FLEXBOX

What is CSS Flexbox?

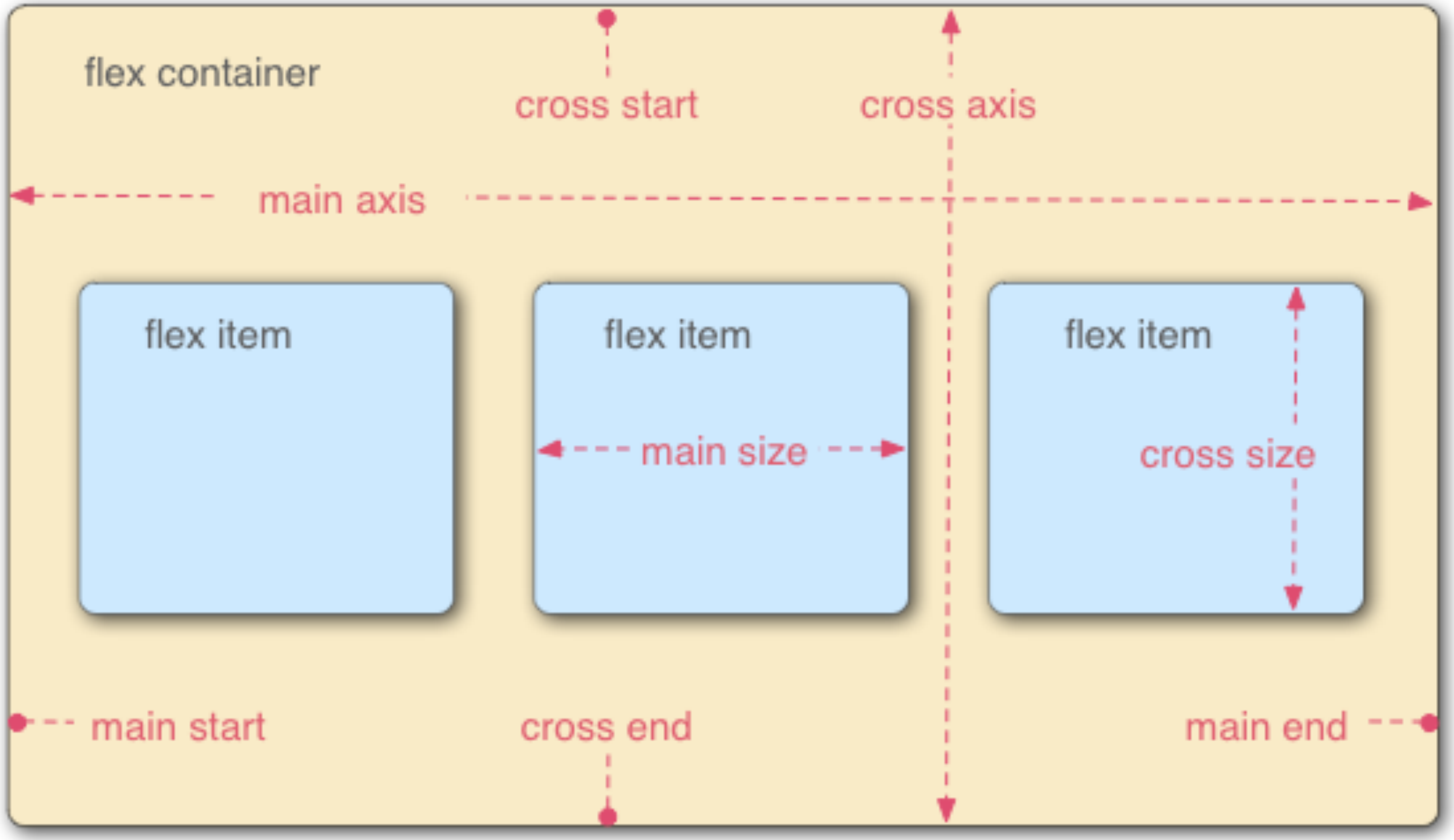
- The Flexbox Layout module aims at providing a more efficient way to lay out, align, and distribute space among items in a container, even when their size is unknown and/or dynamic (thus the word "flex").

Can I use it?

caniuse.com

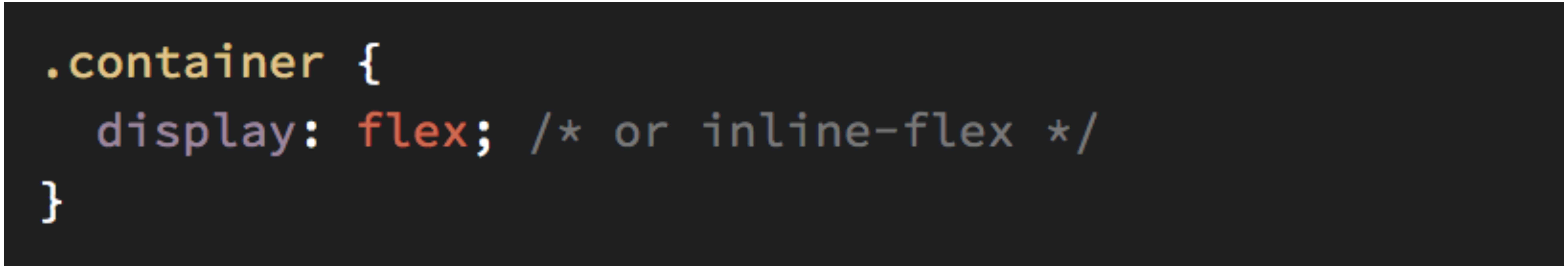
IE	Edge *	Firefox	Chrome	Safari	Opera	iOS Safari *	Opera Mini *	Android Browser *	Chrome for Android
8			45					[1] 4.3 −	
9			46					4.4	
[2][4] 10 −		43	47			8.4 −		4.4.4	
[4] 11	13	44	48	9	34	9.2	8	47	47
	14	45	49	9.1	35	9.3			
		46	50		36				
		47	51						

