

**What's one thing you know about
layout CSS? Write it on a sticky.**

**Introduce yourself to someone new, and share your
answer**

CTFEDs

css grid layout



About us

what we will do

Recap layout techniques

Grid concepts and properties

Simple grid

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Animalia

Eymology

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The name "flamingo" comes from Portuguese or Spanish *flamengo*, "flame-colored", in turn coming from Provençal *flamenc* from *flama* "flame" and Germanic-like suffix -ing, with a possible influence of words like "Fleming".



Flamingo Complex layout



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Kingdom

Phylum

Class

Rank

Animalia

Chordata

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Family

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03

What we won't do in detail but is also important

- **Box alignment**
- **Writing modes**
- **Grid template areas**



Jon Gold

@jongold

Follow



which one of the two possible websites are you currently designing?



10:40 AM - 2 Feb 2016

The old ways

The web is fluid

The first web page

Layouts in the dark ages (the 90s)

- **Complex nested tables**
- **inline styles (such as they were)**
- **spacer gifs**
- **Flash**

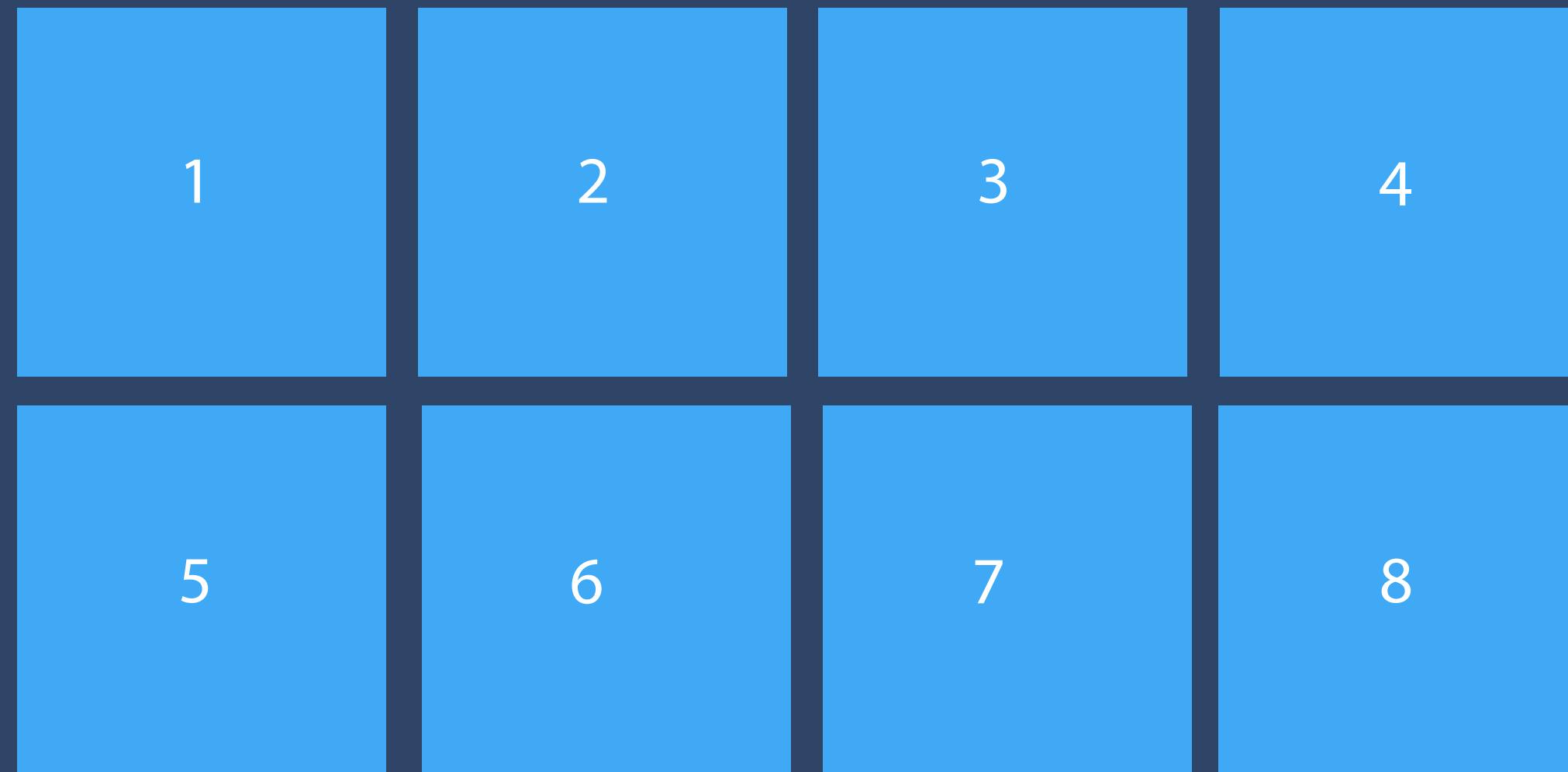
Absolutely no flexibility

```
<TABLE BGCOLOR="#CCCCFF" BORDER=10 BORDERCOLOR="#0000FF"
BORDERCOLORTLIGHT="#33CCFF" BORDERCOLORDARK="#0000CC"
WIDTH="80%" ALIGN="CENTER">
<TR>
<TD>
<H1 align="center">
<FONT SIZE="3" COLOR="red" FACE="verdana">
    Welcome to my home page!
</FONT>
</H1>
</TD>
</TR>
</TABLE>
```

