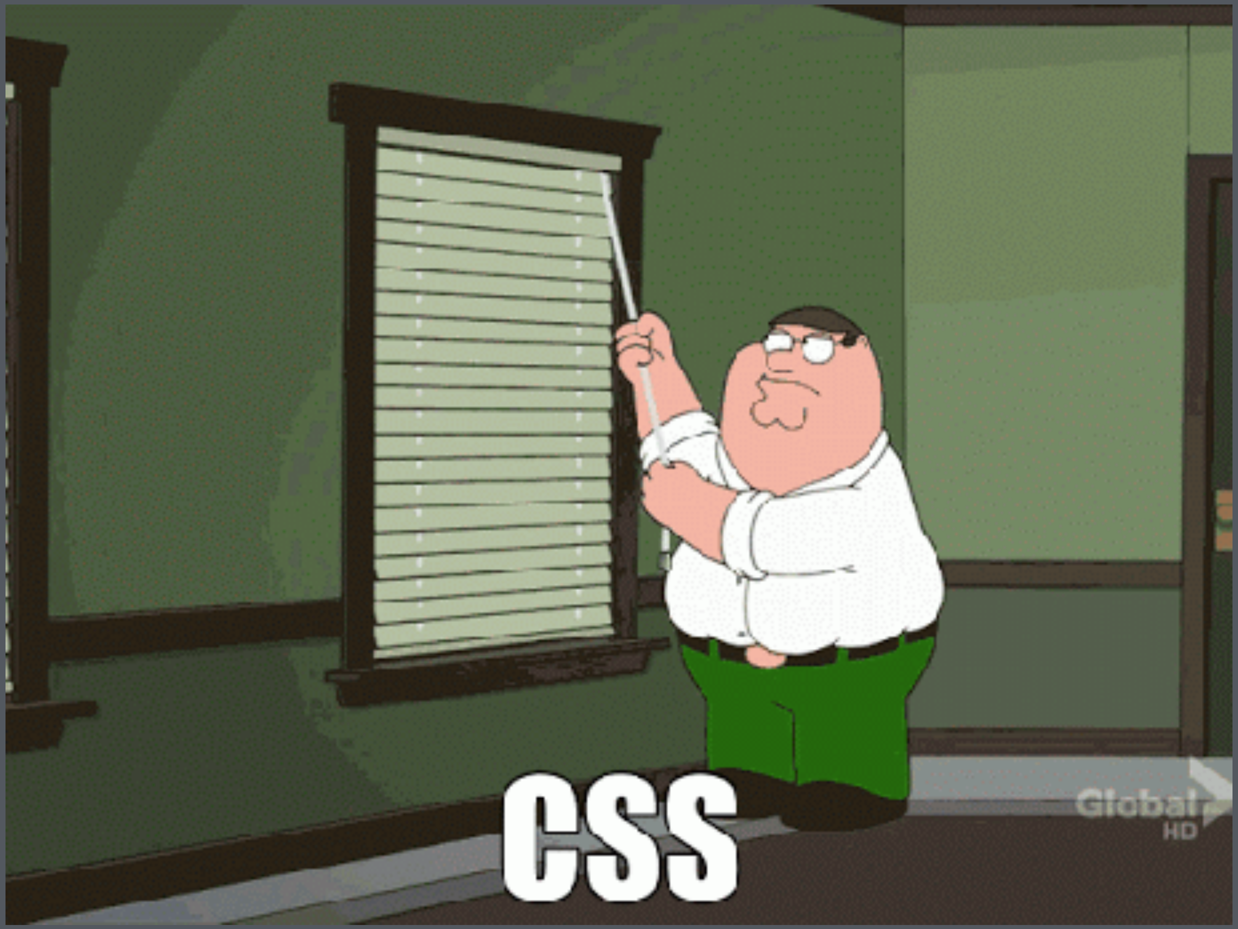
FLEXBOX

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.

FLOATS

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

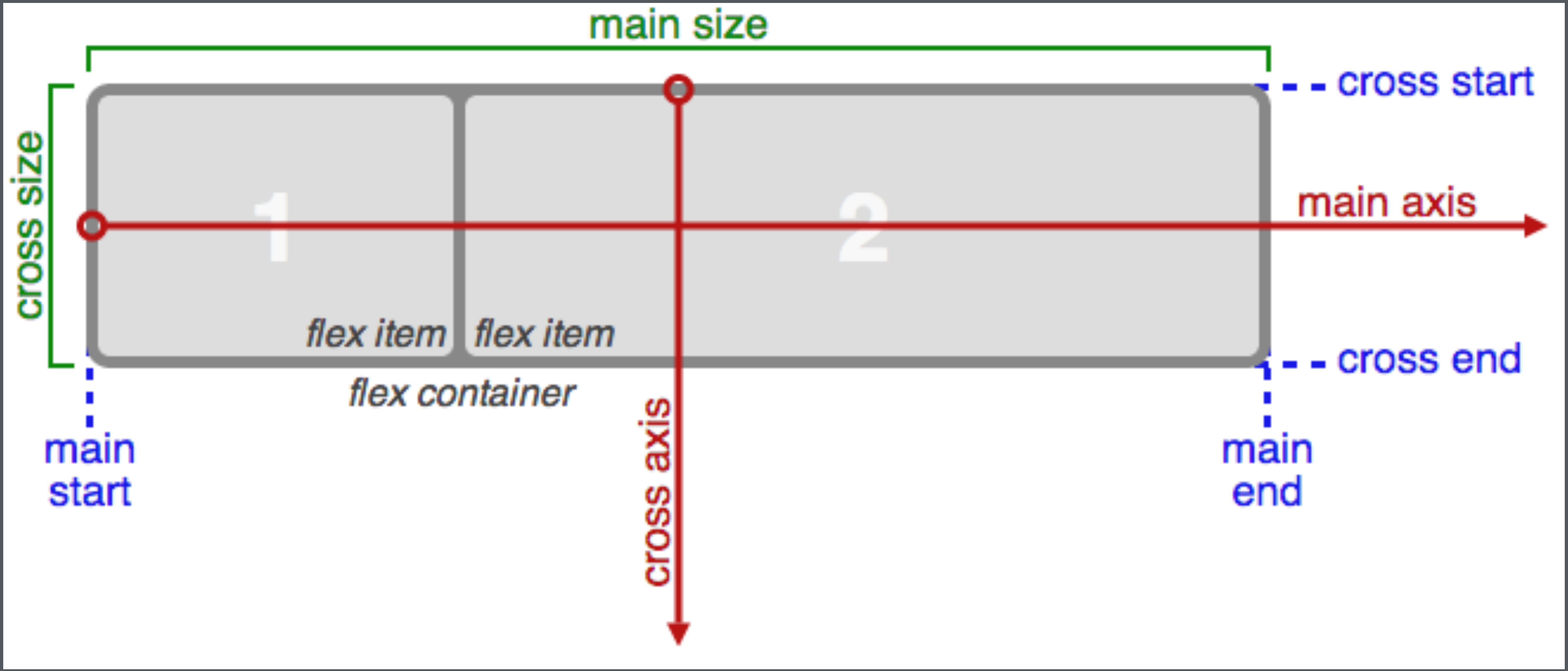
Children (Items)

