

CSS BOX MODEL

BUILDING BLOCKS

BLOCK LEVEL

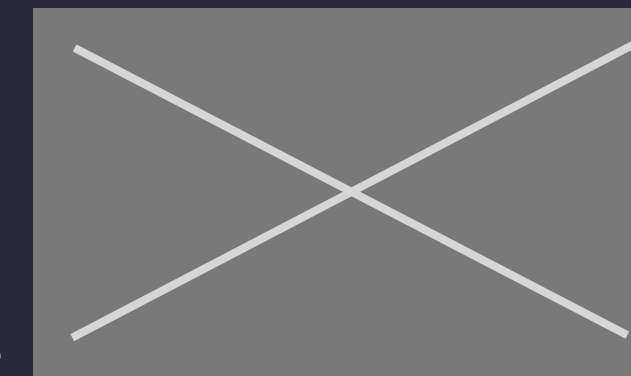
LOREM IPSUM

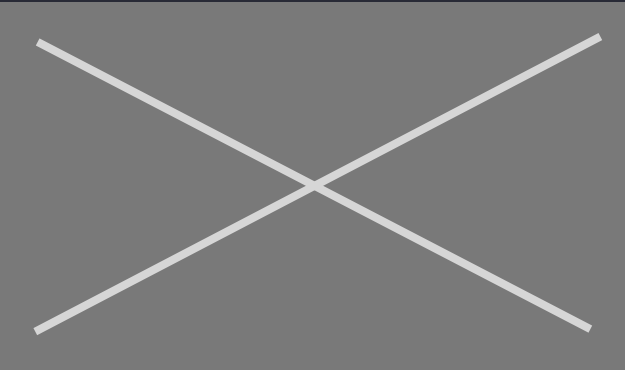
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nullam sodales pretium ipsum. Etiam ut enim augue. Etiam mi tortor, pulvinar at dictum faucibus, mollis eget nunc. Morbi justo velit, rutrum vel placerat in, adipiscing vitae sapien.

- Duis in erat neque.
- Pellentesque habitant morbi
- Praesent ac condimentum neque

INLINE

*Lorem ipsum dolor sit amet, [consectetur adipiscing](#) elit. Nullam sodales **pretium ipsum**. Etiam ut enim augue. Etiam mi tortor, pulvinar at dictum faucibus, mollis eget nunc. Morbi justo velit, rutrum vel placerat in, adipiscing.*



Suspendisse  potenti. Duis in erat neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas.

THINKING INSIDE THE BOX

The Cottage Garden

The *cottage garden* is a distinct style of garden that uses an informal design, dense planting and a mixture of ornamental and edible plants.

The Cottage Garden originated in England and its history can be traced back for centuries, although they were re-invented in 1870's England, when stylized versions were formed as a reaction to the more structured and rigorously maintained English estate gardens.

The earliest cottage gardens were more practical than their modern descendants, with an emphasis on vegetables and herbs, along with some fruit trees.

WIDTH & HEIGHT

Hello



WIDTH



HEIGHT

BORDER, MARGIN AND PADDING



PADDING

BORDER

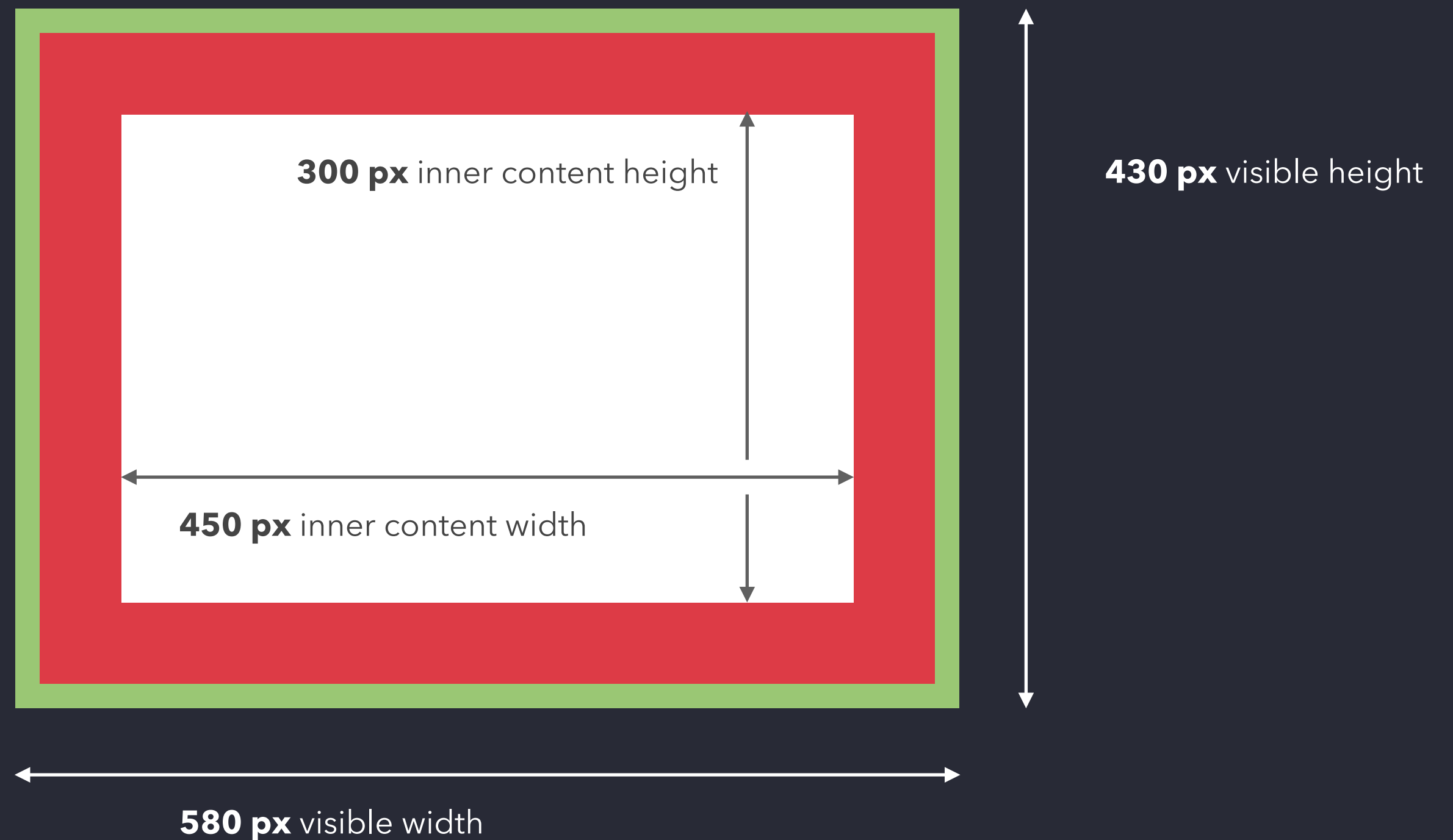
MARGIN

BOX SIZING

By default padding and border are **added** to the width of a box

$\text{width} + \text{padding} + \text{border} = \text{actual visual width of box}$

```
div {  
  width: 450px;  
  height: 300px;  
  padding: 50px;  
  border: 15px solid red;  
}
```



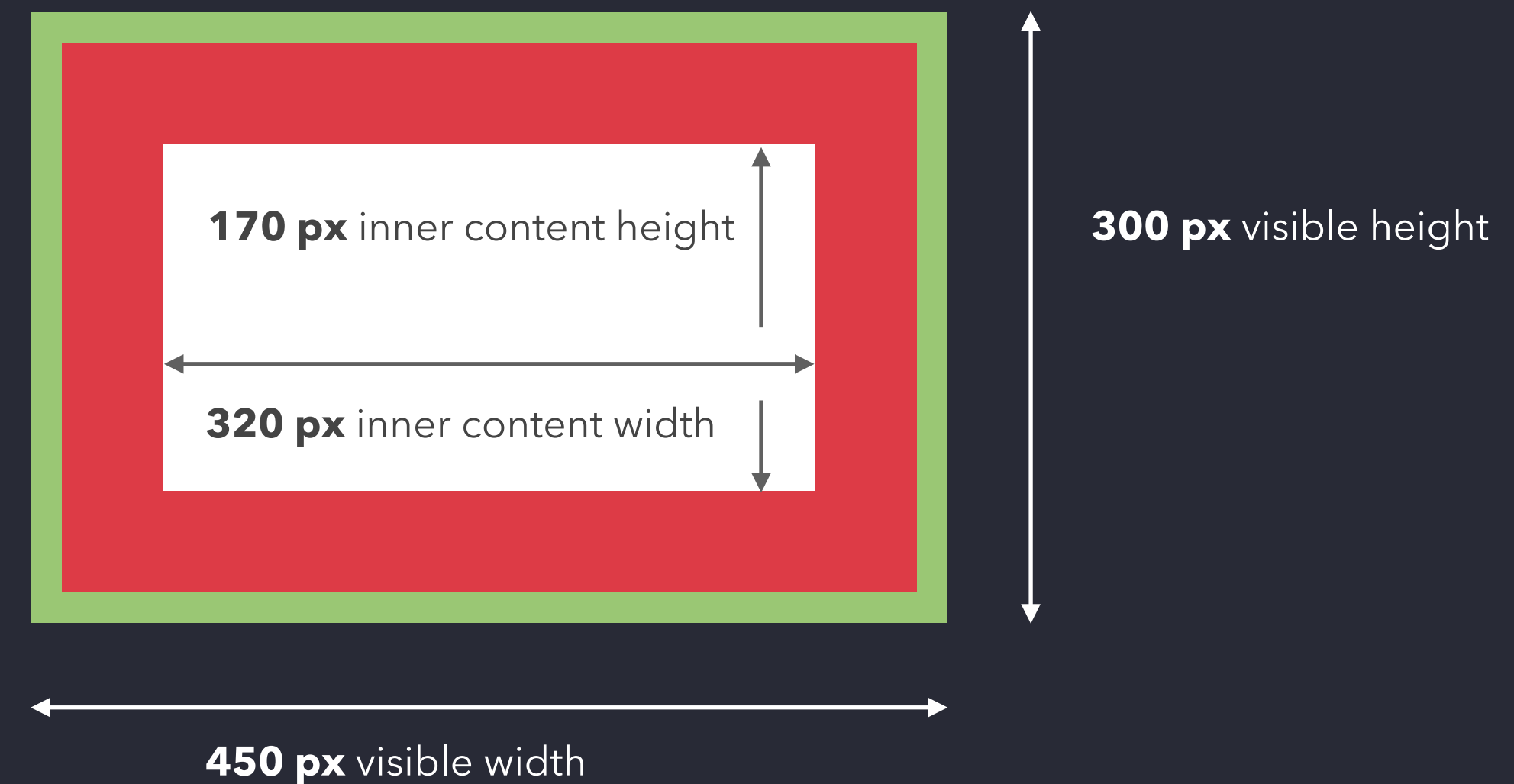
* white box is where text content shows

BOX SIZING: BORDER-BOX

`border-box`: padding and border are **included** in the width of a box

Therefore reducing the inner dimensions of the box

```
div {  
  width: 450px;  
  height: 300px;  
  padding: 50px;  
  border: 15px solid red;  
  box-sizing: border-box;  
}
```



* white box is where text content shows

BOX SIZING

This becomes especially important when mixing percentage based widths with pixel based padding.

```
.div-1 {  
  width: 100%; /* Visual width is 100% + 100px = >100% */  
  padding: 50px;  
}
```

```
.div-2 {  
  width: 100%; /* Inner content width is 100% - 100px */  
  padding: 50px;  
  box-sizing: border-box;  
}
```


BOX DIMENSIONS

```
div {  
  width: 400px;  
  height: 300px;  
  background-color: #ee3e80; /* Pink box */  
}  
  
p {  
  width: 75%; /* 75% of width of parent */  
  height: 75%; /* 75% of height of parent */  
  background-color: #e1ddda; /* Grey box */  
}
```

CODE

BOX DIMENSIONS

The Moog company pioneered the commercial manufacture of modular voltage-controlled analog synthesizer systems in the early 1950s.

BORDER WIDTH

```
p.one {  
  border-width: 2px;  
}
```

CODE

```
p.two {  
  border-width: thick;  
}
```

Bottom

```
p.three {  
  border-width: 1px 4px 12px 4px;  
}
```

Top Right Left

BORDER WIDTH

Hohner's "Clavinet" is essentially an electric clavichord.

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BORDER STYLE

```
p.one    { border-style: solid;  }
p.two    { border-style: dotted; }
p.three  { border-style: dashed; }
p.four   { border-style: double; }
p.five   { border-style: groove; }
p.six    { border-style: ridge;  }
p.seven  { border-style: inset;  }
p.eight  { border-style: outset; }
```

CODE

BORDER STYLE

Wurlitzer Electric Piano

Wurlitzer Electric Piano

Wurlitzer Electric Piano

Wurlitzer Electric Piano

Wurlitzer Electric Piano

Wurlitzer Electric Piano

Wurlitzer Electric Piano

Wurlitzer Electric Piano

BORDER COLOR

```
p.one {  
  border-color: #0088dd;  
}
```

```
p.two {  
  border-color: #bbbbaa #111111 #ee3e80 #0088dd;  
}
```

CODE

BORDER COLOR

The ARP Odyssey was introduced in 1972.