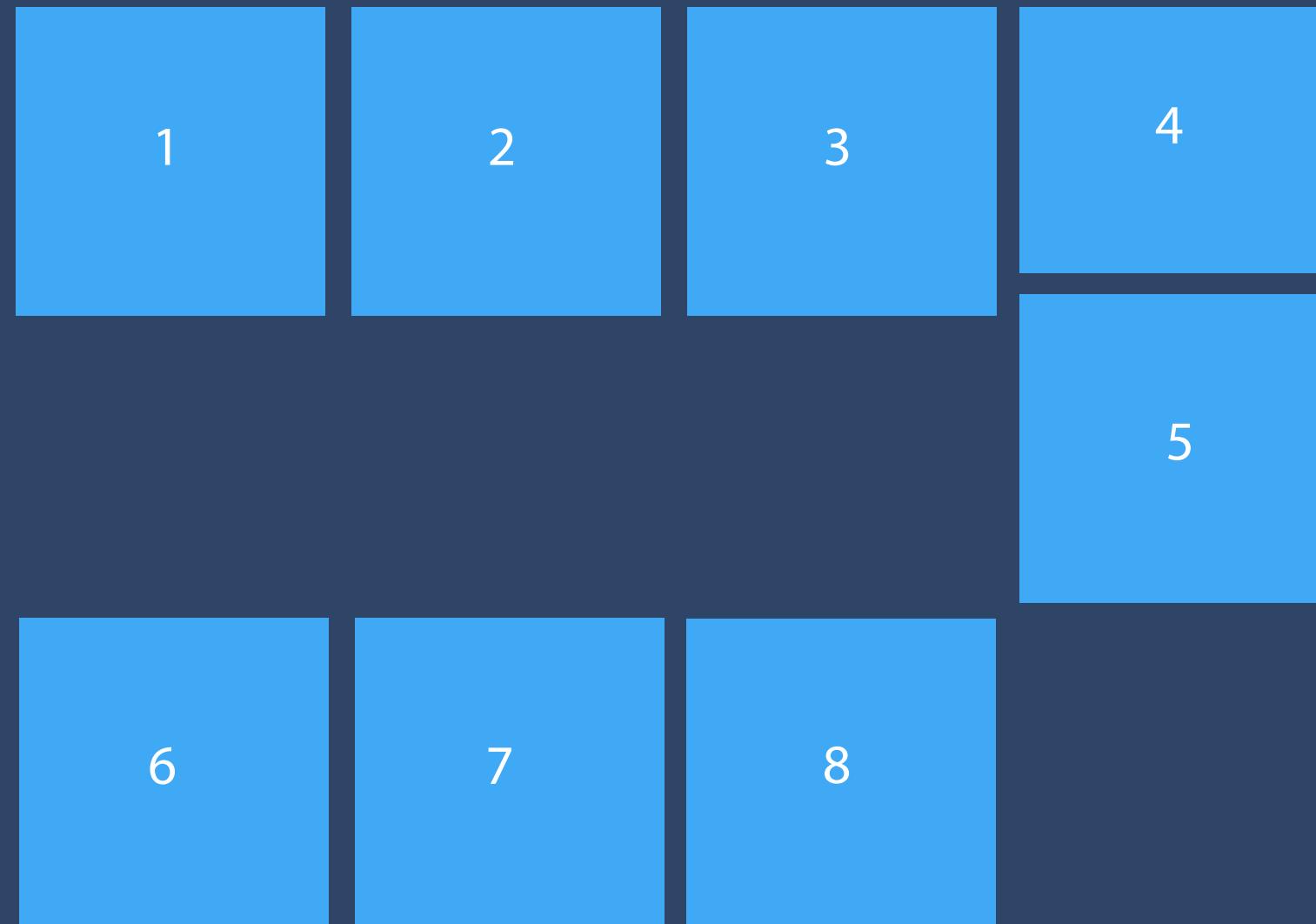
Table-less layouts - divs, floats and positioning

