Mimos training (Mygov)

Responsive website with Flexbox

Start to think responsively

Now that we have the fundamentals down, it’s time to get into the responsive frame of mind.

We’ll work our way up from getting design work on a single screen so that it can work on any device.

We’ll work our way up, exploring the do’s and don’ts and how to plan things out to make your life easier in the long run.

What are we covering today

- How to approach a layout
- CSS Units (absolute, relative, percentage)
- Flexbox basics
- Media Query Basics

CSS Units

CSS Units come in different flavors:

- Absolut units
- Relative Units
- Percentage

CSS Units - Absolut unit

Absolut units are the easiest one to understand

- Pixels (px)
- Pt, cm, mm, in, etc

CSS Units - Percentages

Percentages are mainly used for widths and are pretty easy to understand.

- Relative to their parent

CSS Units - Relative Units

There are two type of relative units

- Relative to font size
- Relative to the view port

CSS Units - Relative Units

- Relative to font size
  - Em and rem (and many other less common ones)
- Relative to the view port
  - vw,vh , vmin, vmax

CSS Units Absolut unit

Absolut units are the easiest one to understand

- Pixels (px)
- Pt, cm, mm, in, etc

Exercise - Build the following website using relative unit

THE
ANALOG
SPECIALISTS

Home For Sale Repairs About Contact

We specialize in the sale and repair of classic keyboards, in particular the Fender Rhodes, Wurlitzer EP200, and Hohner Clavinet.

Checklist - Piano Exercise

In this exercise, ensure that:

- The size of the white box changes with the size of screen
- The image size adapt to the size of screen
- The font adapts to the size of the screen

Min-width and max-width

The `min-width` property defines the minimum width of an element.

If the content is smaller than the minimum width, the minimum width will be applied.

The `max-width` property defines the maximum width of an element.

If the content is larger than the maximum width, it will automatically change the height of the element.

If the content is smaller than the maximum width, the `max-width` property has no effect.

Practice: Use min-width and max-width in the piano exercise to ensure after a certain size the box remains.

Using em and rem

The **em** and **rem** are considered relative, because they are relative to the font size of other elements.

- Font size is an inherited property, so if you don’t declare it anywhere, it is getting from the body (default is 16px)
- **Em** is related to the parent element whereas **rem** is related to the root HTML

Practice & Exercise

Use em and rem in your exercise.

- Set font size using em for some of your element, eg: 1.6em, 2.0em
- Set the body font-size of body to a different size, 10px then 16px
- See the effect on the other font-size set as em and rem

Can you see the difference between **em** and **rem**?

How to decide which units to use?

Pixels used to cause a lot of problems, as they were fixed unit (one dot on a screen)

Now it follows the reference pixel.

This is normally what we use:

- Font-size: rem
- Padding:em
- Widths: em or percentage

The element of Flexbox

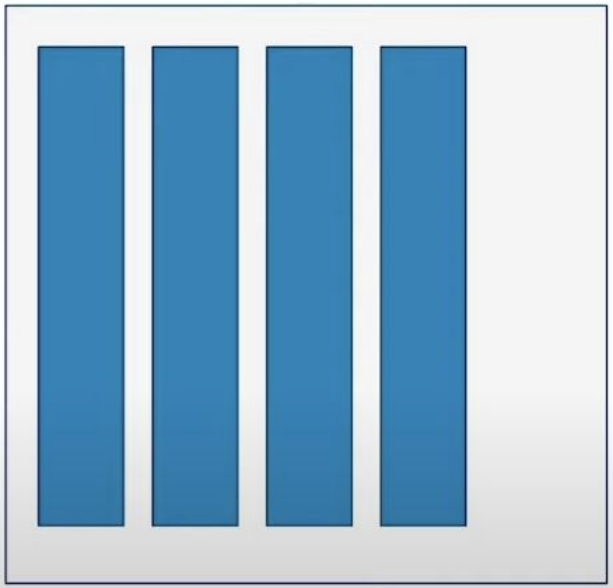
Elements normally have **display:block** or **display:inline** as a default from a browser

Block elements stack from one to another, eg: h1-h1, p, div, footer, main, section etc

Inline elements stay within the flow of what's around them, eg: a, strong, em, span

We can change this behaviour by setting the **display** property to **flex** on the parent element

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



Let's start getting a little more fancy!

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.container

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.columns

.columns

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.container

.columns

.col

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.columns

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.col

#312614

#B7832F

#707070

#FFF

Font sizes

h1: 3rem

h2: 1.5rem

body: 1.125rem

Layout

max-width: 980px

Let's start getting a little more fancy!

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The structure

```
<body>
<div class="container">
    <h1></h1>
    <img src="" alt="">
    <div class="columns">
        <div class="col">

        </div>
        <div class="col">

        </div>
        <div class="col">

        </div>
    </div>
    <div class="columns">
        <div class="col">

        </div>
        <div class="col">

        </div>
    </div>
</div>
</body>
```

Setting the layout to flex

```
img {
    width: 100%;
}
.container {
    max-width: 980px;
    margin: 0px auto;
    width: 95%;
}
.columns {
    display: flex;
}
```

Typography code

```
body {
    font-size: 1.125rem;
    color:#707070;
    margin: 0;

}

h1 {
    font-size: 3rem;
    color: #212614;
    text-align: center;
}

h1 span {
    color: #b7832f;
}

h2 {
    font-size: 1.5rem;
}
```

Size of the column & background color

```
<div class="columns">
    <div class="col col-1">
        <h2>Dolor Sit</h2>
        <p>Lorem ipsum dolor sit amet, consectetur adipisicing
        tempor incididunt ut labore et dolore magna aliqua. Ut
        quis nostrud exercitation ullamco laboris nisi ut aliqu
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    </div>
    <div class="col col-2">
        <h2>Consectur adipsing</h2>
        <p>Lorem ipsum dolor sit amet, consectetur adipisicing
        tempor incididunt ut labore et dolore magna aliqua. Ut
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        cillum dolore eu fugiat nulla pariatur. Excepteur sint
        proident, sunt in culpa qui officia deserunt mollit ani
    </div>
    <div class="col col-bg col-1">
        <p>Lorem ipsum dolor sit amet, consectetur adipisicing
        tempor incididunt ut labore et dolore magna aliqua. Ut
```

```
.col-1 {
width: 25%;
}

.col-2 {
width: 50%;
}
.col-3 {
width: 75%;
}

.col-bg {
    background:#212614;
    padding:.5em;
    color:#fff;
}
```

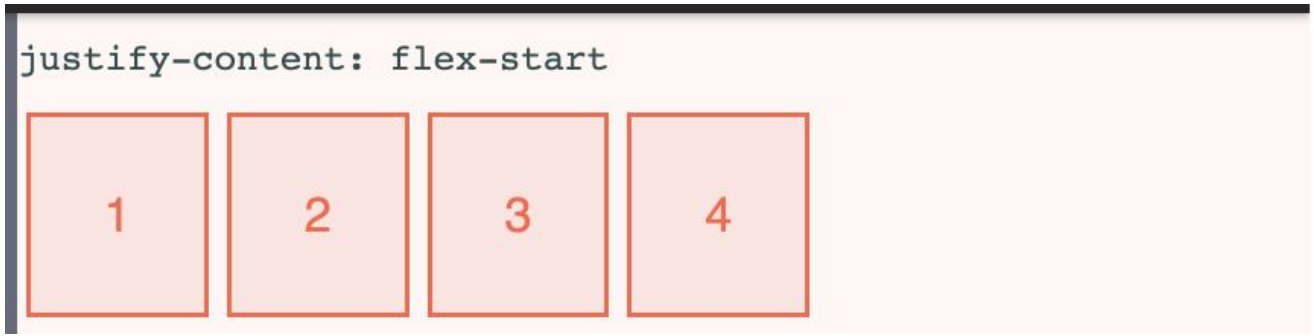
Alignment content on the main axis

The justify-content property aligns flex items within the flex container along the main axis. It distributes the extra space left after the browser has calculated the necessary space for all items in the flex container.