The ARP Odyssey was introduced in 1972.

BORDER SHORTHAND

```
p {  
  width: 250px;  
  border: 3px dotted #0088dd;  
}
```

CODE

⋮

⋮

⋮

Width

Style

Color

BORDER SHORTHAND

Here is a simple chord sequence
played on a Hammond organ
through a Leslie speaker.

PADDING

```
p {  
  width: 275px;  
  border: 2px solid #0088dd;  
}
```

CODE

```
p.example {  
  padding: 10px;  
}
```

/* Equivalent to selector above. Values for: top, right, bottom, left */

```
p.example {  
  padding: 10px 10px 10px 10px;  
}
```

PADDING

Analog synths produce a wave sound, whereas the sounds stored on a digital synth have been sampled and then turned into numbers.

Analog synths produce a wave sound, whereas the sounds stored on a digital synth have been sampled and then turned into numbers.

MARGIN

CODE

```
p {  
  width: 200px;  
  border: 2px solid #0088dd;  
  padding: 10px;  
}
```

```
p.example {  
  margin: 20px;  
}
```

/* Equivalent to selector above. Values for: top, right, bottom, left */

```
p.example {  
  margin: 20px 20px 20px 20px;  
}
```

MARGIN

Analog synthesizers are often said to have a "warmer" sound than their digital counterparts.

Analog synthesizers are often said to have a "warmer" sound than their digital counterparts.

CENTERING CONTENT

```
body {  
  text-align: center;  
}
```

CODE

```
p {  
  width: 300px;  
  padding: 50px;  
  border: 20px solid #0088dd;  
}
```

```
p.example {  
  margin: 10px auto; /* top and bottom: 10px; left and right: auto; */  
  text-align: left;  
}
```

CENTERING CONTENT

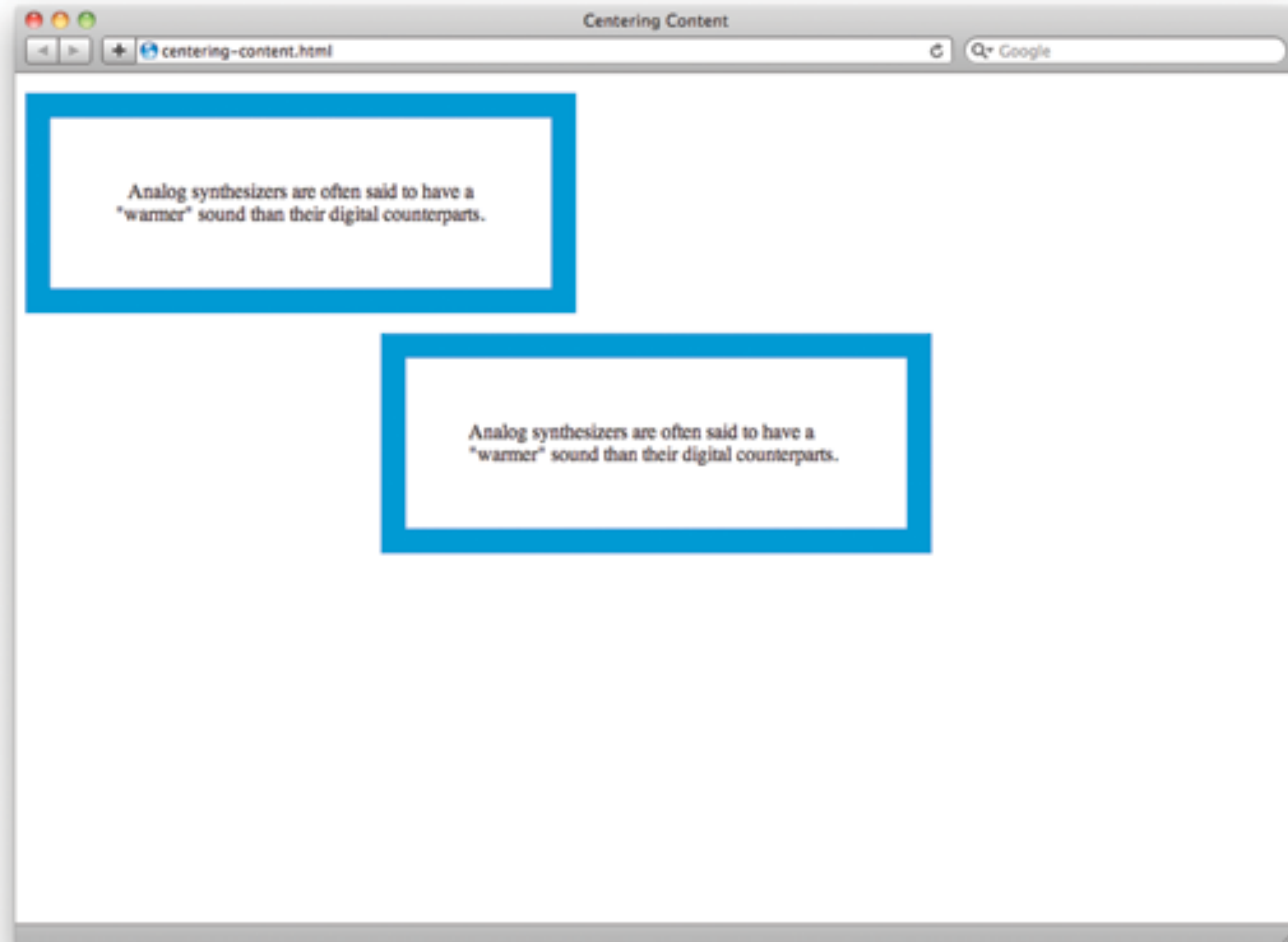
```
body {  
    text-align: center; /* Text alignment */  
}
```

```
p {  
    width: 300px;  
    padding: 50px;  
    border: 20px solid #0088dd;  
}
```

```
p.example {  
    margin: 10px auto; /* Margin `auto` on left and right for block elements */  
    text-align: left;  
}
```

CODE

CENTERING CONTENT



OVERFLOWING CONTENT

```
p.one {  
  overflow: hidden;  
}
```

```
p.two {  
  overflow: scroll;  
}
```

CODE

OVERFLOWING CONTENT

Fender Stratocaster

The Fender Stratocaster or "Strat" is one of the most popular electric guitars of all time, and its design has been copied by many guitar makers.

Gibson Les Paul

The Gibson Les Paul is a solid body electric guitar that was first sold in 1952. The Les Paul was designed by



DISPLAY INLINE/BLOCK

```
li {  
  display: inline;  
  margin-right: 10px;  
}
```

```
li.coming-soon {  
  display: none;  
}
```

CODE

DISPLAY INLINE/BLOCK

Home Products About Contact

VISIBILITY

```
li {  
  display: inline;  
  margin-right: 10px;  
}
```

```
li.coming-soon {  
  visibility: hidden;  
}
```

CODE

VISIBILITY

Home Products

About Contact

FLOATS

FLOATING ELEMENTS

```
blockquote {  
  float: right;  
  width: 275px;  
  font-size: 130%;  
  font-style: italic;  
  font-family: Georgia, Times, serif;  
  margin: 0px 0px 10px 10px;  
  padding: 10px;  
  border-top: 1px solid #665544;  
  border-bottom: 1px solid #665544;  
}
```

CODE

FLOATING ELEMENTS

```
blockquote {  
    float: right; /* Opposite: float: left; */  
    width: 275px;  
    font-size: 130%;  
    font-style: italic;  
    font-family: Georgia, Times, serif;  
    margin: 0px 0px 10px 10px;  
    padding: 10px;  
    border-top: 1px solid #665544;  
    border-bottom: 1px solid #665544;  
}
```

CODE

The Evolution of the Bicycle

In 1817 Baron von Drais invented a walking machine that would help him get around the royal gardens faster: two same-size in-line wheels, the front one steerable, mounted in a frame upon which you straddled. The device was propelled by pushing your feet against the ground, thus rolling yourself and the device forward in a sort of gliding walk.

The machine became known as the Draisienne (or "hobby horse"). It was made entirely of wood. This enjoyed a short lived popularity as a fad, not being practical for transportation in any other place than a well maintained pathway such as in a park or garden.

The next appearance of a two-wheeled riding machine was in 1865, when pedals were applied directly to the front wheel. This machine was known as the velocipede (meaning "fast foot") as well as the "bone shaker," since its wooden structure combined with the cobblestone roads of the day made for an extremely uncomfortable ride. They also became a fad and indoor riding academies, similar to roller rinks, could be found in large cities.

*"Life is like riding a bicycle.
To keep your balance you
must keep moving." - Albert
Einstein*

FLEXBOX

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

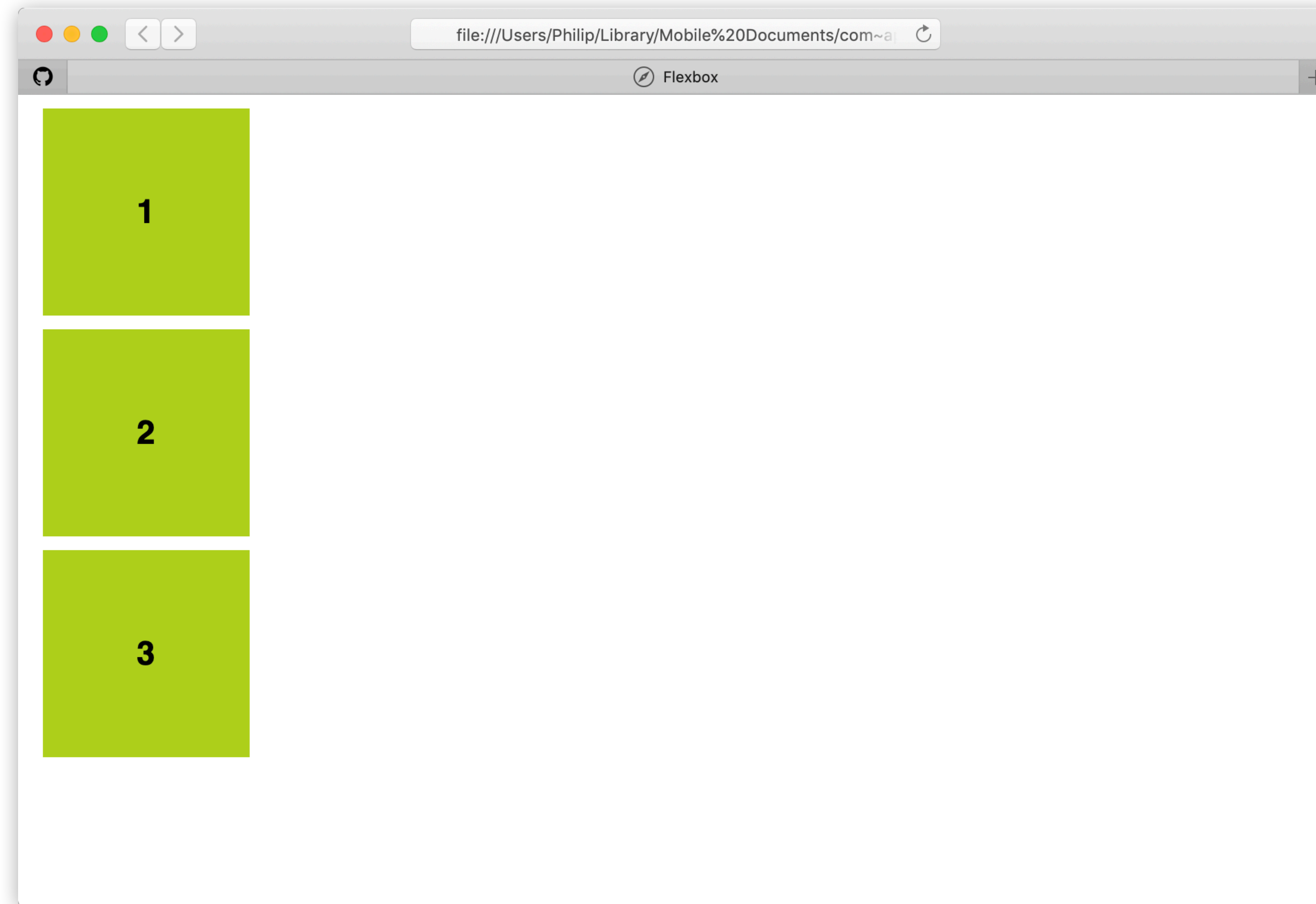
HTML/CSS: SETUP

```
<div class="flex">
  <div class="box">1</div>
  <div class="box">2</div>
  <div class="box">3</div>
</div>

.box {
  width: 150px;
  height: 150px;
  margin: 10px;
  background-color: #acd123;
}
```

