

responsive

“A pixel is not a pixel”  
— Peter Paul Koch

“If the pixel density of the output device is very different from that of a typical computer display, the user agent should rescale pixel values. It is recommended that the pixel unit refer to the whole number of device pixels that best approximates the reference pixel. It is recommended that the reference pixel be the visual angle of one pixel on a device with a pixel density of 96dpi and a distance from the reader of an arm's length.” — [w3 consortium](#)

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

- - Tells the browser to match the device's width for the viewport
- Sets an initial zoom value -->

**<meta name="viewport" content="width=device-width, initial-scale=1.0">**



**without**



**with**

## Metadata: `viewport`

The user's visible area of a web page

HTML5 introduced a method to let web designers take control over the viewport, through the `<meta>` tag.

Let's breakdown the `content` value:

- + **Values** are comma separated, letting you specify a list of values for `content`
- + The `width` value is set to `device-width`. This will cause the browser to render the page at the same width of the device's screen size.
- + `initial-scale` set to `1` indicates the "zoom" value if your web page when it is first loaded. `1` means "no zoom."

There are other values you can specify for the `content` list -

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

## Metadata: `viewport`

There are other **values** you can specify for the **`content`** attribute -

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

500px

minimum-scale  
maximum-scale  
user-scalable

**vw + vh**



You can define height and width in terms of the viewport

- Use units **vh** and **vw** to set height and width to the percentage of the viewport's height and width, respectively
- $1\text{vh} = 1/100\text{th}$  of the viewport height
- $1\text{vw} = 1/100\text{th}$  of the viewport width

```
div {  
  width: 10vw;  
  height: 10vh;  
}
```

## responsive text

The text size can be set with a "vw" unit, which means the "viewport width".

That way the text size will follow the size of the browser window.

```
div {  
  font-size:10vw;  
}
```

## Media Queries

the @media rule tells the browser to include a block of CSS properties only if a certain condition is true.

So this:

```
@media only screen and (max-width: 500px) {  
  body {  
    background-color: light blue;  
  }  
}
```

Translates to:

```
if (the maximum width of the web page is 500 pixels) {  
  then do this stuff  
}
```

# Media Queries

## Breakpoint

```
/* For mobile phones: */  
[class*="col-"] {  
    width: 100%;  
}  
@media only screen and (min-width: 768px) {  
    /* For desktop: */  
    .col-1 {width: 8.33%;}  
    .col-2 {width: 16.66%;}  
    .col-3 {width: 25%;}  
    .col-4 {width: 33.33%;}  
    .col-5 {width: 41.66%;}  
    .col-6 {width: 50%;}  
    .col-7 {width: 58.33%;}  
    .col-8 {width: 66.66%;}  
    .col-9 {width: 75%;}  
    .col-10 {width: 83.33%;}  
    .col-11 {width: 91.66%;}  
    .col-12 {width: 100%;  
}
```

add a **breakpoint** where certain parts of the design will behave differently on each side of the breakpoint

many examples: [https://www.w3schools.com/Css/css\\_rwd\\_mediaqueries.asp](https://www.w3schools.com/Css/css_rwd_mediaqueries.asp)

# Mobile-first! (Images)



```
/* For width smaller than 400px: */  
body {  
    background-image: url('void_newspaper.jpg');  
}
```

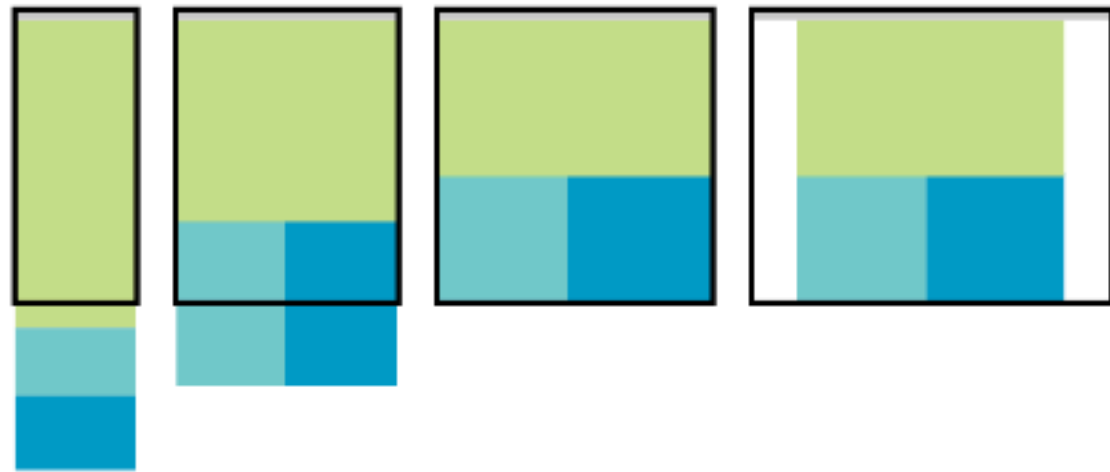


```
/* For width 400px and larger: */  
@media only screen and (min-width: 400px) {  
    body {  
        background-image: url('void.jpg');  
    }  
}
```

## Responsive layout patterns

The manner in which a site transitions from a small-screen layout to a wide-screen layout must make sense for that particular site, but there are a few patterns (common and repeated approaches) that have emerged over the years. We can thank Luke Wroblewski (known for his “Mobile First” approach to web design, which has become the standard) for doing a survey of how responsive sites handle layout. Following are the top patterns Luke named in his [article](#):

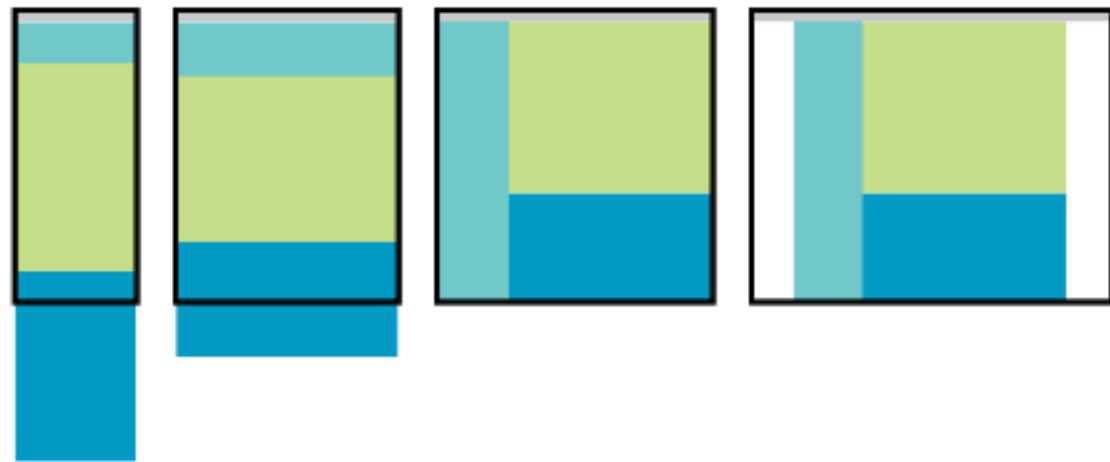
Mostly fluid



Column drop



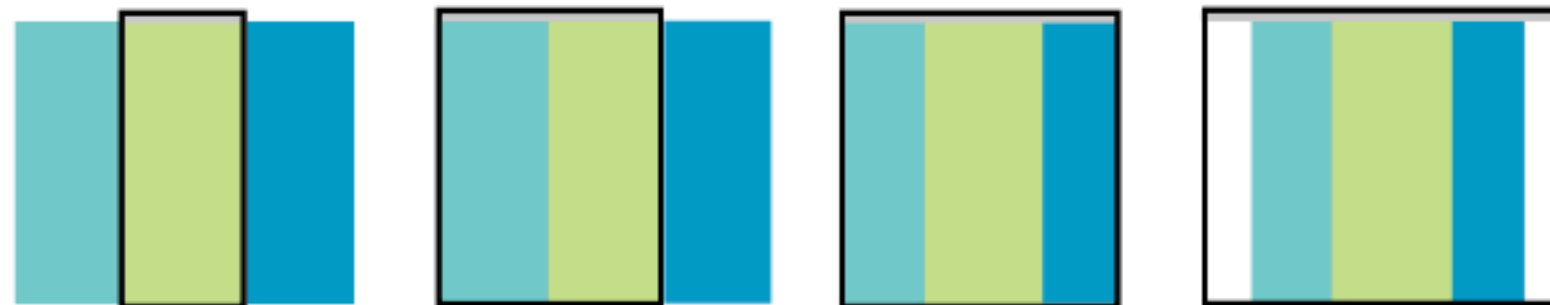
Layout shifter



Tiny tweaks



Off canvas



**FIGURE 17-9.** Examples of the responsive layout patterns identified by Luke Wroblewski.

## Mostly fluid

This pattern uses a single-column layout for small screens, and another fluid layout that covers medium and large screens, with a maximum width set to prevent it from becoming too wide. It generally requires less work than other solutions.

## Column drop

This solution shifts between one-, two-, and three-column layouts based on available space. When there isn't room for extra columns, the sidebar columns drop below the other columns until everything is stacked vertically in the one-column view.

## Layout shifter

If you want to get really fancy, you can completely reinvent the layout for a variety of screen sizes. Although expressive and potentially cool, it is not necessary. In general, you can solve the problem of fitting your content to multiple environments without going overboard.

## Tiny tweaks

Some sites use a single-column layout and make tweaks to type, spacing, and images to make it work across a range of device sizes.



# Display Property

`display: none;`

`display: inline;`

`display: block;`

`display: flex;`

`display: grid;`

## Overriding Default Display

Changing an inline element to a block element, or vice versa, can be useful for making the page look a specific way, and still follow the web standards.

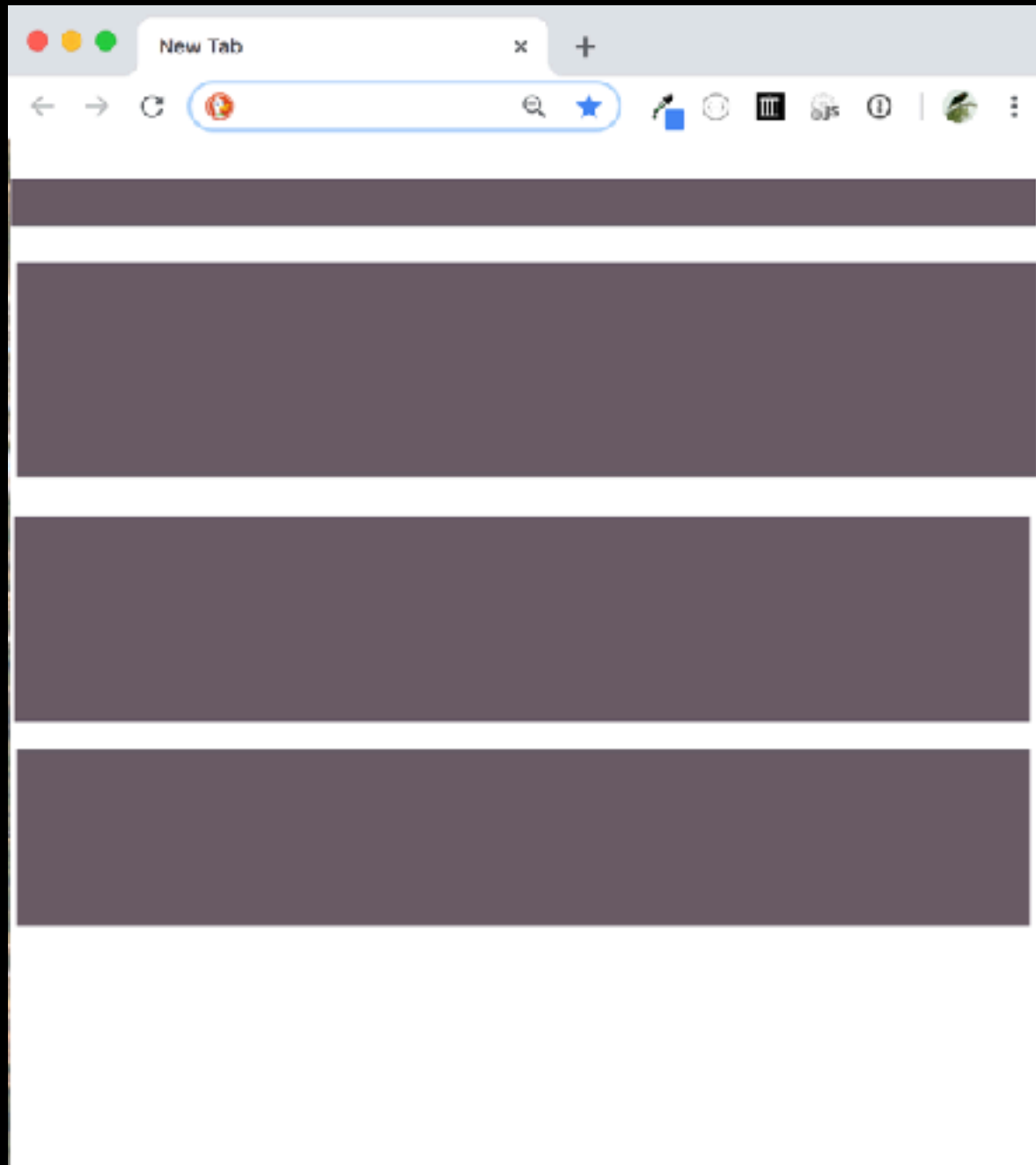
```
li {  
    display: inline;  
}
```

```
span {  
    display: block;  
}
```

Note: Setting the display property of an element only changes how the element is displayed, NOT what kind of element it is. So, an inline element with display: block; is not allowed to have other block elements inside it.

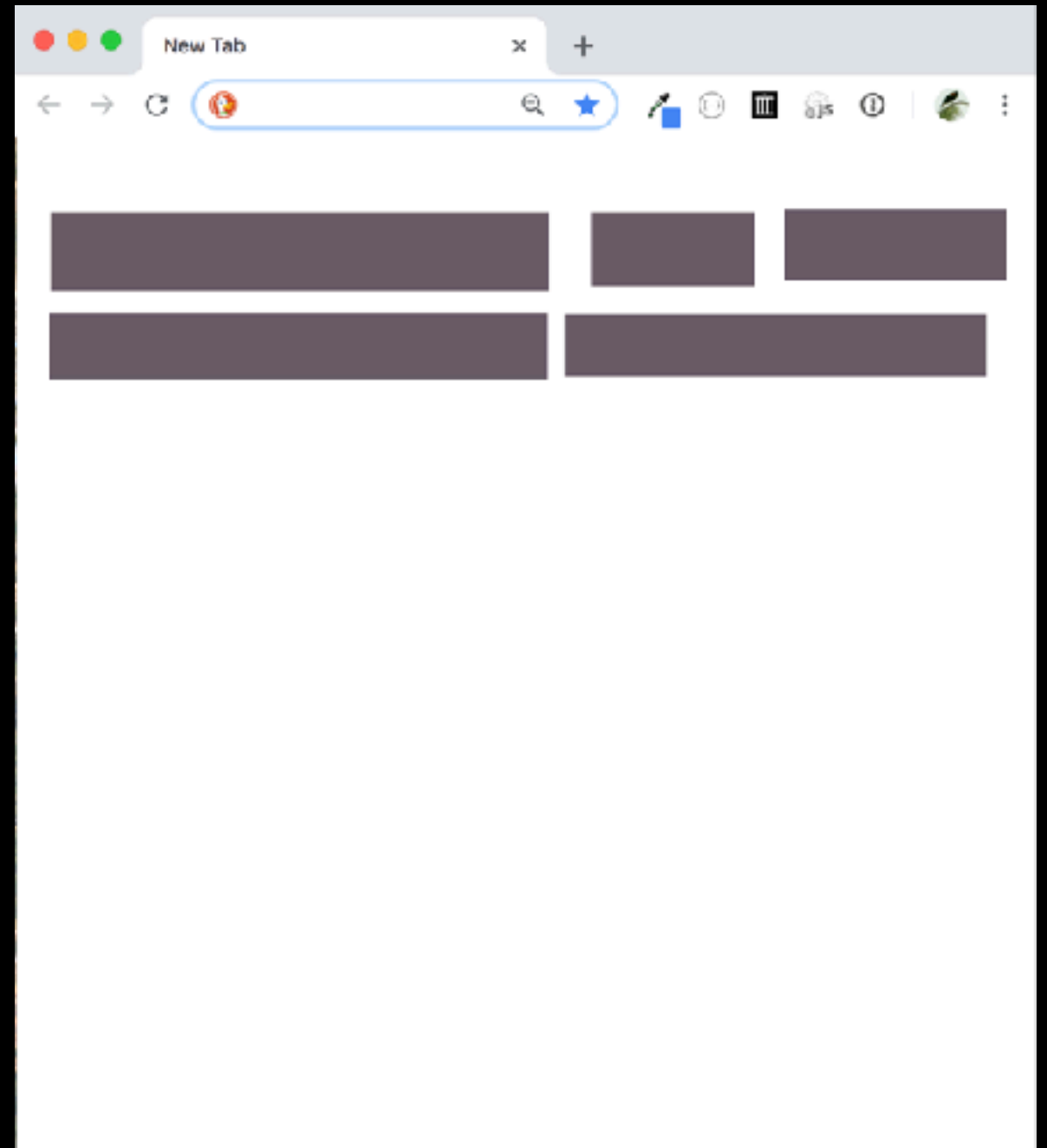
```
display: flex;  
display: grid;
```

flex display



## Block layout

Laying out large sections of a page



## Inline layout

Laying out txt + other inline content within a section

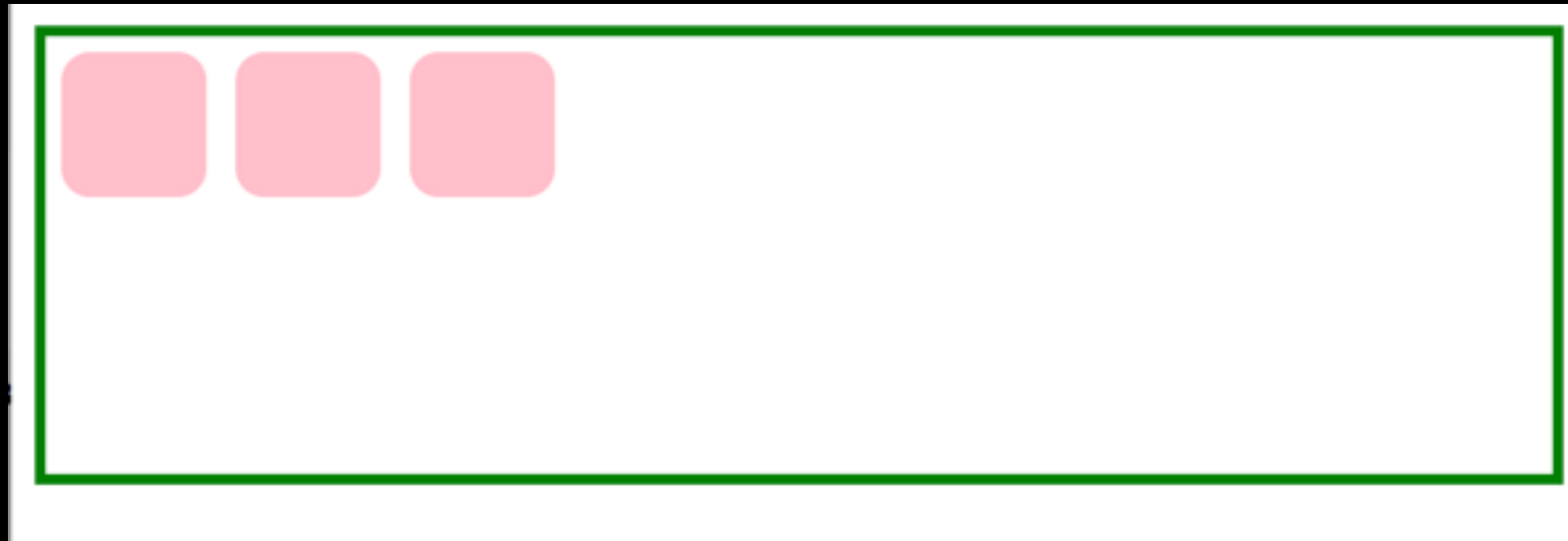
## Flex - different rendering model

When you set a container to **display: flex**, the direct children in that container are **flex items** + follow a new set of rules.

