

Flexbox and Grid, Revisited



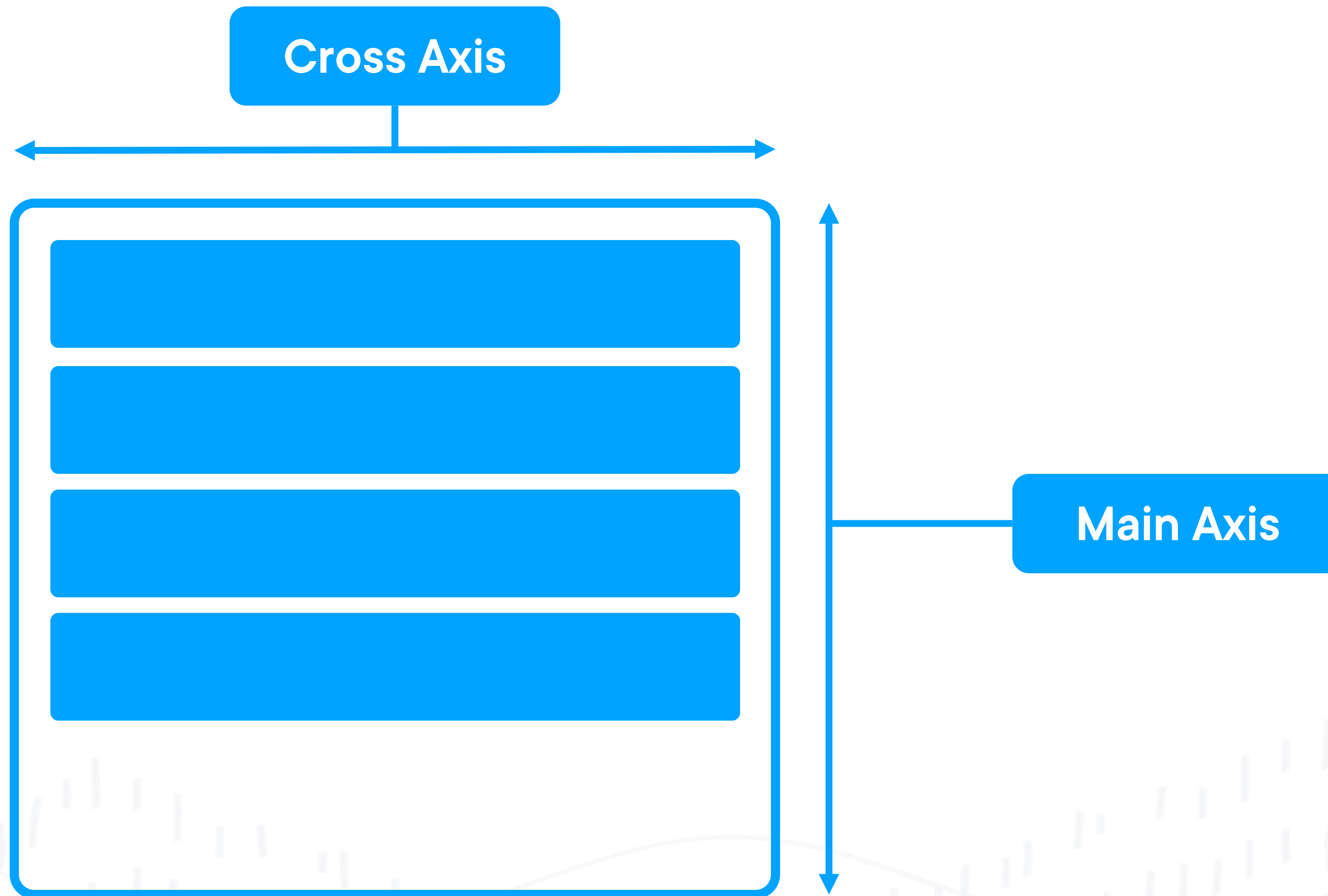
Matt Henry

VP, Product and Independent Developer

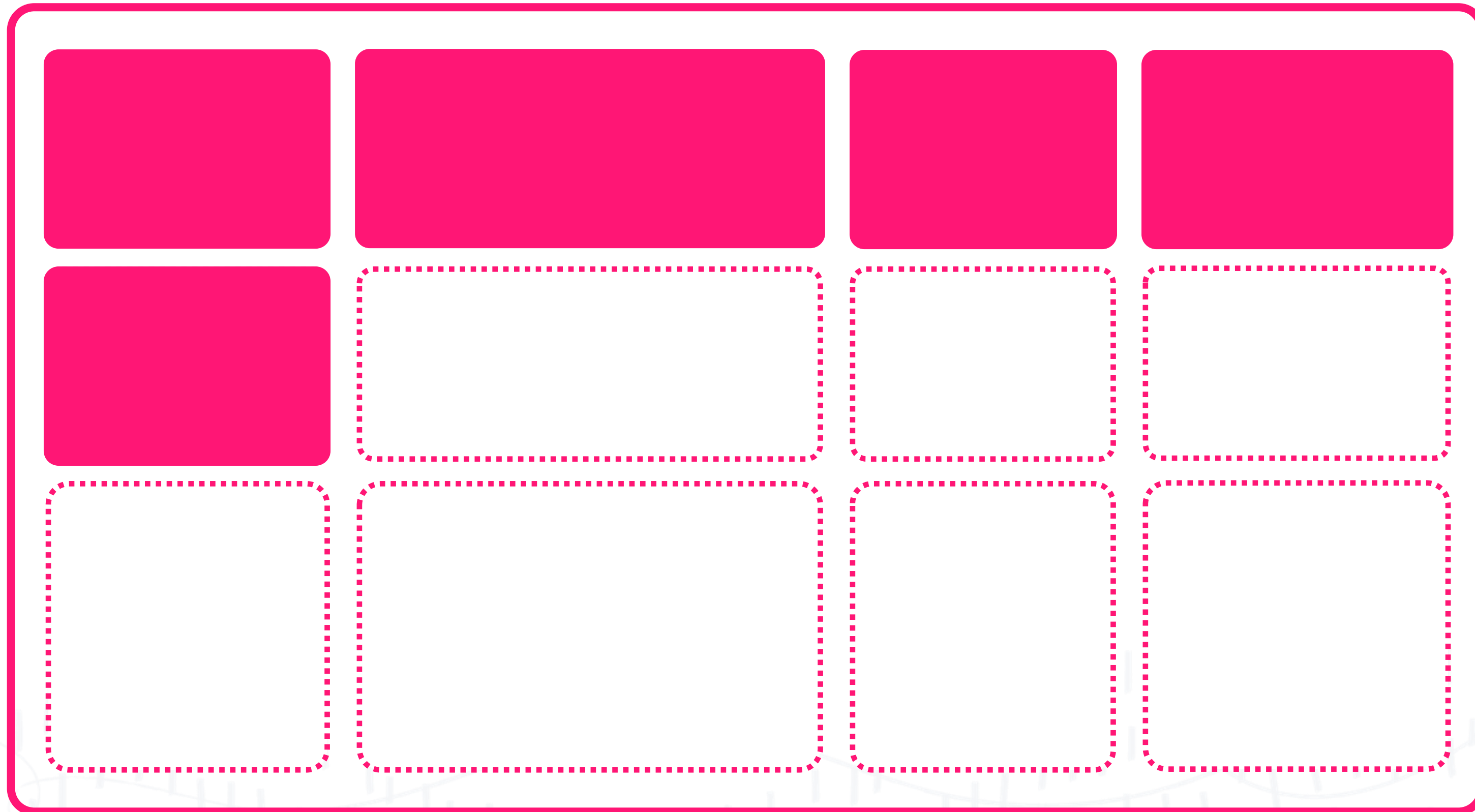
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Flexbox is an Indispensable Tool for Positioning