Flex direction	Description
`justify-content:flex-start;`	flex items are justified towards the start of the main axis (this is the default)
`justify-content:flex-end;`	flex items are justified towards the end of the main axis
`justify-content:center;`	flex items are justified around the center of the main axis
`justify-content:space-between;`	flex items are distributed evenly along the main axis, from flex-start to flex-end
`justify-content:space-around;`	flex items are distributed evenly along the main axis, but half-size spaces are added to each end

justify-content : flex-start

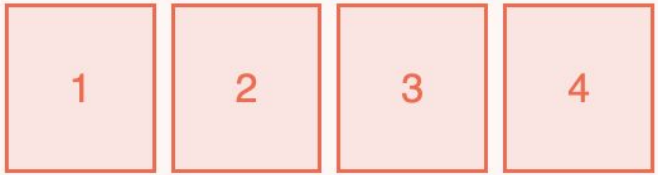
```
/*-- --*/
.container {
  display: flex;
  flex-wrap: wrap;
  flex-direction: row;
}
.container.flex-start {
  justify-content: flex-start;
}
```



justify-content : flex-end

```
/*-- --*/
.container {
  display: flex;
  flex-wrap: wrap;
  flex-direction: row;
}
.container.flex-end {
  justify-content: flex-end;
}
```

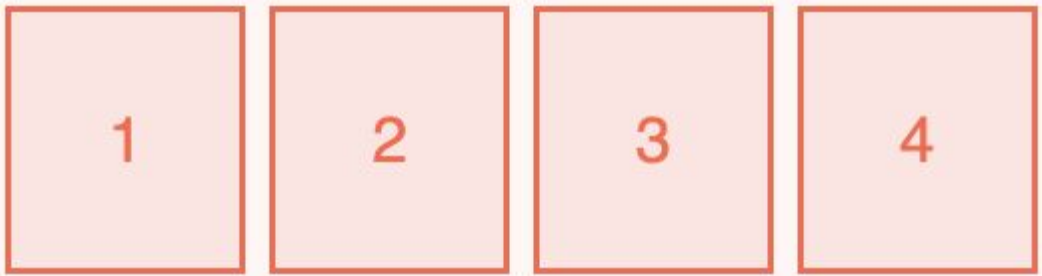
justify-content: flex-end



justify-content : center

```
/*-- --*/
.container {
  display: flex;
  flex-wrap: wrap;
  flex-direction: row;
}
.container.center {
  justify-content: center;
}
```

justify-content: center

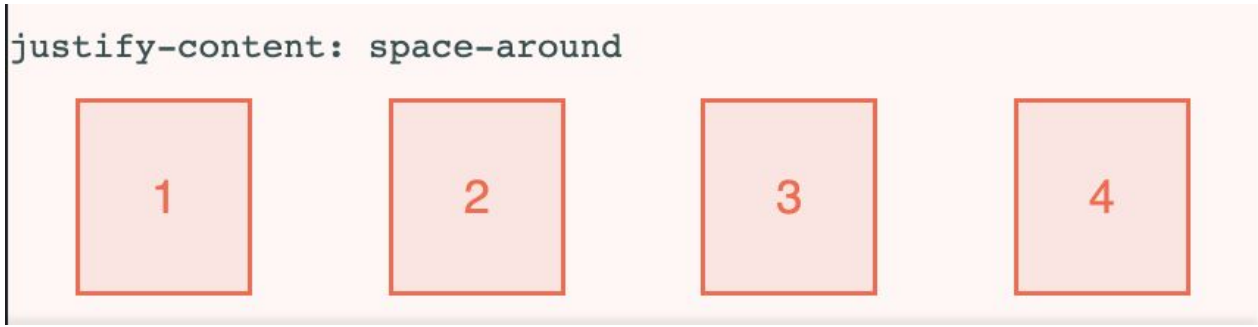


justify-content : space-between

```
/*-- --*/
.container {
  display: flex;
  flex-wrap: wrap;
  flex-direction: row;
}
.container.space-between {
  justify-content: space-between;
}
```

justify-content : space-around

```
/*-- --*/
.container {
  display: flex;
  flex-wrap: wrap;
  flex-direction: row;
}
.container.space-around {
  justify-content: space-around;
}
```



Play around with justify-content

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Finally create the proper spacing to our UI

Let's start getting a little more fancy!

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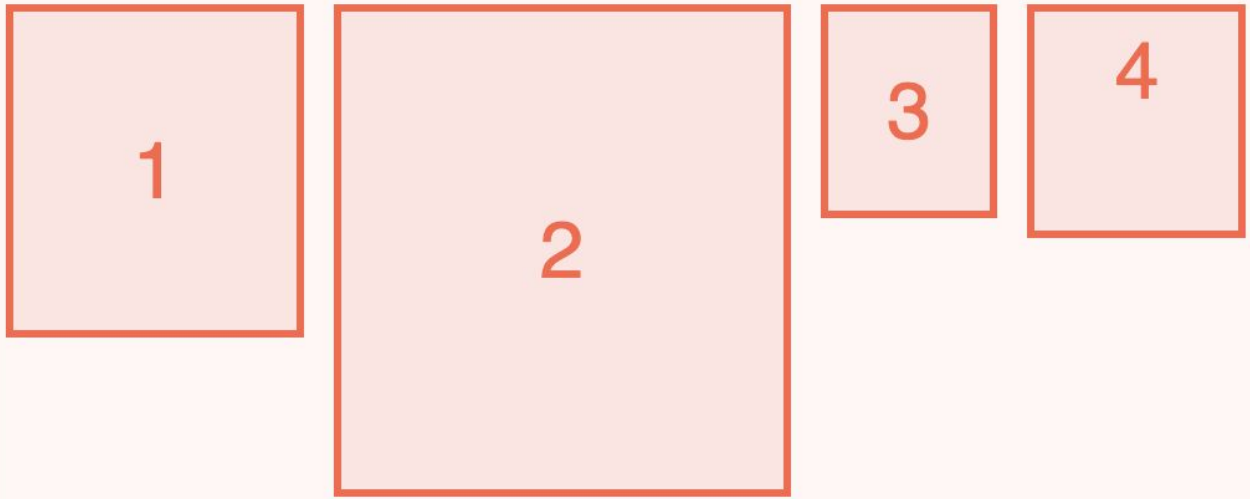
Alignment content on the main axis