**Flex items are not block or inline**; they have different rules for their height, width + layout.

- The **contents** of a flex item follow the usual block/inline rules, relative to the flex item's boundary.

# Flex Basics

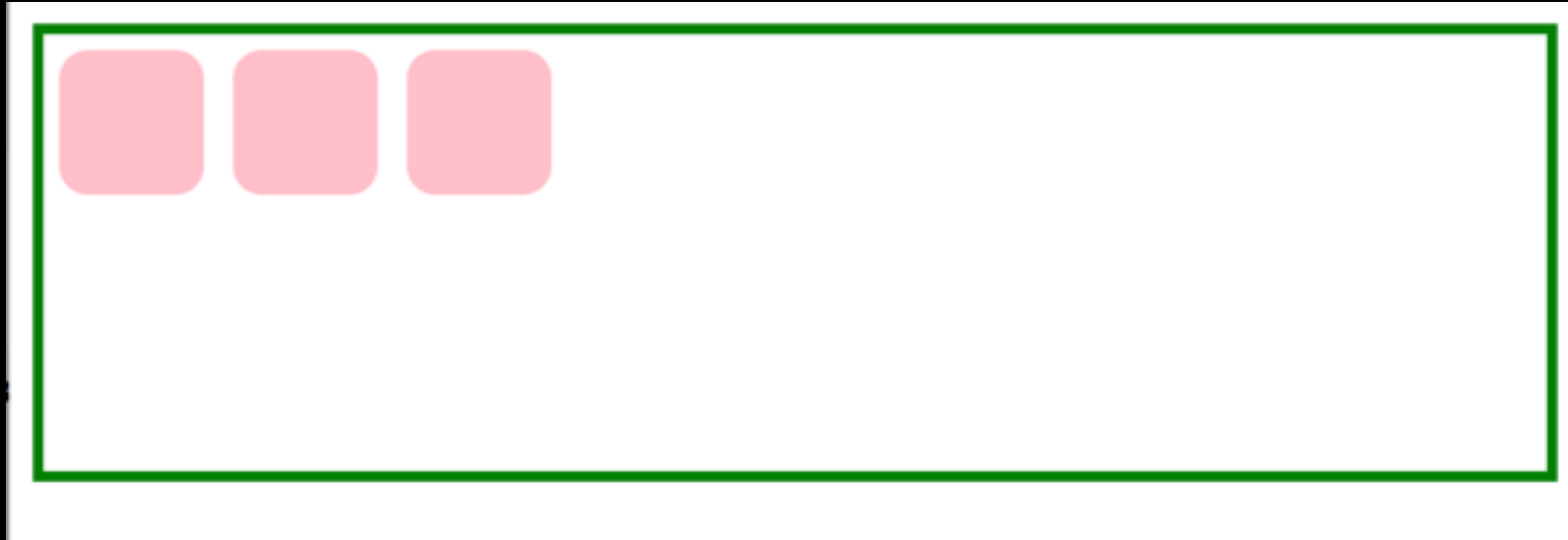


Flex layouts are composed of:

- a **Flex container**, which contains one or more:  
**Flex item(s)**

You can then apply CSS properties on the **Flex container** to dictate how the **Flex item(s)** are displayed

# Flex Basics



To make an element a flex container, change display:

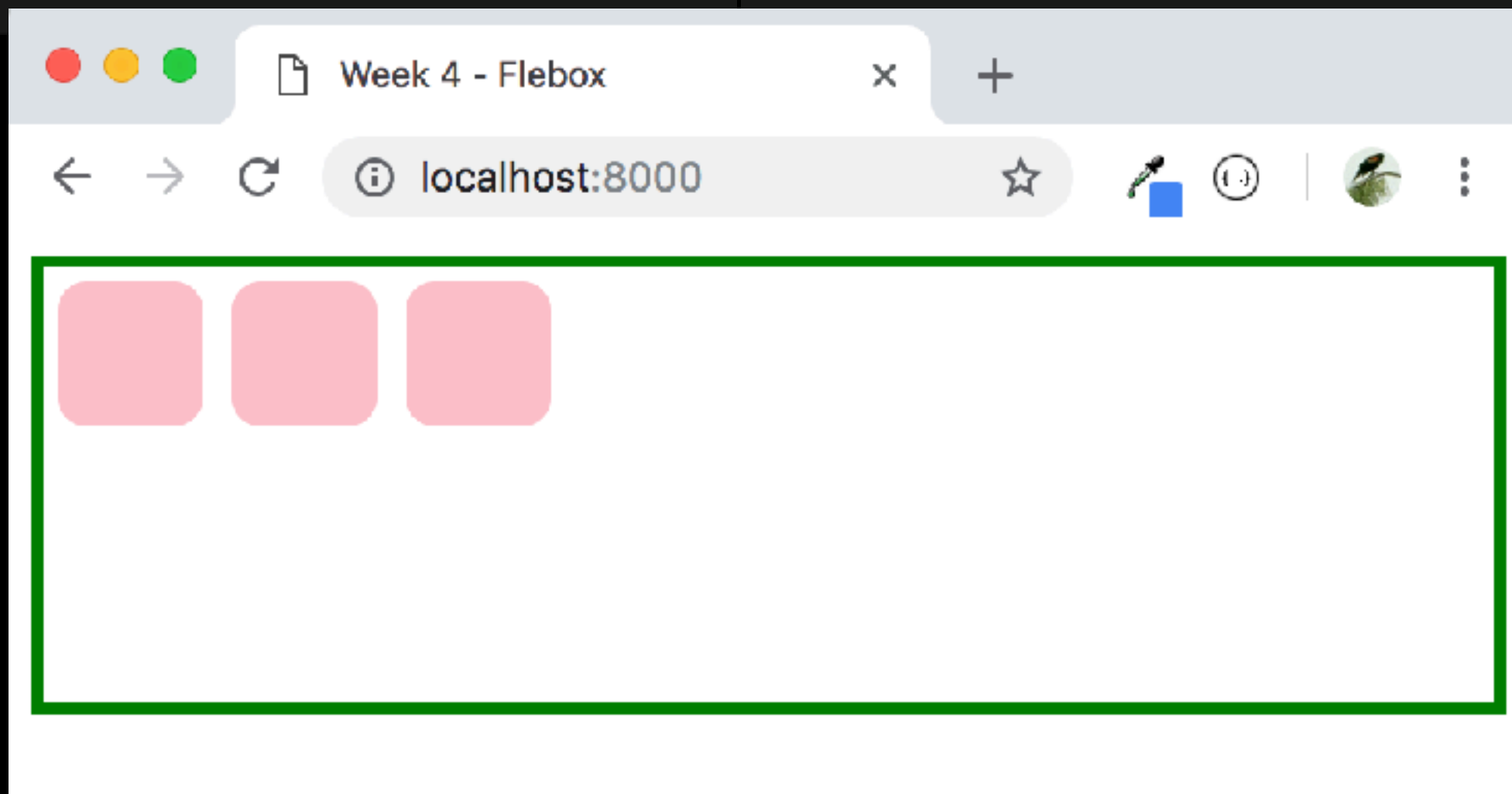
- Block container: `display: flex;`
- Inline container: `display: inline-flex;`



# Flex Basics

```
<body>  
  
  <div id="flexBox">  
    <div class="flexThing"></div>  
    <div class="flexThing"></div>  
    <div class="flexThing"></div>  
  
  </div>  
</body>
```

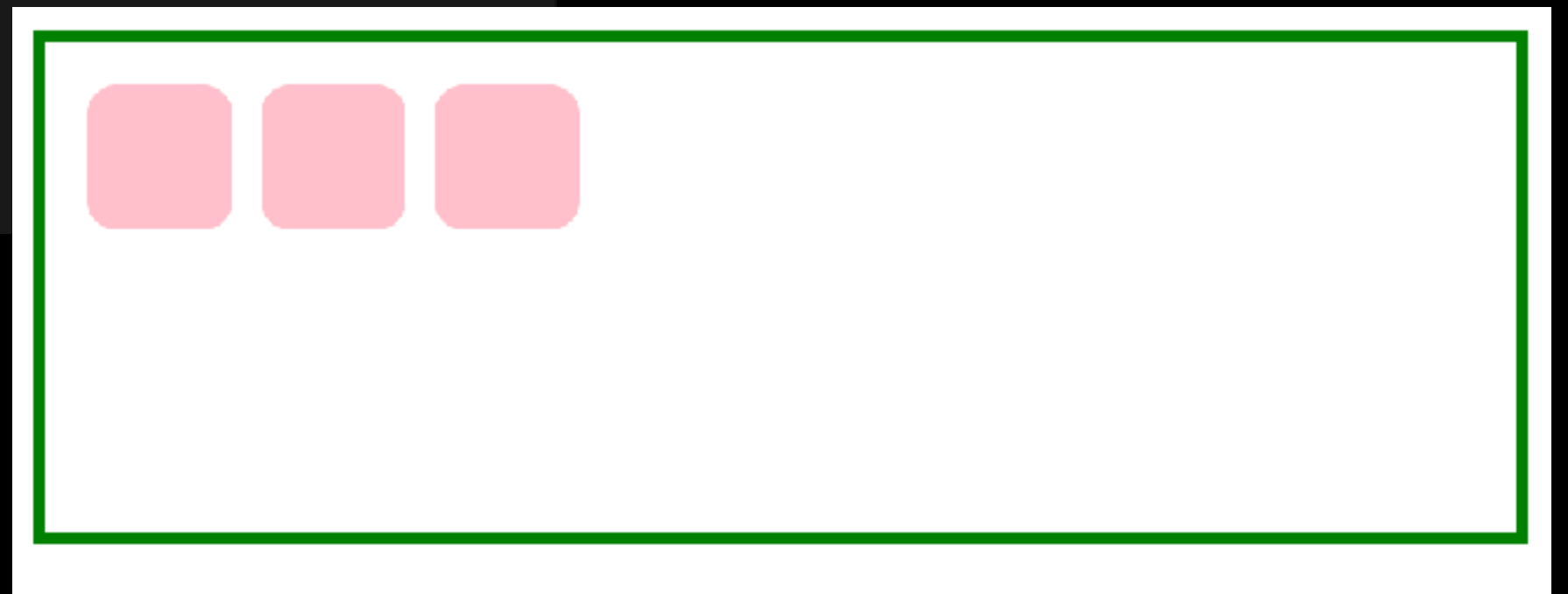
```
#flexBox {  
  display: flex;  
  border: 4px solid Green;  
  height: 150px;  
}  
  
.flexThing {  
  border-radius: 10px;  
  background-color: pink;  
  height: 50px;  
  width: 50px;  
  margin: 5px;  
}
```



## Flex Basics: justify-content

You can control where the item is horizontally in the box by setting **justify-content** in the flex container.

```
#flexBox {  
  display: flex;  
  border: 4px solid Green;  
  justify-content: flex-start;  
  padding: 10px;  
  height: 150px;  
}
```



## Flex Basics: justify-content

You can control where the item is horizontally in the box by setting **justify-content** in the flex container.

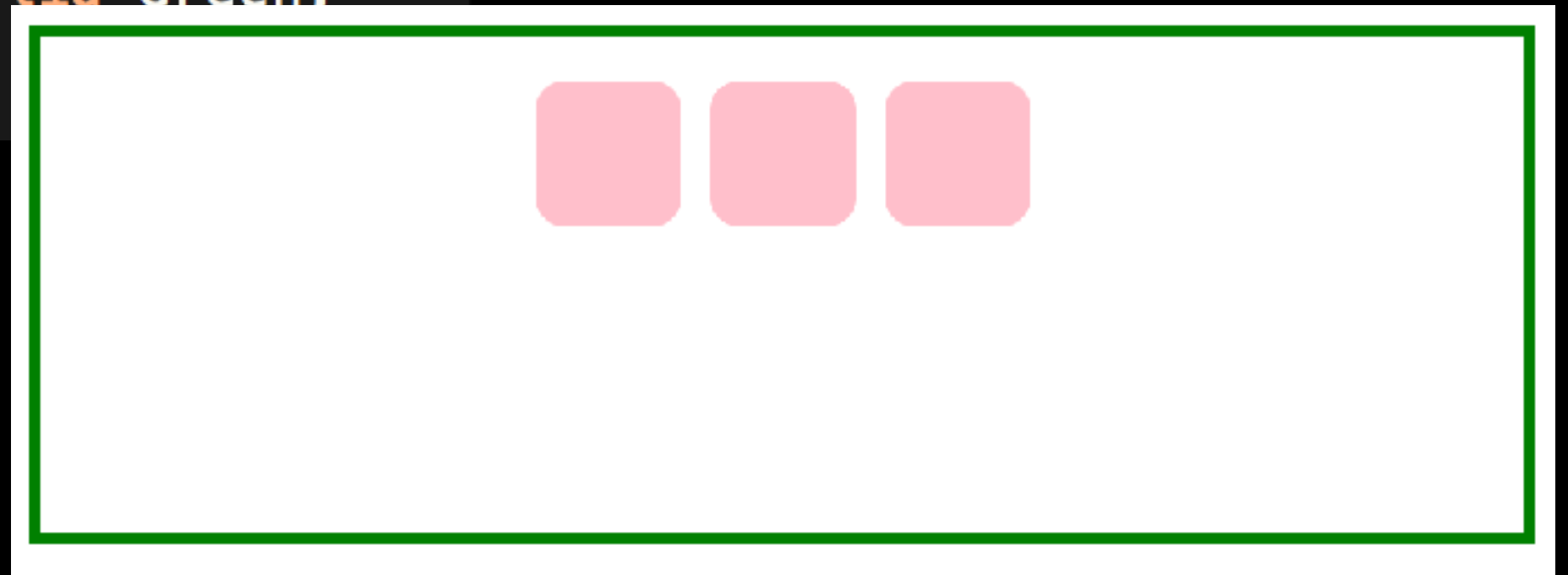
```
#flexBox {  
  display: flex;  
  justify-content: flex-end;  
  padding: 10px;  
  height: 150px;  
  border: 4px solid Green;  
}
```



## Flex Basics: justify-content

You can control where the item is horizontally in the box by setting **justify-content** in the flex container.

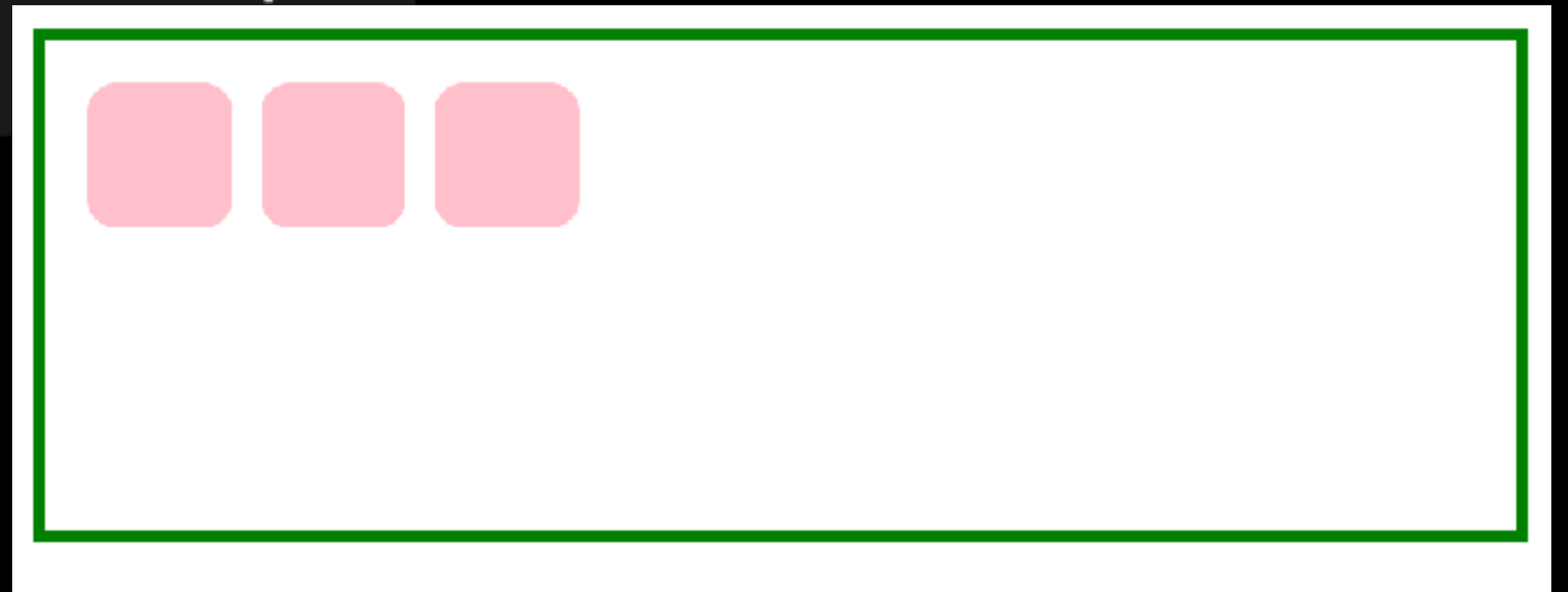
```
#flexBox {  
  display: flex;  
  justify-content: center;  
  padding: 10px;  
  height: 150px;  
  border: 4px solid Green;  
}
```



## Flex Basics: align-items

You can control where the item is vertically in the box by setting **align-items** in the flex container.