Grid is the Most Powerful Tool for Layouts



**This module is meant to
make sure your
understanding is complete.**



Course Overview

The Responsive Layout Process

Designers and Frontend Developers

Layout Principles and Patterns

Clean Code and Accessibility



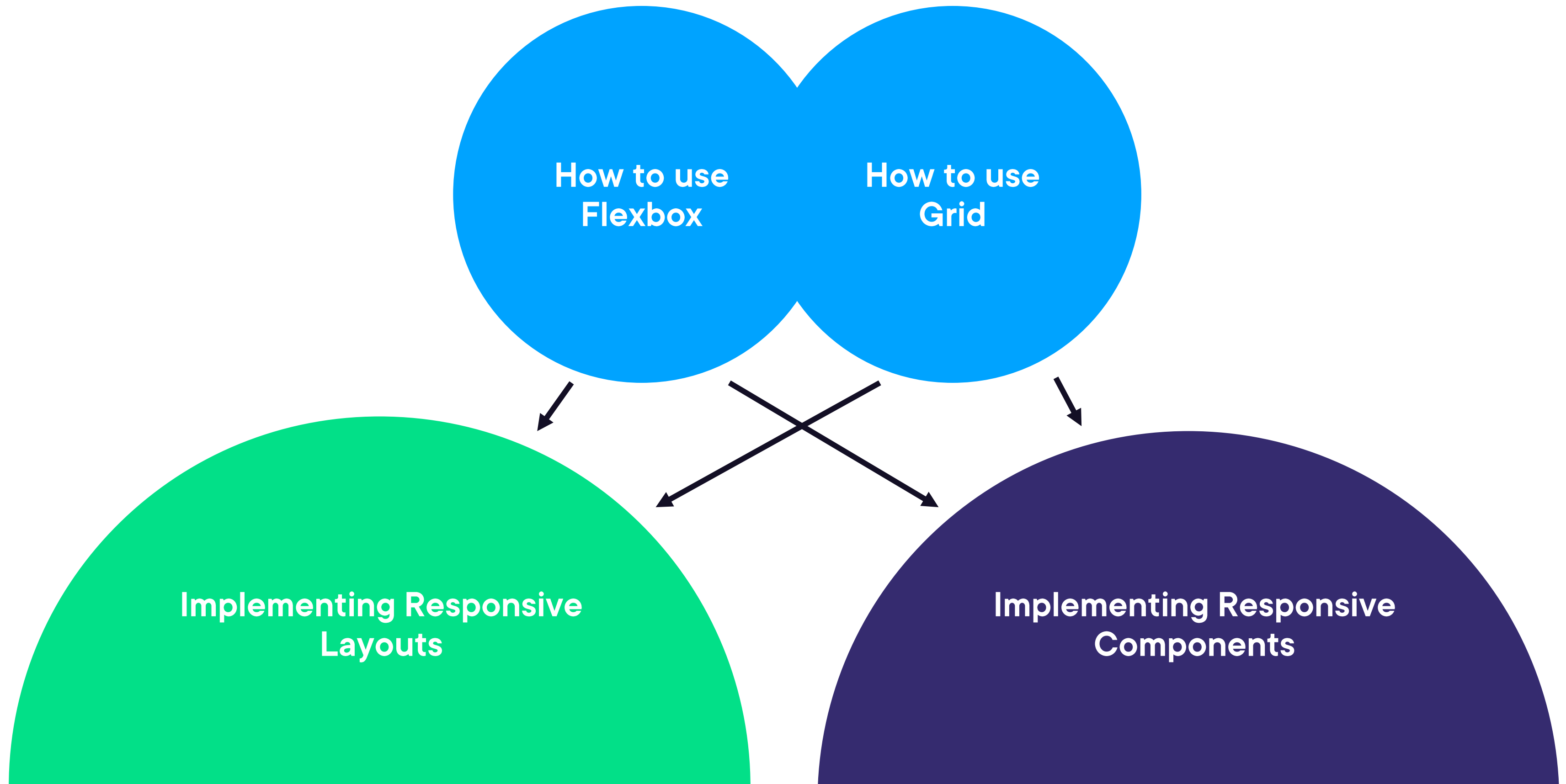
Flexbox and Grid, Revisited

Building a Responsive Layout

Building Responsive Components



Flexbox and Grid are Tools



Overview: Flexbox and Grid, Revisited

Flexbox and Grid, Similarities

Flexbox and Grid, Differences

Align and Justify Properties

Implementing a Layout using Flexbox

Implementing a Layout using Grid

Grid: Defining Grids In-Depth

Grid: Positioning Items In-Depth

Problem Solving with Grid and Flexbox



Up Next:

Flexbox and Grid: Similarities





Flexbox and Grid: Similarities



Flexbox and Grid Similarities

Use containers and items

Define container with `display` property

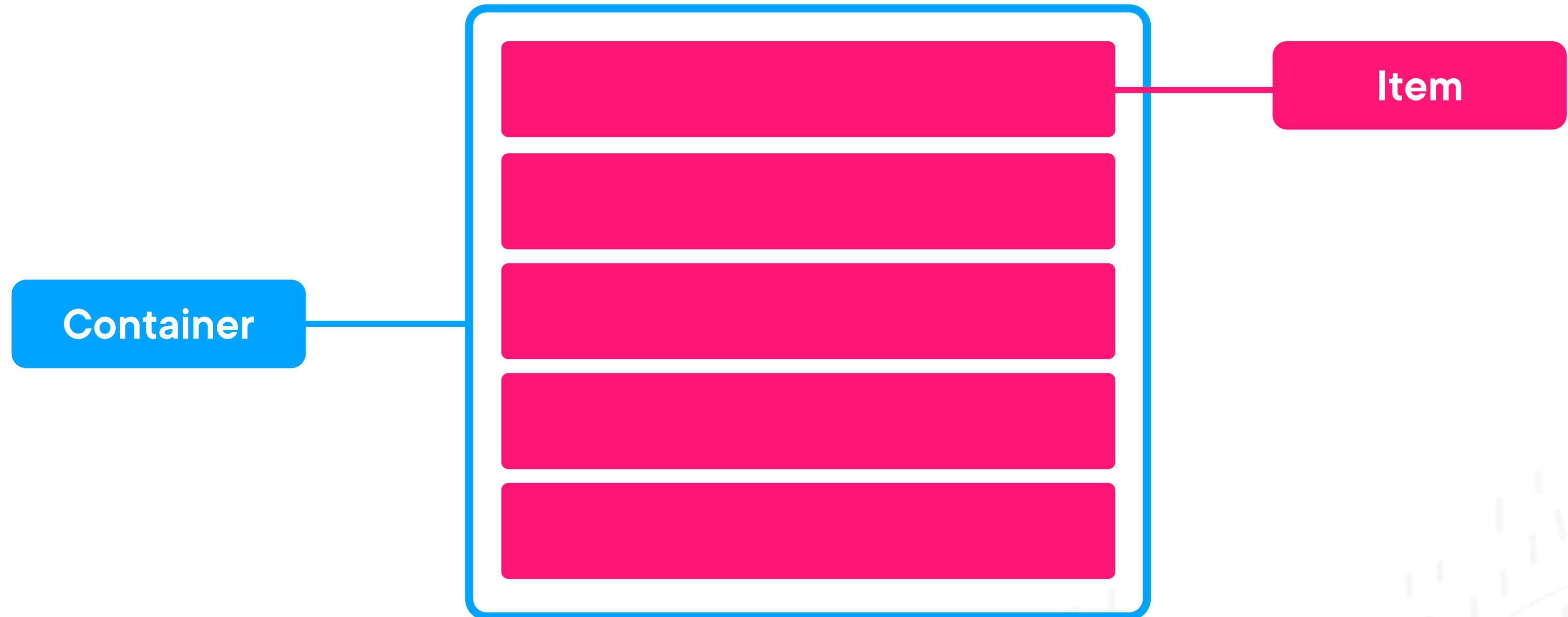
Define behavior of items with properties on the container

Property `gap` used to control spacing

Use `align-` and `justify-` properties which behave consistently on main- and cross-axis



Containers and Items



Up Next:

