

# Nation Code

## HTML and CSS

Intro to flexbox

{codenation}<sup>®</sup>

# Learning objectives

- } To be able to use CSS flexbox to structure layouts

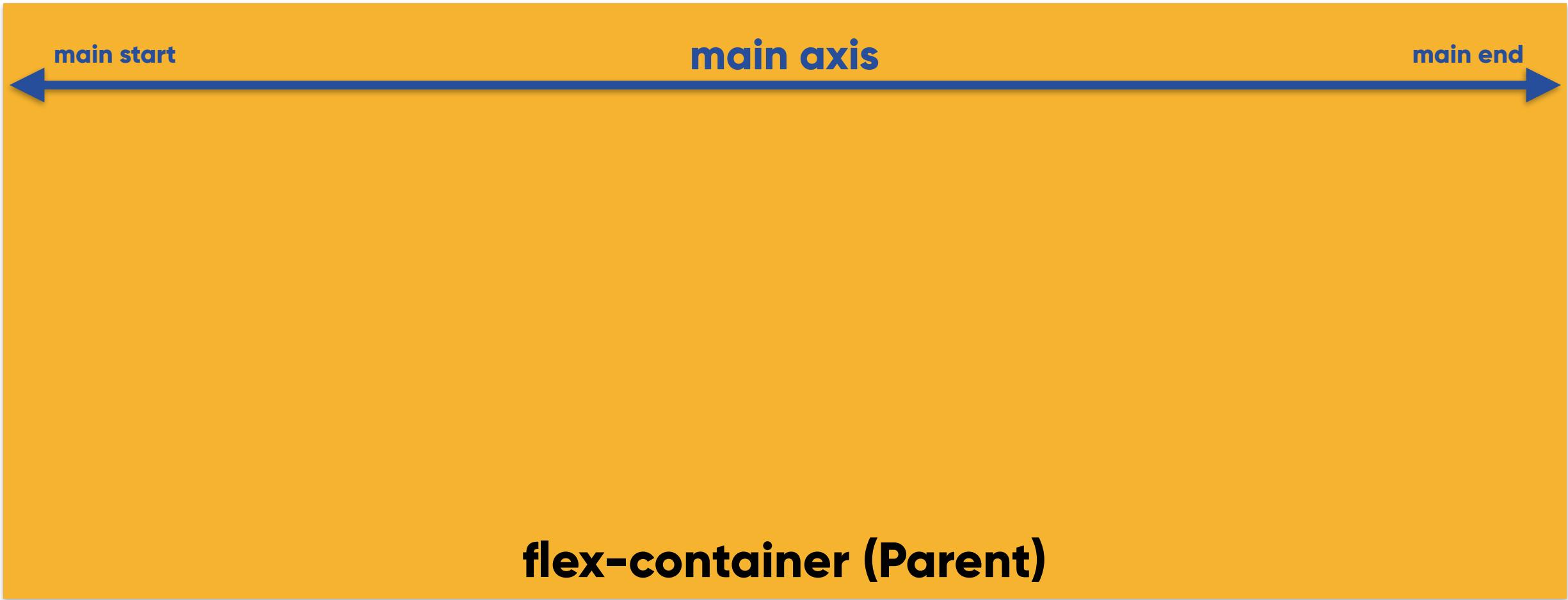


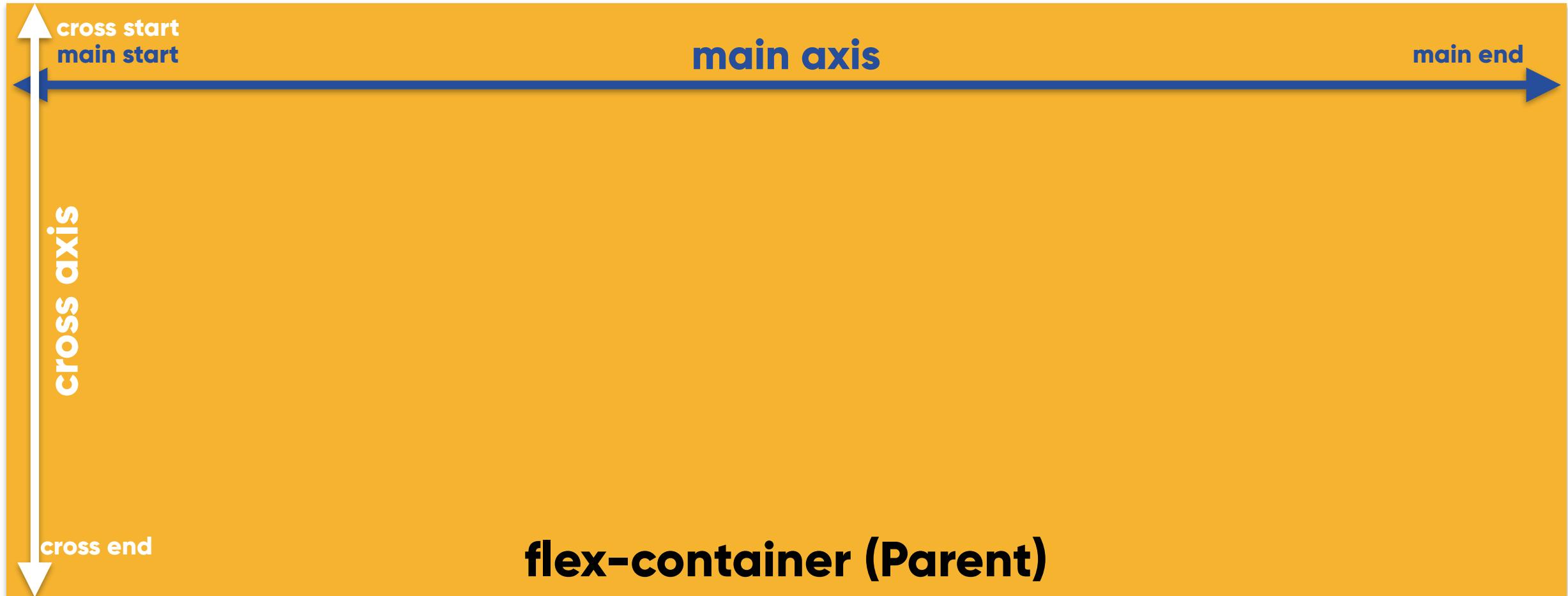
flexbox.

