



FLEXBOX

FLEX BOX

CSS only recently got real layout tools (CSS Flexbox and Grid) - for years we were stuck with Floats / Clears

FLOAT LAYOUTS



WHY?

CSS was written a LONG time ago, in a galaxy far far away (called the 1990s).

There was no concept of a multi-device universe or interactive websites. Everything was based around print layouts.



Pasta 3

Carbs are out of favour with some, but pasta is low in fat and a good source of protein - 100g can

to 25 per cent of daily protein needs - making it a great alternative to meat meals, as well as quick and healthy meals for the family.

PERFECT PASTA

Bring water in a large saucepan to a rolling boil, add salt, then gradually add pasta. Stir and keep the water boiling fast to keep the pasta moving. Test by biting a piece of pasta. It is done when it is al dente - cooked through but still firm to bite. Before draining, reserve a little of the cooking liquid to use in whatever sauce you are making. Drain pasta using a colander. Do not rinse it - this removes flavour.

ANGEL HAIR FRITTATA

prep + cook time: 30 min

- 100g angel hair pasta
- 1 tablespoon vegetable oil
- 1 small leek (25g)
- 2 cloves garlic, crushed
- ½ cup (20g) finely grated parmesan
- 200g fetta, crushed
- 60g spinach leaves, chopped coarsely
- ½ cup (120g) sour cream
- ½ teaspoon ground nutmeg
- 6 eggs, beaten lightly

1. Meanwhile, heat oil in a 20cm ovenproof frying pan (see tip) over medium heat; cook

leek and garlic until soft, for about 2 minutes.

2. Combine all the ingredients except the eggs in a large bowl with parmesan and half the sour cream. Season with nutmeg.

3. Preheat grill.

4. Remove cover from pan and for about

10 minutes, cook frittata until golden brown.

5. To serve, remove from heat, slice and serve with a mixed leaf salad, if you like.

TIP: You need a frying pan with an ovenproof handle for this recipe. If the handle of your pan is not ovenproof, wrap it in two layers of foil before

placing the pan under the grill. The frittata can be eaten hot, warm or at room temperature. It is not suitable to freeze.

FLOATS

WHICH PASTA, WITH WHICH SAUCE?

There are no hard and fast rules for matching sauces with pasta shapes, but a simple rule of thumb is the longer the pasta, the thinner the sauce; the shorter the pasta, the thicker or chunkier the sauce.

That why's we have the float-based system - it comes from print design where you "float" images in a sea of words - like in a magazine.

The web doesn't
FLOAT
anymore





Now we...

FLEX

How does
FLEXBOX
work?

PARENT (CONTAINER)



Flex containers are the objects that contain the children

CHILDREN (ITEMS)



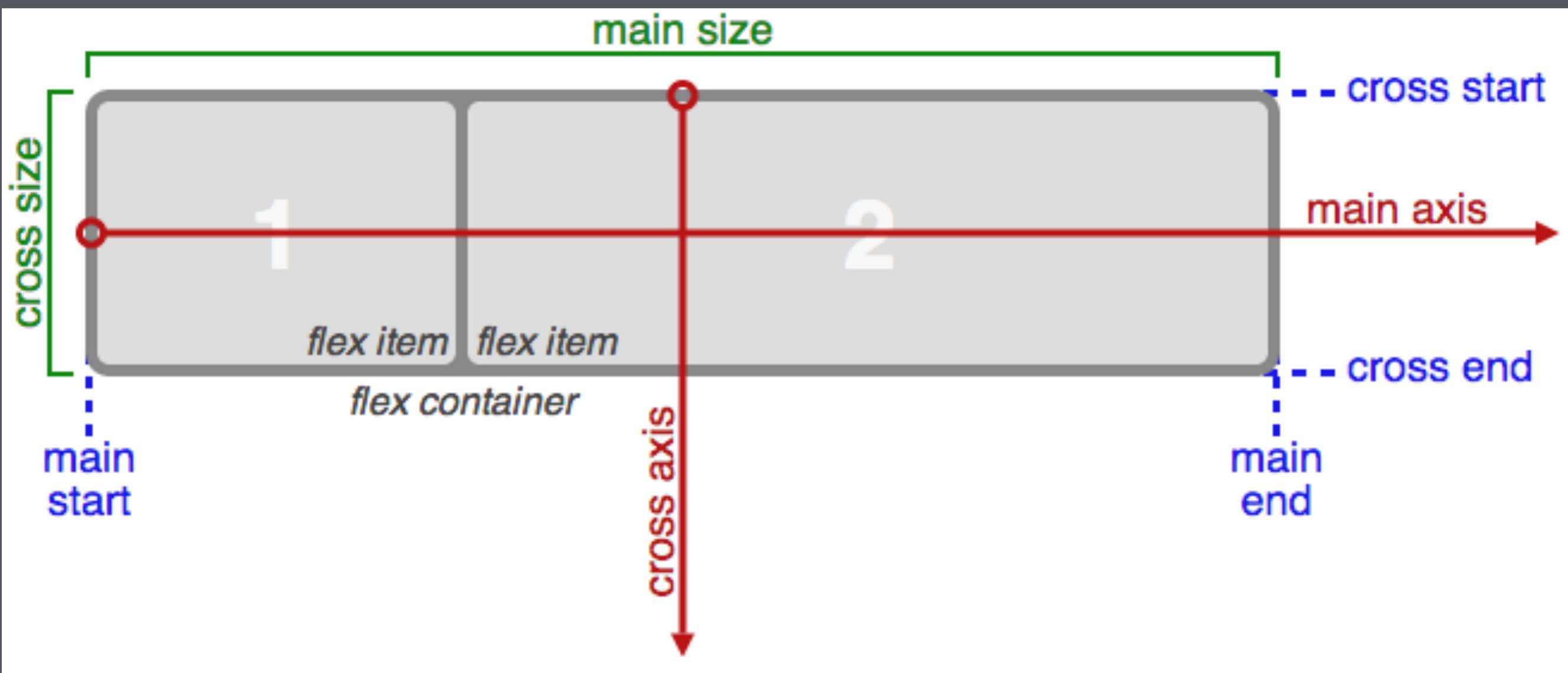
Flex items are the children that go inside the parent container

FLEXBOX IN ACTION

A vibrant photograph of six children of diverse ethnicities and ages jumping joyfully on a large trampoline. They are all laughing and smiling, their bodies suspended in mid-air. The background is a bright, colorful trampoline enclosure with yellow, orange, and white panels. The children are dressed in casual clothing like t-shirts, jeans, and a pink jacket. The overall scene is energetic and dynamic, perfectly illustrating the concept of flexbox layout where each child's position and size are flexible yet part of a cohesive whole.

