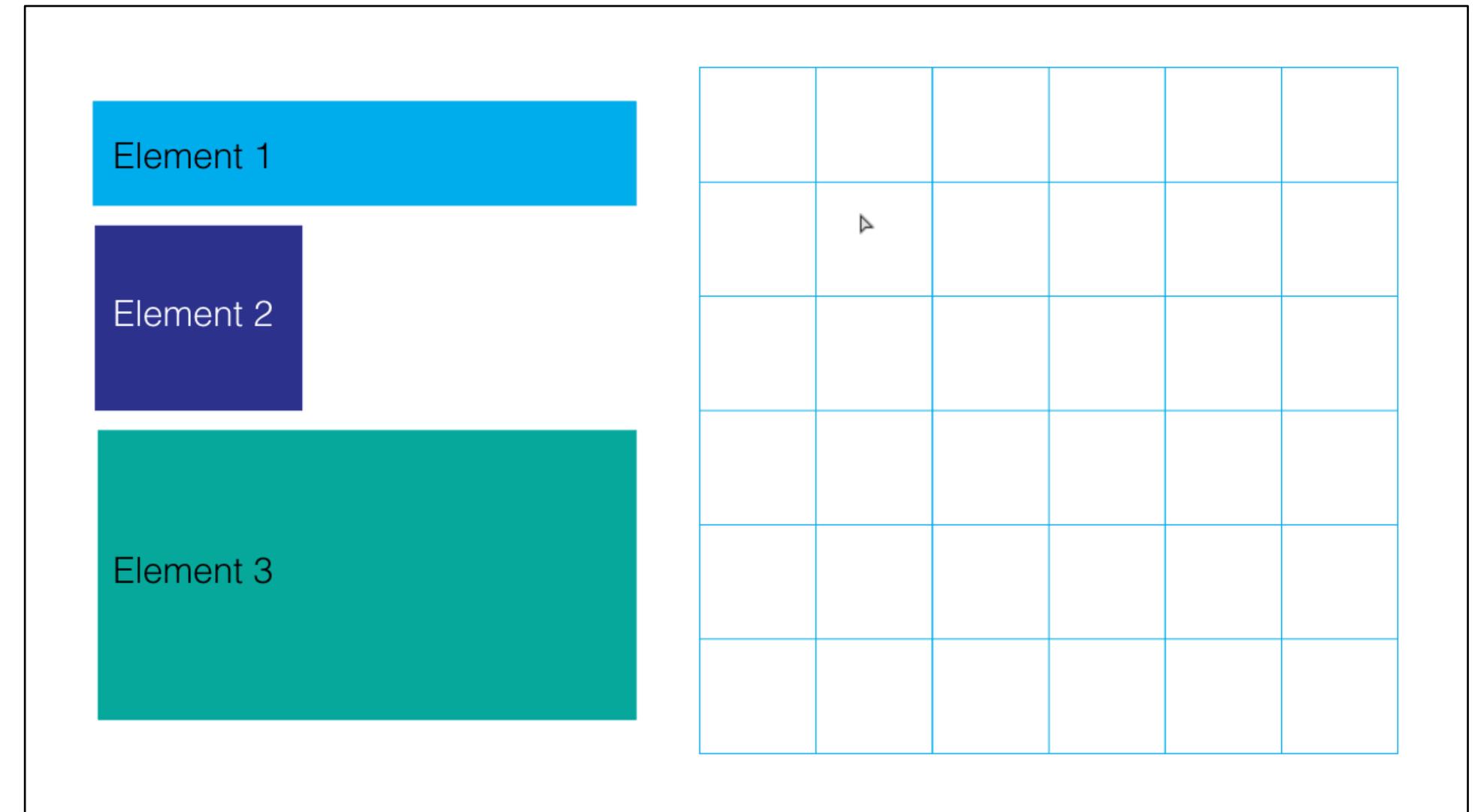
# Summary



```
1 <!doctype html>
2 <html lang="en">
3 <head>
4     <!-- Required meta tags -->
5     <meta charset="utf-8">
6     <meta name="viewport"
content="width=device-width, initial-
scale=1, shrink-to-fit=no">
7
8     <!-- Bootstrap CSS -->
9     <link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/
bootstrap/4.1.3/css/bootstrap.min.css"
integrity="sha384-
MCw98/SFnGE8fJT3GXwEOngsV7Zt27NXFoaoApmYm
81iuXoPkFOJwJ8ERdknLPMO"
crossorigin="anonymous">
10
11    <link rel="stylesheet"
href="https://use.fontawesome.com/release
s/v5.3.1/css/all.css" integrity="sha384-
mzrmE5qonljUremFsqc01SB46JvROS7bZs3I02Emf
Fsd15uHvIt+Y8vEf7N7fWAU"
crossorigin="anonymous">
12
```

Line 1, Column 1 – 1147 Lines    INS    UTF-8 ▾    HTML ▾    ●    Spaces: 4

# Summary



# Summary

The screenshot shows the official Emmet website ([emmet.io](https://emmet.io)) displayed in a Safari browser window. The page has a dark background with white text. At the top, there's a navigation bar with links for File, Edit, View, History, Bookmarks, Develop, Window, and Help. Below the navigation is a search bar with the URL "emmet.io". The main header features the Emmet logo (a stylized 'E' icon) and the text "Emmet - Tools for web-developers". There are links for "More tools", "DOCUMENTATION", "DOWNLOAD", "CREDITS", and "BLOG". A sidebar on the left contains an advertisement for Opsgenie and a "DONATE" button. The central content area includes a large heading "Emmet — the essential toolkit for web-developers", a brief description of what Emmet is, a code snippet example, a "Watch demo" button with a play icon, and three sections: "HTML from CSS", "Dynamic snippets", and "Ultra-fast coding".