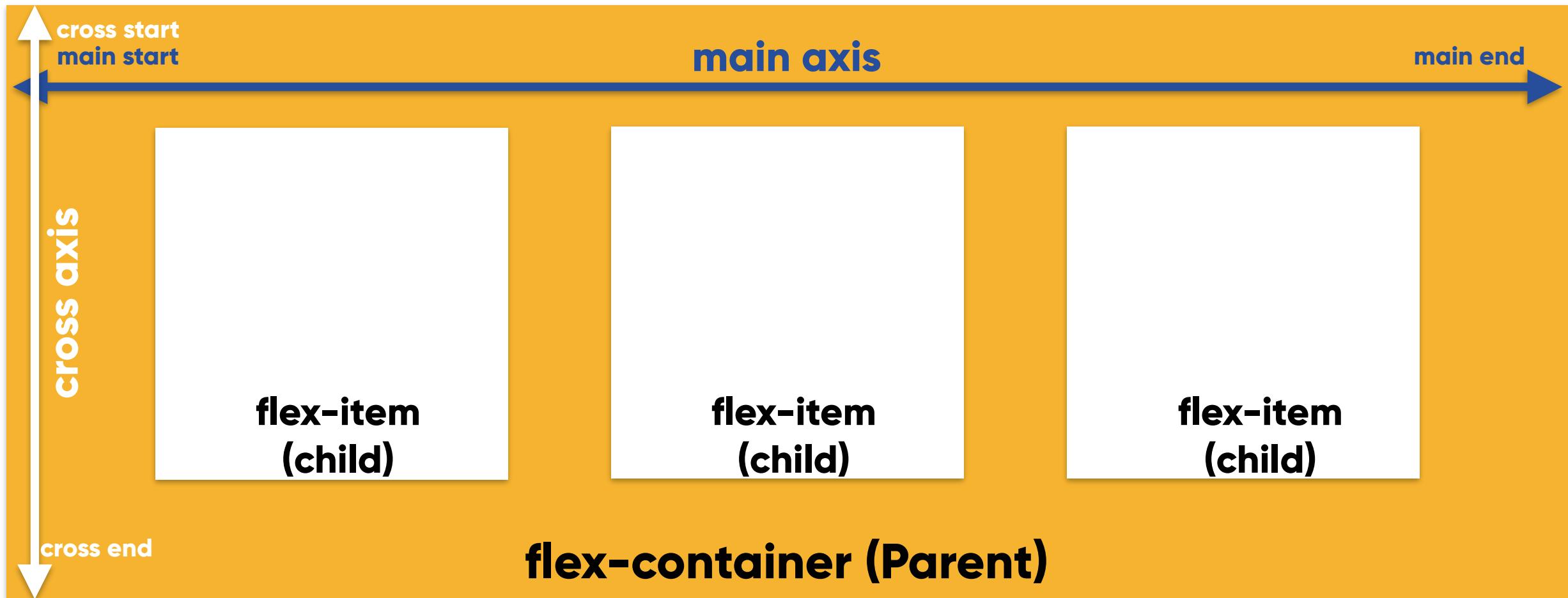
{ CODENATION }

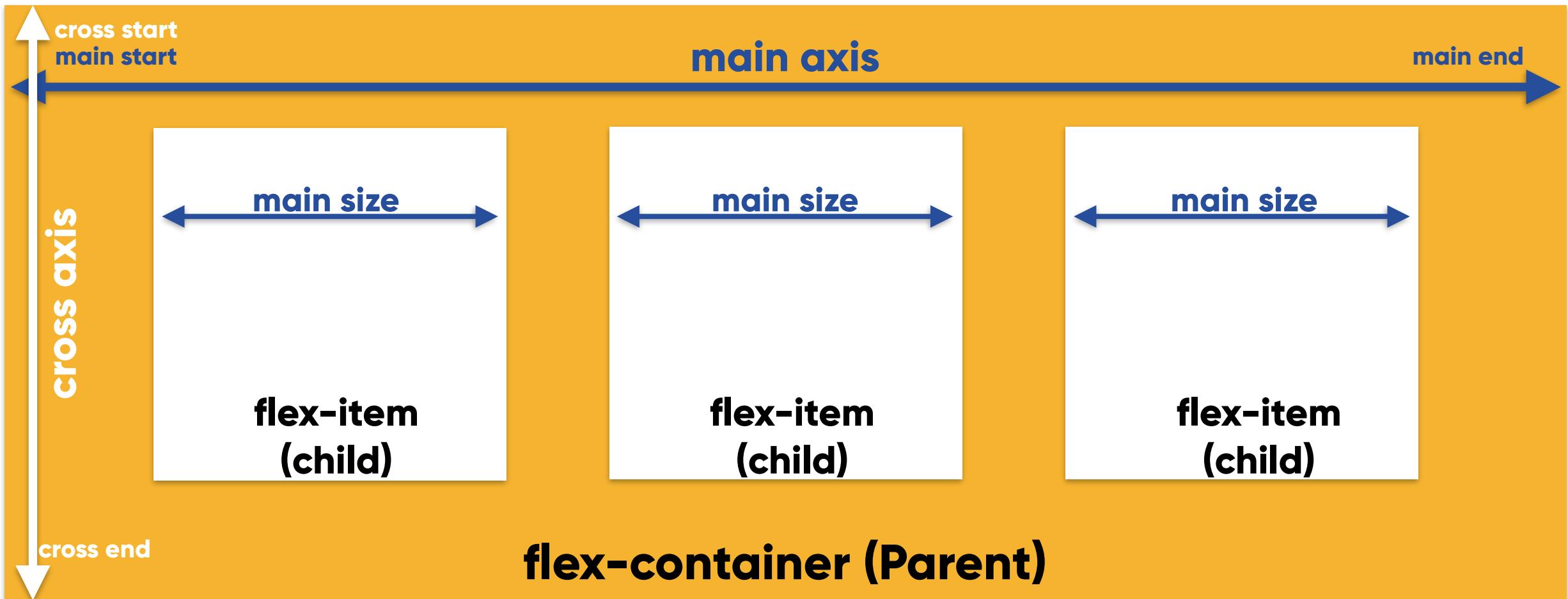


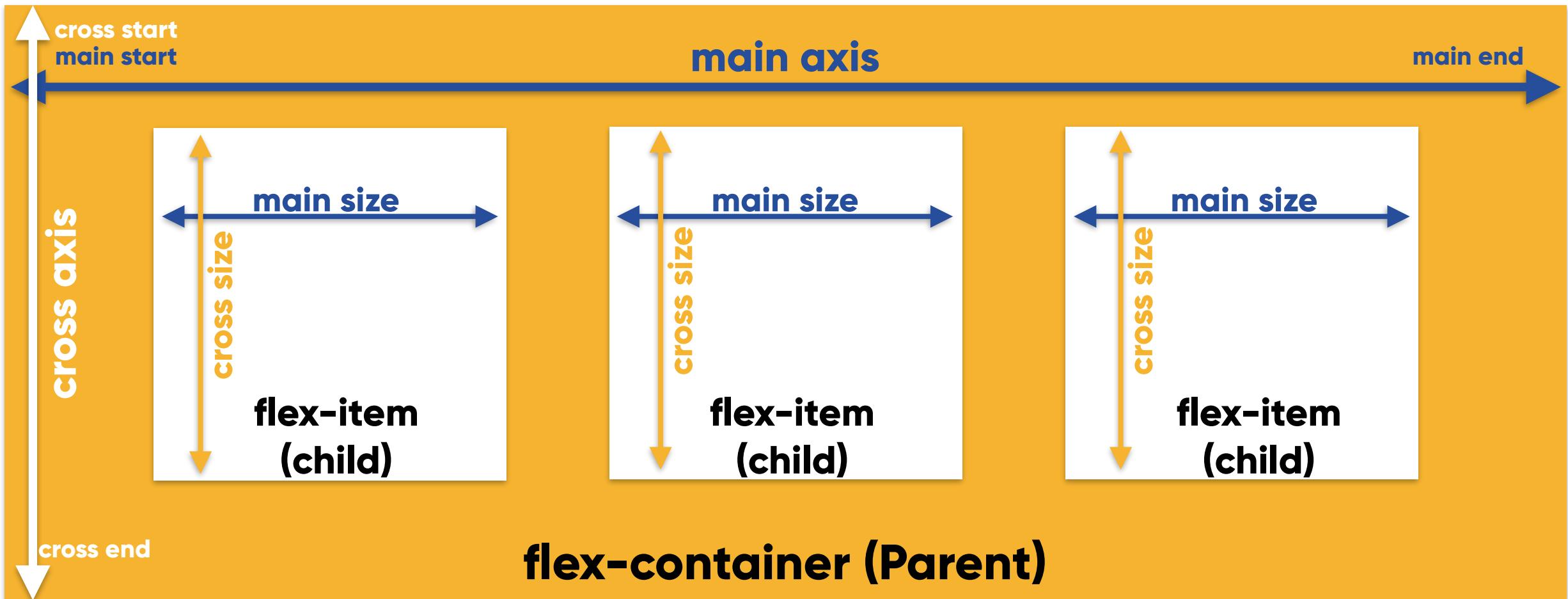
**CSS flexbox layout** - New layout module in CSS3 to improve items alignments, directions and order in the container, dynamic or unknown size.













# Demo files - pre-settings

```
<!DOCTYPE html>
<html lang="en">
<head>
  <link rel="stylesheet" href="style.css">
  <title>Flexbox</title>
</head>
<body>
  <div class="container">
    <div class="box box1">1</div>
    <div class="box box2">2</div>
    <div class="box box3">3</div>
    <div class="box box4">4</div>
    <div class="box box5">5</div>
    <div class="box box6">6</div>
    <div class="box box7">7</div>
    <div class="box box8">8</div>
    <div class="box box9">9</div>
    <div class="box box10">10</div>
  </div>
</body>
</html>
```

# index.html



```
@import url('https://fonts.googleapis.com/css?  
family=Montserrat+Alternates:900');  
  
* {box-sizing: border-box;}  
  
.box {  
    color: white;  
    font-size: 100px;  
    font-family: 'Montserrat Alternates', sans-serif;  
    text-align: center;  
    padding: 15px;  
}  
  
/* Colours for each box */  
.box1 { background:#eccc68; }  
.box2 { background:#ff6348; }  
.box3 { background:#ff7f50; }  
.box4 { background:#ff4757; }  
.box5 { background:#f1c40f; }  
.box6 { background:#e67e22; }  
.box7 { background:#2ed573; }  
.box8 { background:#1e90ff; }  
.box9 { background:#c56cf0; }  
.box10 { background:#18dcff; }
```

# style.css



1

2

3

4

5

6

7

8

9

10

# The browser





# Applying flexbox

# Activity: Defining a flex container

**display: flex** changes the flow of our page, and allows us to use flex properties in the container class (flex container/parent) and its children (flex items/children).

```
.container{  
    display: flex;  
}
```

Add this code at the bottom of your css file.

```
@import url('https://fonts.googleapis.com/css?family=Montserrat+Alternates:900');
```

```
* {box-sizing: border-box;}
```

```
.box {  
    color: white;  
    font-size: 100px;  
    font-family: 'Montserrat Alternates', sans-serif;  
    text-align: center;  
    padding: 15px;  
}
```

```
.box1 { background:#eccc68; }  
.box2 { background:#ff6348; }  
.box3 { background:#ff7f50; }  
.box4 { background:#ff4757; }  
.box5 { background:#f1c40f; }  
.box6 { background:#e67e22; }  
.box7 { background:#2ed573; }  
.box8 { background:#1e90ff; }  
.box9 { background:#c56cf0; }  
.box10 { background:#18dcff; }
```

```
.container{  
    display: flex;  
}
```



# Activity: extending the height

Using viewpoint height (vh) to set the minimum height to 100vh, this will resolve to 100% of the viewpoint height inside the container, so it will span the whole screen height.

```
.container{  
    display: flex;  
    min-height: 100vh;  
}
```

**Add min-height to your code.**

```
@import url('https://fonts.googleapis.com/css?family=Montserrat+Alternates:900');
```

```
* {box-sizing: border-box;}
```

```
.box {  
    color: white;  
    font-size: 100px;  
    font-family: 'Montserrat Alternates', sans-serif;  
    text-align: center;  
    padding: 15px;  
}
```

```
.box1 { background:#eccc68; }  
.box2 { background:#ff6348; }  
.box3 { background:#ff7f50; }  
.box4 { background:#ff4757; }  
.box5 { background:#f1c40f; }  
.box6 { background:#e67e22; }  
.box7 { background:#2ed573; }  
.box8 { background:#1e90ff; }  
.box9 { background:#c56cf0; }  
.box10 { background:#18dcff; }
```

```
.container{  
    display: flex;  
    min-height: 100vh;  
}
```





# flex-direction

```
@import url('https://fonts.googleapis.com/css?family=Montserrat+Alternates:900');  
* {box-sizing: border-box;}  
.box {  
    color: white;  
    font-size: 100px;  
    font-family: 'Montserrat Alternates', sans-serif;  
    text-align: center;  
    padding: 15px;  
}  
.box1 { background:#eccc68; }  
.box2 { background:#ff6348; }  
.box3 { background:#ff7f50; }  
.box4 { background:#ff4757; }  
.box5 { background:#f1c40f; }  
.box6 { background:#e67e22; }  
.box7 { background:#2ed573; }  
.box8 { background:#1e90ff; }  
.box9 { background:#c56cf0; }  
.box10 { background:#18dcff; }  
  
.container{  
    display: flex;  
    min-height: 100vh;  
    flex-direction: row;  
}
```