Flex items are the children that go inside the parent container

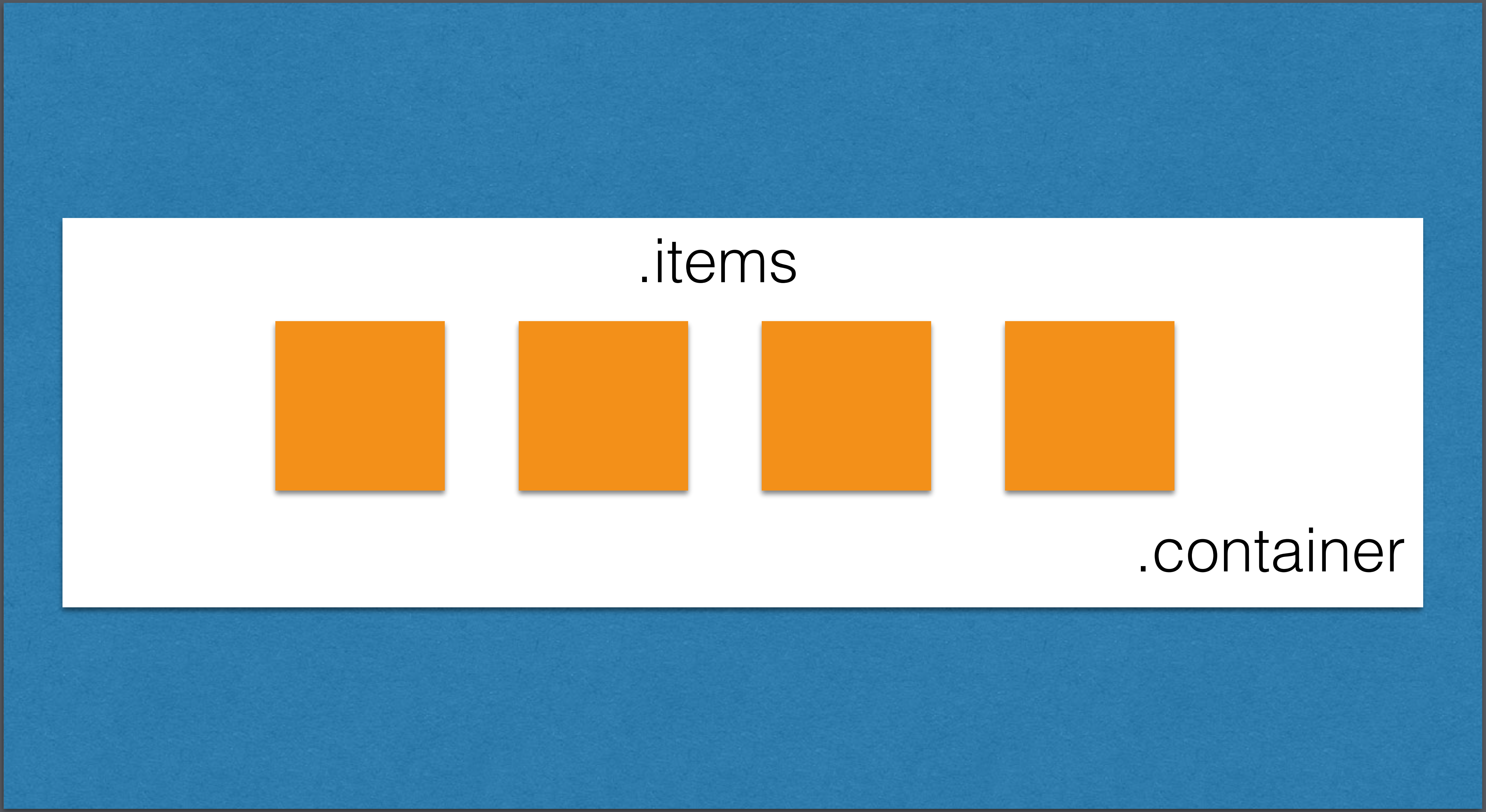
FLEXBOX IN ACTION

HOW TO FLEXBOX

Multi-axis alignment method



HOW TO FLEXBOX



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:

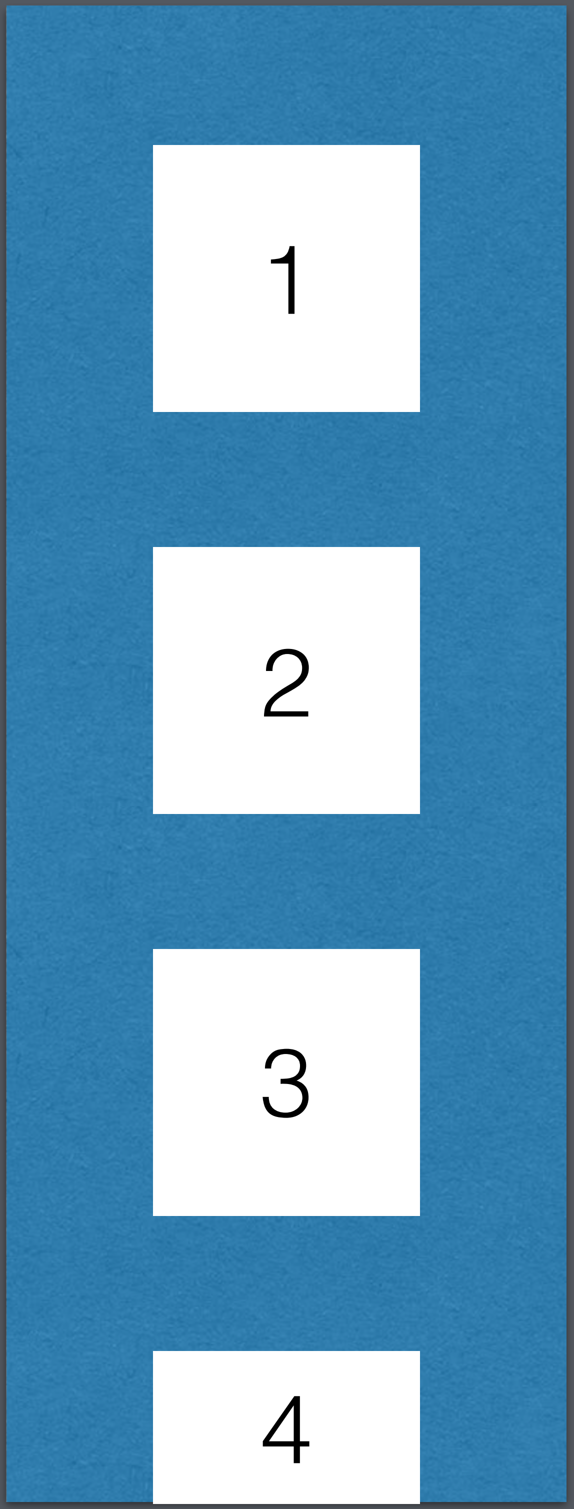
```
flex-direction: row;
justify-content: flex-start;
align-items: stretch;
```