Flexbox and Grid: Differences





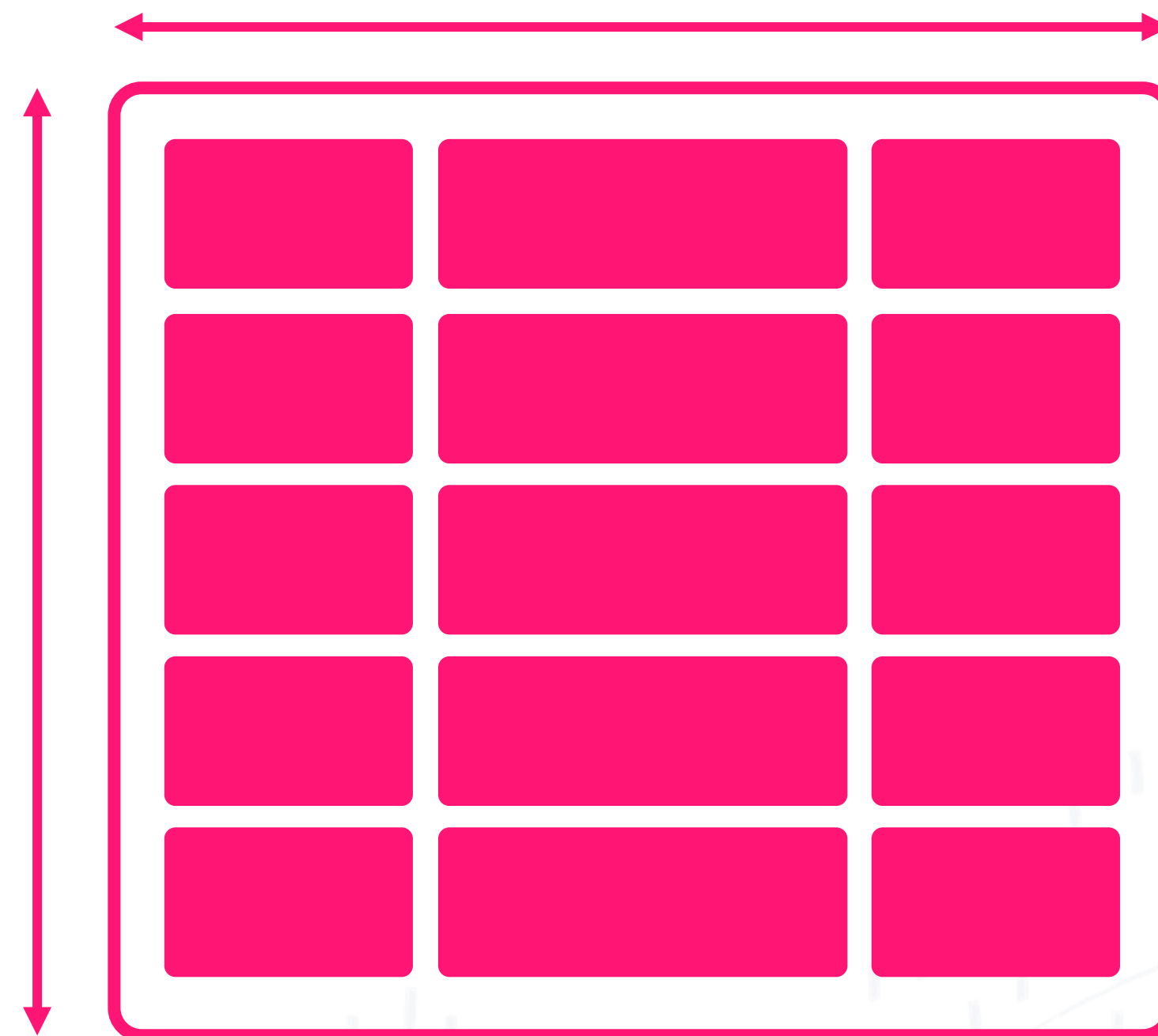
Flexbox and Grid: Differences



Flexbox is 1-Dimensional, Grid is 2-Dimensional



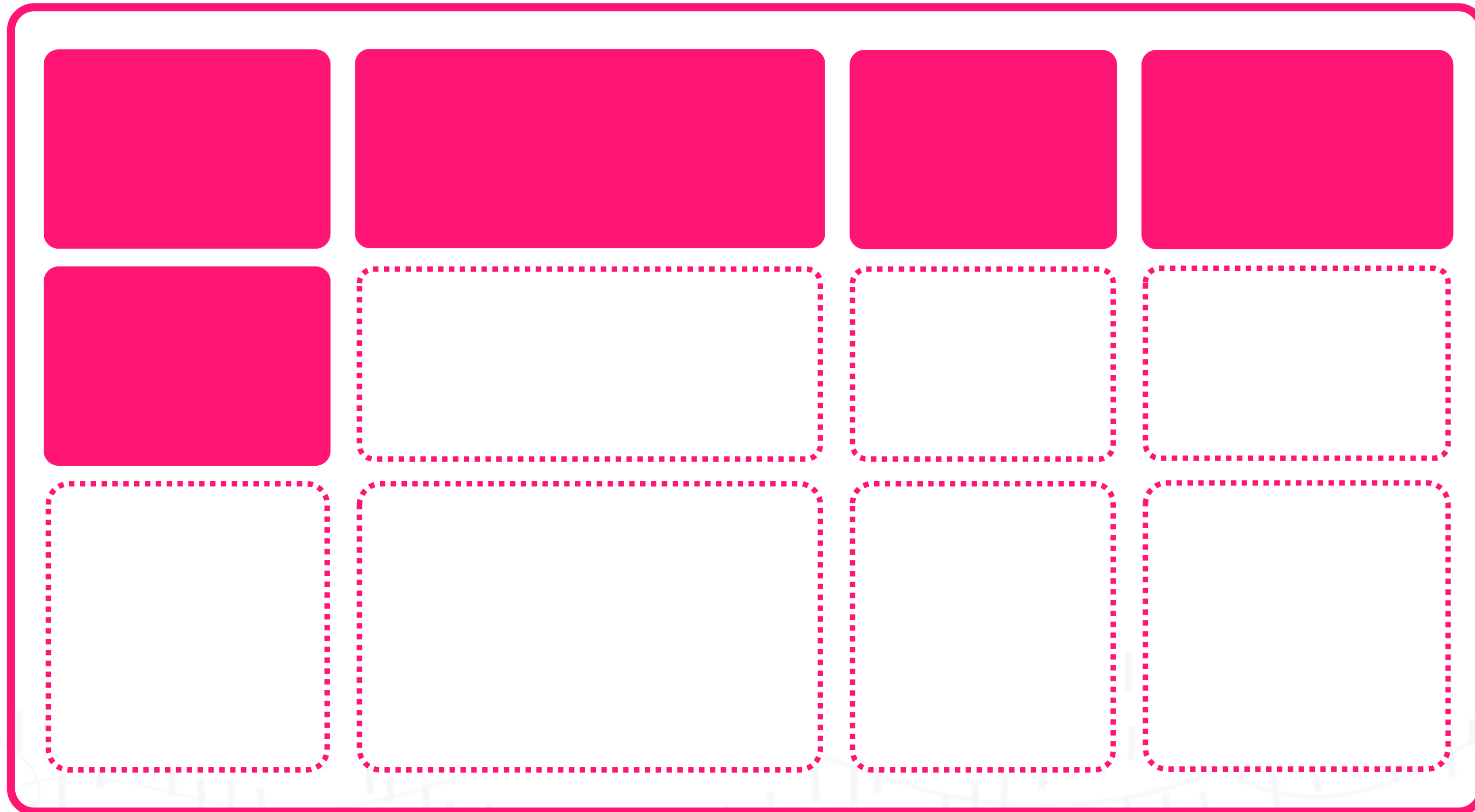
Flexbox



Grid



Grid Containers Use Grid Areas and Grid Items



Layout-In vs Content-Out

Layout-In

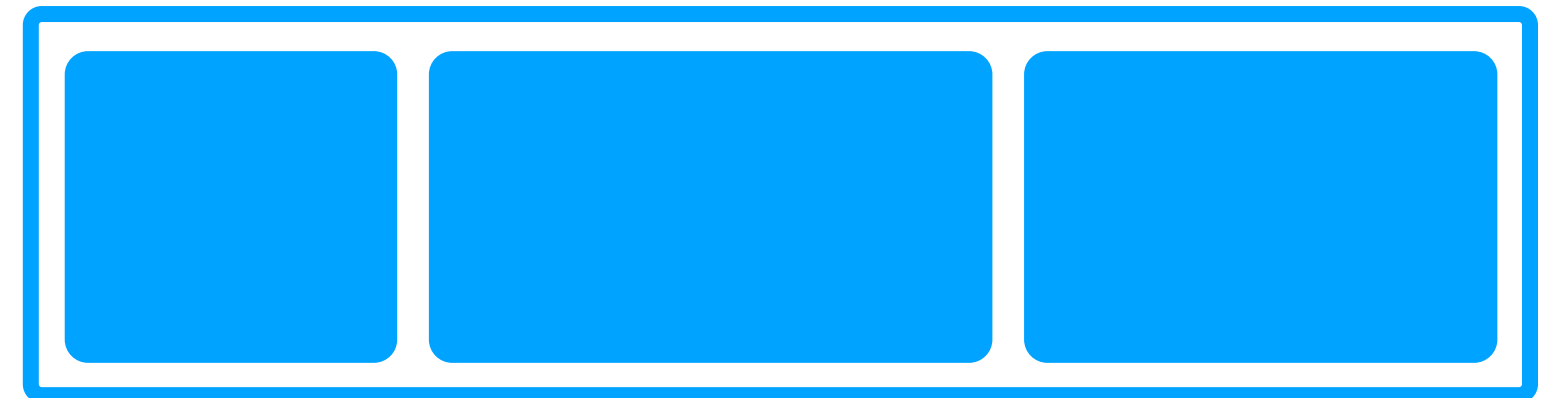
Grid is best for
The layout sets the content's shape



VS

Content-Out

Flexbox is best for
The content sets the layout's shape



Flexbox and Grid Similarities

Use containers and items

Define container with `display` property

Define behavior of items with properties on the container

Use `align-` and `justify-` properties which behave consistently on main- and cross-axis

Property `gap` used to control spacing