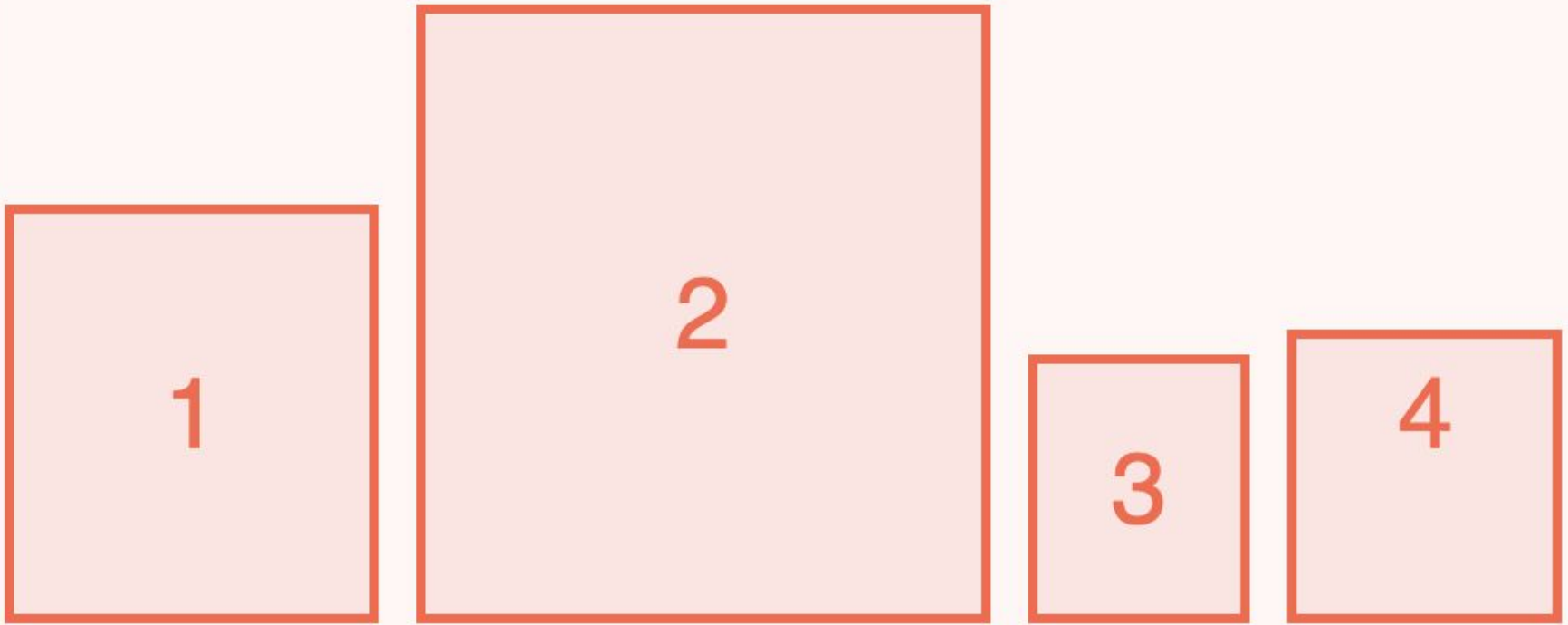
The justify-content property aligns flex items within the flex container along the main axis. It distributes the extra space left after the browser has calculated the necessary space for all items in the flex container.

Flex direction	Description
`align-items:auto;`	makes the align-self property inherit the value of align-items (default for align-self)
`align-items:flex-start;`	flex items are aligned towards the start of the cross axis
`align-items:flex-end;`	flex items are aligned towards the end of the cross axis
`align-items:center;`	flex items are aligned around the center of the cross axis
`align-items:baseline;`	flex items are aligned such that their baseline alignment lines up
`align-items:stretch;`	flex items are stretched along the cross axis to fill the flex container (default for align-items)

