

FRONTEND MEETUP BUDAPEST & BUDAPEST JS PRESENTS

CSS CONTAINER QUERIES

AUG 5, 2021

A portrait of a man with short brown hair and a slight beard, smiling at the camera. He is wearing a black button-down shirt. The background consists of vertical wooden planks.

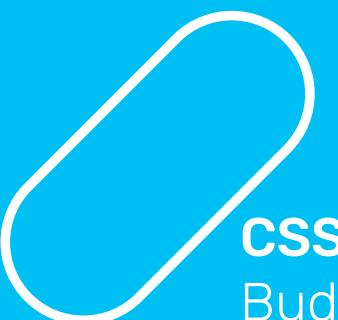
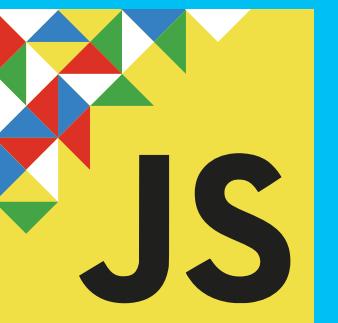
IBM Cloud

@_Nec

@jsconfbp

@cssconfbudapest

@frontendmeetup



HI, I'M SZabolcs



JSConf

Budapest

2-3 June

2022



CSS CONTAINER QUERIES

TOPICS

- HISTORY
- API & USAGE
- EXAMPLES & USE CASES
- AVAILABILITY

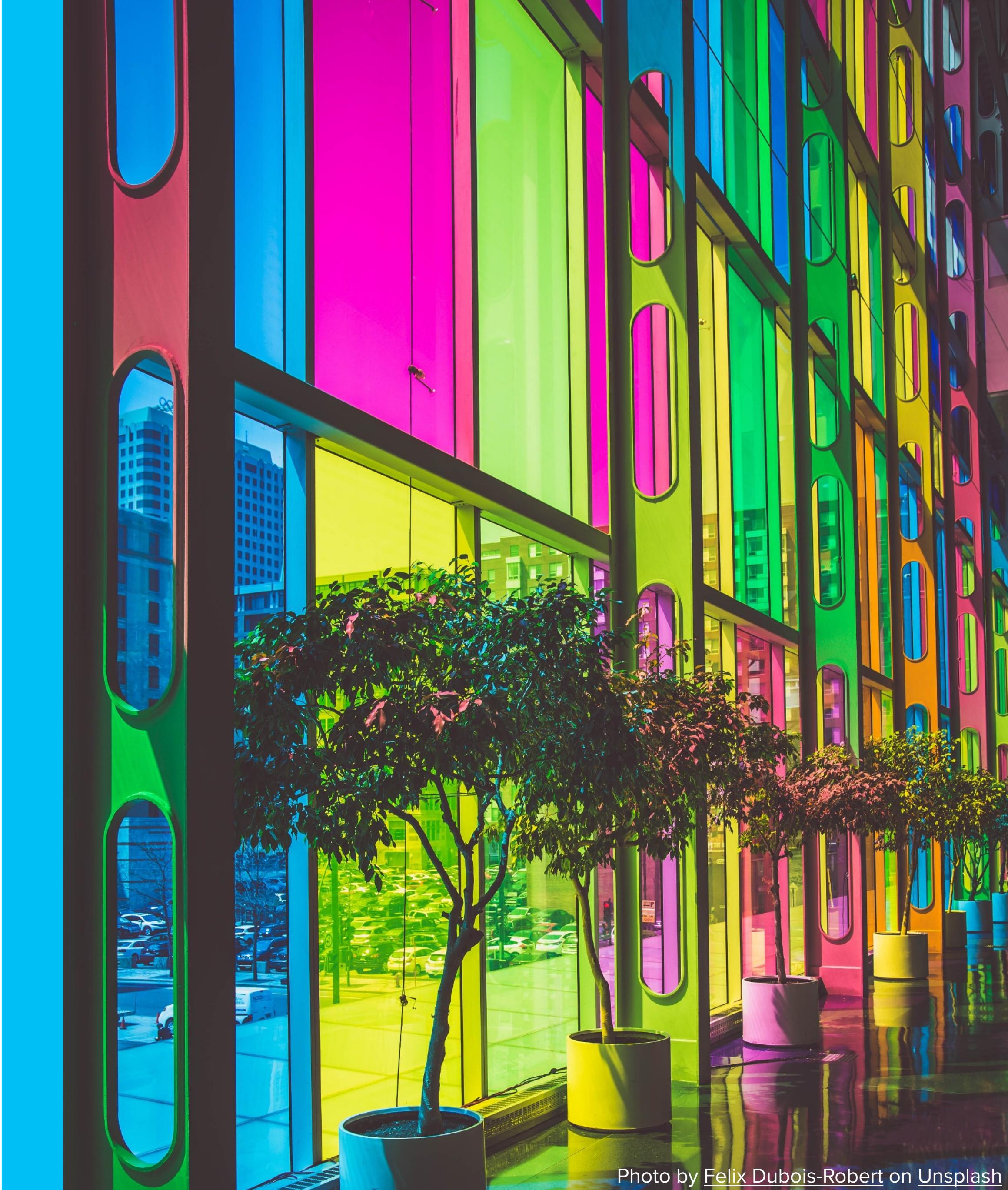


Photo by Felix Dubois-Robert on [Unsplash](#)

HISTORY

“MEDIA QUERIES”

***PART OF THE ORIGINAL IDEA FOR CSS,
BUT NEVER GOT INCLUDED IN CSS LEVEL 1***

[ARTICLES](#)[EVENTS](#)[TOPICS](#)[WRITE FOR US](#)[LANGUAGE \(ENGLISH\) ▾](#)

ALISI APART



Responsive Web Design

by [Ethan Marcotte](#) · May 25, 2010

Published in [CSS](#), [Interaction Design](#), [Layout & Grids](#), [Mobile/Multidevice](#), [Responsive Design](#)

