

WHY CSS GRID IS A GAME-CHANGER FOR WEB DESIGN



CONSTELLATION







The World Wide Web
Launch back in 1990



WHERE THE WEB WAS BORN

In the offices of this corridor, all the fundamental technologies of the World Wide Web were developed.

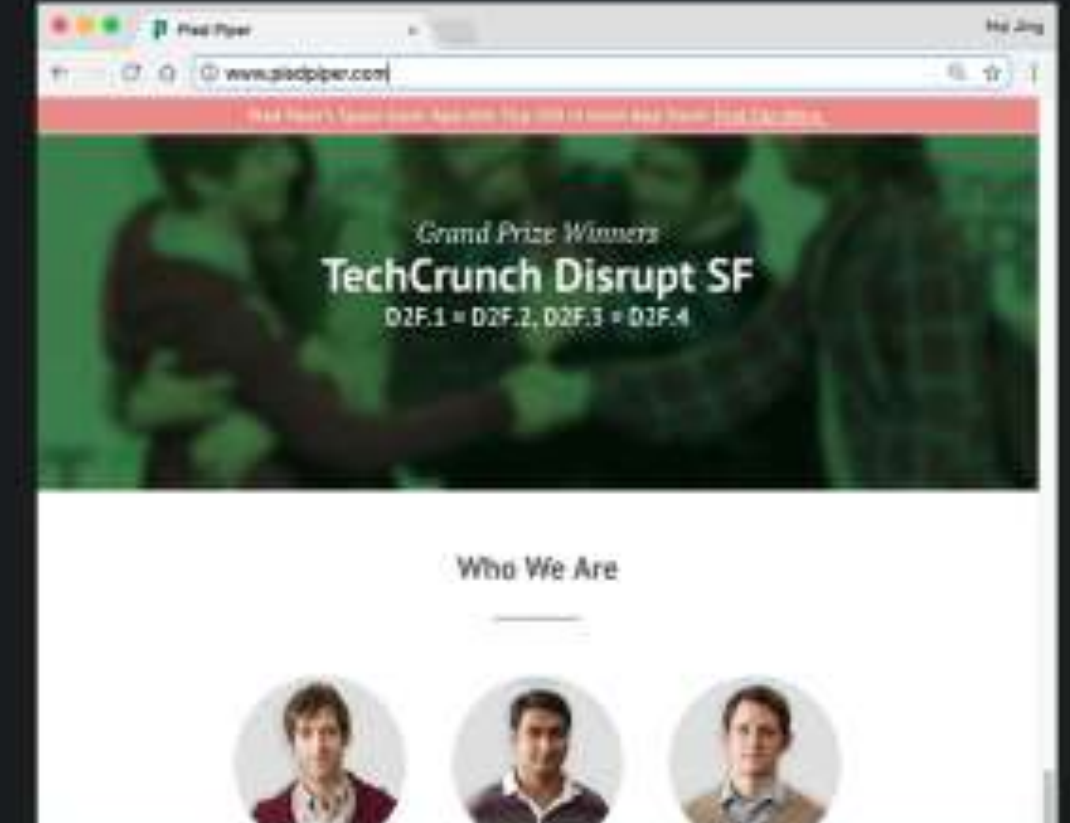
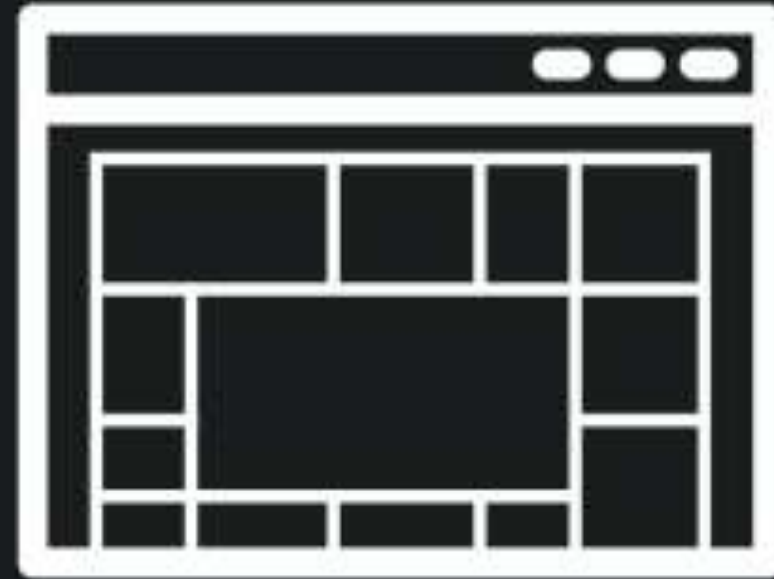
Started in 1990 from a proposal made by Tim Berners-Lee in 1989, the effort was first divided between an office in building 31 of the Computing and Networking Division (CN) and one in building 2 of the Electronics and Computing for Physics Division (ECP).

In 1991 the team came together in these offices, then belonging to ECP. It was composed of two CERN staff members, Tim Berners-Lee (CN) and Robert Calliau (ECP), aided by a number of fellows, Technical Students, a Consultant and Summer Students.

At the end of 1994 Tim Berners-Lee left CERN to direct the WWW Consortium (W3C), a worldwide organization devoted to leading the Web to its full potential. W3C was founded with the help of CERN, the European Commission, the Massachusetts Institute of Technology (MIT), the Institut National de Recherche en Informatique et en Automatique (INRIA), and the Advanced Research Projects Agency (ARPA).

In 1995 Tim Berners-Lee and Robert Calliau received the ACM Software System Award for the World Wide Web. In 2004, Tim Berners-Lee was awarded the first World Technology Award Foundation.

Web layouts over the years



2017: the year of CSS grid

March 2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6		8	9	10	11
12	13		15	16	17	18
19	20		22	23	24	25
26		28	29	30	31	

October 2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16		18	19	20	21
22	23	24	25	26	27	28
29	30					



Evolution of CSS Specifications

CSS1

Recommendation: 17
Dec 1996

CSS2

Recommendation: 12
May 1998

CSS2.1

Recommendation: 7
Jun 2011

CSS2.2

Working draft: 12
Apr 2016

CSS3

Decision to modularise: 14 Apr
2000
(26 modules)

CSS Snapshot 2017 (88 modules)

Completed

CSS Snapshot 2017
CSS Snapshot 2015
CSS Snapshot 2010
CSS Snapshot 2007
CSS Color Level 3
CSS Namespaces
Selectors Level 3
CSS Level 2 Revision 1
CSS Level 1
CSS Print Profile
Media Queries
CSS Style Attributes

Stable

CSS Backgrounds and Borders Level 3
CSS Conditional Rules Level 3
CSS Multi-column Layout Level 1
CSS Values and Units Level 3
CSS Cascading and Inheritance Level 3
CSS Fonts Level 3
CSS Writing Modes Level 3
CSS Counter Styles Level 3

Rewriting

CSS Basic Box Model Level 3
CSS Generated Content Level 3

Refining

CSS Animations
Web Animations 1.0
CSS Text Level 3
CSS Transforms
CSS Transitions
CSS Box Alignment Level 3
CSS Display Level 3
Preview of CSS Level 2
CSS Timing Functions Level 1

Testing

CSS Image Values and Replaced Content Level 3
CSS Speech
CSS Flexible Box Layout Level 1
CSS Text Decoration Level 3
CSS Shapes Level 1
CSS Masking Level 1
CSS Fragmentation Level 3
CSS Cascading Variables
Compositing and Blending Level 1
CSS Syntax Level 3
CSS Grid Layout Level 1
CSS Basic User Interface Level 3
CSS Will Change Level 1
Media Queries Level 4
Geometry Interfaces Level 1
CSS Cascading and Inheritance Level 4
CSS Scroll Snap Level 1
CSS Containment Level 1

Exploring

CSS Backgrounds and Borders Level 4
CSS Device Adaptation
CSS Exclusions
Filter Effects
CSS Generated Content for Paged Media
CSS Page Floats
CSS Template Layout
CSS Line Grid
CSS Lists Level 3
CSS Positioned Layout Level 3
CSS Regions
CSS Table Level 3
CSS Object Model
CSS Font Loading
CSS Scoping Level 1
Non-element Selectors

CSS Inline Layout Level 3
Motion Path Level 1
CSS Round Display Level 1
CSS Basic User Interface Level 4
CSS Text Level 4
CSS Painting API Level 1
CSS Properties and Values API Level 1
CSS Typed OM Level 1
Worklets Level 1
CSS Color Level 4
CSS Fonts Level 4
CSS Rhythmic Sizing Level 1
CSS Image Values and Replaced Content Level 4
CSS Fill and Stroke Level 3
CSS Logical Properties and Values Level 1
CSS Overflow Level 4



Team Layout

Display

**Box
Alignment**

Flexible Box

CSS Grid

**Ruby
Layout**

**Inline
Layout**

**Positioned
Layout**

**Writing
Mode**

CSS Shapes

**CSS
Transforms**

And more...