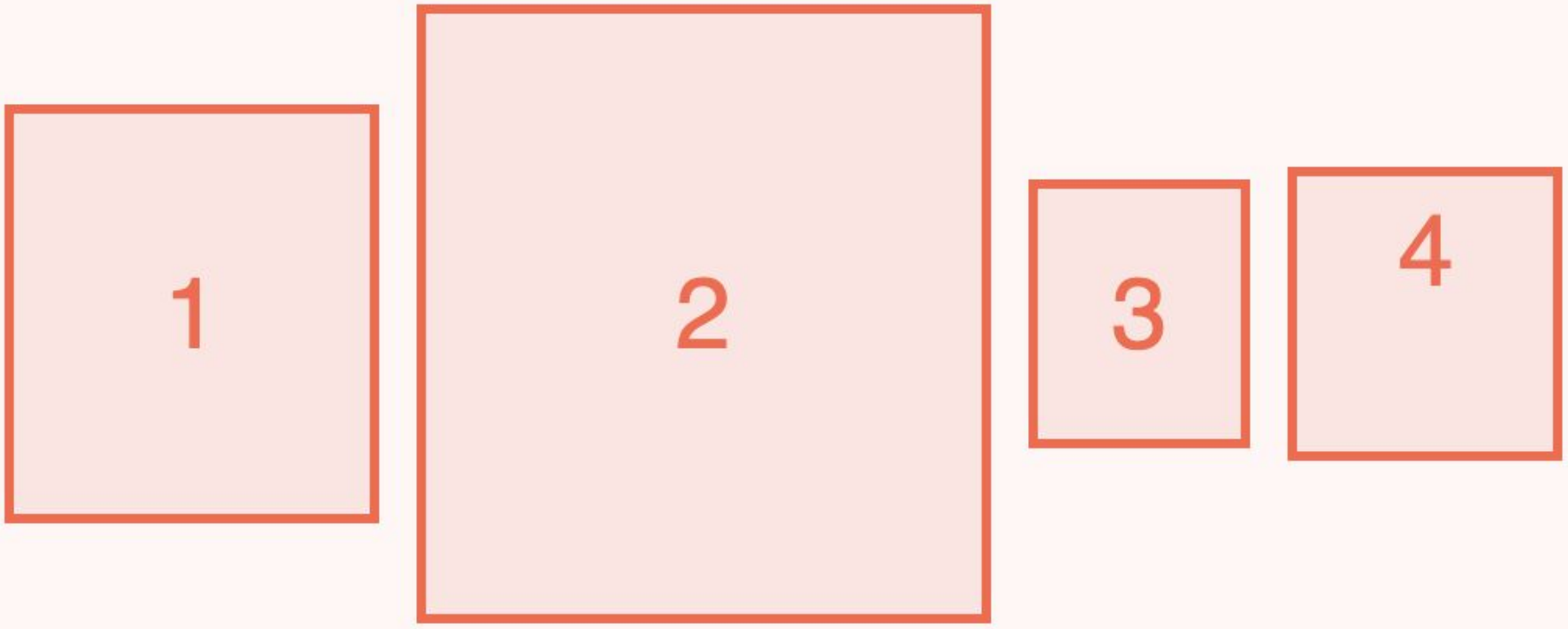
`align-items: flex-start`



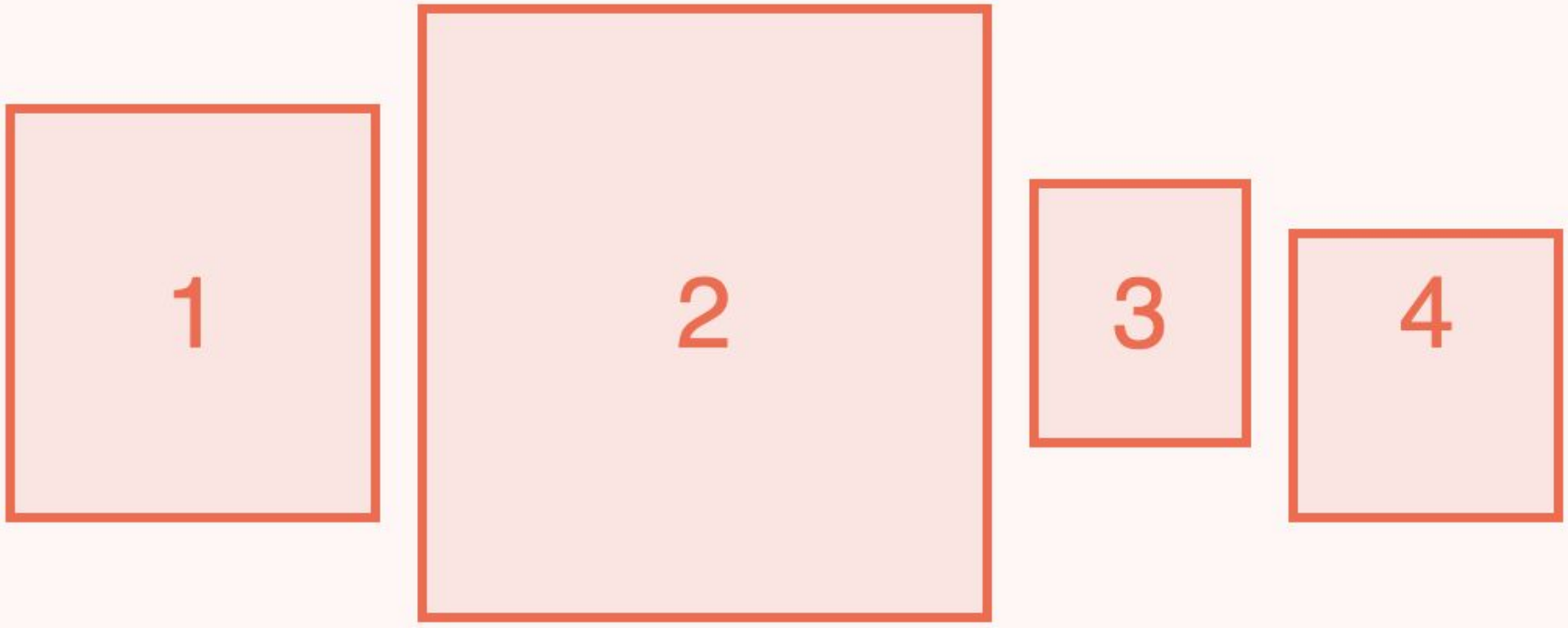
```
align-items: flex-end
```



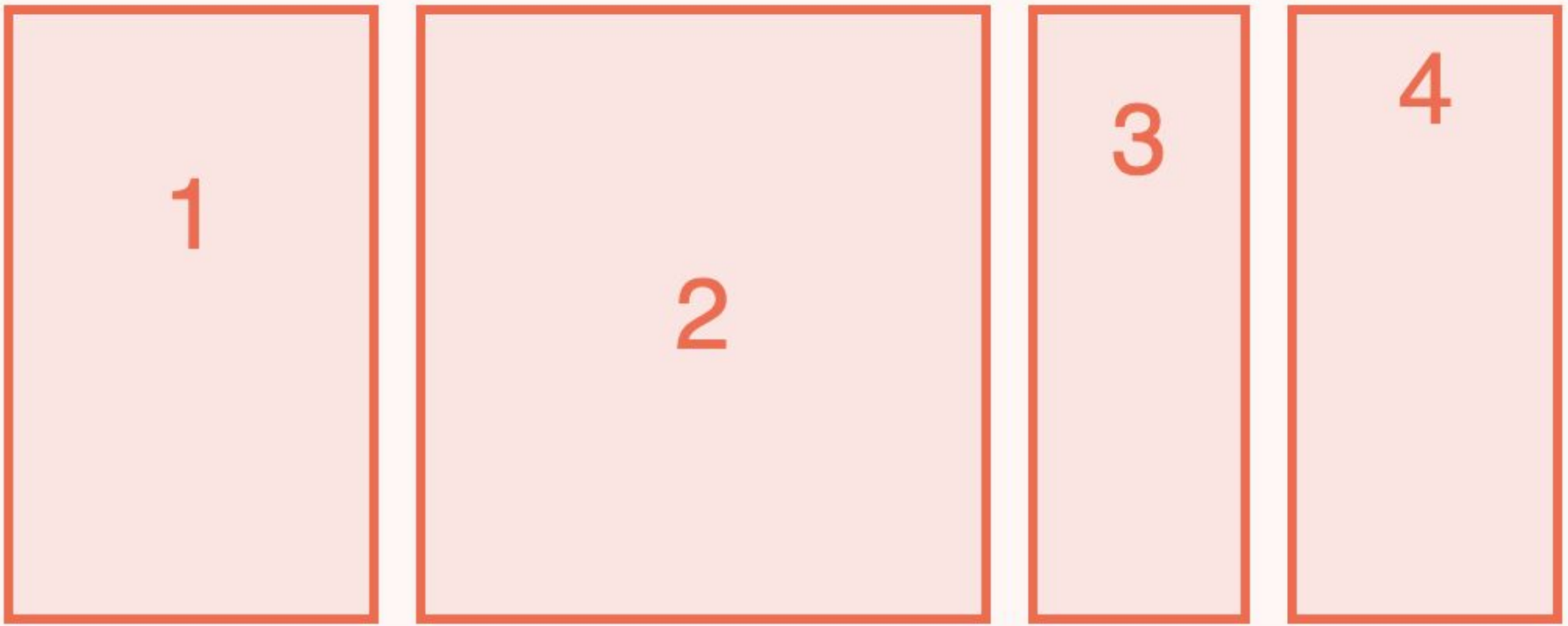
```
align-items: center
```



```
align-items: baseline
```



```
align-items: stretch
```



What is the setting for following page?

Dolor Sit

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Media Query

Media queries let us add new styles that target only specific conditions.