2012

W3C RECOMMENDATION IN CSS 3

MEDIA QUERIES - THE BAD PARTS

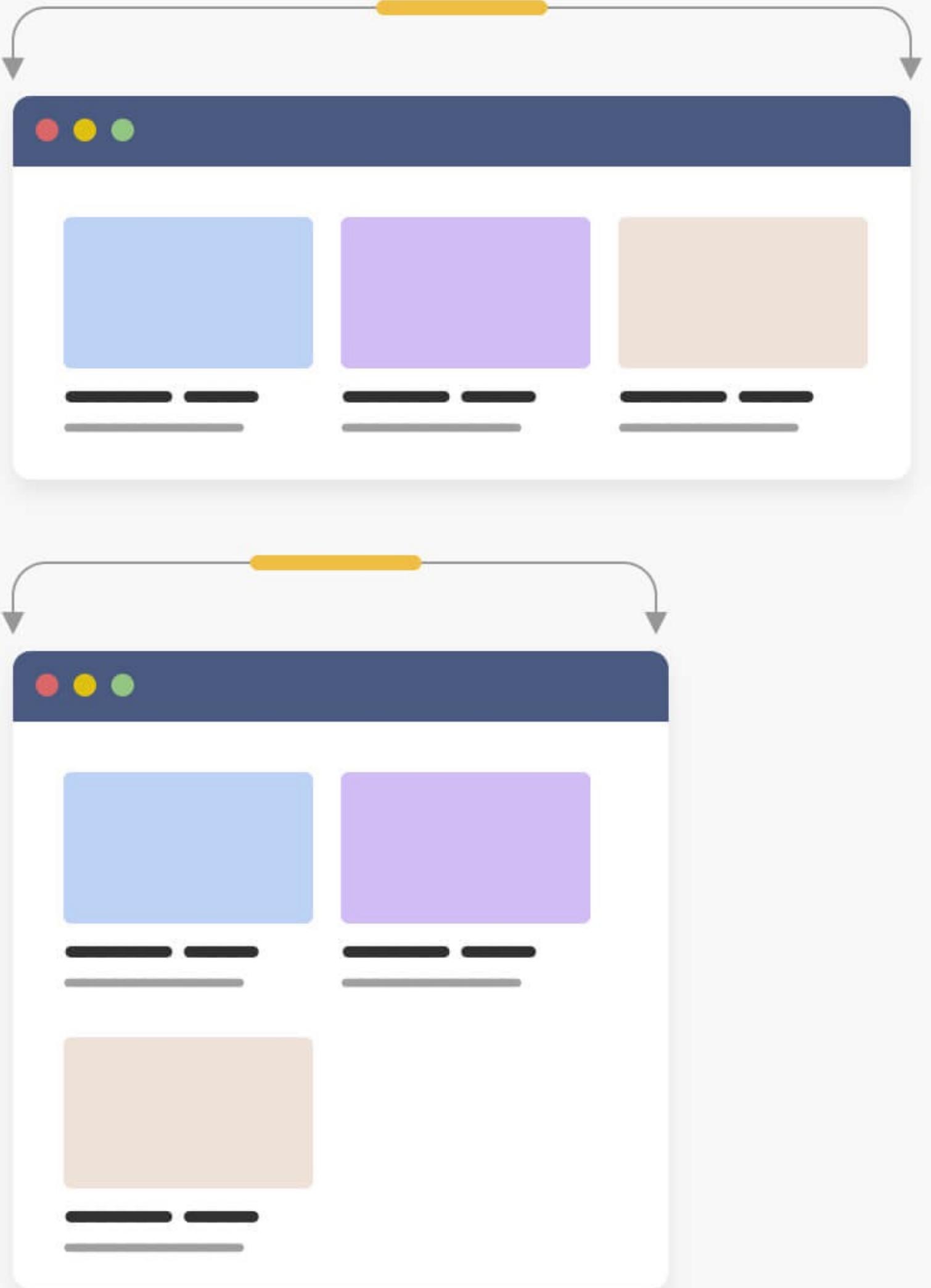
- CANNOT BE APPLIED TO AN ELEMENT
- ANTI MODULAR
- LEAD TO HACKS, POLYFILLS & UNOFFICIAL APIs

MEDIA QUERIES - THE BAD PARTS

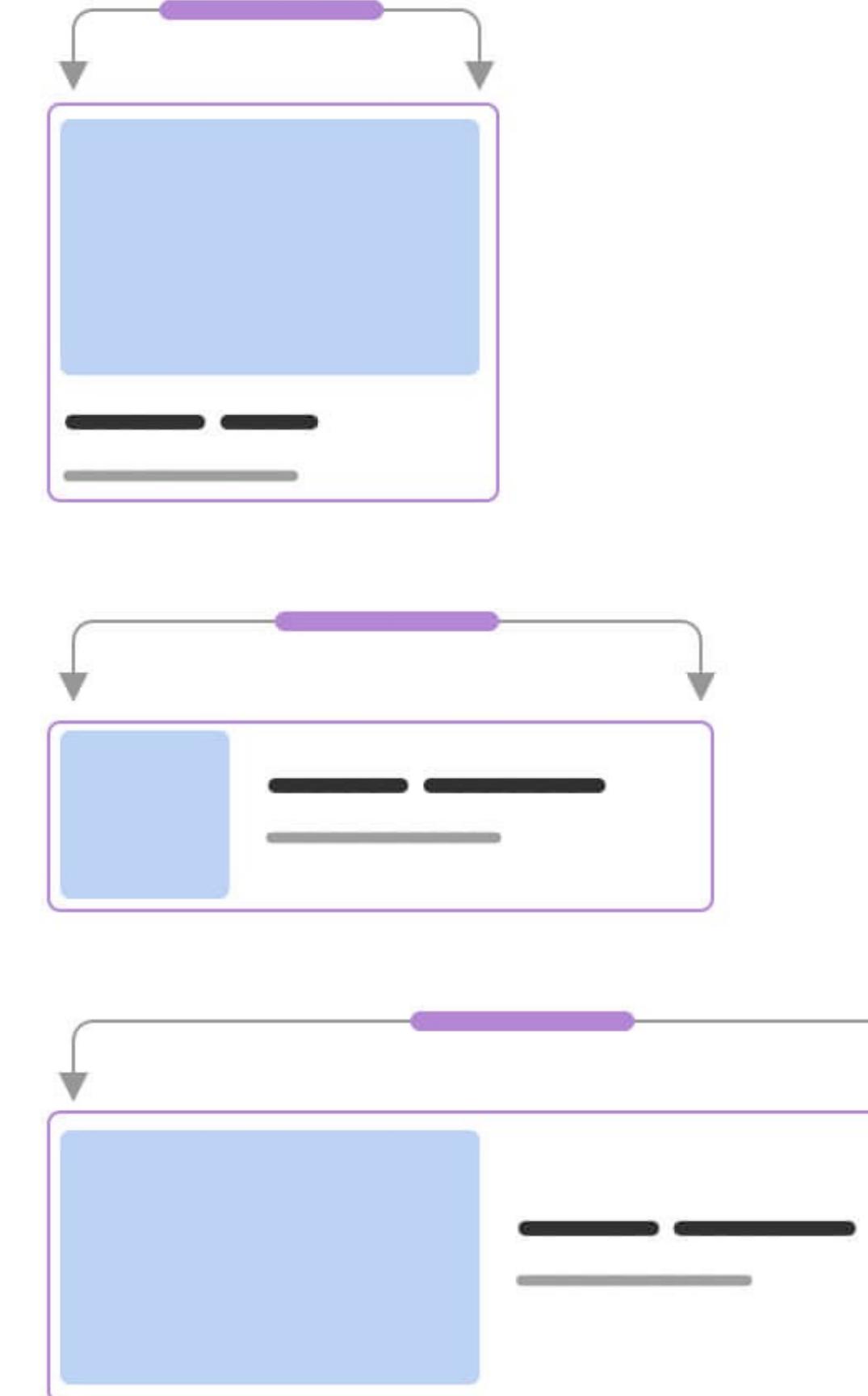
- CANNOT BE APPLIED TO AN ELEMENT
- ANTI MODULAR
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Media Query