CODEALONG

Let’s *flex* those coding muscles…

PARENT PROPERTIES

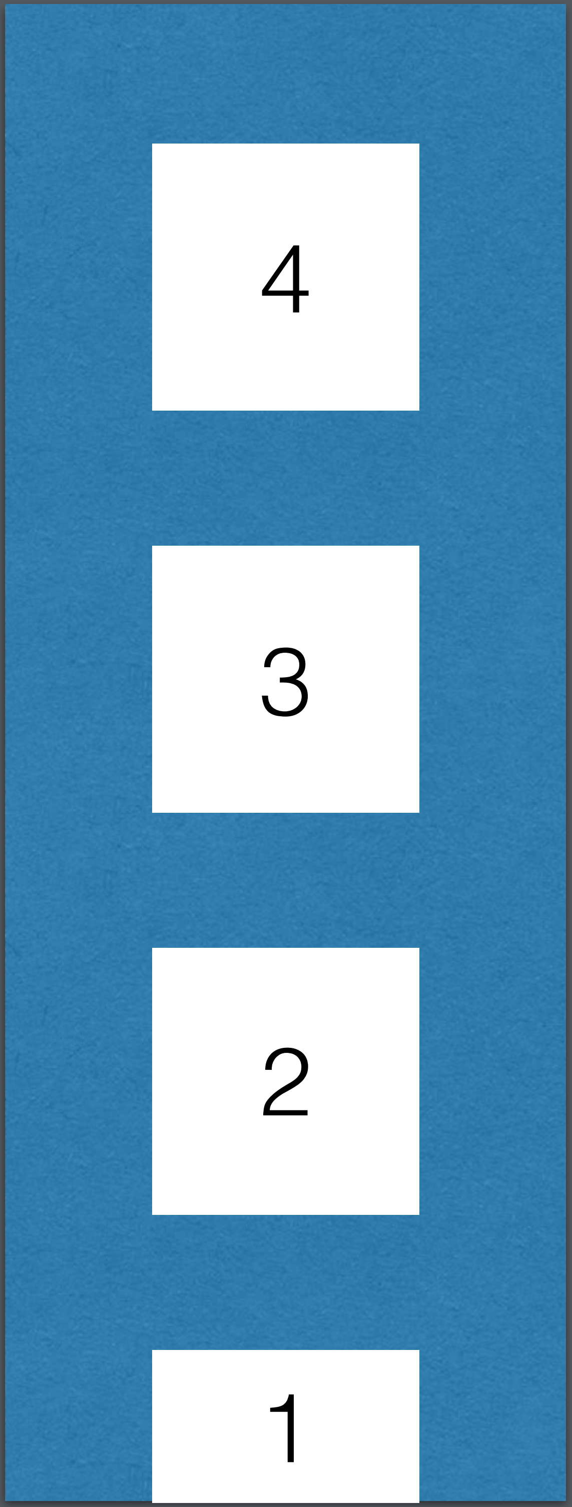
FLEX-DIRECTION



Think about orientation - flexbox layouts are inherently vertical or horizontal

```
flex-direction: column;
```

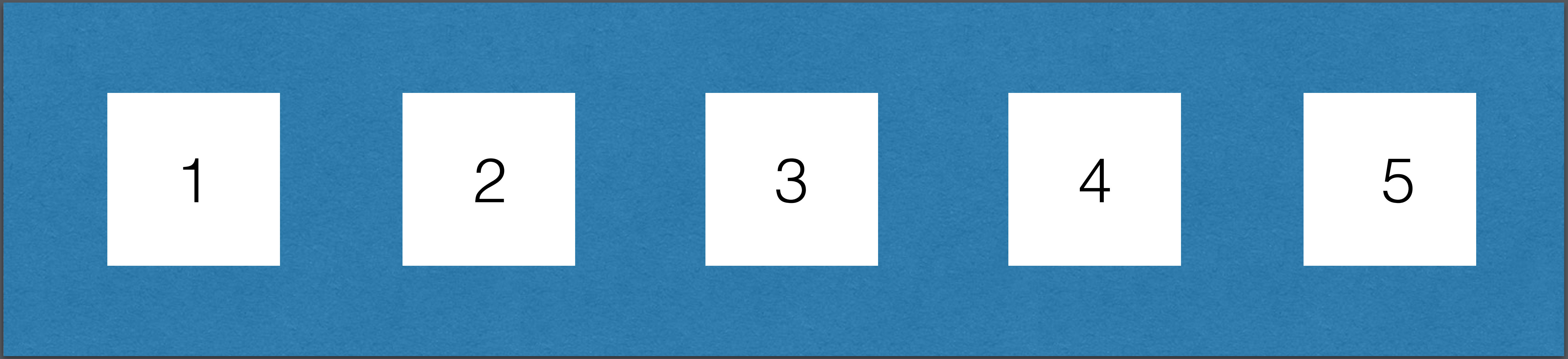
Flex-Direction



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

```
flex-direction: column-reverse;
```

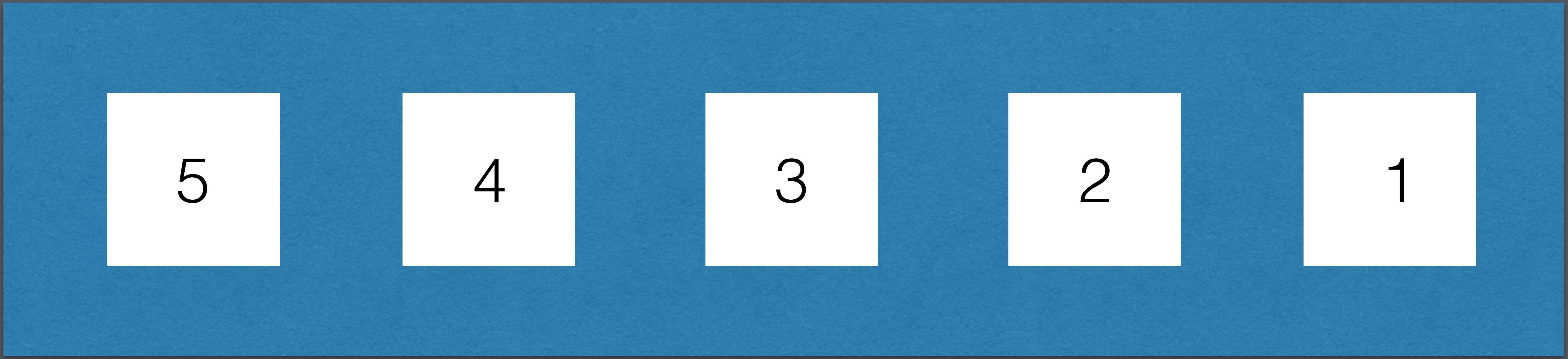
FLEX-DIRECTION



You can also do layouts in a row.