Flexbox and Grid Differences

Flexbox is a 1D system, Grid is a 2D system

Flexbox is Content-Out, Grid is Layout-In



Justify and Align Properties

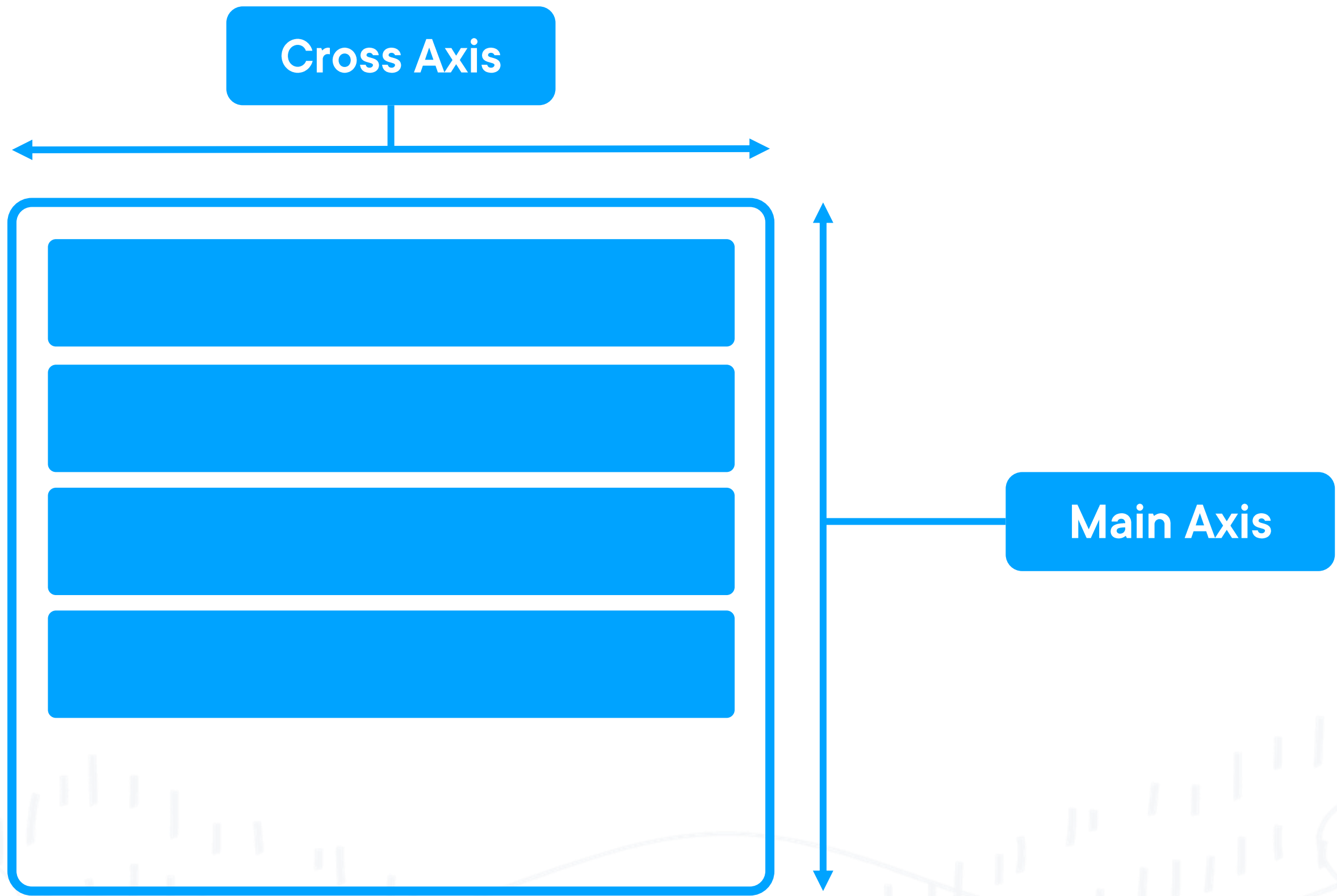
	Set on	Controls	Axis	Default value
<code>justify-content</code>	container	Container area	Main	start
<code>align-content</code>	container	Container area	Cross	stretch
<code>justify-items</code>	container	Item area	Main	stretch
<code>align-items</code>	container	Item area	Cross	stretch
<code>justify-self</code>	item	Own item area	Main	<code>justify-items</code> value
<code>align-self</code>	item	Own item area	Cross	<code>align-items</code> value



	Content	Items
Justify	<code>justify-content</code>	<code>justify-items</code>
Align	<code>align-content</code>	<code>align-items</code>