flex-direction



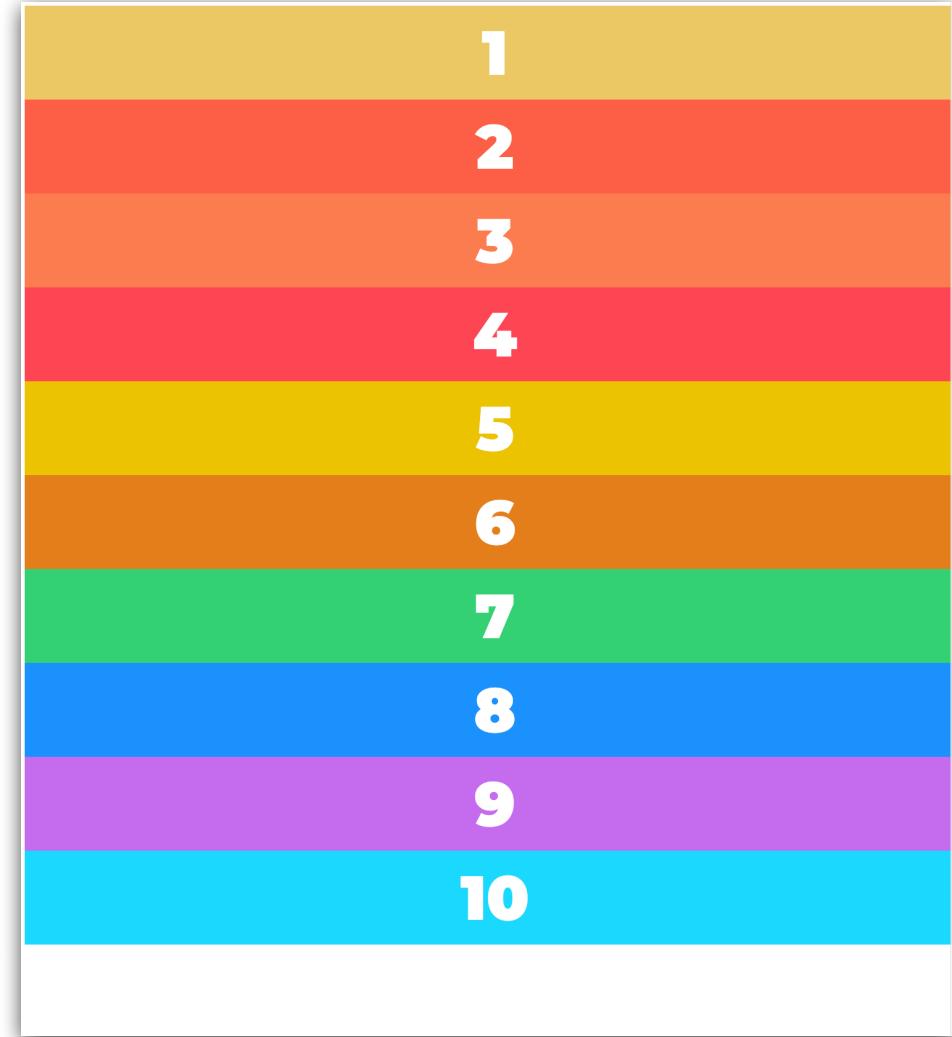
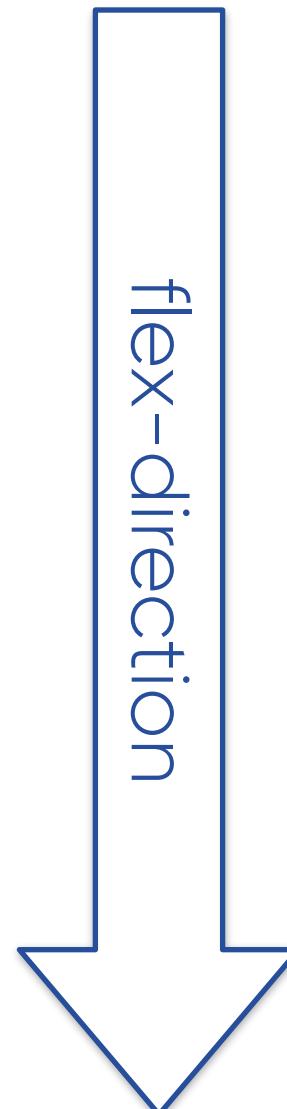
# Activity: flex-direction

Other options are:

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

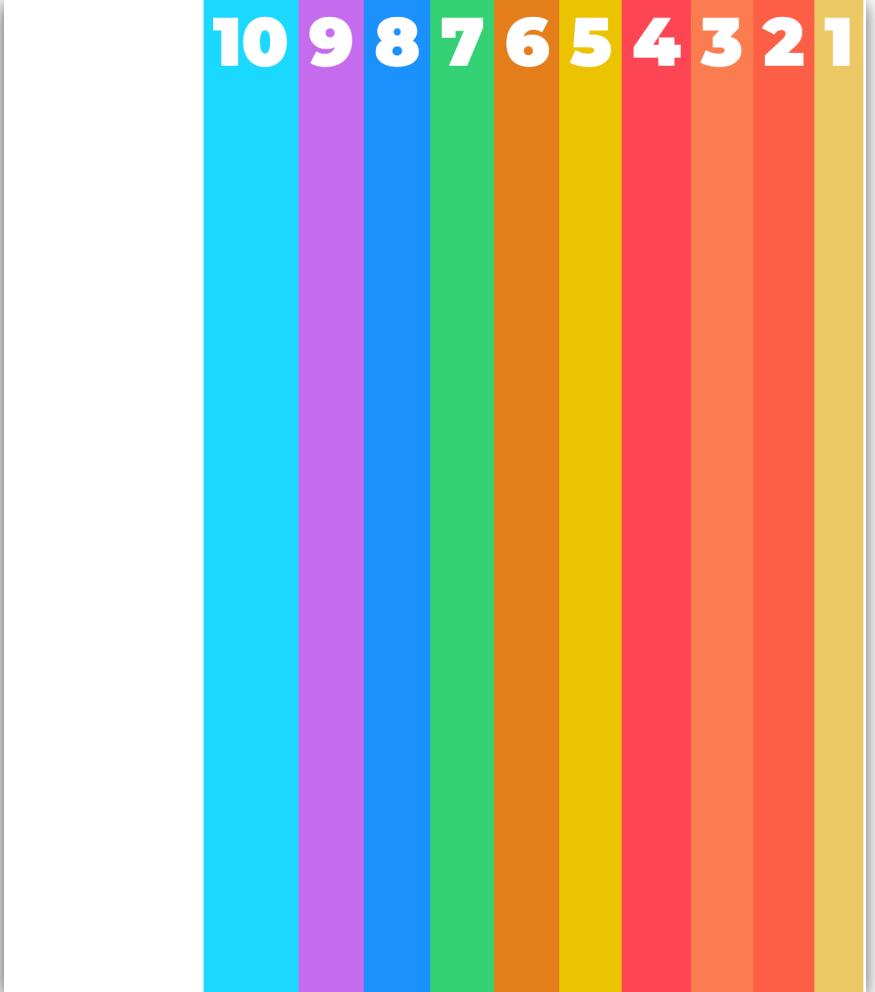
**Change the value **one at a time.****

```
@import url('https://fonts.googleapis.com/css?family=Montserrat+Alternates:900');  
* {box-sizing: border-box;}  
.box {  
    color: white;  
    font-size: 100px;  
    font-family: 'Montserrat Alternates', sans-serif;  
    text-align: center;  
    padding: 15px;  
}  
.box1 { background:#eccc68; }  
.box2 { background:#ff6348; }  
.box3 { background:#ff7f50; }  
.box4 { background:#ff4757; }  
.box5 { background:#f1c40f; }  
.box6 { background:#e67e22; }  
.box7 { background:#2ed573; }  
.box8 { background:#1e90ff; }  
.box9 { background:#c56cf0; }  
.box10 { background:#18dcff; }  
  
.container{  
    display: flex;  
    min-height: 100vh;  
    flex-direction: column;  
}
```



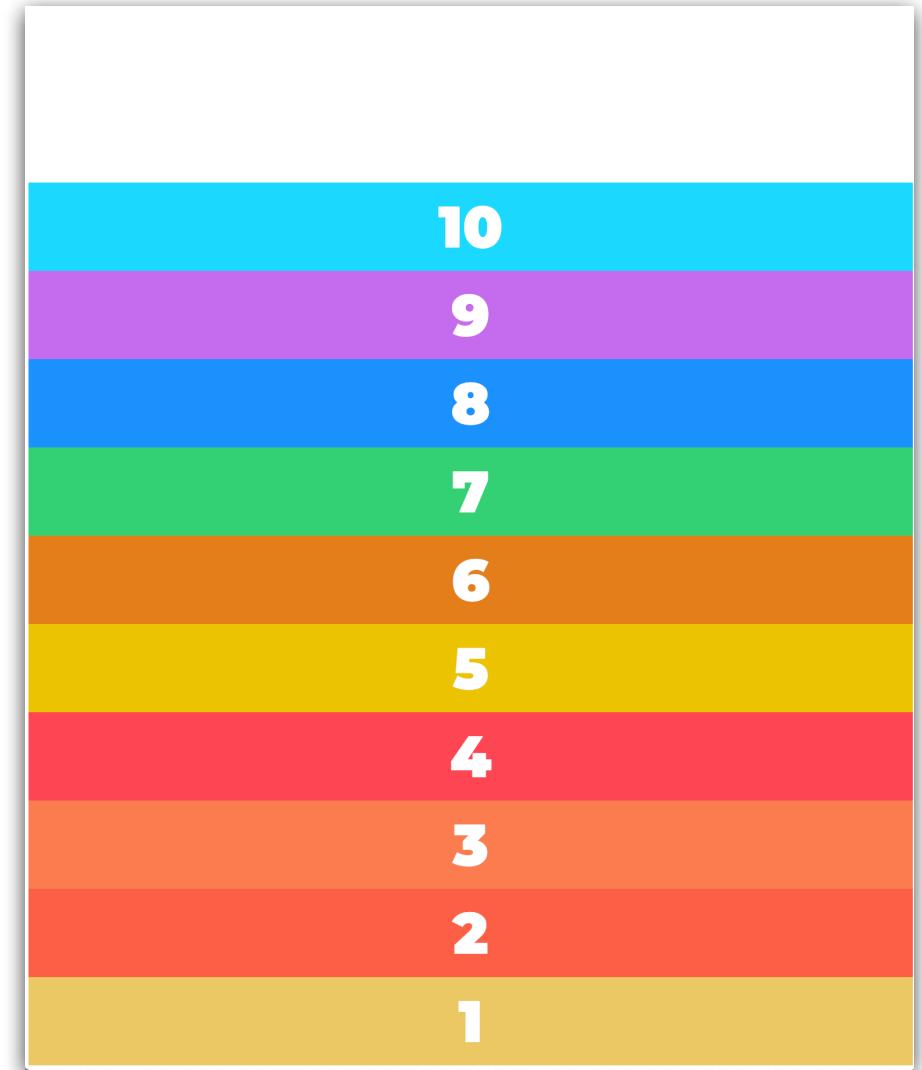
```
@import url('https://fonts.googleapis.com/css?family=Montserrat+Alternates:900');  
* {box-sizing: border-box;}  
.box {  
    color: white;  
    font-size: 100px;  
    font-family: 'Montserrat Alternates', sans-serif;  
    text-align: center;  
    padding: 15px;  
}  
.box1 { background:#eccc68; }  
.box2 { background:#ff6348; }  
.box3 { background:#ff7f50; }  
.box4 { background:#ff4757; }  
.box5 { background:#f1c40f; }  
.box6 { background:#e67e22; }  
.box7 { background:#2ed573; }  
.box8 { background:#1e90ff; }  
.box9 { background:#c56cf0; }  
.box10 { background:#18dcff; }  
  
.container{  
    display: flex;  
    min-height: 100vh;  
    flex-direction: row-reverse;  
}
```