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

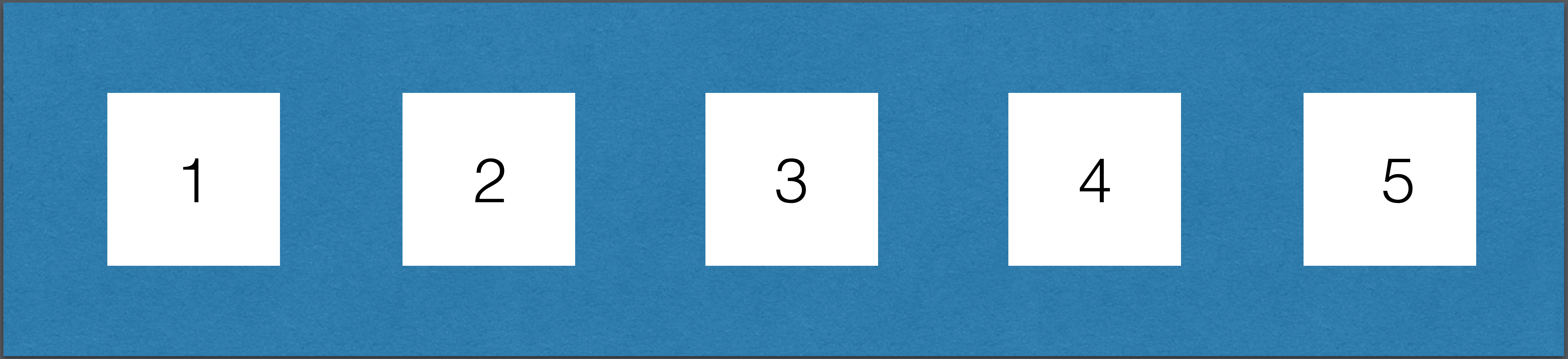
FLEX-DIRECTION



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

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

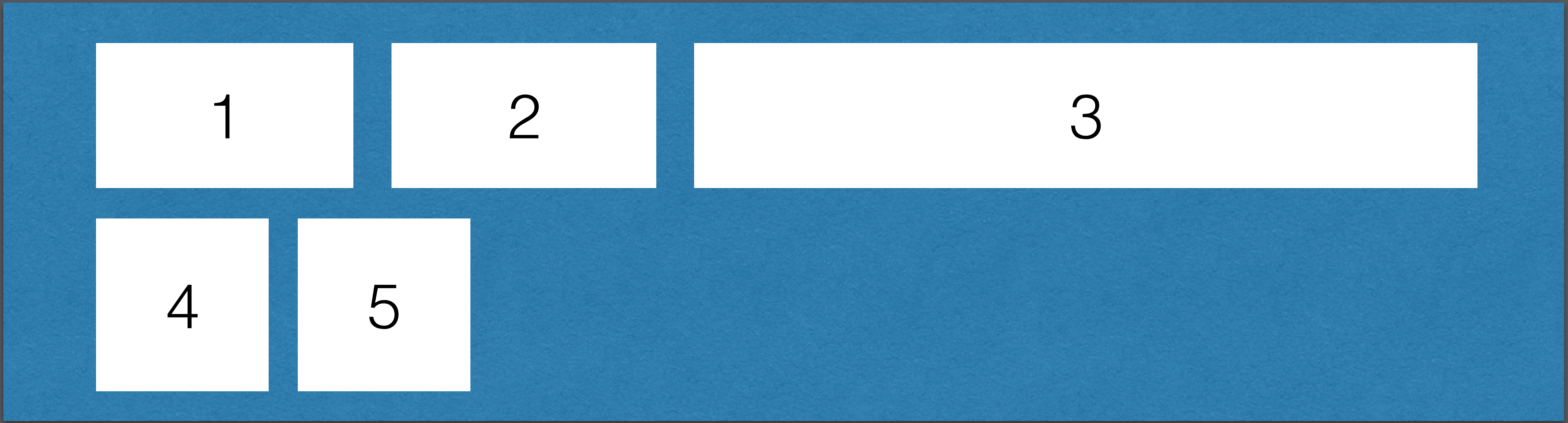
FLEX-WRAP



Be default, all boxes are stuffed into one row.

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

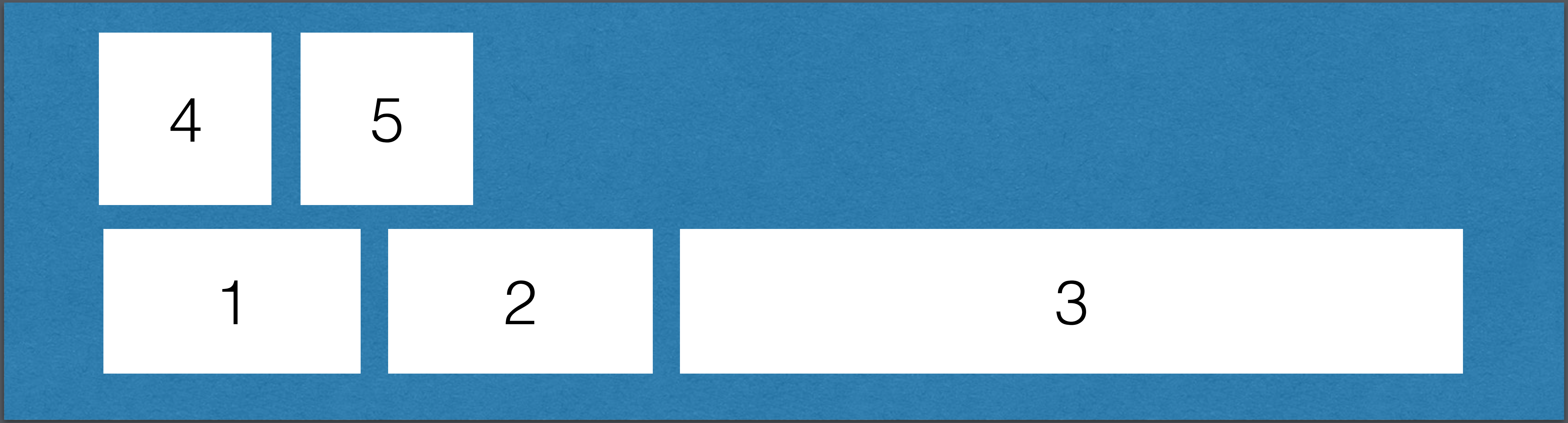
FLEX-WRAP



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

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

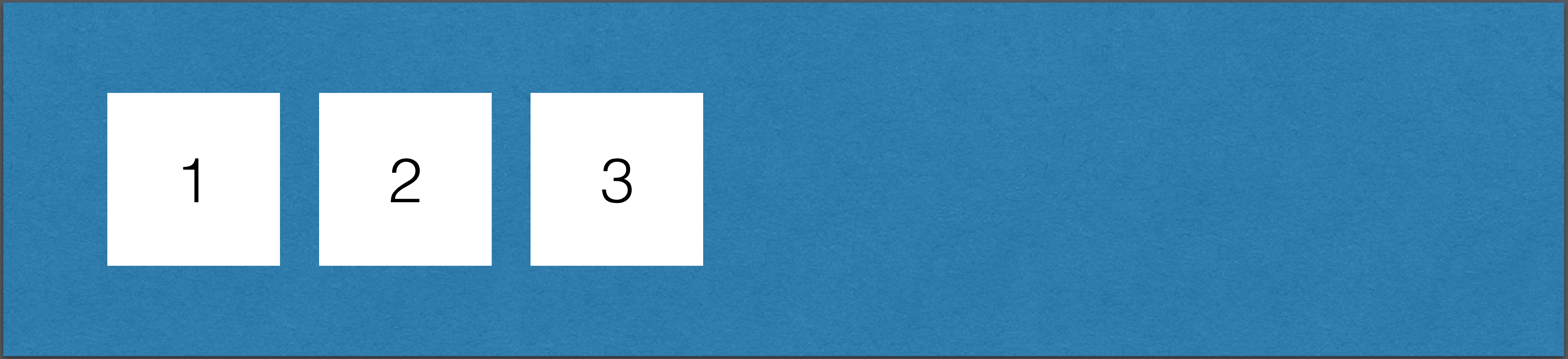
FLEX-WRAP



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;
```

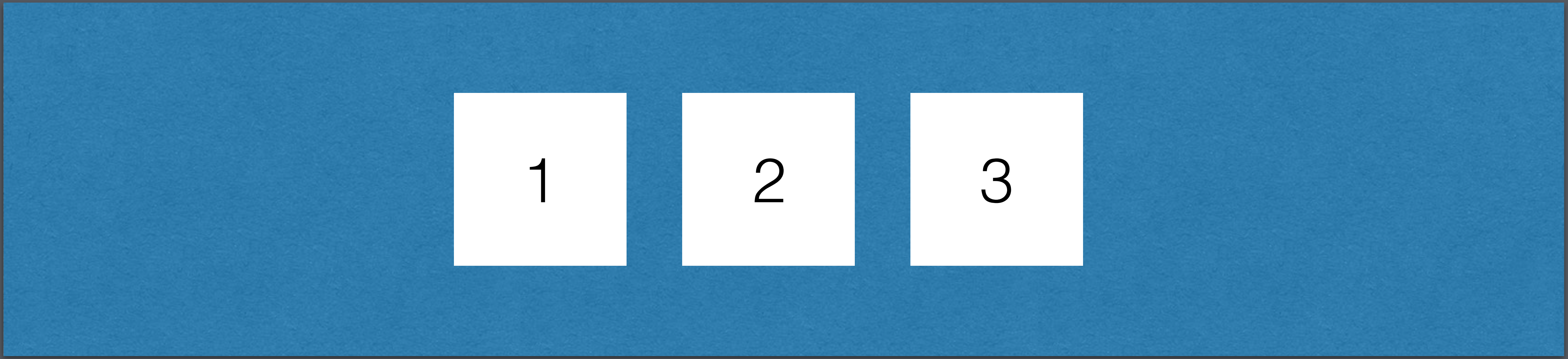
JUSTIFY-CONTENT



Controls how boxes space in flexbox rows/columns.

