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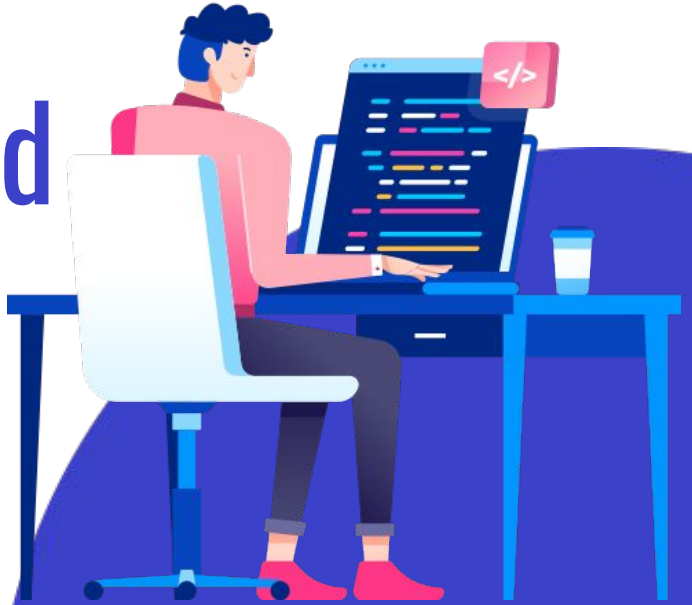
PROGRAMMING FUNDAMENTALS

HTML CSS Advanced

DIPLOMA IN FULL-STACK DEVELOPMENT

Certificate in **Computing Fundamentals**



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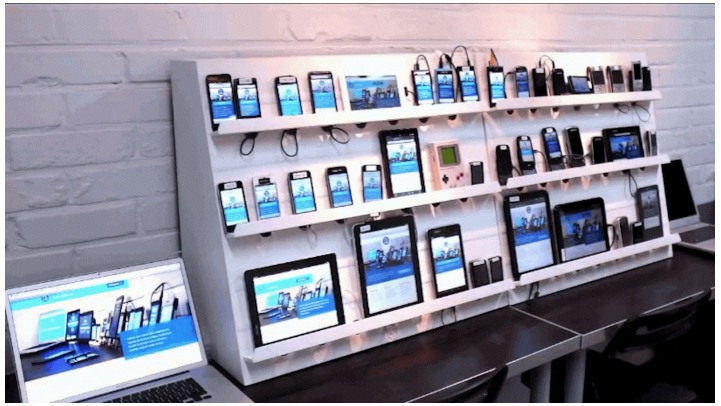
TODAY'S AGENDA

- Media Queries
- Box Model & Positioning
- Flex

MEDIA QUERIES 📱 💻



Testing across 27 devices

sad web dev noises

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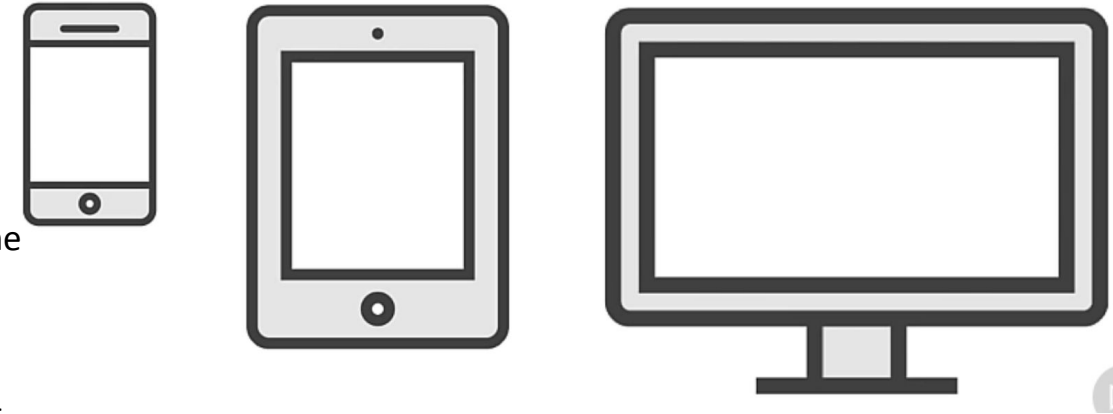
Mobile First Design

Media Query
Used to modify the CSS of a site depending on qualities such as viewport size or device type



@media
Applies one or more CSS properties based on the result of a media query

Min-width
If the minimum width of the viewport is at least the specific width or wider, then the media query is true

Max-width
If the maximum width of the viewport is at no more than the specified width, or it's narrower then the media query is true

@media rule @media type media feature

```
@media screen and (min-width: 576px)
{
/* when the browser viewport is at
least 576px apply rules here */
}
```