● Viewport width

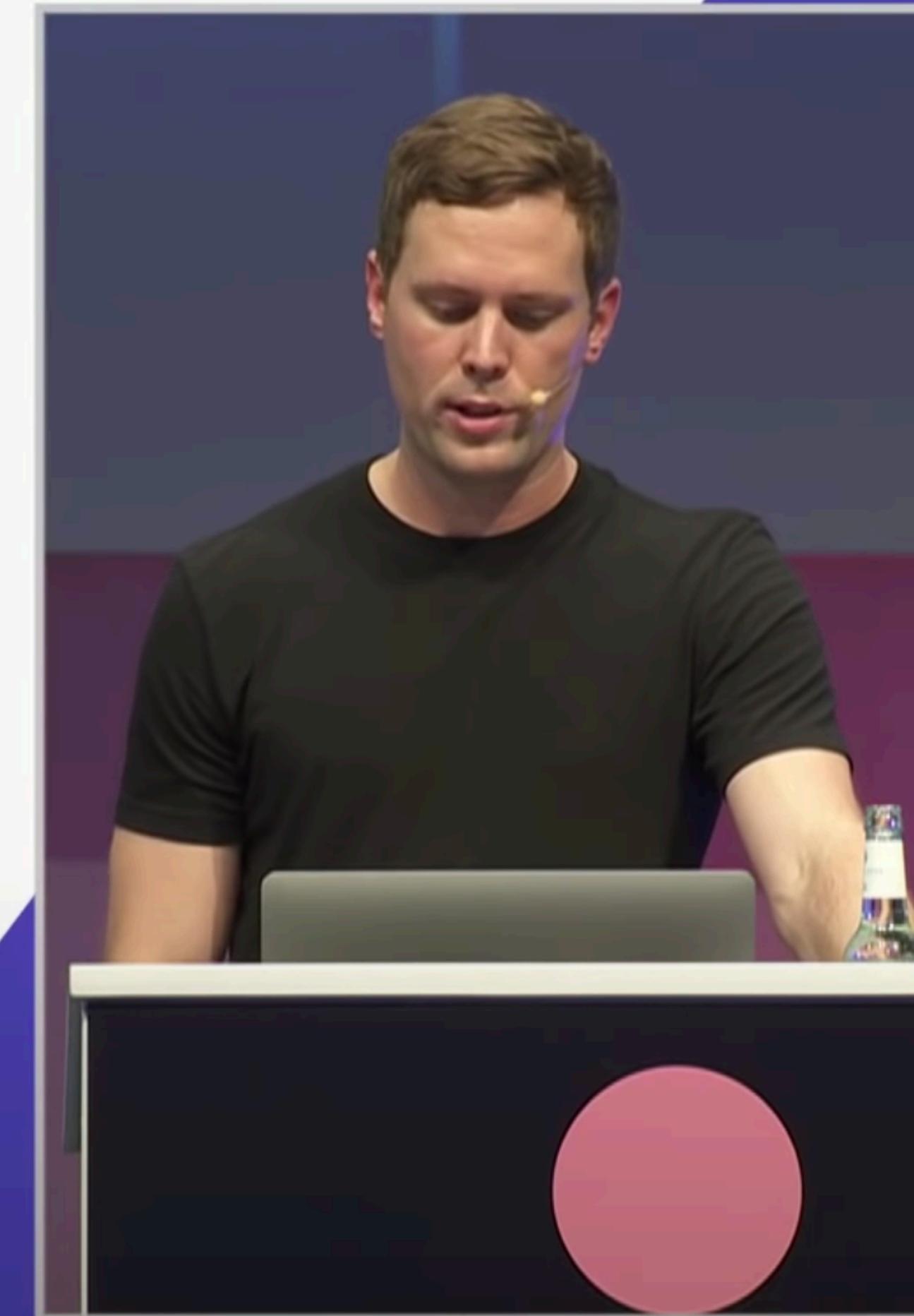


ELEMENT QUERY



DIFFERENCE BETWEEN
MEDIA AND CONTAINER
QUERIES

Image by
Ahmad Shadeed
ishadeed.com



W3C Editor's Draft

CSS Containment

Editor's Draft, 16 July 2015

▼ Specification Metadata

This version:
<http://dev.w3.org/cswwg/css-containment/>

Issue Tracking:
[Inline In Spec](#)
[GitHub Issues](#)

Editor:
[Tab Atkins \(Google\)](#)

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Abstract

This CSS module describes the 'contain' property, which indicates that the element's subtree must be contained within the boundaries of the element. This enables heavy optimizations by user agents when used well.

CSS is a language for describing the rendering of structured documents (such as HTML and XML) on the Web.