CODE

HTML/CSS: SETUP

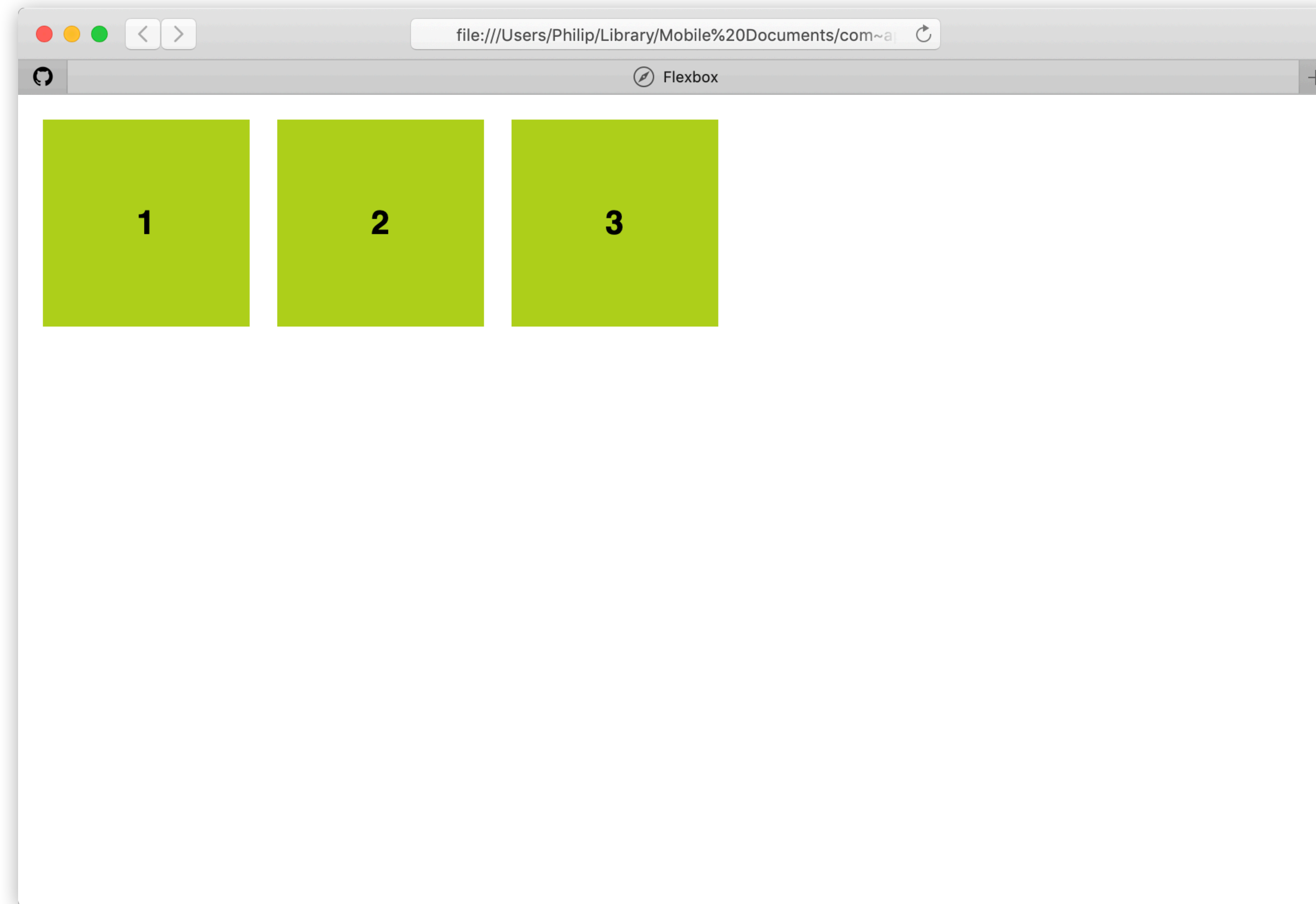


FLEXBOX

```
.flex {  
  display: flex;  
}
```

CODE

FLEXBOX



FLEX-DIRECTION

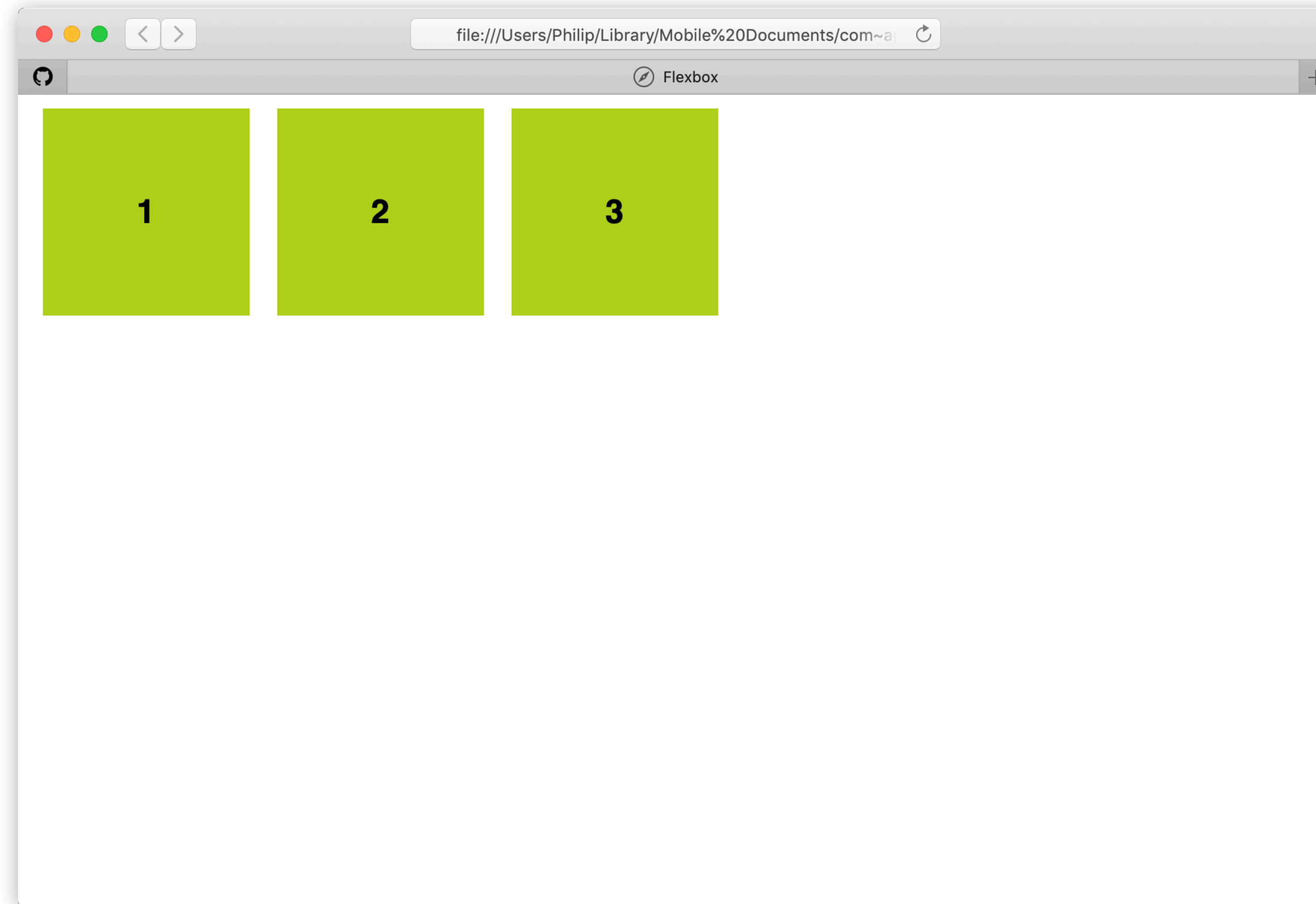
FLEXBOX: FLEX-DIRECTION

```
.flex {  
  display: flex;  
  flex-direction: row; /* Establishes main-axis along horizontal. Default is row */  
}
```

CODE



FLEXBOX: FLEX-DIRECTION



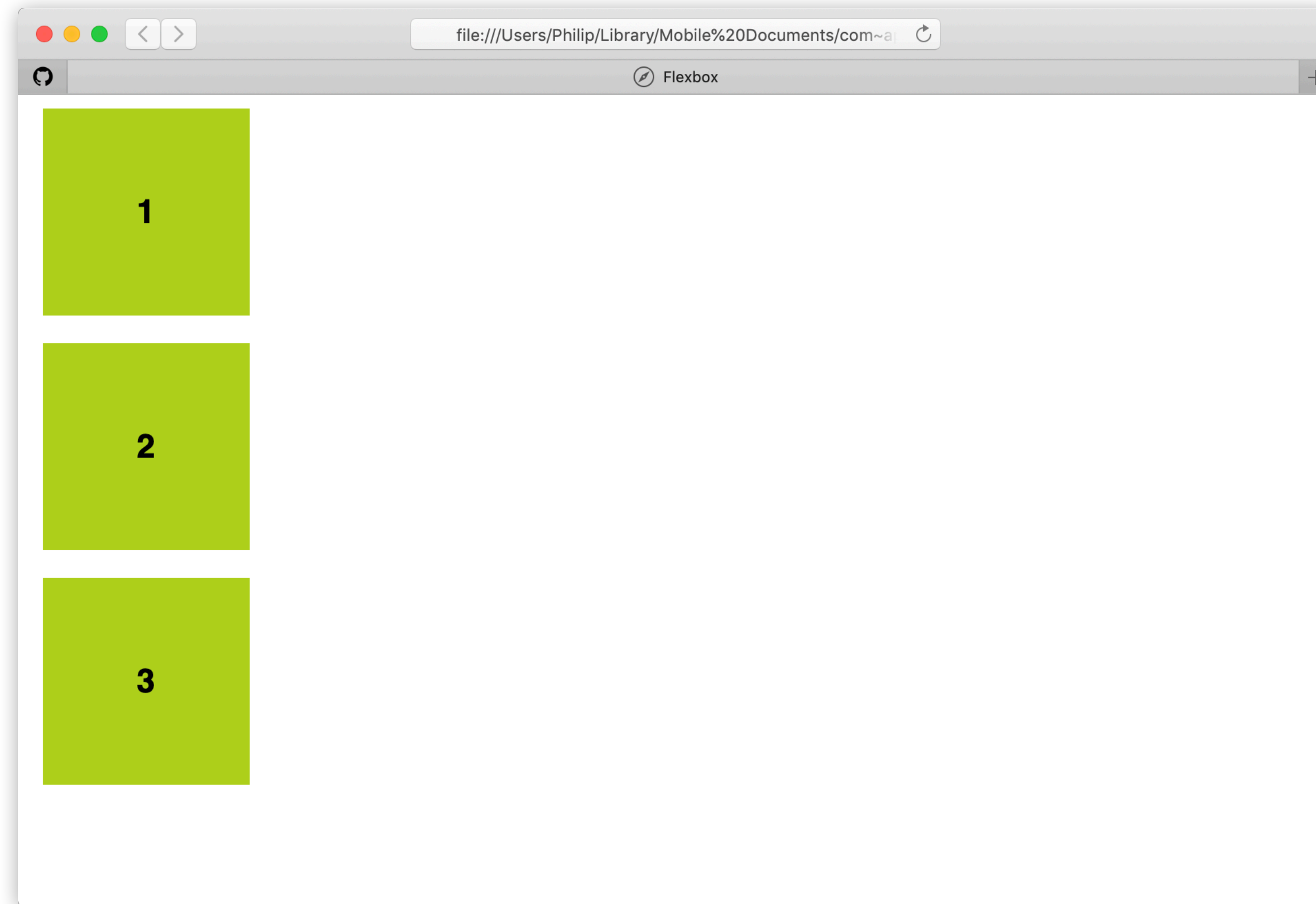
FLEXBOX: FLEX-DIRECTION

```
.flex {  
  display: flex;  
  flex-direction: column; /* Establishes main-axis along vertical. */  
}
```