flex-direction



10 9 8 7 6 5 4 3 2 1

```
@import url('https://fonts.googleapis.com/css?family=Montserrat+Alternates:900');  
* {box-sizing: border-box;}  
.box {  
    color: white;  
    font-size: 100px;  
    font-family: 'Montserrat Alternates', sans-serif;  
    text-align: center;  
    padding: 15px;  
}  
.box1 { background:#eccc68; }  
.box2 { background:#ff6348; }  
.box3 { background:#ff7f50; }  
.box4 { background:#ff4757; }  
.box5 { background:#f1c40f; }  
.box6 { background:#e67e22; }  
.box7 { background:#2ed573; }  
.box8 { background:#1e90ff; }  
.box9 { background:#c56cf0; }  
.box10 { background:#18dcff; }  
  
.container{  
    display: flex;  
    min-height: 100vh;  
    flex-direction: column-reverse;  
}
```





# flex-wrap

```
@import url('https://fonts.googleapis.com/css?family=Montserrat+Alternates:900');
```

```
* {box-sizing: border-box;}
```

```
.box {  
  color: white;  
  font-size: 100px;  
  font-family: 'Montserrat Alternates', sans-serif;  
  text-align: center;  
  padding: 15px;  
}
```

```
.box1 { background:#eccc68;}  
.box2 { background:#ff6348;}  
.box3 { background:#ff7f50;}  
.box4 { background:#ff4757;}  
.box5 { background:#f1c40f;}  
.box6 { background:#e67e22;}  
.box7 { background:#2ed573;}  
.box8 { background:#1e90ff;}  
.box9 { background:#c56cf0;}  
.box10 { background:#18dcff;}
```

```
.container{  
  display: flex;  
  min-height: 100vh;  
}
```



**Remove flex-direction (or comment out)  
before we continue**



We don't want the  
whitespace here  
so let's sort out the  
width for each box

# Activity: flex-wrap: setting up

Set the width for each box to 400px for now,  
add this below the container:

```
.box{  
    width: 400px;  
}
```

\*Try different sizes



```
.box{  
    width: 400px;  
}
```

\*Change the browser size to see the effect

**flexbox will try to work with the width you set, if impossible it will evenly distribute the boxes.**

\*Check the size of your browser

```
@import url('https://fonts.googleapis.com/css?family=Montserrat+Alternates:900');

* {box-sizing: border-box;}

.box {
    color: white;
    font-size: 100px;
    font-family: 'Montserrat Alternates', sans-serif;
    text-align: center;
    padding: 15px;
}

.box1 { background:#eccc68; }
.box2 { background:#ff6348; }
.box3 { background:#ff7f50; }
.box4 { background:#ff4757; }
.box5 { background:#f1c40f; }
.box6 { background:#e67e22; }
.box7 { background:#2ed573; }
.box8 { background:#1e90ff; }
.box9 { background:#c56cf0; }
.box10 { background:#18dcff; }

.container{
    display: flex;
    min-height: 100vh;
}

.box{
    width: 400px;
}
```



\*Change the size of your browser to experiment

# Activity: flex-wrap

Add flex-wrap settings inside the container:

```
.container{  
    display: flex;  
    min-height: 100vh;  
    flex-wrap: wrap;  
}
```

\*Comment out height if you want to experiment further

```
@import url('https://fonts.googleapis.com/css?family=Montserrat+Alternates:900');

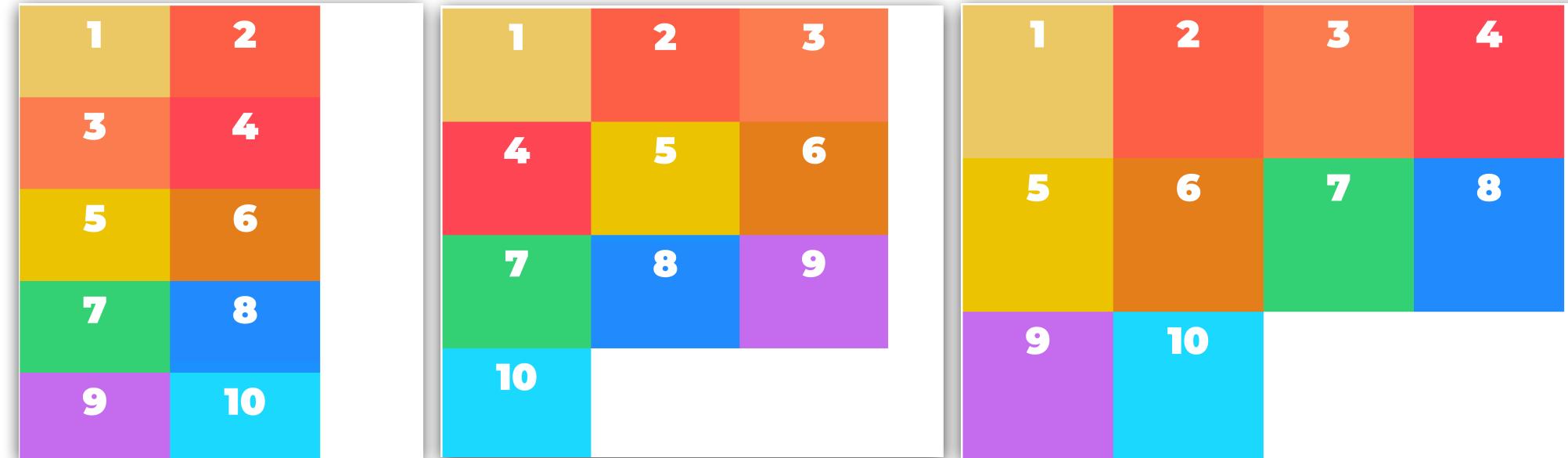
* {box-sizing: border-box;}

.box {
    color: white;
    font-size: 100px;
    font-family: 'Montserrat Alternates', sans-serif;
    text-align: center;
    padding: 15px;
}

.box1 { background:#eccc68; }
.box2 { background:#ff6348; }
.box3 { background:#ff7f50; }
.box4 { background:#ff4757; }
.box5 { background:#f1c40f; }
.box6 { background:#e67e22; }
.box7 { background:#2ed573; }
.box8 { background:#1e90ff; }
.box9 { background:#c56cf0; }
.box10 { background:#18dcff; }

.container{
    display: flex;
    min-height: 100vh;
    flex-wrap: wrap;
}

.box{
    width: 400px;
}
```



As the screen size increases...

\*Comment out height if you want to experiment further

# Activity: flex-wrap

Other options are:

- } **flex-wrap: nowrap;** /\*default setting\*/
- } **flex-wrap: wrap-reverse;**

**Change the value one at a time.**

```
@import url('https://fonts.googleapis.com/css?family=Montserrat+Alternates:900');

* {box-sizing: border-box;}

.box {
    color: white;
    font-size: 100px;
    font-family: 'Montserrat Alternates', sans-serif;
    text-align: center;
    padding: 15px;
}

.box1 { background:#eccc68; }
.box2 { background:#ff6348; }
.box3 { background:#ff7f50; }
.box4 { background:#ff4757; }
.box5 { background:#f1c40f; }
.box6 { background:#e67e22; }
.box7 { background:#2ed573; }
.box8 { background:#1e90ff; }
.box9 { background:#c56cf0; }
.box10 { background:#18dcff; }

.container{
    display: flex;
    min-height: 100vh;
    flex-wrap: nowrap;
}

.box{
    width: 400px;
}
```

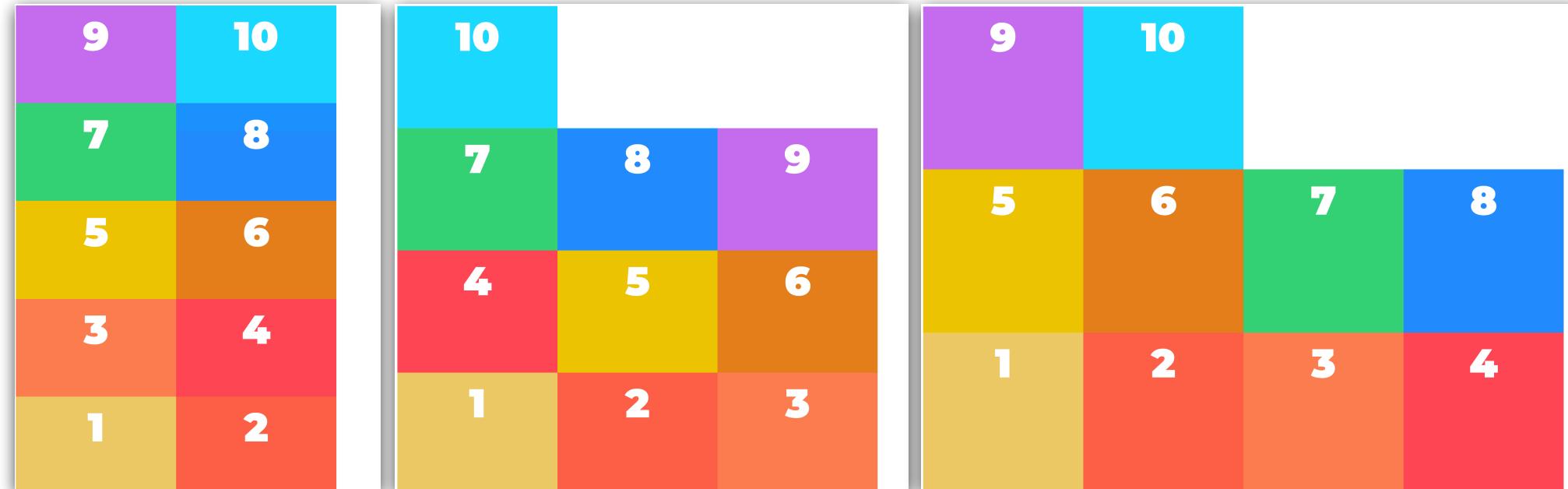


```

@import url('https://fonts.googleapis.com/css?family=Montserrat+Alternates:900');
* {box-sizing: border-box;}
.box {
  color: white;
  font-size: 100px;
  font-family: 'Montserrat Alternates', sans-serif;
  text-align: center;
  padding: 15px;
}
.box1 { background:#eccc68; }
.box2 { background:#ff6348; }
.box3 { background:#ff7f50; }
.box4 { background:#ff4757; }
.box5 { background:#f1c40f; }
.box6 { background:#e67e22; }
.box7 { background:#2ed573; }
.box8 { background:#1e90ff; }
.box9 { background:#c56cf0; }
.box10 { background:#18dcff; }

.container{
  display: flex;
  min-height: 100vh;
  flex-wrap: wrap-reverse;
}
.box{
  width: 400px;
}

```



As the screen size increases...