```
justify-content: flex-start;
```

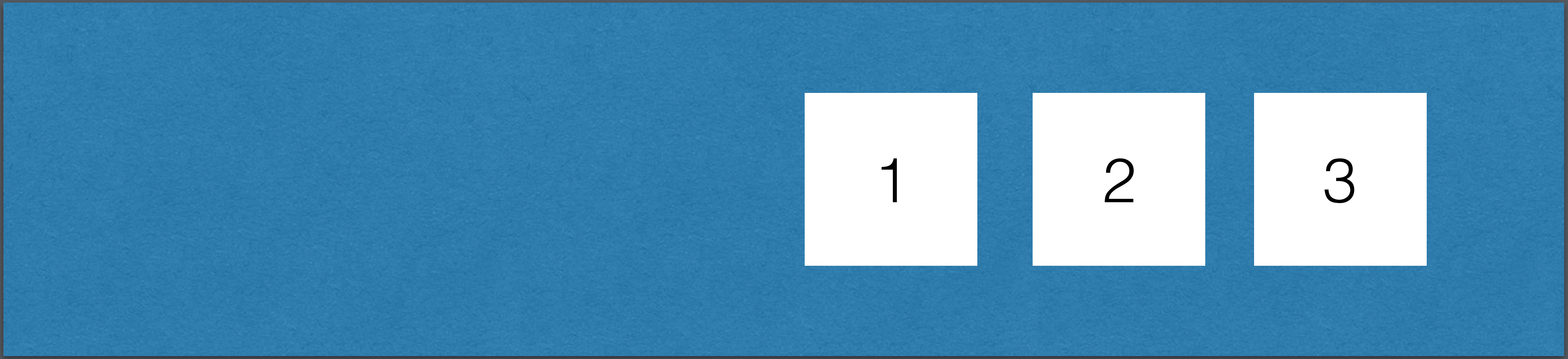
JUSTIFY-CONTENT



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

```
justify-content: flex-center;
```

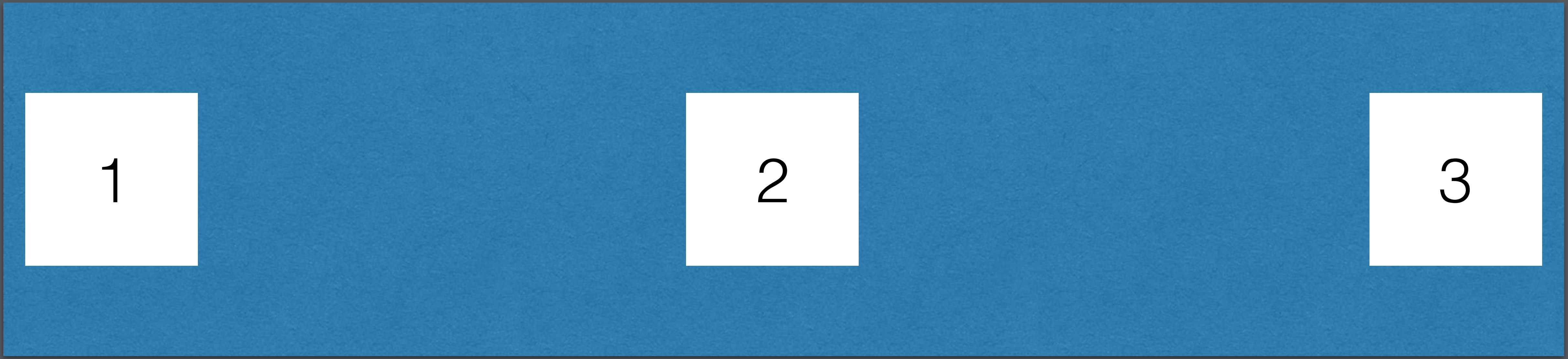
JUSTIFY-CONTENT



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

```
justify-content: flex-end;
```

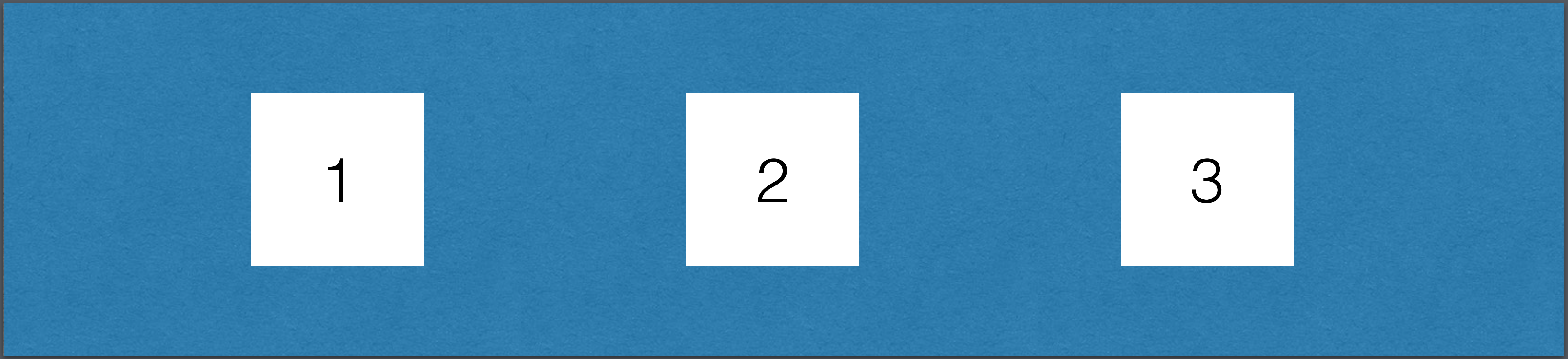
JUSTIFY-CONTENT



Pushes stuff as far apart as possible.

```
justify-content: space-between;
```

JUSTIFY-CONTENT



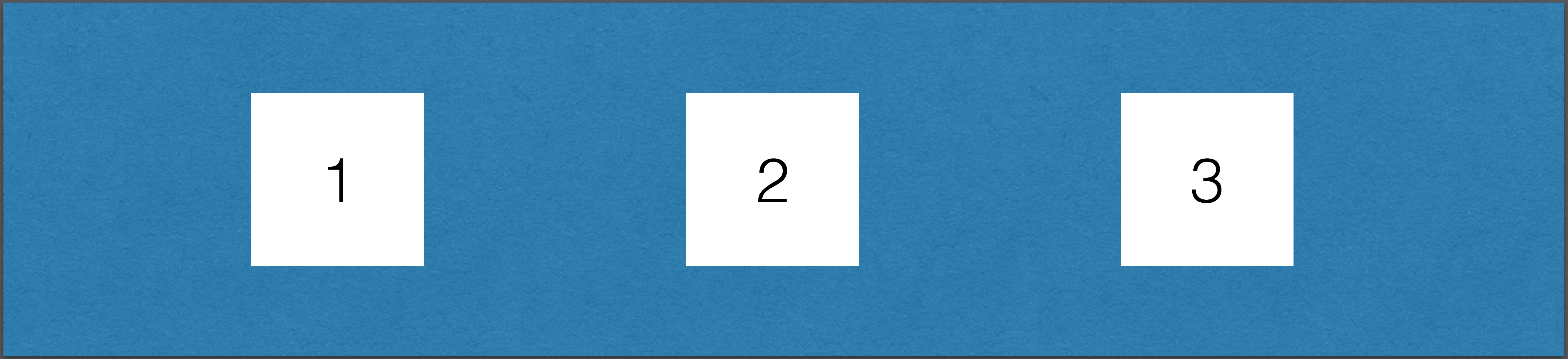
Centers with respect to total row/column, equal spacing between each item.