The Container



Flexbox Container: display

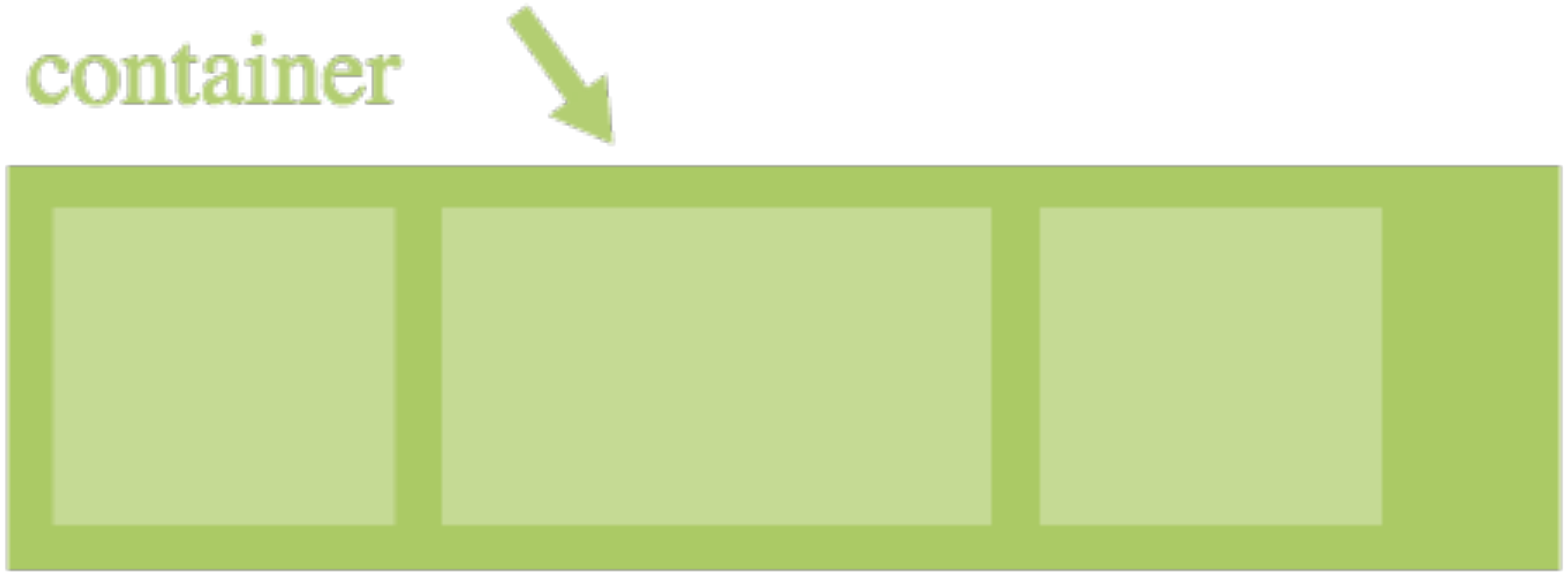
- display: flex defines an element as a flex container and enables a flex context for all its direct children.



```css
.container {
  display: flex; /* or inline-flex */
}
```

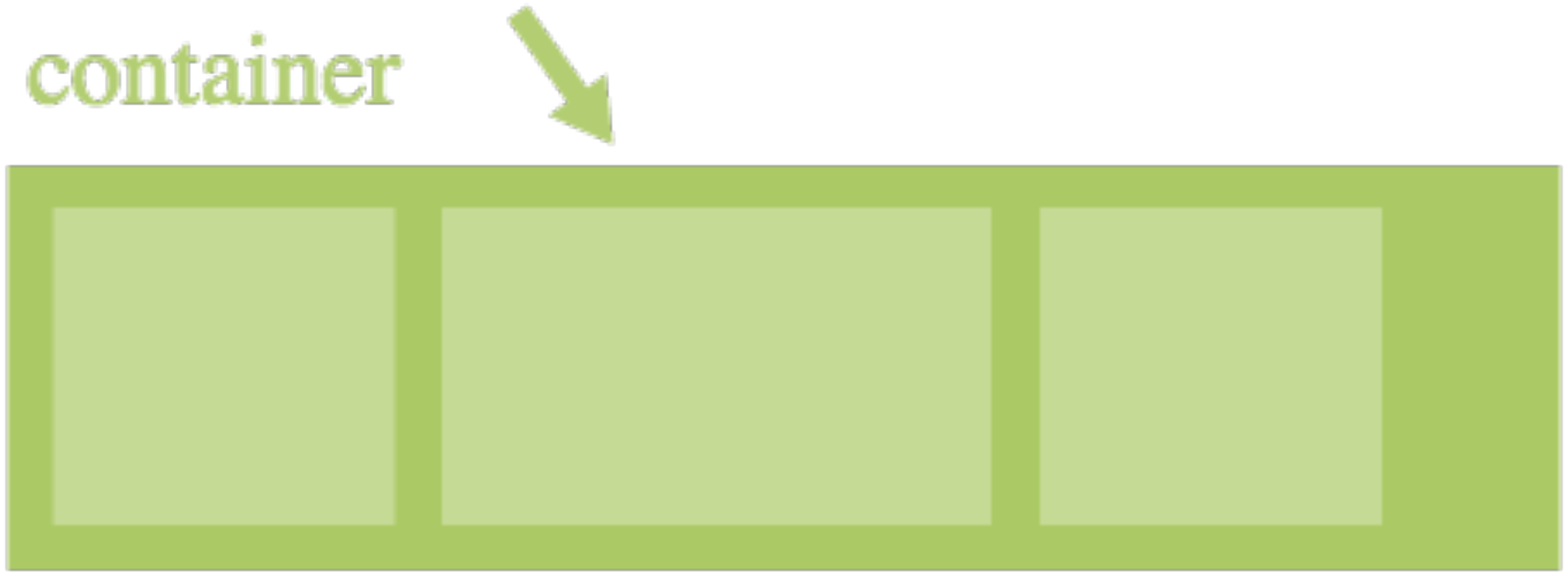
Flexbox Container

- Flexbox gives the container the ability to alter its items' dimensions (and order) to best fill the available space.