Grid **flexbox?**

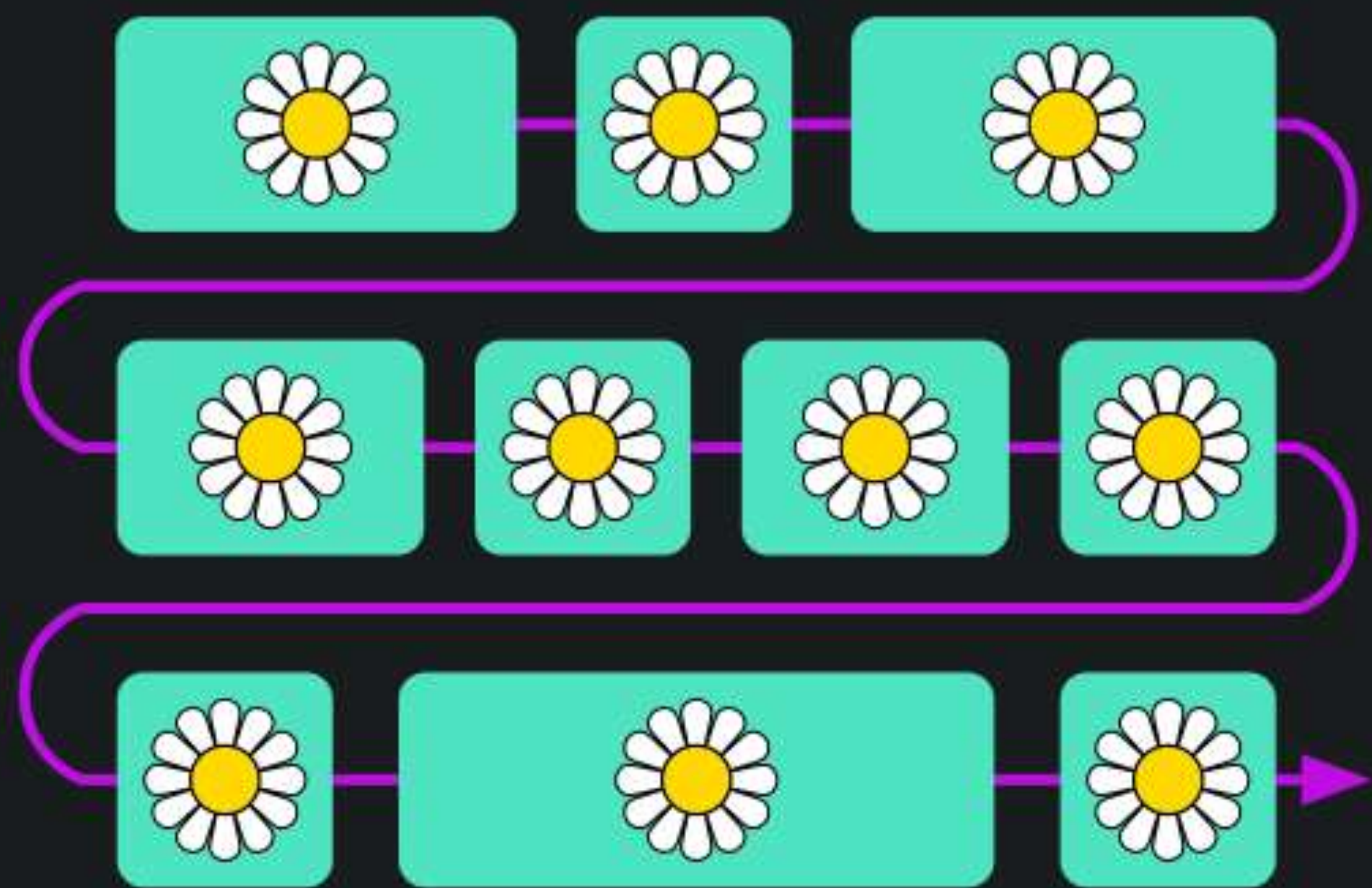
WRONG QUESTION



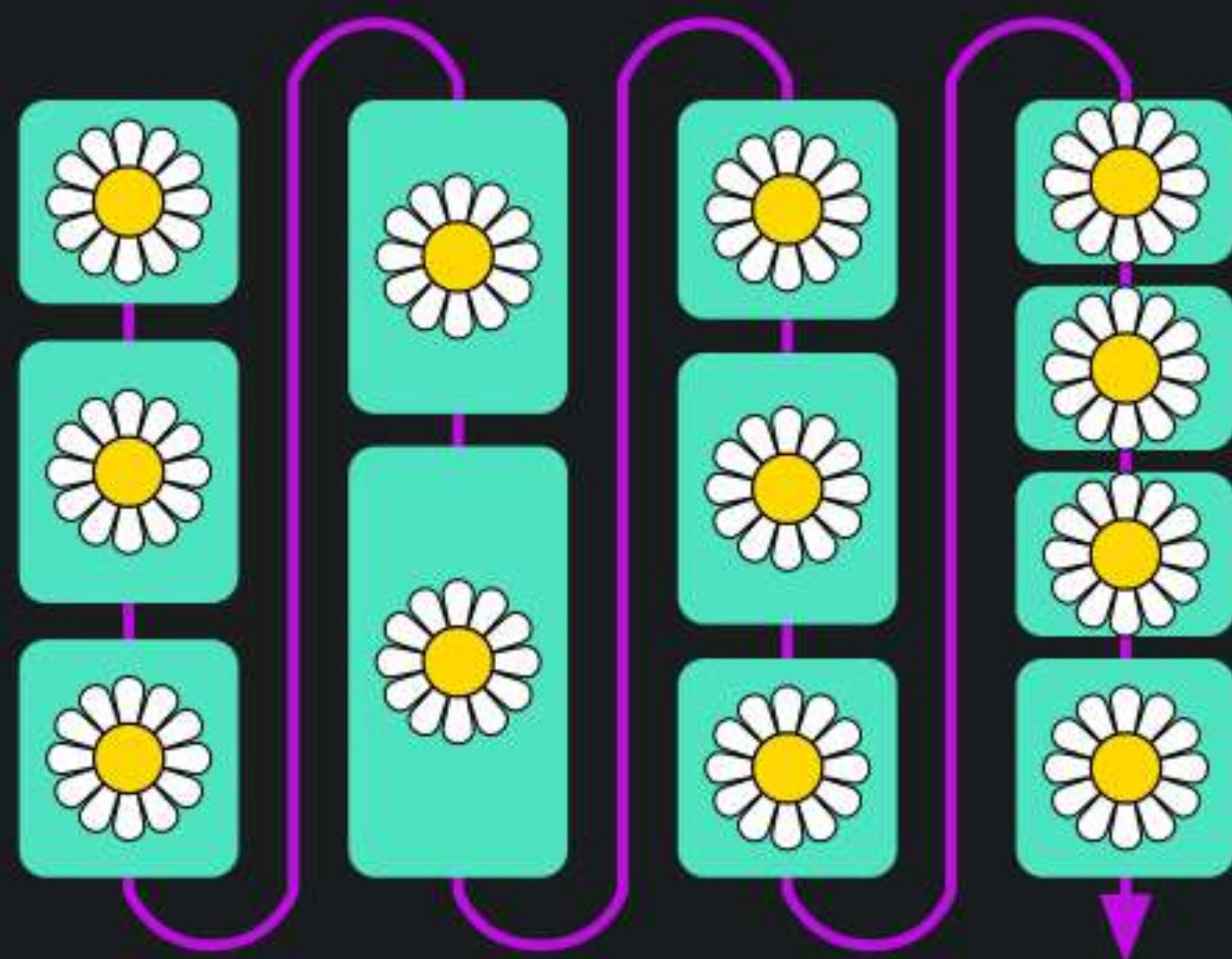
Grid AND Flexbox



Flexbox → single dimension



flex-direction: row



flex-direction: column

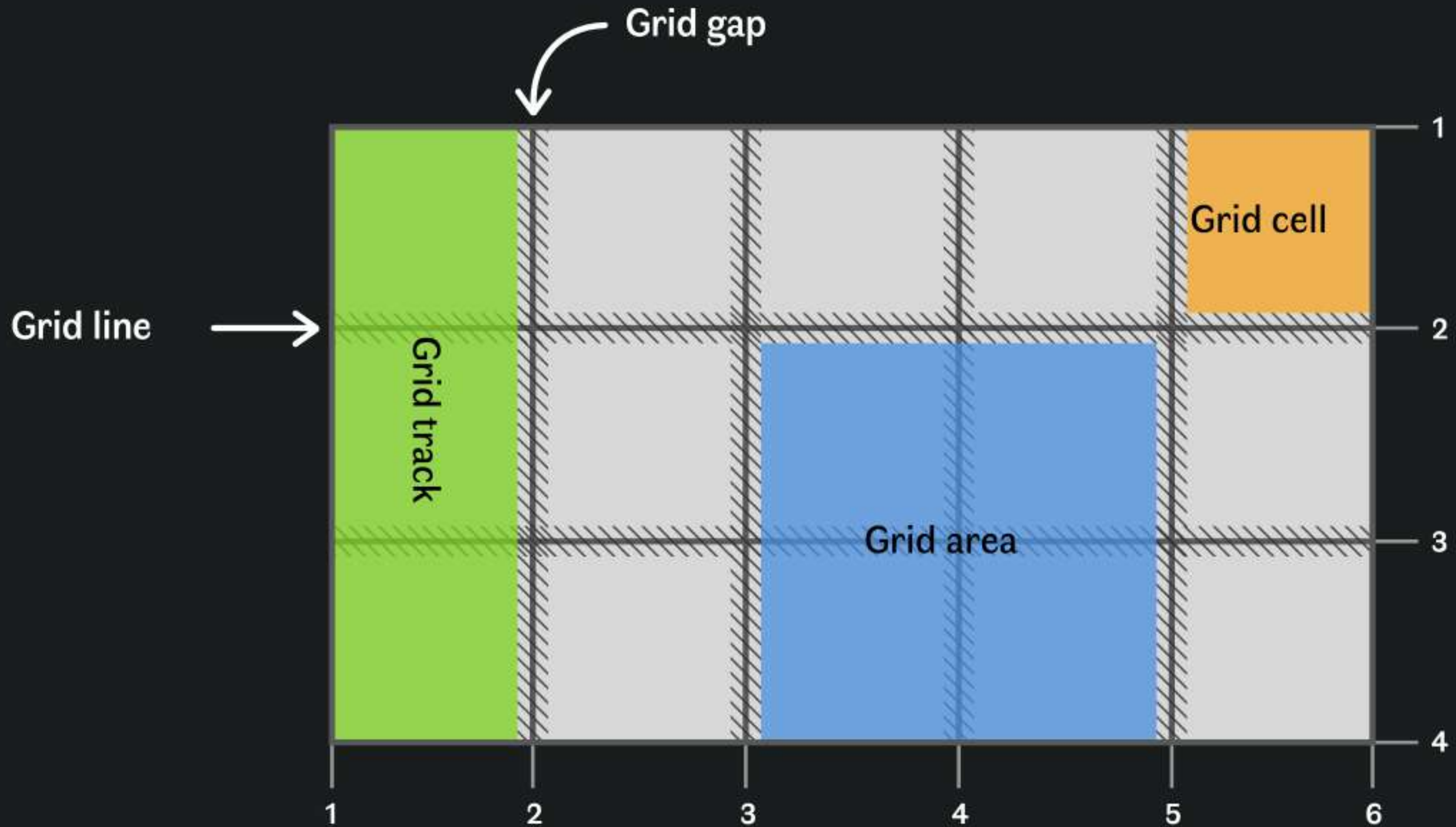


What is CSS grid?

Defines a **two-dimensional** grid-based layout system, optimized for user interface design.



Basic terminology



Flexbox and Grid

Based on the container-child relationship

Flex/Grid container



“Grid works from the **container** in, other layout methods start with the **item**”

—Rachel Andrew



Layout technique: **inline-block**

Item A	Item B	Item C
Item D	Item E	Item F

```
.inlineblock_item {  
  display: inline-block;  
  width: calc(100% / 3);  
}
```



Layout technique: float

Item A	Item B	Item C
Item D	Item E	Item F

```
.float__item {  
  float: left;  
  width: calc(100% / 3);  
}
```



Layout technique: flex

Item A	Item B	Item C
Item D	Item E	Item F

```
.flexbox {  
  display: flex;  
  flex-wrap: wrap;  
}  
  
.flexbox__item {  
  flex: 1 1 calc(100% / 3);  
}
```



“Grid is the only layout technique that establishes a **relationship** between rows and columns of grid items.”

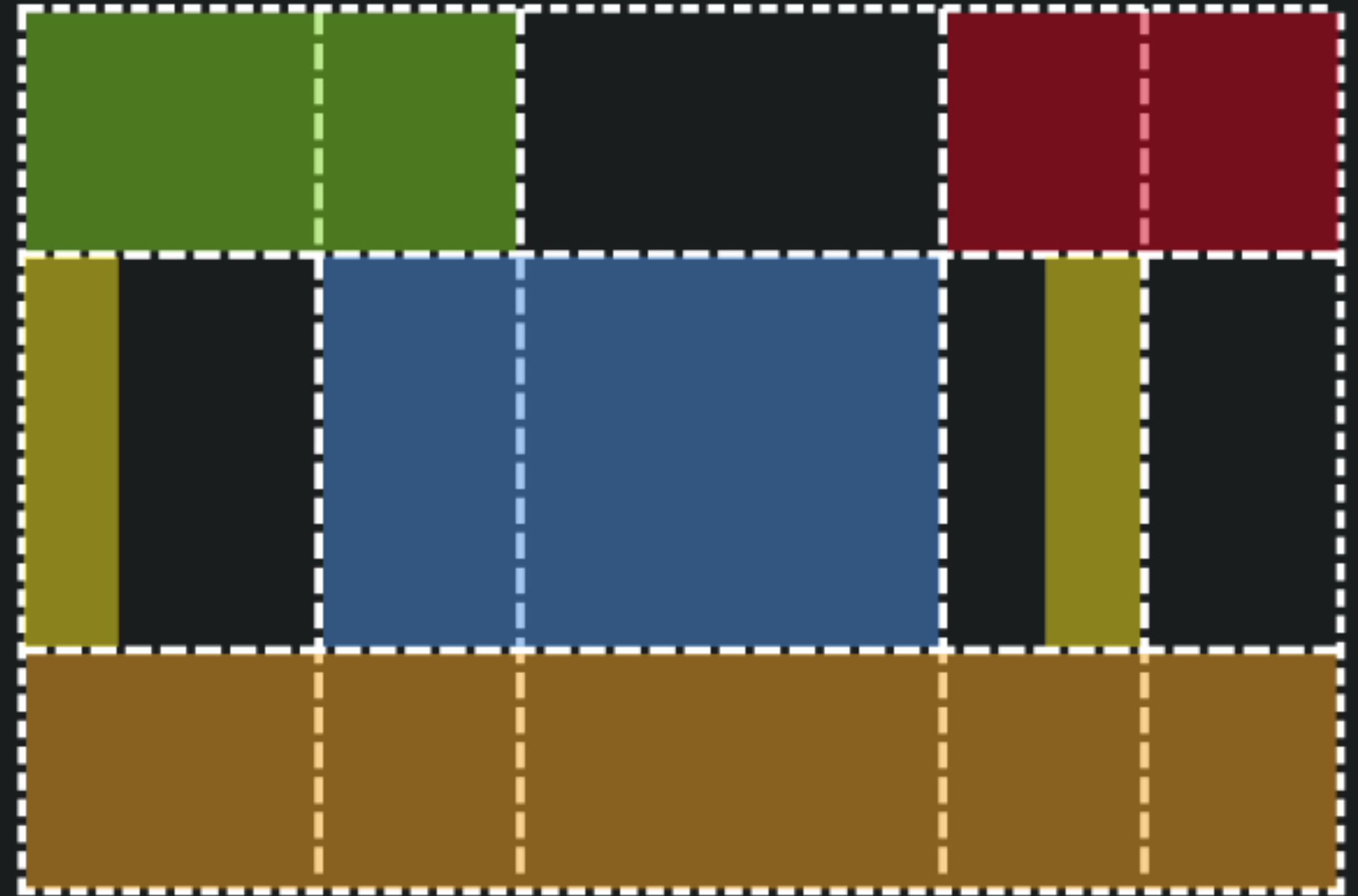


CSS grid basics

Define your grid.