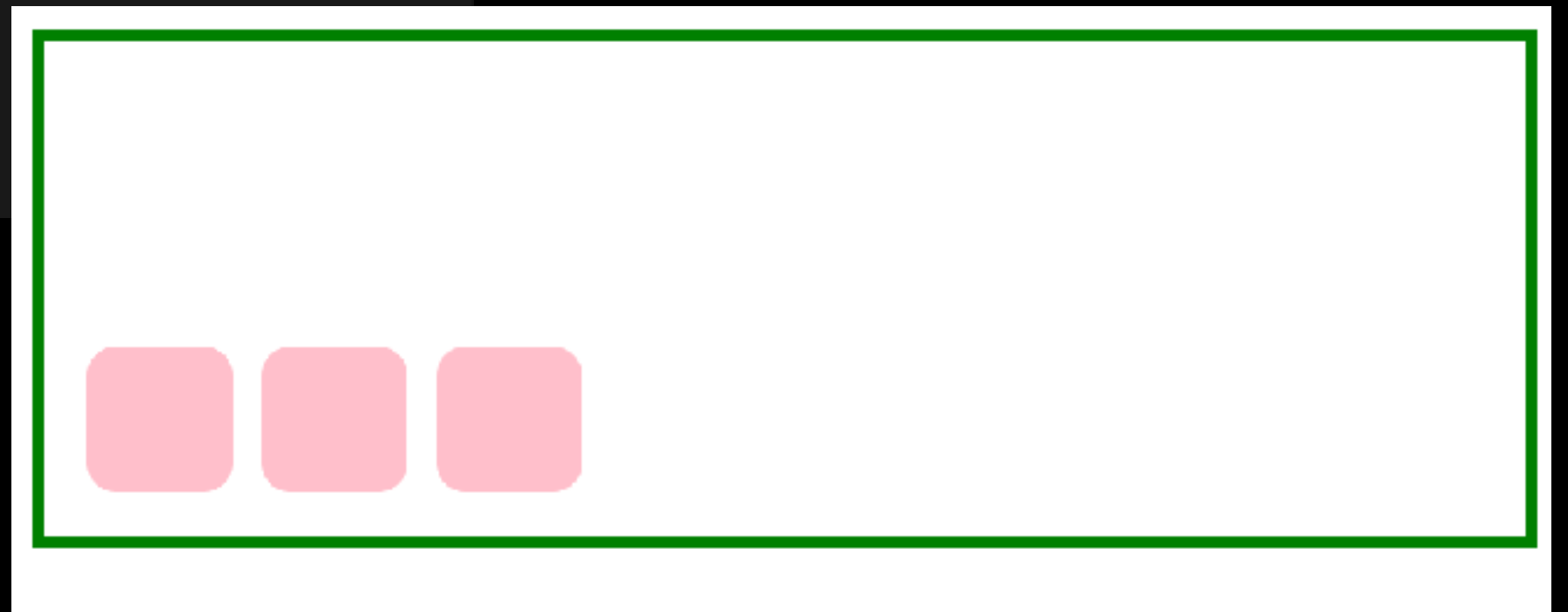
```
#flexBox {  
  display: flex;  
  align-items: flex-start;  
  padding: 10px;  
  height: 150px;  
  border: 4px solid Green;  
}
```



## Flex Basics: align-items

You can control where the item is vertically in the box by setting **align-items** in the flex container.

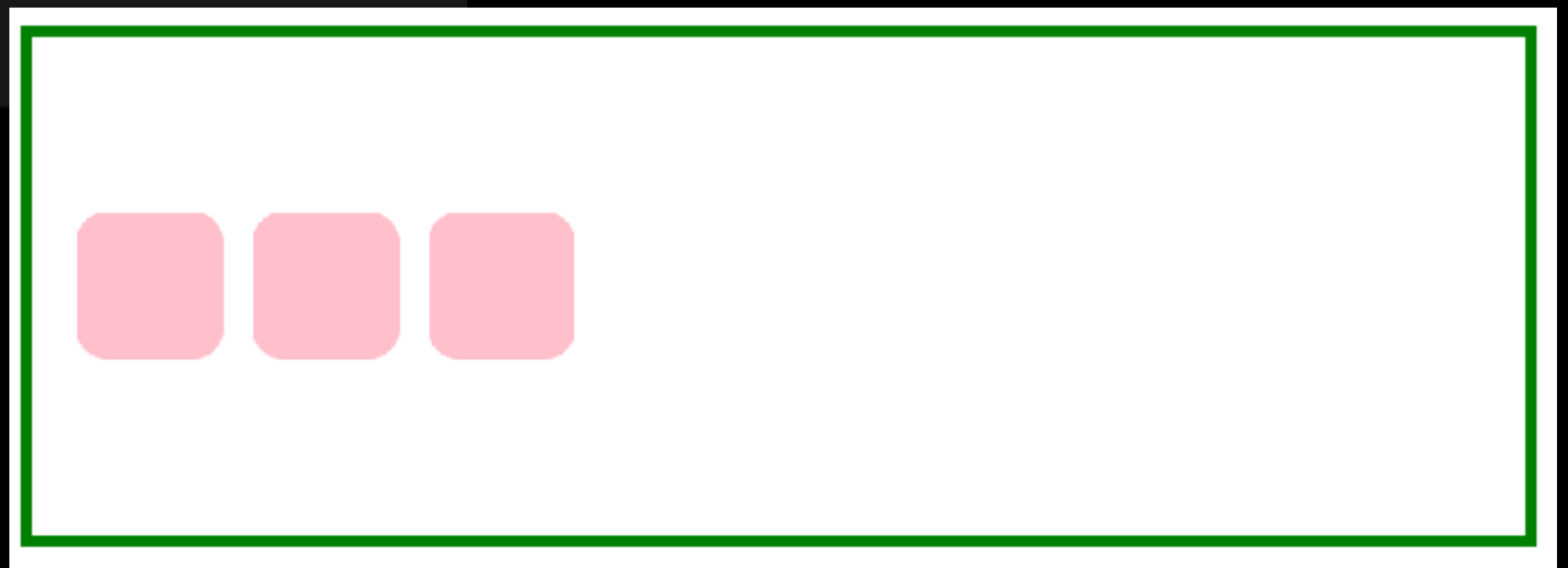
```
#flexBox {  
  display: flex;  
  align-items: flex-end;  
  padding: 10px;  
  height: 150px;  
  border: 4px solid  
}
```



## Flex Basics: align-items

You can control where the item is vertically in the box by setting **align-items** in the flex container.

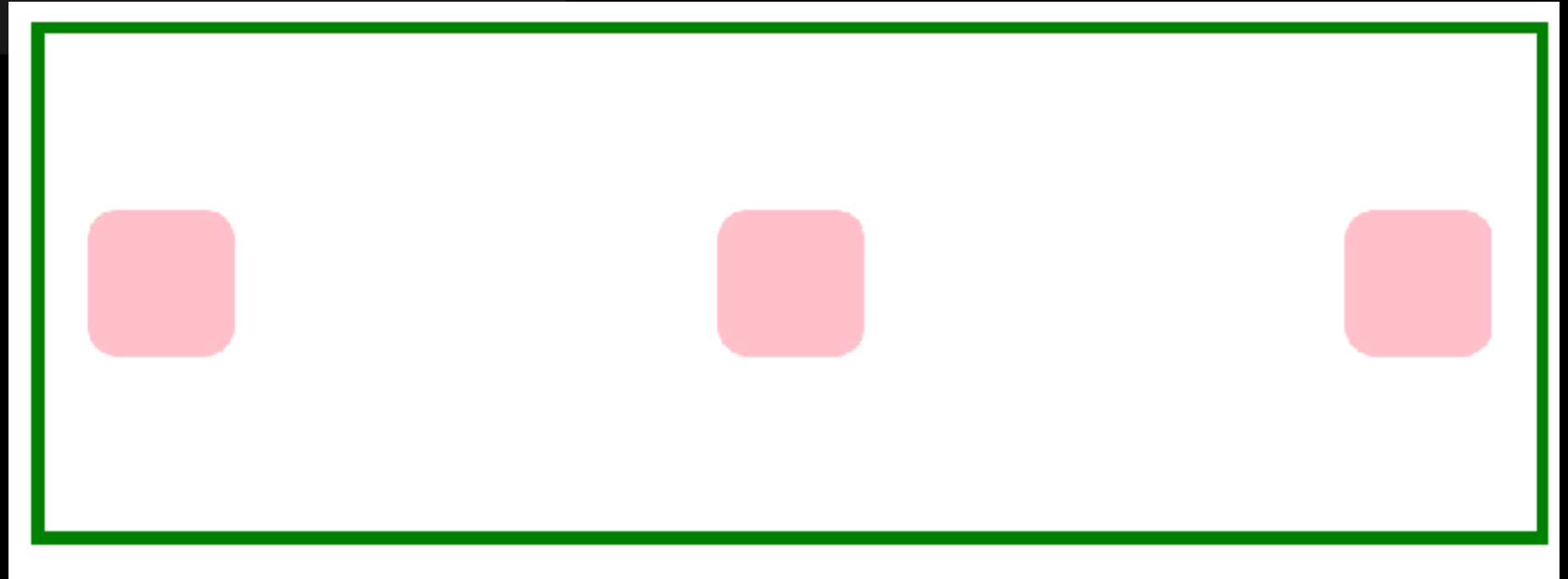
```
▼ #flexBox {  
  display: flex;  
  align-items: center;  
  padding: 10px;  
  height: 150px;  
  border: 4px solid Green;  
}
```



# Flex Basics:

space-between + space-around

```
#flexBox {  
  display: flex;  
  justify-content: space-between;  
  align-items: center;  
  padding: 10px;  
  height: 150px;  
  border: 4px solid Green;  
}
```

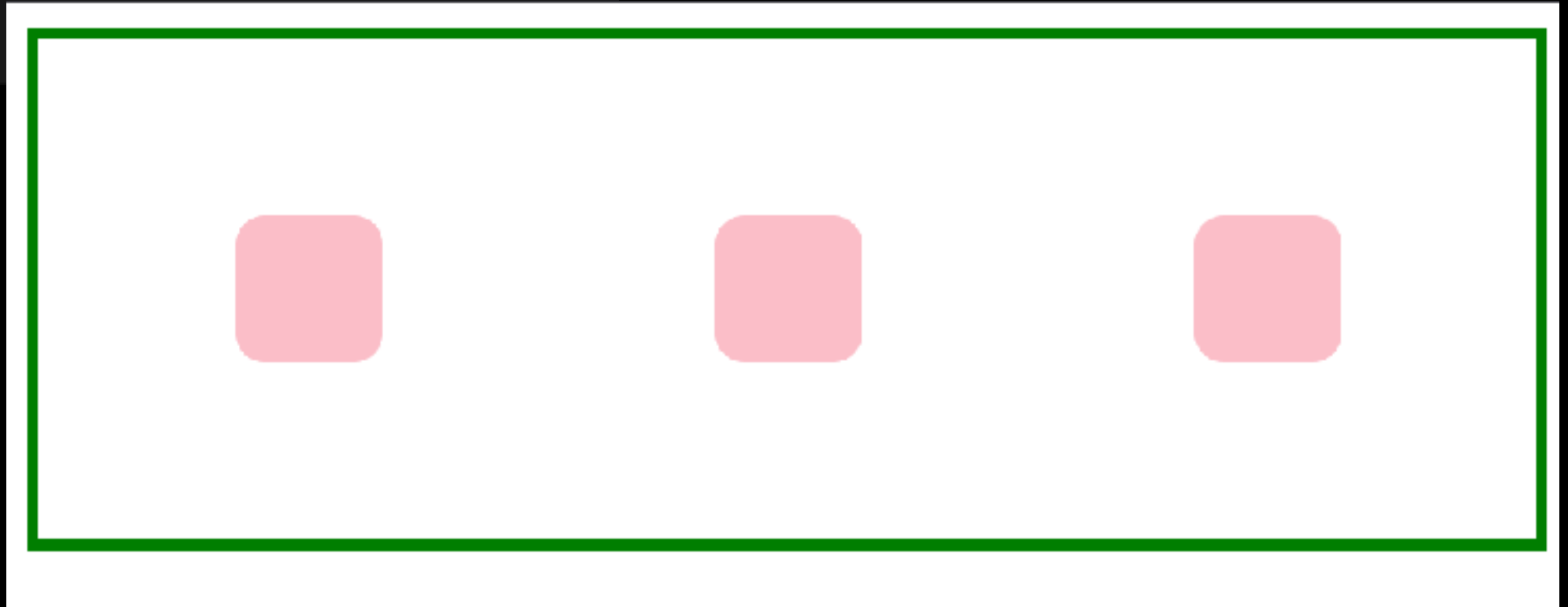




# Flex Basics:

space-between + space-around

```
#flexBox {  
  display: flex;  
  justify-content: space-around;  
  align-items: center;  
  padding: 10px;  
  height: 150px;  
  border: 4px solid Green;  
}
```



## Flex Basics: flex-direction

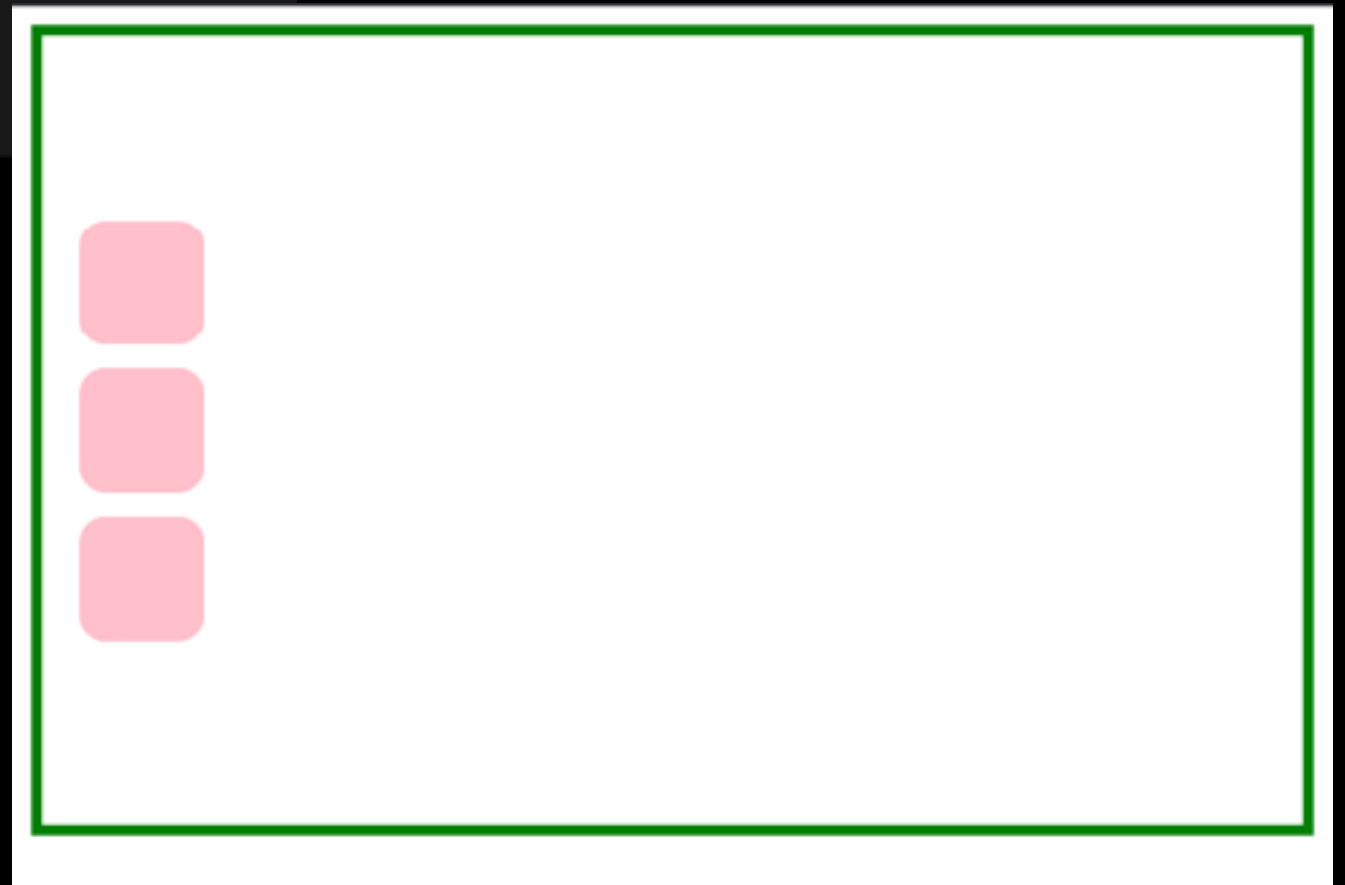
```
#flexBox {  
  display: flex;  
  flex-direction: column;  
  padding: 10px;  
  height: 150px;  
  border: 4px solid Green;  
}
```



## Flex Basics: flex-direction

```
#flexBox {  
  display: flex;  
  flex-direction: column;  
  justify-content: center;  
  padding: 10px;  
  height: 300px;  
  border: 4px solid Green;  
}
```

Now **justify-content** controls where the column is vertically in the box.