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Mobile First Design

MEDIA TYPE
all: matches to all devices
print: matches to print and printer displays
speech: matches to speed reading devices that read out a page
screen: matches all devices that does not match print or speech

Common breakpoints

Reading:
https://www.lambdatest.com/blog/how-to-use-css-breakpoints-for-responsive-design/

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Media Features

Media features are used to test a specific feature of the device
@media (width: 480px){ }
@media (orientation: landscape){ }

Combining multiple types or features
@media (width: 480px) and @media (orientation: landscape) { }

https://developer.mozilla.org/en-US/docs/Web/CSS/Media_Queries/Using_media_queries

```
h1{color: red;}
/* media query starts here */
/* Small devices (landscape phones, 576px and up) */
@media screen and (min-width: 576px) {
   h1{color: green;}
}
/* Medium devices (tablets, 768px and up) */
@media (min-width: 768px) {
   h1{color: blue;}
}
/* Large devices (desktops, 992px and up) */
@media (min-width: 992px) {
   h1{color: purple;}
}
/* Extra large devices (large desktops, 1200px and up) */
@media (min-width: 1200px) {
   h1{color: lightpink;}
}
```

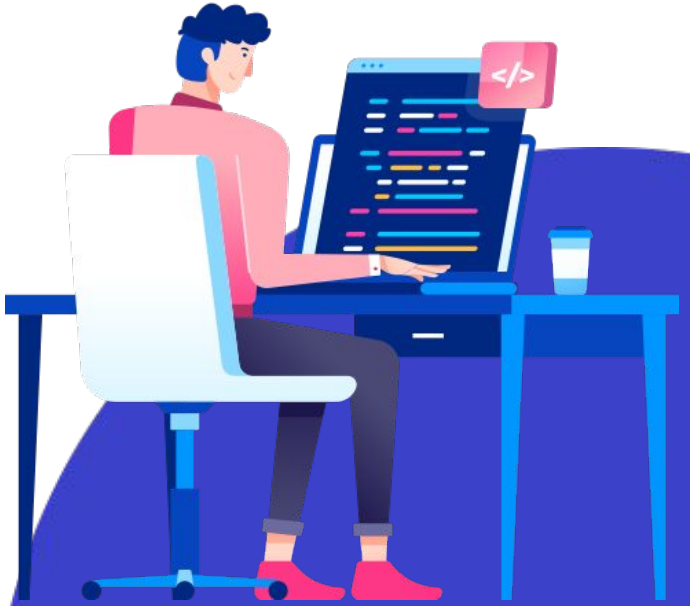
MEDIA QUERIES

https://replit.com/@immalcolm/simple-media-queries

Modern Frontend Web Dev

CSS Positioning

Bootcamp on Modern Frontend Web Dev.
with Javascript



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Objectives

1. Learn about advanced positioning in CSS
2. Relative, Absolute, Fixed
3. Flexbox

MEASUREMENT

Relative to the font-size of the root (e.g. the `<html>` element). “rem” = “root em”

MEASUREMENT

Absolute

- Measurement does not rely on another.

Relative

- Measurement is with relation to something else.

By Units

Absolute

cm	Centimeter
mm	Milimeters
in	Inches
px	**Pixels**
pt	Points
pc	Picas

Relative

em	Browser default font-size E.g Relative to the current font-size of the element
rem	Relative to root element (html) font-size.
vw	1% to width of viewport
vh	1% to height of viewport
%	To parent element

https://developer.mozilla.org/en-US/docs/Learn/CSS/Building_blocks/Values_and_units
https://www.digitalocean.com/community/tutorials/css-css-units-explained

POSITIONING

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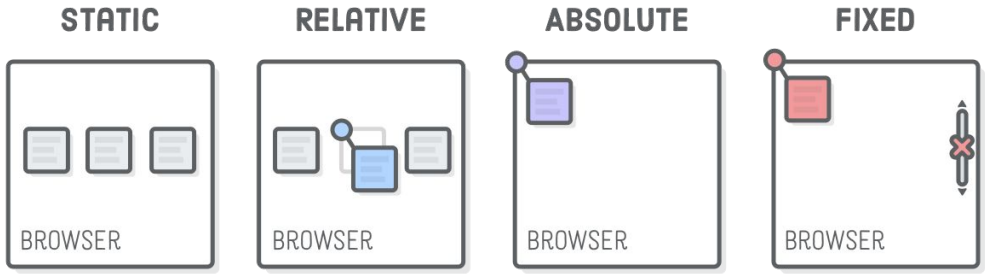

Positioning

CSS position property lets you alter the positioning scheme of a particular element.