2010 2011 2012 2013 2014 2015 2016

CSSConf EU 2018

Philip Walton:
Container Queries

NOT TRIVIAL

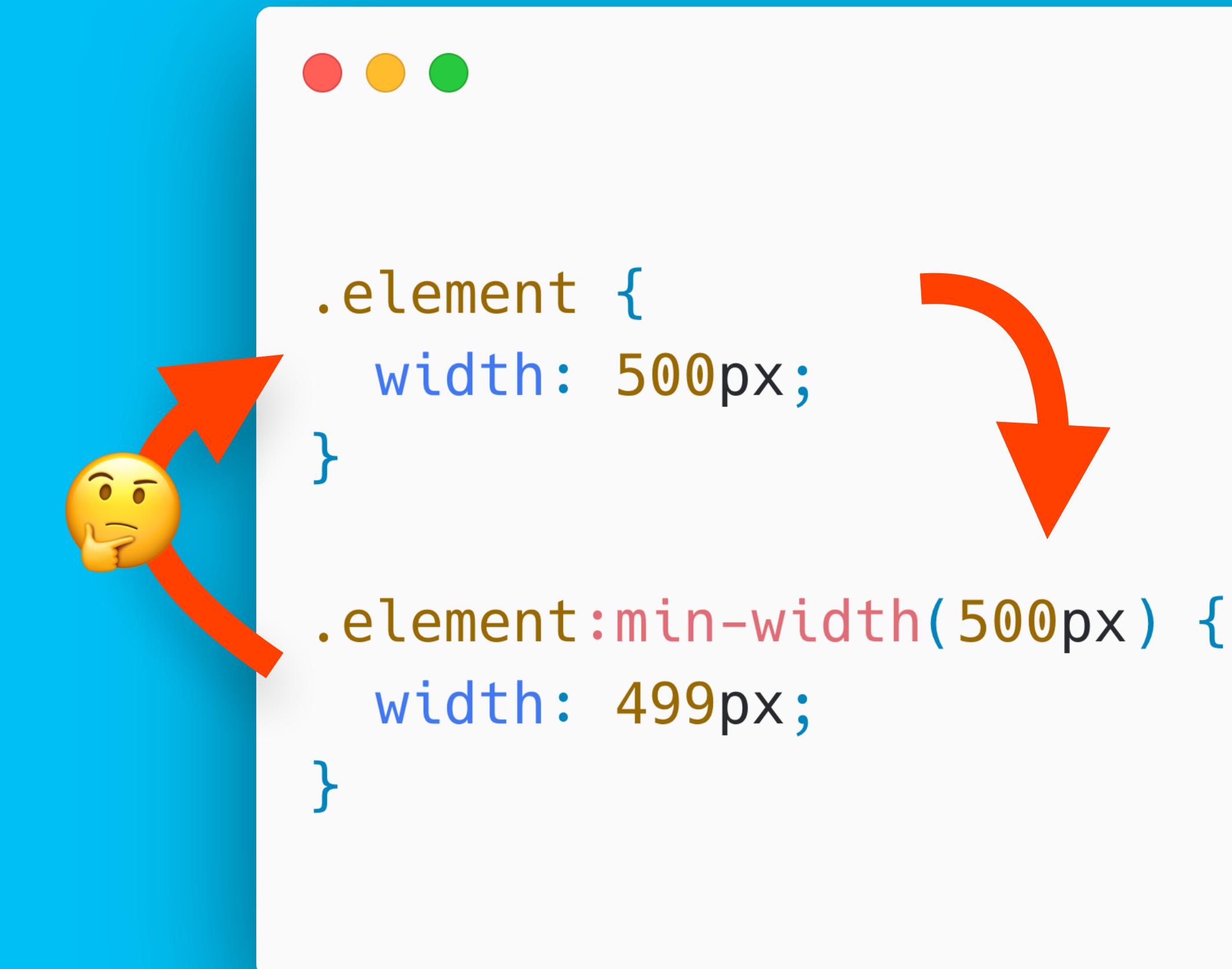
:(|

**INFINITE LOOPS
&
BREAKING THE CASCADE**

“ELEMENT QUERY” PROBLEMS

INFINITE LOOPS

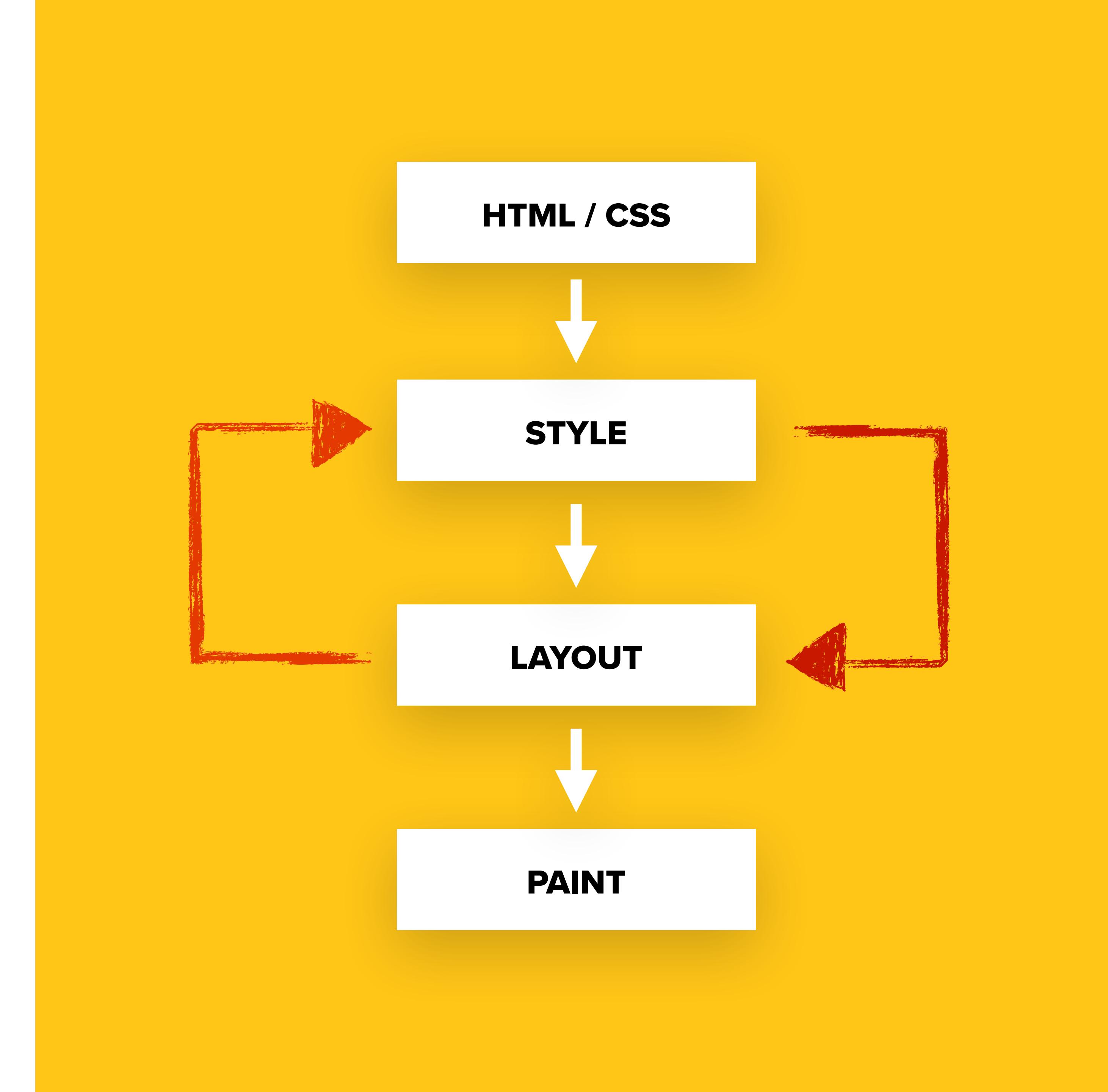
- Element-scoped queries
- Can create contradicting rules
- Which one should be true?