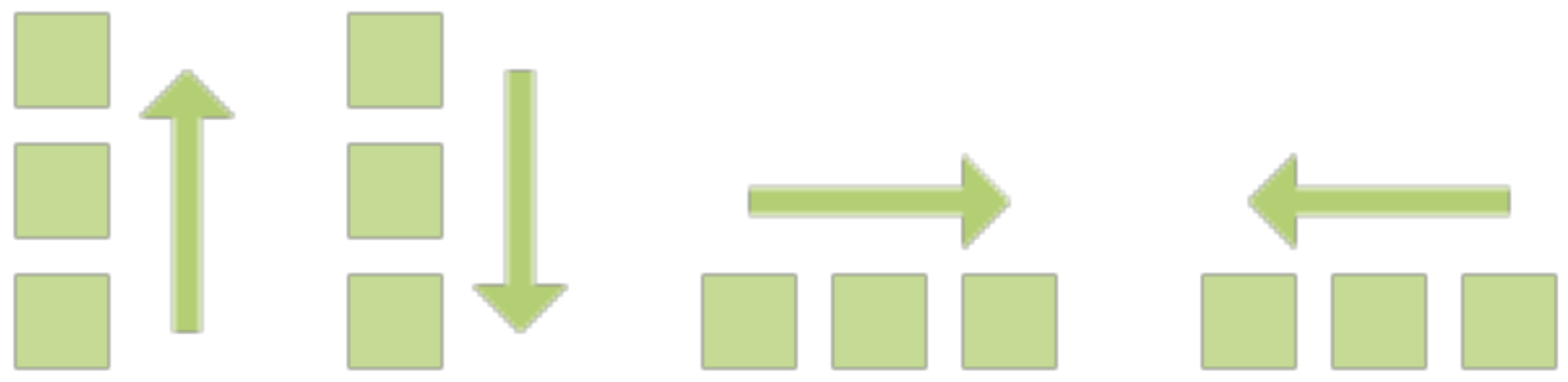
Flexbox Container

- A flex container expands flexible items to fill free space, or shrinks them to prevent overflow.