Main Axis vs Cross Axis



M J C A



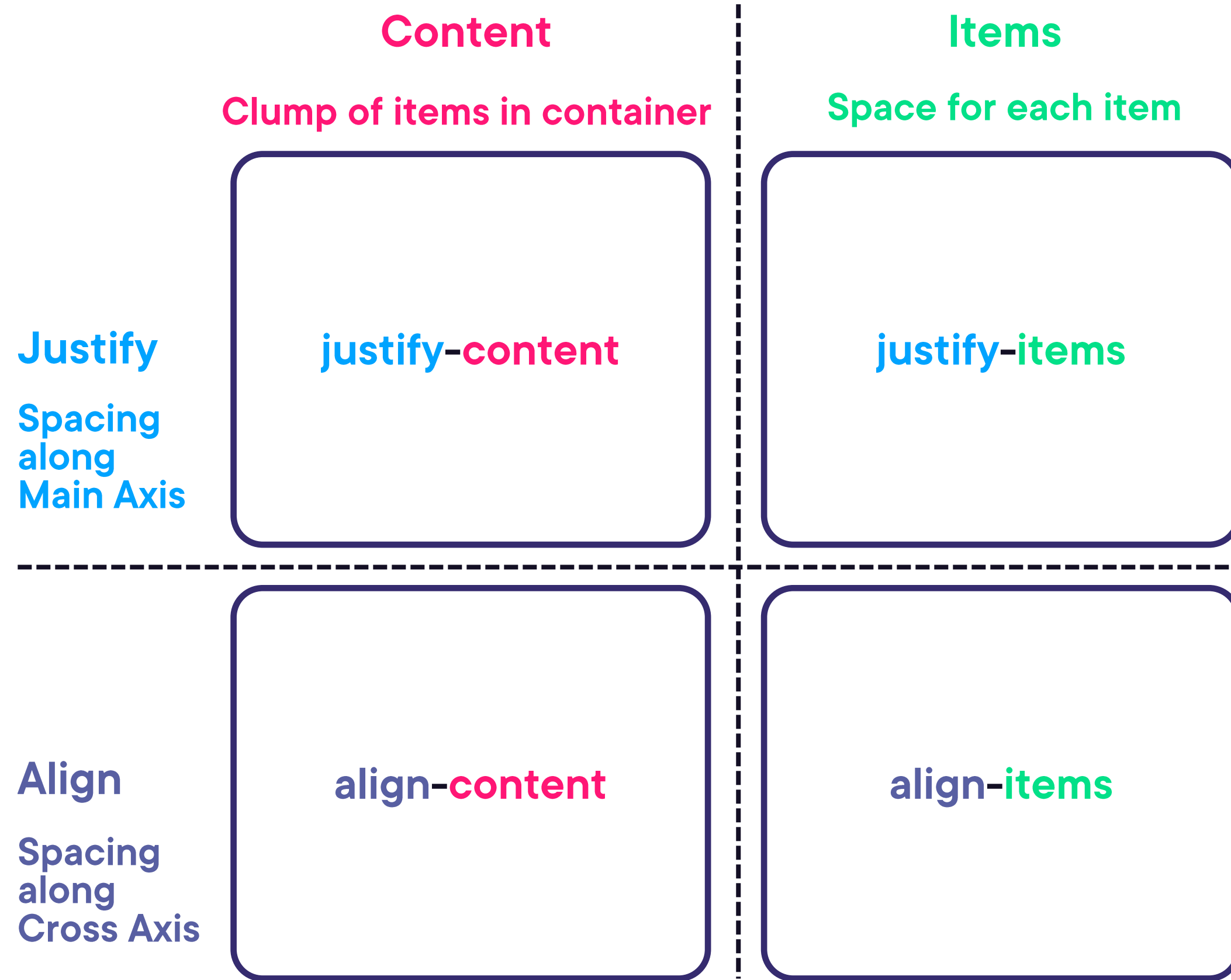
Michael Jordan Can't Act



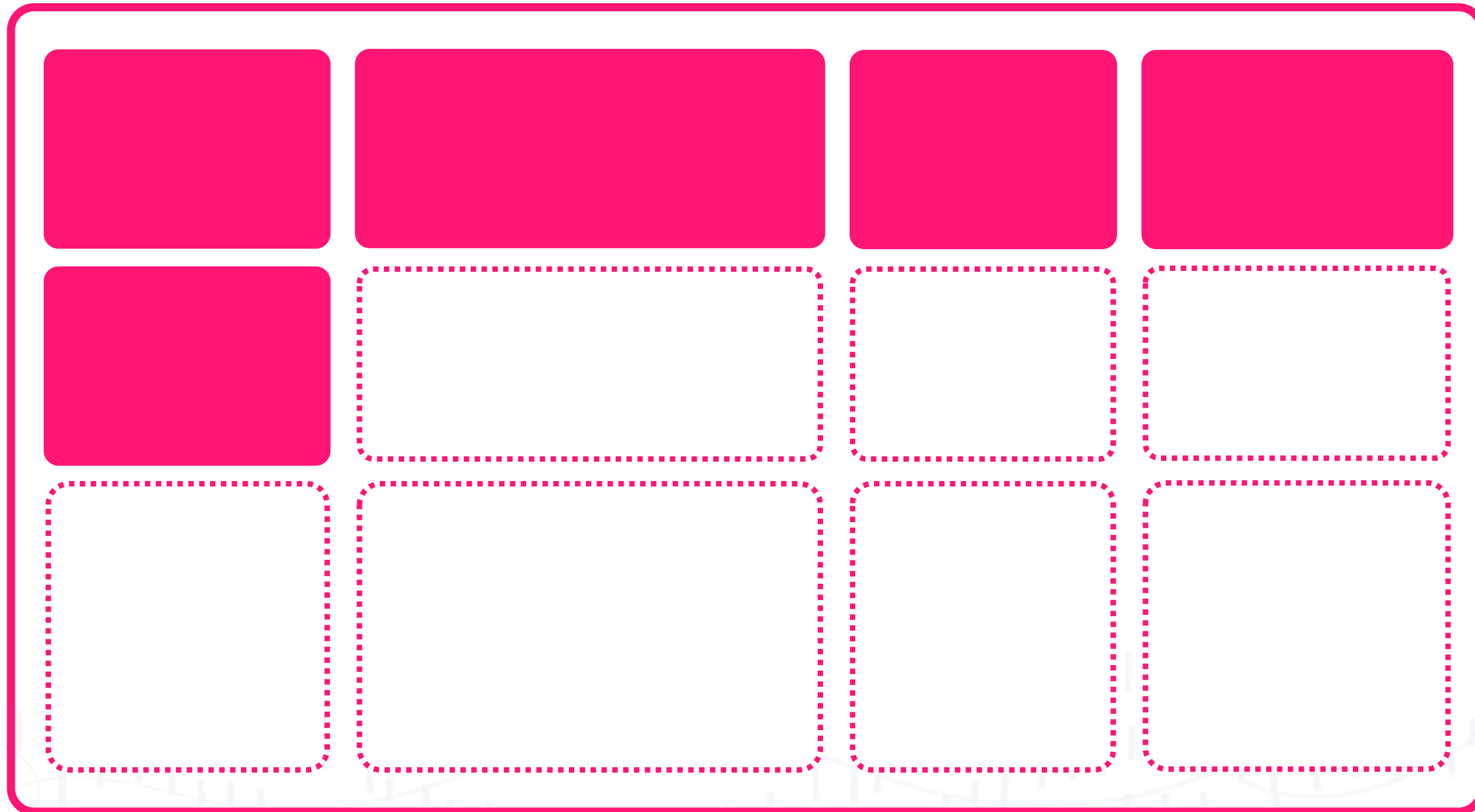
Main Justify

Cross Align





Grid Containers Use Grid Areas and Grid Items

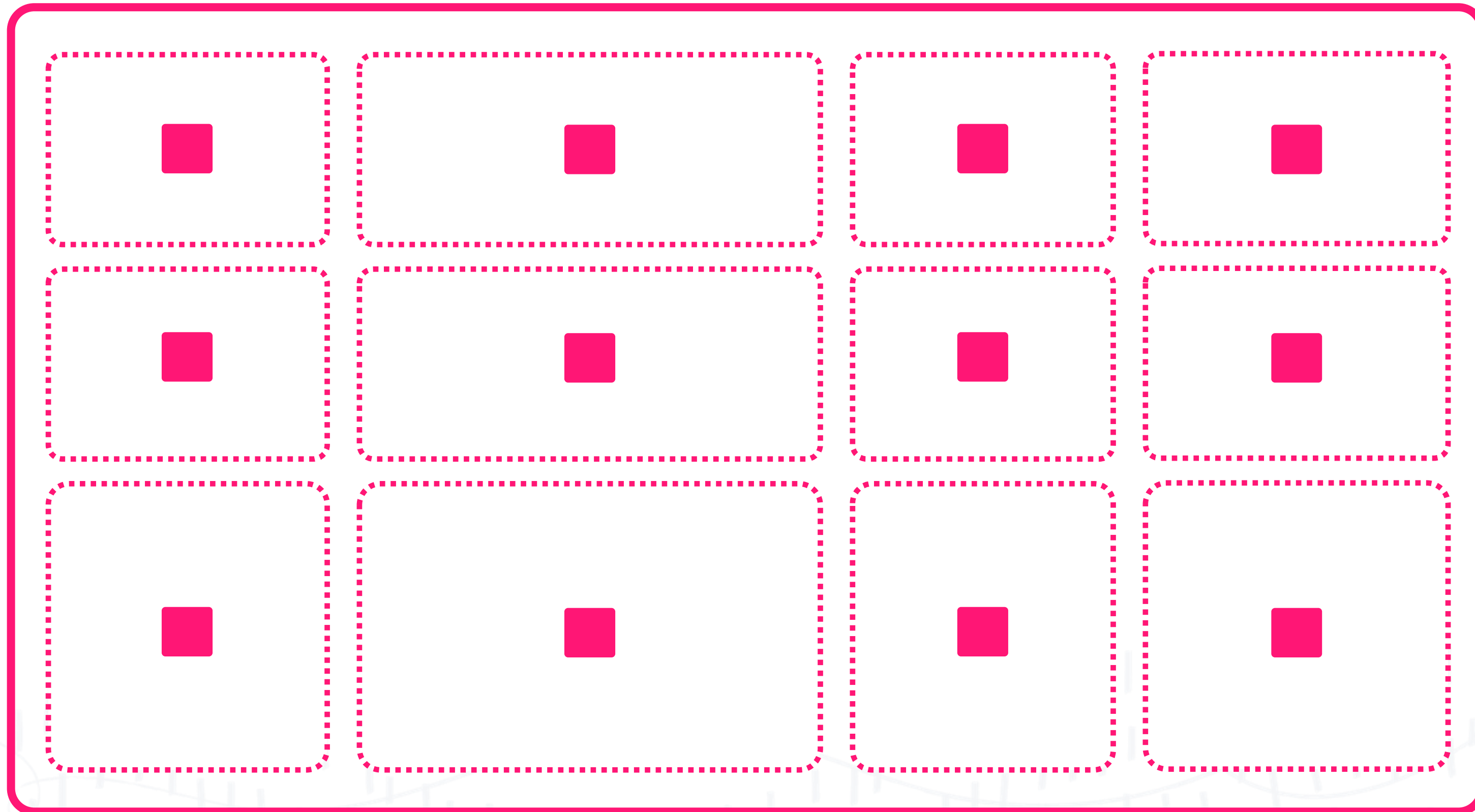


Display and Align Properties