\*Comment out height if you want to experiment further

# Activity: flex-wrap: more setting up

Set the width for each box to 33.3333% for now (previously 400px), change in the box:

```
.box{  
    width: 33.3333%;  
}
```

This will ensure that all width spaces are filled evenly and have three columns.

```
@import url('https://fonts.googleapis.com/css?family=Montserrat+Alternates:900');

* {box-sizing: border-box;}
.box {
  color: white;
  font-size: 100px;
  font-family: 'Montserrat Alternates', sans-serif;
  text-align: center;
  padding: 15px;
}
.box1 { background:#eccc68; }
.box2 { background:#ff6348; }
.box3 { background:#ff7f50; }
.box4 { background:#ff4757; }
.box5 { background:#f1c40f; }
.box6 { background:#e67e22; }
.box7 { background:#2ed573; }
.box8 { background:#1e90ff; }
.box9 { background:#c56cf0; }
.box10 { background:#18dcff; }

.container{
  display: flex;
  min-height: 100vh;
  flex-wrap: wrap;
}
.box{
  width: 33.3333%;
}
```



# Activity: flex-wrap: more setting up

If you want to have all in one column, add flex-direction: column in the container:

```
.container{  
    display: flex;  
    min-height: 100vh;  
    flex-wrap: wrap;  
    flex-direction: column;  
}
```

This will give you one single column with width of 33.3333%.

\* Change the width in the box and play around with it

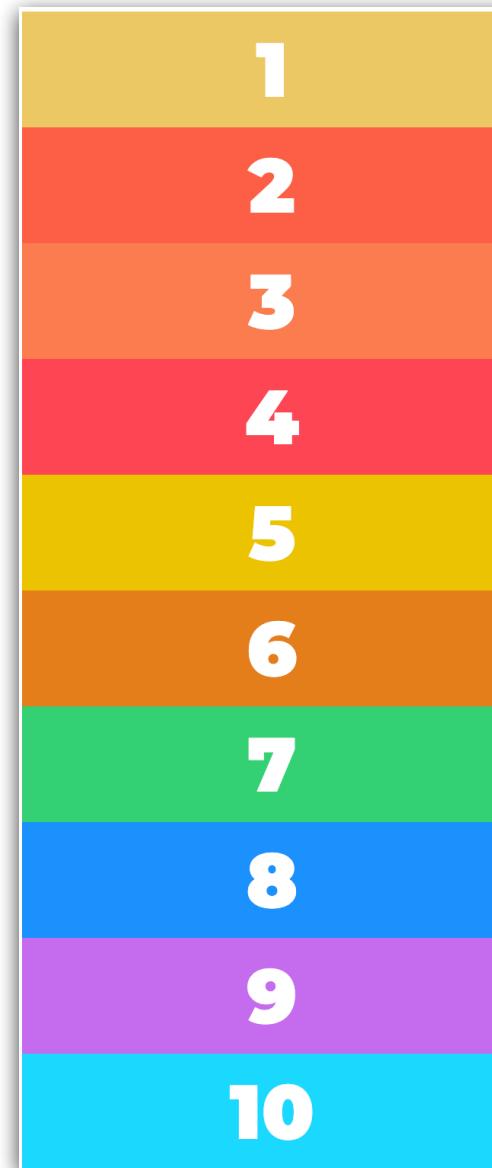
```
@import url('https://fonts.googleapis.com/css?family=Montserrat+Alternates:900');

* {box-sizing: border-box;}
.box {
  color: white;
  font-size: 100px;
  font-family: 'Montserrat Alternates', sans-serif;
  text-align: center;
  padding: 15px;
}

.box1 { background:#eccc68; }
.box2 { background:#ff6348; }
.box3 { background:#ff7f50; }
.box4 { background:#ff4757; }
.box5 { background:#f1c40f; }
.box6 { background:#e67e22; }
.box7 { background:#2ed573; }
.box8 { background:#1e90ff; }
.box9 { background:#c56cf0; }
.box10 { background:#18dcff; }

.container{
  display: flex;
  min-height: 100vh;
  flex-wrap: wrap;
  flex-direction: column;
}

.box{
  width: 33.3333%;
}
```





# Ordering

```
@import url('https://fonts.googleapis.com/css?family=Montserrat+Alternates:900');
```

```
* {box-sizing: border-box;}
```

```
.box {  
  color: white;  
  font-size: 100px;  
  font-family: 'Montserrat Alternates', sans-serif;  
  text-align: center;  
  padding: 15px;  
}
```

```
.box1 { background:#eccc68;}  
.box2 { background:#ff6348;}  
.box3 { background:#ff7f50;}  
.box4 { background:#ff4757;}  
.box5 { background:#f1c40f;}  
.box6 { background:#e67e22;}  
.box7 { background:#2ed573;}  
.box8 { background:#1e90ff;}  
.box9 { background:#c56cf0;}  
.box10 { background:#18dcff;}
```

```
.container{  
  display: flex;  
}
```



**Remove all settings, and keep the  
display: flex only before we continue**

**Ordering can help with setting the order of items you wish to display, whilst keeping the original ordering in the html file**

# Activity: ordering

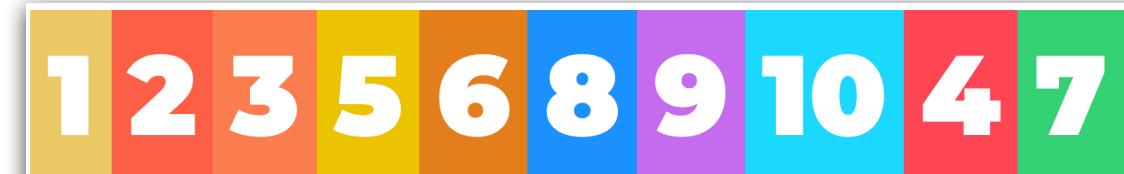
The **order of each item is preset to 0**, so you can add order to be 1, 2, etc. You can add the ordering each individual box.

```
.box4{  
    order:1;  
}  
.box7{  
    order:2;  
}
```

This is an example of ordering, add more boxes you have, see what happens.

```
@import url('https://fonts.googleapis.com/css?family=Montserrat+Alternates:900');  
* {box-sizing: border-box;}  
.box {  
    color: white;  
    font-size: 100px;  
    font-family: 'Montserrat Alternates', sans-serif;  
    text-align: center;  
    padding: 15px;  
}  
.box1 { background:#eccc68; }  
.box2 { background:#ff6348; }  
.box3 { background:#ff7f50; }  
.box4 { background:#ff4757; }  
.box5 { background:#f1c40f; }  
.box6 { background:#e67e22; }  
.box7 { background:#2ed573; }  
.box8 { background:#1e90ff; }  
.box9 { background:#c56cf0; }  
.box10 { background:#18dcff; }
```

```
.container{  
    display: flex;  
}  
.box4{order:1;}  
.box7{order:2;}
```





**Add more boxes you have, see what happens.**

**Use your mouse to highlight the page, what happens?**



# Using justify-content

```
@import url('https://fonts.googleapis.com/css?family=Montserrat+Alternates:900');
```

```
* {box-sizing: border-box;}
```

```
.box {  
    color: white;  
    font-size: 100px;  
    font-family: 'Montserrat Alternates', sans-serif;  
    text-align: center;  
    padding: 15px;  
}
```

```
.box1 { background:#eccc68;}  
.box2 { background:#ff6348;}  
.box3 { background:#ff7f50;}  
.box4 { background:#ff4757;}  
.box5 { background:#f1c40f;}  
.box6 { background:#e67e22;}  
.box7 { background:#2ed573;}  
.box8 { background:#1e90ff;}  
.box9 { background:#c56cf0;}  
.box10 { background:#18dcff;}
```

```
.container{  
    display: flex;  
}
```



**Remove all settings, and keep the  
display: flex only before we continue**

# Activity: alignment with justify-content

justify-content gives the arrangement of the items, for example, align items to the left, right, or centre, or left and right with spaces in between.

```
.container{  
    display: flex;  
    justify-content: center;  
}
```

**Add this to the container.**

# Activity: options on justify-content

Other options:

- › `justify-content: flex-start; /*default*/`
- › `justify-content: flex-end;`
- › `justify-content: center;`

With spaces:

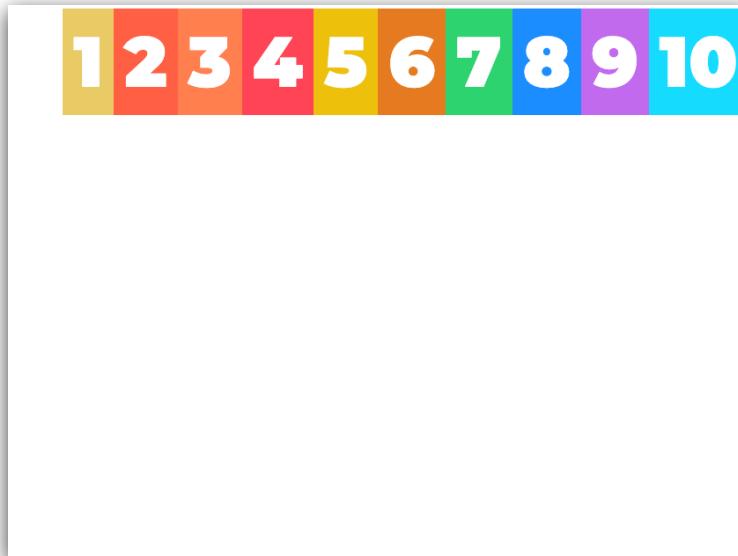
- › `justify-content: space-between;`
- › `justify-content: space-around;`

What's the difference  
between these two?