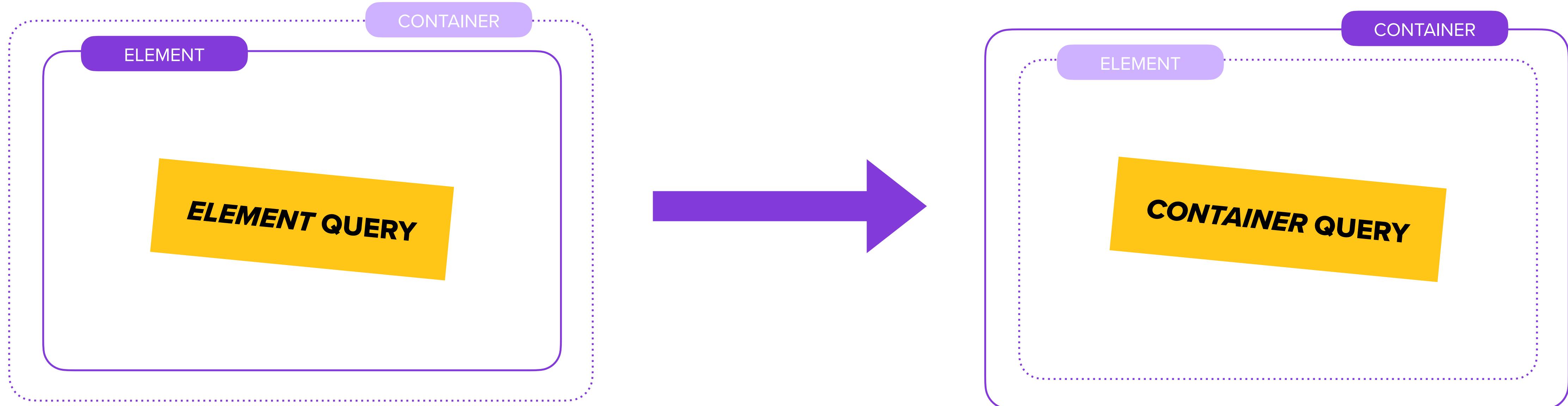
“ELEMENT QUERY” PROBLEMS

BREAKING THE CASCADE

- Calculate styles,
inherited, default, ruled by specificity
- Create layout,
everything gets its dimension
- Layout sizing cause style recalculations :(