HOW TO FLEXBOX

Multi-axis alignment method



HOW TO FLEXBOX

.items



.container

HOW TO FLEXBOX

Easy to start, harder to use well

```
.container {  
    display: flex;  
    justify-content: center;  
    align-items: center;  
}  
  
.item {  
    background-color: orange;  
    height: 100px;  
    width: 100px;  
}
```

When building

FLEXBOX LAYOUTS

Every Container Must Have:

`display: flex;`

Which also gives you the following for free:

`flex-direction: row;`
`justify-content: flex-start;`
`align-items: stretch;`

REFERENCE

Assignment #2

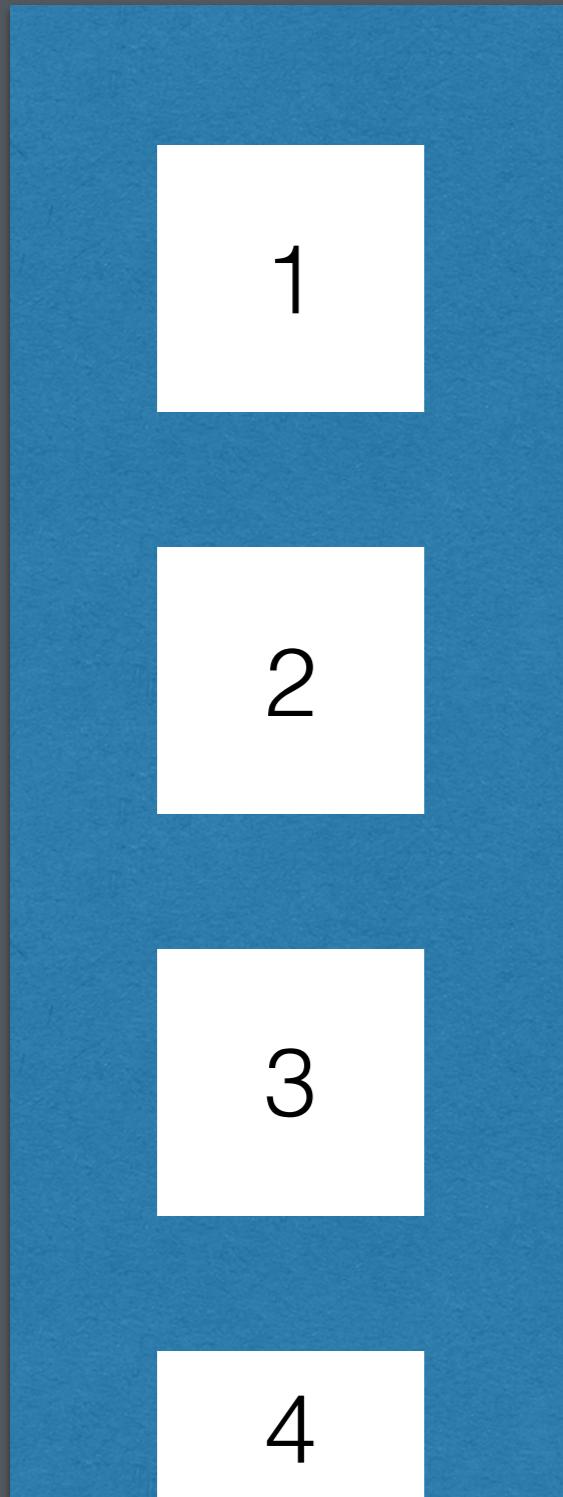
CODEALONG

Let's *flex* those coding muscles...