**Emmet — the essential toolkit for web-developers**

Emmet is a plugin for many popular text editors which greatly improves HTML & CSS workflow:

```
<!doctype html>
<html lang="en">
<head>
  <title>Demo</title>
</head>
<body>
</body>
</html>
```

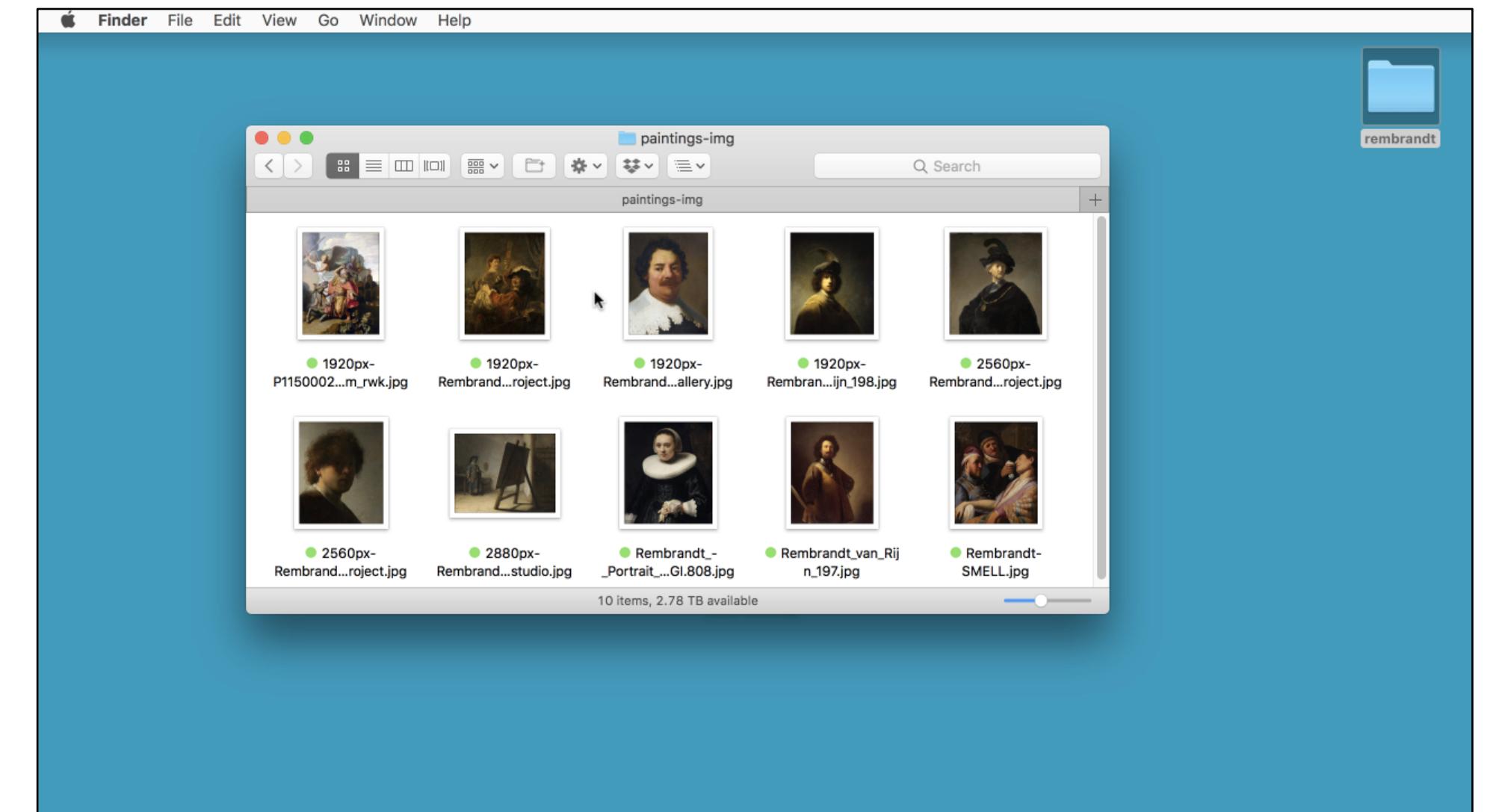
**Watch demo**

**HTML from CSS**  
You've already known how to use Emmet abbreviations: its [syntax](#) is inspired by CSS selectors.

**Dynamic snippets**  
Each abbreviation is transformed in runtime: just slightly change its name [to get a different result](#).