- **separation of presentation and content**
- **floats**
- **absolute and relative positioning**
- **media queries**

Simple grid type layout



Floats



First...

```
.grid4 .col:nth-of-type(4n+1),  
.grid3 .col:nth-of-type(3n+1),  
.grid2 .col:nth-of-type(2n+1) {  
    margin-left: 0;  
    clear: left;  
}
```

And then...

```
@media screen and (max-width: 46.25em) {  
  .grid4 .col {  
    width: 31.2%;  
  }  
  .grid4 .col:nth-of-type(4n+1) {  
    margin-left: 3.2%;  
    clear: none;  
  }  
  .grid4 .col:nth-of-type(3n+1) {  
    margin-left: 0;  
    clear: left;  
  }  
}
```

And also...

```
@media screen and (max-width: 37.5em) {  
  .grid4 .col {  
    width: 48.4%;  
  }  
  .grid4 .col:nth-of-type(3n+1) {  
    margin-left: 3.2%;  
    clear: none;  
  }  
  .grid4 .col:nth-of-type(2n+1) {  
    margin-left: 0;  
    clear: left;  
  }  
  
  .grid3 .col {  
    width: 48.4%;  
  }  
  .grid3 .col:nth-of-type(3n+1) {  
    margin-left: 3.2%;  
    clear: none;  
  }  
  .grid3 .col:nth-of-type(2n+1) {  
    margin-left: 0;  
    clear: left;  
  }  
}
```

Which leads to...



Perhaps even...



**So we just give up and
download...**



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](#)

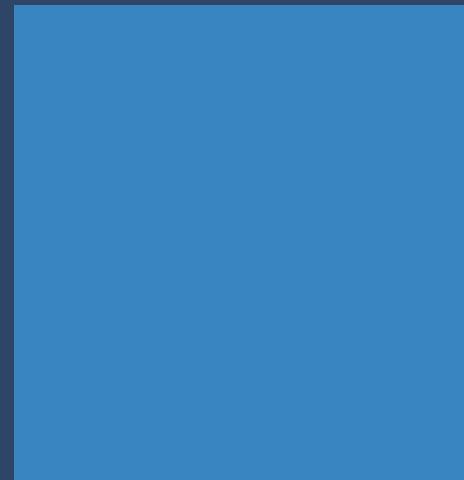
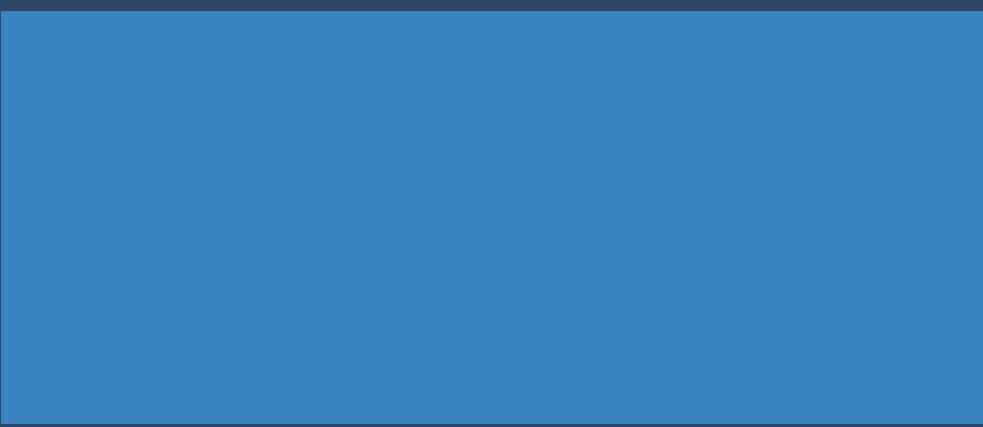
Currently v4.1.1