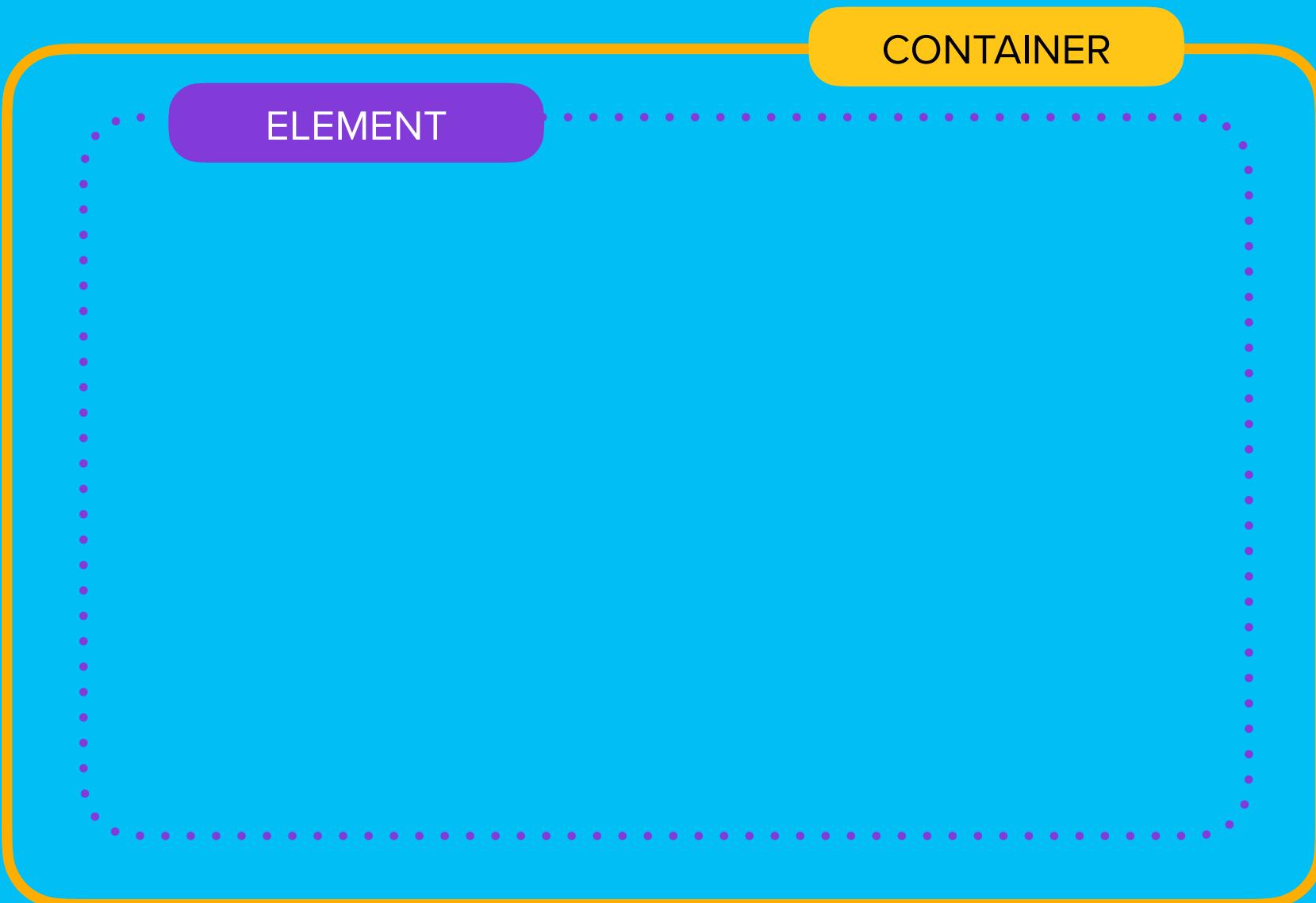
CONTEXT SHIFT



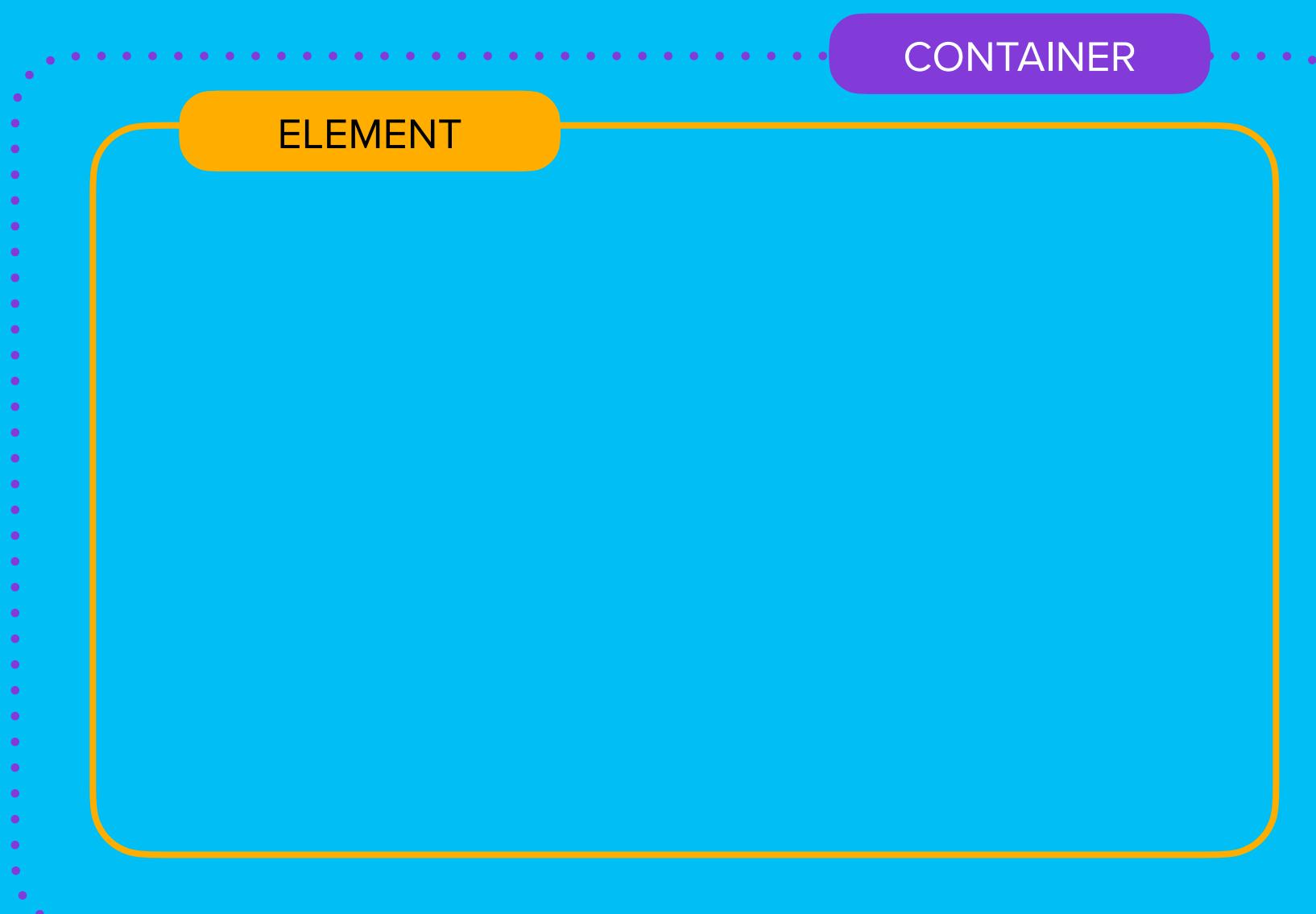
- **Containment context**
creates a new formatting context, like block, or flex does the same
- **Size containment**
content will not alter the size of the parent (like floated elements)

API & USAGE

CONTAINER CONTEXT



CONTAINER QUERIES



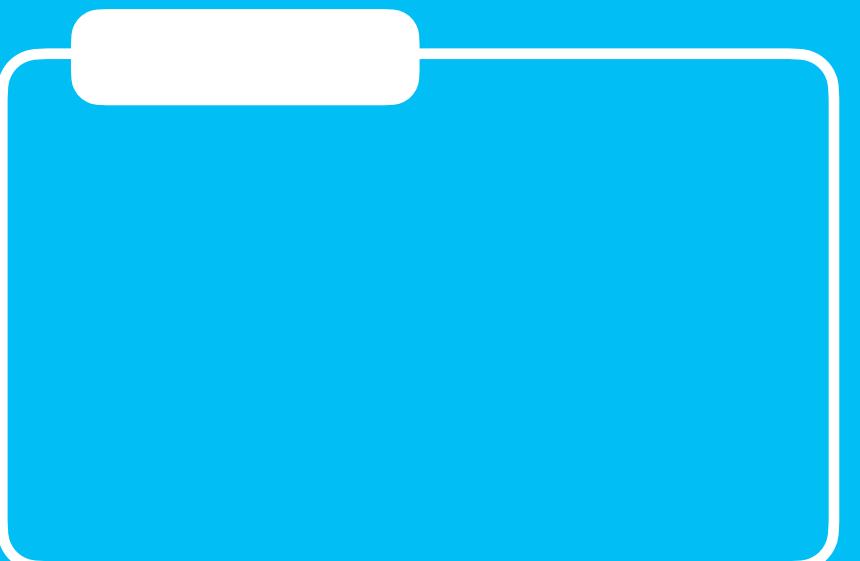
```
@container (max-width: 600px) {  
  .element {  
    // set up narrow containment  
  }  
}  
  
@container (min-width: 600px) {  
  .element {  
    // set up wide containment  
  }  
}
```