The syntax is as follows:

@media() { … }

@media media-type and (media-features) { .. }

Media queries: Media type

The media type let’s us target different type of media

- screen : @media screen { .. }
- print : @media print { .. }
- speech: @media speech { .. }

Media queries - media condition

The media condition let us target specific condition within that media type

- Widths @media(min-width:600px) { … }
- Orientation @media (orientation:landscape) { … }
- Specific features @media(hover) { .. }

Both media types and conditions are optional. However we do need to have either media type or condition

Media queries

We can target only screen:

@media screen { … }

Or we can choose a condition, such as the width of the viewport:

@media (min-width:960px) { .. }

Or combine both with **and**

@media screen and (min-width:960px) { .. }

Example - add the following code

```
body {
    font-size: 1.125rem;
    color:#707070;
    margin: 0;

}

@media (min-width: 600px){
    body {
        background:purple;
    }
}
h1 {
    font-size: 3rem;
    color: #212614;
    text-align: center;
}

h1 span {
```

What is wrong with this code?

```
body {
    font-size: 1.125rem;
    color:#707070;
    margin: 0;

}

@media (min-width: 800px){
    body {
        background:orange;
    }
}
@media (min-width: 600px){
    body {
        background:purple;
    }
}
```

Example - Media query with orientation

```
body {
    font-size: 1.125rem;
    color:#707070;
    margin: 0;
    background:pink;

}

@media (min-width: 600px) and (orientation:landscape){
    body {
        background:purple;
    }
}
```

Defining the main axis: flex-direction

Flex direction	Description
`flex-direction: row;`	main axis runs from left to right (this is the default)
`flex-direction: row-reverse;`	main axis runs from right to left
`flex-direction: column;`	main axis runs from top to bottom
`flex-direction: column-reverse;`	main axis runs from bottom to top

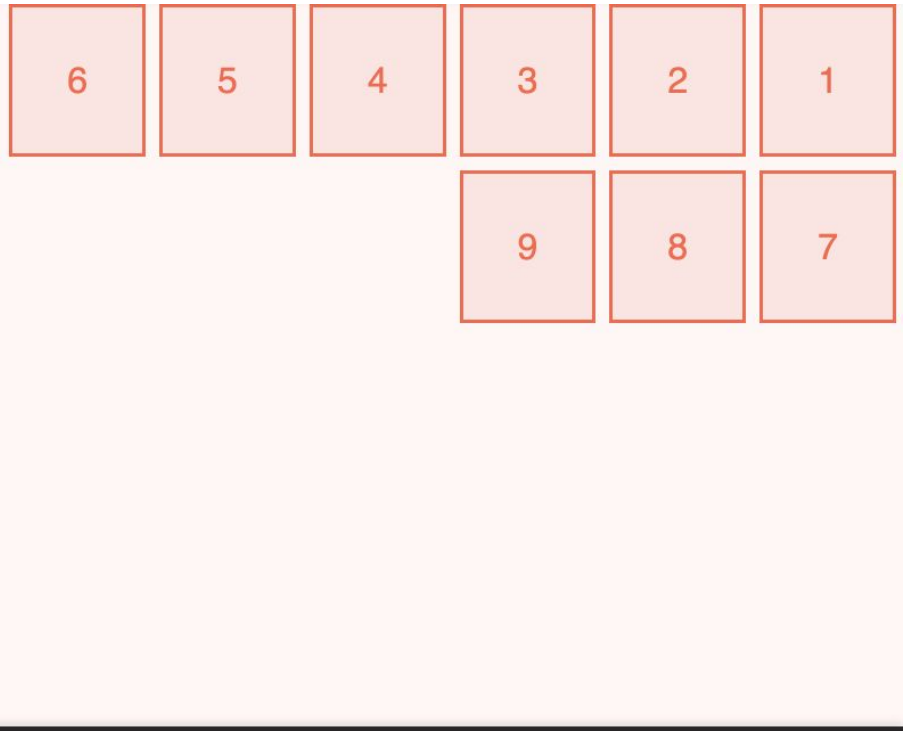
Example (row)

```html
<div class="container">
      <div class="item item-1">1</div>
      <div class="item item-2">2</div>
      <div class="item item-3">3</div>
      <div class="item item-4">4</div>
      <div class="item item-5">5</div>
      <div class="item item-6">6</div>
      <div class="item item-7">7</div>
      <div class="item item-8">8</div>
      <div class="item item-9">9</div>
</div>
```

```css
/*-- --*/
.container {
  display: flex;
  flex-wrap: wrap;
  flex-direction: row;
}
.item {
  font-size: 2rem;
  line-height: 1;
  text-align: center;
  padding: 3rem;
  background: mistyrose;
  border: 3px solid tomato;
  color: tomato;
  margin: 6px;
```

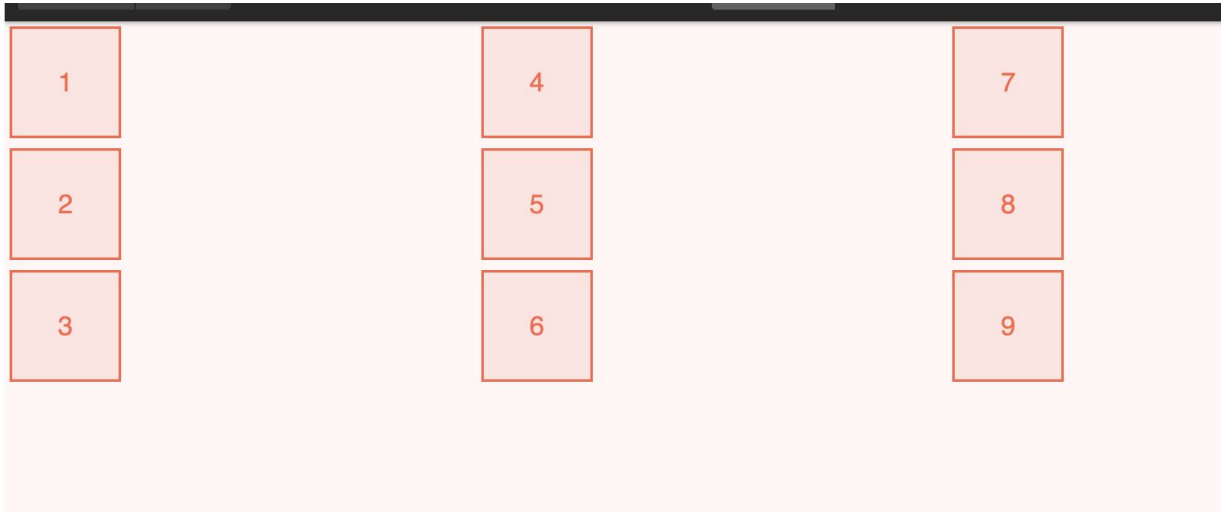
Defining the main axis: flex-direction (row-reverse)

```
}

/*-- --*/
.container {
  display: flex;
  flex-wrap: wrap;
  flex-direction: row-reverse;
}
.item {
  font-size: 2rem;
  line-height: 1;
  text-align: center;
  padding: 3rem;
  background: mistyrose;
  border: 3px solid tomato;
  color: tomato;
  margin: 6px;
}
```