PARENT PROPERTIES



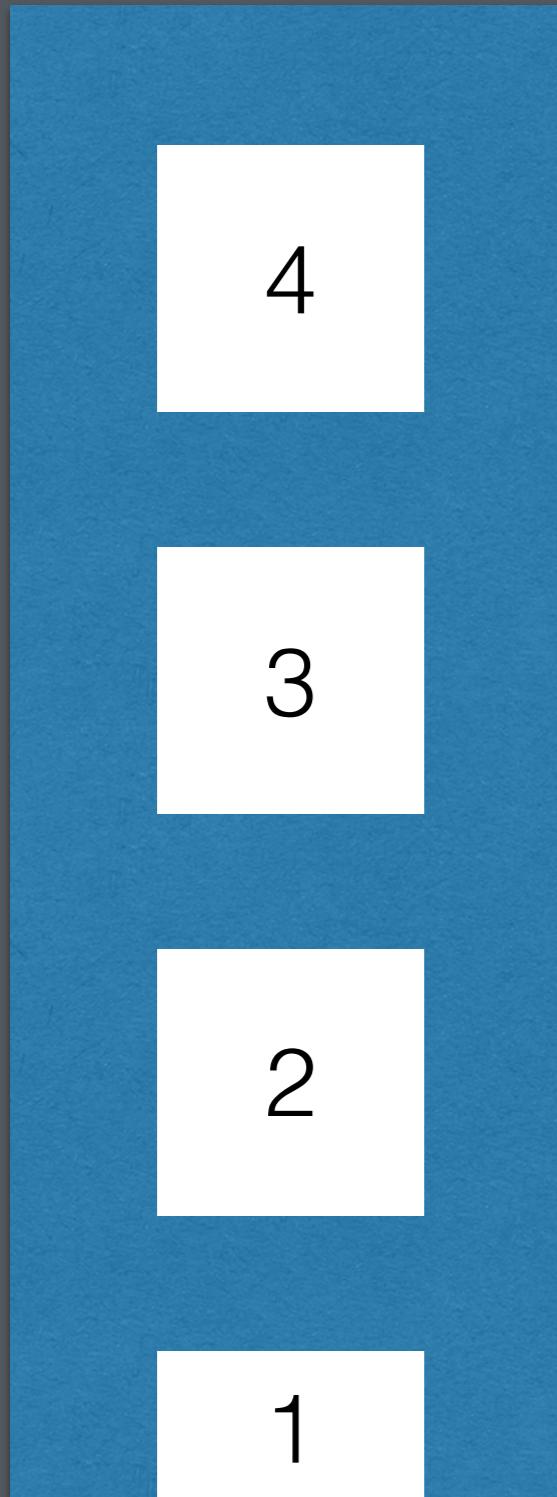
FLEX-DIRECTION



Think about orientation -
flexbox layouts are
inherently vertical or
horizontal

`flex-direction: column;`

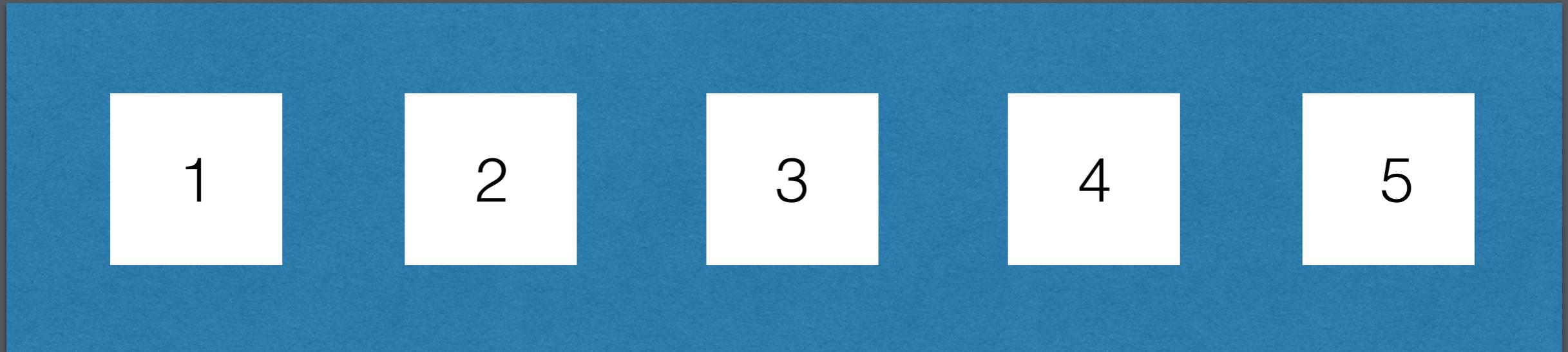
FLEX-DIRECTION



You can easily flip the display order without reordering your HTML!

`flex-direction: column-reverse;`

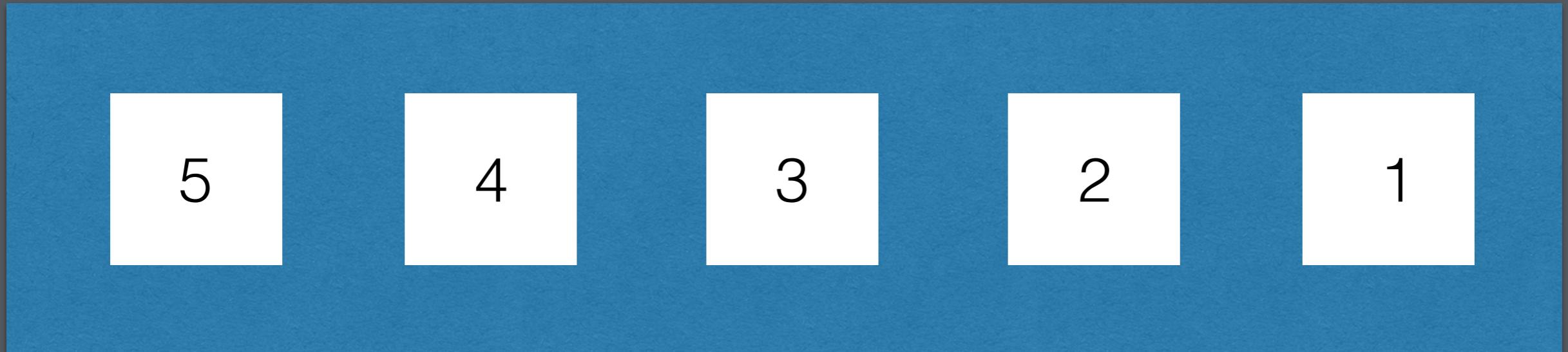
FLEX-DIRECTION



You can also do layouts in a row.

```
flex-direction: row;
```

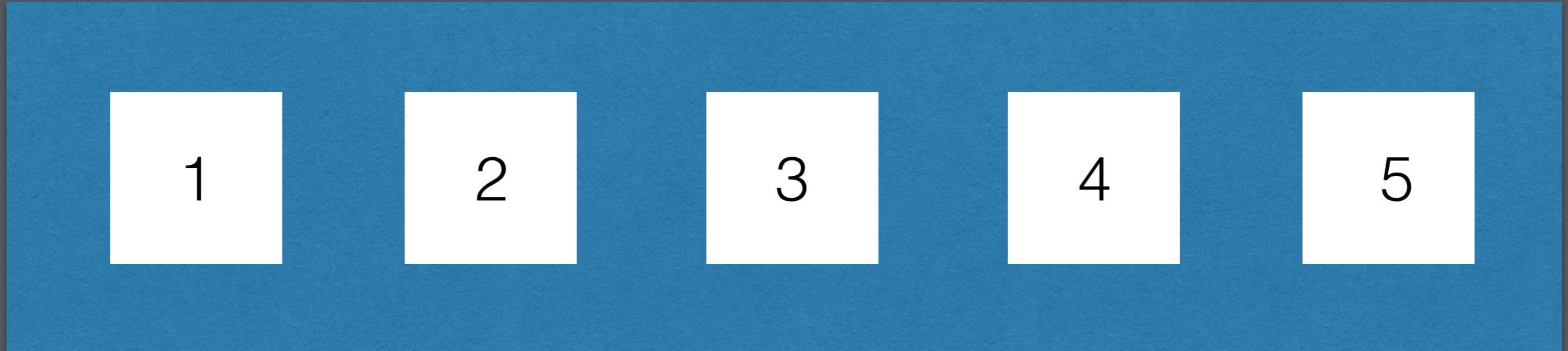
FLEX-DIRECTION



You can also flip rows - this is very advantageous for right-to-left languages like Arabic.