## Flex Basics: flex-direction

```
▼ #flexBox {  
  display: flex;  
  flex-direction: column;  
  justify-content: space-around;  
  padding: 10px;  
  height: 300px;  
  border: 4px solid Green;  
}
```

And you can also lay out columns instead of rows.

Now **justify-content** controls where the column is vertically in the box.

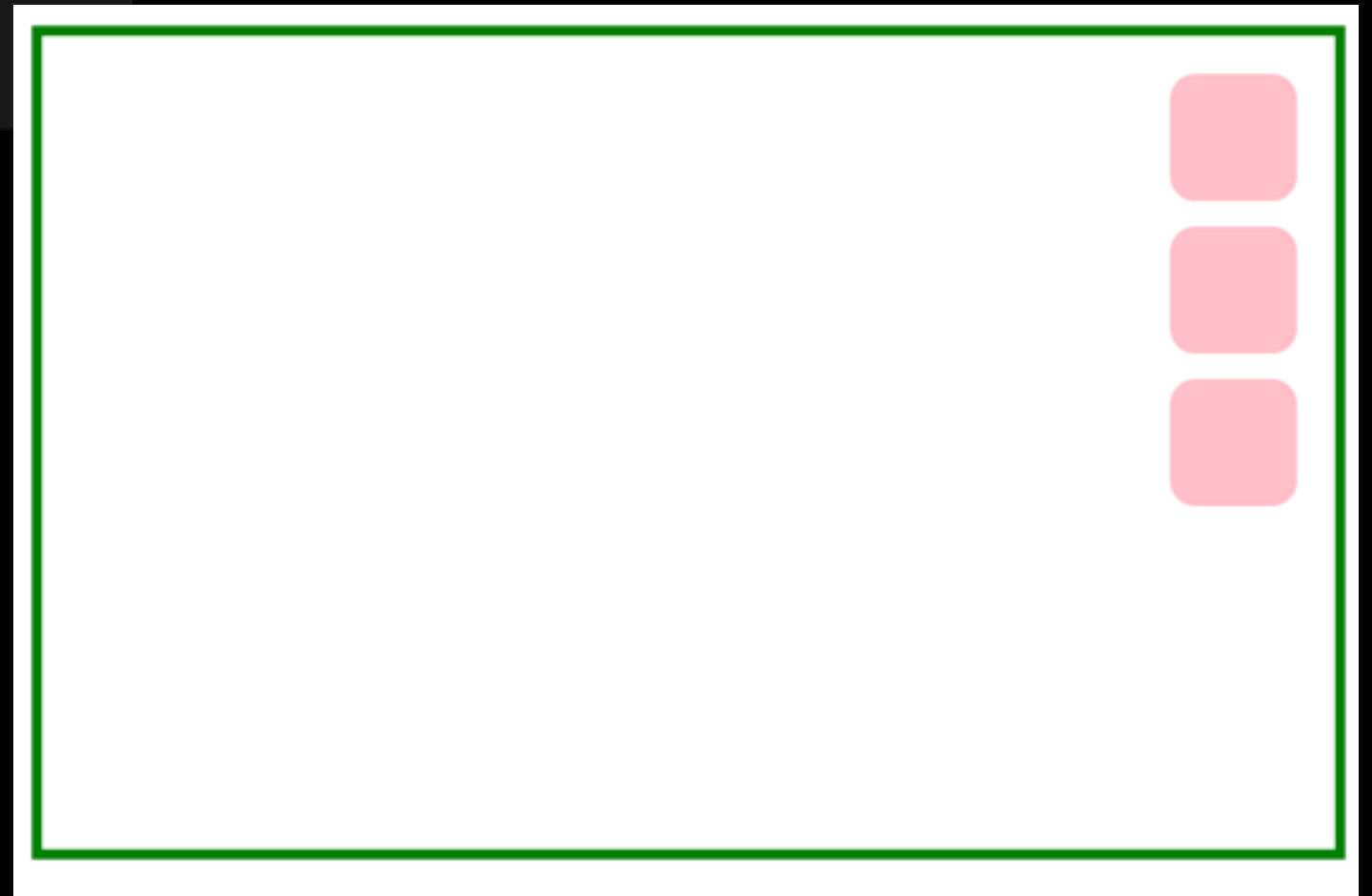


## Flex Basics: flex-direction

```
▼ #flexBox {  
  display: flex;  
  flex-direction: column;  
  align-items: flex-end;  
  padding: 10px;  
  height: 300px;  
  border: 4px solid Green;  
}
```

And you can also lay out columns instead of rows.

Now **align-items** controls where the column is horizontally in the box.



## Flex Basis

Flex items have an initial width\*, which, by default is either:

- The content width, or
- The explicitly set **width** property of the element, or
- The explicitly set **flex-basis** property of the element

This initial width\* of the flex item is called the **flex basis**.

\*width in the case of rows; height in  
the case of columns

## Flex Basis

Flex items have an initial width\*, which, by default is either:

- The content width, or
- The explicitly set **width** property of the element, or
- The explicitly set **flex-basis** property of the element

This initial width\* of the flex item is called the **flex basis**.

The explicit width\* of a flex item is respected **for all flex items**, regardless of whether the flex item is inline, block, or inline-block.

\*width in the case of rows; height in  
the case of columns

## Flex Basis

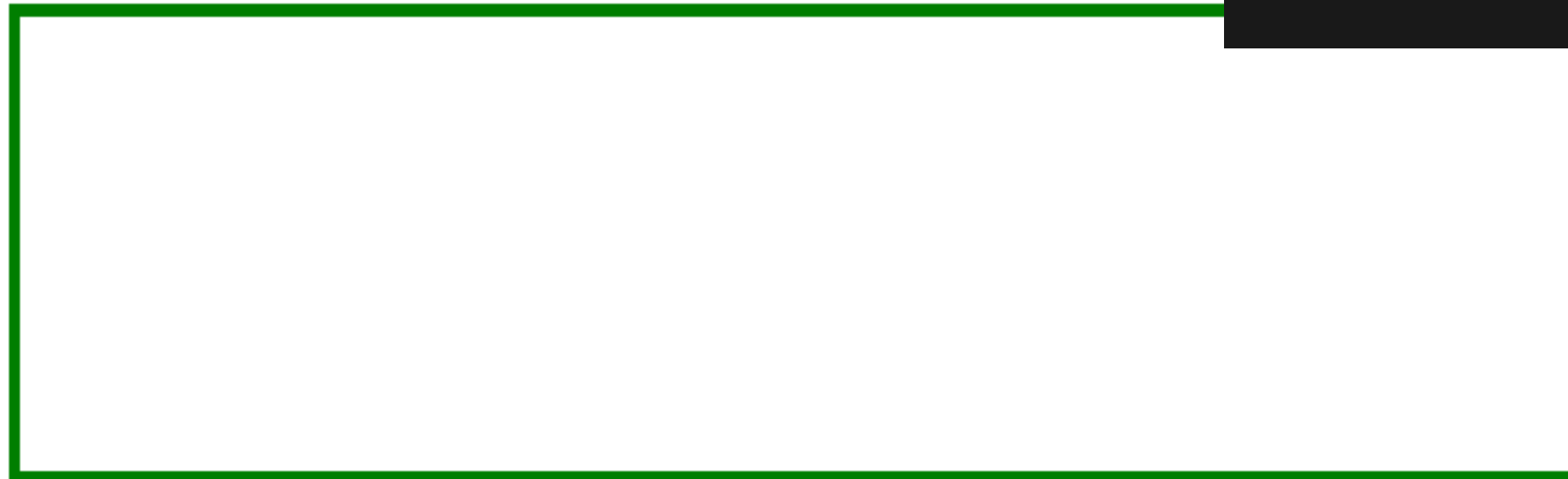
If we unset the height and width, our flex items disappears, because the **flex basis** is now the content size, which is empty:

```
<div id="flexBox">
  <span class="flexThing"></span>
  <div class="flexThing"></div>
  <span class="flexThing"></span>
</div>
```

```
#flexBox {
  display: flex;
  border: 4px solid Green;
  height: 150px;
}

.flexThing {
  border-radius: 10px;
  background-color: pink;
  margin: 5px;
}
```

← → ↻ ⓘ localhost:8000





## flex-shrink

The width\* of the flex item can automatically shrink **smaller** than the **flex basis** via the **flex-shrink** property:

### flex-shrink:

- If set to **1**, the flex item shrinks itself as small as it can in the space available
- If set to **0**, the flex item does not shrink.

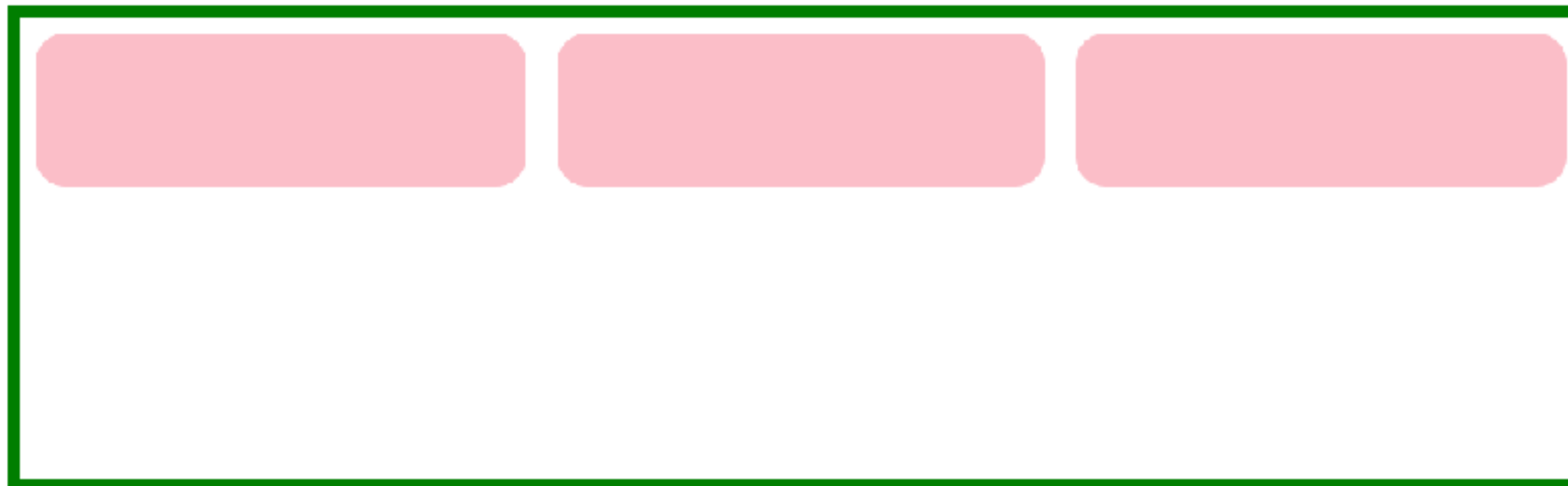
Flex items have **flex-shrink: 1** by default.

\*width in the case of rows;  
height in the case of columns

# flex-shrink

```
#flexBox {  
  display: flex;  
  align-items: flex-start;  
  border: 4px solid Green;  
  height: 150px;  
}  
  
.flexThing {  
  width: 500px;  
  height: 50px;  
  border-radius: 10px;  
  background-color: pink;  
  margin: 5px;  
}
```

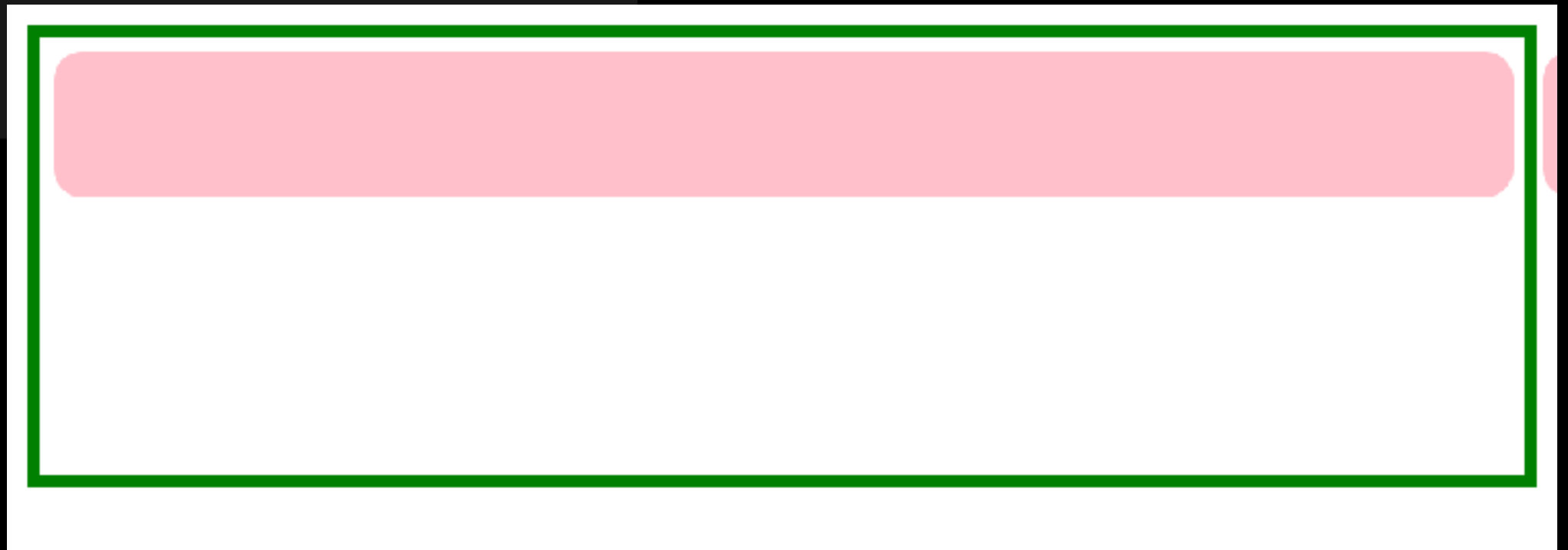
The flex items' widths all shrink to fit the width of the container.



# flex-shrink

```
.flexThing {  
  width: 500px;  
  height: 50px;  
  flex-shrink: 0;  
  border-radius: 10px;  
  background-color: pink;  
  margin: 5px;  
}
```

Setting **flex-shrink: 0;**  
undoes the shrinking behavior,  
and the flex items do not  
shrink in any circumstance:



## flex-grow

The width\* of the flex item can automatically **grow larger** than the **flex basis** via the **flex-grow** property:

### flex-grow:

- If set to **1**, the flex item grows itself as large as it can in the space remaining
- If set to **0**, the flex item does not grow

Flex items have **flex-grow: 0** by default.

\*width in the case of rows;  
height in the case of columns

# flex-grow

Let's unset the height + width of our flex items again.

```
<div id="flexBox">
  <span class="flexThing"></span>
  <div class="flexThing"></div>
  <span class="flexThing"></span>
</div>
```

```
#flexBox {
  display: flex;
  border: 4px solid Green;
  height: 150px;
}

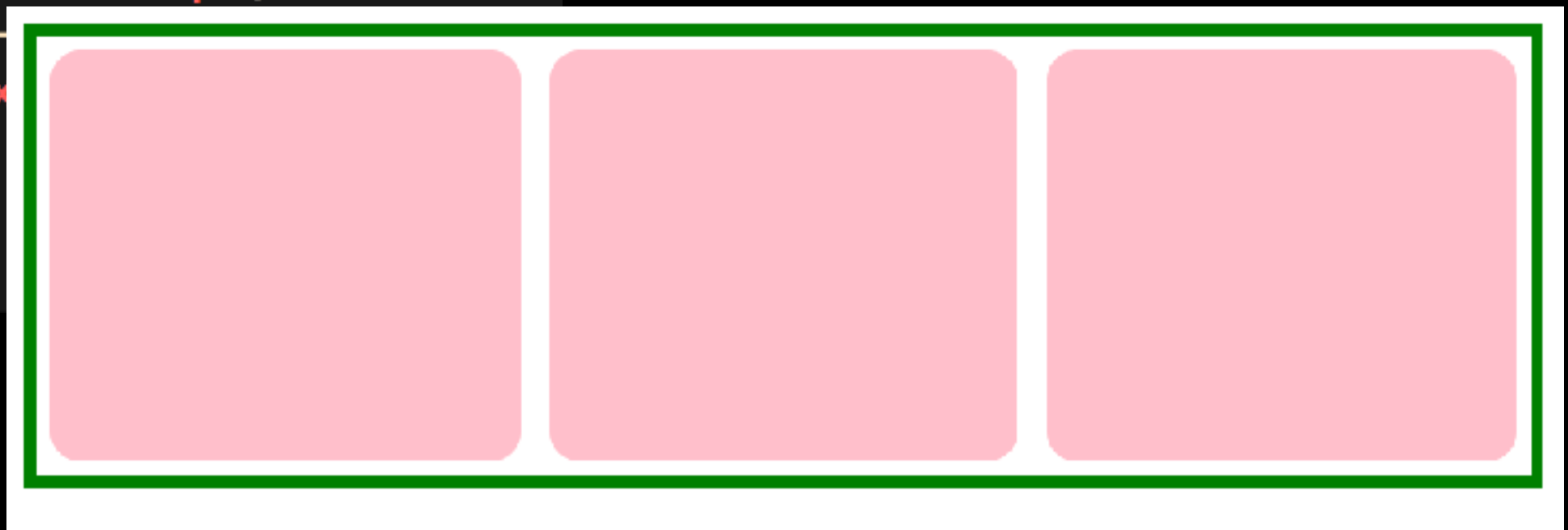
.flexThing {
  border-radius: 10px;
  background-color: pink;
  margin: 5px;
}
```