Place items in the grid.



Properties on the Grid container

Defining a grid

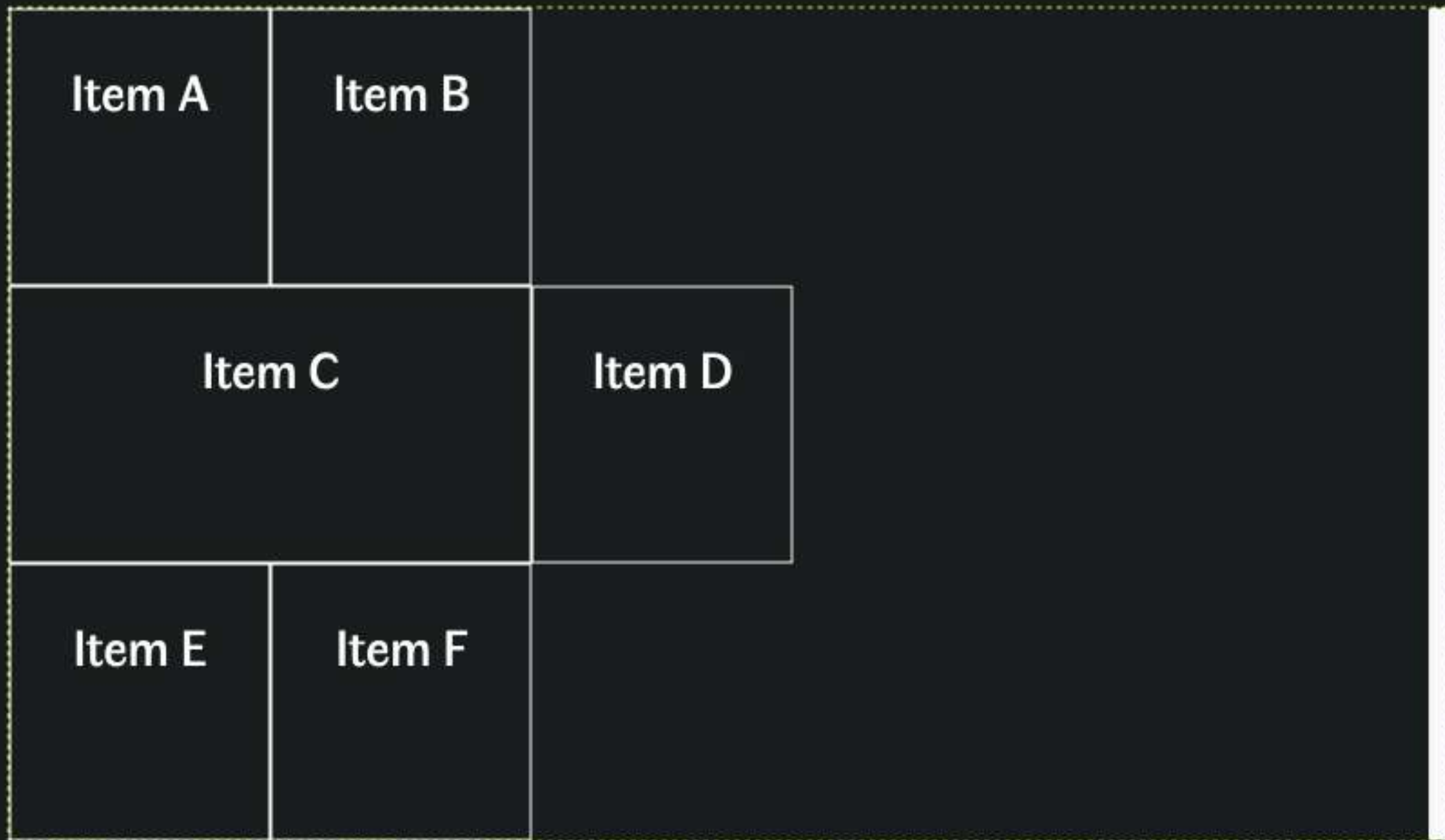
```
<div class="grid1">
  <div class="grid1__item">
    <p>Item A</p>
  </div>
  <div class="grid1__item">
    <p>Item B</p>
  </div>
  <div class="grid1__item">
    <p>Item C</p>
  </div>
  <div class="grid1__item">
    <p>Item D</p>
  </div>
  <div class="grid1__item">
    <p>Item E</p>
  </div>
  <div class="grid1__item">
    <p>Item F</p>
  </div>
</div>
```

Item A
Item B
Item C
Item D
Item E
Item F

```
.grid1 {
  display: grid;
}
```



Naming grid lines



```
.grid2 {  
  display: grid;  
  grid-template-columns: [alpha-start] 150px [alpha-end beta-start] 150px [beta-end gamma-start] 150px [gamma-end];  
}  
  
.grid2 .c {  
  grid-column: alpha-start / beta-end;  
}
```



“Cede **control** of your designs to the **browsers** that render them.”



The **fr** unit

Represents a **fraction** of the **free space** in the grid container.

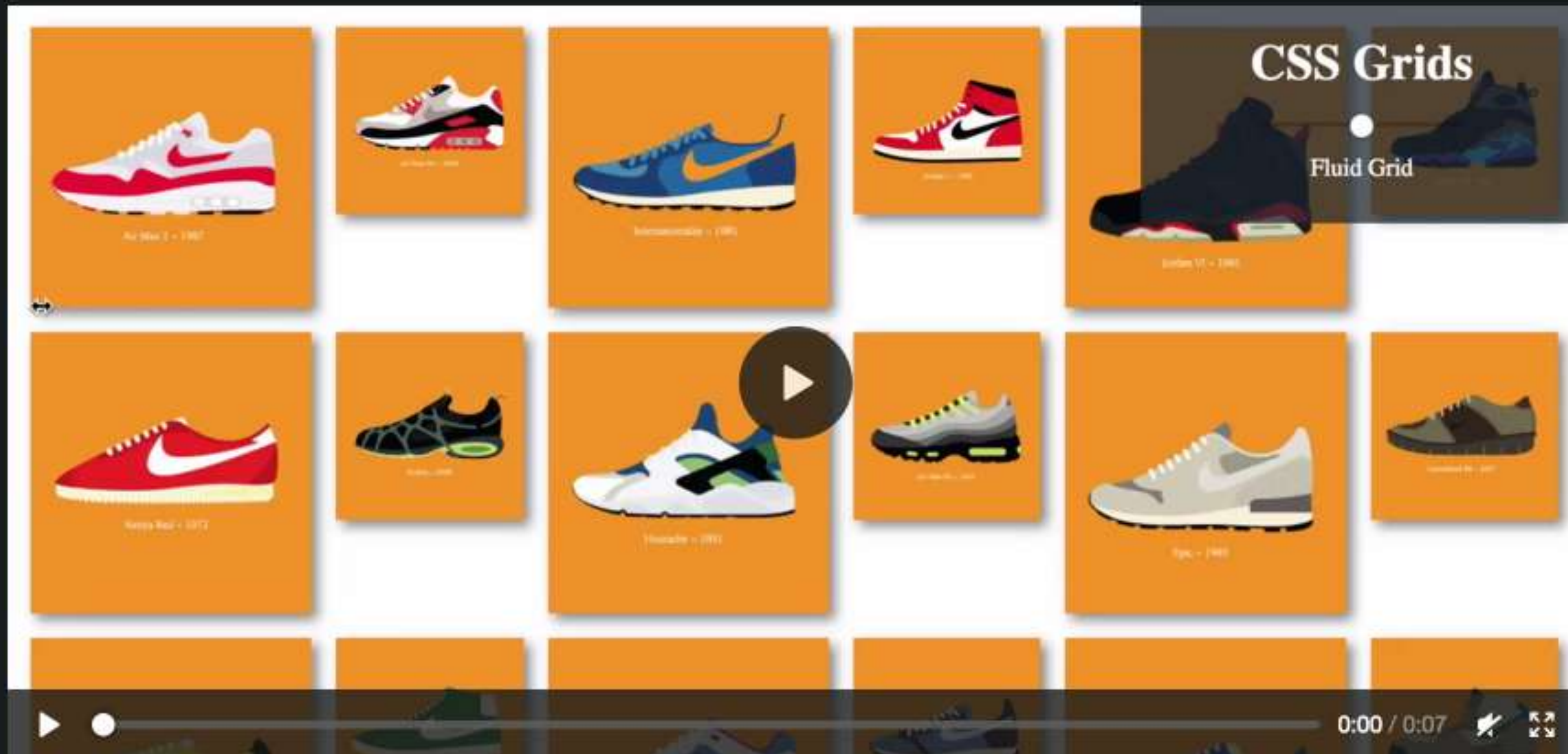


```
.grid4 {  
  display: grid;  
  grid-template-columns: 150px 1fr  
  2fr;  
}
```



Fluid CSS grid

```
.container {  
  display: grid;  
  grid-template-columns: repeat(3, 3fr 2fr);  
}
```



The `minmax()` function

Defines a size range for columns or rows in the grid.

Item A

Item B

Item C

```
.grid5 {  
  display: grid;  
  grid-template-columns:  
  minmax(200px, 1fr) 300px 300px;  
}
```



The repeat () function

To specify a large number of columns or rows that follow a similar pattern

Item	Item	Item	Item	Item	Item	Item	Item
------	------	------	------	------	------	------	------

```
.grid6 {  
  display: grid;  
  grid-template-columns: repeat(4,  
75px 120px);  
}
```



auto-fill vs. auto-fit

Allow browser to determine how many tracks to create depending on track size.



```
repeat(auto-fill, 100px);
```



```
repeat(auto-fit, 100px);
```

auto-fit collapses empty tracks.