**Change the value one at a time.**



```
justify-content: flex-start;  
/*default*/
```



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



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



`justify-content: space-between;`



`justify-content: space-around;`

# What's the difference?

# Activity: play with sizing

Inside .box, change font size to 20px (or other sizes)

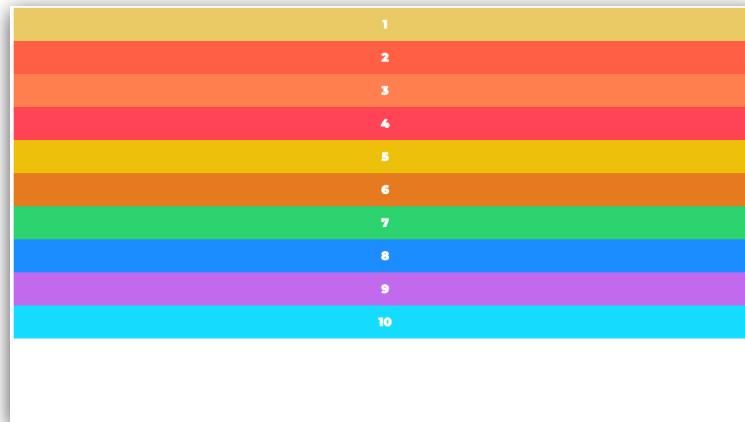
Inside the .container, add:

```
> flex-direction: column;  
> min-height: 100vh;
```

Experiment with each of these:

```
> justify-content: flex-start; /*default*/  
> justify-content: flex-end;  
> justify-content: center;  
> justify-content: space-between;  
> justify-content: space-around;
```

**Change the value one at a time.**



```
justify-content: flex-start;  
/*default*/
```



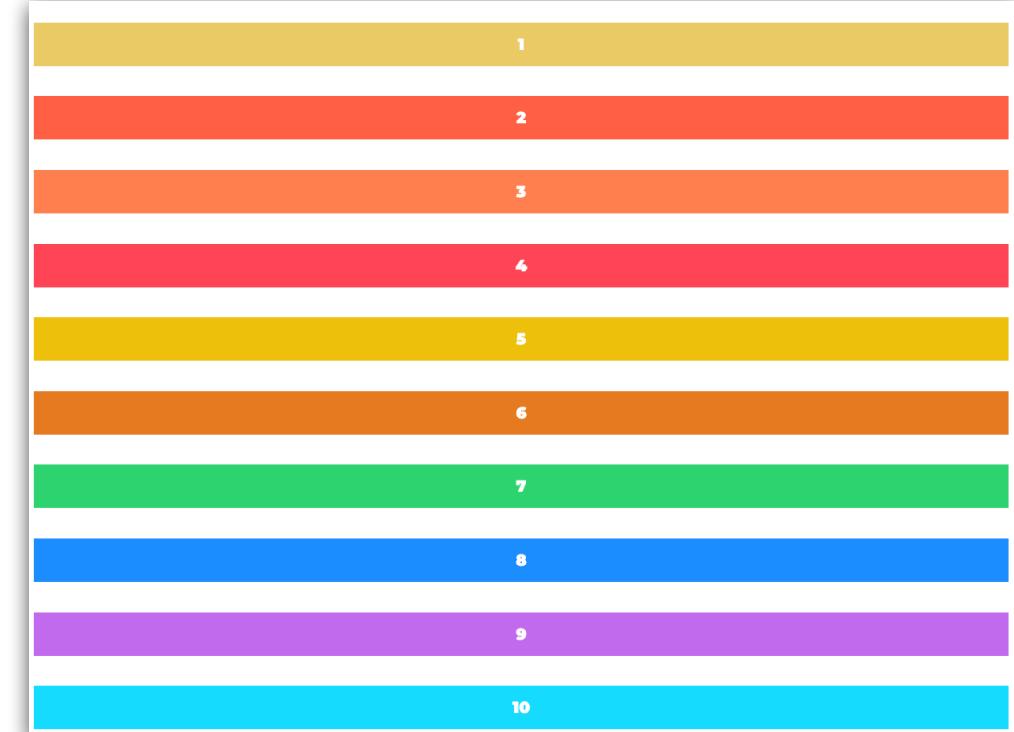
```
justify-content: flex-end;
```



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



`justify-content: space-between;`



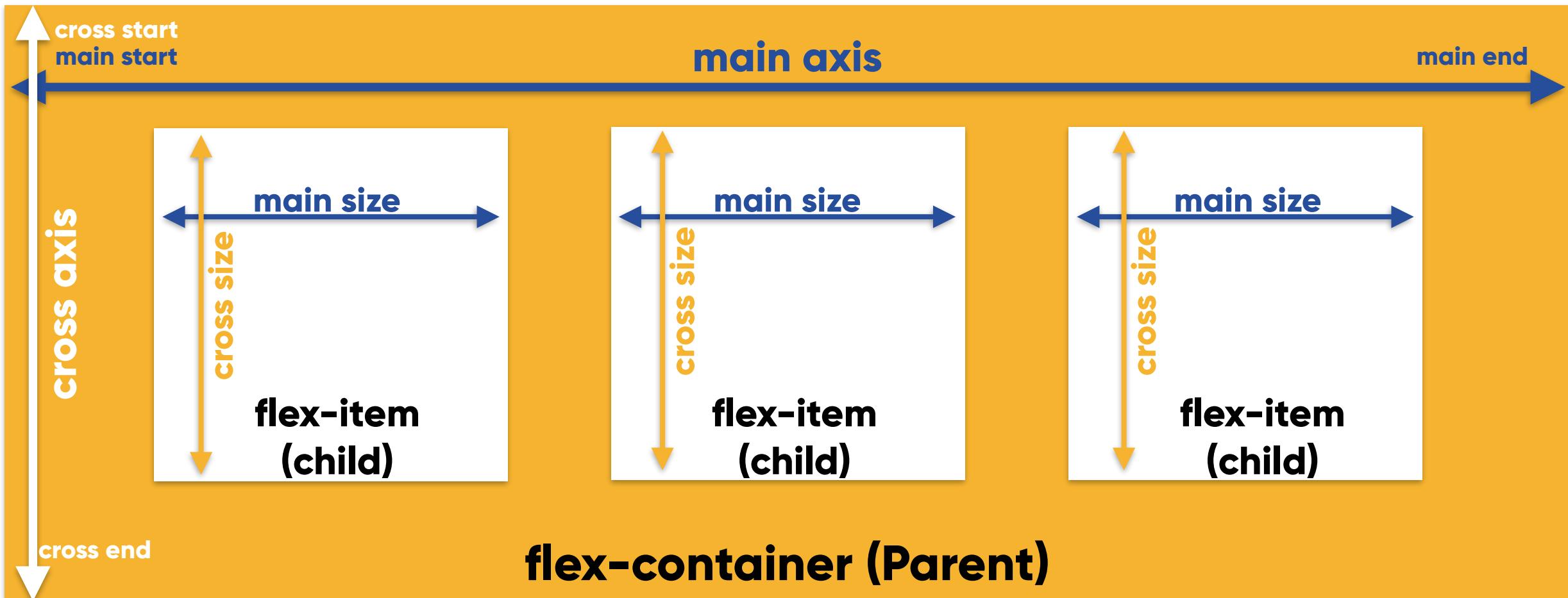
`justify-content: space-around;`

# What's the difference?



# Using align-items

# Take a look at the flex direction...



```
@import url('https://fonts.googleapis.com/css?family=Montserrat+Alternates:900');
```

```
* {box-sizing: border-box;}
```

```
.box {  
    color: white;  
    font-size: 100px;  
    font-family: 'Montse  
    text-align: center;  
    padding: 15px;  
}
```

```
.box1 { background:#eccc68;}  
.box2 { background:#ff6348;}  
.box3 { background:#ff7f50;}  
.box4 { background:#ff4757;}  
.box5 { background:#f1c40f;}  
.box6 { background:#e67e22;}  
.box7 { background:#2ed573;}  
.box8 { background:#1e90ff;}  
.box9 { background:#c56cf0;}  
.box10 { background:#18dcff;}
```

```
.container{  
    display: flex;  
}
```

**font-size to 100px**



**Remove all settings, and keep the  
display: flex only before we continue**

# Activity: align-items

Inside container, set the align-items be center:

**align-items: center;**

# Activity: align-items

Inside container, set the align-items be center:

`align-items: center;`



**Nothing happens, why?**

# Activity: align-items

Inside container, set the align-items be center:

`align-items: center;`



**Nothing happens, why?**

It has no dimension to play with.

# Activity: setting the height

Inside container, set the height:

**height: 100vh;**

```
@import url('https://fonts.googleapis.com/css?family=Montserrat+Alternates:900');  
* {box-sizing: border-box;}  
.box {  
    color: white;  
    font-size: 100px;  
    font-family: 'Montserrat Alternates', sans-serif;  
    text-align: center;  
    padding: 15px;  
}  
.box1 { background:#eccc68; }  
.box2 { background:#ff6348; }  
.box3 { background:#ff7f50; }  
.box4 { background:#ff4757; }  
.box5 { background:#f1c40f; }  
.box6 { background:#e67e22; }  
.box7 { background:#2ed573; }  
.box8 { background:#1e90ff; }  
.box9 { background:#c56cf0; }  
.box10 { background:#18dcff; }  
  
.container{  
    display: flex;  
    height: 100vh;  
    align-items: center;  
}
```



# Activity: play with align-items

Experiment with each of these:

```
› align-items: stretch; /*default*/  
› align-items: flex-start;  
› align-items: center;  
› align-items: flex-end;  
› align-items: baseline;
```