# flex-grow

if we set **flex-grow: 1;**  
the flex items fill the empty space.

```
#flexBox {  
  display: flex;  
  border: 4px solid Green;  
  height: 150px;  
}  
  
.flexThing {  
  flex-grow: 1;  
  border-radius: 10px;  
  background-color: #FFB6C1;  
  margin: 5px;  
}
```

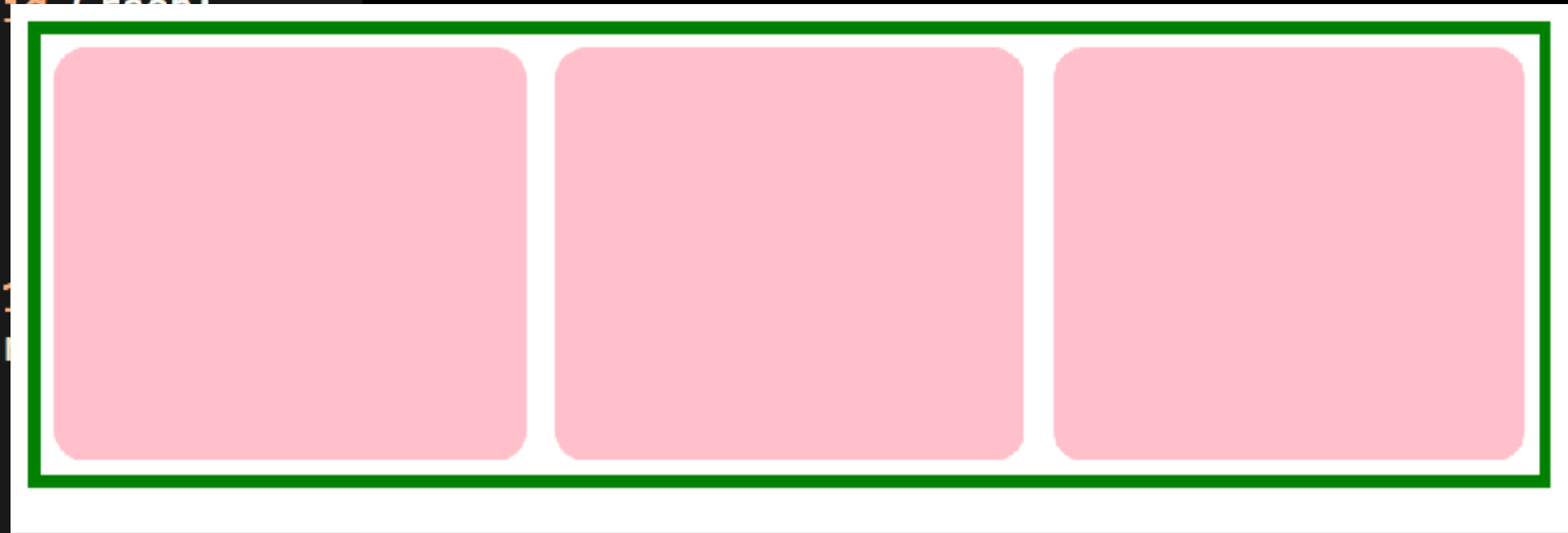


# flex item height\*\*?

note that **flex-grow** only controls width\*

So why does the height\*\* of the flex items seem to 'grow' as well?

```
#flexBox {  
  display: flex;  
  border: 4px solid green;  
  height: 150px;  
}  
  
.flexThing {  
  flex-grow: 1;  
  border-radius: 10px;  
  background-color: #f8bbd0;  
  margin: 5px;  
}
```



\*width in the case of rows; height in the case of columns

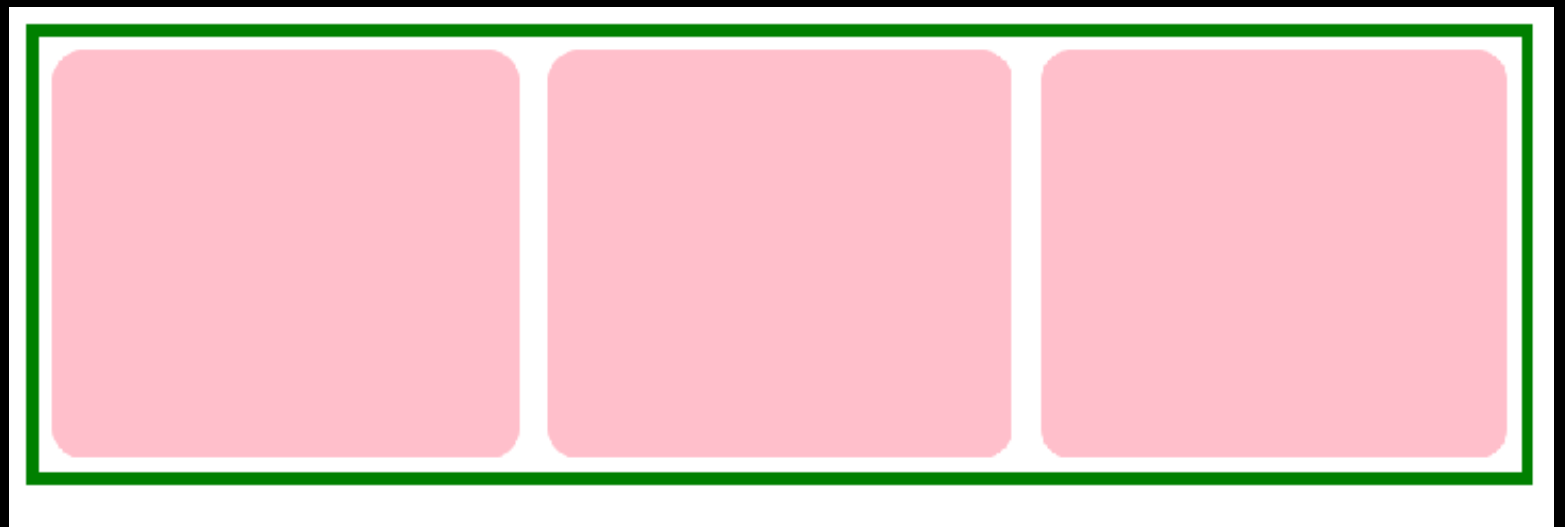
\*\*height in the case of rows; width in the case of columns

## align-items: stretch;

The default value of **align-items** is stretch, which means every flex item grows vertically\* to fill the container by default.

(This will not happen if the height on the flex item is set)

```
#flexBox {  
  display: flex;  
  border: 4px solid Green;  
  height: 150px;  
}  
  
.flexThing {  
  flex-grow: 1;  
  border-radius: 10px;  
  background-color: pink;  
  margin: 5px;  
}
```



\*vertically in the case of rows; horizontally in the case of columns

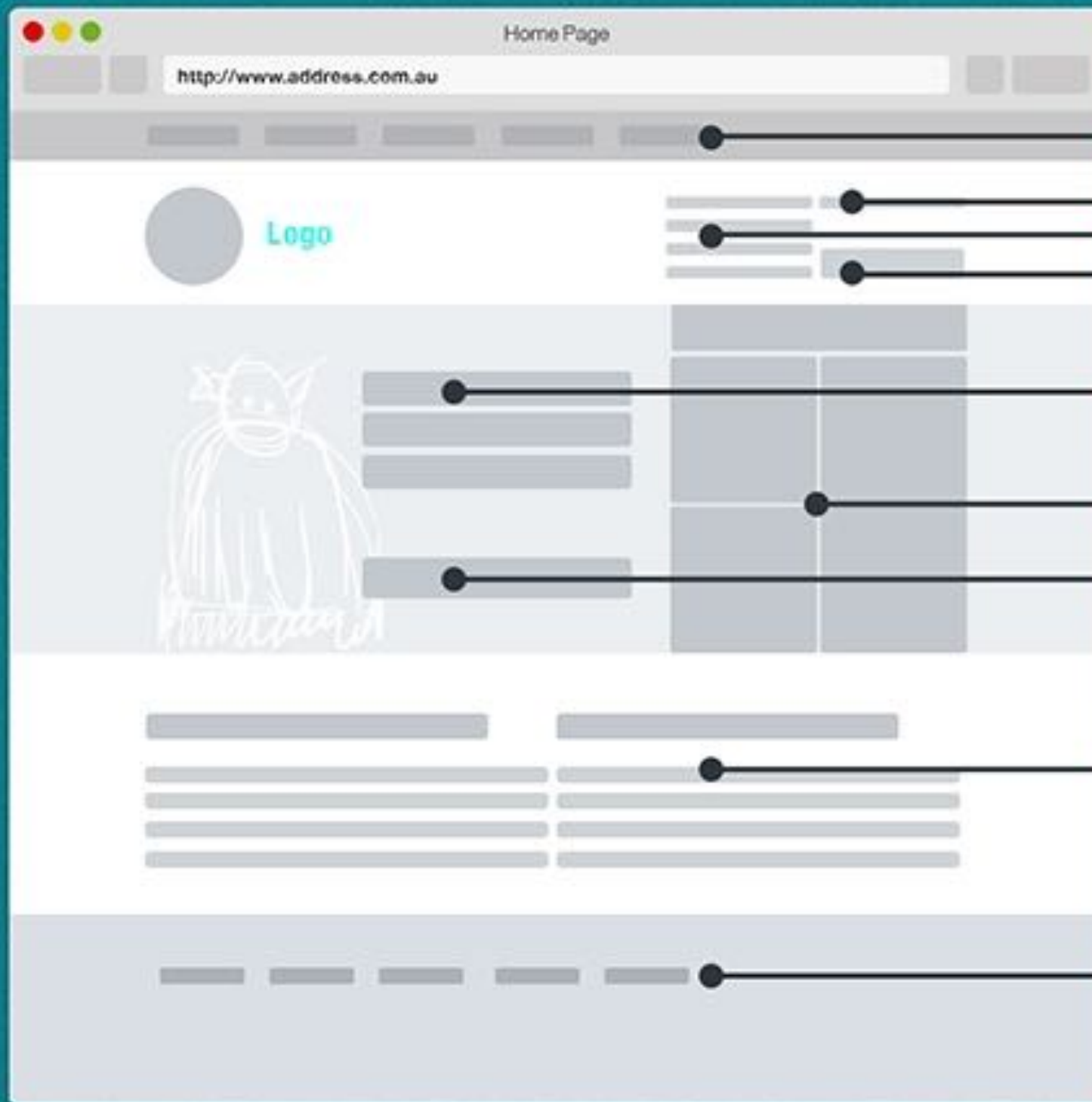


## align-items: stretch;

If we set another value for align-items, the flex items disappear again because the height is now content height, which is 0:

```
▼ #flexBox {  
  display: flex;  
  align-items: flex-start;  
  border: 4px solid Green;  
  height: 150px;  
}  
  
▼ .flexThing {  
  flex-grow: 1;  
  border-radius: 10px;  
  background-color: pink;  
  margin: 5px;  
}
```





### Navigation

Main navigation.

### Quick Contact / Social Media

Phone/Address /Links to Social media accounts.

### After Hours Highlight

Make people aware of your extended hours service.

### Friendly Expertise Message

Reassuring people of your experience / care.

### Links to Main Service

Graphical illustration / links to more content.

### Quality / Take Action

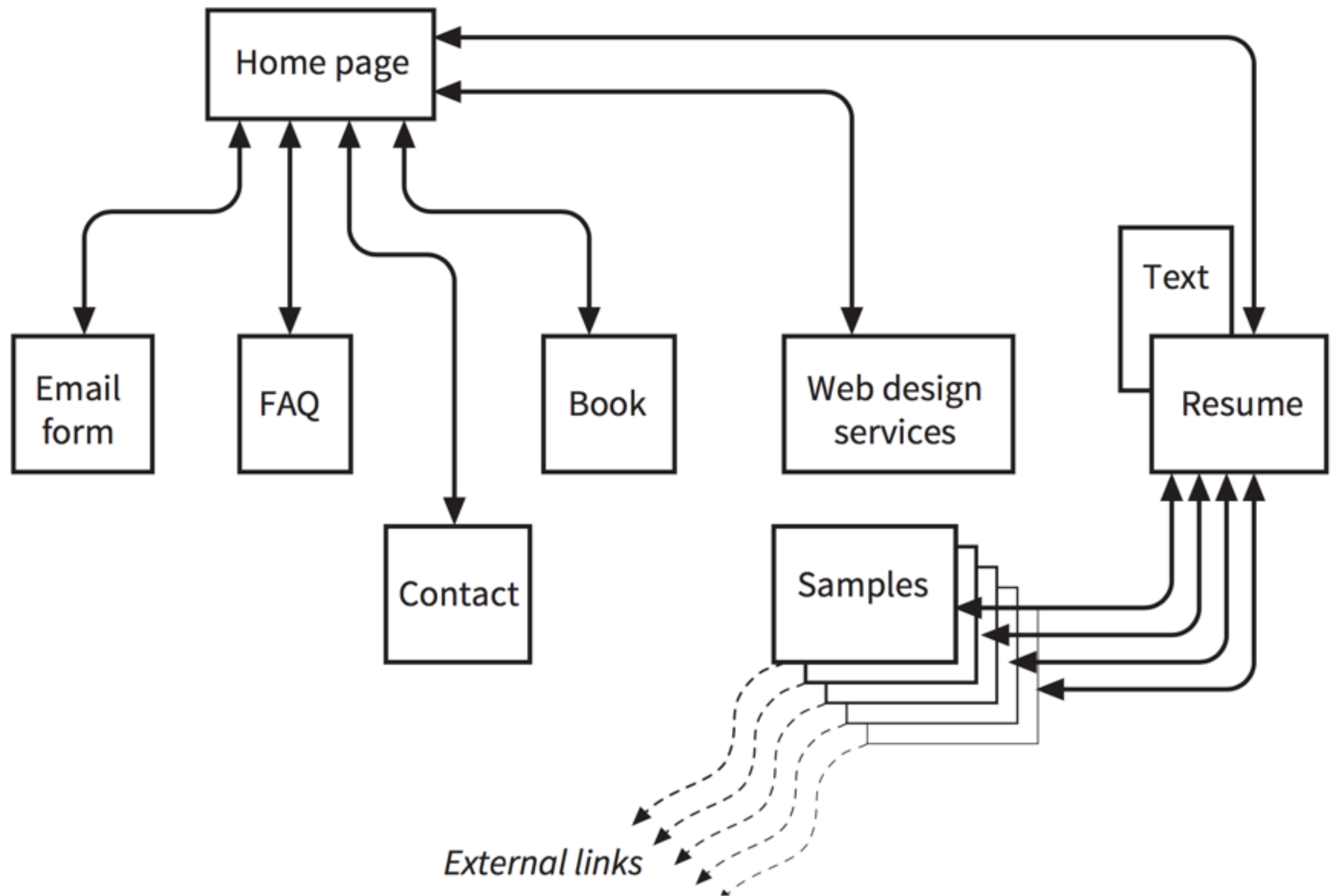
Link, follow up on skills / expertise in the about us section

### Two Highlight Boxes

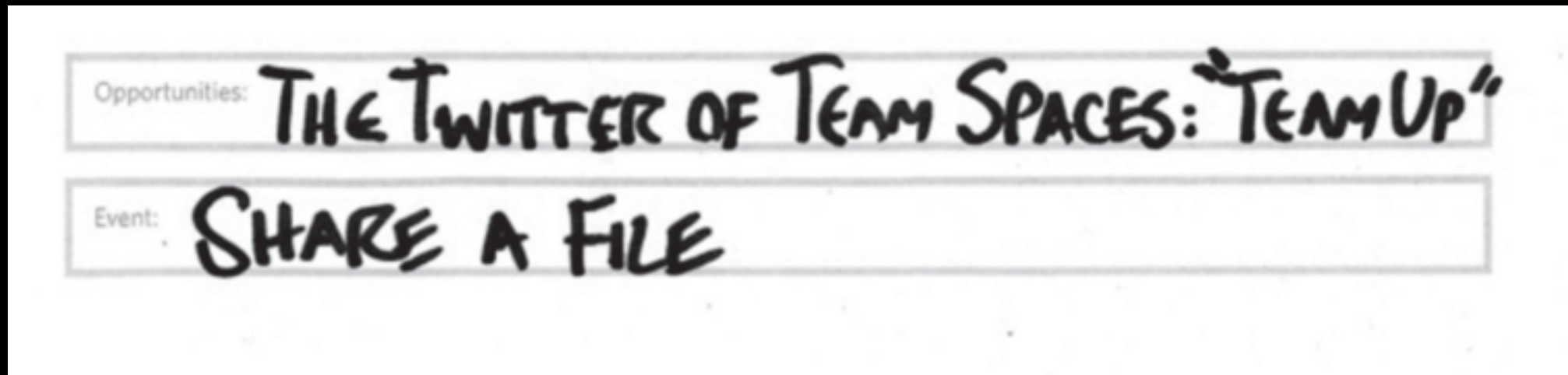
Highlight pet care and expertise here, would be latest articles added to the news section

### Footer Links

Contact / address / deeper linkage into website



A good sitemap will include interaction design. not just page structure.

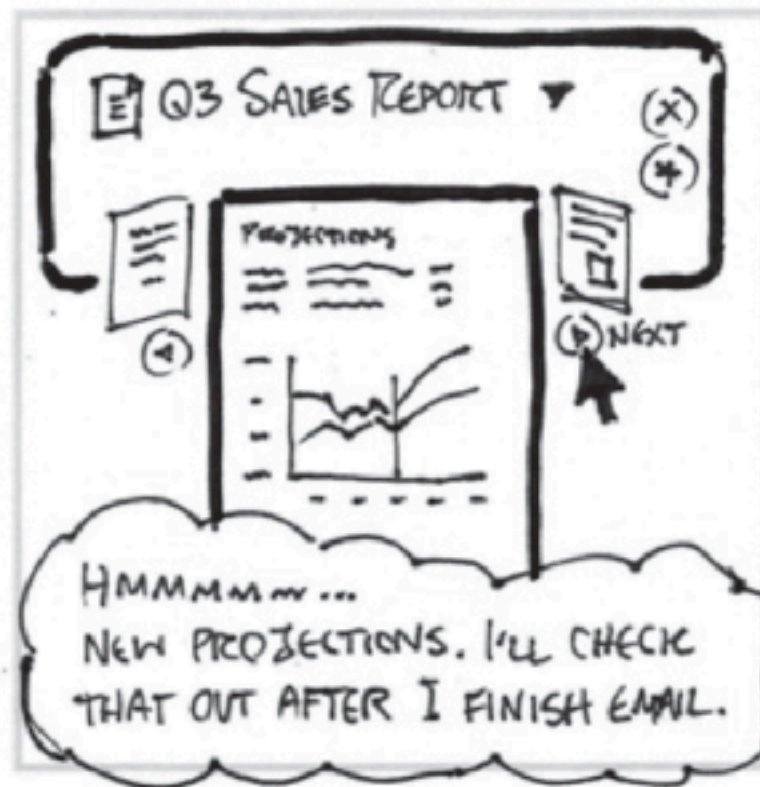


A storyboard traces the path through a site or application from the point of view of a typical user (a persona in UX lingo). Usually includes a script + "scenes" consisting of screen views or the user interacting with the screen. The storyboard aims to demonstrate the steps it takes to accomplish tasks, outlines possible options, and also introduces some standard page types.