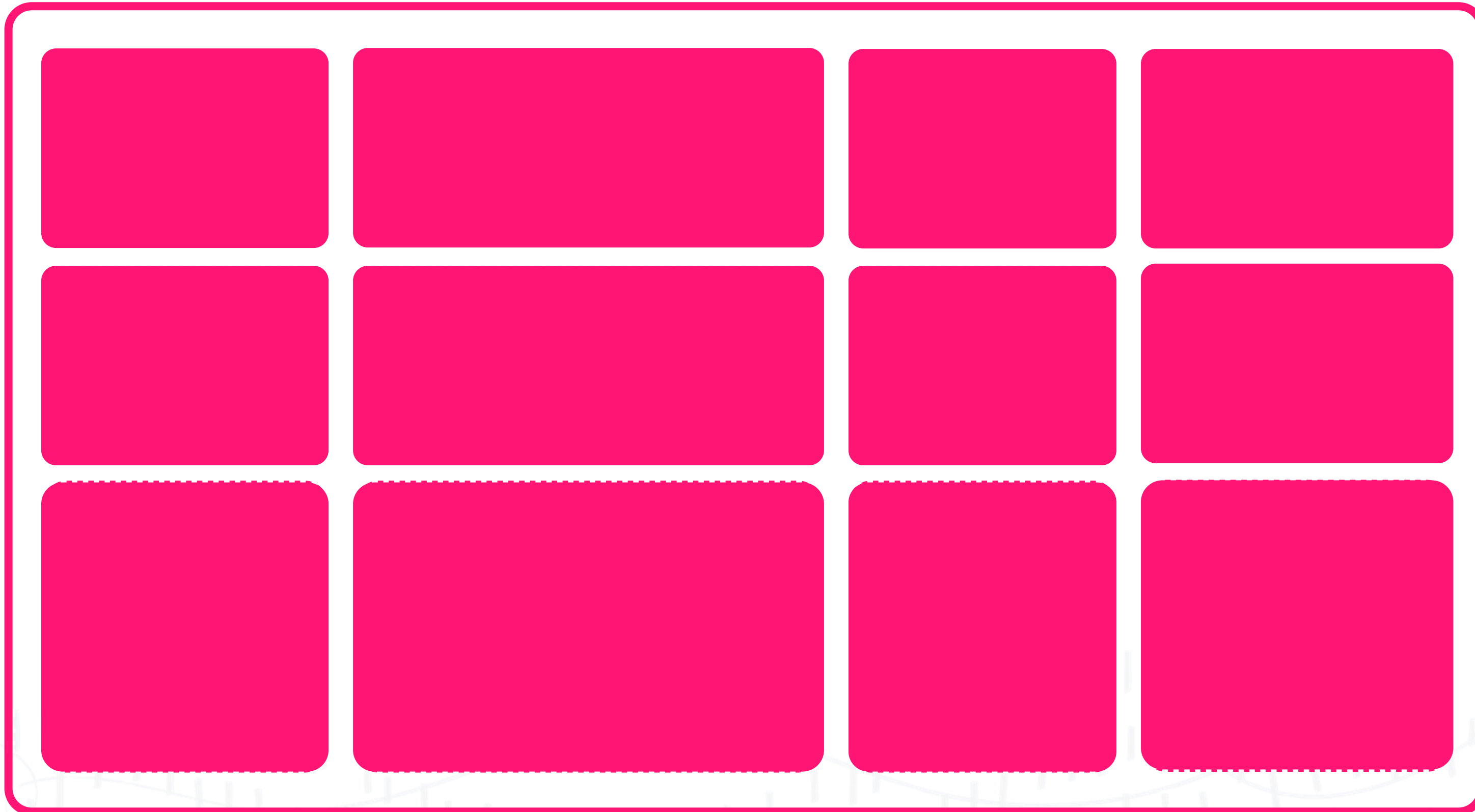
	Set on	Controls	Axis	Default value
<code>justify-content</code>	container	Container area	Main	start
<code>align-content</code>	container	Container area	Cross	stretch
<code>justify-items</code>	container	Item area	Main	stretch
<code>align-items</code>	container	Item area	Cross	stretch