**Change the value one at a time.**

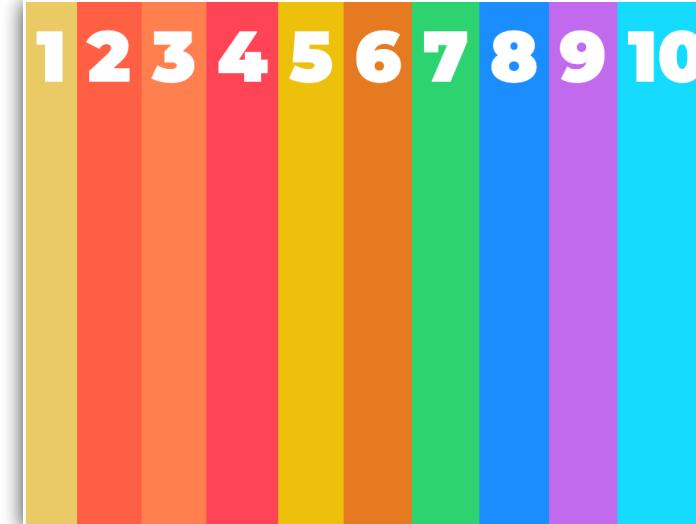


1 2 3 4 5 6 7 8 9 10

justify-content: center;



1 2 3 4 5 6 7 8 9 10



1 2 3 4 5 6 7 8 9 10

/\*default\*/

1 2 3 4 5 6 7 8 9 10



align-items: flex-start;

align-items: baseline;

# What does baseline do?

# Activity: testing the baseline

Let's change the font size for the boxes, e.g:

```
.box1 {font-size: 30px;}  
.box3 {font-size: 150px;}  
.box4 {font-size: 200px;}  
.box5 {font-size: 10px;}  
.box10 {font-size: 77px;}
```

Experiment with each of these:

```
} align-items: stretch; /*default*/  
} align-items: flex-start;  
} align-items: center;  
} align-items: flex-end;  
} align-items: baseline;
```

**Change the value one at a time.**



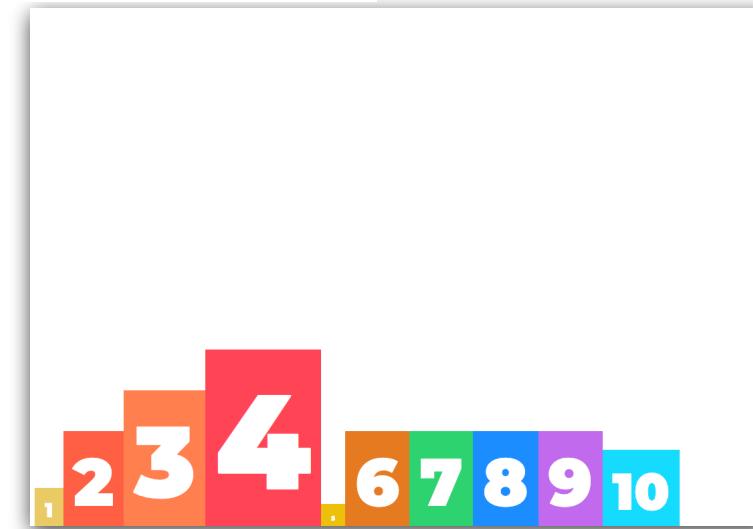
`align-items: center;`



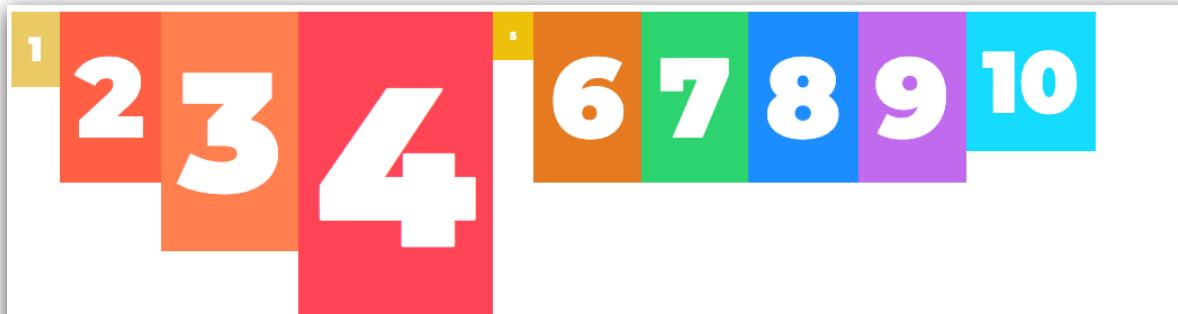
`align-items: flex-start;`



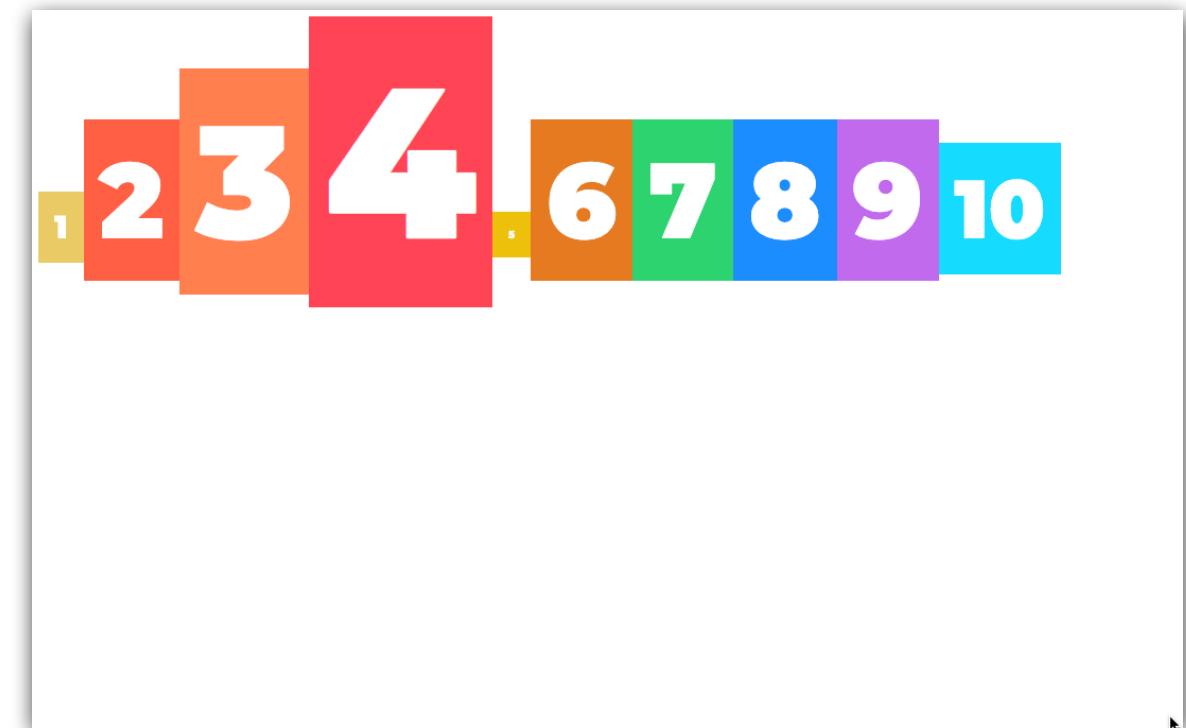
`align-items: stretch;  
/*default*/`



`align-items: flex-end;`

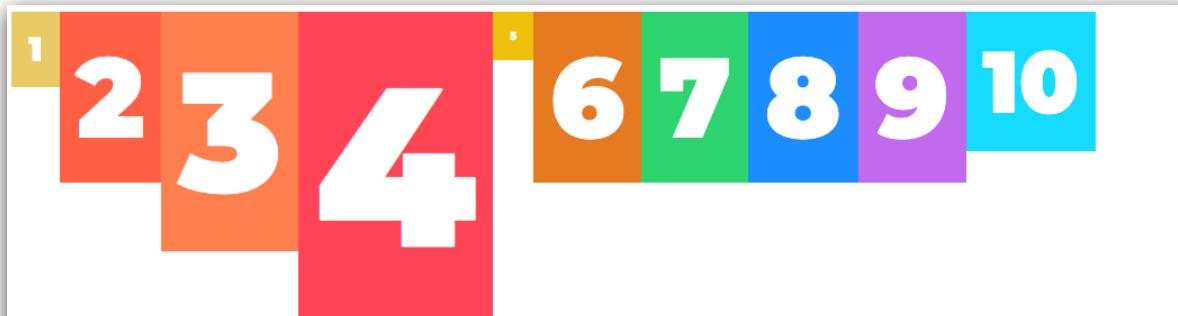


align-items: flex-start;

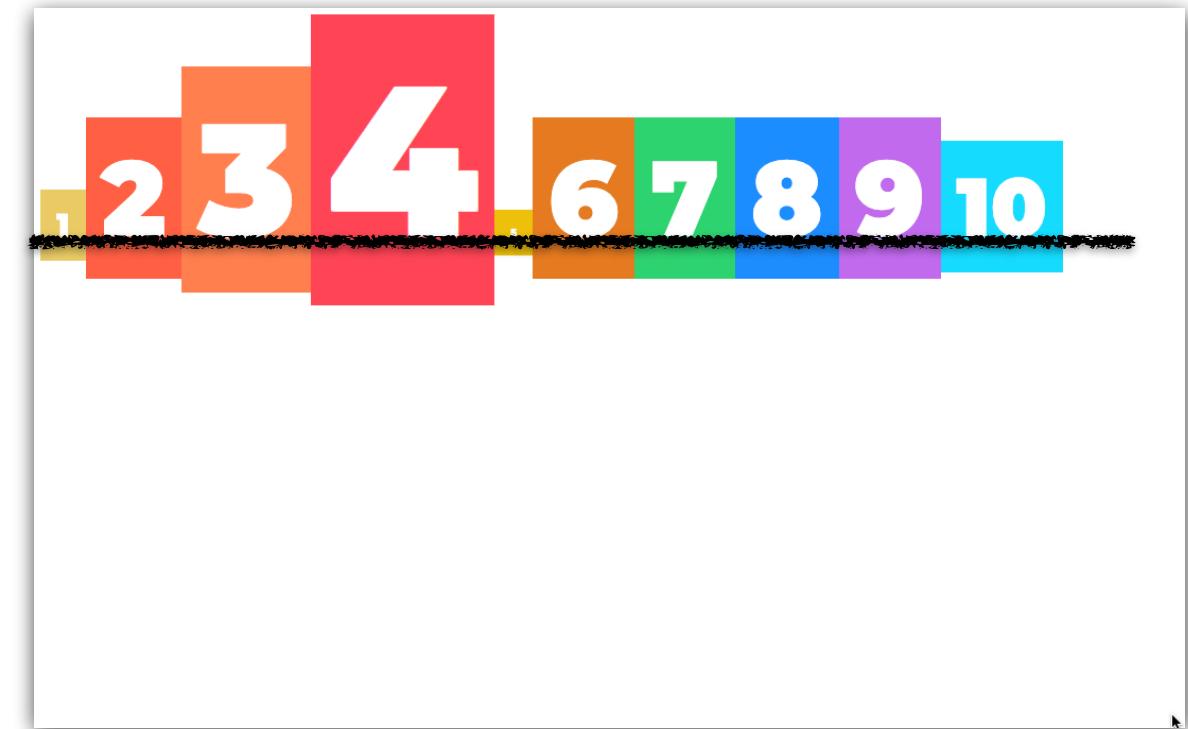


align-items: baseline;