CAROL JUST UPLOADED A NEW REPORT — A REVISION. OTTO NOTICES, AND TAKES A QUICK PEEK TO SEE WHAT CHANGED.



A PREVIEW POPS UP, AND IT LOOKS LIKE CAROL MADE AN IMPORTANT CHANGE THAT MIGHT BE WORTH LOOKING AT — LATER.



BUT FOR NOW, OTTO NEEDS TO FINISH WHAT HE'S DOING. TEAM UP DOWNLOADS THE FULL FILE AND HOLDS ON TO IT FOR HIM TO CHECK OUT LATER.

A storyboard traces the path through a site or application from the point of view of a typical user (a persona in UX lingo). Usually includes a script + “scenes” consisting of screen views or the user interacting with the screen. The storyboard aims to demonstrate the steps it takes to accomplish tasks, outlines possible options, and also introduces some standard page types.

color



wes anderson's color

Andrés Peña



# COLOR THEORY

## QUICK REFERENCE SHEET

### CMYK SUBTRACTIVE

CREATED WITH INK

WHEN WE MIX COLORS USING PAINT OR THROUGH THE PRINTING PROCESS, WE ARE USING SUBTRACTIVE COLOR METHOD. SUBTRACTIVE COLOR MIXING MEANS THAT ONE BEGINS WITH WHITE AND ENDS WITH BLACK, AS ONE ADDS COLOR, THE RESULT GETS DARKER AND TENDS TO BLACK.



### RGB ADDITIVE

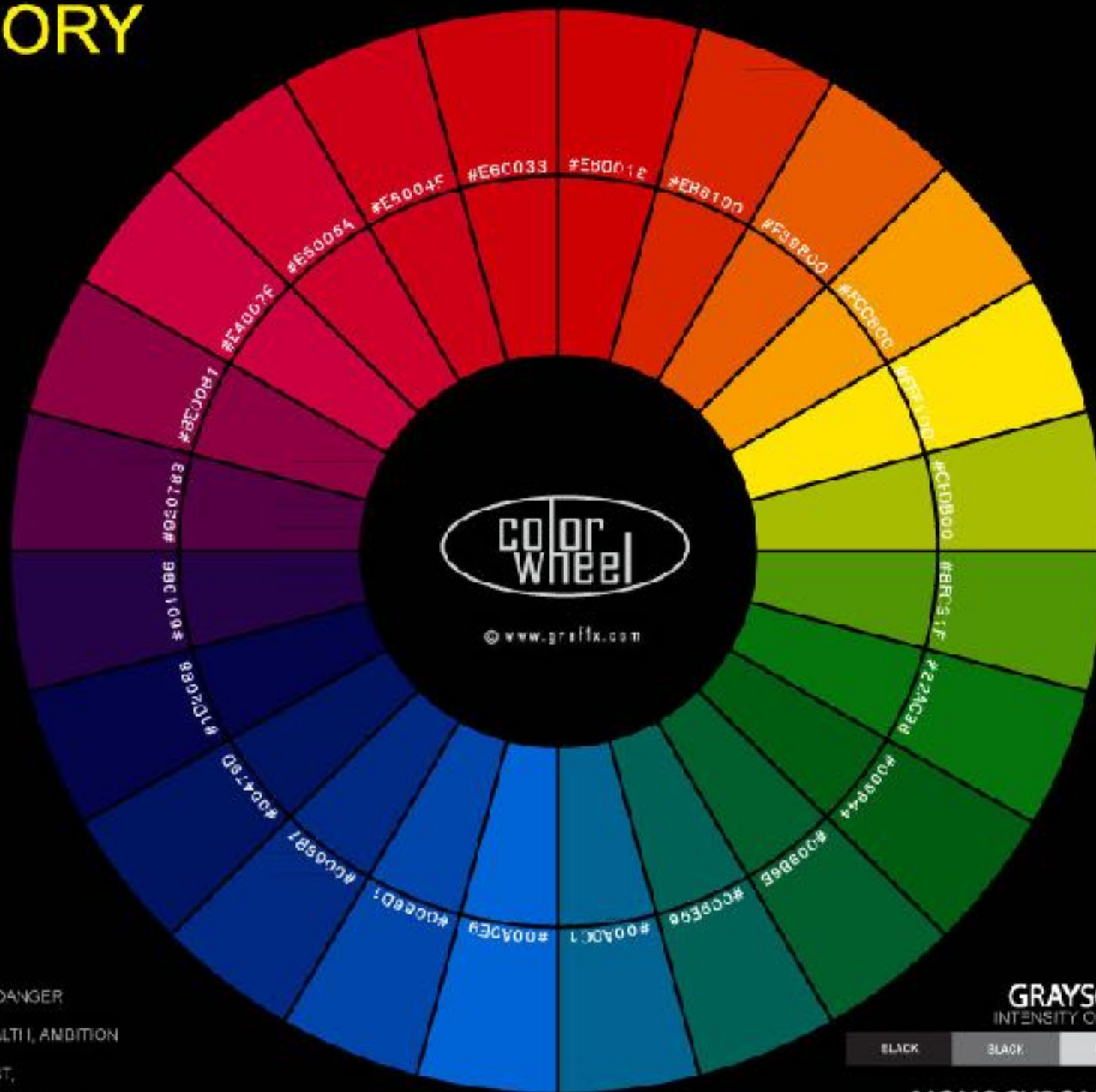
CREATED WITH LIGHT

IF WE ARE WORKING ON A COMPUTER, THE COLORS WE SEE ON THE SCREEN ARE CREATED WITH LIGHT USING THE ADDITIVE COLOR METHOD. ADDITIVE COLOR MIXING BEGINS WITH BLACK AND ENDS WITH WHITE, AS MORE COLOR IS ADDED THE RESULT IS LIGHTER AND TENDS TO WHITE.



### COLOR MEANINGS

RED	INTENSE, FIRE, BLOOD, ENERGY, DANGER, LOVE, PASSIONATE, STRONG.
RED-VIOLET	ROYALTY, POWER, NOBILITY, WEALTH, AMBITION, DIGNIFIED, MYSTERIOUS.
BLUE	SKY, SEA, DEPTH, STABILITY, TRUST, MASCULINE, TRANQUIL.
GREEN	NATURE, GROWTH, FERTILITY, FRESHNESS, HEALING, SAFETY, MONEY.
YELLOW	SUNSHINE, JOY, CHEERFULNESS, INTELLECT, ENERGY, ATTENTION.
ORANGE	WARM, STIMULATING, ENTHUSIASM, HAPPINESS, SUCCESS, CREATIVE, AUTUMN.



### ANALOGOUS

COLORS THAT ARE ADJACENT TO EACH OTHER ON THE COLOR WHEEL.

RED	RED-ORANGE	YELLOW-ORANGE
YELLOW-ORANGE	YELLOW-GREEN	GREEN

### COMPLEMENTARY

COLORS OPPOSITE EACH OTHER ON THE COLOR WHEEL.

RED	GREEN
ORANGE	BLUE
YELLOW	VIOLET
YELLOW-GREEN	RED-VIOLET
GREEN	RED
BLUE	ORANGE
BLUE-VIOLET	YELLOW-ORANGE

### TRIADIC

THREE COLORS SPACED EQUALLY APART ON THE WHEEL.

RED	YELLOW	BLUE
RED-ORANGE	YELLOW-GREEN	BLUE-VIOLET
ORANGE	GREEN	VIOLET
YELLOW-ORANGE	BLUE-GREEN	RED-VIOLET

### SPLIT COMPLEMENT

A COLOR AND THE TWO COLORS NEXT TO ITS COMPLEMENT ON THE COLOR WHEEL.

RED	BLUE-VIOLET	RED-VIOLET
RED-ORANGE	VIOLET	RED
ORANGE	RED-VIOLET	RED-ORANGE
YELLOW-ORANGE	RED	ORANGE
YELLOW-GREEN	RED-ORANGE	YELLOW-ORANGE
GREEN	ORANGE	YELLOW-GREEN
BLUE-GREEN	ORANGE	YELLOW-GREEN
BLUE	RED-ORANGE	YELLOW-ORANGE
BLUE-VIOLET	ORANGE	YELLOW-ORANGE
VIOLET	YELLOW-ORANGE	YELLOW-GREEN
RED-VIOLET	YELLOW	GREEN
RED	YELLOW-GREEN	BLUE-GREEN
RED-ORANGE	GREEN	BLUE
ORANGE	BLUE-GREEN	BLUE-VIOLET
YELLOW-ORANGE	BLUE	VIOLET

### GRAYSCALE

INTENSITY OF BLACK

BLACK	BLACK	BLACK
-------	-------	-------

### MONOCHROMATIC

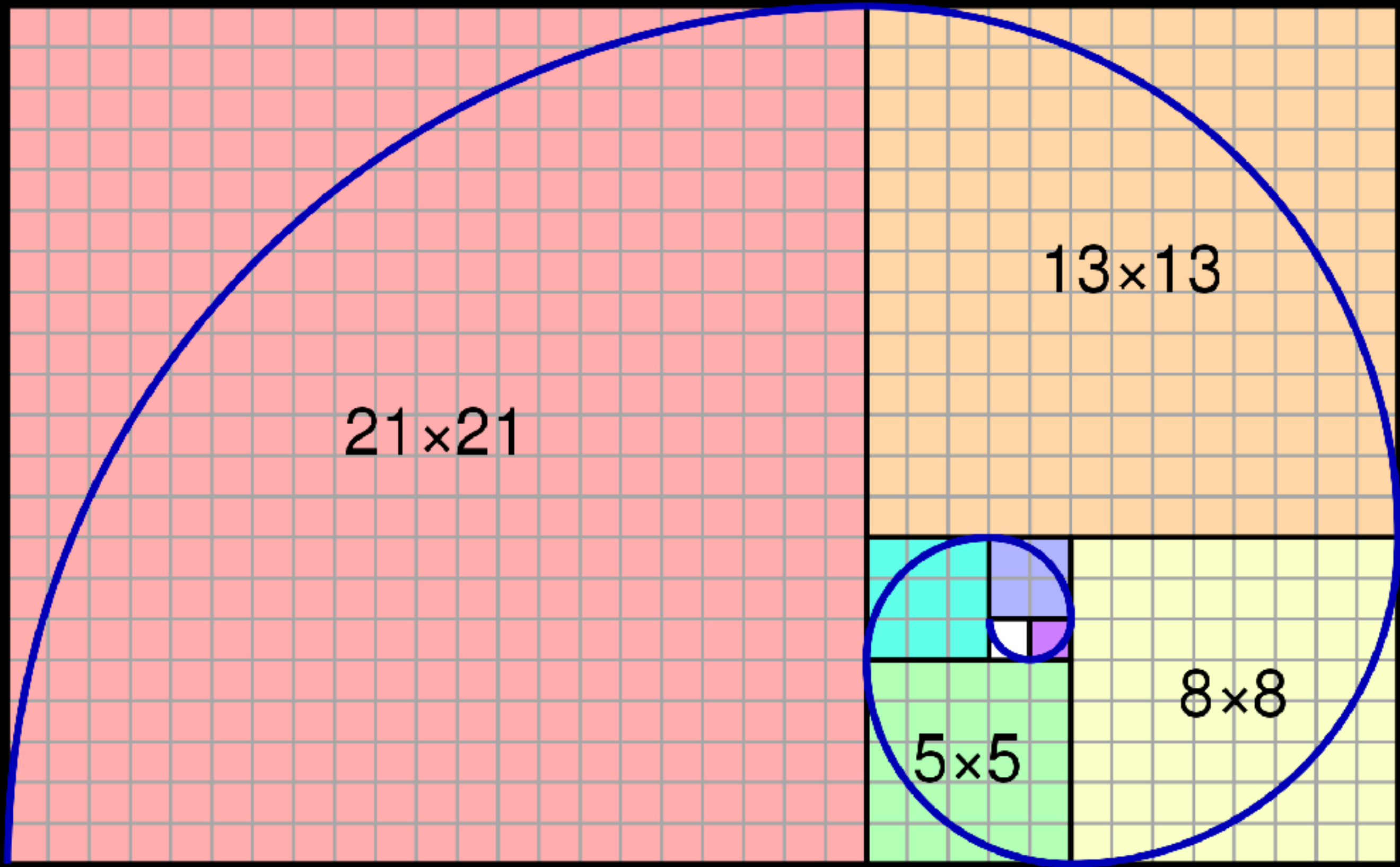
COLORS OF SINGLE HUE

BLUE	BLUE	BLUE
RED	RED	RED

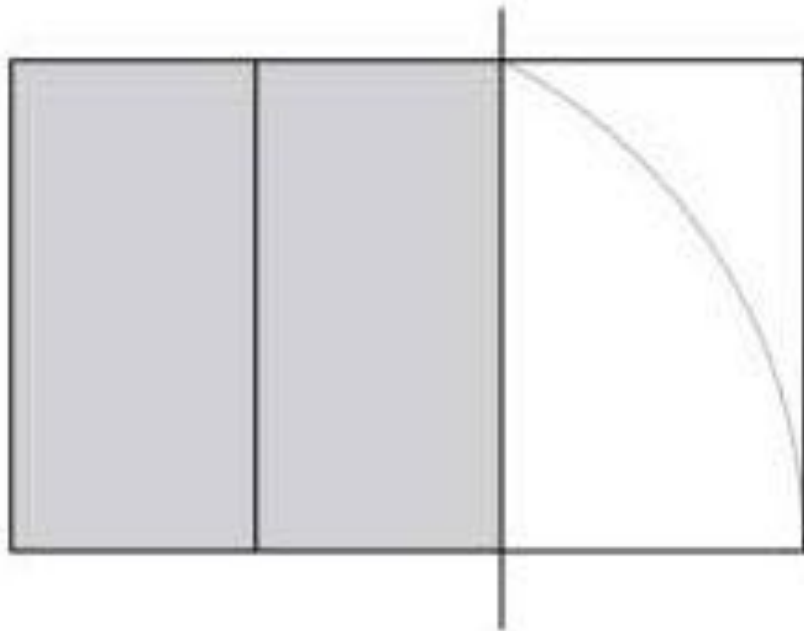
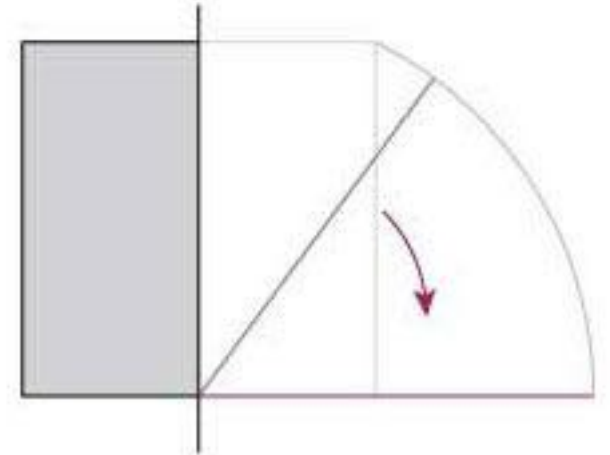
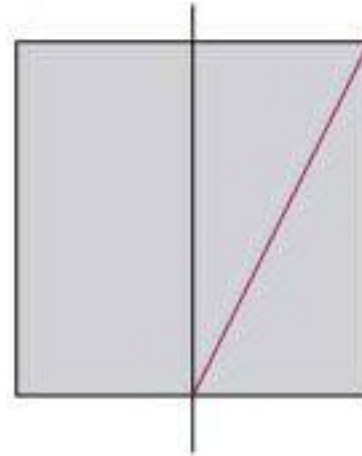
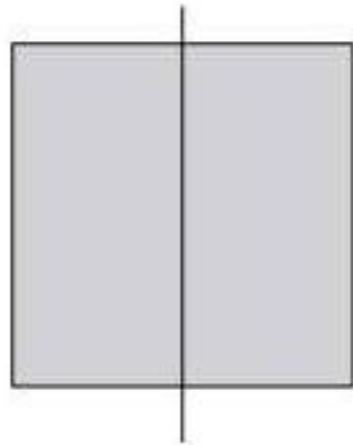
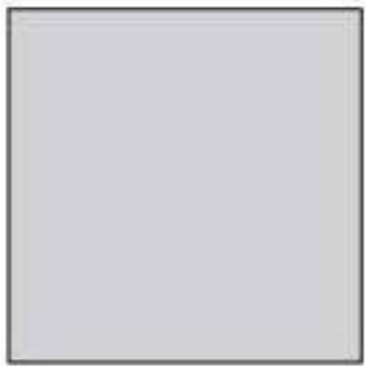


“Anyone willing to take the necessary trouble will find that, with the aid of the grid system, he is better fitted to find a solution to his design problems which is functional, logical and also more aesthetically pleasing”