auto-fill versus auto-fit

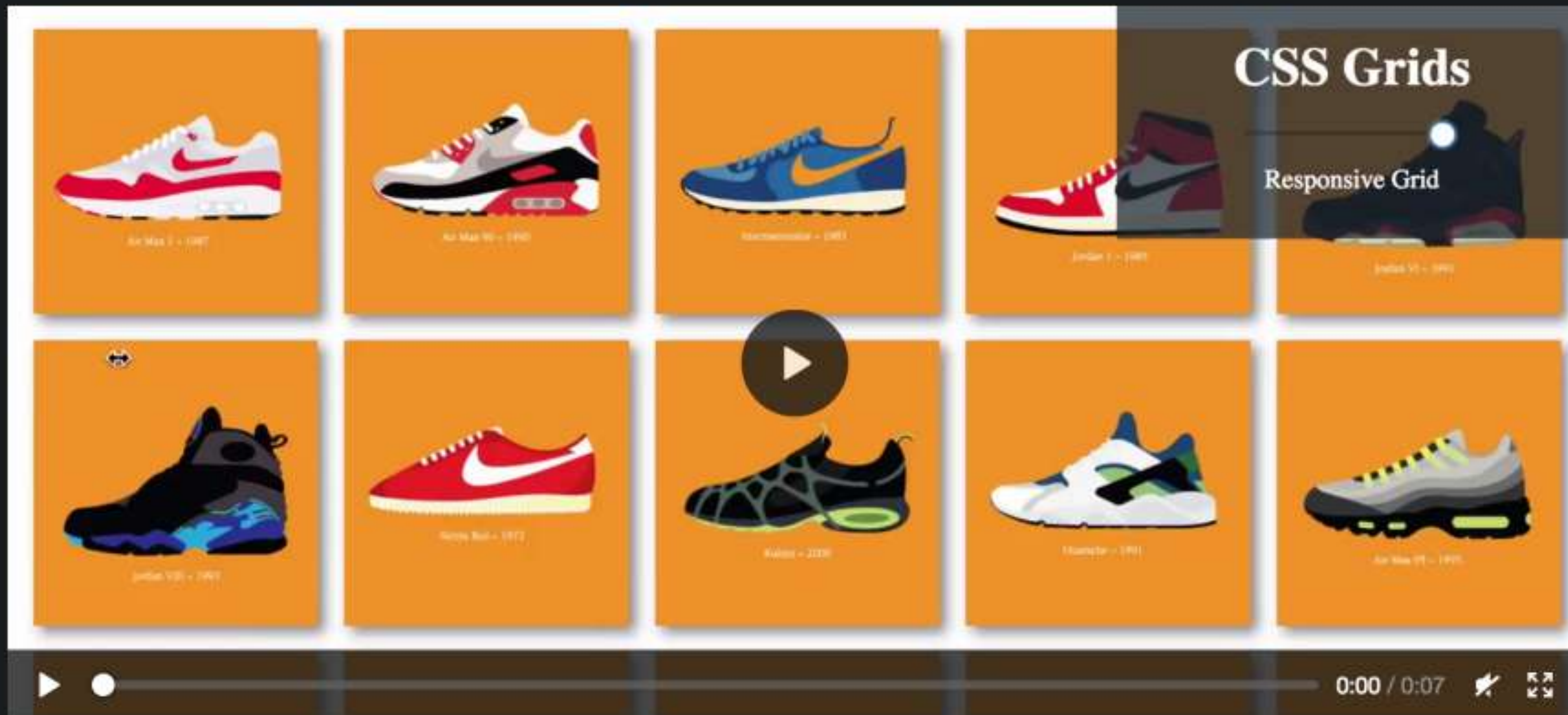
A	B	C	D	E	F	

```
.keyword {  
  display: grid;  
  grid-template-columns:  
  repeat(auto-fill, minmax(100px,  
  1fr));  
}
```

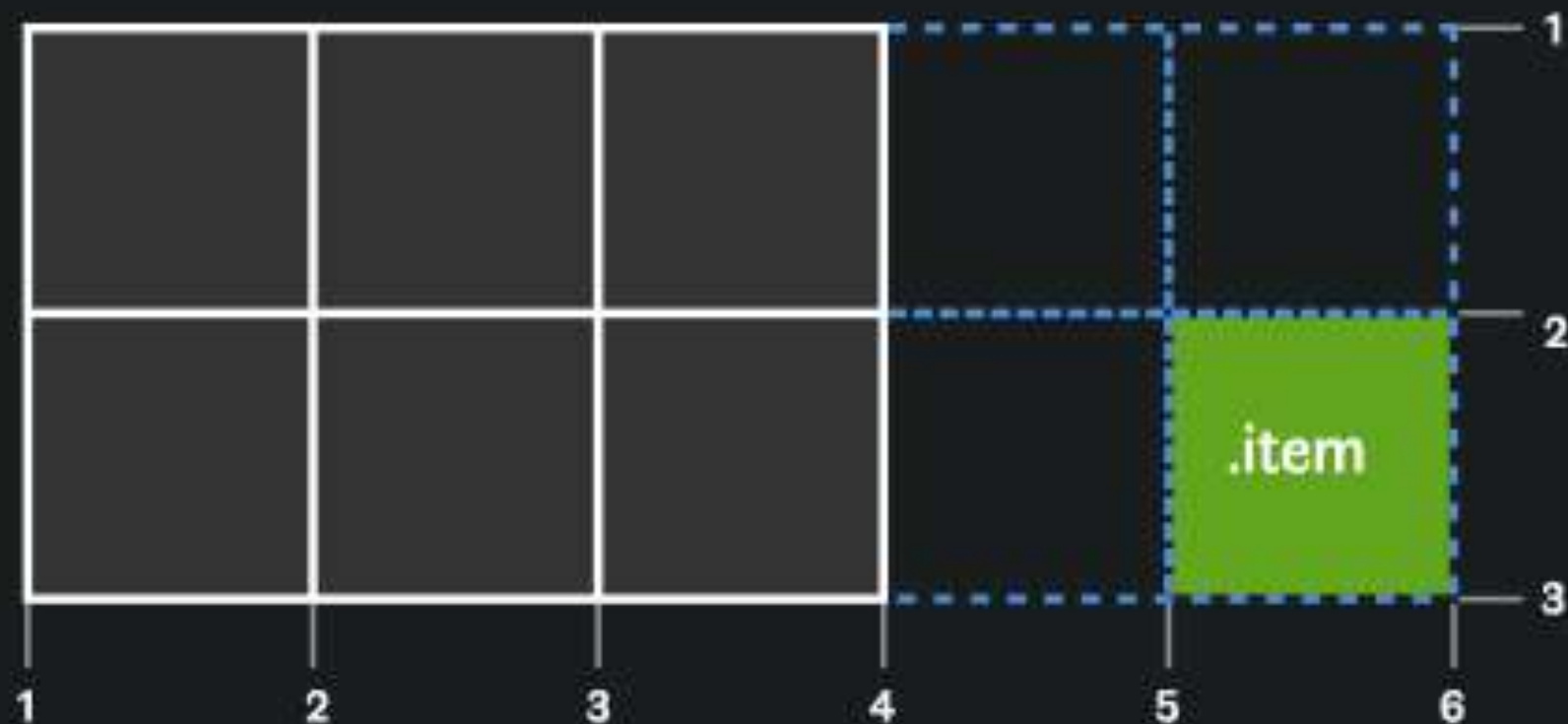


Responsive grid without media queries

```
.container {  
  display: grid;  
  grid-template-columns: repeat(auto-fill, minmax(10em, 1fr));  
}
```



Explicit Grid and Implicit Grid

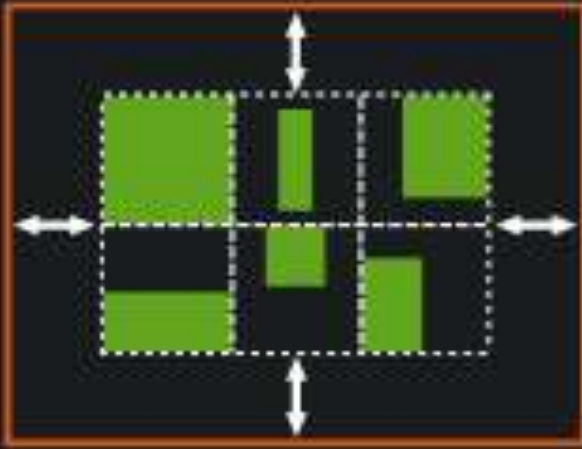
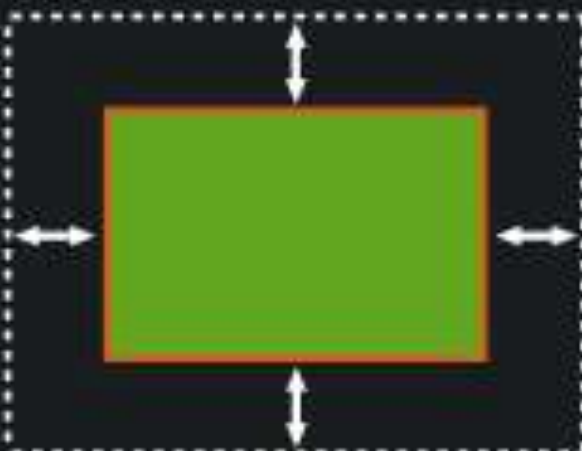
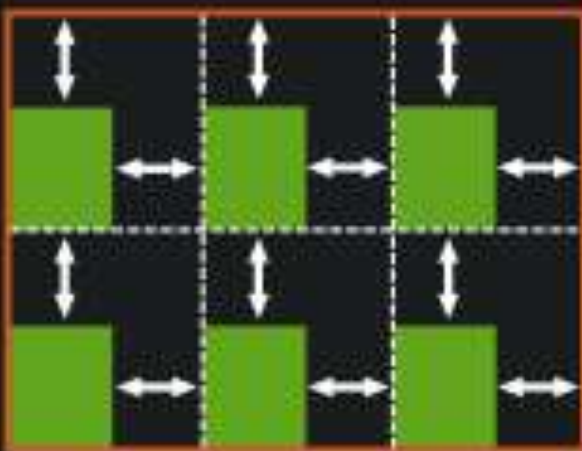


```
.grid-container {  
  display: grid;  
  grid-template-columns: 150px 150px 150px; /* three columns */  
  grid-template-rows: 150px 150px; /* two rows */  
}  
  
.item {  
  grid-column: 5 / 6; /* grid-column-start: 5; grid-column-end:  
  grid-row: 2 / 3; /* grid-row-start: 2; grid-row-end: 3; */  
}
```

The browser will create an implicit grid to hold items placed outside the grid.



Aligning your grid items

Property	Axis	Aligns		Applies to
<code>justify-content</code>	main/inline	content within element (effectively adjusts padding)		block containers, flex containers and grid containers
<code>align-content</code>	cross/block			
<code>justify-self</code>	inline	element within parent (effectively adjusts margins)		block-level boxes, absolutely-positioned boxes and grid items
<code>align-self</code>	cross/block			absolutely-positioned boxes, flex items and grid items
<code>justify-items</code>	inline	items inside box (controls child items)		block containers and grid containers
<code>align-items</code>	cross/block			flex-containers and grid-containers

Source: [CSS Box Alignment Module Level 3](#)




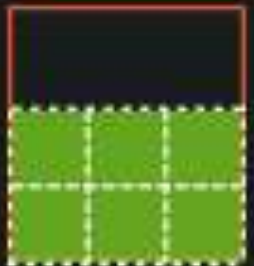
justify/align-content

content-distribution properties



```
.content {  
  justify-content: normal;  
  align-content: normal;  
  
  display: grid;  
  grid-template-columns: repeat(3,  
25%);  
  grid-template-rows: repeat(3, 20%);  
  grid-gap: 1em;  
  grid-template-areas:  
    "a b b"  
    "a b b"  
    "c c d";  
}  
  
.content_itemA {  
  grid-area: a;  
}
```