`flex-direction: row-reverse;`

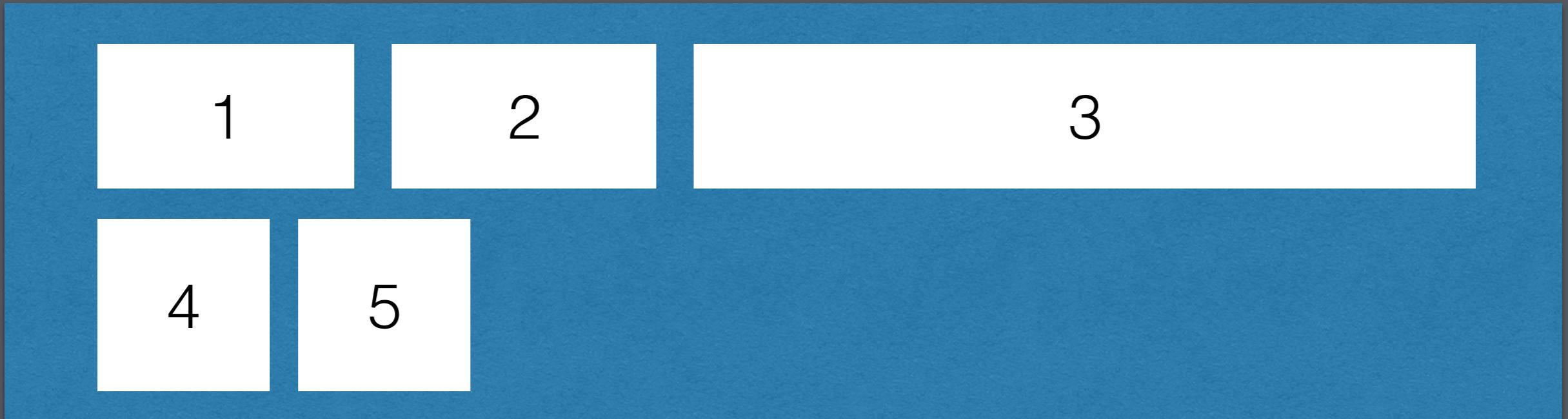
FLEX-WRAP



By default, all boxes are
stuffed into one row.

`flex-wrap: nowrap;`

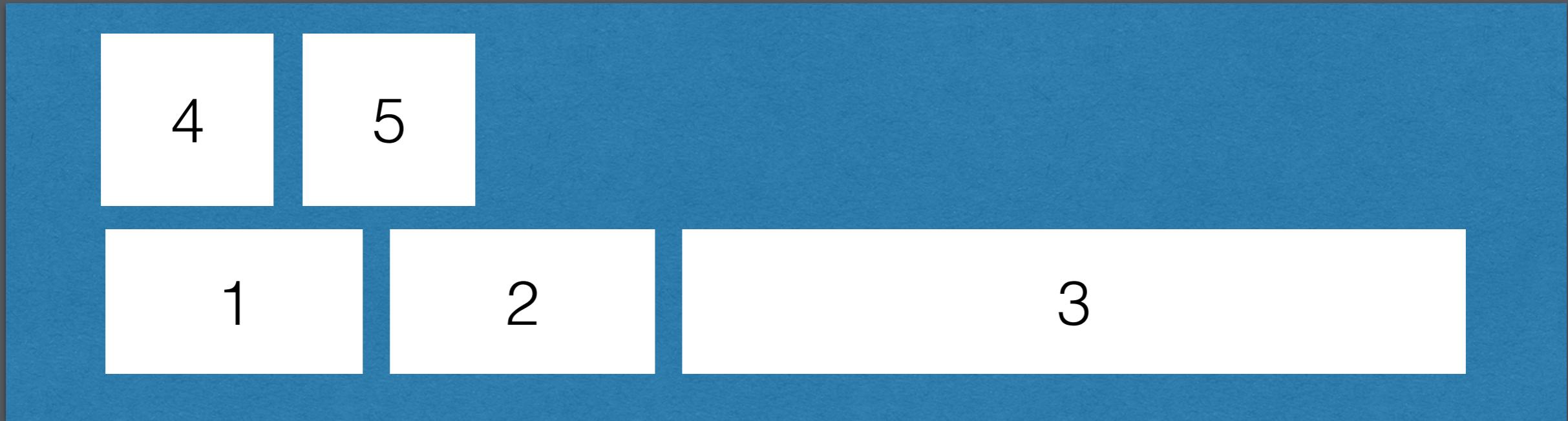
FLEX-WRAP



But you can make them
pop-out into additional rows
as needed.

```
flex-wrap: wrap;
```

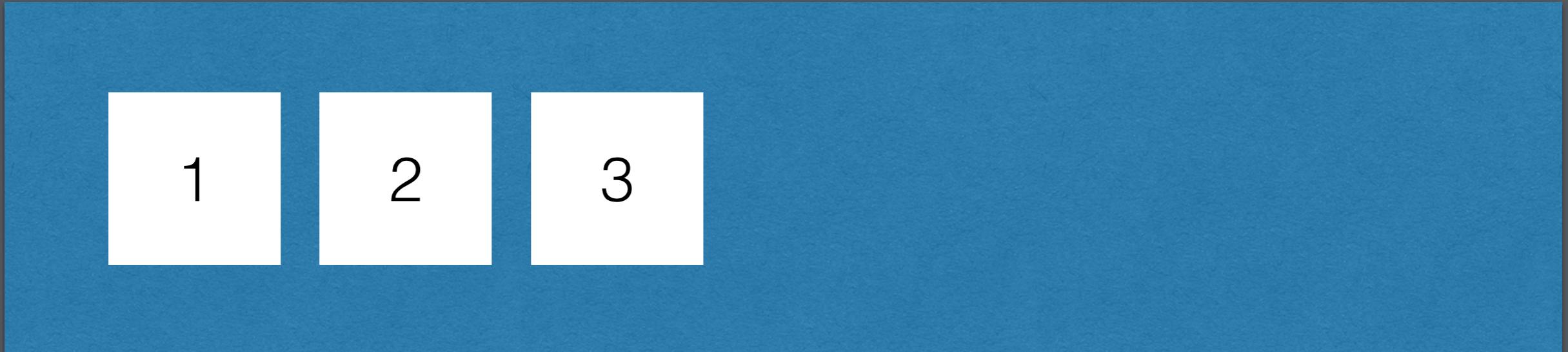
FLEX-WRAP



They can display right to left as well and bottom-to-top (I find this very confusing personally and don't use it).

`flex-wrap: wrap-reverse;`

JUSTIFY-CONTENT



Controls how boxes space
in flexbox rows/columns.

justify-content: flex-start;

JUSTIFY-CONTENT



Centering is easy - note,
auto margins don't work in
flex land.