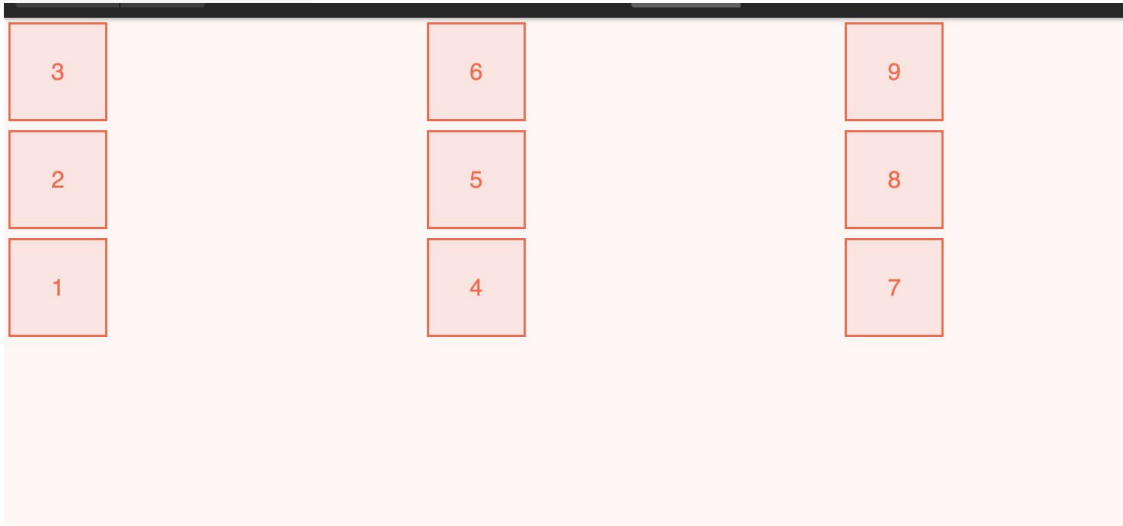
Defining the main axis: flex-direction (column)

```css
.container {
  display: flex;
  flex-wrap: wrap;
  flex-direction: column;
  max-height: 35rem; /* so that items wrap */
}
```



Defining the main axis: flex-direction (column-reverse)

```
.container {
  display: flex;
  flex-wrap: wrap;
  flex-direction: column-reverse;
  max-height: 35rem; /* so that items wrap */
}
```



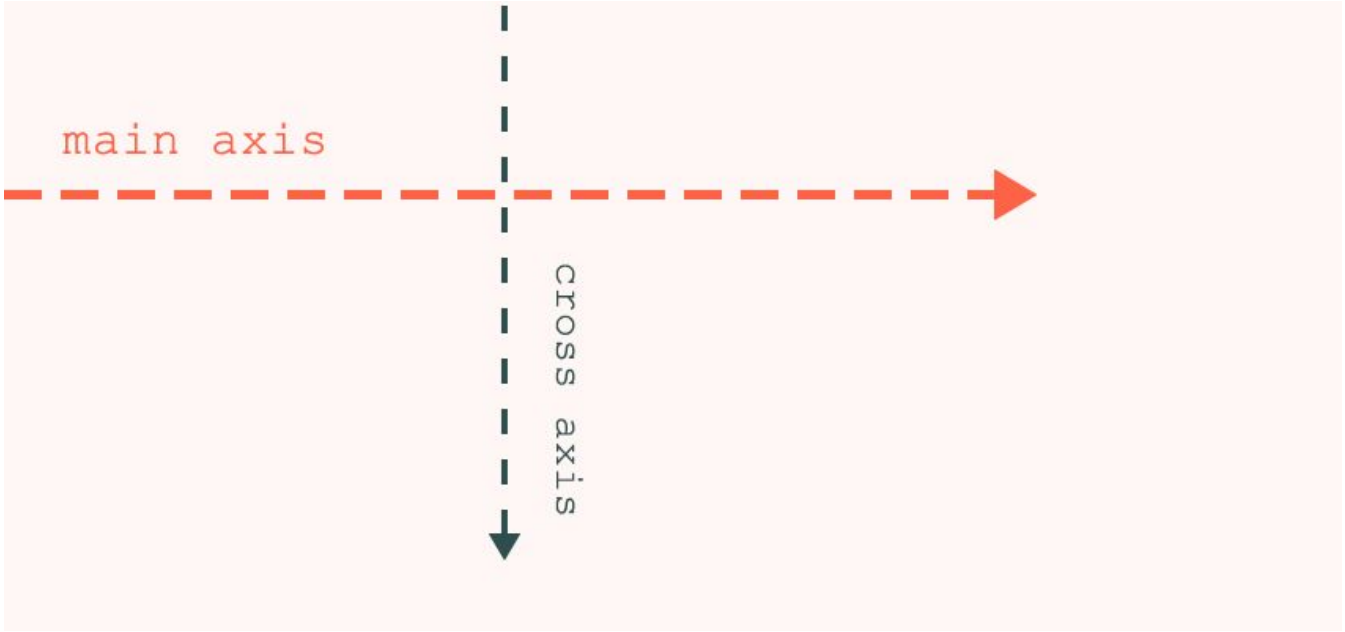
Set the media-query for max-width: 600px

```
@media (max-width: 600px){

    .col-1 , .col-2, .col-3 {
        width: 100%;
    }

}
```

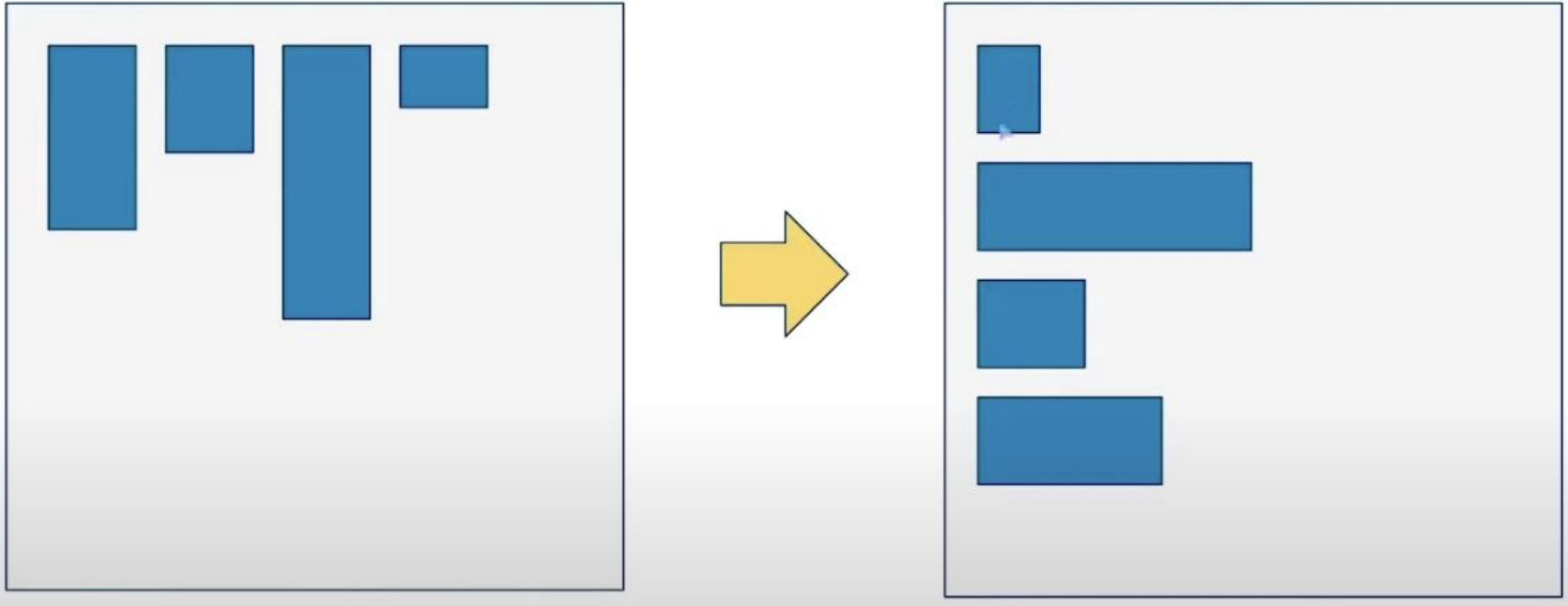
```
@media (max-width: 600px){

    .columns {
        flex-direction: column;
    }


}
```