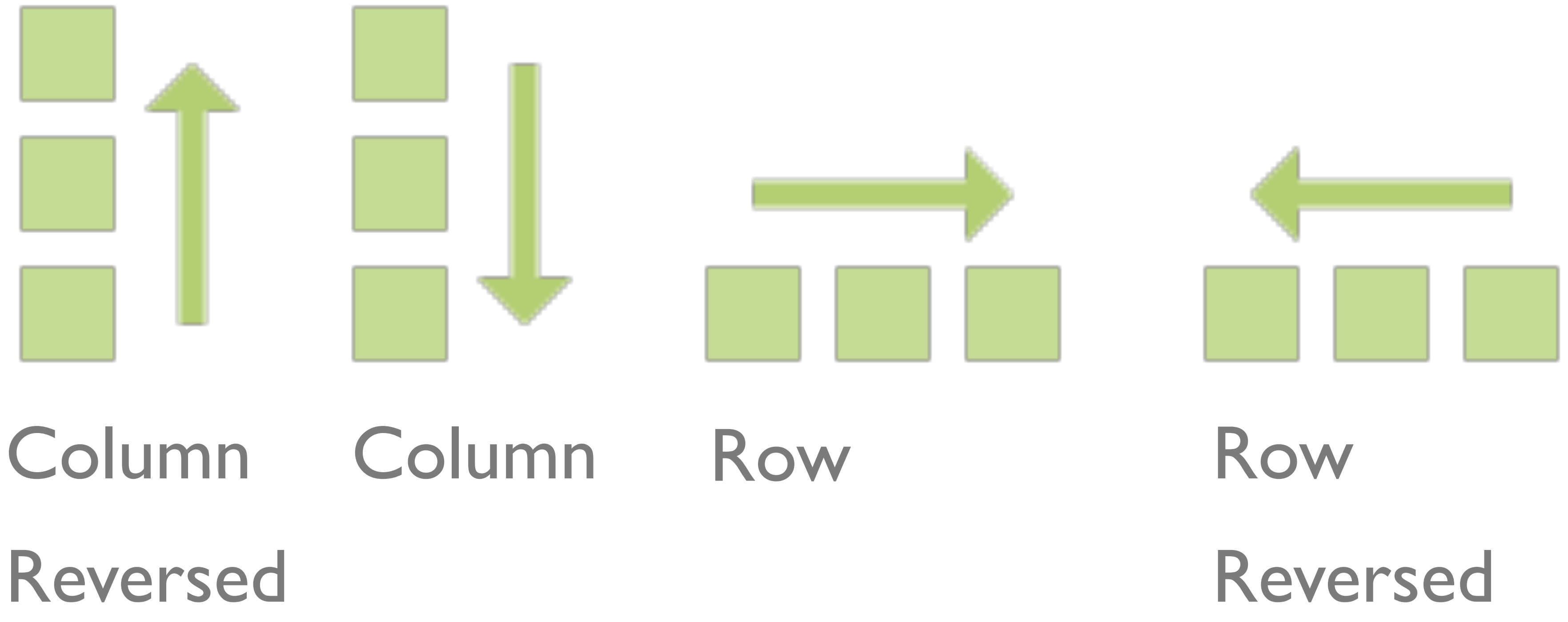
Flexbox Container: flex-direction

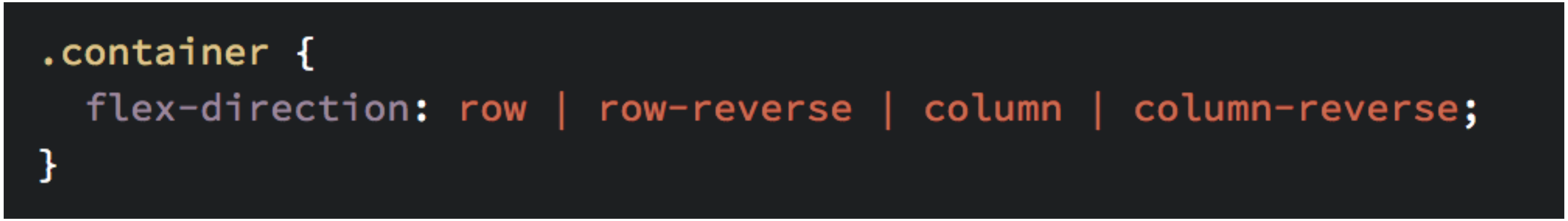
- Flexbox is (aside from optional wrapping) a single-direction layout concept. Think of flex items as primarily laying out either in horizontal rows or vertical columns.
- “main axis” and “cross axis”



Flexbox Container: Direction

- Think of flex items as primarily laying out either in horizontal rows or vertical columns.

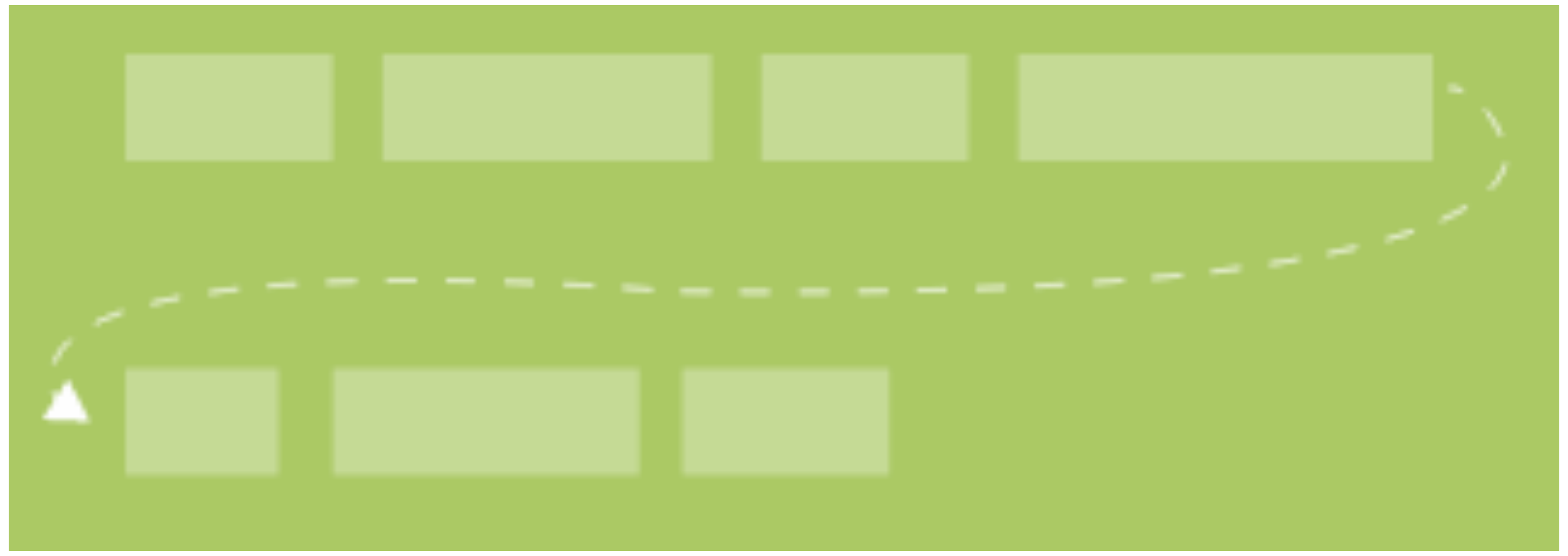


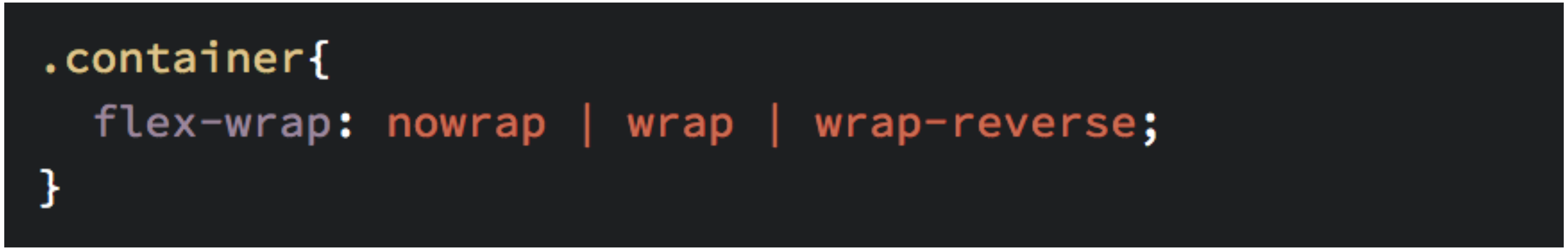


```
.container {
  flex-direction: row | row-reverse | column | column-reverse;
}
```