CODE



FLEXBOX: FLEX-DIRECTION



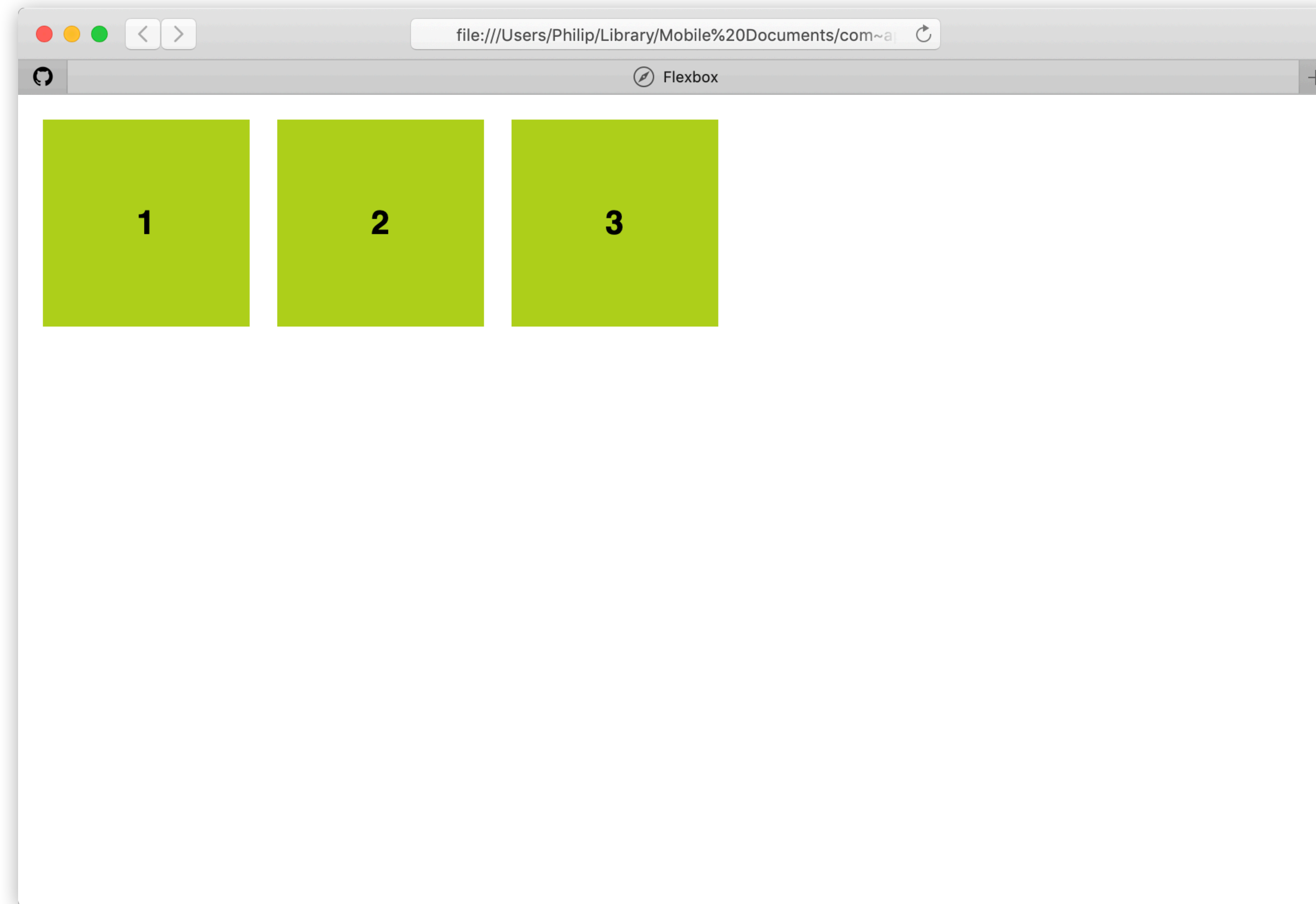
JUSTIFY-CONTENT

FLEXBOX: JUSTIFY-CONTENT

```
.flex {  
  display: flex;  
  justify-content: flex-start;  
}
```

CODE

FLEXBOX: JUSTIFY-CONTENT

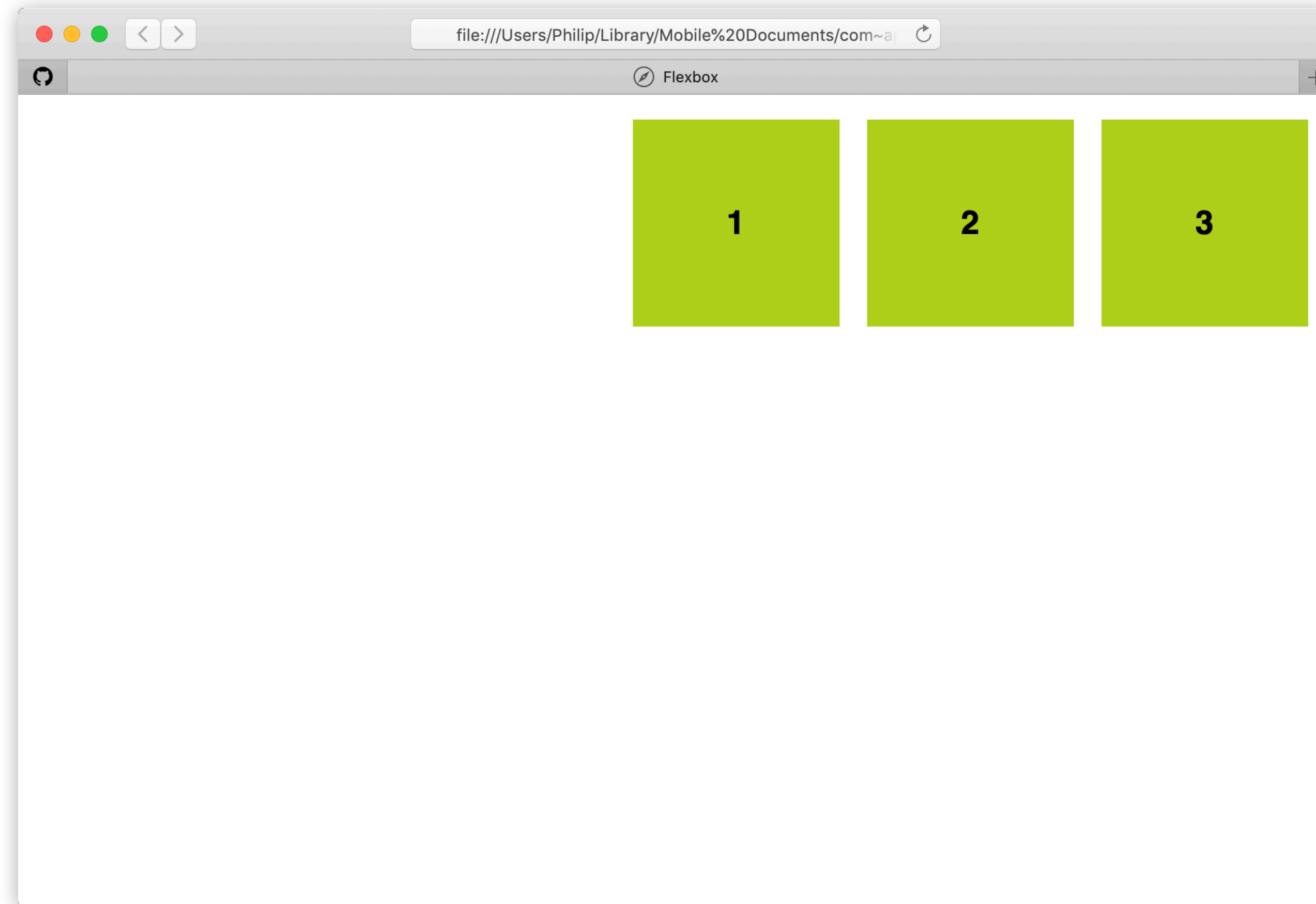


FLEXBOX: JUSTIFY-CONTENT

```
.flex {  
  display: flex;  
  justify-content: flex-end;  
}
```

CODE

FLEXBOX: JUSTIFY-CONTENT



FLEX-START & FLEX-END

`flex-start` and `flex-end` are dependent on `flex-direction` e.g.:

FLEX-START & FLEX-END

`flex-start` and `flex-end` are dependent on `flex-direction` e.g.:

```
.flex {  
  display: flex;  
  flex-direction: row;          /* Flex items on horizontal axis */  
  justify-content: flex-start; /* start is left. end is right. */  
}
```

FLEX-START & FLEX-END

`flex-start` and `flex-end` are dependent on `flex-direction` e.g.:

```
.flex {
  display: flex;
  flex-direction: row;          /* Flex items on horizontal axis */
  justify-content: flex-start; /* start is left. end is right. */
}
```

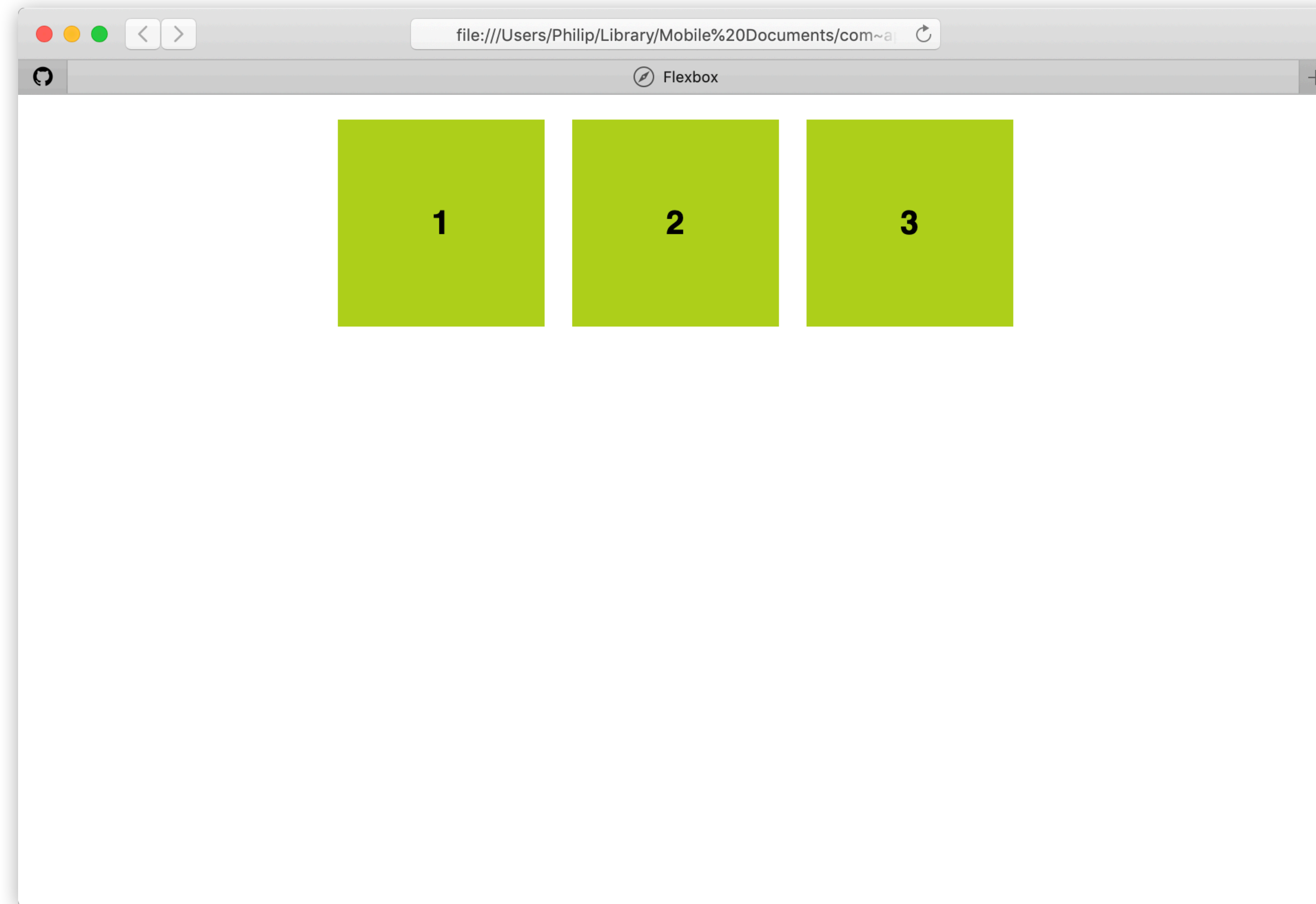
```
.flex {
  display: flex;
  flex-direction: column;      /* Flex items on vertical axis */
  justify-content: flex-start; /* start is top. end is bottom. */
}
```

FLEXBOX: JUSTIFY-CONTENT

```
.flex {  
  display: flex;  
  justify-content: center;  
}
```