— Joseph Müller-Brockmann<sub>1</sub>

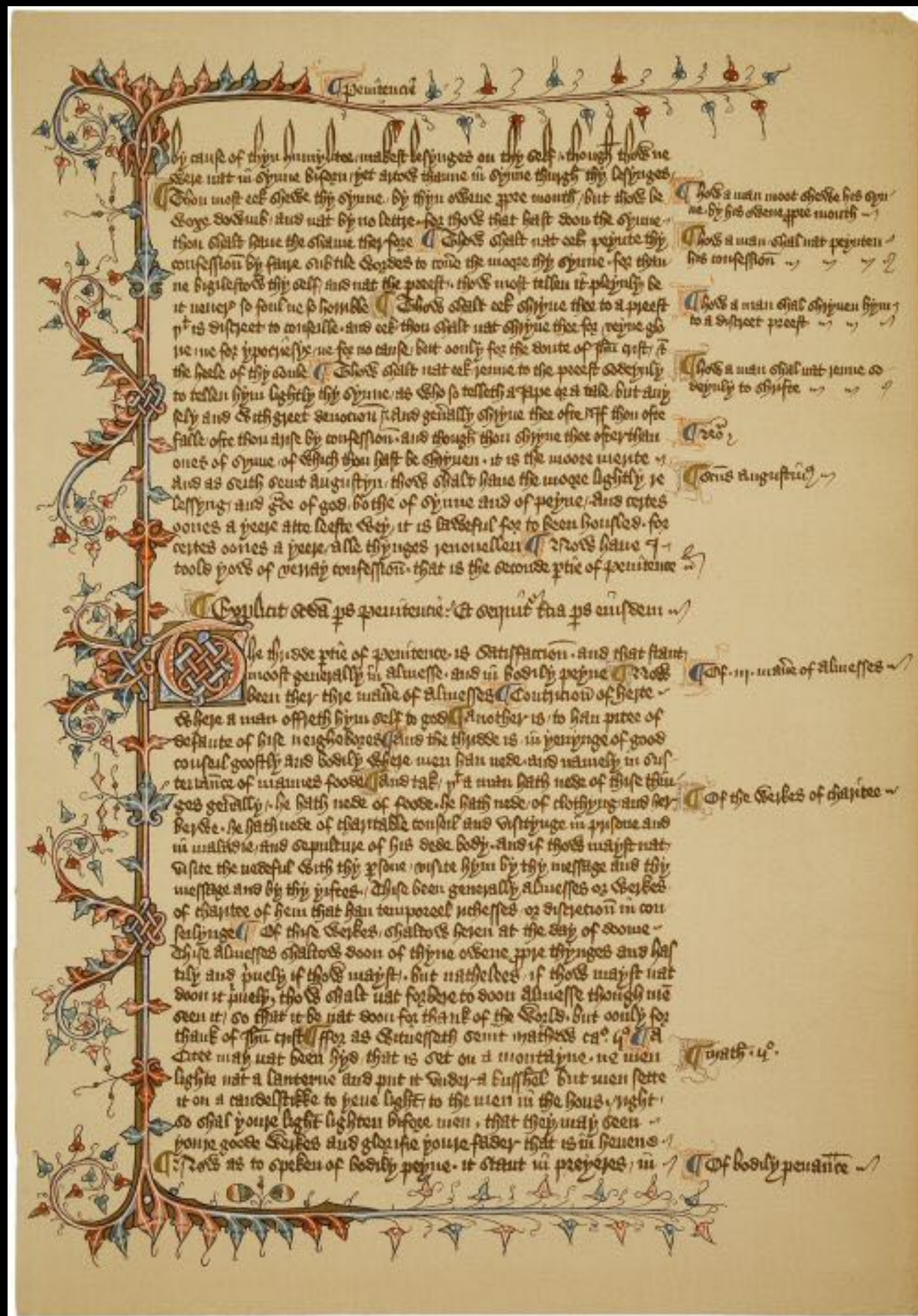


Plotting the relationships in scale provides us with a spiral that can be seen in nature



- 1) draw a square
- 2) divid square
- 3) draw a diagonal line
- 4) rotate
- 5) create new rectangle

Grid systems started as helper lines  
for written books.





doore of the Tabernacle of the Congregation, lest you die: for the anointing oyle of the LORD is vpon you: and they did according to the word of Moses.

8 And the LORD spake vnto Aaron, saying,

9 Doe not drinke wine nor strong drinke, thou, nor thy sonnes with thee, when ye goe into the Tabernacle of the Congregation, lest yee die: it shall bee a statute for euer, throughout your generations:

10 And that ye may put difference betwene holy and unholy, and betwene vncleane and cleane:

11 And that ye may teach the children of Israel all the statutes which the LORD hath spoken vnto them by the hand of Moses.

12 And Moses spake vnto Aaron, and vnto Eleazar and vnto Ithamar his sonnes that were left, Take the meate offering that remaineth of the offerings of the LORD made by fire, and eate it without leauen, beside the altar: for it is most holy.

14 And ye shal eat it in the holy place, because it is thy due, and thy sonnes due of the sacrifices of the LORD, made by fire: for so I am commanded.

\*Exod. 29.  
24.

14 And the waue breast and heaue shoulder shall yee eate in a cleane place, thou, and thy sonnes, and thy daughters with thee: for they be thy due and thy sonnes due, which are given out of the sacrifice of peace offerings, of the children of Israel.

15 The heaue shoulder, and the waue breast shall they bring, with the offerings made by fire of the fatted, to waue: for a waue offering before the LORD: and it shall bee thine, and thy sonnes with thee, by a statute for euer, as the LORD hath commanded.

16 And Moses diligently sought the goate of the sinne offering, and behold, it was burnt: and he was angry with Eleazar and Ithamar, the sonnes of Aaron, which were left alive, saying,

17 Wherefore haue ye not eaten the sinne offering in the holy place, seeing it is most holy, and God hath given it you to beare the iniquitie of the Congregation, to make atonement for them, before the LORD?

18 Behold, the blood of it was not brought in, within the holy place: yee

should indeede haue eaten it in the holy place, as I commanded.

\*Chap. 6.  
16.

19 And Aaron said vnto Moses, behold, this day haue they offered their sinne offering and their burnt offering before the LORD: and such things haue befallen mee: and if I had eaten the sinne offering to day, should it haue bin accepted in the sight of the LORD?

20 And when Moses heard that, hee was content.

## CHAP. XI.

1 What beasts may, 4 and what may not bee eaten. 9 What fishes. 13 What fowles. 29 The creeping things which are vncleane.

And the LORD spake vnto Moses, and to Aaron, saying vnto them.

2 Speake vnto the children of Israel, saying, These are the beasts which ye shal eate among all the beasts that are on the earth:

\*Deut. 14-4.  
20. 10. 14.

3 Whatsoever parteth the hoofe, and is clouen footed, & cheweth cud among the beasts, that shall ye eate.

4 Neuerthelesse, these shall yee not eate: of them that chew the cud, or of them that diuide the hoofe: as the camel, because hee cheweth the cud, but diuideth not the hoofe, he is vncleane vnto you.

5 And the conie, because he cheweth the cud, but diuideth not the hoofe, he is vncleane vnto you.

6 And the hare, because he cheweth the cud, but diuideth not the hoofe, he is vncleane vnto you.

7 And the swine, though he diuide the hoofe, and be clouen footed, yet hee cheweth not the cud: hee is vncleane to you.

\*2. Marc. 6.  
29.

8 Of their flesh shal ye not eate, and their carcase shal ye not touch: they are vncleane to you.

9 These shal ye eate, of all that are in the waters: whatsoever hath finnes and scales in the waters, in the seas, and in the rivers, them shall ye eate.

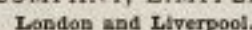
10 And all that haue not finnes nor scales in the seas, and in the rivers, of all that moue in the waters, and of any liuing thing which is in the waters, they shall be an abomination vnto you:

11 They shalbe euen an abomination vnto you: ye shall not eate of their flesh, but you shall haue their carcases in a-bomination.

12 What

It transferred to movable type, where the type setting itself consists of a grid. The grid lines continued to help printers in typesetting. This could often be as simple as a baseline that determined the scale of the headings and body.



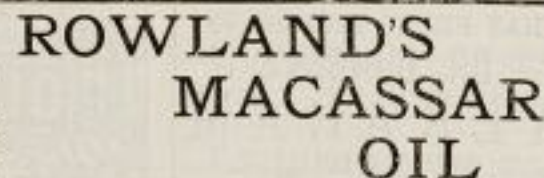


FIRST MONTHLY PART OF NEW  
VOLUME NOW READY.

LONDON: 16, PATERNOSTER ROW:  
AND ALL NEWSDEALERS.

### BRANCH ESTABLISHMENTS

61, BROMFSGATE STREET WITHIN, E.C. 2, STRAD (near Charing Cross), W.C. 2, REGENT CIRCUS, W.  
1, WESTBURY GARDEN, W. 29, HIGH HOLBORN, W.C.



strengthens the hair of children and adults; contains no lead nor mineral ingredients; sold in golden colour also; usual sizes, 3s. 6d., 7s., 10s. 6d. and 21s. Can be sent by post by J. ROWLAND & SONS, 20, Hatton Garden, London, on receipt of 3d. above these prices. Avoid spurious imitations. Sold everywhere.

ALLEN & HANBURYS, PLOUGH COURT, LOMBARD STREET,  
LONDON.



Movements like the Bauhaus and the Futurists investigated the use of grid systems, and how to play within these constraints. Here it's a page from the futurist magazine Lacerba.

MOVIMENTO  
DI  
2 STANTUFFI

VENTO

negatore pigriada inar-  
zia congelare tutto con  
stelle letterarie sradia-  
tedalla carne (NOTTE  
LIBRARIA) seppel-  
lire tutto con odore di  
azzelle materassi di pro-  
fumi mammele cotte  
piacere + 7000 ragiona-  
menti scettici

SANGUE

affermatore ottimismo  
forza respingere il vento  
pessimismo callo a fedi-  
do andare senza  
scopo per FARE VI-  
VERE CORRERE  
ESSERE

KARAZUC KARAZUC  
KARAZUC KARAZUC  
KARAZUC KARAZUC

Nadi nadi AAA

letterina tiepida sulante sul petto dila-  
toaaaARSI d'una parola scritta gonito  
nudo affusolarsi di auvola — mano — te-  
nue nel caldo 3 giorni  
di maria dune dune dune  
COSTA il POSTALE  
S GIOENI GEIOVA Parma eccomi  
baci zingzing zingzing tradizionale di  
un letto di provincia  
Karazuc - zuezue Karazuc - zuezue sei-  
statanevna zingzingenie Nalèl Nalèl  
AAAAAaaaa zingzingenie floscezza di cam-  
pane bagnate mature cadenti cadeenti  
daal ramo altissimo antichiiiiissimo  
odore-di-tucato-acacie-muffa-legnotarlat-  
cavolicotti-zing zang-di-casseruole  
buio ammoniacale d'una tenda ci bedrini  
dune cune dune

Tempo di Cala-Walk  
(andante grazioso con  
pizzicato)

SOLE OLIATORE UNIVERSALE

tlac  
tlac  
cib-cioc

1. Antipasto di lakawisknostalgia  
2. Angoscette al sugo  
3. rimorseluf in bianco  
4. presentimentlung alb spiedo  
5. grappoli emorroidali  
6. orna d'asceta frappe

alè  
alè  
alè  
fuuuuu

sedersi comodamente in quattro sulla  
punta d'uno scillo snellezza  
signorile grigio perla del vento che  
porta a spasso l'incendio-levrette ve-  
stite di rosso

FEROCISSIMO SOLE

SENTIMENTALE

accecato  
di  
lagrime

sui giovani esploratori tra-  
diti da mogli amanti  
sclennità d'un cornuto  
sulla linea dell'equatore

accecante  
di  
lagrime rosse

MARINETTI

CARRA.

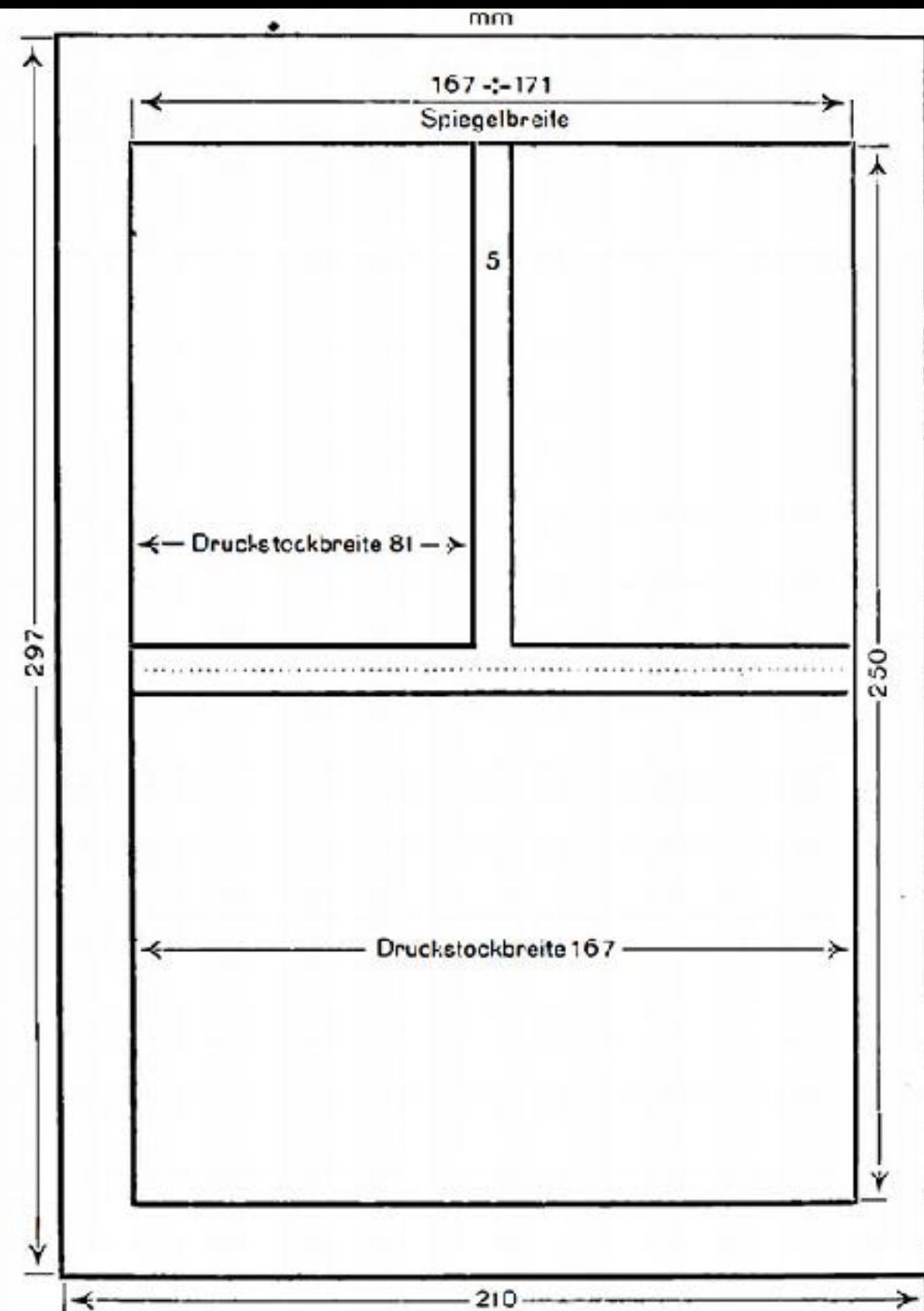
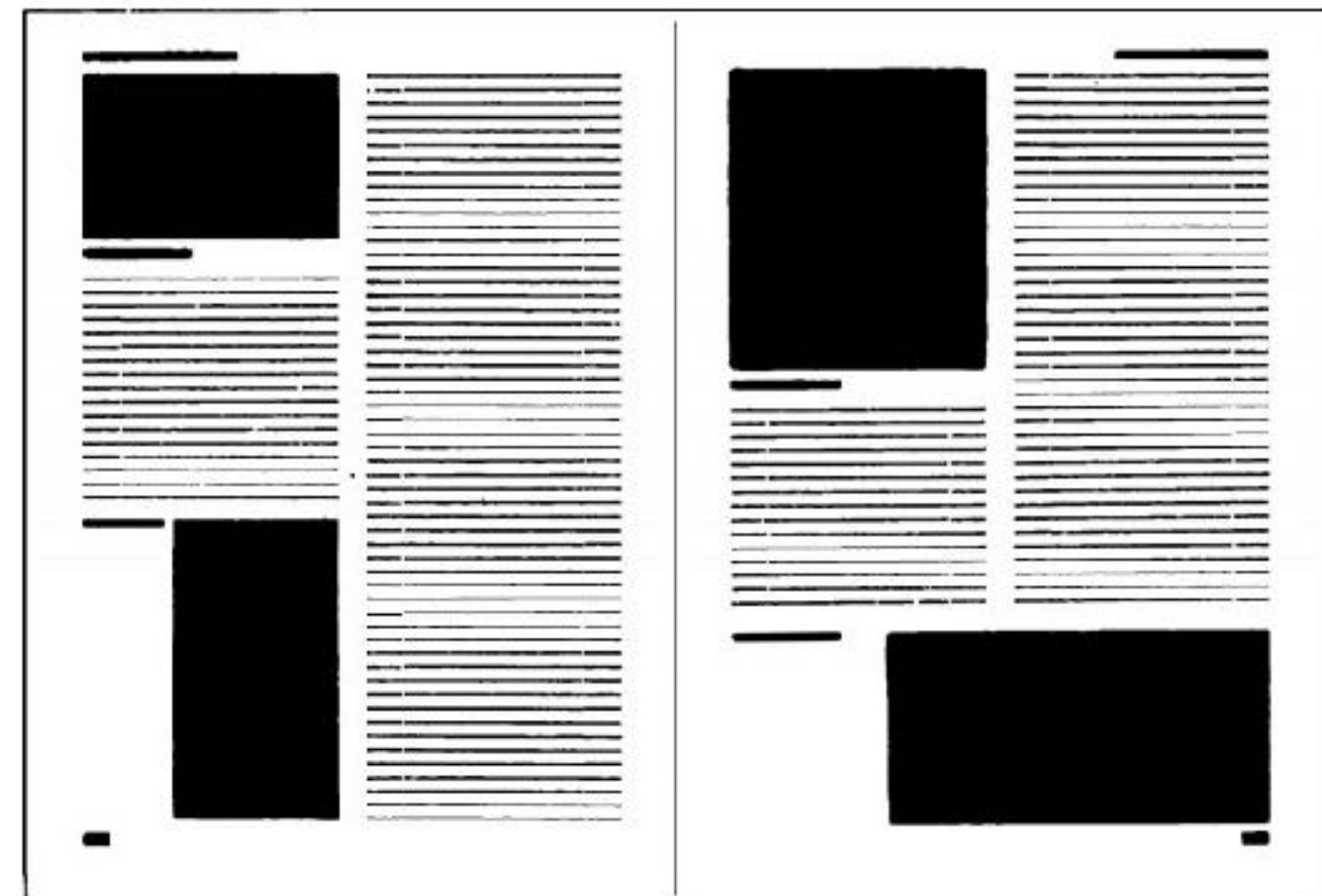
Costruzione spaziale.  
Simultaneità di ritmi.  
Deformazione dinamica.