# What does baseline do?



align-items: flex-start;



align-items: baseline;

# What does baseline do?



# Using align-item

```
@import url('https://fonts.googleapis.com/css?family=Montserrat+Alternates:900');  
* {box-sizing: border-box;}  
.box {  
    color: white;  
    font-size: 100px;  
    font-family: 'Montserrat Alternates', sans-serif;  
    text-align: center;  
    padding: 15px;  
}  
.box1 { background:#eccc68; }  
.box2 { background:#ff6348; }  
.box3 { background:#ff7f50; }  
.box4 { background:#ff4757; }  
.box5 { background:#f1c40f; }  
.box6 { background:#e67e22; }  
.box7 { background:#2ed573; }  
.box8 { background:#1e90ff; }  
.box9 { background:#c56cf0; }  
.box10 { background:#18dcff; }
```

```
.container{  
    display: flex;  
    border: 10px solid gold;  
    height: 100vh;  
    flex-wrap: wrap;  
}  
.box{  
    width: 33.333%;  
}
```



**Remove all settings, and have these  
settings before we continue**

# Activity: align-content

Experiment with each of these in the **container**:

- › align-content: stretch; /\*default\*/
- › align-content: flex-start;
- › align-content: center;
- › align-content: flex-end;
- › align-content: space-between;
- › align-content: space-around;

**Change the value one at a time.**

1	2	3
4	5	6
7	8	9
10		

1	2	3
4	5	6
7	8	9
10		

1	2	3
4	5	6
7	8	9
10		

/\*default\*/

1	2	3
4	5	6
7	8	9
10		

1	2	3
4	5	6
7	8	9
10		

align-content: space-between;

1	2	3
4	5	6
7	8	9
10		

align-content: space-around;



# Using align-self

```
@import url('https://fonts.googleapis.com/css?family=Montserrat+Alternates:900');  
* {box-sizing: border-box;}  
.box {  
    color: white;  
    font-size: 100px;  
    font-family: 'Montserrat Alternates', sans-serif;  
    text-align: center;  
    padding: 15px;  
}  
.box1 { background:#eccc68; }  
.box2 { background:#ff6348; }  
.box3 { background:#ff7f50; }  
.box4 { background:#ff4757; }  
.box5 { background:#f1c40f; }  
.box6 { background:#e67e22; }  
.box7 { background:#2ed573; }  
.box8 { background:#1e90ff; }  
.box9 { background:#c56cf0; }  
.box10 { background:#18dcff; }
```

```
.container {  
    display: flex;  
    border: 10px solid gold;  
    height: 100vh;  
    align-content: stretch;  
    flex-wrap: wrap;  
}  
.box{  
    width: 33.3333%;
```



**Remove all settings, and have these  
settings before we continue**

# Activity: applying padding

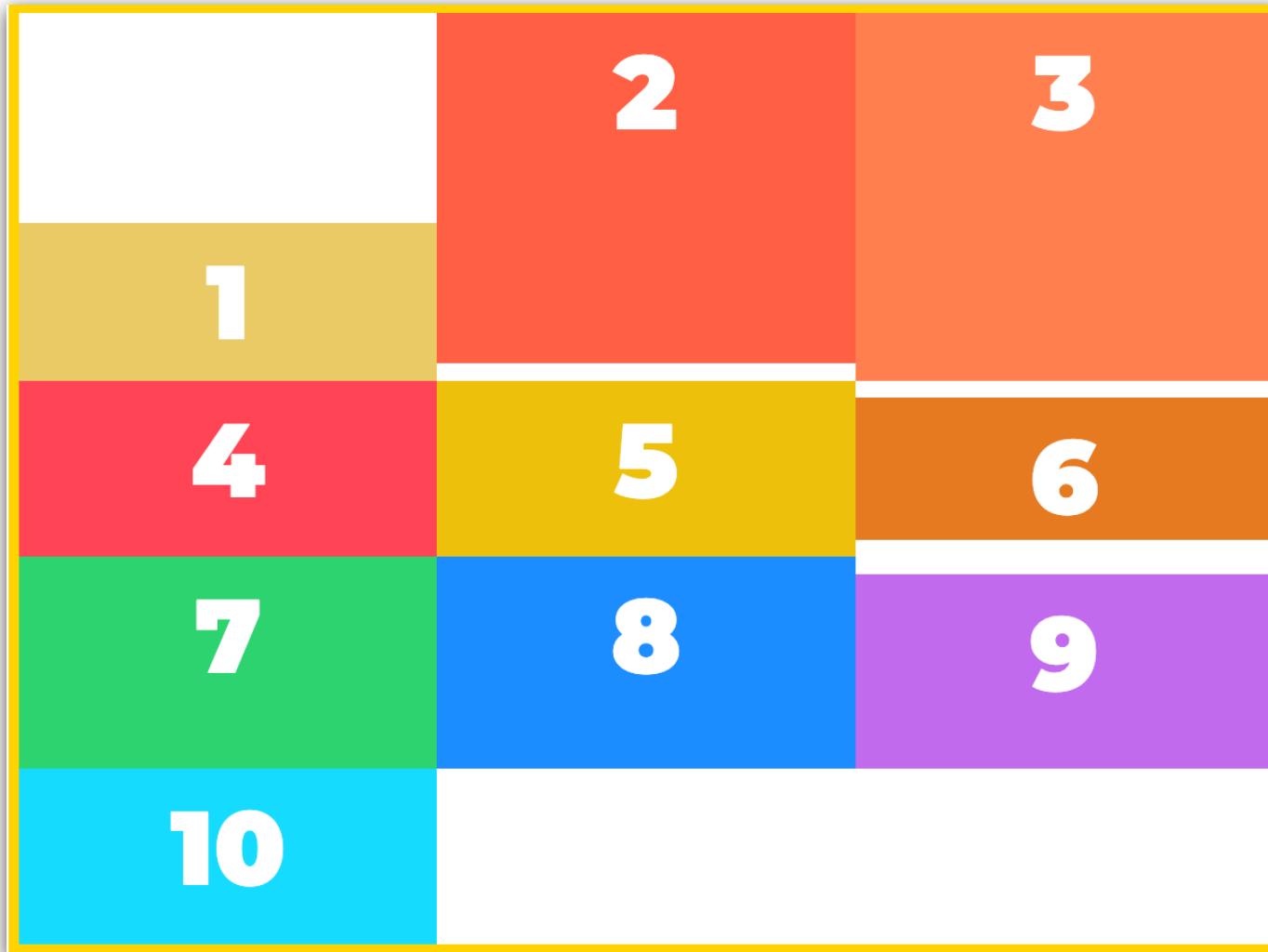
Apply paddings to these boxes:

```
.box2 {padding-bottom: 200px;}  
.box6 {padding-bottom: 0;}  
.box9 {padding-bottom: 50px;}
```

# Activity: applying align-self

Then update/add these align-self to these boxes:

```
.box1 {  
  align-self: flex-end;}  
.box2 {  
  padding-bottom: 200px;  
  align-self: baseline;}  
.box6 {  
  padding-bottom: 0;  
  align-self: center;}  
.box9 {  
  padding-bottom: 50px;  
  align-self: flex-end;}  
.box10 {  
  align-self: stretch;}
```



**Inspect the boxes: 1, 2, 6, 9 and 10, check the settings of self-align and notice what each does**



# Using flex

```
@import url('https://fonts.googleapis.com/css?family=Montserrat+Alternates:900');
```

```
* {box-sizing: border-box;}
```

```
.box {  
    color: white;  
    font-size: 100px;  
    font-family: 'Montserrat Alternates', sans-serif;  
    text-align: center;  
    padding: 15px;  
}
```

```
.box1 { background:#eccc68;}  
.box2 { background:#ff6348;}  
.box3 { background:#ff7f50;}  
.box4 { background:#ff4757;}  
.box5 { background:#f1c40f;}  
.box6 { background:#e67e22;}  
.box7 { background:#2ed573;}  
.box8 { background:#1e90ff;}  
.box9 { background:#c56cf0;}  
.box10 { background:#18dcff;}
```

```
.container{  
    display: flex;  
}
```



**Remove all settings, and keep the  
display: flex only before we continue**

# Activity: applying flex

Apply flex to all boxes:

```
.box{  
  flex: 1;  
}
```

This will evenly distribute the boxes if there is any free space left.

1 2 3 4 5 6 7 8 9 10

1 2 3 4 5 6 7 8 9 10



.box{flex: 1;}

# Activity: applying flex

Apply flex to only box4 and box7:

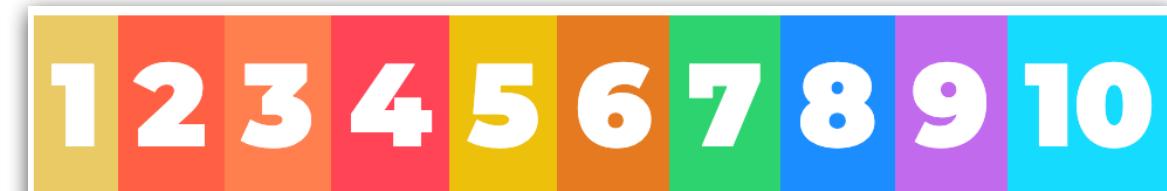
```
.box4{  
  flex: 2;  
}  
.box7{  
  flex: 3;  
}
```

This will give priority to box4 to have twice the free space when available than other peers, and in box7, three times any free spaces available.

Note when there is no space available, all items will not be given any priority space.



**Space available**



**No space available**

# Learning objectives

- } To be able to use CSS flexbox to structure layouts



## Further reading:

<https://css-tricks.com/snippets/css/a-guide-to-flexbox/>

<https://flexboxfroggy.com/>