CODE

FLEXBOX: JUSTIFY-CONTENT

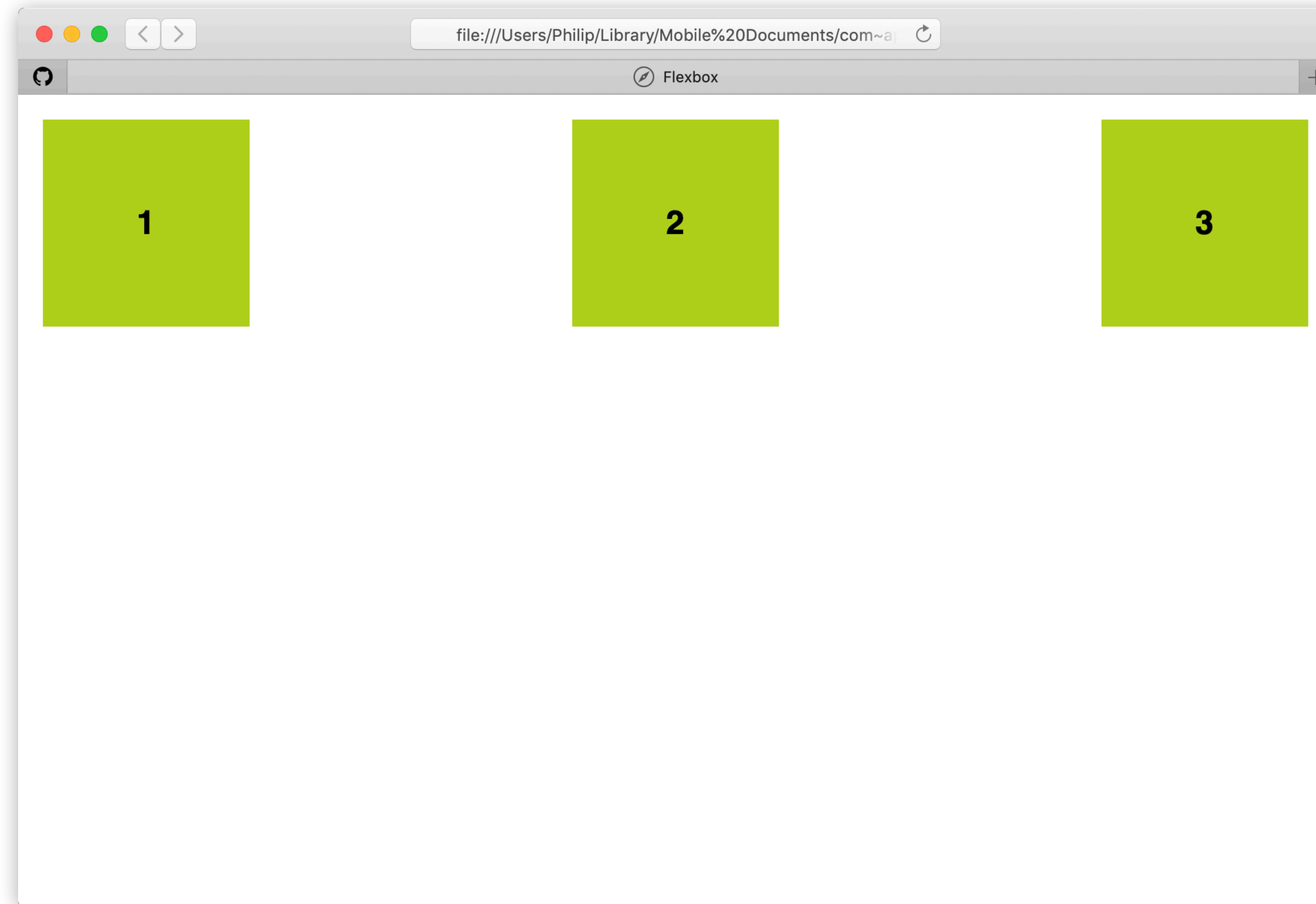


FLEXBOX: JUSTIFY-CONTENT

```
.flex {  
  display: flex;  
  justify-content: space-between;  
}
```

CODE

FLEXBOX: JUSTIFY-CONTENT

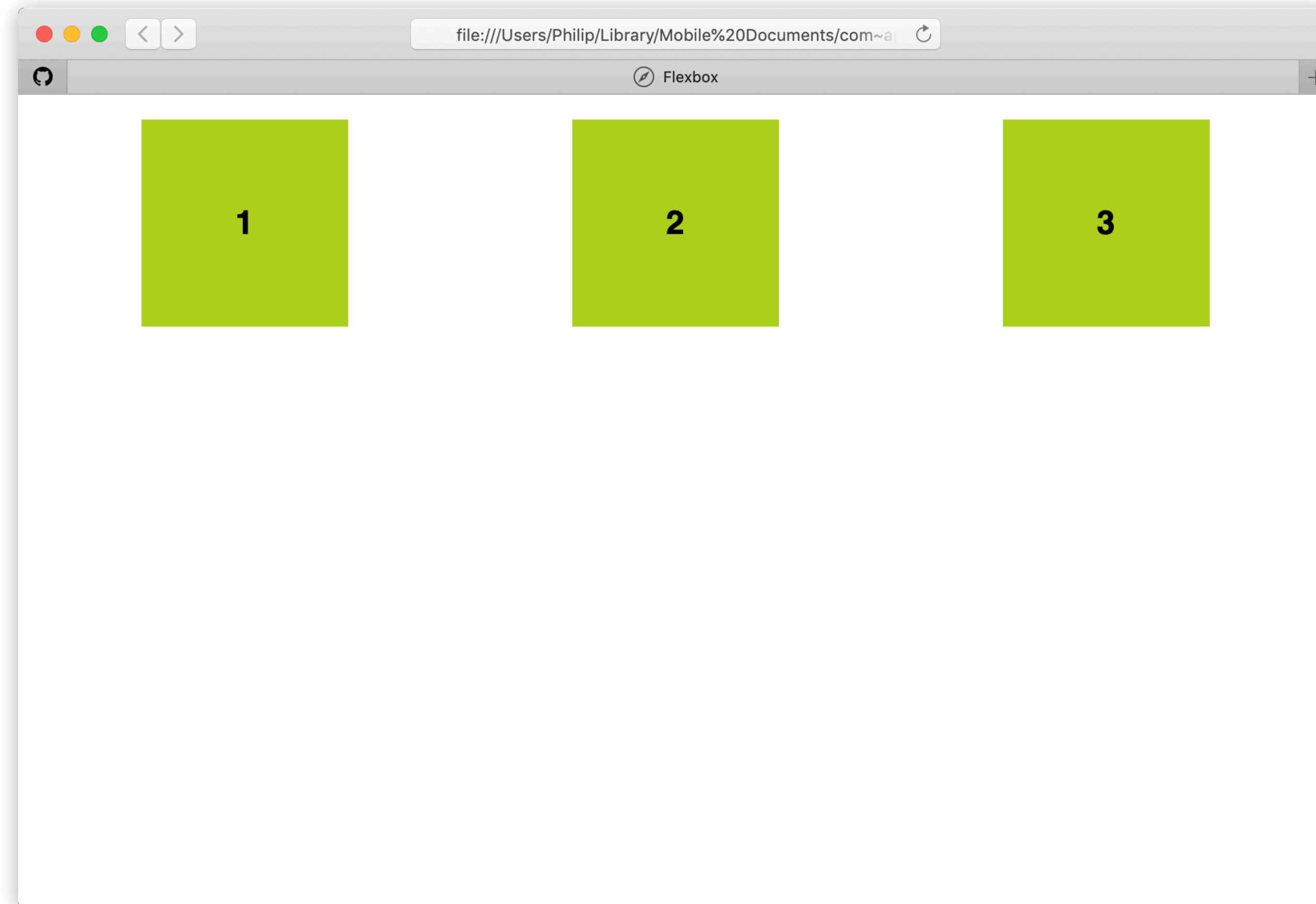


FLEXBOX: JUSTIFY-CONTENT

```
.flex {  
  display: flex;  
  justify-content: space-around;  
}
```

CODE

FLEXBOX: JUSTIFY-CONTENT



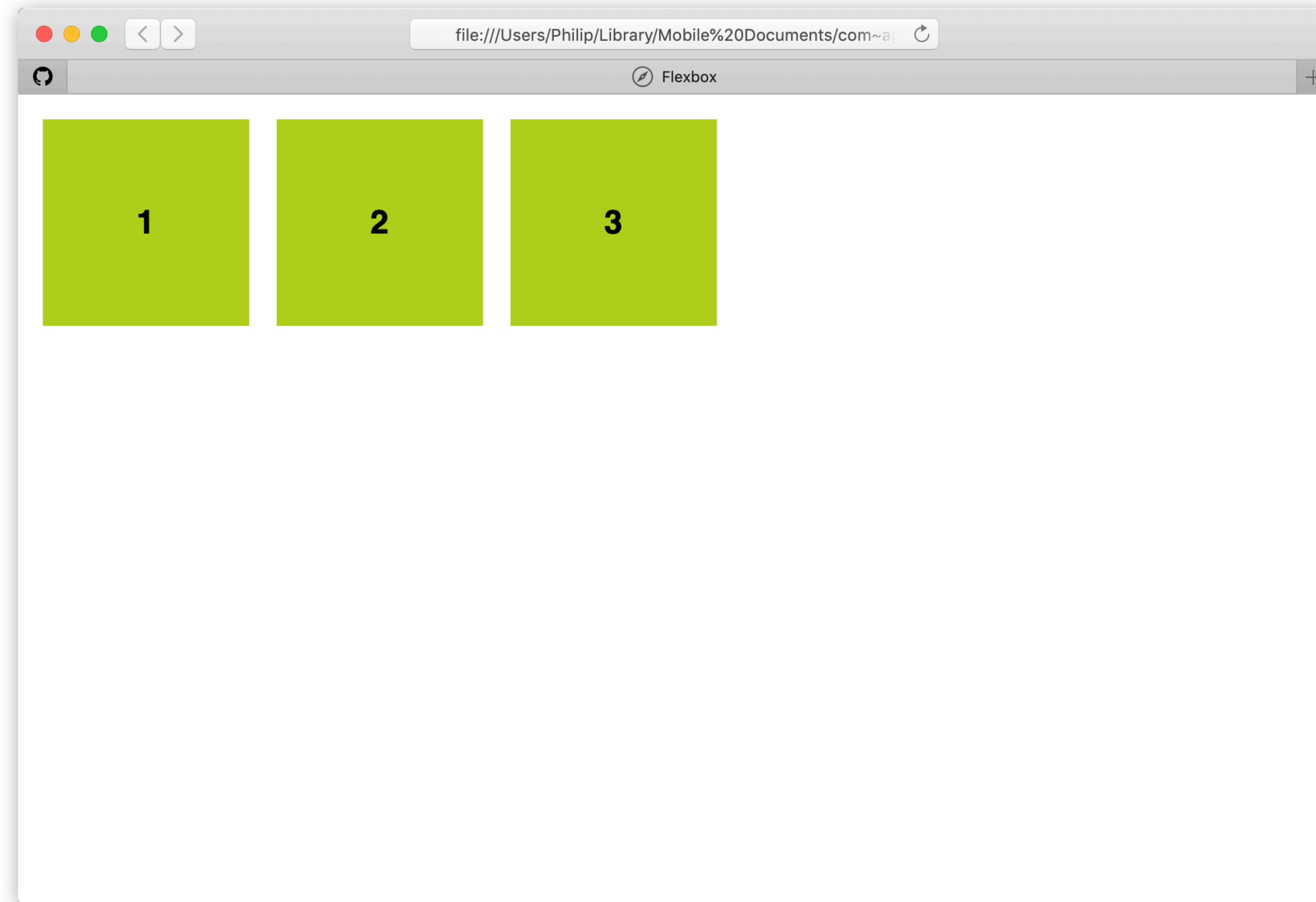
ALIGN-ITEMS

FLEXBOX: ALIGN-ITEMS

```
.flex {  
  display: flex;  
  align-items: flex-start; /* Similar to justify-content, but opposite axis */  
}
```