`justify-content: flex-center;`

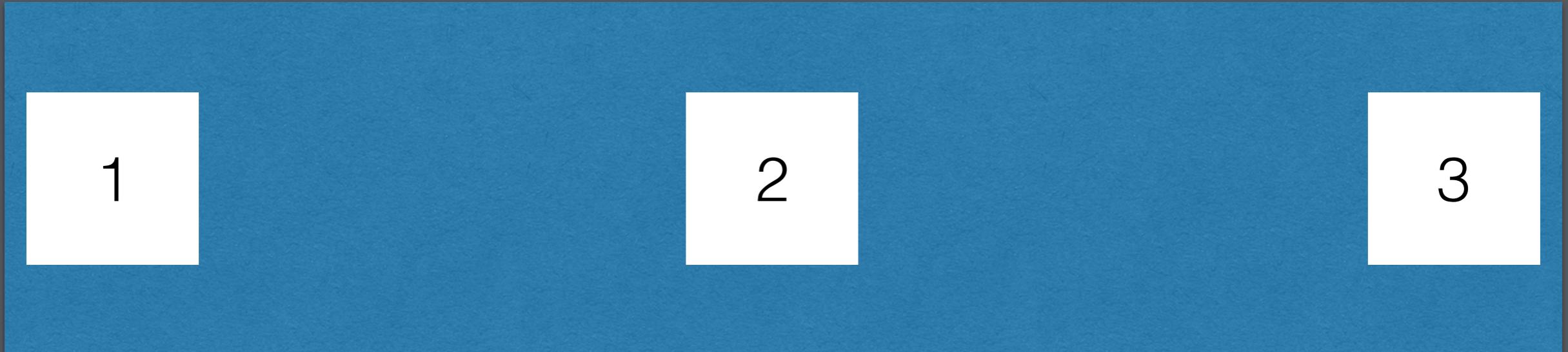
JUSTIFY-CONTENT



Push everything right,
similar to text-align: right;
but for layouts!

justify-content: flex-end;

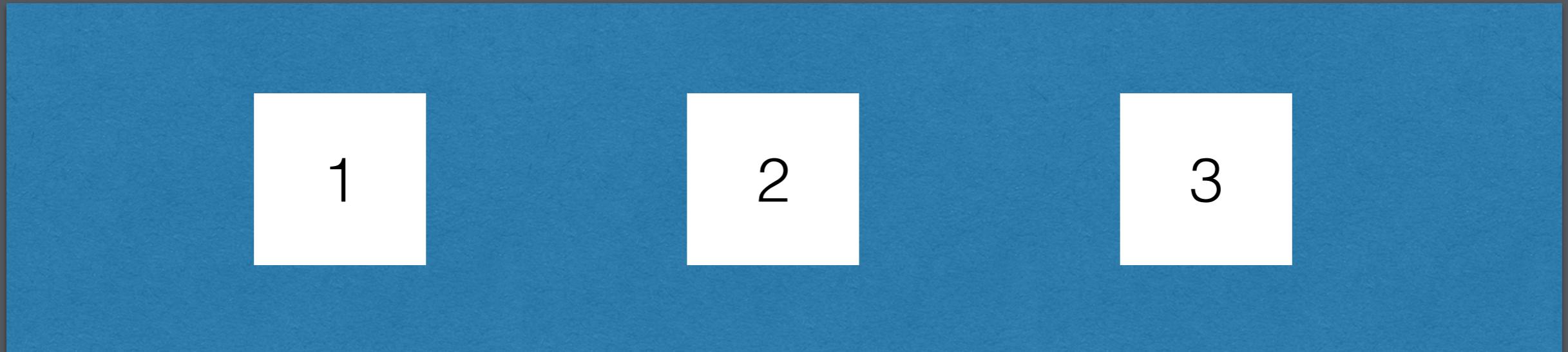
JUSTIFY-CONTENT



Pushes stuff as far apart as possible.

justify-content: space-between;

JUSTIFY-CONTENT



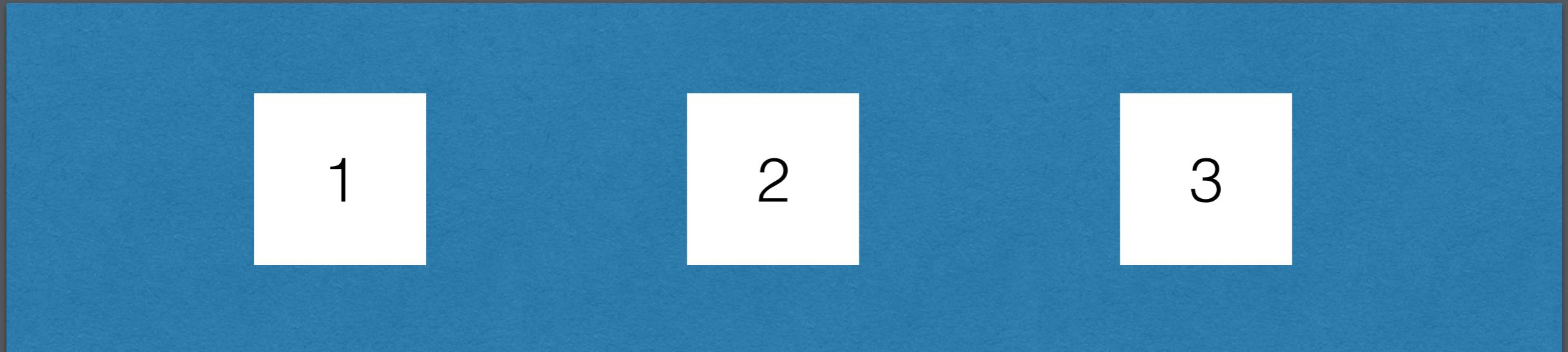
Centers with respect to total row/column, equal spacing between each item.

justify-content: space-around;

ALIGN-ITEMS

Controls vertical alignment -
hurrah! Only took CSS 20
years...

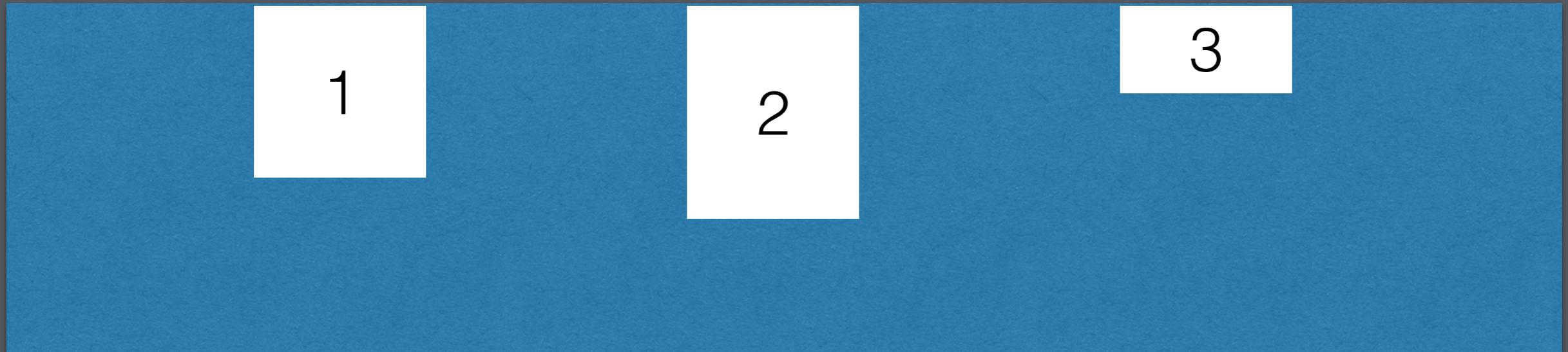
ALIGN-ITEMS



Centers children items
vertically

align-items: center;