Flexbox Container: wrap

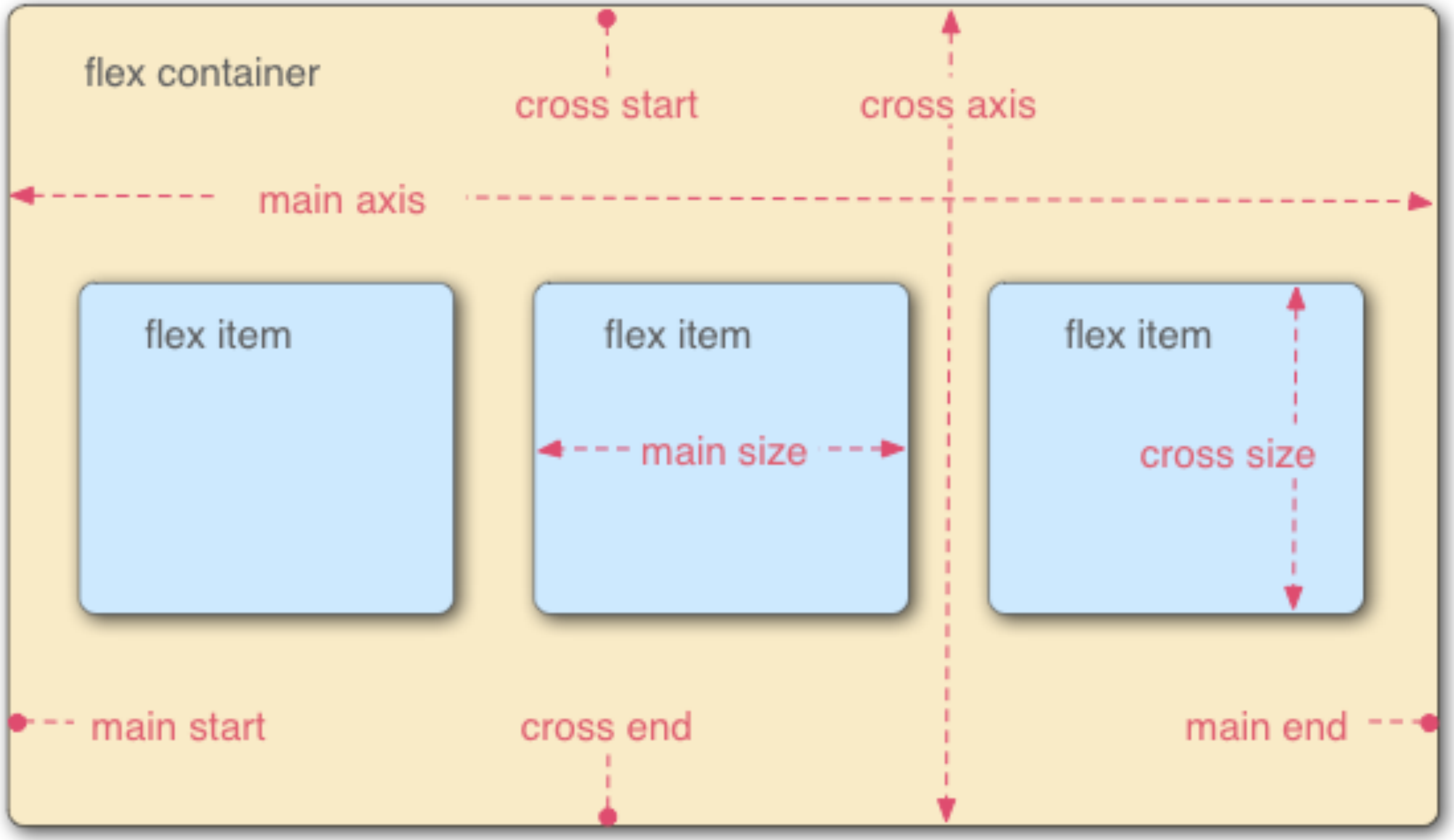
- Items will all try to fit onto one line. Items can wrap as needed with this property. Direction also plays a role here, determining the direction new lines are stacked in.





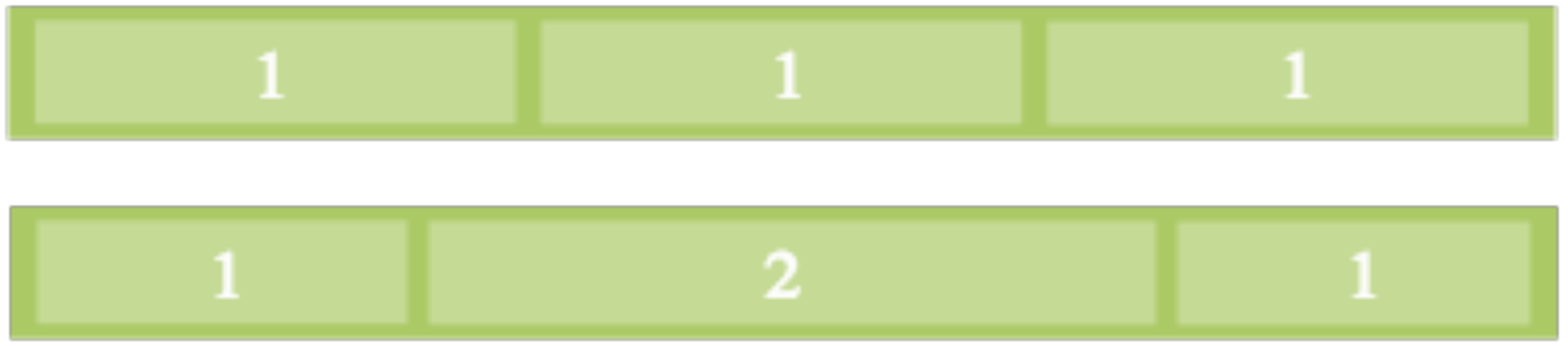
```
.container{
  flex-wrap: nowrap | wrap | wrap-reverse;
}
```