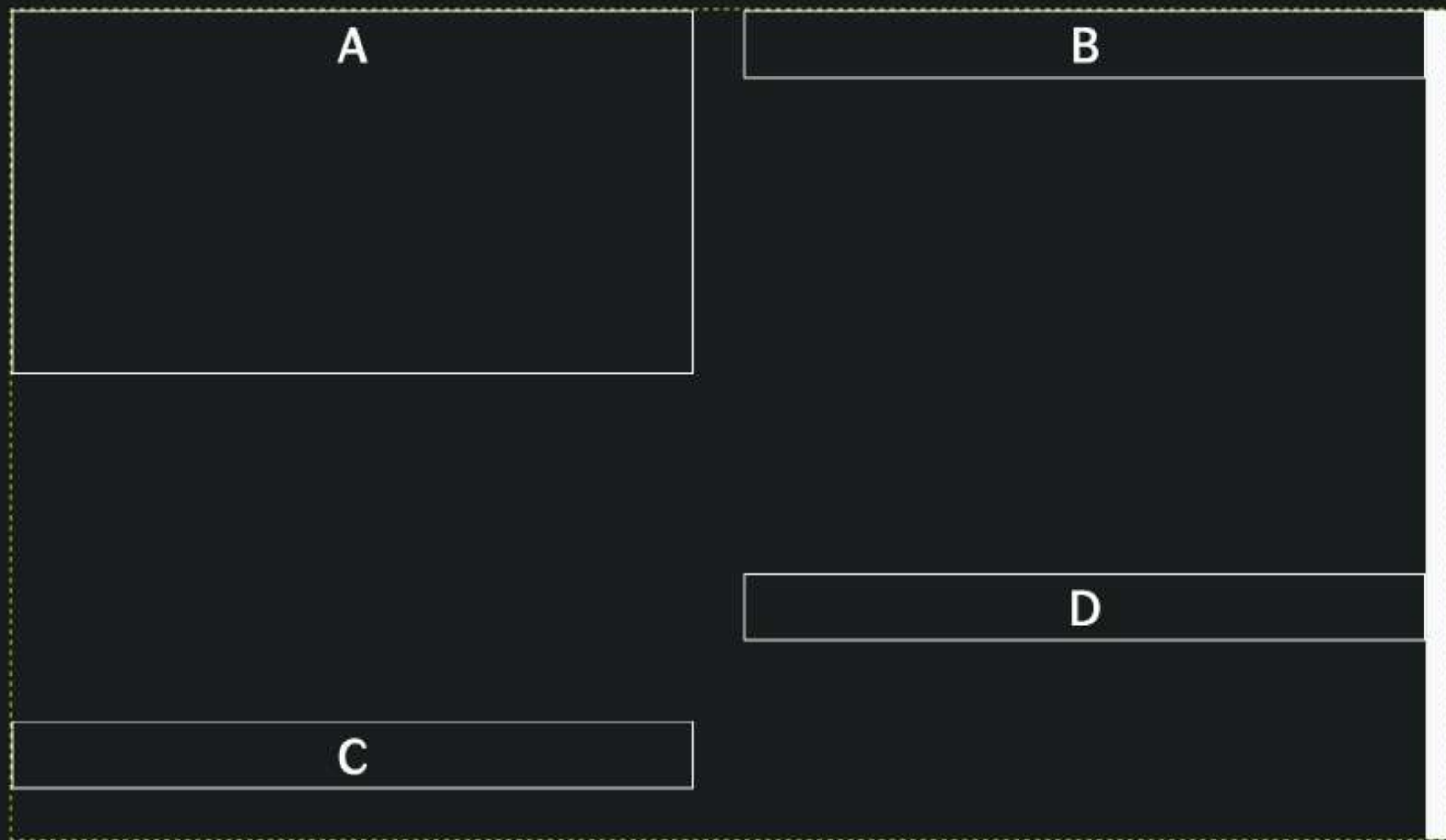


Values	justify-content	align-content
center		
start		
end		
space-around		
space-between		
space-evenly		



justify/align-self

self-alignment properties



```
.self {  
  display: grid;  
  grid-template-columns: repeat(4,  
1fr);  
  grid-gap: 1em;  
  grid-auto-rows: calc(25% - 1em);  
  grid-template-areas:  
    "a a b b"  
    "a a b b"  
    "c c d d"  
    "c c d d";  
}  
  
.self_itemA {  
  grid-area: a;  
}  
  
.self_itemB {  
  grid-area: b;  
}
```



justify/align-items

defaults for justify/align-self

A

B

C

D

```
.items {  
  justify-items: normal;  
  align-items: normal;  
  
  display: grid;  
  grid-template-columns: repeat(4,  
1fr);  
  grid-gap: 1em;  
  grid-auto-rows: calc(25% - 1em);  
  grid-template-areas:  
    "a a b b"  
    "a a b b"  
    "c c d d"  
    "c c d d";  
}  
  
.items_itemA {  
  grid-area: a;  
}
```


Tiefe Fliegeraufnahme
über einem Platz mit


8


Straßenöffnungen.




TEMPO-o-

Die Fahrzeuge: elektrische Straßenbahn, Autos, Lastwagen, Fahrräder, Droschken, Autobus, Cyklonette, Motorräder fahren in raschem Tempo vom Mittelpunkt auswärts, dann plötzlich alle umgekehrt; in der Mitte treffen sie sich. Die Mitte öffnet sich, ALLES sinkt tief, tief, tief — ein Funkturm.





(Der Apparat wird rasch umgekippt; das Gefühl eines Tiefstürzens entsteht.)



Unter den Straßenzügen die ausgebauten Kloaken. Lichtglanz auf dem Wasserspiegel.

TEMPO

Untergrundbahn, Kabel, Kanäle.

TEMPO-o-o-o

Tiefe Fliegeraufnahme
über einem Platz mit


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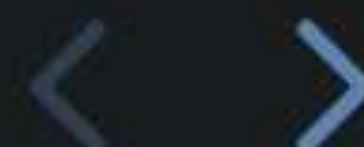
TEMPO

Untergrundbahn, Kabel, Kanäle.

TEMPO-o-o-o

Original print version

CSS grid web version



Self-alignment properties, maybe?



These are not the borders you are looking for



Flexbox to the rescue



That's more like it

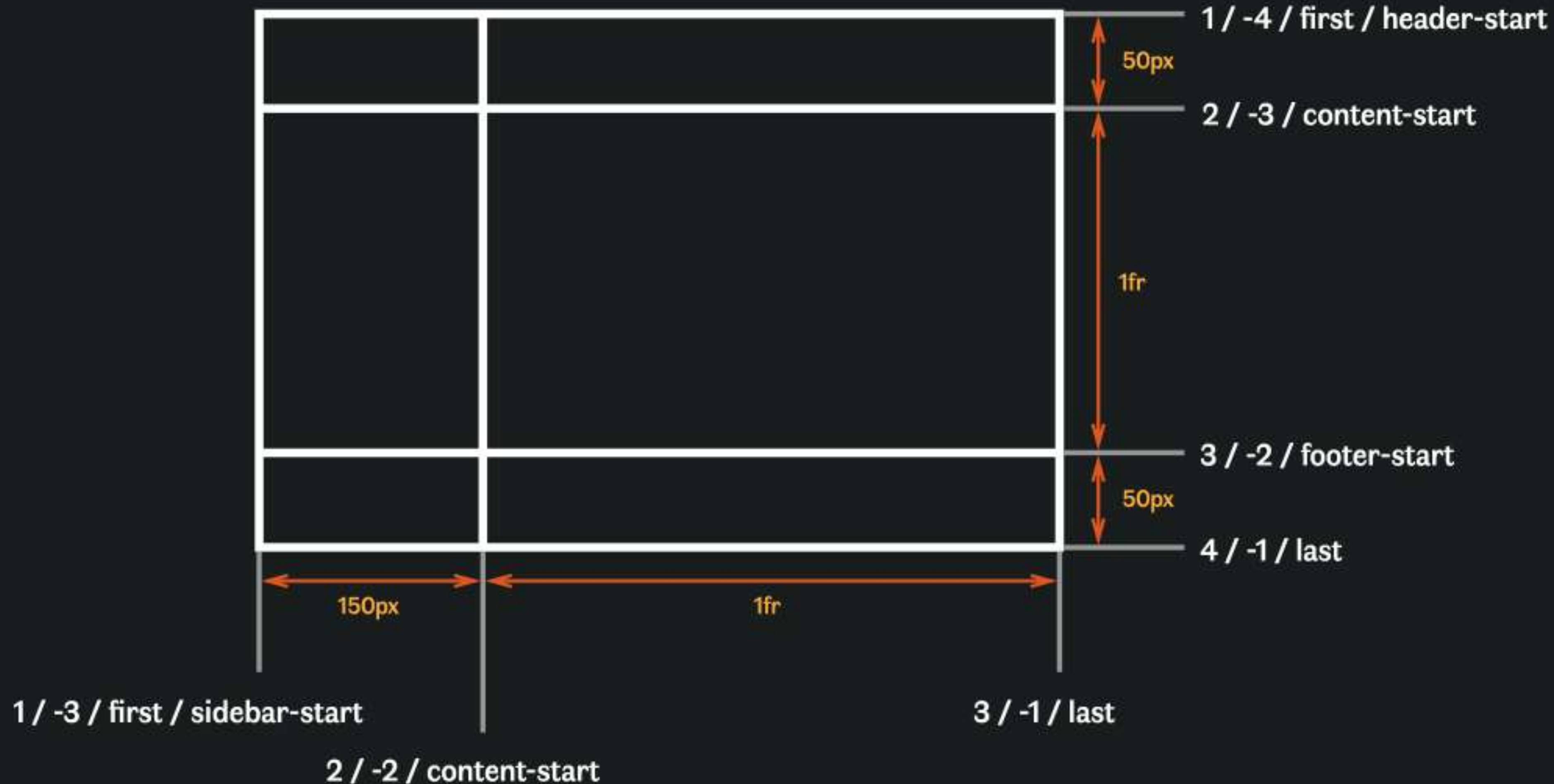




Properties on the grid item

Grid placement with grid lines / named lines

```
grid-template-columns: [first sidebar-start] 250px [content-start] 1fr [last];  
grid-template-rows: [first header-start] 100px [content-start] 1fr [footer-start] 100px [last];
```



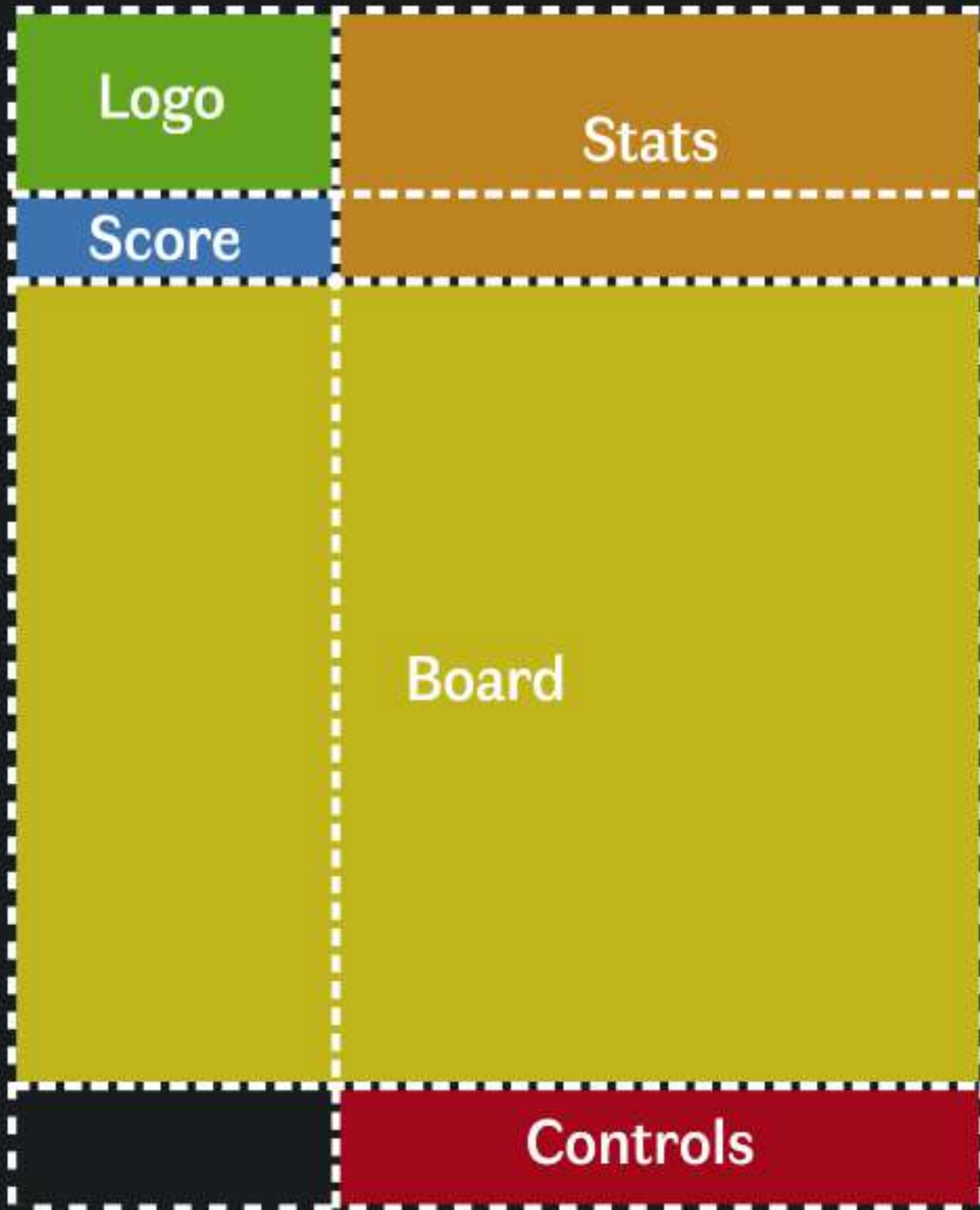
Using grid-column and grid-row



```
.grid7 {  
  display: grid;  
  grid-template-columns: repeat(6,  
    2.6em);  
  grid-template-rows: repeat(6,  
    2.6em);  
  justify-content: center;  
}  
  
.grid7__item:nth-child(1) {  
  grid-column: 4;  
  grid-row: 2;  
}  
  
.grid7__item:nth-child(3) {  
  grid-column: 2;  
  grid-row: 5;  
}
```



Grid placement with named areas



```
.grid-container {  
  display: grid;  
  grid-template-areas: "logo stats"  
                      "score stats"  
                      "board board"  
                      "... controls";  
}  
  
.logo { grid-area: logo; }  
.score { grid-area: score; }  
.stats { grid-area: stats; }  
.board { grid-area: board; }  
.controls { grid-area: controls; }
```



Using grid areas



```
.grid3 {  
  display: grid;  
  grid-template-columns: 150px  
150px 150px 150px;  
  grid-template-rows: 100px 100px  
100px;  
  grid-template-areas: 'a . . .'  
                      'a . . c'  
                      '. b . c';  
}  
  
.grid3 .a { grid-area: a; }  
.grid3 .b { grid-area: b; }  
.grid3 .c { grid-area: c; }
```





C N N E
C T I N G
T H E
D T S

Vertical whitespace



Founded in 2005, Whitespace is a culturally savvy design agency providing creative direction, branding and interactive services across various mediums, platforms and time zones. < >

Braun HiFi Steuergerät audio 300

title

In der modernen Aufnahmetechnik
ist keine Mühe zu groß, kein
Aufwand zu kostspielig, um auch
allerletzte Feinheiten einer
Interpretation zu erhalten.