Una tela bianca non ha spazio.  
Lo spazio s'inizia con l'arabesco plastico,  
man mano che i valori di superficie e di pro-  
fondità vanno prendendo i caratteri speciali all'emo-  
zione che guida il pittore.  
Un insieme di colore-sono acustico e si svi-  
luppa da un dato colore che ne è in qualche modo  
il centro generatore.  
Il valore spaziale di una data forma, con-  
cetta e subordina a sé i diversi valori plastici  
di un quadro in una unità d'espressione.  
Il pittore futurista non si limita a conside-  
rare il problema plastico dal punto di vista ele-  
mentare dell'impressionismo.  
Egli sa che non varcherebbe i confini limi-  
tatissimi dell'impressionismo se si accon-  
tasse di rendere la deformazione formale d'un  
oggetto nel solo suo succedersi ritmico di onde  
colorate.  
Il pittore futurista supera il principio pitto-  
resco dell'impressionismo tagliando in ogni forma  
e zona di colore la forza emotiva propria ad ogni  
forma e ad ogni zona di colore e raggiunge così il  
carattere ben definito di espressione spaziale.  
Questa espressione spaziale potrebbe essere  
definita prospettiva astratta di forma-colore.  
I ritmi organati sull'asse della specialità ci  
danno gli accordi e disaccordi orchestrali di co-  
lore forma forma. La spazialità ci dà la quantità



Simple forms, strict fonts, and clear visual hierarchy work harmoniously together to honor the content. Image: Joost Schmidt, 'Plakat Zur Bauhaus - Ausstellung in Weimar 1923', 1923





Examples of page divisions from Jan Tschichold's *Die Neue Typographie*



Mehrzahl der Fälle überlegen. Überlegen deshalb, weil solche Arbeiten optisch den Betrachter anziehen, ja übersehen, wird. In der rein bildlichen Darstellung eine umfangreiche Textbeigabe überflüssig macht, weil sie das zu propagierende unter dem Akzent in der Typographie schon durch die Bildwirkung anschaulich erläutert. Diese Schwarz-Weiß-Arbeiten aber erweisen sich als zu dem Anteil der reinen Typographie, daß das Photo der Zeichnung immer dann im Wettbewerb unterlegen ist, wenn das erstere konventionelles rein Typographisches gering, ja sei letztere in ihrer Anlage weitgehend den Bereichen der modernen Kunst zuneigt. Die moderne Graphik, als eine Gruppe der reinen Typographie zum Schmuck der Wände bestimmt, wird von der Mehrzahl der Betrachter in dieser Zweckbestimmung als typographische Mittel erstellt sind, gleich dagegen in dieser oder jener Form als formaler Effekt in der Werbung sehr häufig von denselben Leuten Setzers verdanken, streng genommen. Es gibt dafür eine einfache Erklärung: Die moderne Graphik löst bei der Mehrzahl der Betrachter, soweit sie als typographische Elemente, eine gewisse optische Schockwirkung aus und hat deshalb den Vorzug, das Auge festzuhalten und wenn mehrfarbiger Druck sollen dabei

Wer sich der Fülle von Druckerzeugnissen aller Art bei einer Sichtung gegenübersieht, wird notwendig strenge Trennung versuchen und das Material in Gruppen unterteilen. Wir unterscheiden dabei nach Art und Lage vor allem zwei Gruppen der Gestaltung und kommen dabei einmal zu dem Anteil der reinen Typographie und zum zweiten zu der Gruppe von Druckerzeugnissen, bei denen das rein Typographische gering, ja im Umfang nach von ausgesprochen sekundärer Bedeutung ist. Die erstere Gruppe der reinen Typographie schließt für uns Arbeiten, die in ihrer Gesamtkonzeption aus typographischen Mitteln erstellt sind, gleich ob diese Erzeugnisse ihre Entstehung der Skizze eines Graphikers oder Setzers verdanken, streng genommen also Arbeiten, die unter Verwendung von Schmuck, Form- und Flächenelementen, soweit sie als typographisches Material vorhanden sind, „gebaut“ werden können. Negativsätze und mehrfarbiger Druck sollen d

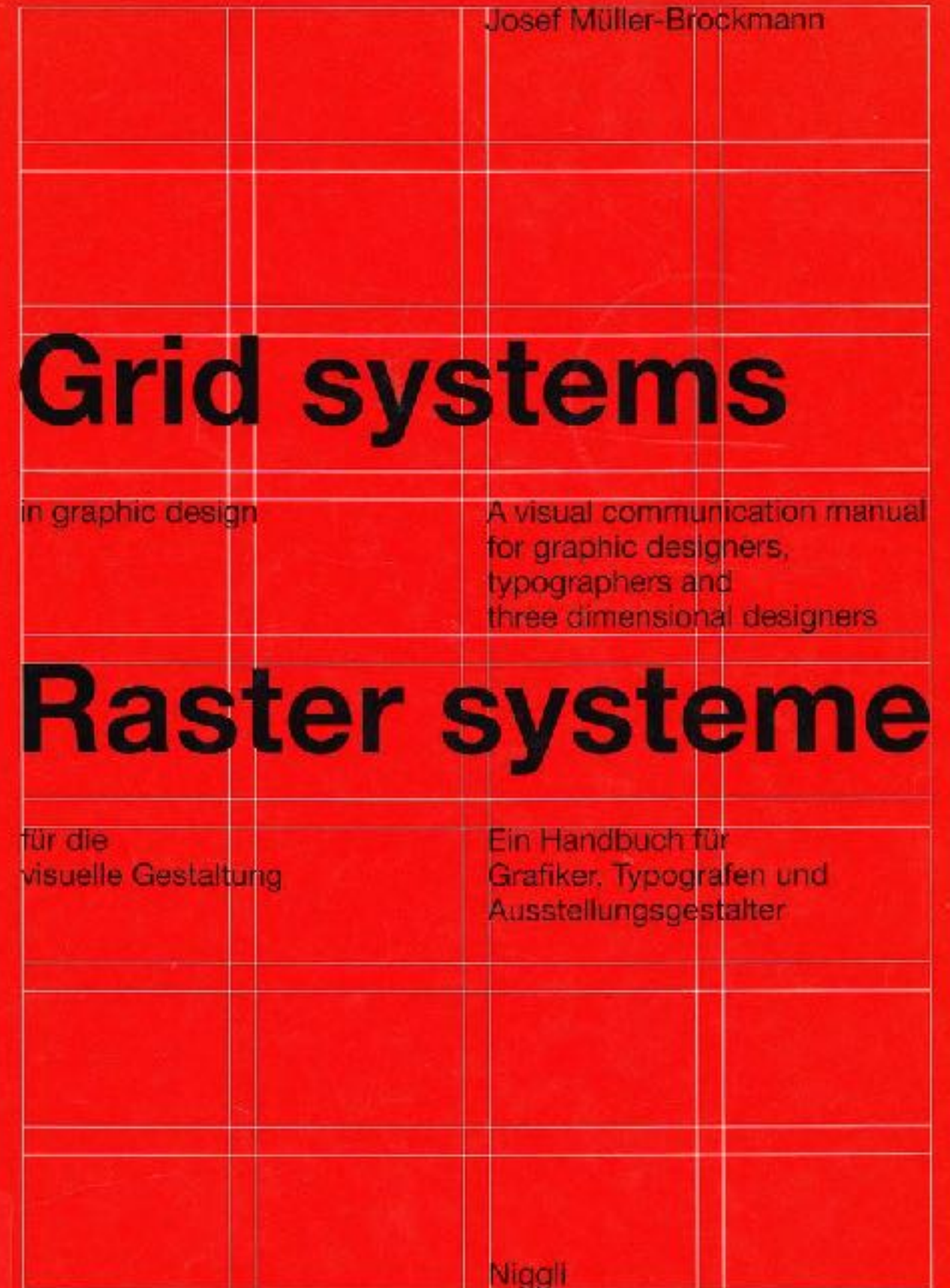
einbezogen sein. Demgegenüber steht die zweite Gruppe, deren Hauptanteil scheinlich die Hand des Gebrauchsgraphikers und freien Künstlers aus der Gestaltungskraft aus dem überlegenen Einsatz freier graphischer Mittel, und zwar bar gering ist, ja, wo der Satz nur die Funktion der unbedingt notwendigen der Drucktechniken soll im Rahmen dieser Zeilen nicht berührt werden. Der Anteil der reinen Typographie im Laufe der letzten Jahre erheblicher kundige Einbruch der freien Graphik in eine Domäne, die früher ausschließlich nicht wegzuleugnende Tatsache ist. Die stürmische Aufwärtsentwicklung sich gebracht, daß die Auseinandersetzung um Absatzmärkte und

die die Einbeziehung immer neu schäft bleiben will“. Die aufgewandte lange richtig angelegt, wie sie es unter den hier aufgezeigten Beispielen ist, muß schon ungewöhnlich phantasievoll. Im Falle schon bei Verwendung einer Untersuchung in den USA, die zu den erfolgreichsten sind als schwarz-weiß-objekten noch vorherrschend ist

A diagram from Joseph Müller-Brockmann's *Grid Systems in Graphic Design* illustrating how to align type to a grid



The masters of the grid system - Swiss  
Style designers like Brockmann and  
Gerstner.



**Opernhaus  
Zürich**

**Eröffnung  
der Spielzeit  
1968 / 69**

## **Palestrina**

Musikalische Legende von Hans Pfitzner

Erstaufführung  
Samstag, 7. September, 19.00 Uhr

Musikalische Leitung:  
Inszenierung:  
Bühnenbild/Kostüme:  
Chöre:

Alberto Erede  
Herbert Graf  
Max Röthlisberger  
Hans Erismann

## **Der Wildschütz**

Komische Oper von Albert Lorzing

Neuinszenierung  
Samstag, 14. September, 20.00 Uhr

Musikalische Leitung:  
Inszenierung:  
Bühnenbild/Kostüme:  
Chöre:

Matthias Aeschbacher  
Martin Markun  
Monika von Zallinger  
Hans Erismann



# Internationale Juni-Festwochen 1962 Stadttheater Zürich

Direktor  
Dr. Herbert Graf

Freitag, 1. Juni  
20.00 Uhr  
Eröffnungsvorstellung

Fidelio  
Oper von  
L. van Beethoven

Leitung  
Otto Kriempker  
Hainer Hill

In den Hauptpartien  
Jean Cook  
Sena Jinnac  
Heinz Borsl  
James McCracken  
Deszö Ernster  
Gustav Neidlinger  
Leonhard Plickl

Sonntag, 3. Juni  
20.00 Uhr  
Welterauführung  
Donnerstag, 7. Juni  
20.00 Uhr

Blackwood und Co.  
von Armin Schibler

Leitung  
Nello Santi  
Loth Mansouri  
Max Bignens  
Juan Tena

Mittwoch, 6. Juni  
19.30 Uhr  
Freitag, 15. Juni  
19.30 Uhr

Der Prophet  
Oper von  
G. Meyerbeer

Leitung  
S. Krachmalnick  
Loth Mansouri  
Hainer Hill  
Michel de Lubry

In den Hauptpartien  
Virginia Gordani  
Sandra Warfield  
James McCracken  
Sandra Warfield  
Heinz Borsl  
Fritz Peter  
Andrew Foldi  
Siegfried Tappolet  
Ralph Telasko

Freitag, 8. Juni  
20.00 Uhr

Le Mystère de la  
Nativité  
von Frank Martin

Leitung  
Ernest Ansermet  
Georg Reinhardt  
Heinrich Weidel

Mitwirkende:  
Mary Davenport  
Regina Sarfaty  
Vera Schlosser  
Werner Ernst  
Reinhold Güther  
Walter Henze  
Wolfram Mertz  
Victor de Nake  
Leonhard Plickl  
Fritz Peter  
Glade Peterson  
Abe Polakoff  
Siegfried Tappolet  
Ralph Telasko  
Robert Thomas  
Gottfried Zimmerer

Samstag, 9. Juni  
20.00 Uhr

2. Trovatore  
Oper von  
Giuseppe Verdi

Leitung  
Nello Santi  
Herbert Graf  
Max Rothlisberger  
Wend Hubert

In den Hauptpartien  
Virginia Gordani  
Sandra Warfield  
Heinz Borsl  
James McCracken  
Abe Polakoff

Dienstag, 12. Juni  
20.00 Uhr

Die Zauberflöte  
Oper von  
W. A. Mozart

Leitung  
Hans Erismann  
Rudolf Hartmann  
Max Rothlisberger

Gastspiel  
Maria Stader  
Ernst Hähner  
Peter Lagger

Mittwoch, 13. Juni  
19.30 Uhr

Die Fledermaus  
Operette von  
Johann Strauss

Leitung  
S. Krachmalnick  
Herbert Graf  
Max Rothlisberger  
Wend Hubert

In den Hauptpartien  
Adèle Leigh  
Eva-Maria Rogger  
Regina Sarfaty  
Wolfram Mertz  
Leonhard Plickl  
Alfred Rasser  
Rudolf Schöckl  
Ralph Telasko  
Robert Thomas

Samstag, 16. Juni  
20.00 Uhr

Orpheus  
und Eurydike  
Oper von  
Chr. W. von Gluck

Leitung  
Robert F. Desautel  
Hans Zimmermann  
Max Rothlisberger  
James J. Berger

In der Hauptpartie  
Regina Sarfaty

Sonntag, 17. Juni  
20.00 Uhr  
Mittwoch, 20. Juni  
20.00 Uhr  
Neu-Inszenierung

Der Freischütz  
Oper von Carl Maria  
von Weber

Leitung  
Rudolf Kempe  
Herbert Graf  
Rudolf Heinrich

Gastspiel  
Ingrid Bjoner  
Harry Stieff  
Gottlieb Frick  
Fritz Uhl

Donnerstag, 21. Juni  
20.00 Uhr

Die Nachtigall  
Die Geschichte  
vom Soldaten  
von Igor Strawinsky

Leitung  
Victor Reinschagen  
Hans Zimmermann  
Hans Erni

In den Hauptpartien  
Die Nachtigall  
Ren Grist  
Glade Peterson  
Die Geschichte  
vom Soldaten  
Virginia Zengo  
Hans-Joachim Frick  
Franz Metter  
Bill Ross

Sonntag, 23. Juni  
19.00 Uhr  
Dienstag, 25. Juni  
19.00 Uhr

Der Rosenkavalier  
Oper von  
Richard Strauss

Leitung  
Peter Maag  
Herbert Graf  
Max Rothlisberger

In den Hauptpartien  
Lisa Della Casa  
Anneliese  
Rothlisberger  
Regina Sarfaty  
Rudolf Knoll  
James Pease

Samstag, 24. Juni  
20.00 Uhr

Il Barbiere  
di Sordani  
Oper von  
Gioacchino Rossini

Leitung  
Nello Santi  
Loth Mansouri  
Max Rothlisberger

In den Hauptpartien  
Ren Grist  
Heinz Borsl  
Fernando Corena  
Robert Kerns  
Fritz Peter

Mittwoch, 27. Juni  
20.00 Uhr

Don Giovanni  
Oper von  
W. A. Mozart

Leitung  
Peter Maag  
Josef Giesen  
Max Rothlisberger

In den Hauptpartien  
Maria van Dongen  
Ren Grist  
Vera Schlosser  
Heinz Borsl  
Fernando Corena  
Werner Ernst  
George London  
Glade Peterson

Ballet  
du XXème Siècle  
du Théâtre Royal  
de la Monnaie  
Bruxelles

Leitung  
Maurice Béjart  
André Vandermoot

Choreographie  
Maurice Béjart  
Anne Charist

Freitag, 28. Juni  
20.00 Uhr  
Sonntag, 1. Juli  
14.30 Uhr  
1. Programm

Homage  
à Igor Strawinsky

Pulcinella  
Musik von  
Igor Strawinsky

Jeu de Cartes  
Musik von  
Igor Strawinsky

Le Sacre  
du Printemps  
Musik von  
Igor Strawinsky

Sonntag, 30. Juni  
19.00 Uhr  
Sonntag, 1. Juli  
20.00 Uhr  
2. Programm

Directimato  
Musik von  
Fernand Schärer

Fantasia  
Concertante  
Musik von  
S. Prokofiev

Sensale à trois  
Musik von  
Béla Bartók

Bolero  
Musik von  
Maurice Ravel

# Font stack

It's important to understand that the browser will only display font if it's installed on user's computer.

**Font stack** - a collection of more than one typeface in an order of preference to be displayed in the browser if some of the typefaces are not found.

```
{  
  font-family: Georgia, Courier, serif;  
}
```

# Font

Padding is the space btw the border + the content.

## Some Properties:

`font-family`

`color`

`font-size`

`line-height`

`text-align`

# Font

Padding is the space btw the border + the content.

## text-decoration

underline, strike thru or none (eg to unset underline on hyperlinks)

## text-transform

change font **case** (eg uppercase, lower, capitalize, none)

## font-style

set to italic or normal

## font-weight

set to bold or normal

## letter-spacing

controls the space btw letters



**font-family** property sets the font in your CSS

Presented as a hierarchy of choices (1st choice, 2nd choice, 3rd choice) so it's good to have a fallback for older browsers that can't render

```
body {  
    font-family: Georgia, Courier, serif;  
}  
  
h1, h2, h3 {  
    font-family: Arial, Verdana, sans-serif;  
}
```

## Custom web fonts: Google Fonts

Add link in **<head>** of HTML

```
<link href="https://fonts.googleapis.com/css?
family=Roboto" rel="stylesheet">
```

Use with font-family property in CSS

```
font-family: 'Roboto', sans-serif;
```