And the inevitable...



**Now what if you had a grid that
looked like this?**



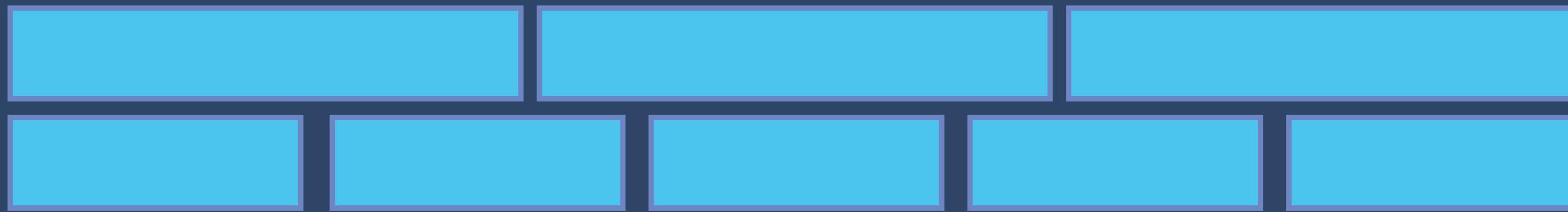
The new ways

What about flexbox?

Flexbox

**flexbox was designed for layout
in one dimension, i.e. layout in a
row or a column**

Flexbox - flex-direction: row



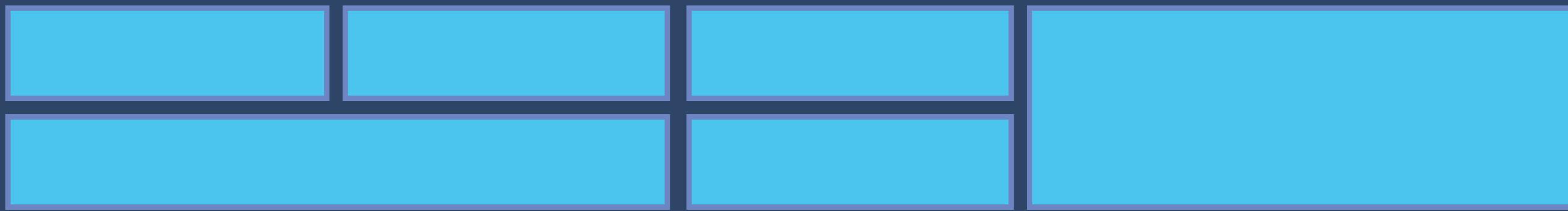
Flexbox - flex-direction: column



Flexbox versus grid

Grid was designed for two-dimensional layout, i.e. layout in rows and columns at the same time

Grid



Grid

CSS Grid Layout introduces a two dimensional grid system to CSS.

Grid

Grids can be used to lay out major page areas or small user interface elements.

What is a grid?

A grid is an intersecting set of horizontal and vertical lines - one set defining columns and the other rows.

What is a grid?

Elements can be placed onto the grid respecting these column and row lines.