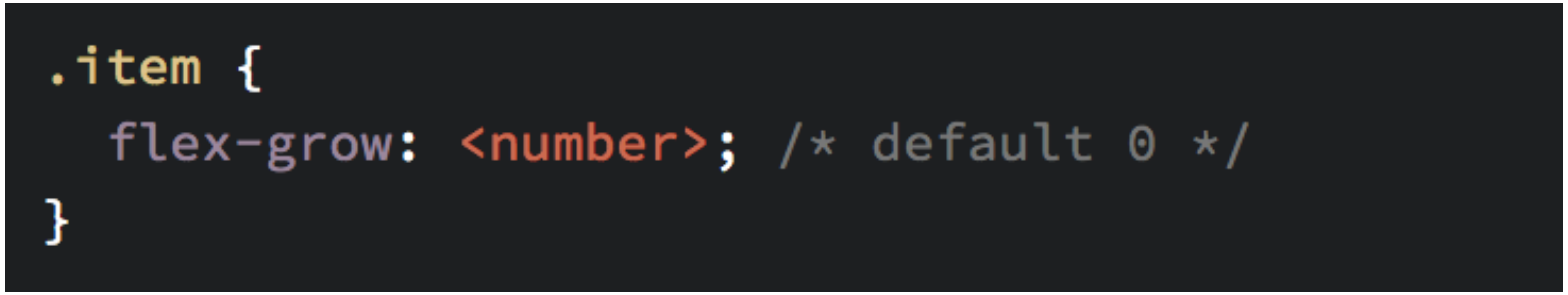
The Items


flex container
cross start
cross axis
main axis
flex item
flex item
flex item
main size
cross size
main start
cross end
main end

Flexbox Items: flex-grow

- Flex items can grow if necessary. This property accepts a unit-less value that serves as a proportion. It dictates what amount of the available space inside the flex container the item should take up.

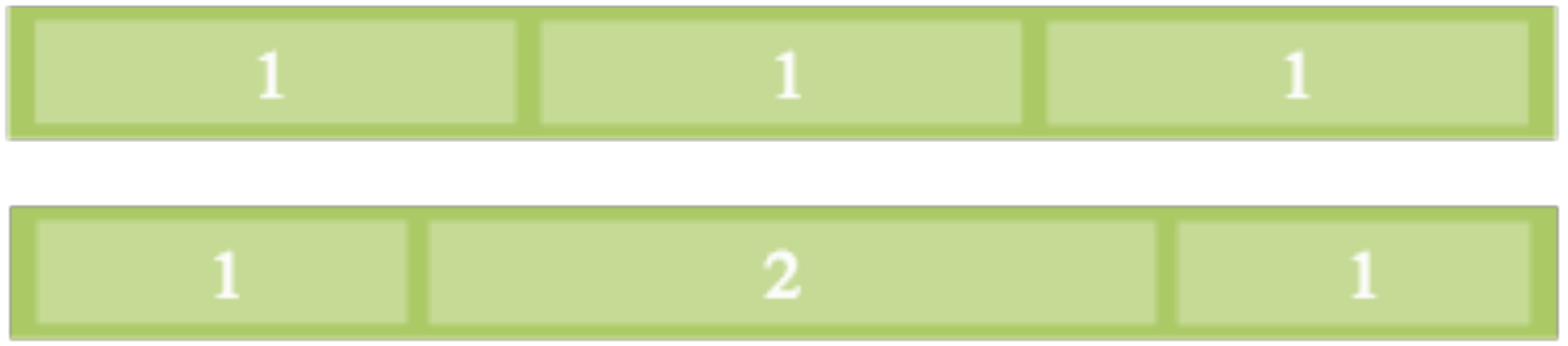


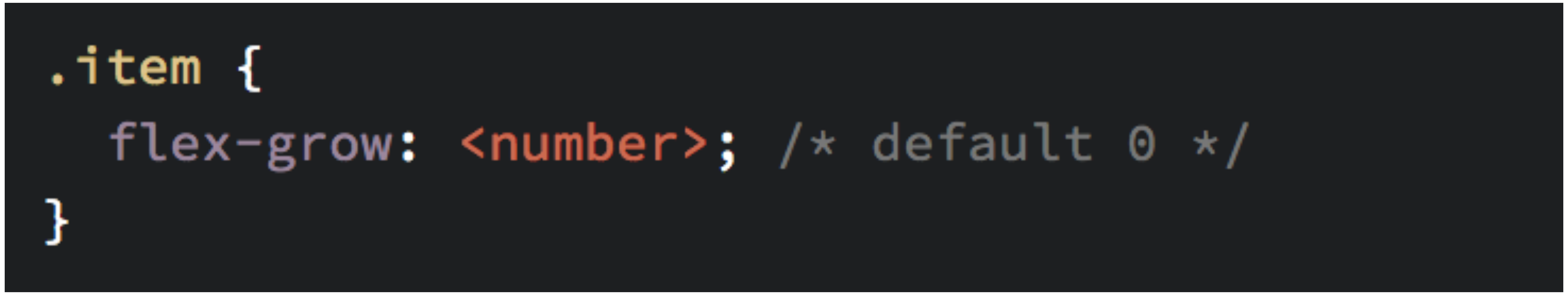


```
.item {
  flex-grow: <number>; /* default 0 */
}
```

Flexbox Items: flex-grow

- eg. if all items have flex-grow set to 1, every child will set to an equal size inside the container. If set to 2, that child would take up twice as much space as the others.

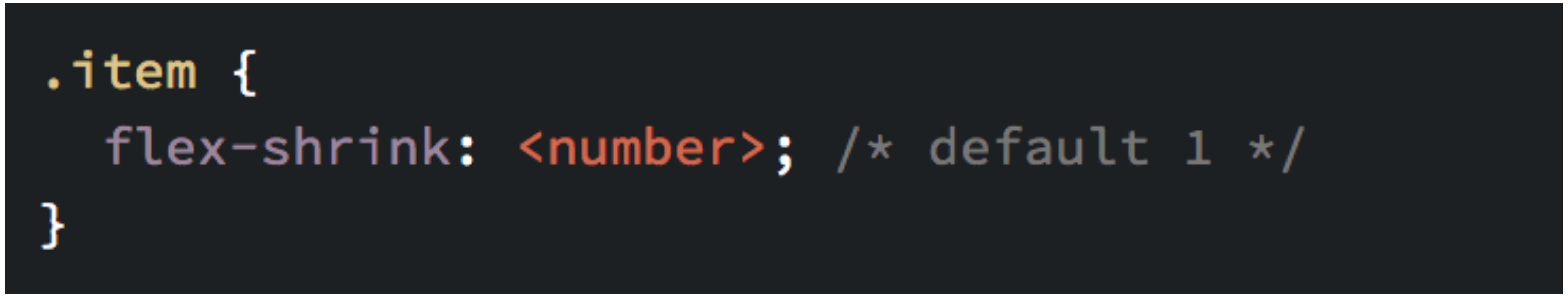




```
.item {
  flex-grow: <number>; /* default 0 */
}
```