```
justify-content: space-around;
```

ALIGN-ITEMS

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

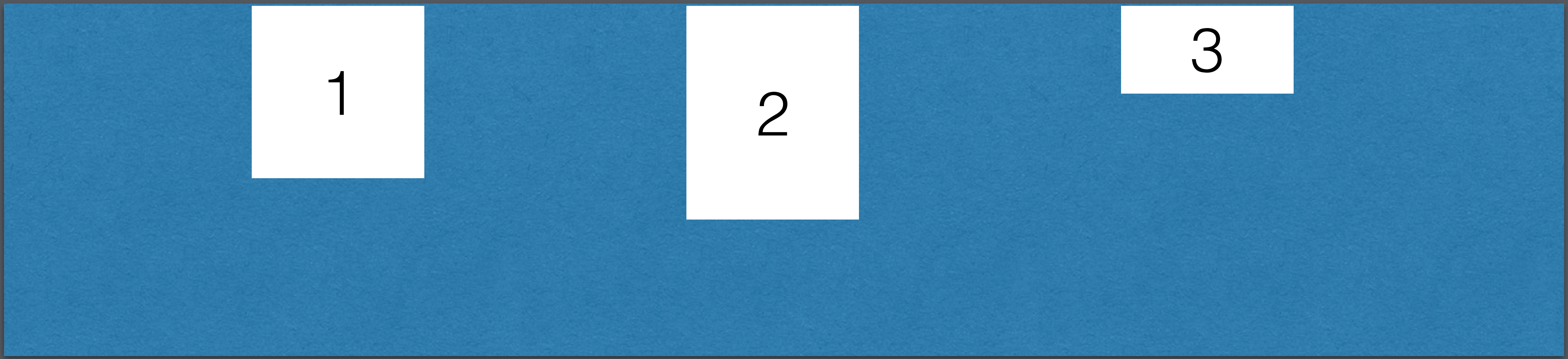
ALIGN-ITEMS



Centers children items vertically

```
align-items: center;
```

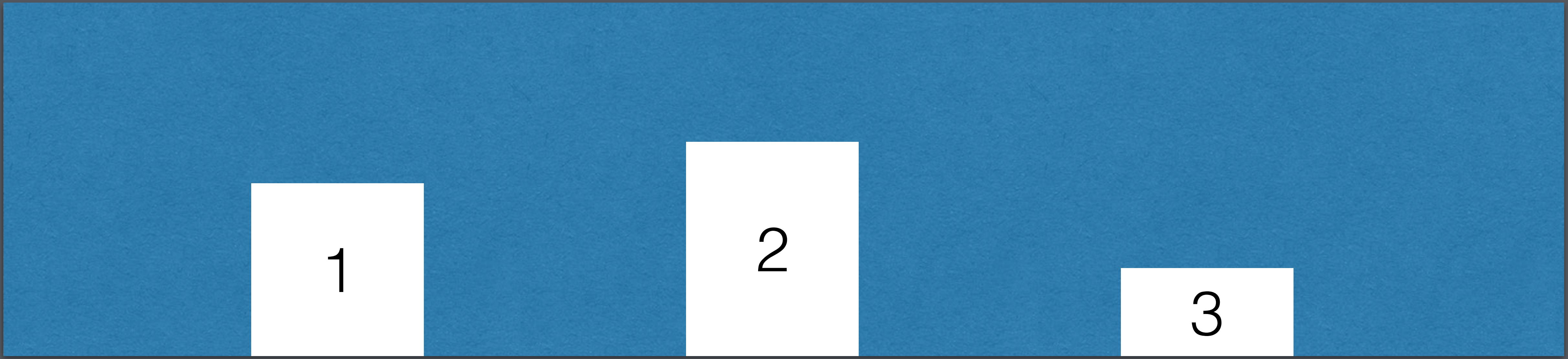
ALIGN-ITEMS



Top-aligns children, even if they have different heights

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

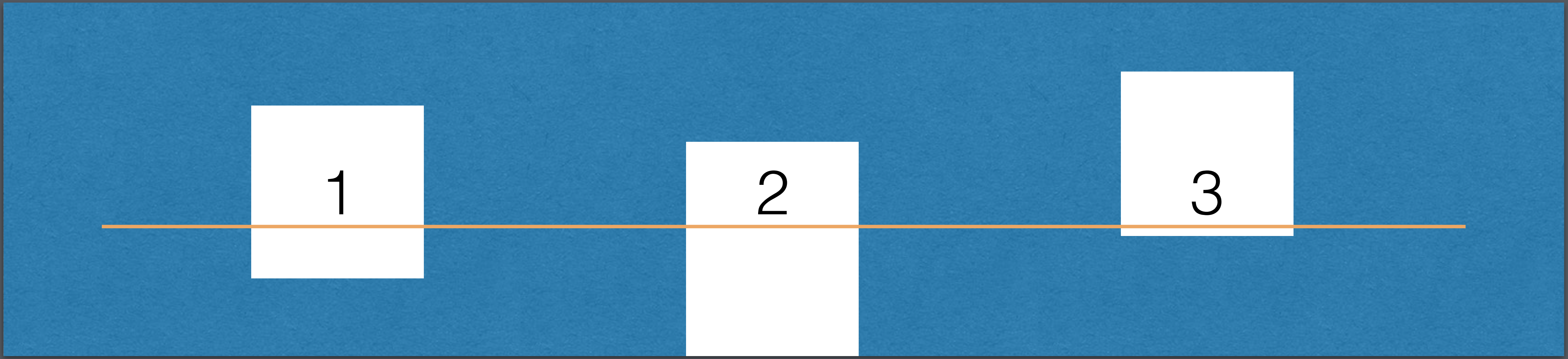
align-items



Bottom-aligns children, even if they have different heights