Demgegenüber gibt es aber nur
wenige HiFi Ger^{text}äte, die es
fertigbringen, den ganzen
Nuancenreichtum wieder vollends
hörbar zu machen.

Ein Gerät mit diesen Fähigkeiten ist
das neue "audio 300", eine
Kompaktanlage mit ungewöhnlicher
technischer Ausrüstung und einem
formalen Konzept, das Braun
höchste internationale
Auszeichnungen eintrug.

text

BRAUN



key



detail1



key












detail2



detail3

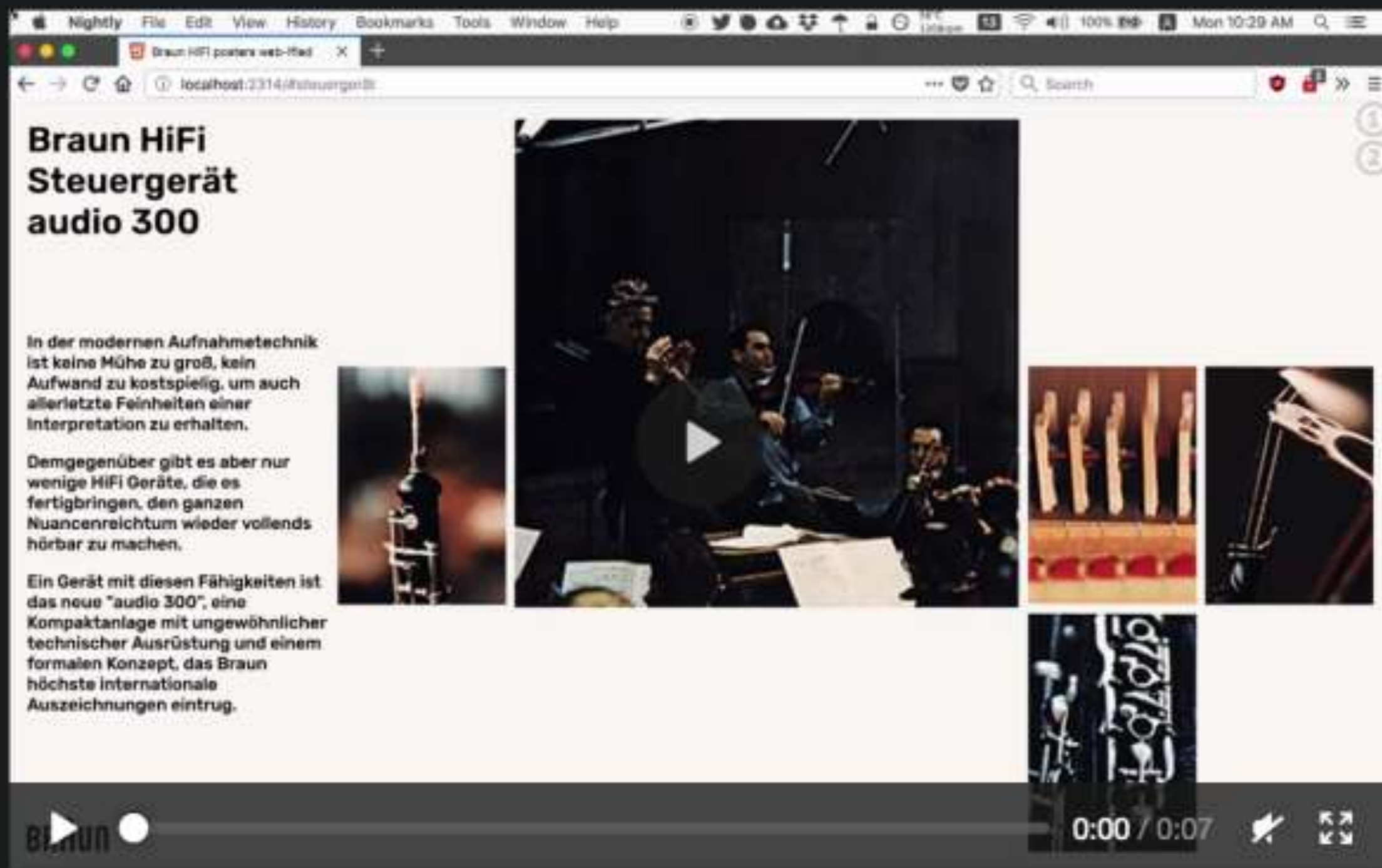


detail4

<h1>Braun HiFi Steuergerät audio 300</h1>			
<p>In der modernen Aufnahmetechnik ist keine Mühe zu groß, kein Aufwand zu kostspielig, um auch allerletzte Feinheiten einer Interpretation zu erhalten.</p> <p>Demgegenüber gibt es aber nur wenige HiFi Geräte, die es fertigbringen, den ganzen Nuancenreichtum wieder vollends hörbar zu machen.</p>			
<p>Ein Gerät mit diesen Fähigkeiten ist das neue "audio 300", eine Kompaktanlage mit ungewöhnlicher technischer Ausrüstung und einem formalen Konzept, das Braun höchste internationale Auszeichnungen eintrug.</p>			

<h1>Braun HiFi Steuergerät audio 00</h1>	
<p>In der modernen Aufnahmetechnik ist keine Mühe zu groß, kein Aufwand zu kostspielig, um auch allerletzte Feinheiten einer Interpretation zu erhalten.</p> <p>Demgegenüber gibt es aber nur wenige HiFi Geräte, die es fertigbringen, den ganzen Nuancenreichtum wieder vollends hörbar zu machen.</p> <p>Ein Gerät mit diesen Fähigkeiten ist das neue "audio 300", eine Kompaktanlage mit ungewöhnlicher technischer Ausrüstung und einem formalen Konzept, das Braun höchste internationale Auszeichnungen eintrug.</p>	
	
	
	
	





```
.steuergerät {
  grid-gap: 0.5em;
  grid-template-columns: 50% 50%;
  grid-template-areas: "title title"
    "text text"
    "key key"
    "detail1 detail2"
    "detail3 detail4";
}

@media screen and (min-aspect-ratio: 1/1) and (min-height: 22em) {
  .steuergerät {
    grid-template-columns: 18.75em 1fr 1fr 1fr;
    grid-template-rows: calc((100vh - 3em) / 3) calc((100vh - 3em) / 3) calc((100vh - 3em) / 3);
    grid-template-areas: "title detail1 key key"
      "text detail2 key key"
      "text detail3 detail4 braun";
  }
}

@media screen and (min-aspect-ratio: 8/5) and (min-height: 36em) {
  .steuergerät {
    grid-template-columns: 17.5em 1fr 3fr 1fr 1fr;
    grid-template-rows: calc((100vh - 3em) / 3) calc((100vh - 3em) / 3) calc((100vh - 3em) / 3);
    grid-template-areas: "title . key . ."
      "text detail1 key detail2 detail3"
      "text . . detail4 .";
  }
}
```


GENERATION



Overlap

H55
<http://www.h55studio.com>

Tuesday 10th May
Hanson Ho

With his bold, stripped-back typographic approach, Hanson Ho founded H55 in 1999. It is now one of the most recognised and celebrated graphic design studios in Singapore.

much influenced by Europe. Less culture and tradition. So I'm quite surprised you say that Hong Kong has a wider creative industry – they have a music industry, places like Taiwan have big stars, movie stars, film makers. Here there is nothing like that, the population is too small.

How, you can say things in the time you've been designing here?

Things have changed here a lot in the last ten years. The last generation was kind of traditional, quite hierarchical – studios, consultants, strategists, that kind of thinking from the nineties. Not very progressive. My peers didn't want to be like our predecessors so we say "why can't we be like the studios in London?" We actually referenced London a lot, that's the truth. We admired people like Tomaso and the Designers Republic, we read Creative Review and wanted to get into O&A&D. Things like that. It was kind of a renaissance, if you were there at the right time to witness all of this. And so we started up our own small studios with a more independent voice – the studios had their own individualistic representation, rather than consultants, strategists blah blah blah. So I think things have changed a lot. It's easier now to set up a new business, with new technology, we don't need a studio manager.

So, as well as your own studio, you also create The Design Society here in Singapore. How did things start out?

The Design Society is fairly new, it was set up a few years ago when the designers from my generation were stable and not struggling as much as when we started. We felt we should try to do something together.

What are the objectives of The Design Society?

"We are interested in archiving Singapore design history, to map it, and also to offer a more yearly conference. We have maybe four or five casual workshops a year."

HANSON HO IS VERY BUSY, AS WELL AS RUNNING H55, HE IS AN ACTIVE MEMBER OF THE DESIGN SOCIETY AND HANDLES DESIGN AND PRODUCTION OF THEIR BIENNIAL JOURNAL. HOWEVER, WE MANAGE TO ARRANGE AN EARLY MEETING OVER BREAKFAST AT SHIBLY PRATA SHOP NEAR THE STUDIO. WE OPEN BY SAYING THAT SINGAPORE IS FREQUENTLY MENTIONED AS THE GRAPHICS HUB OF SOUTHEAST ASIA...

HANSON I think Hong Kong is very vibrant compared to Singapore. They've had a very strong identity throughout the years, even in the eighties. I think it has to do with language and less diversity, whereas here, everyone is speaking a different language. Look at Japan and, yeah,

THINK GLOBAL GROW LOCAL



FIGTREE NETWORK

<http://uk.figtreenetwork.com>

Wednesday 27th April

David Brabbins

Already an established consultancy in London and Paris, Figtree Network branched out to Hong Kong in 2010. David Brabbins tells us why

PROMOTING TAIWAN TOURISM FOR THE BUREAU OF ECONOMIC TRADE, TAIWAN



WE FIND THE OFFICES OF FIGTREE NETWORK TUCKED AWAY IN A QUIET BUT COOL STREET IN THE WANCHAI DISTRICT OF THE CITY. AFTER VISITING THE MONOCLE STORE ACROSS THE ROAD, WE POP IN TO CHAT WITH DAVID AND OUR CONVERSATION QUICKLY LEADS TO THE RISE OF THE CREATIVE SECTOR IN HIS NEW HOMELAND.

DAVID I think there is a push going on, though not as strongly as in Singapore, which is a shame. In Hong Kong the government have identified the creative industry as one of six areas of growth as they try to expand beyond finance, property and shipping.

We've learned that in Hong Kong technique and production standards are high, but actual design perhaps less so.

Sure, this is the big leap that Asian businesses, especially Chinese businesses need to make. We've had the experience of going through that process with HTC. Many businesses are not yet ready to make the leap, so our first strategy when we came here was to help Asian businesses build global brands. But it's not as simple as just doing communications. They have to invest quite heavily in a long term strategy, acquire new competencies they never had: innovation, marketing. It is a big jump for companies that are used to making things for other people, and not designing things for themselves. HTC was a bit further along because they designed stuff for mobile networks so they had all the competencies

How did Figtree Network get started?