Flexbox Items: flex-shrink

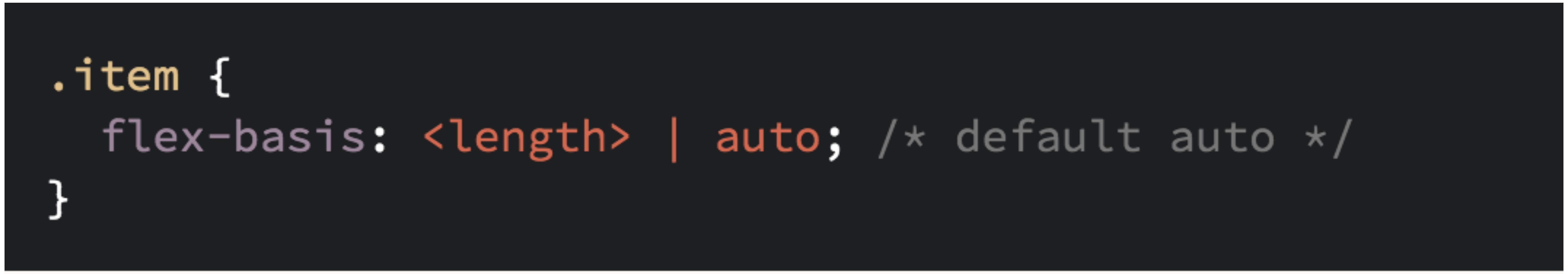
- This defines the ability for a flex item to shrink if necessary. Negative numbers are invalid.
- Not that necessary



```css
.item {
  flex-shrink: <number>; /* default 1 */
}
```

Flexbox Items: flex-basis

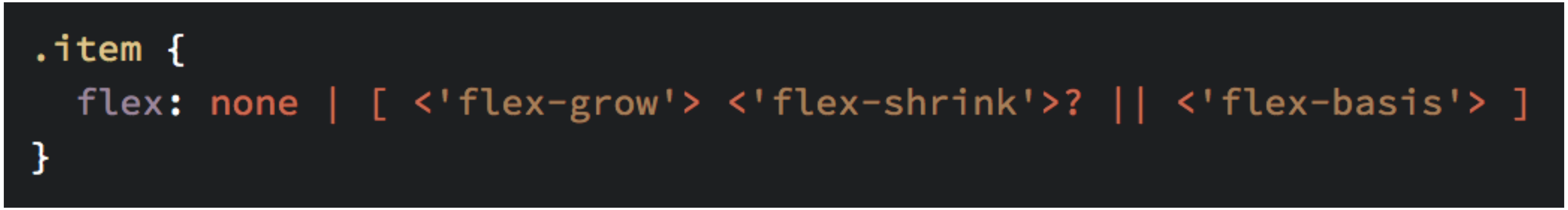
- Like width property (or height, depending on flex-direction).
- If a relative value, indicates proportion of that item’s width that should be applied.
- Default size of element before flex-grow or flex-shrink kick in



```
.item {
  flex-basis: <length> | auto; /* default auto */
}
```

Flexbox Items: flex

- This is the shorthand for flex-grow, flex-shrink and flex-basis combined. The second and third parameters (flex-shrink and flex-basis) are optional. Default is 0 1 auto.



```
.item {
  flex: none | [ <'flex-grow'> <'flex-shrink'>? || <'flex-basis'> ]
}
```