```
align-items: flex-end;
```

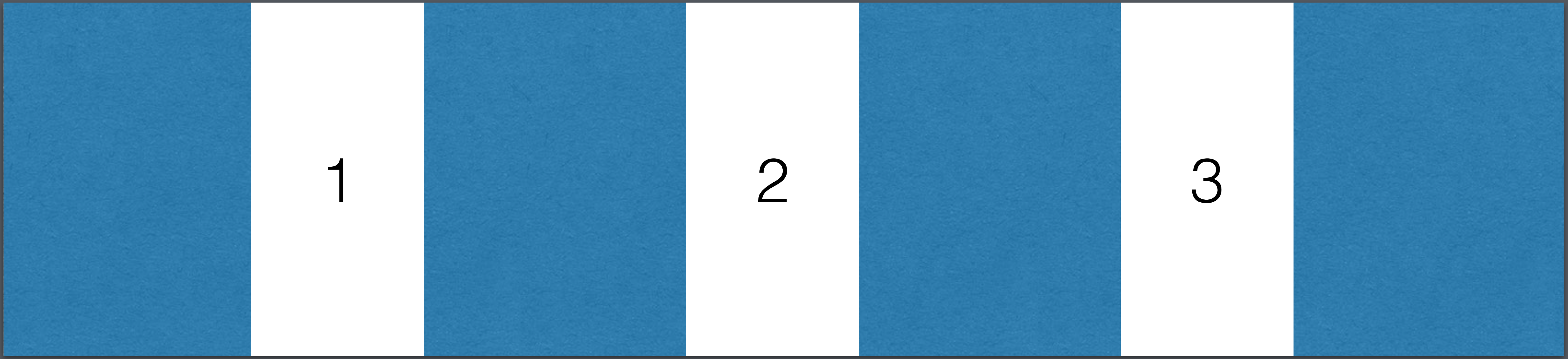
ALIGN-ITEMS



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

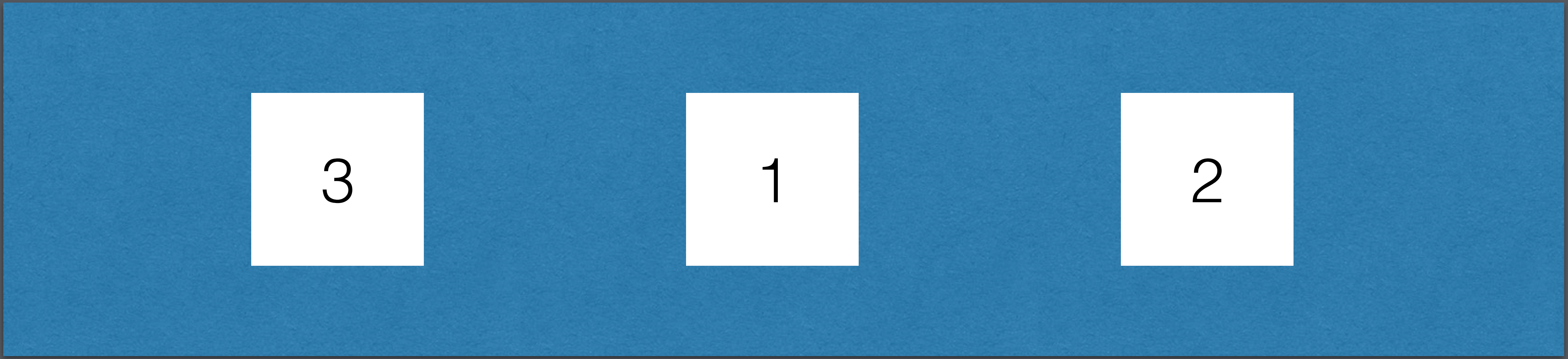
```
align-items: stretch;
```

CODEALONG

Let’s play with these some more

Children Properties

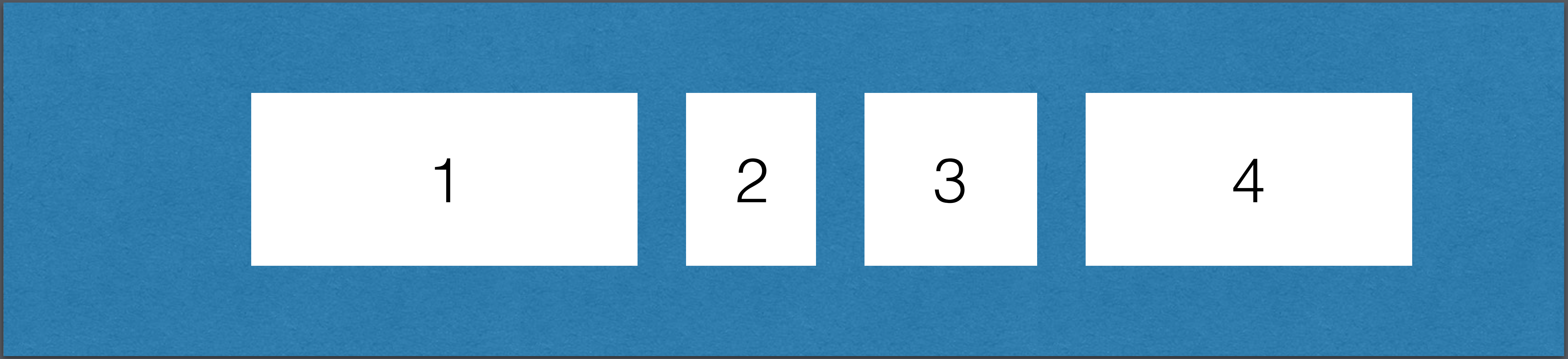
ORDER



Change the order in which children render within a row.

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

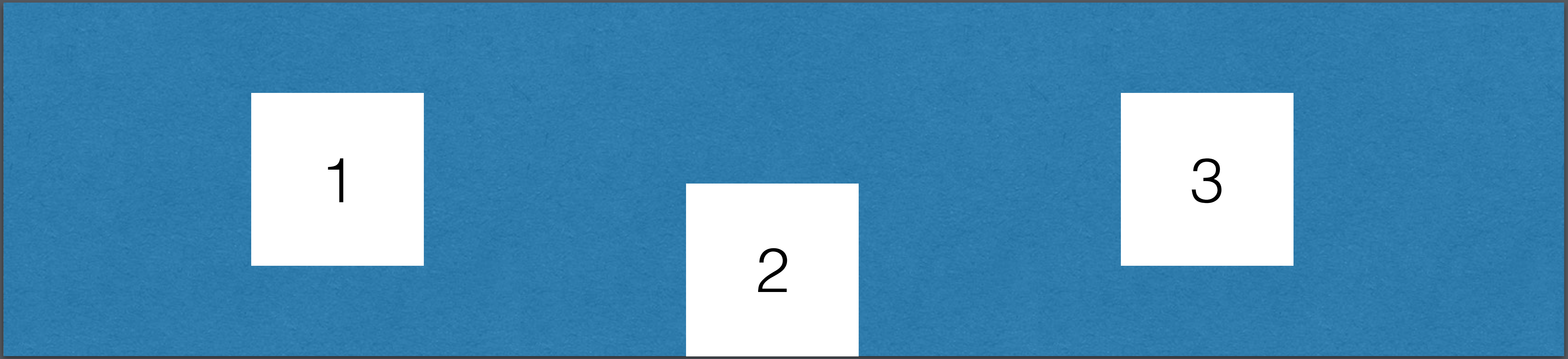
FLEX-GROW



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