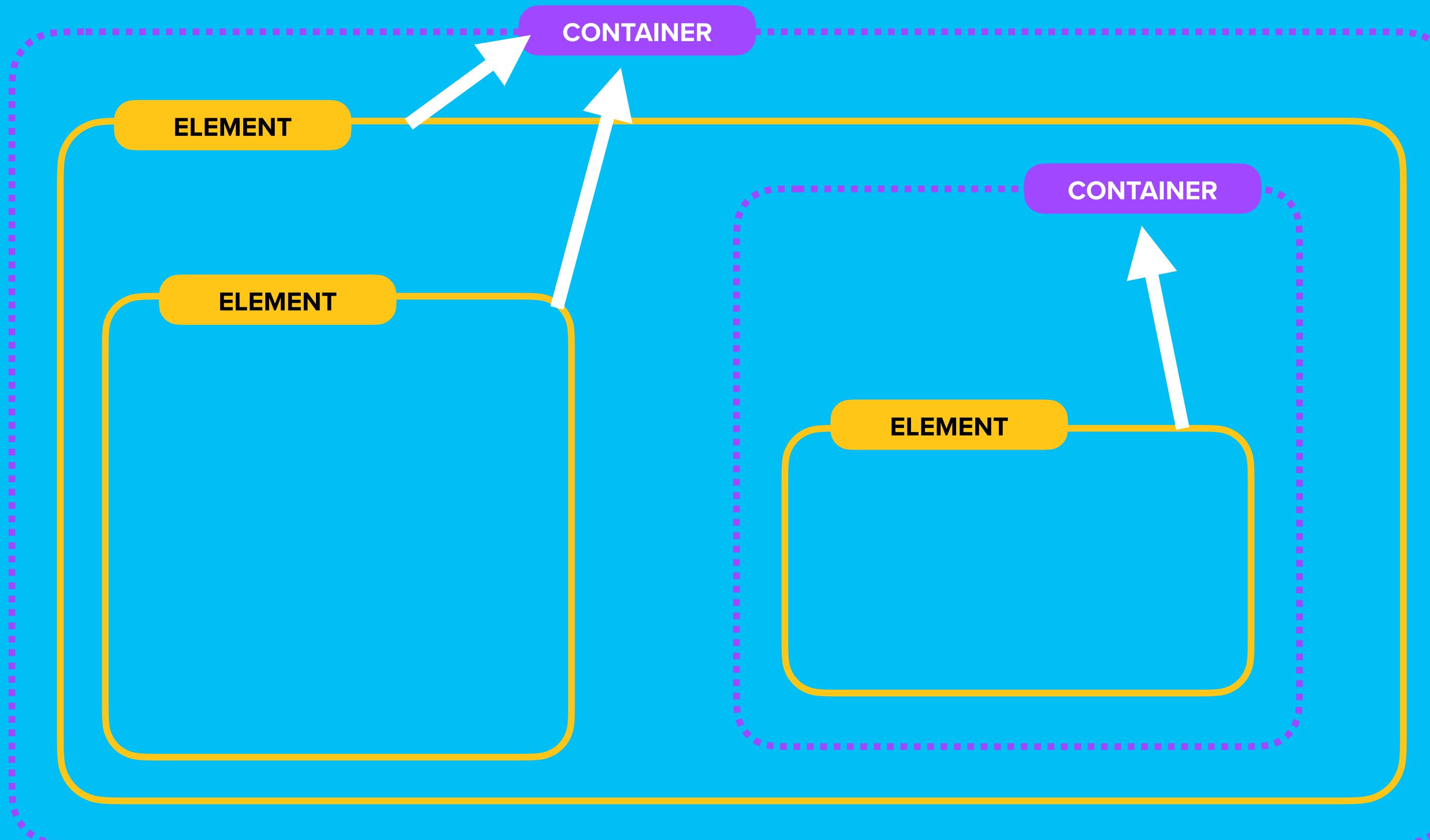
ONLY THE CONTEXT MATTERS



ELEMENTS CONTROLLED BY QUERIES
DON'T NEED TO BE AWARE OF THE ELEMENT
THAT SET THE CONTEXT



QUERIES & CONTEXT



- QUERIES ARE CALCULATED WITHIN THE CLOSEST PARENT CONTEXT
- SIMILAR TO STACKING CONTEXT, CREATED WITH 'POSITION'

DEMO TIME

<https://codepen.io/necccc/full/abWjEbz>

EXAMPLES & USE CASES

EXAMPLES AND USE CASES

PAGINATION

1 2 3 4 5 6

PREVIOUS

NEXT

PREVIOUS

NEXT

- *Demo by Ahmad Shadeed*

EXAMPLES AND USE CASES

FORM FIELDS

- *Demo by Ahmad Shadeed*



EXAMPLES AND USE CASES

ALTERNATING GRIDS

- Grid sets container sizes
- Viewport sets grid layout



Introduction to Core Web Vitals

In this talk we will explore what metrics the guidance includes and what tools are available to measure them.



Managing application state with science

Attendees are going to learn about how to apply finite state machines to a real world problem of fetching data from a server. This talk is suitable for everyone ranging from beginner to intermediate.



CSS Container Queries - components for all sizes!

CSS Container Queries are one of the best things that happened to CSS in these recent years, so let's see where our components will evolve pretty soon.



The Smart(home) way to deal with your neighbor and other home automation adventures

Lore ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris.



A pragmatic look at authentication in microservices

In this talk, we'll look at what authentication and authorization are in general, and then go more and more into specifics while explaining some tradeoffs and decisions along the way.