We are about seven years old. Orange was the foundation client, I joined shortly after it was incorporated. You need eight good clients for an agency. HTC is our most recent large one and we have a couple more big ones in the UK right now.

OK, so how many offices does Figtree have?

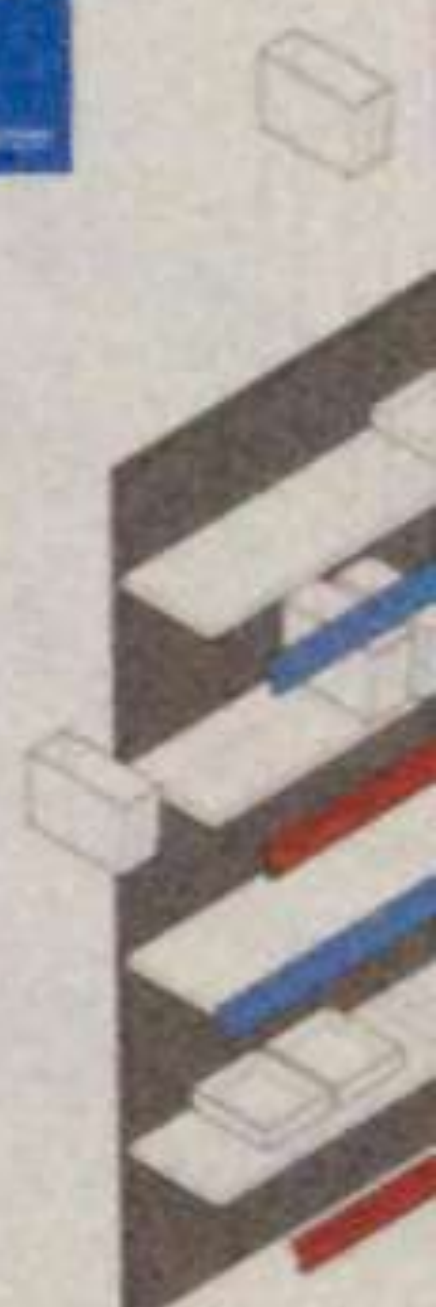
Three. We've got London – which is our HQ – there are about forty people there. About three or four work in Paris, then eight of us here in Hong Kong.

Did you initially work in the London branch?

Yeah. Back in the days when we were three guys in a garage, just like Google!

What brought you to Hong Kong?

Opportunity and change of scene. I was getting a bit bored with London: the weather (not the heat), high tax, low growth. I found that I kept shopping over at Hong Kong when I was on my way to Taiwan to meet with HTC. I used to come here before flying back to London to catch up with some mates. I gradually fell in love with the place, so I thought "Well, what we do could work here," so here we are.

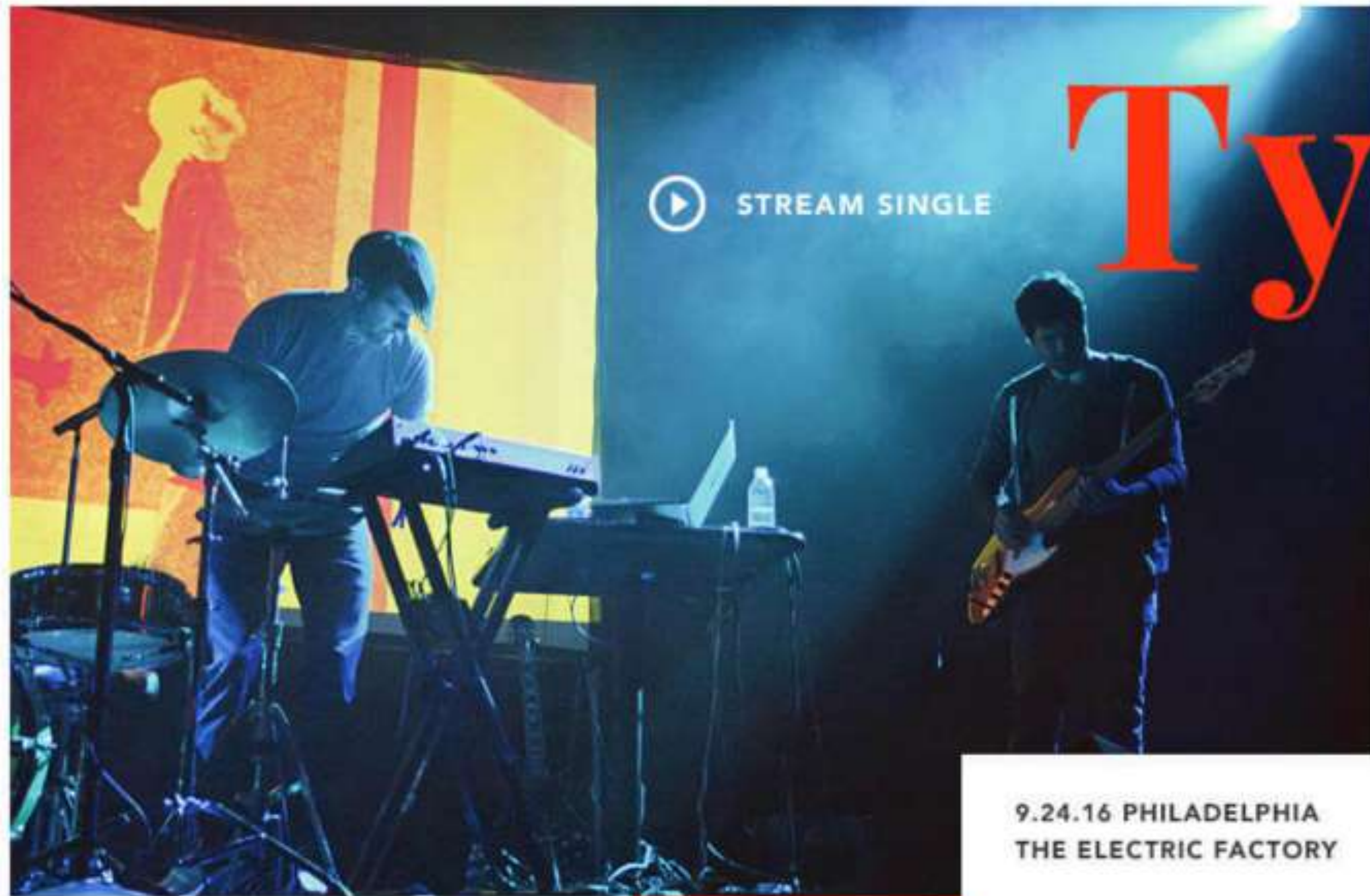




The Orange Issue

```
.container {  
  display: grid;  
  grid-template-columns: repeat(9, 1.25em);  
  grid-template-rows: repeat(6, 1.25em);  
}  
  
h2 {  
  grid-row: 3 / 5;  
  grid-column: 1 / 10;  
}  
  
.container::before {  
  grid-row: 1 / 7;  
  grid-column: 1 / 7;  
}  
  
.container::after {  
  grid-row: 1 / 7;  
  grid-column: 4 / 10;  
}
```


Building a grid layout



STREAM SINGLE

Tycho

Earlier this year, San Francisco-bred artist and designer Tycho announced a new album on the way for 2016, but gave scant details about the project, leaving fans to speculate about just what the ambient master had in store. Fans need no longer worry, as Tycho's fifth studio album, *Epoch*, has arrived in grand fashion.

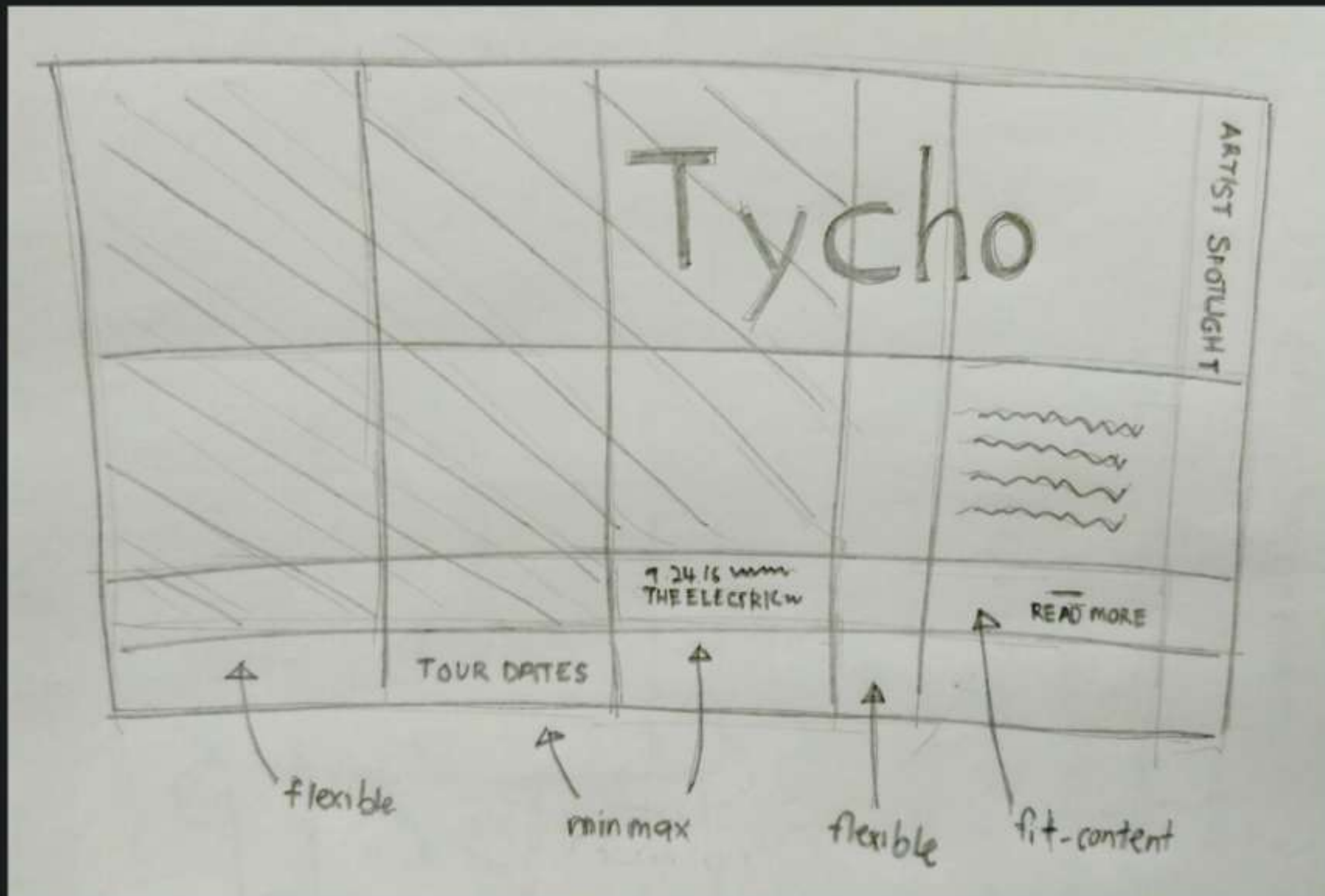
9.24.16 PHILADELPHIA
THE ELECTRIC FACTORY

TOUR DATES



READ MORE

ARTIST SPOTLIGHT



Good ol' pencil and paper



Tycho

Artist Spotlight

Tycho is an American ambient music project led by Scott Hansen as primary composer, songwriter and producer. Hailing from San Francisco, California, he is known as ISO50 for his photographic and design works. His music is a combination of downtempo vintage-style synthesizers and ambient melodies.

[Read more](#)



10.2.2010 Toronto
The Drake Hotel

[Tour dates](#)

Markup without any CSS

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[READ MORE](#)



10.2.2010 TORONTO
THE DRAKE HOTEL

[TOUR DATES](#)

Basic styles



“Websites do **NOT** have to look the same in every browser.”