Explanation on axis

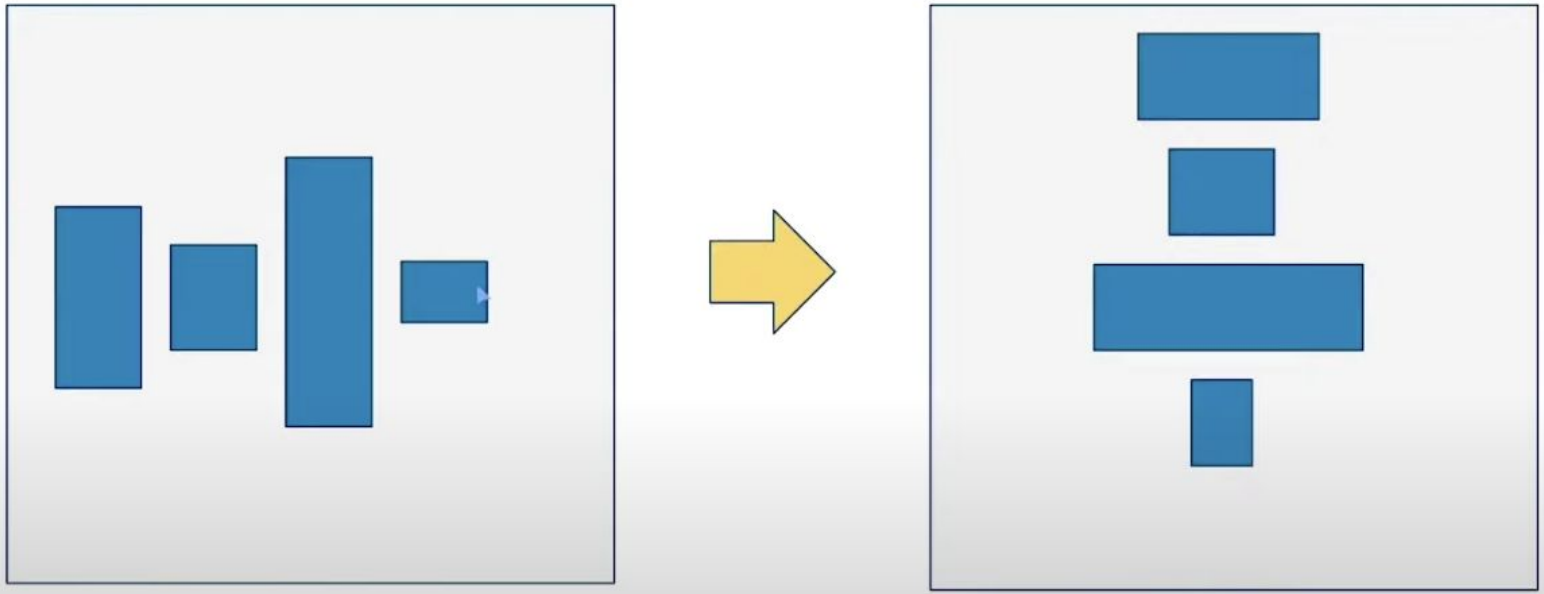
When using flexbox we work with two axes: the *main* and *cross* axes.



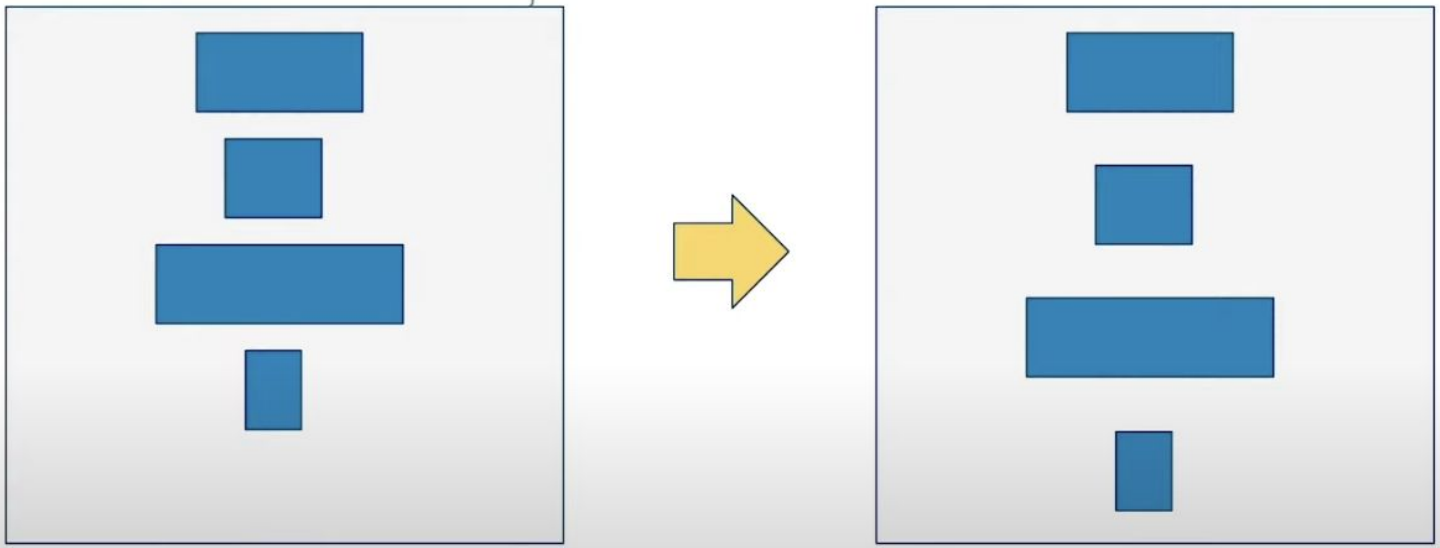
```
.parent {
  display: flex;
  align-items: flex-start;
  flex-direction: column;
}
```