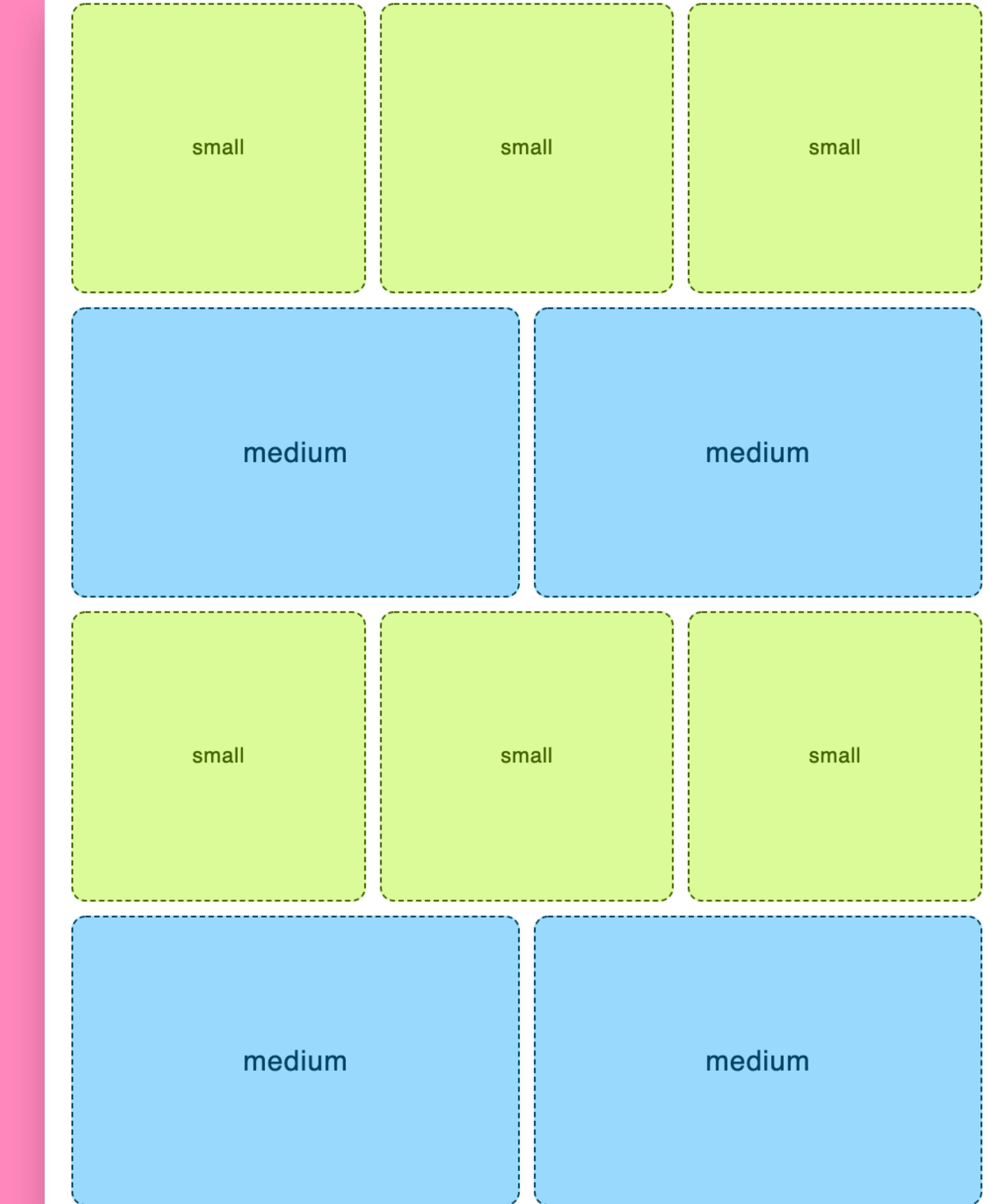
Quiz time by Prisma.io

Our friends from Prisma.io will drop by a bring some goodies to our community, including a fun quiz :)

EXAMPLES AND USE CASES

IMAGES

- Aspect ratios, image sizes
- Even better responsive images, loading proper version not just by viewport, but by containers
- *Demo by Stephanie Eckles*



AVAILABILITY

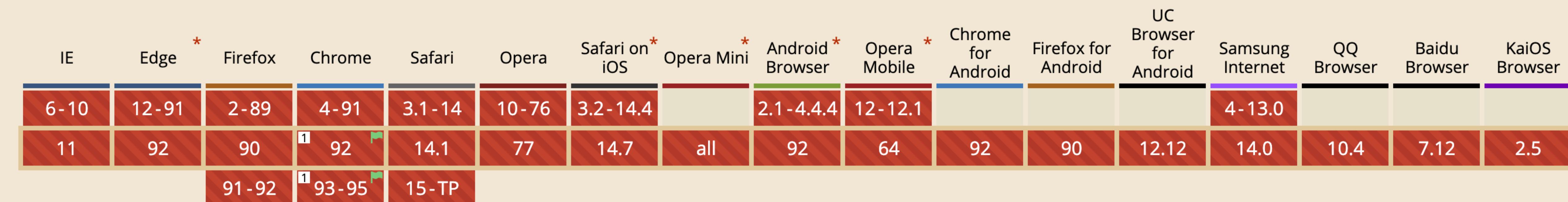
CSS Container Queries

— UNOFF

Usage
Global
% of all users
0%

Experimental media query to apply styles to specified container elements rather than the entire page. Currently implemented using the `contain` property and `@container` at-rule.

Current aligned Usage relative Date relative Filtered All



Notes

Test on a real browser

Known issues (0)

Resources (6)

Feedback

Chrome status: [Proposed](#)

¹ Can be enabled with the "Enable CSS Container Queries" feature flag under `chrome://flags`

AVAILABLE TODAY

- Chrome Canary
- Experimental flag under *chrome://flags*
- *#enable-container-queries*

RESOURCES

CSS Containment Level 3

<https://drafts.csswg.org/css-contain-3>

Phil Walton's talk from CSSConf EU 2018

https://www.youtube.com/watch?v=0wA4CMo9_EU

A Primer On CSS Container Queries by Stephanie Eckles

<https://www.smashingmagazine.com/2021/05/complete-guide-css-container-queries/>

Collection of demos on Codepen

<https://codepen.io/collection/XQrgJo>

THANK YOU

ANY QUESTIONS?