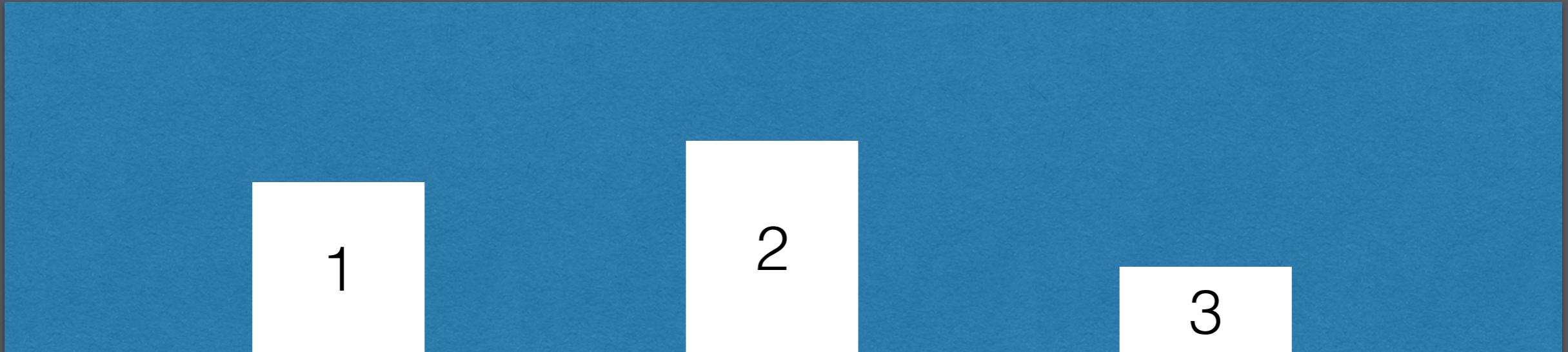
ALIGN-ITEMS



Top-aligns children, even if they have different heights

```
align-items: flex-start;
```

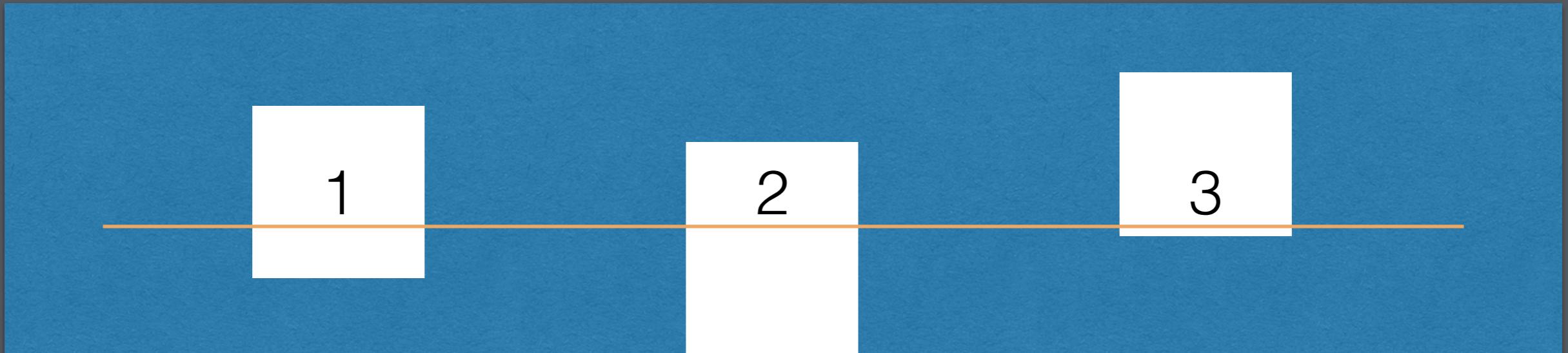
ALIGN-ITEMS



Bottom-aligns children, even if they have different heights

align-items: flex-end;

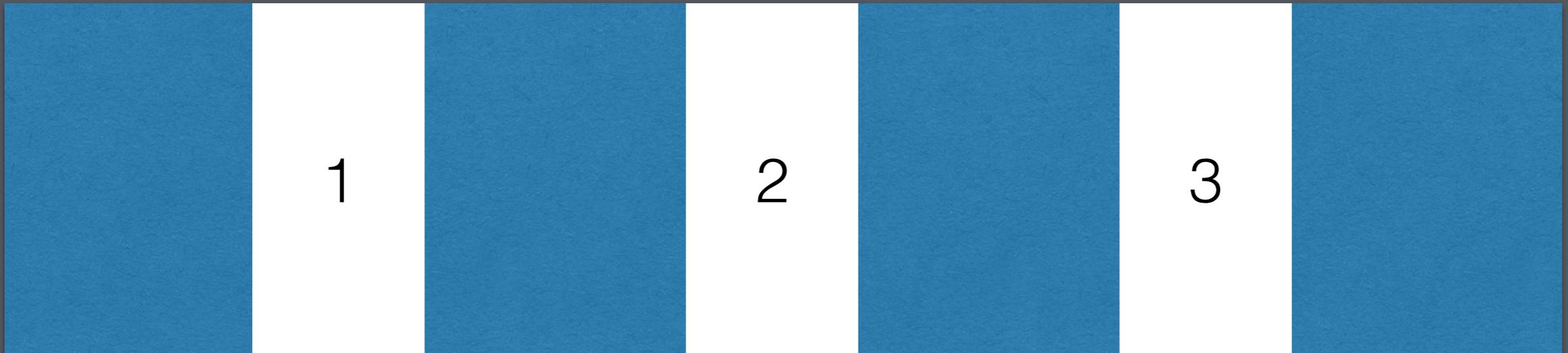
ALIGN-ITEMS



Aligns children by the middle baseline of the text in the child (note orange line)

align-items: baseline;