Features

- **Fixed and flexible track sizes**
- **Item placement**
- **Creation of additional tracks to hold content**

Features

- **Alignment control**
- **Control of overlapping content**

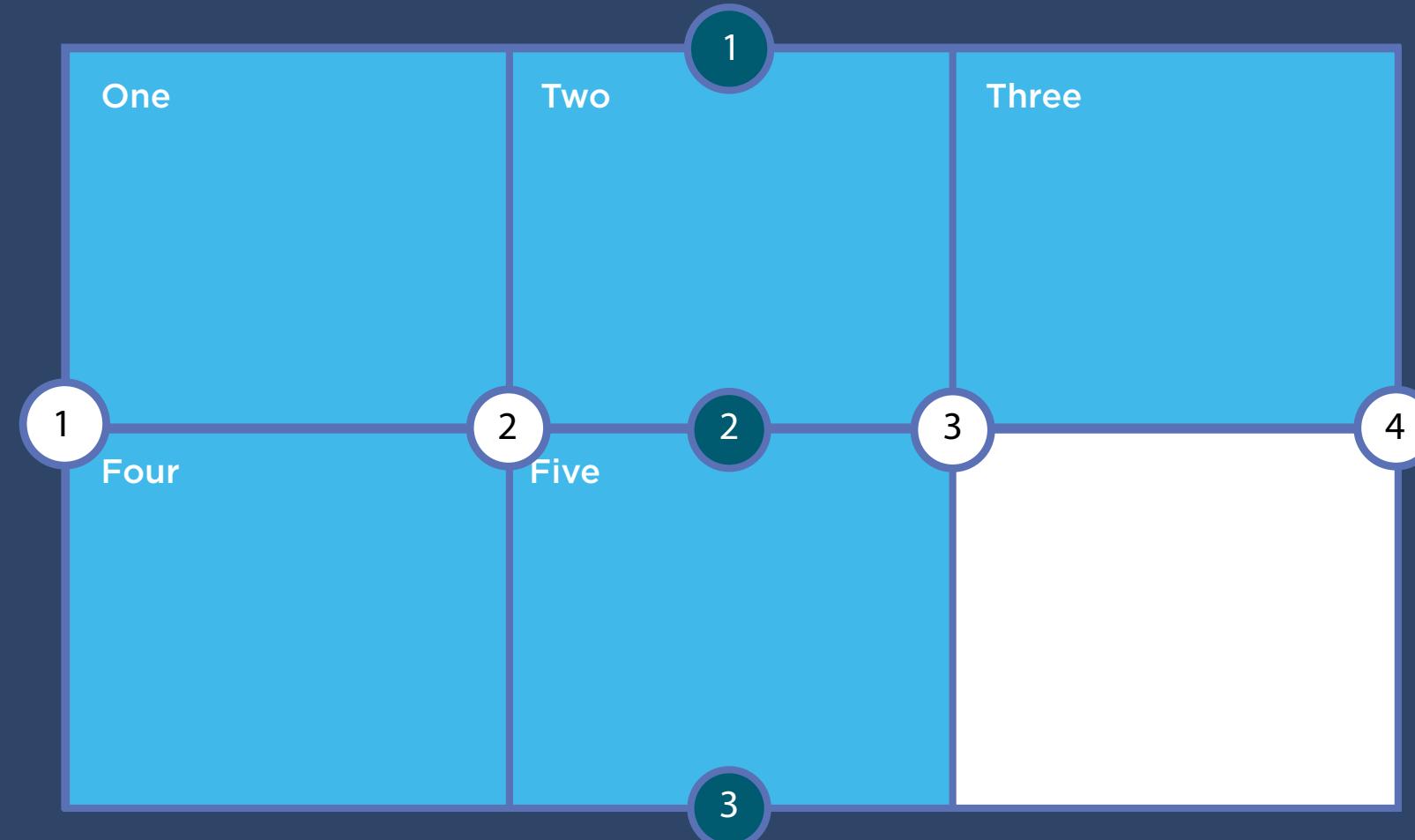
Can we use CSS grid now?