The Default Behavior of All -items Rules is to Stretch



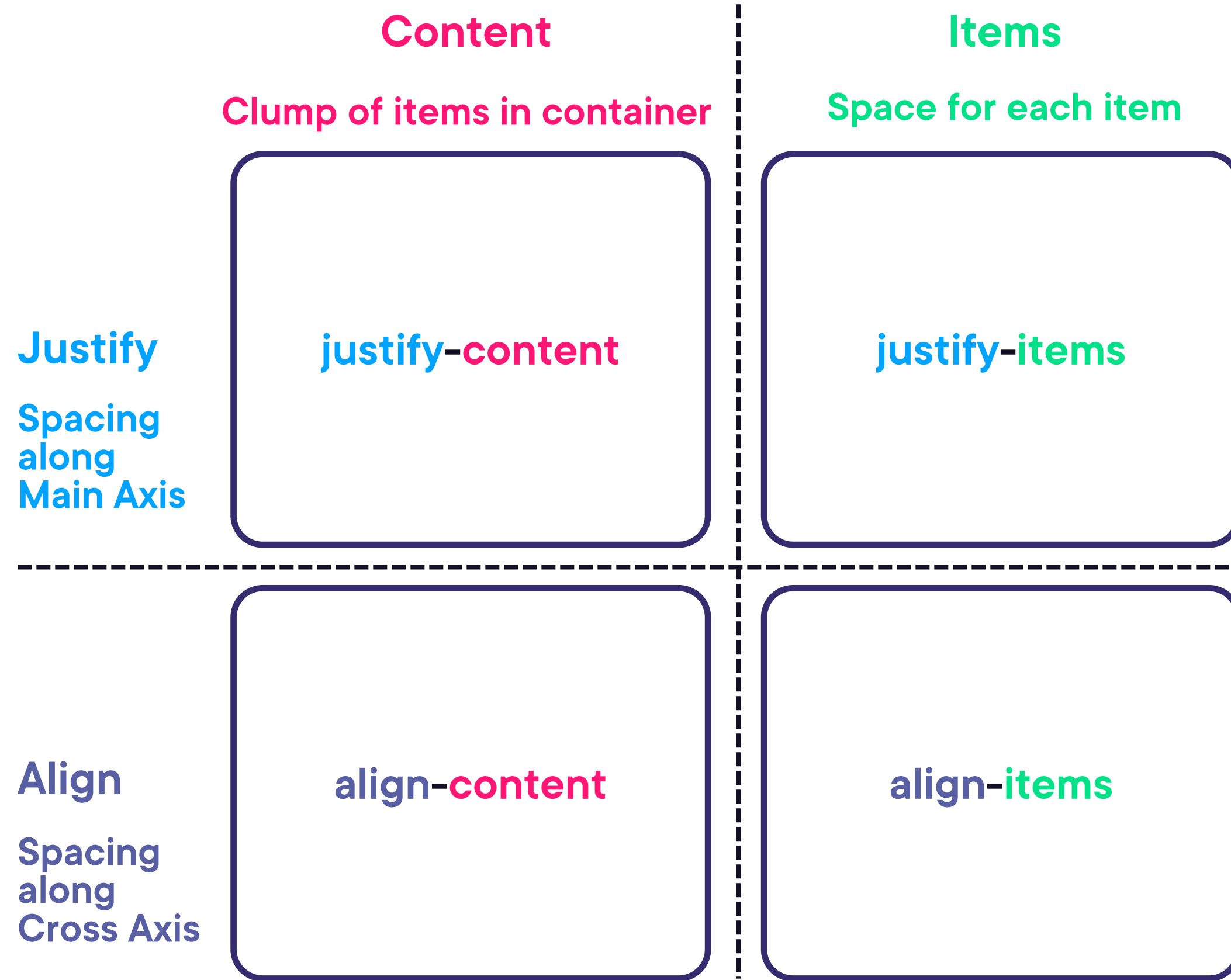
The Default Behavior of All -items Rules is to Stretch



Justify and Align Properties

	Set on	Controls	Axis	Default value
<code>justify-content</code>	container	Container area	Main	start
<code>align-content</code>	container	Container area	Cross	stretch
<code>justify-items</code>	container	Item area	Main	stretch
<code>align-items</code>	container	Item area	Cross	stretch
<code>justify-self</code>	item	Own item area	Main	<code>justify-items</code> value
<code>align-self</code>	item	Own item area	Cross	<code>align-items</code> value





Up Next:

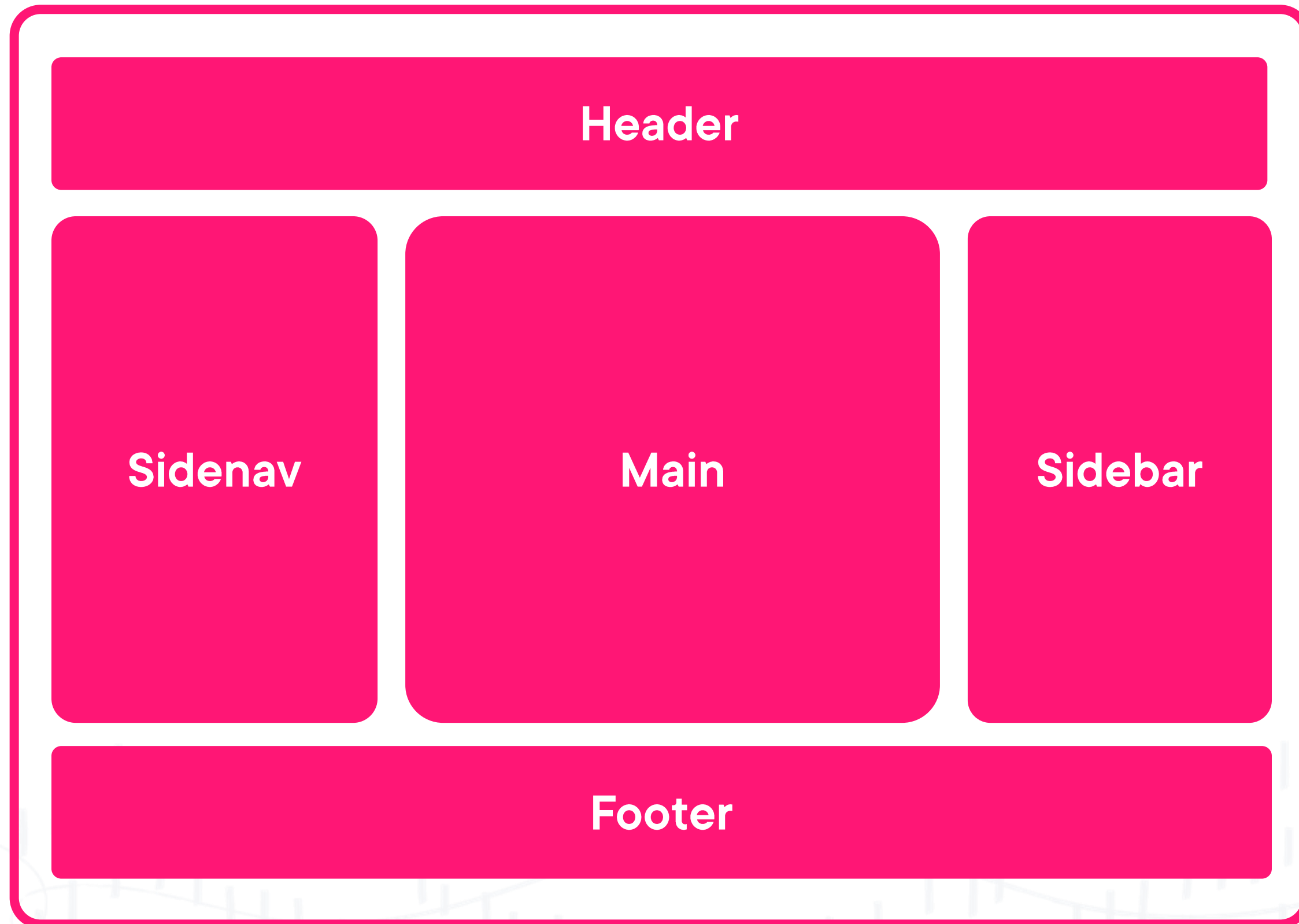
Making a Layout with Flexbox



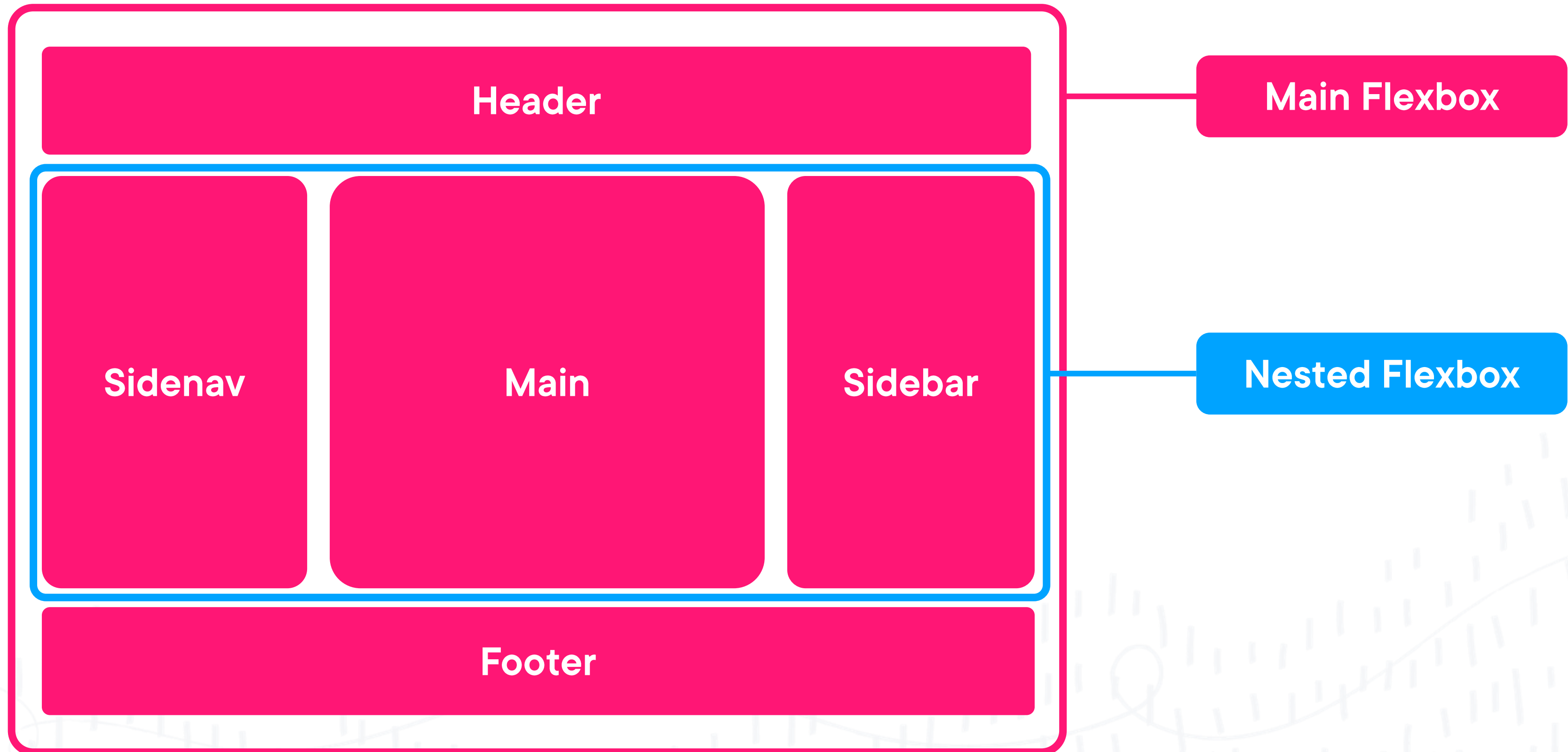
Making a Layout with Flexbox



The Holy Grail Layout



The Holy Grail Layout – With Flexbox





The flex Property



Flex Items Don't Grow Along the Main Axis



Flex Items Don't Grow Along the Main Axis

Flex item

Flex item

Flex item



Calculating Flex Grow



Flex basis + Extra space divided evenly



Up Next:

Making a Layout with Grid

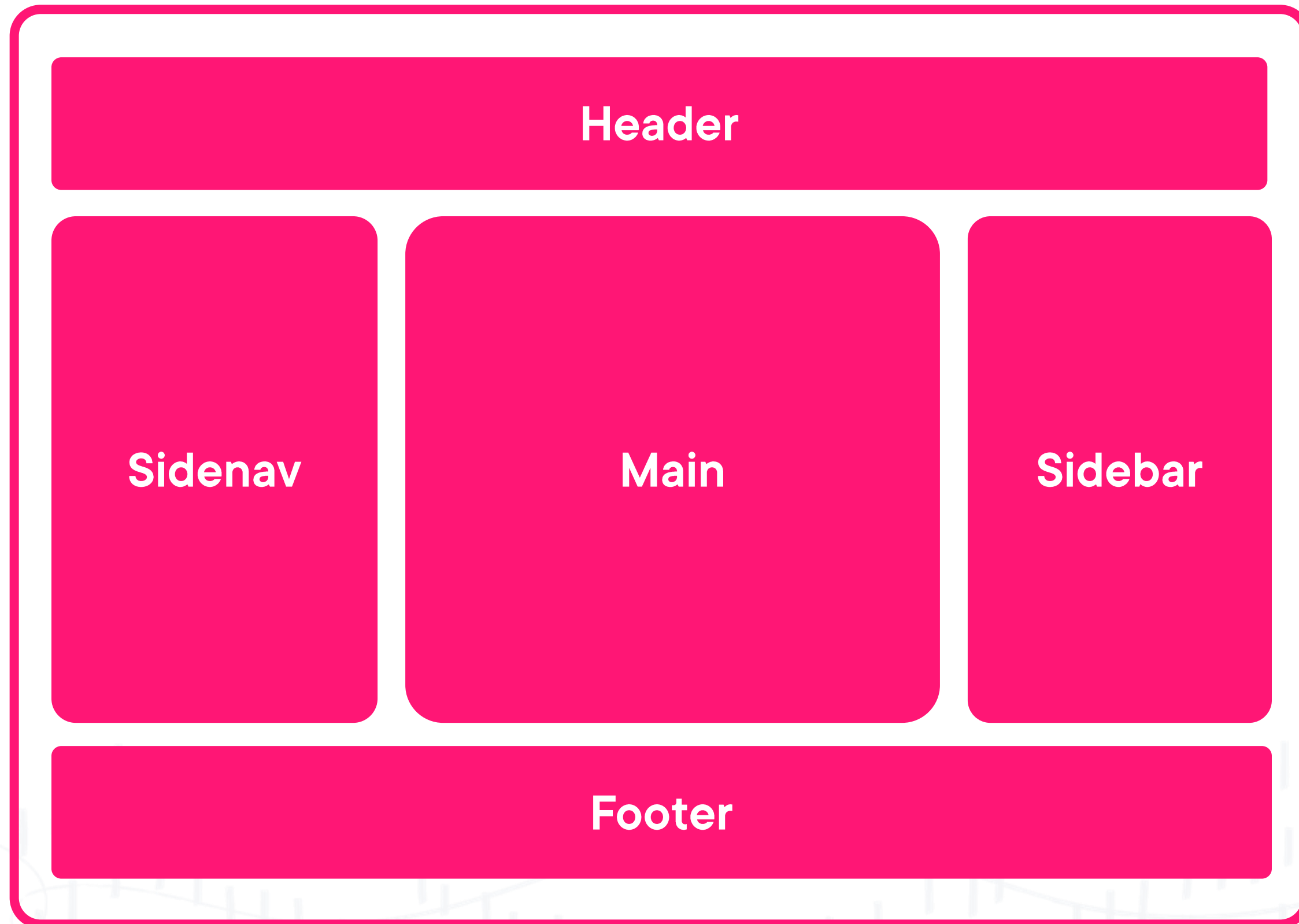




Making a Layout with Grid



The Holy Grail Layout



Up Next:

Grid: Defining Grids In-Depth



Working with Grid

Create your grid

Position items onto the grid



Track Sizes

Type	Examples
Static values	100px, 10em
Percentages	50%, 25%
Fractional units	1fr, 4fr
Content-relative values	min-content, max-content
Auto	auto
Minmax	minmax(min_track_size, max_track_size)



Up Next:

Grid: Positioning Items In-Depth



Working with Grid

Create your grid

Position items onto the grid



Three Ways of Positioning Items

Grid lines

Named grid lines

Named grid areas



Up Next:

Problem Solving with Grid and Flexbox



Up Next:

Summary: When to Use Grid and Flexbox



When should I use Flexbox?
When should I use Grid?



Grid vs Flexbox

Grid

Can define columns and rows (2D)
Layout-In system
Laying out a page as a whole
Great for responsive layouts

VS

Flexbox

Will use more often
Many problems are solved with 1D layouts
Can nest Flexbox containers for complex layouts
Content-Out system



"Homemade flavor in the heart of Vancouver"

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VEGAN ONLY

LIMITED

GLUTEN FREE

Pumpkin



Pie description goes here. Pie
description goes here. Pie
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\$19.99
WHOLE PIE

\$3.99
PER SLICE

Rhubarb

VEGAN



Pie description goes here. Pie
description goes here. Pie
description goes here.

\$19.99
WHOLE PIE

\$3.99
PER SLICE

Lemon Meringue



Pie description goes here. Pie
description goes here. Pie
description goes here.

\$19.99
WHOLE PIE

\$3.99
PER SLICE

Key Lime

VEGAN



French Silk



Coconut Creme



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Implementing Responsive Layouts