Source:
https://internetingishard.com/html-and-css/advanced-positioning/

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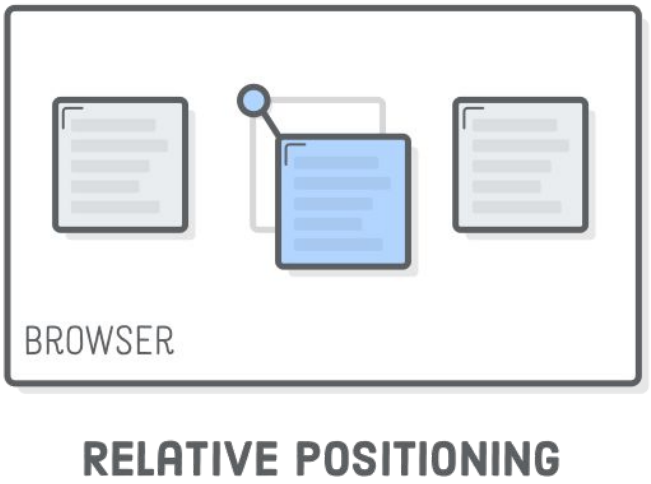

Relative Position

Moves elements around relative to where they would appear on the page.

Uses

Nudging boxes around

Source:
https://internetingishard.com/html-and-css/advanced-positioning/

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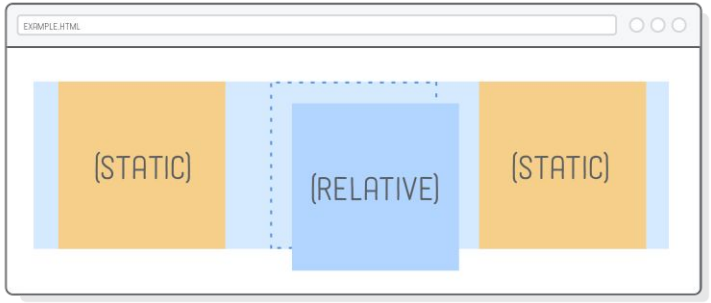
Relative Position

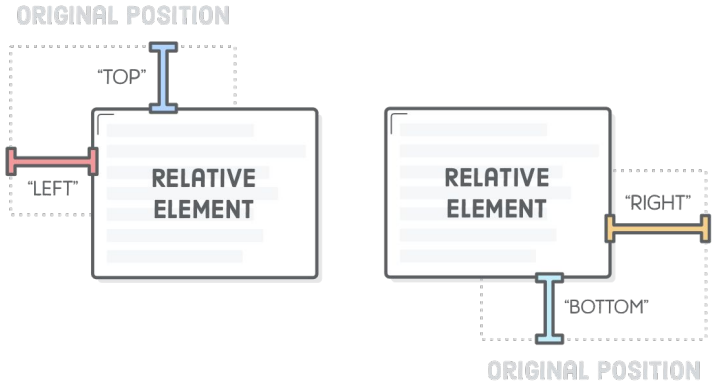



```
.item-relative {
  position: relative;
  bottom: 30px;
  right: 30px;
}
```

https://replit.com/@immalcolm/simple-positioning

Think of the offsets as being applied after the browser finishes laying out the page.

Uses Top, Left, Right, Bottom properties



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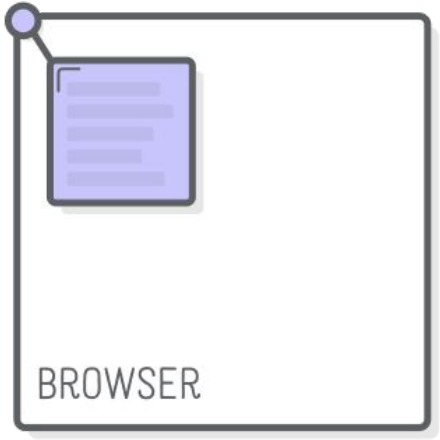
https://internetingishard.com/html-and-css/advanced-positioning/

Official (Closed) - Non Sensitive



ABSOLUTE POSITIONING

- Absolute position elements are placed in relation to a parent content(browser viewport, or parent element). The parent is the positioning context
- Positions can be modified using positioning offsets, top, right, bottom, left

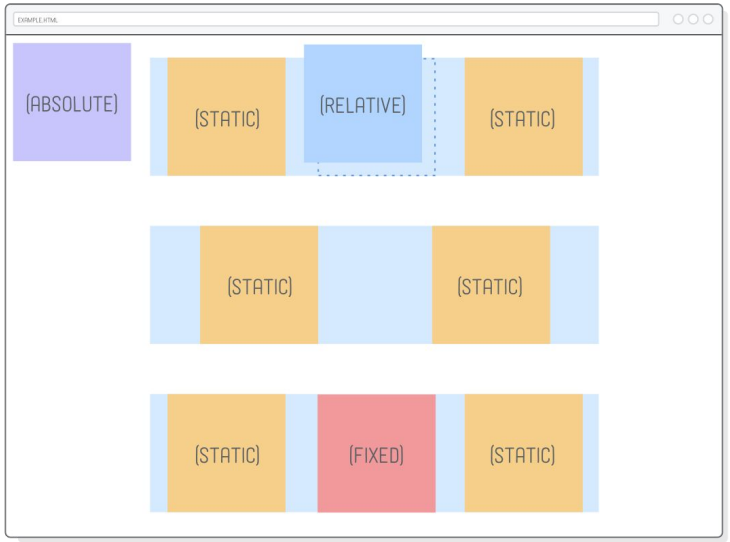
https://replit.com/@immalcolm/simple-positioning

Reading

https://css-tricks.com/almanac/properties/p/position/

Absolute Position

Offset is relative to the entire browser window instead of the original position of the element.