- Can I Use

The Grid container

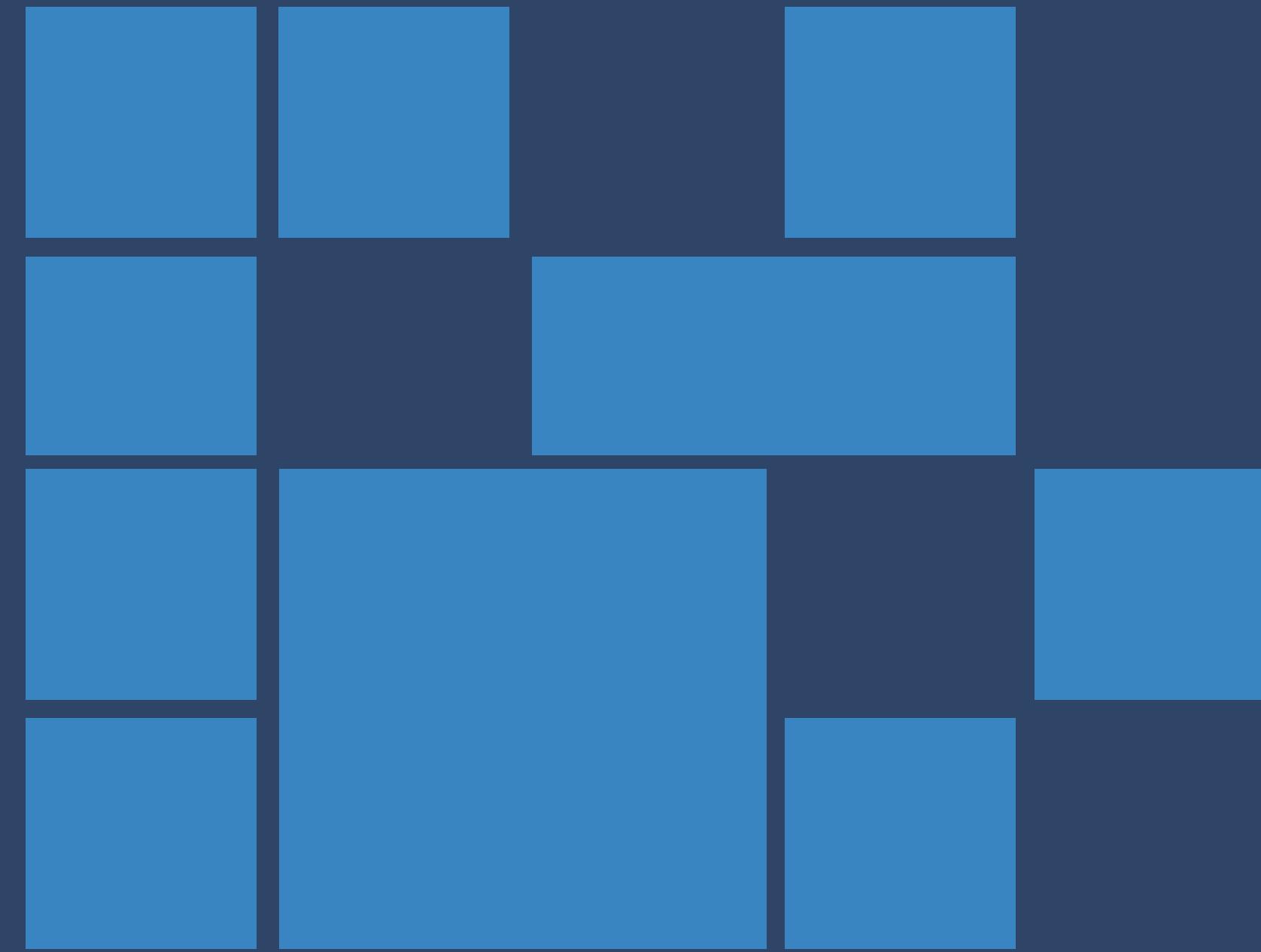
- We create a grid container by declaring `display: grid` or `display: inline-grid` on an element.
- As soon as we do this all direct children of that element will become grid items.