ALIGN-ITEMS



Stretches children to be the size of the container

```
align-items: stretch;
```

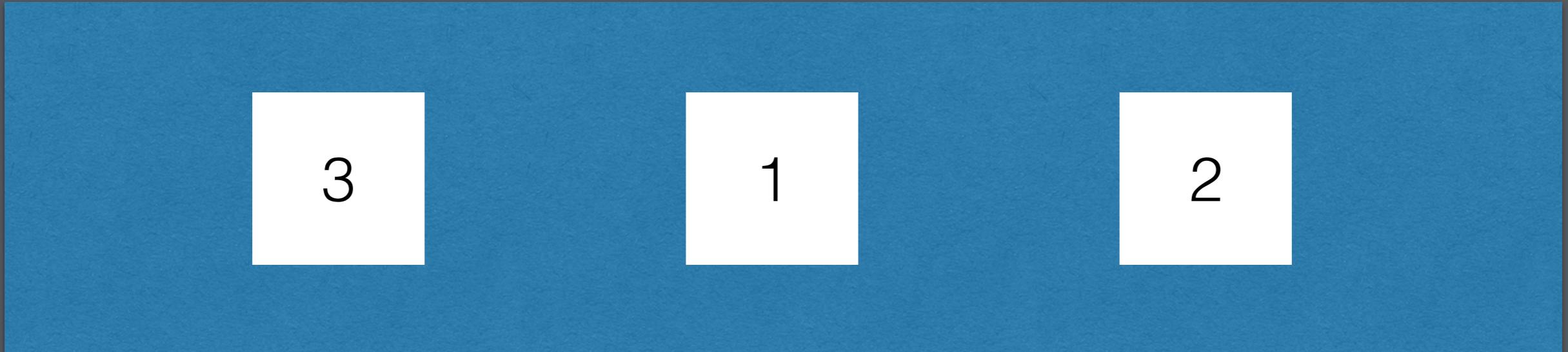
CODEALONG

Let's play with these some more

CHILDREN PROPERTIES



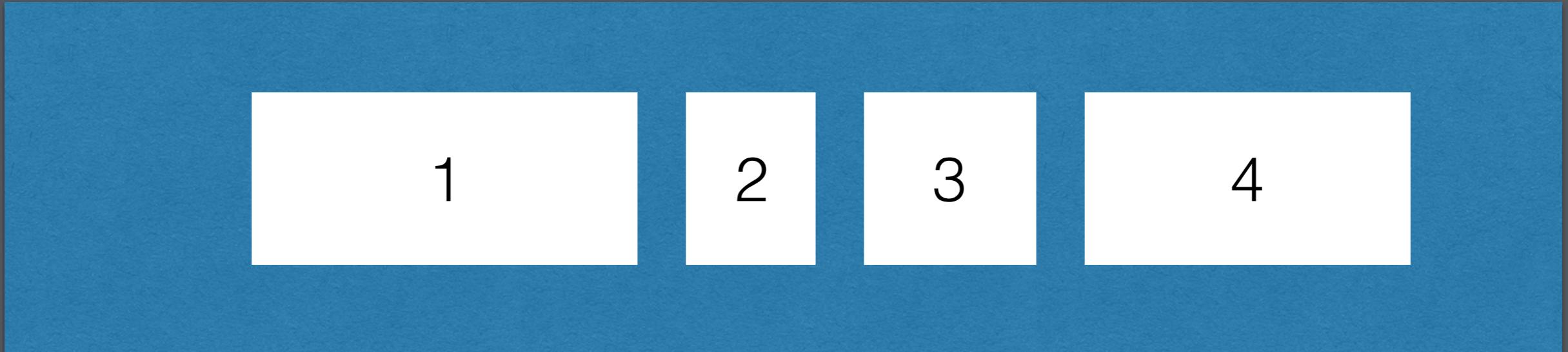
ORDER



Change the order in which children render within a row.

```
order: 3;  
order: 1;  
order: 2;
```

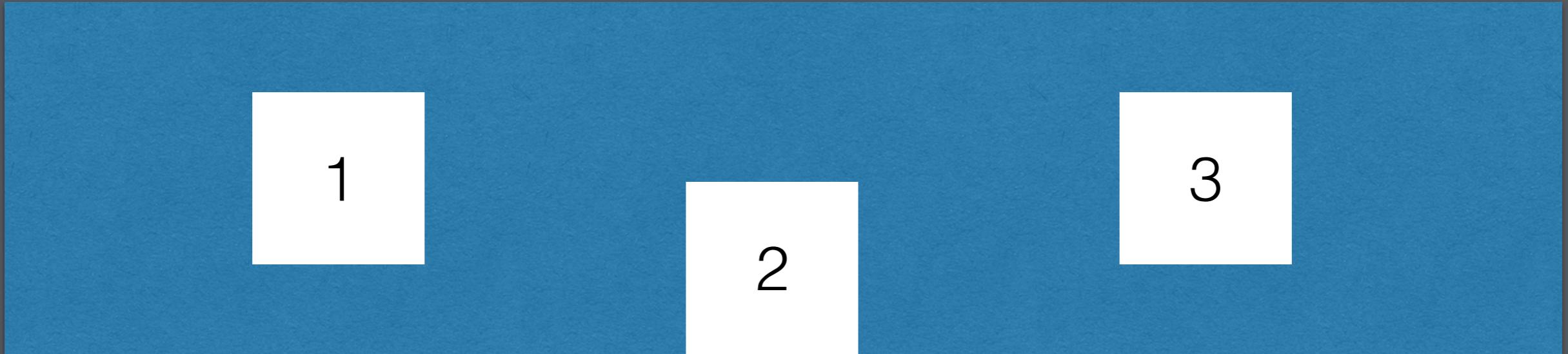
FLEX-GROW



Controls the rate at which individual children grow in width across viewports

```
flex-grow: 2;  
flex-grow: 0.5;  
flex-grow: 1;
```