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

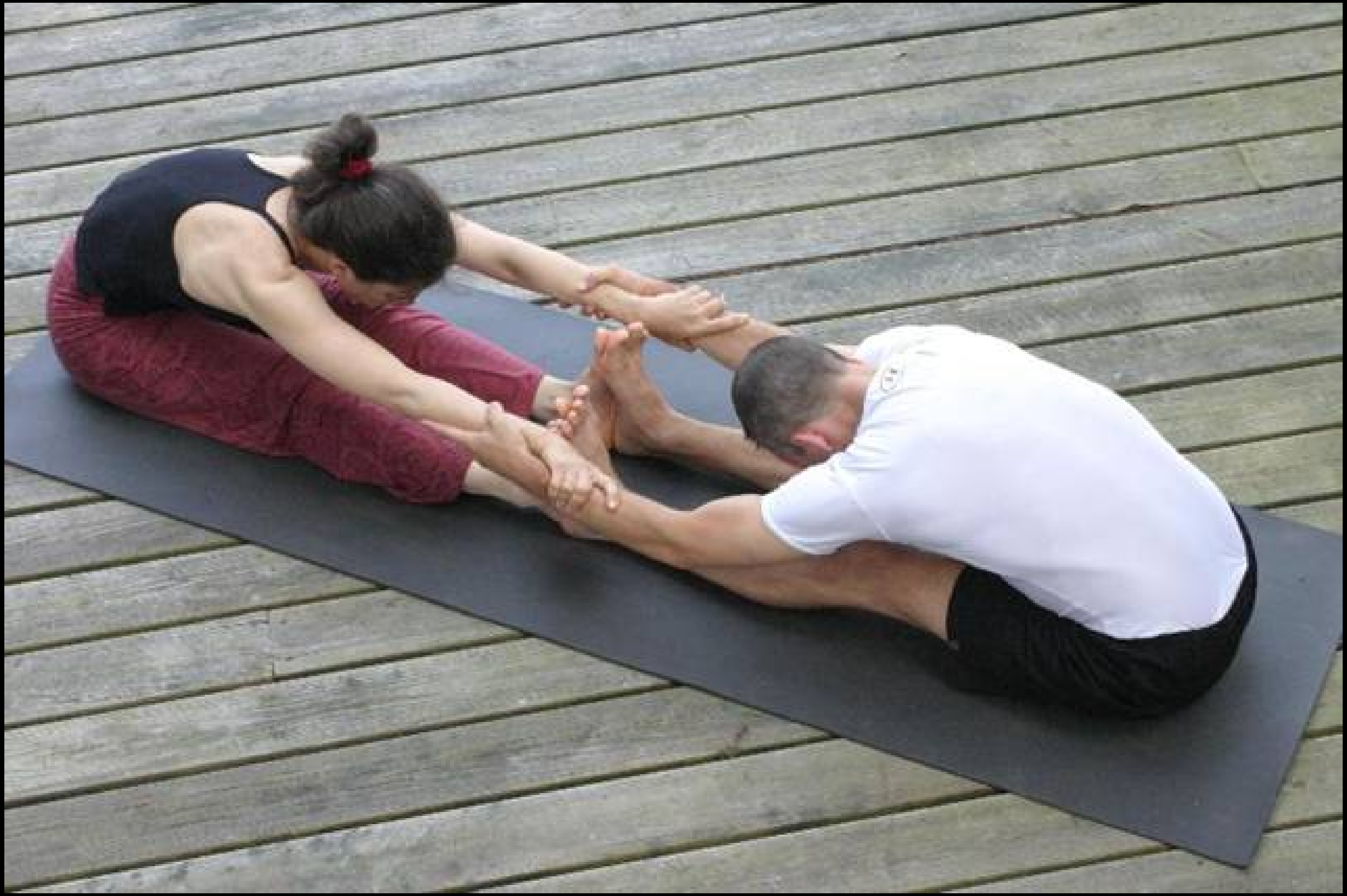
ALIGN-SELF



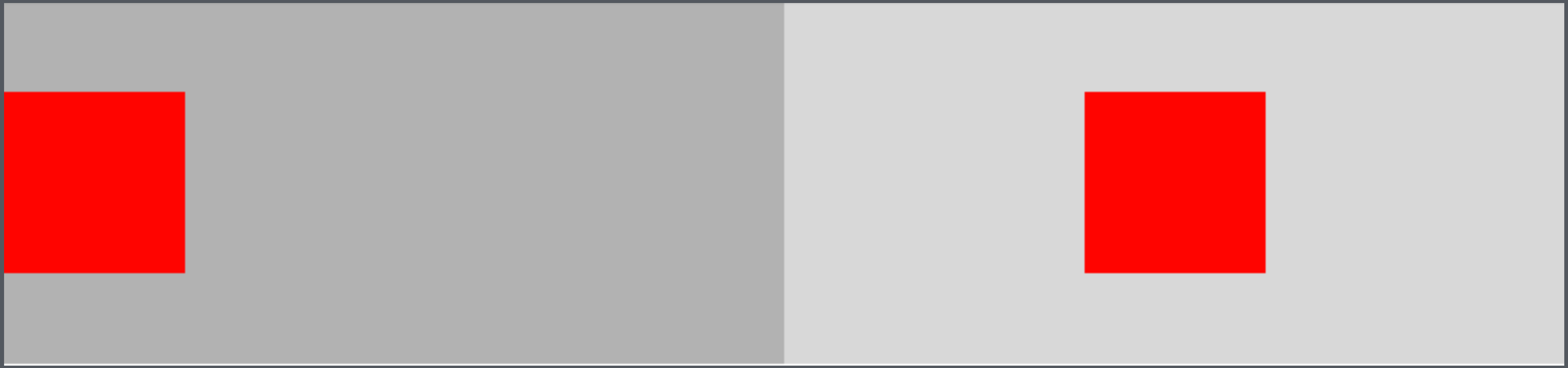
Works like align-items but for an individual child, so you can override on a per-item basis.

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

DOUBLE FLEX?



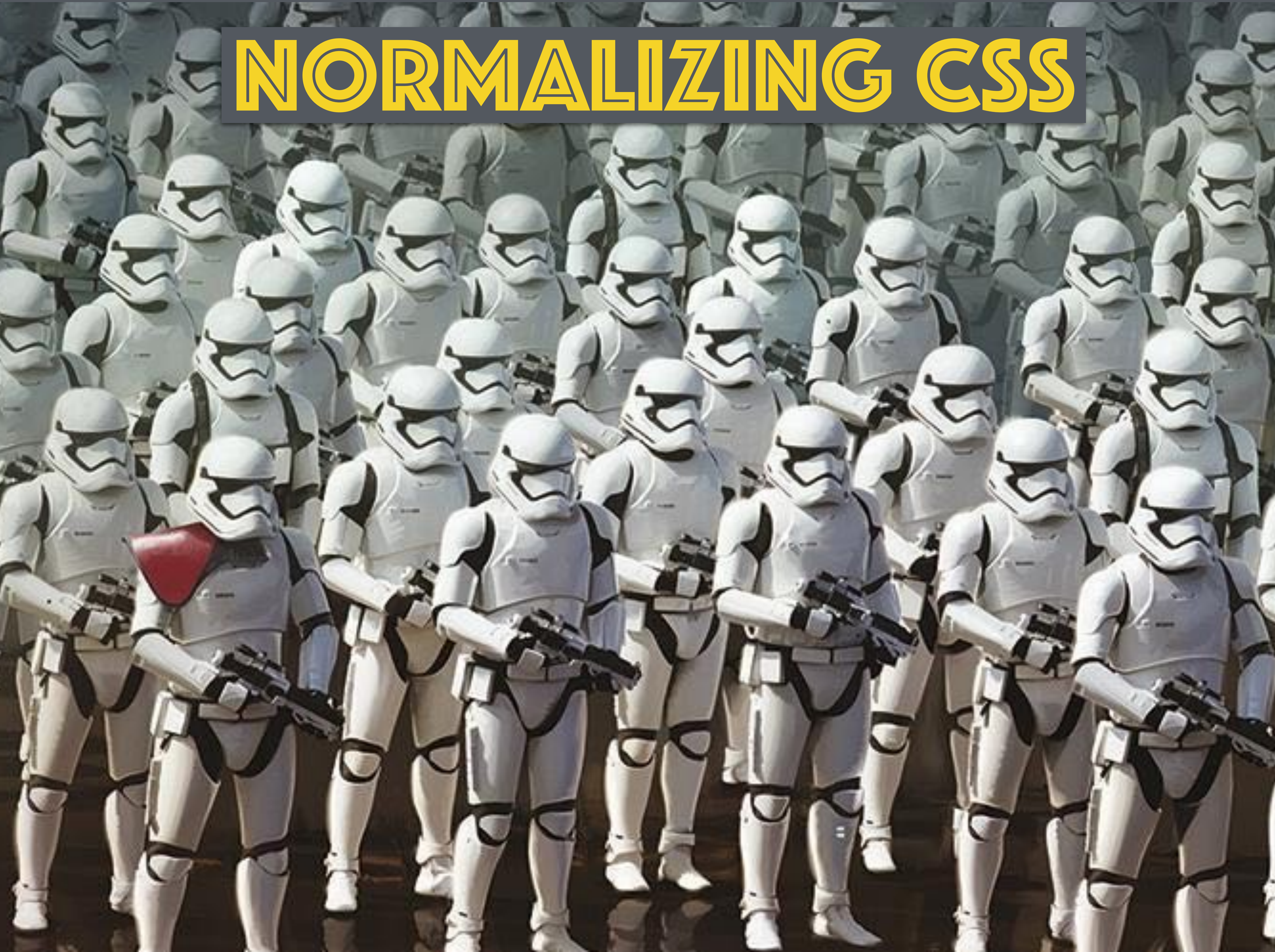
YES YOU CAN



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

YOUR TURN

Flex on Assignment #2



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