CODE

FLEXBOX: ALIGN-ITEMS

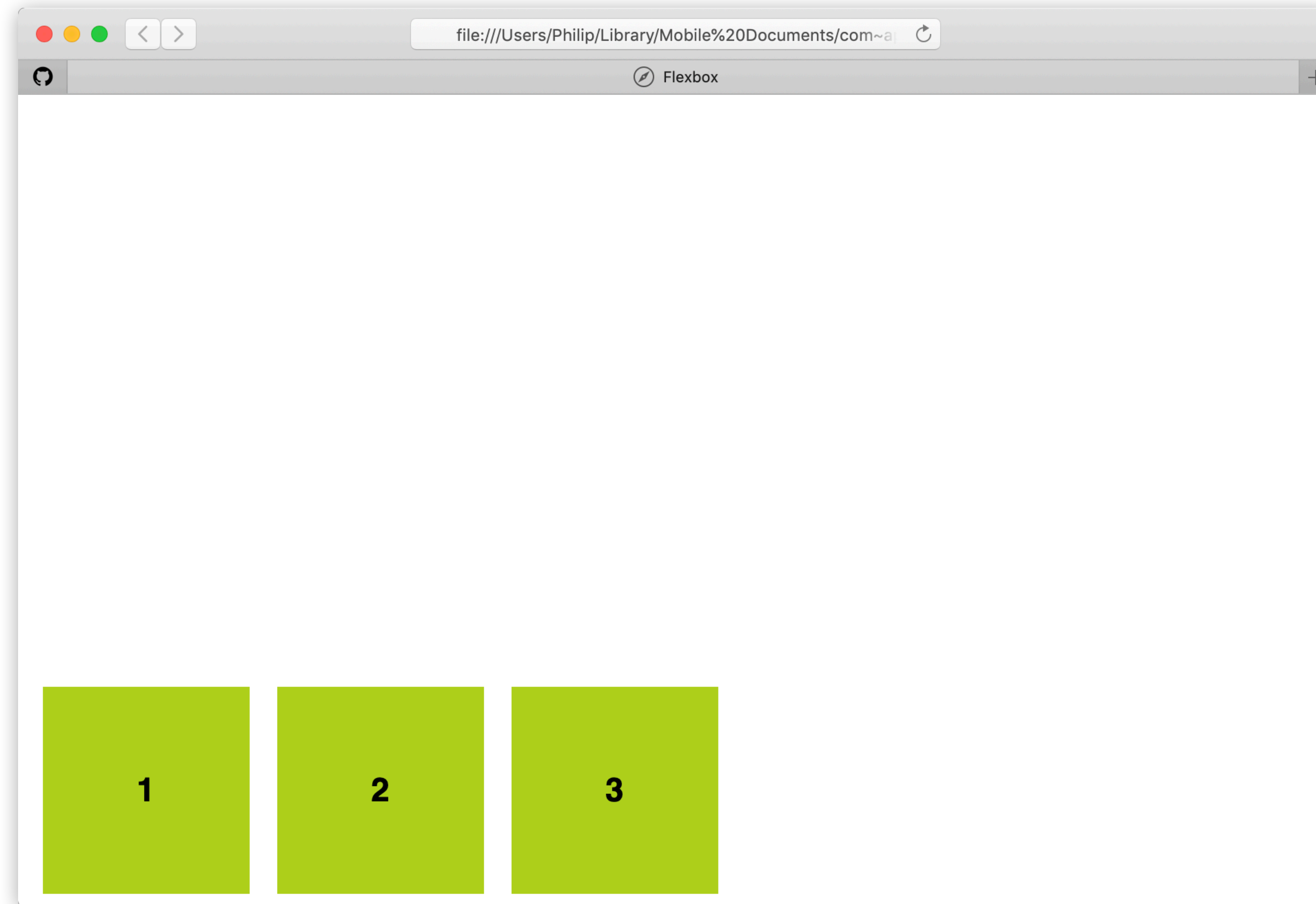


FLEXBOX: ALIGN-ITEMS

```
.flex {  
  display: flex;  
  align-items: flex-end;  
}
```

CODE

FLEXBOX: ALIGN-ITEMS

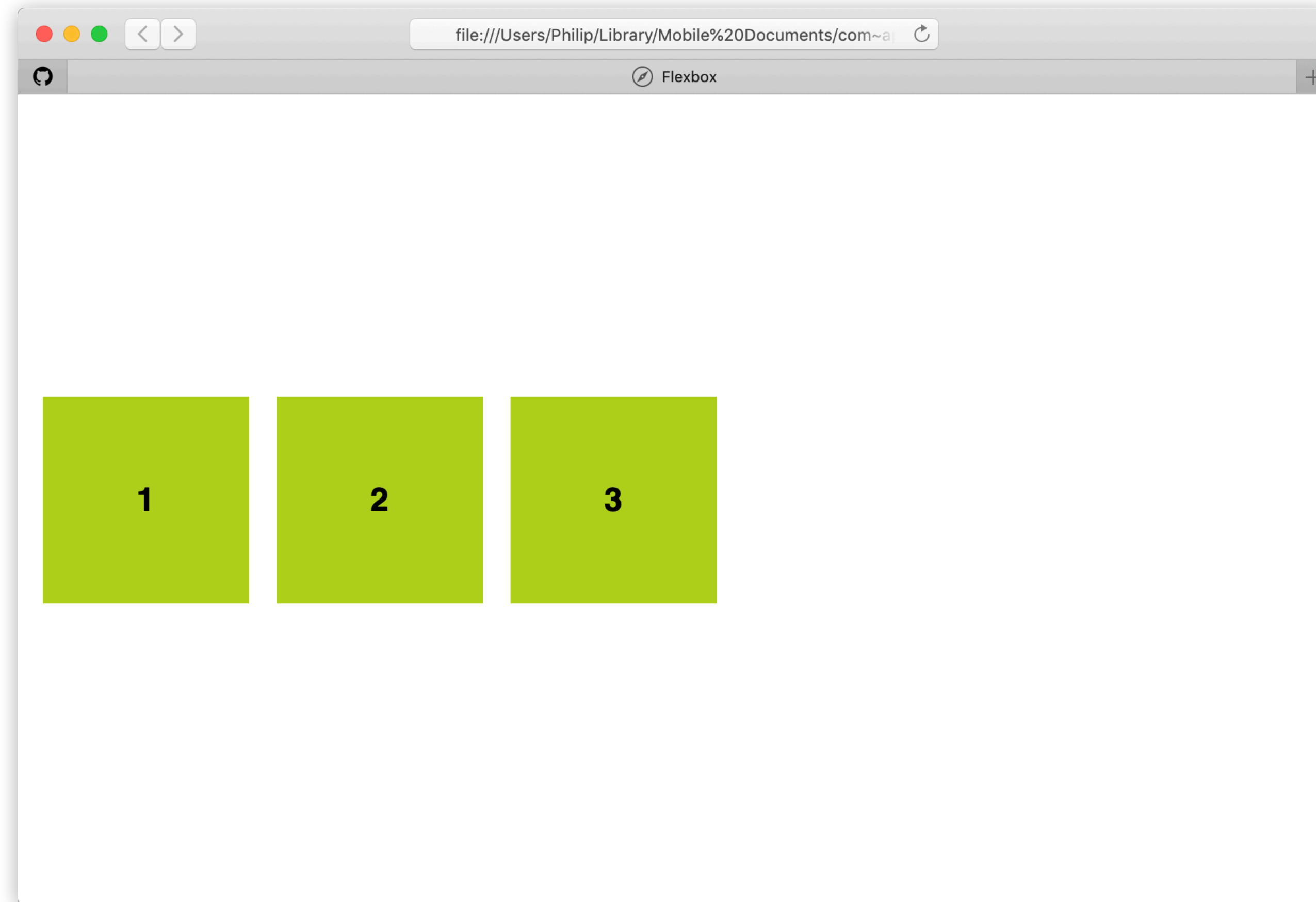


FLEXBOX: ALIGN-ITEMS

```
.flex {  
  display: flex;  
  align-items: center;  
}
```

CODE

FLEXBOX: ALIGN-ITEMS

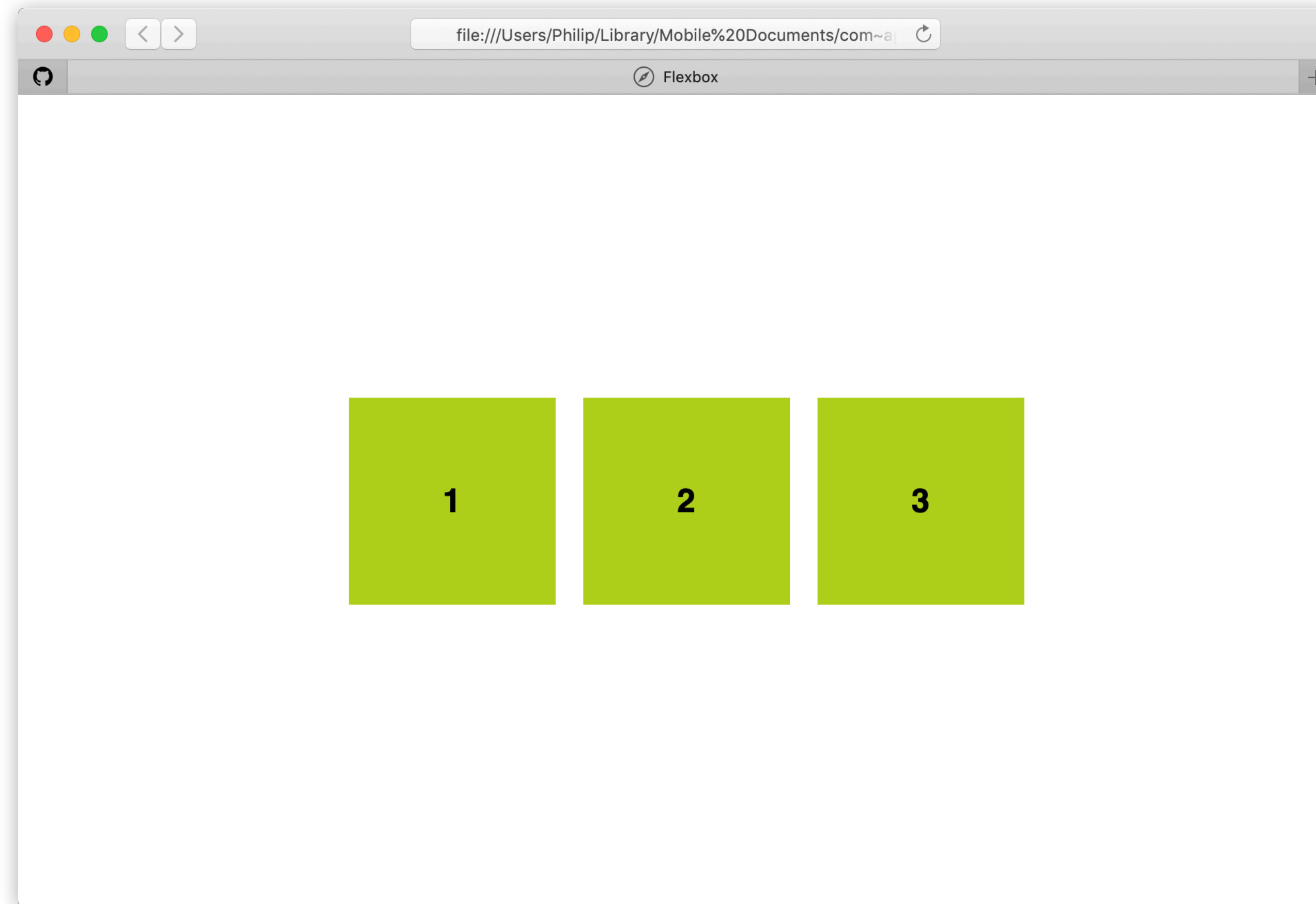


FLEXBOX: CENTER

```
.flex {  
  display: flex;  
  justify-content: center;  
  align-items: center;  
}
```