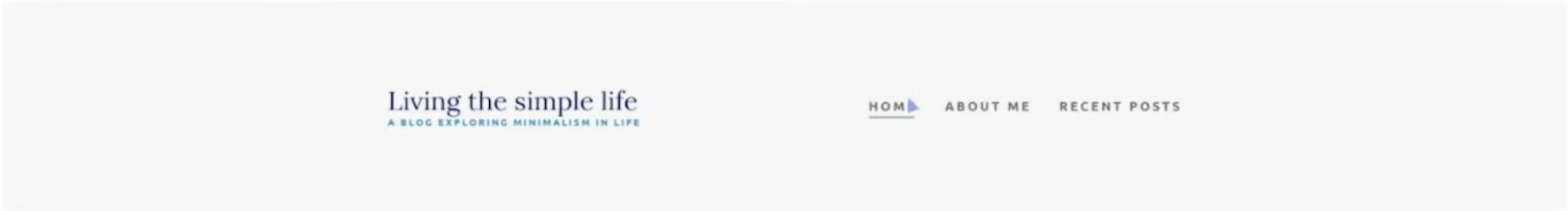
```
.parent {
  display: flex;
  align-items: center;
  flex-direction: column;
}
```



```
.parent {
  display: flex;
  Flex-direction: column;
  align-items: center;
  justify-content: space-between;
}
```



Living the simple life
A BLOG EXPLORING MINIMALISM IN LIFE
HOME
ABOUT ME
RECENT POSTS


Living the simple life
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HOME
ABOUT ME
RECENT POSTS

Living the simple life
A BLOG EXPLORING MINIMALISM IN LIFE
HOME
ABOUT ME
RECENT POSTS

#F8F8F8

#707070

#1792D2

#143774

Title: Lora - 3.375rem
Subtitle: Ubuntu bold - 1rem
Navigation: Ubuntu bold - 1rem

HTML for the project

```
<!DOCTYPE html>
<html>
<head>
    <link rel="stylesheet" type="text/css" href="style.css">
    <title></title>
</head>
<body>
    <header>
        <div class="site-title">
            <h1>Living the social life</h1>
            <p class="subtitle">A blog exploring minimilism in life</p>
        </div>
        <nav>
    <ul>
        <li><a href="index.html">home</a></li>
        <li><a href="about.html">about me</a></li>
        <li><a href="recent-posts.html">recent posts</a></li>
    </ul>
 </nav>
    </header>

</body>
</html>
```

Positioning the navigation using Flexbox

```
nav ul {
    list-style: none;
    display: flex;
    padding: 0px;
    justify-content: center;
}
nav li {
    margin:0 1em;
}

nav a {

}

nav a:hover {

}
```

CSS for Typography

```css
body {
    margin: 0;
    font-family: 'Ubuntu',sans-serif;
}

h1 {
    font-family: 'Lora',serif;
    font-weight: 400;
    color:#143774;
    font-size: 2rem;
    margin:0;
}
.subtitle {
    font-weight: bold;
    color:#1792d2;
    font-size: 0.75rem;
    margin:0;
}
header {
    text-align: center;
    background: pink;
    padding: 2em 0;
}
```

```css
nav a {
text-decoration: none;
color:#707070;
font-weight: 700;
}

nav a:hover, nav a:focus {
color:#1792d2;
text-decoration: underline;
}
```

```css
.current-page {
    border-bottom: 1px solid #707070;
}

.current-page:hover {
    color: #707070;
}
```

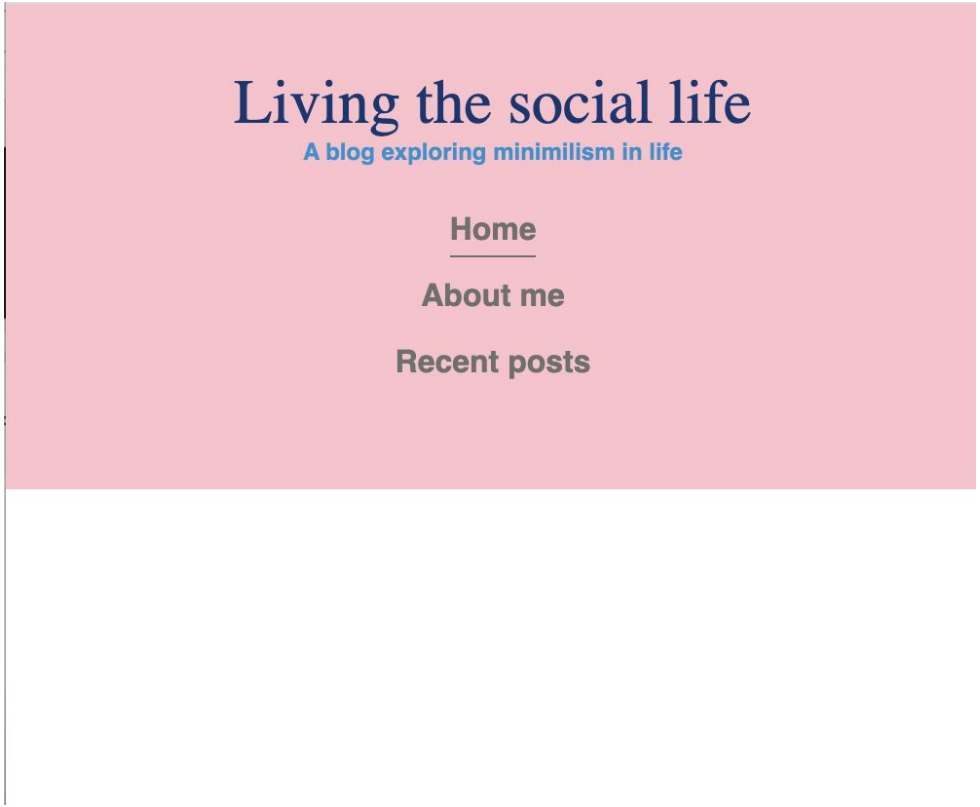
Changing to different style of navigation

```
</head>
<body>
    <header>
        <div class="container container-nav">
            <div class="site-title">
                <h1>Living the social life</h1>
                <p class="subtitle">A blog explo
            </div>
            <nav>
                <ul>
                    <li><a href="index.html" cla
                    <li><a href="about.html">Abo
                    <li><a href="recent-posts.ht
                </ul>
            </nav>
```

```
.container {
    width: 90%;
    max-width: 900px;
    margin: 0 auto;
}

.container-nav {
    display: flex;
    justify-content: space-between;
}
```

Adding media query to have nav view on phone



Adding media query to have nav view on phone

```
@media (max-width: 675px){
    nav ul {
        flex-direction: column;
    }
    nav li {
        margin:0.5em;
    }
}
```

```
@media (max-width: 675px){
    .container-nav {
        flex-direction: column;

    }
    header {
        text-align: center;
    }
}
```