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[READ MORE](#)



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THE DRAKE HOTEL

[TOUR DATES](#)

Fallback layout

```
main {
  max-width: 45em;
  margin: 0 auto;
  position: relative;
  padding: 1em;
}

_:-ms-input-placeholder, :root main {
  display: block;
}

h1 {
  margin-bottom: 0.25em;
}

h2 {
  margin-bottom: 1em;
}

.about {
  margin-bottom: 1em;
}

a {
  margin-bottom: 2em;
}

button {
  padding: 1em 2em;
}
```




CSS grid in action

```
@supports (display:grid) {  
  @media (min-width: 42em) and (min-height: 27em) {  
    main {  
      max-width: none;  
      padding: 0;  
      display: grid;  
      grid-template-columns: 2fr minmax(10em, max-content);  
      grid-template-rows: 35vh 40vh 15vh 10vh;  
    }  
  
    h1 {  
      grid-column: 3 / 6;  
      grid-row: 1 / 2;  
      z-index: 2;  
      padding-left: 0.25em;  
      margin-bottom: initial;  
    }  
  
    h2 {  
      grid-row: 1 / -1;  
      grid-column: 6 / 7;  
      writing-mode: vertical-rl;  
      margin-bottom: initial;  
      color: $text;  
    }  
  
    hr {  
      grid-column: 5 / 6;  
      grid-row: 2;
```


Tycho



10.2.2010 TORONTO
THE DRAKE HOTEL

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[READ MORE](#)

TOUR DATES

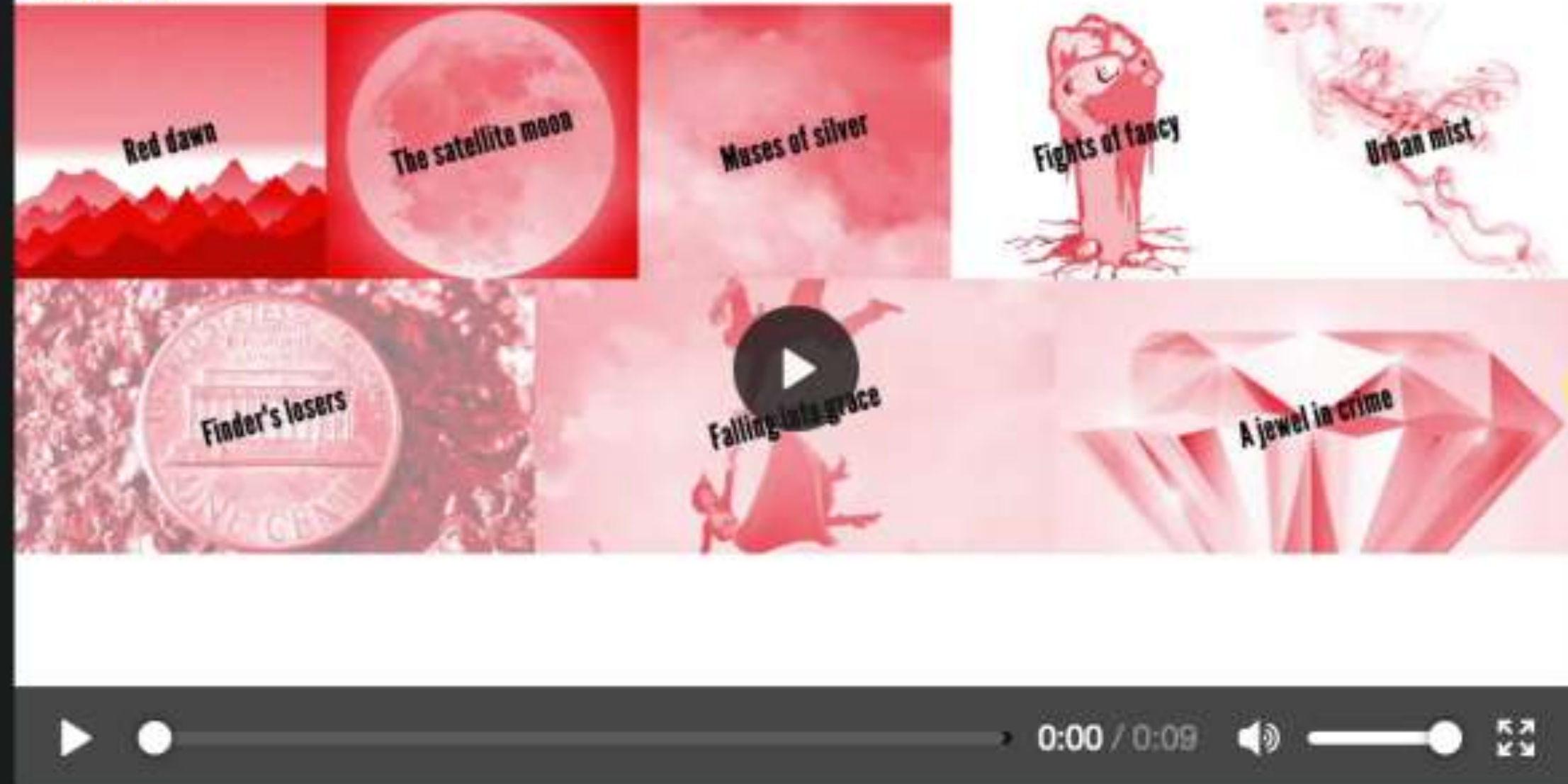
0:00 / 0:09



Fallback with feature queries

A conditional group rule whose condition tests whether the user agent supports CSS property:value pairs.

Contents



```
main {  
  display: flex;  
  flex-wrap: wrap;  
  justify-content: space-between;  
}  
  
.title {  
  width: 100%;  
}  
  
.card {  
  flex: auto;  
  min-width: 12em;  
  height: 12em;  
}
```





```
@supports (display:grid) {
  main {
    display: grid;
    grid-template-columns: repeat(auto-fill, minmax(150px, 1fr));
    grid-auto-rows: 8em;
  }

  .title {
    width: initial;
  }

  .card {
    min-width: initial;
    height: initial;
  }
}

@media screen and (max-width: 383px) {
  main {
    grid-template-rows: 3em repeat(auto-fill, minmax(150px, 1fr));
  }
}

@media screen and (min-aspect-ratio: 1/1) {
  main {
    grid-template-columns: repeat(4, minmax(150px, 1fr));
    grid-template-rows: repeat(3, calc(100vh / 3));
    grid-template-areas: "a b c ."
                        "d e . f"
                        "g . h i";
  }
}
```


Browser support for @supports

CSS Feature Queries [↗](#)

CSS Feature Queries allow authors to condition rules based on whether particular property declarations are supported in CSS using the @supports at rule.

IE	Edge	Firefox	Chrome	Safari	Opera	iOS Safari	Opera Mini	Android Browser	Chrome for Android
9	14	56	62	10	48	10.2		4.4	
10	15	57	63	10.1	49	10.3		4.4.4	
11	16	58	64	11	50	11.2	all	62	64
	17	59	65	11.1	51	11.3			

✓ ✗ Partial Support

Global: 93.2% + 0% = 93.20%

Data from caniuse.com | Embed from caniuse.bitsofco.de

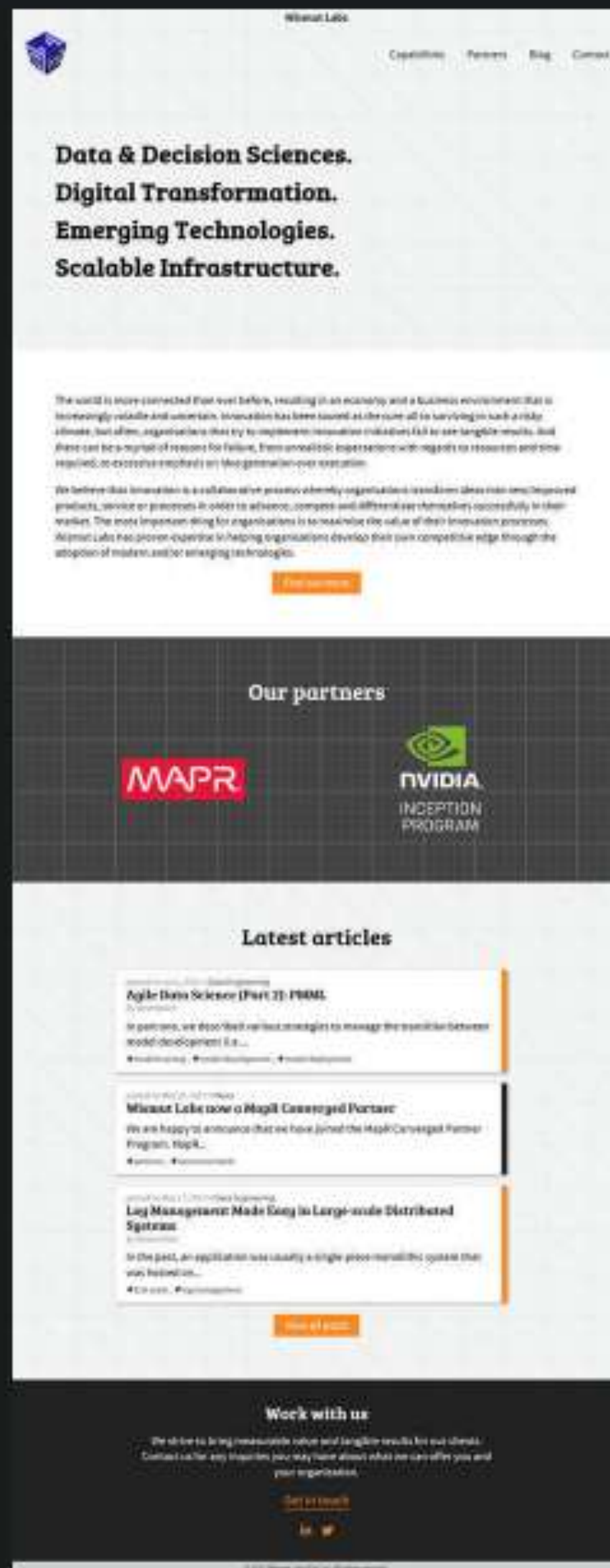
Enable accessible colours



Anatomy of a feature query

```
.selector {  
  /* Styles that are supported in old browsers */  
}  
  
@supports (property:value) {  
  .selector {  
    /* Styles for browsers that support the specified property */  
  }  
}
```





<https://www.wismutlabs.com>



“CSS isn't a programming language. It's a stylesheet language. We shouldn't expect it to behave like a programming language. It has its own **unique landscape and structures**, ones that people with programming language mental maps might not expect.”

—Danielle Huntrods



Shape the web we use and build for

- CSS specifications are [all on GitHub](#)
- [Raising browser bugs](#) can and does make a difference
- Write and talk about CSS features
- Browser developers are people too, provide feedback and [be nice about it](#).

The CSS Layout Workshop

Learn CSS layout with straightforward and practical examples. A course designed to remove layout confusion for good!

Does this sound familiar?

“

I love designing a site, but then find I have to compromise the design when it comes to building it with CSS.

“

My approach to building layouts is to try things, reload and see what happens.

“

I use a framework to do my layouts. I'd love to know what it is really doing under the hood.

“

Once I get my CSS working I'm afraid to make changes in case it all falls apart again!

“

I've never really understood why margins collapse.

“

<https://thecssworkshop.com/>

Study of Writing Modes



// on CodePen



// on CodePen



Return of the 1990s

// requires
display: contents

Other Experiments



<http://labs.jensimmons.com/>

Demos and examples

- Space Jam website
- Regular grids
- Malerei, Fotografie, Film (pg. 126)
- Braun HiFi print posters
- Simple overlap
- Tycho artist profile
- Fallback with feature queries
- Wismut Labs website
- Demos source code on GitHub

Useful references

- [CSS Grid Layout Module Level 1](#)
- [Codrops CSS Grid reference](#)
- [Grid by Example](#)
- [Learn CSS Grid](#)
- [Grid Auto-Placement Is Ready](#)
- [Automatizing the Grid](#)
- [Deep Dive into Grid Layout Placement](#)
- [CSS Grid Layout and positioned items](#)
- [The Story of CSS Grid, from Its Creators](#)
- [CSS Grid Layout is Here to Stay](#)
- [The New Layout Standard For The Web: CSS Grid, Flexbox And Box Alignment](#)

THANK YOU!



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