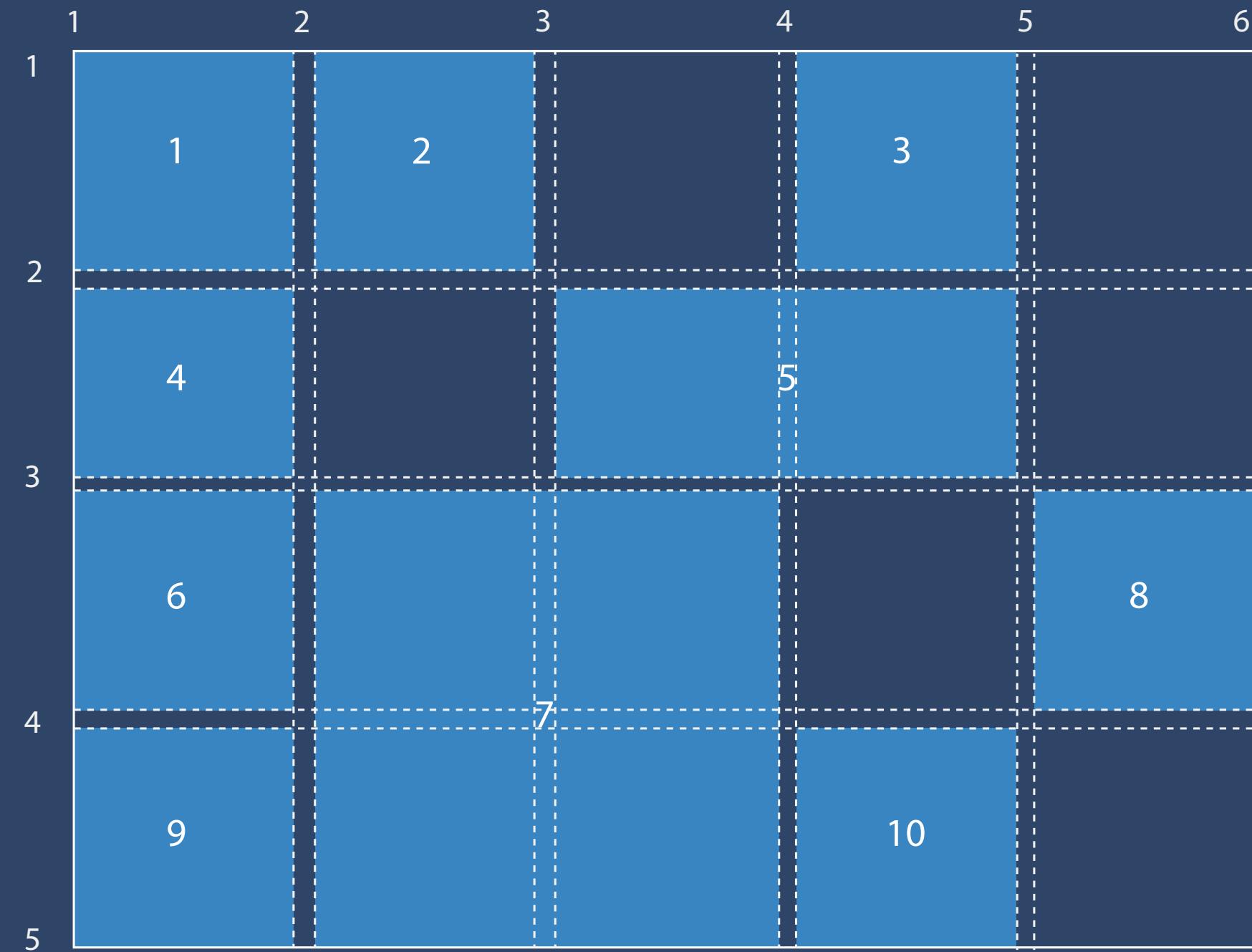
Grid - three columns, two rows



Grid - three columns, two rows

```
div {  
  display: grid;  
  grid-template-columns: 200px 200px 200px;  
  grid-template-rows: 200px 200px;  
}
```





CSS measurement units

- **Fixed units**
- **Relative units**

Fixed units

- **## pixel**
- **## point**
- **## in**
- **## cm and mm**
- **## pc**

Relative units

- **em**
- **rem**
- **ex**
- **ch**
- **percentage**

Relative units

- **vw**
- **vh**
- **vmin**
- **vmax**

The fr unit

- **With CSS Grid Layout, we get a new flexible unit:**
- **the Fr unit**

The fr unit

- Fr stands for fractional unit
- 1fr is equal to 1 part of the available space.