<liveCode />

RESPONSIVE

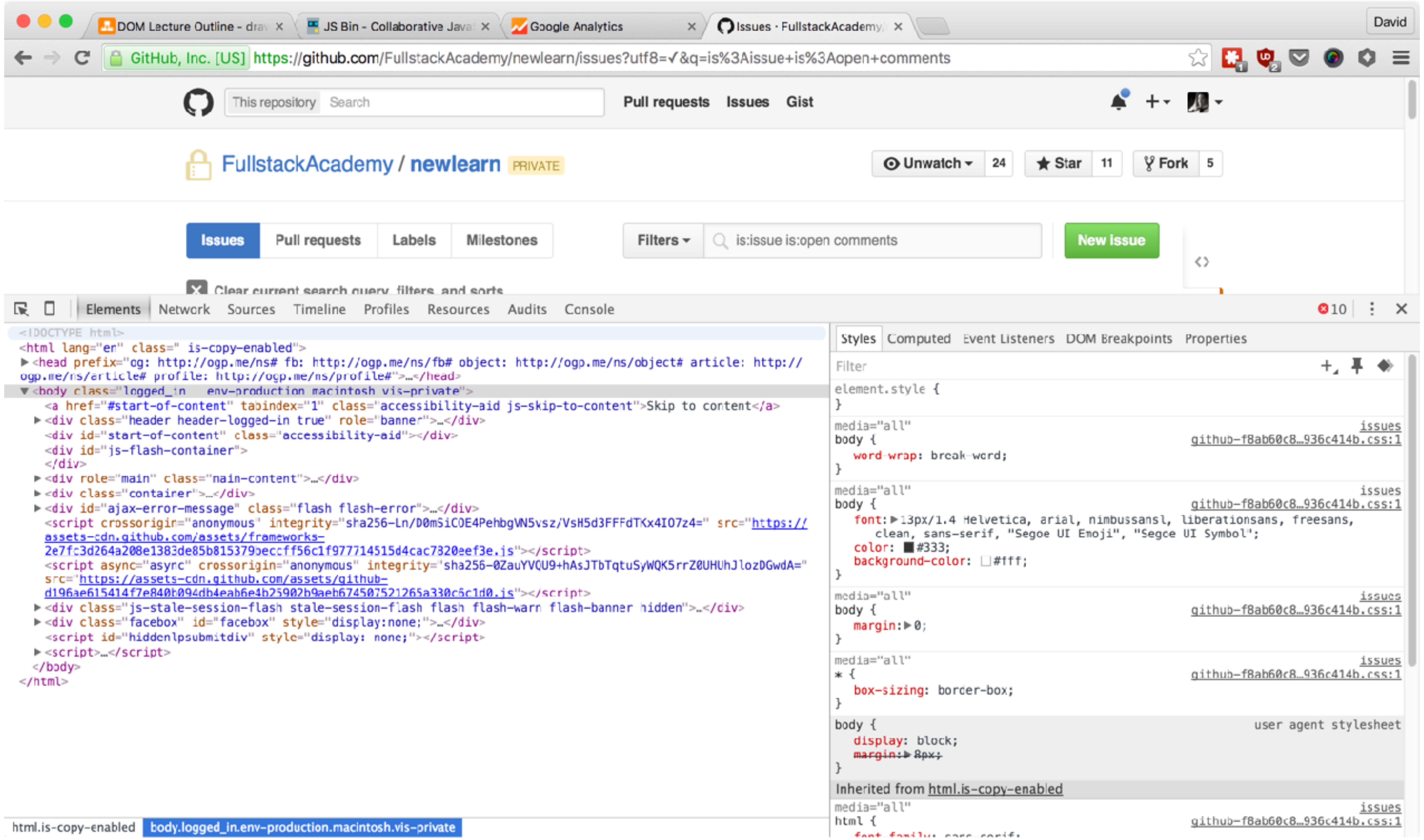
RESPONSIVE

I heard you want to be a web developer
Here are a few devices to test your site

RESPONSIVE DESIGN

- Website is fully functional for all screen sizes, resolutions and orientations
- Born out of necessity (see previous slide)
- Developers and designers should cater to the user's environment, not the other way around

Developer Tools


DOM Lecture Outline - dra
JS Bin - Collaborative Java
Google Analytics
Issues · FullstackAcademy
David
GitHub, Inc. [US] https://github.com/FullstackAcademy/newlearn/issues?utf8=✓&q=is%3Aissue+is%3Aopen+comments
This repository Search
Pull requests Issues Gist
FullstackAcademy / newlearn PRIVATE
Unwatch 24 Star 11 Fork 5
Issues Pull requests Labels Milestones
Filters is:issue is:open comments
New Issue
Clear current search query, filters, and sorts
Elements Network Sources Timeline Profiles Resources Audits Console
10
Styles Computed Event Listeners DOM Breakpoints Properties
Filter
html.is-copy-enabled body.logged_in.env-production.macintosh.vis-private

```
<!DOCTYPE html>
<html lang="en" class=" is-copy-enabled">
▶<head prefix="og: http://ogp.me/ns# fb: http://ogp.me/ns/fb# object: http://ogp.me/ns/object# article: http://
ogp.me/ns/article# profile: http://ogp.me/ns/profile#">…</head>
▼<body class="logged_in  env-production macintosh vis-private">
   <a href="#start-of-content" tabindex="1" class="accessibility-aid js-skip-to-content">Skip to content</a>
  ▶<div class="header header-logged-in true" role="banner">…</div>
   <div id="start-of-content" class="accessibility-aid"></div>
   <div id="js-flash-container">
   </div>
  ▶<div role="main" class="main-content">…</div>
  ▶<div class="container">…</div>
  ▶<div id="ajax-error-message" class="flash flash-error">…</div>
   <script crossorigin="anonymous" integrity="sha256-Ln/D0mSiC0E4PehbgWN5vsz/VsH5d3FFFdTKx4I07z4=" src="https://
   assets-cdn.github.com/assets/frameworks-
   2e7fc3d264a208e1383de85b815379beccff56c1f977714515d4cac7320eef3e.js"></script>
   <script async="async" crossorigin="anonymous" integrity="sha256-0ZauYVQU9+hAsJTbTqtuSyWQK5rrZ0UHUhJlozDGwdA="
   src="https://assets-cdn.github.com/assets/github-
   d196ae615414f7e840b094db4eab6e4b25902b9aeb674507521265a330c6c1d0.js"></script>
  ▶<div class="js-stale-session-flash stale-session-flash flash flash-warn flash-banner hidden">…</div>
  ▶<div class="facebox" id="facebox" style="display:none;">…</div>
   <script id="hiddenlpsubmitdiv" style="display: none;"></script>
  ▶<script>…</script>
 </body>
</html>
```

```
element.style {
}
media="all"                                          issues
body {                          github-f8ab60c8…936c414b.css:1
  word-wrap: break-word;
}
media="all"                                          issues
body {                          github-f8ab60c8…936c414b.css:1
  font:▶13px/1.4 Helvetica, arial, nimbussansl, liberationsans, freesans,
     clean, sans-serif, "Segoe UI Emoji", "Segoe UI Symbol";
  color: ■#333;
  background-color: □#fff;
}
media="all"                                          issues
body {                          github-f8ab60c8…936c414b.css:1
  margin:▶0;
}
media="all"                                          issues
* {                             github-f8ab60c8…936c414b.css:1
  box-sizing: border-box;
}
body {                                user agent stylesheet
  display: block;
  ~~margin:▶ 8px;~~
}
Inherited from html.is-copy-enabled
media="all"                                          issues
html {                          github-f8ab60c8…936c414b.css:1
```

<liveCode />