**Ultra-fast coding**  
With Emmet you can quickly [write a bunch of code](#), [wrap code with new tags](#), quickly [traverse and select](#) important code parts and more!

# Summary



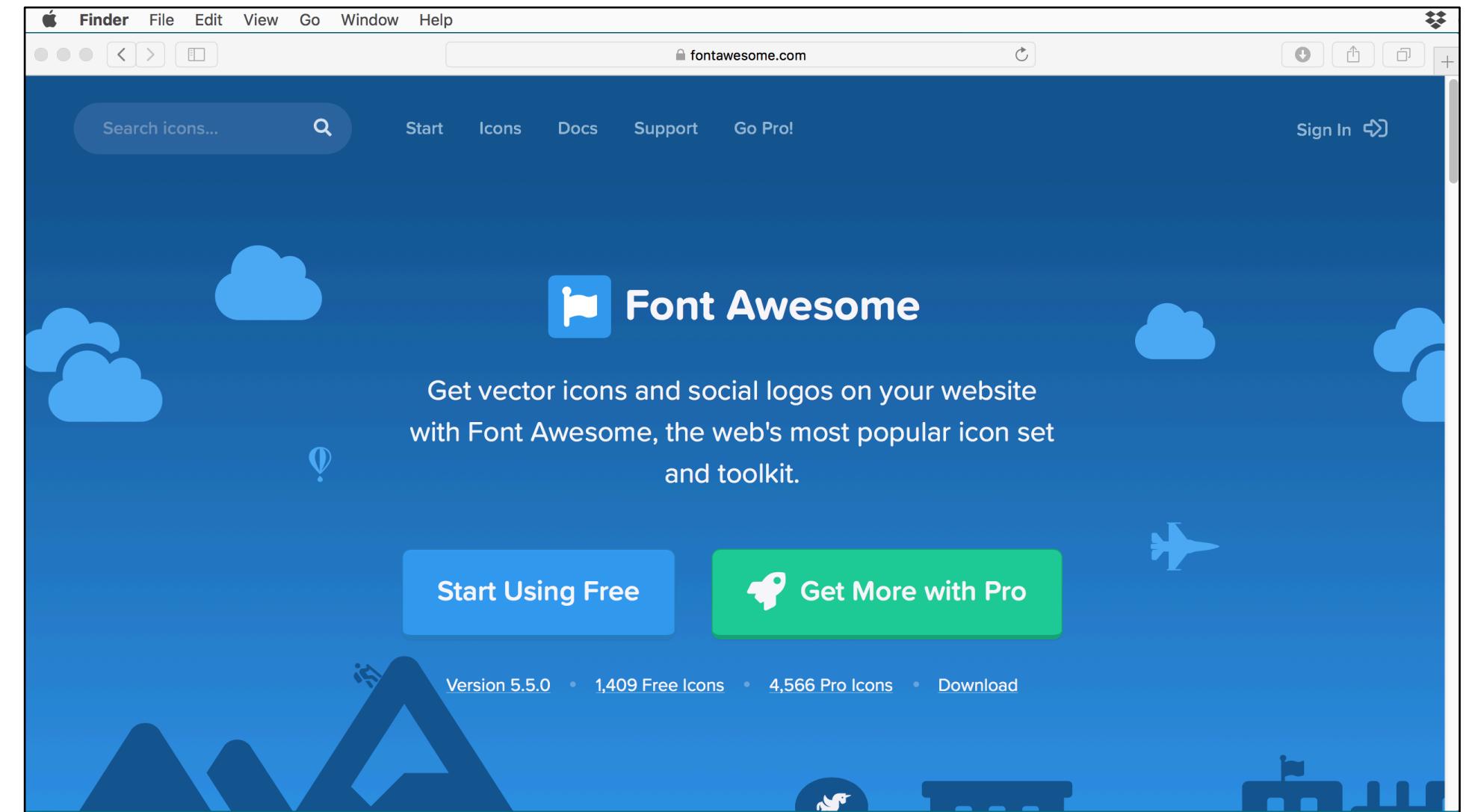
# Summary

The screenshot shows a web browser window displaying the Google Fonts specimen page. The URL in the address bar is `fonts.googleapis.com/specimen/Open+Sans?selection.family=Open+Sans|Princess+Sofia`. The page title is "Google Fonts". A sidebar on the left lists "Open Sans" and "Princess Sofia" as selected font families. The main content area displays a large "Oo" character from the "Open Sans" font. To the right of the character, there is a "Characters" section showing various Cyrillic and Latin characters from both fonts. Below the character, there is an "Embed Font" section with code for an [HTML link](https://fonts.googleapis.com/css?family=Open+Sans|Princess+Sofia) and a "Specify in CSS" section with sample CSS rules:

```
font-family: 'Princess Sofia', cursive;  
font-family: 'Open Sans', sans-serif;
```

At the bottom of the page, there is a note: "For examples of how fonts can be added to webpages, see the [getting started guide](#)".

# Summary



# Summary