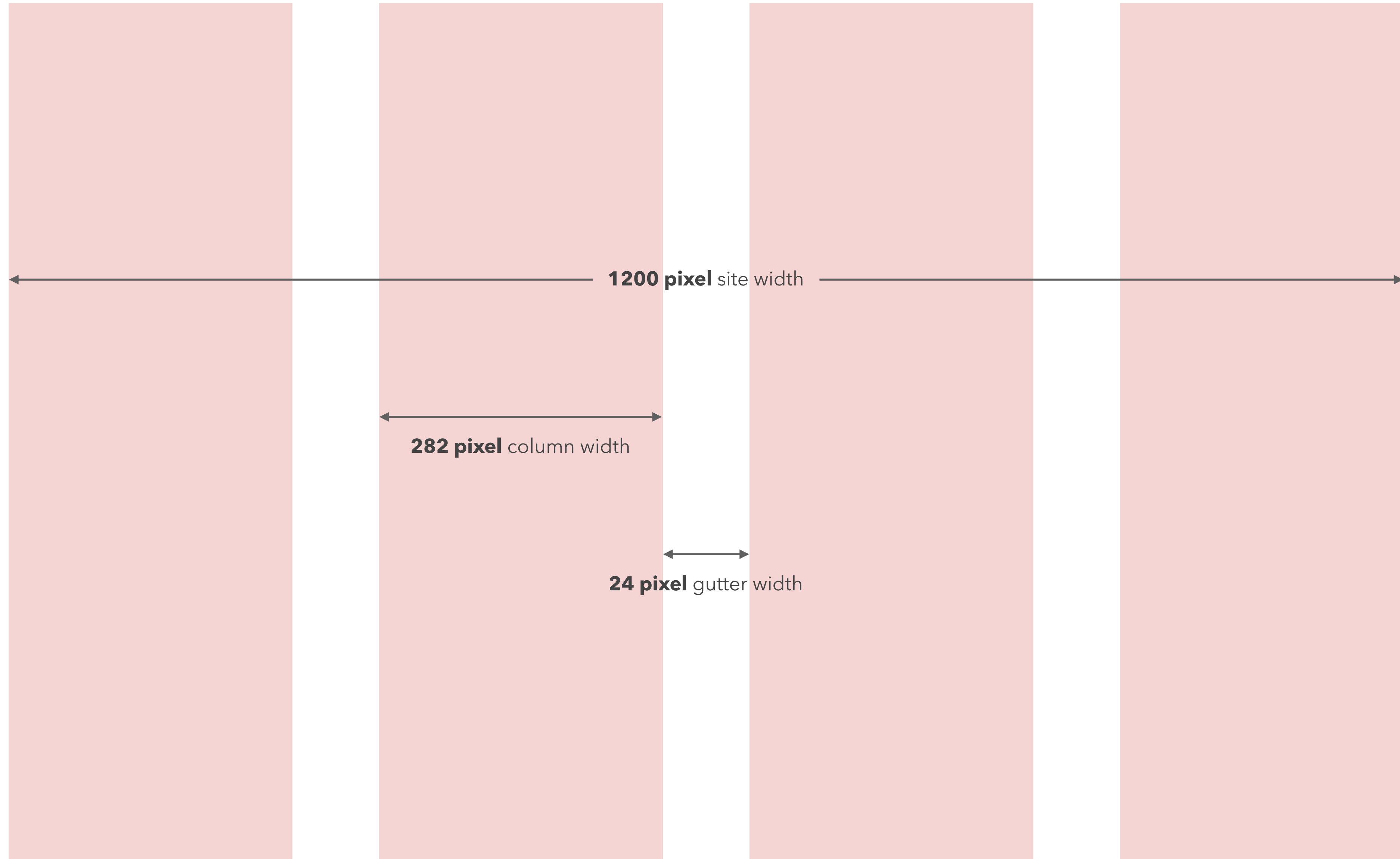
CODE

FLEXBOX: CENTER

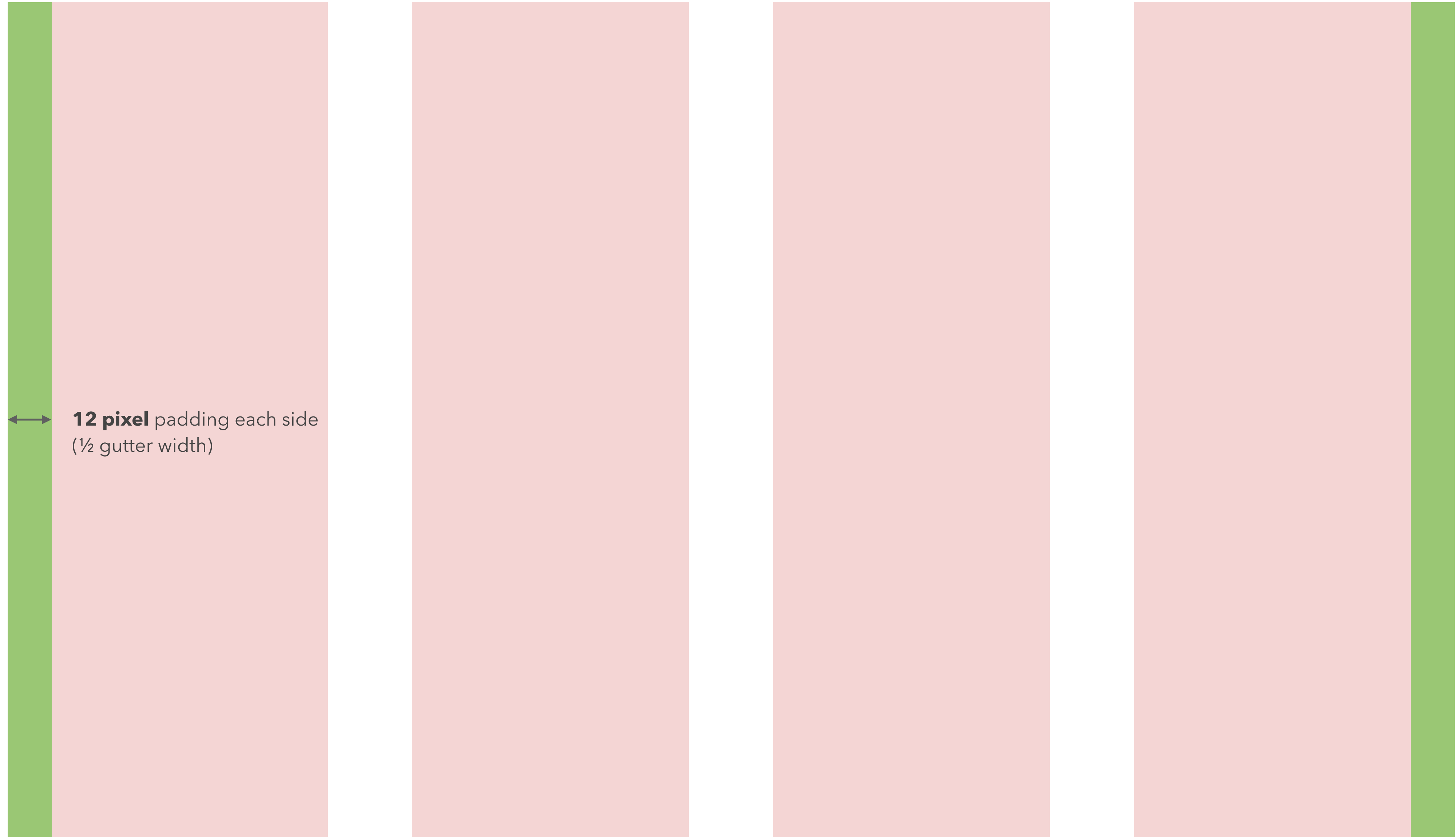


CREATING A GRID IN CODE

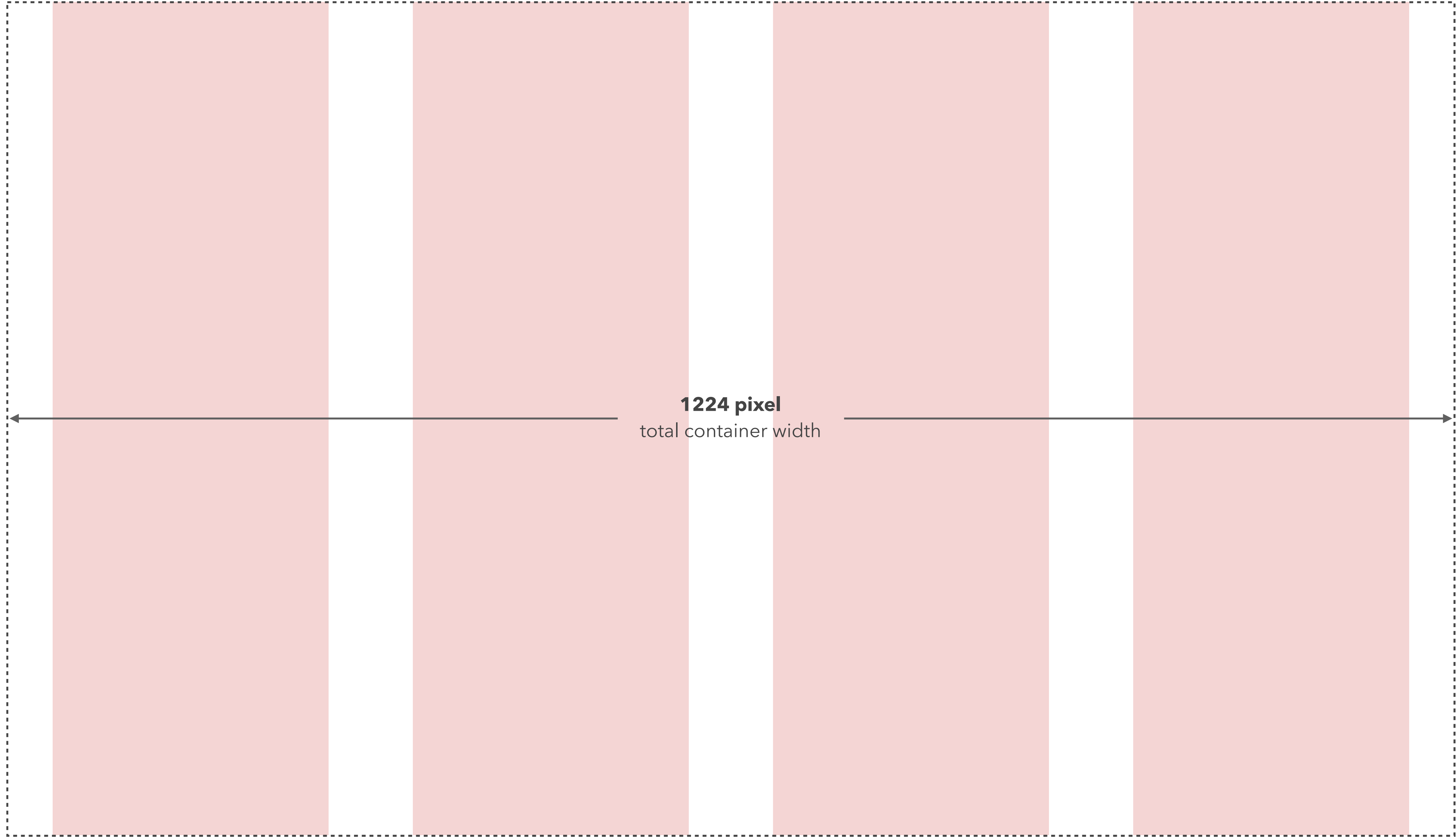
GRID



SITE PADDING



CONTAINER WIDTH



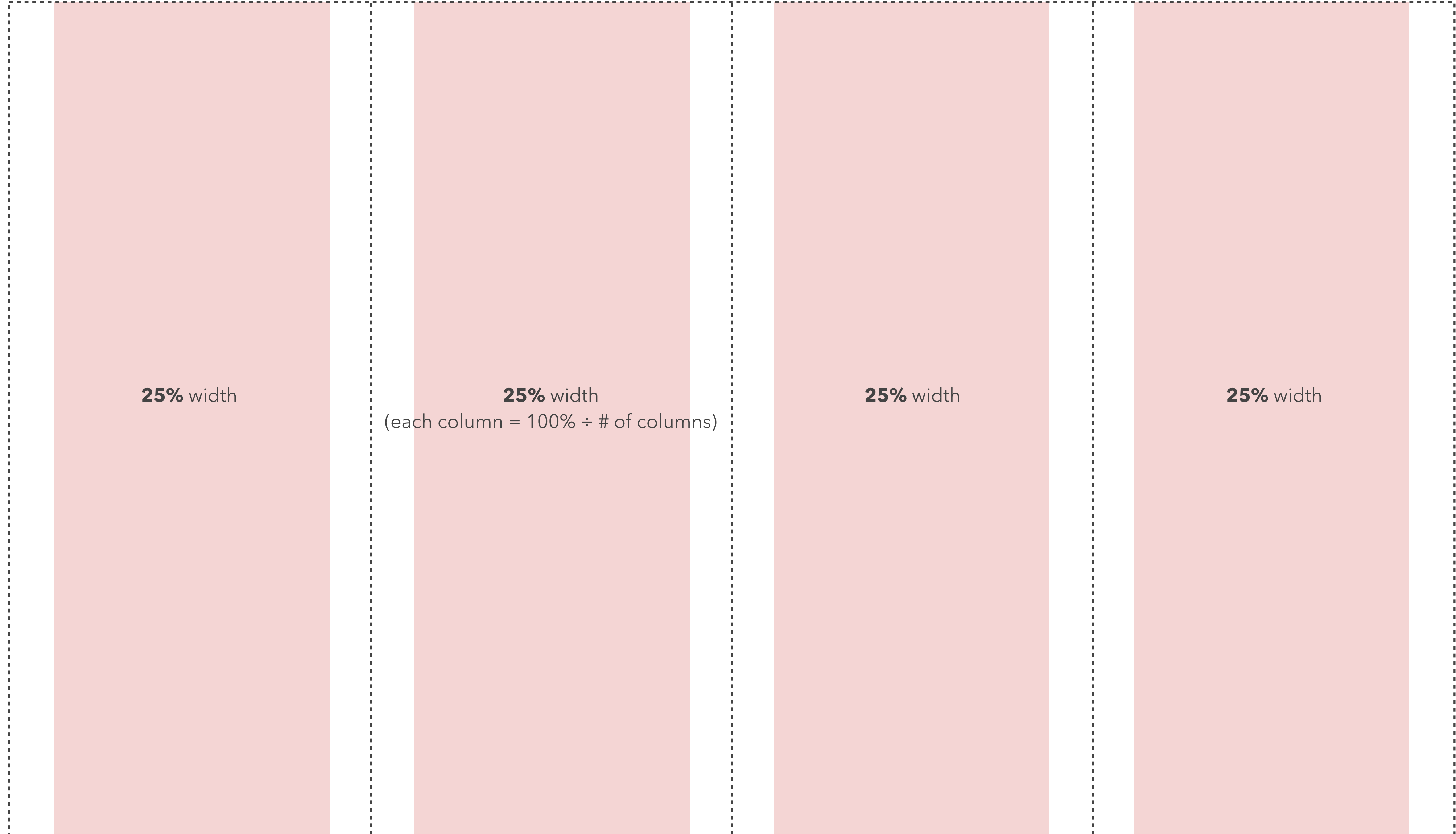
1224 pixel
total container width

CONTAINER CODE

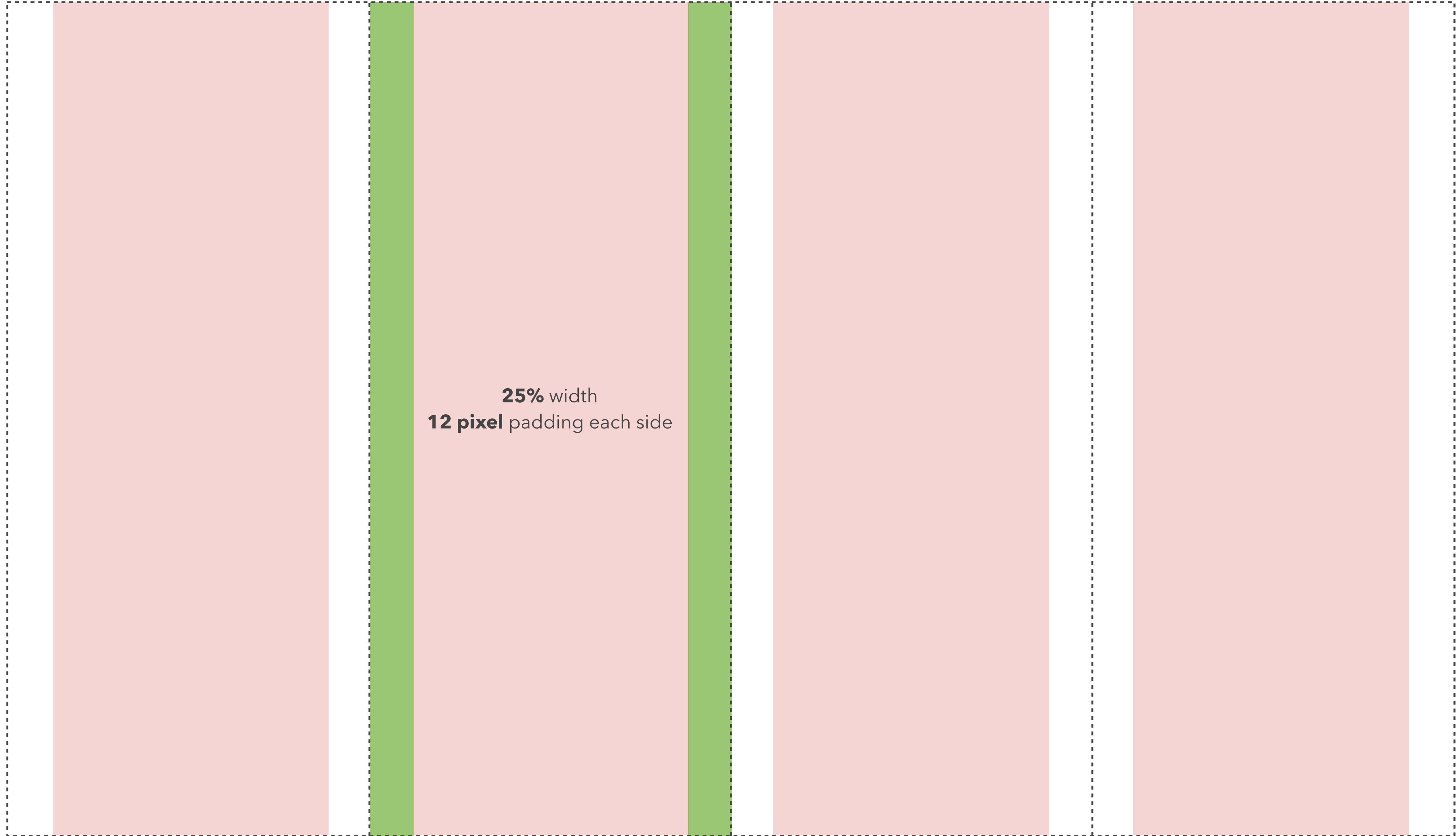
```
.container {  
  width: 1224px; /* 1200px site width + 12px padding each side */  
  margin-left: auto; /* Center the container in the browser window */  
  margin-right: auto; /* Center the container in the browser window */  
}
```

CODE

DIVIDING CONTAINER INTO COLUMNS



COLUMN PADDING



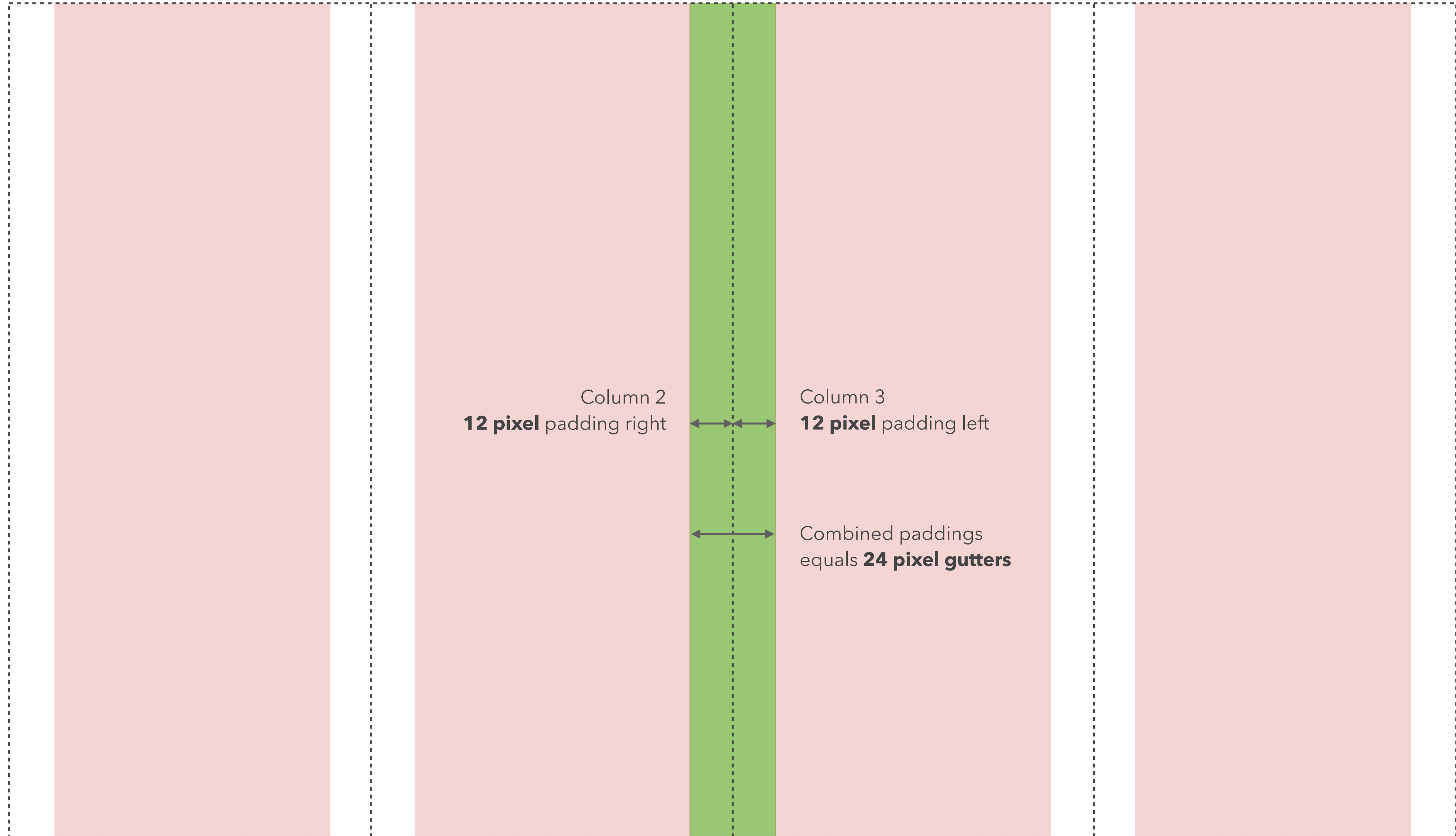
25% width