The fr unit

- You can mix fr values with fixed units
- You can mix fr values with relative units

Simple grid

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Simple grid

- Open `grid-demo-simple.html` in your editor and also in Firefox
- Open `grid-demo-simple.html` in Firefox

Display grid

- **Uncomment** `display: grid;`
- **Turn on grid lines in the inspector**

grid-template-columns

- Uncomment grid-template-columns:
200px 500px;

grid-template-columns

- Uncomment grid-template-columns: 1fr
1fr;

grid-template-columns

- Uncomment grid-template-columns:
repeat(2, 200px);

grid-template-columns

- Uncomment grid-template-columns:
repeat(auto-fill, 200px);

grid-template-rows

- Uncomment grid-template-rows: auto;

grid-template-rows

- Uncomment grid-template-rows:
repeat(3, 150px);

grid-gap

- Uncomment grid-gap: 1em;

Complex grid

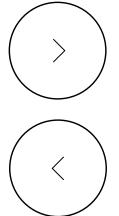
Animalia

MENU 

Etymology

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The name "flamingo" comes from Portuguese or Spanish *flamengo*, "flame-colored", in turn coming from Provençal *flamenc* from *flama* "flame" and Germanic-like suffix *-ing*, with a possible influence of words like "Fleming".



Flamingo



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Rank

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03

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1	Animalia							MENU ┓
2								
3	Etymology							
4	The name "flamingo" comes from Portuguese or Spanish flameng, "flame-colored", in turn coming from Provençal flamenc from flama "flame" and Germanic-like suffix -ing, with a possible influence of words like "Fleming".					READ MORE		
5	Kingdom	Phylum	Class	Rank				
6	Animalia	Chordata	Aves	Family		SEE ALL	03	
7								

**Work on complex
layout**

Paper exercise

With a partner map out item grid and row placement using the handout

Complex layout

- Open final/index.html in your editor and also in Firefox

Main

Add:

- `display: grid;`
- `grid-template-columns: 80px repeat(7, 1fr);`
- `grid-template-rows: repeat(6, auto);`

h2

- grid-column: 2 / 4;
- grid-row: 1 / 1;

.read-more

- grid-column: 6 / 7;
- grid-row: 1 / 4;

nav

- grid-column: 8 / 9;
- grid-row: 1 / 1;

h3

- grid-column: 2 / 6;
- grid-row: 2 / 2;

descriptive-text

- grid-column: 2 / 6;
- grid-row: 3 / 4;

nav-buttons

- grid-column: 8 / 9;
- grid-row: 2 / 4;

h1

- grid-column: 2 / 6;
- grid-row: 4 / 4;
- z-index: 2;

image

- grid-column: 1 / 8;
- grid-row: 4 / 5;

external-links

- grid-column: 8 / 9;
- grid-row: 4 /5;

classification

- grid-row: 5 /6;

kingdom

- grid-column: 2 / 3;

phylum

- grid-column: 3 / 4;

designation

- grid-column: 4 / 5;

rank

- grid-column: 5 / 6;

show-all

- grid-column: 6 / 7;
- grid-row: 5 / 8;

number

- grid-column: 8 / 9;
- grid-row: 5 / 6;

Alignment

nav-buttons

- align-self: center;

read-more

- `display: flex;`
- `writing-mode: vertical-lr;`

h1

- align-self: center;

external-links

- writing-mode: vertical-lr;
- display: flex;
- align-items: flex-end;
- justify-content: center;

show-all

- `display: flex;`
- `writing-mode: vertical-lr;`

number

- align-items: center;
- display: flex;

main

- height: 100vh

Comment on the workshop

Thanks! 😊