ALIGN-SELF

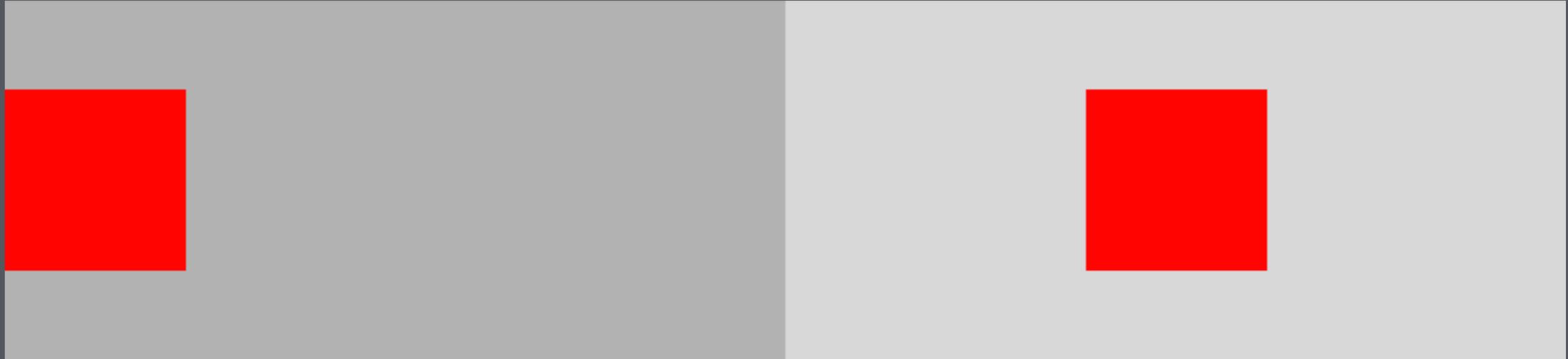


Works like align-items but for an individual child, so you can override on a per-item basis.

```
align-self: flex-bottom;
```

DOUBLE FLEX?

YES YOU CAN

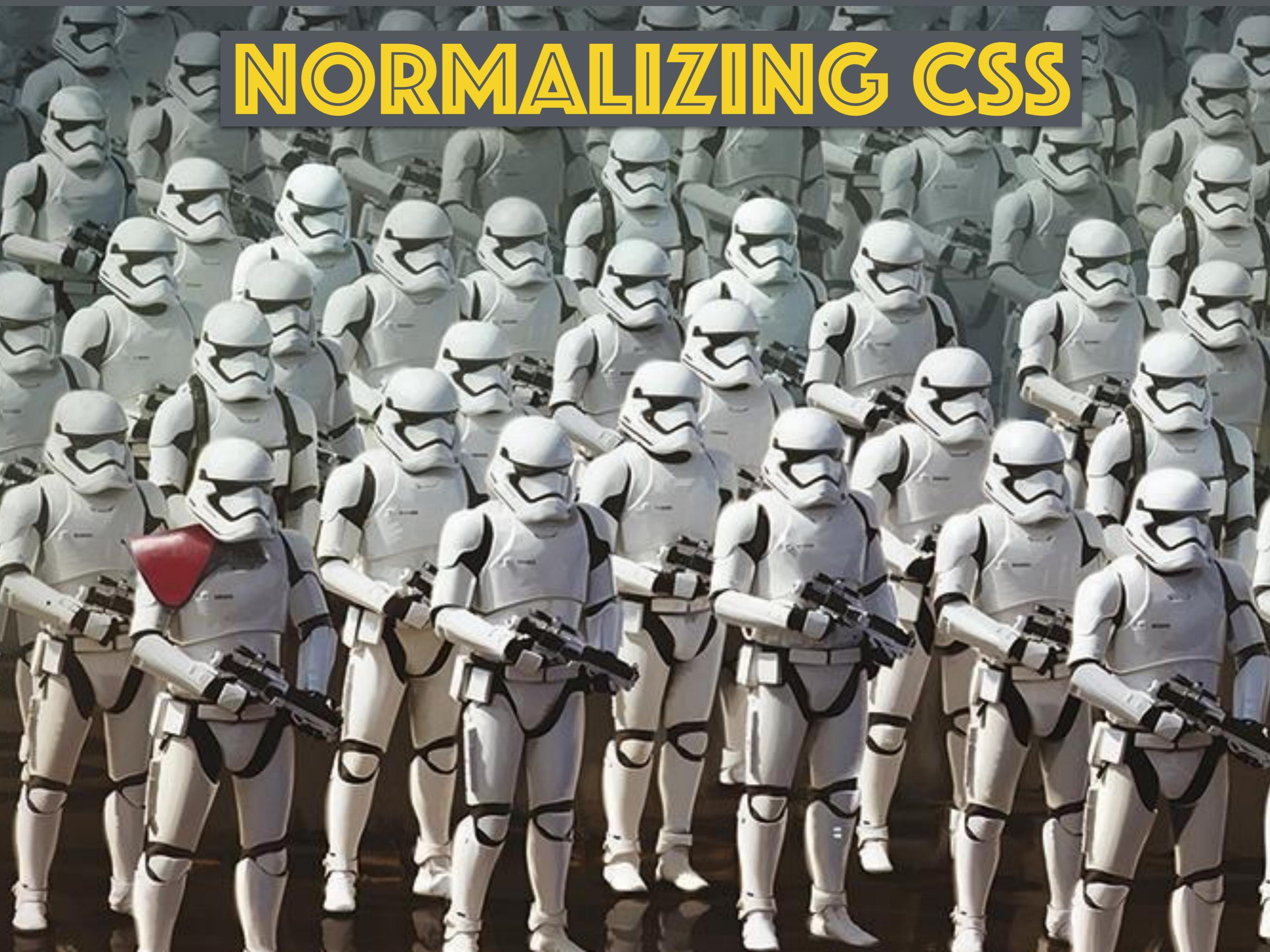


You can nest a flex
container inside of a flex
container - no problem.

YOUR TURN

Flex on Assignment #3

NORMALIZING CSS



NORMALIZING OUTPUT

- Browsers are all a little unique in how they render things
- Very smart people have compared and contrasted these very minor differences and fixed them for you - how nice.
- There are many of them but I'm going to make your life simple and joint point you to the best one:

Normalize.css: <http://necolas.github.io/normalize.css/>

HOW TO USE NORMALIZE

```
<head>
  <title>Something Unique</title>
  <link rel="stylesheet" href="css/normalize.css">
  <link rel="stylesheet" href="css/main.css">
</head>
```

- 1) Download normalize
- 2) Place normalize CSS before your external CSS
- 3) Code away like normal

Let's check it out in action:

<http://codepen.io/staypuftman/pen/VjPEpJ>

**USE NORMALIZE ON
THIS WEEKS HW**

NEXT TIME

HW #2 - Practice Flexbox Layouts
Next time, we'll explore CSS Grid