12 pixel padding each side

COLUMN CODE

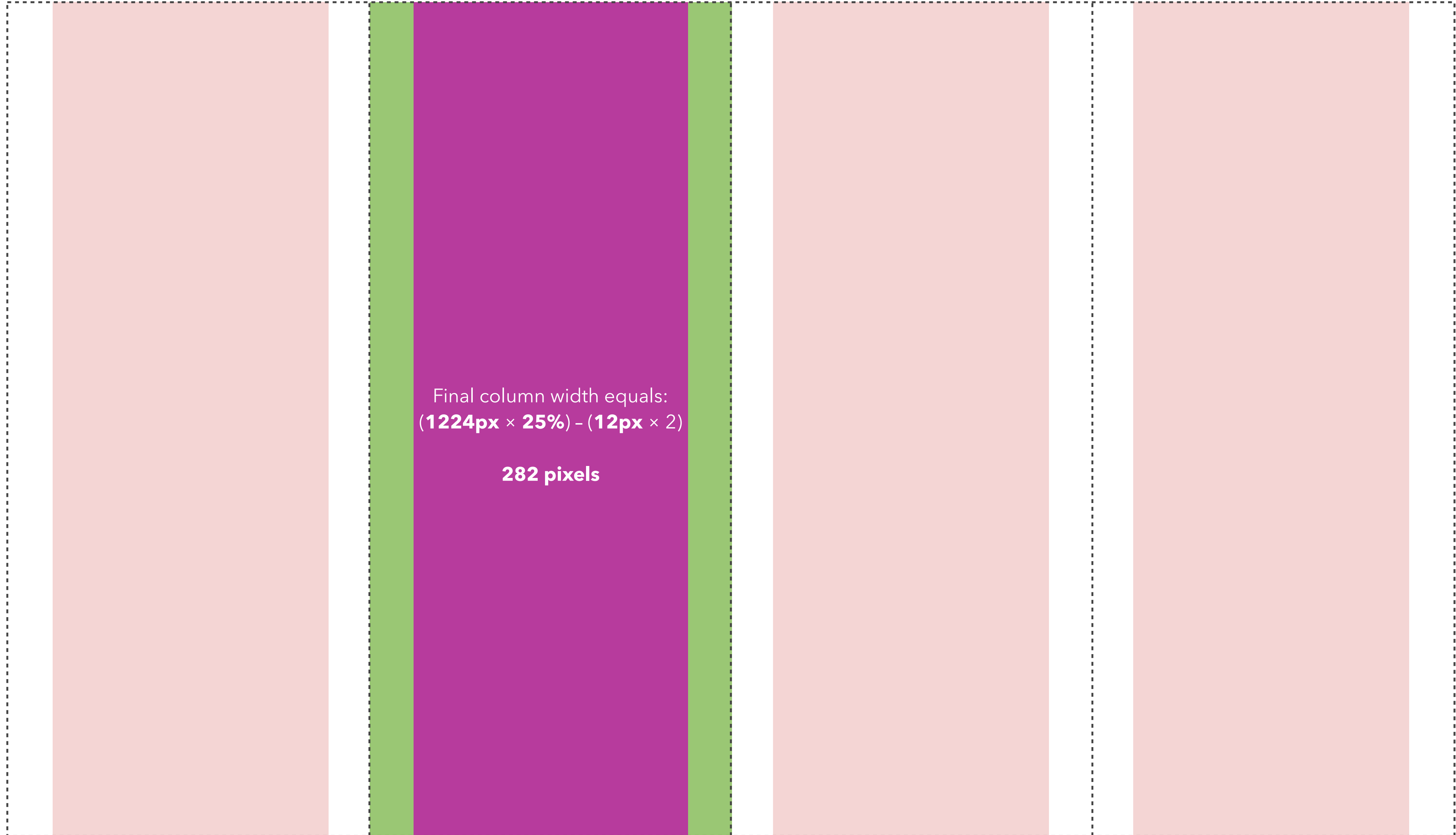
CODE

```
.one-column,  
.two-column,  
...etc {  
    padding-left: 12px; /* ½ gutter width */  
    padding-right: 12px; /* The other ½ gutter width */  
}  
  
.one-column {  
    width: 25%; /* 100% site width ÷ # of columns */  
}  
  
.two-column {  
    width: 50%; /* 100% site width ÷ # of columns × 2 */  
}
```

GUTTERS COMPRISED OF PADDING FROM CONJOINED COLUMNS



COLUMN CONTENT WIDTH



CONTAINER CODE: FLEXBOX

```
.container {  
  display: flex; /* Use flexbox to establish main-axis along horizontal */  
  width: 1224px;  
  margin-left: auto;  
  margin-right: auto;  
}
```

CODE

QUESTIONS?