Source:

https://internetingishard.com/html-and-css/advanced-positioning/

https://developer.mozilla.org/en-US/docs/Web/CSS/position

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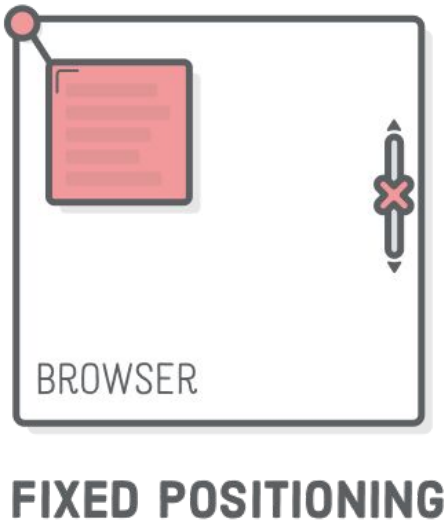
Fixed Position

Very similar to absolute **EXCEPT** that Fixed elements don't scroll with the rest of the page.

Commonly known as sticky elements.



https://repl.it/@malcolmyam/simple-positioning#index.html

Source:
https://internetingishard.com/html-and-css/advanced-positioning/

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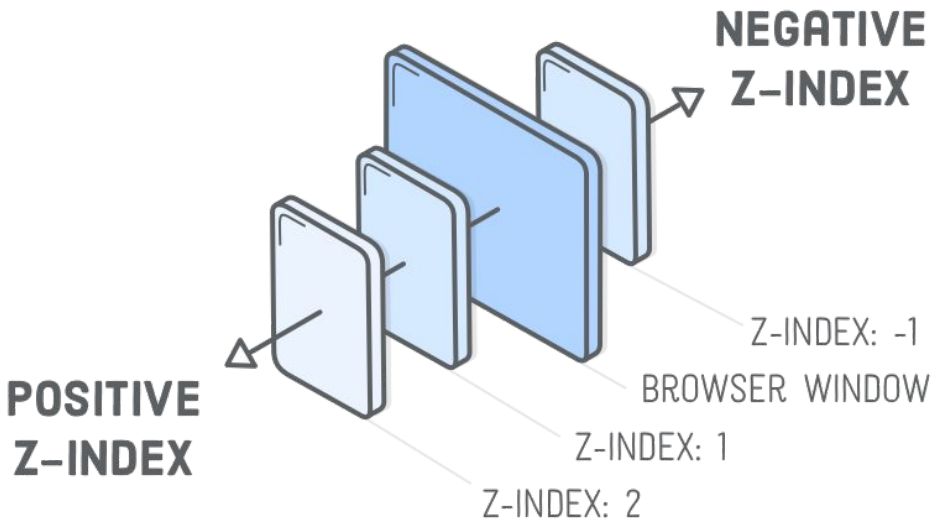
Z-Index



z-index property lets you control the **depth of element**s on the page.

Imagine the screen as a 3D world

Negative z-index go farther into the page. (behind)

Positive z-index comes out of the page

Source:
https://internetingishard.com/html-and-css/advanced-positioning/

Simple z-index demo

Z-index animation demo

Z-index Reading
https://developer.mozilla.org/en-US/docs/Web/CSS/z-index
https://philipwalton.com/articles/what-no-one-told-you-about-z-index/
https://developer.mozilla.org/en-US/docs/Web/CSS/CSS_Positioning/Understanding_z_index/The_stacking_context
https://css-tricks.com/almanac/properties/z/z-index/

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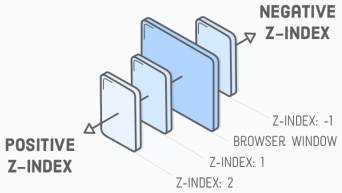
Z-Index

```
.dropdown > span {
  z-index: 2;
  position: relative;  /* This is important! */
  cursor: pointer;
}

.features-menu {
  /* ... */
  z-index: 1;
}
```



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https://developer.mozilla.org/en-US/docs/Web/CSS/CSS_Positioning/Understanding_z_index/The_stacking_context
https://css-tricks.com/almanac/properties/z/z-index/

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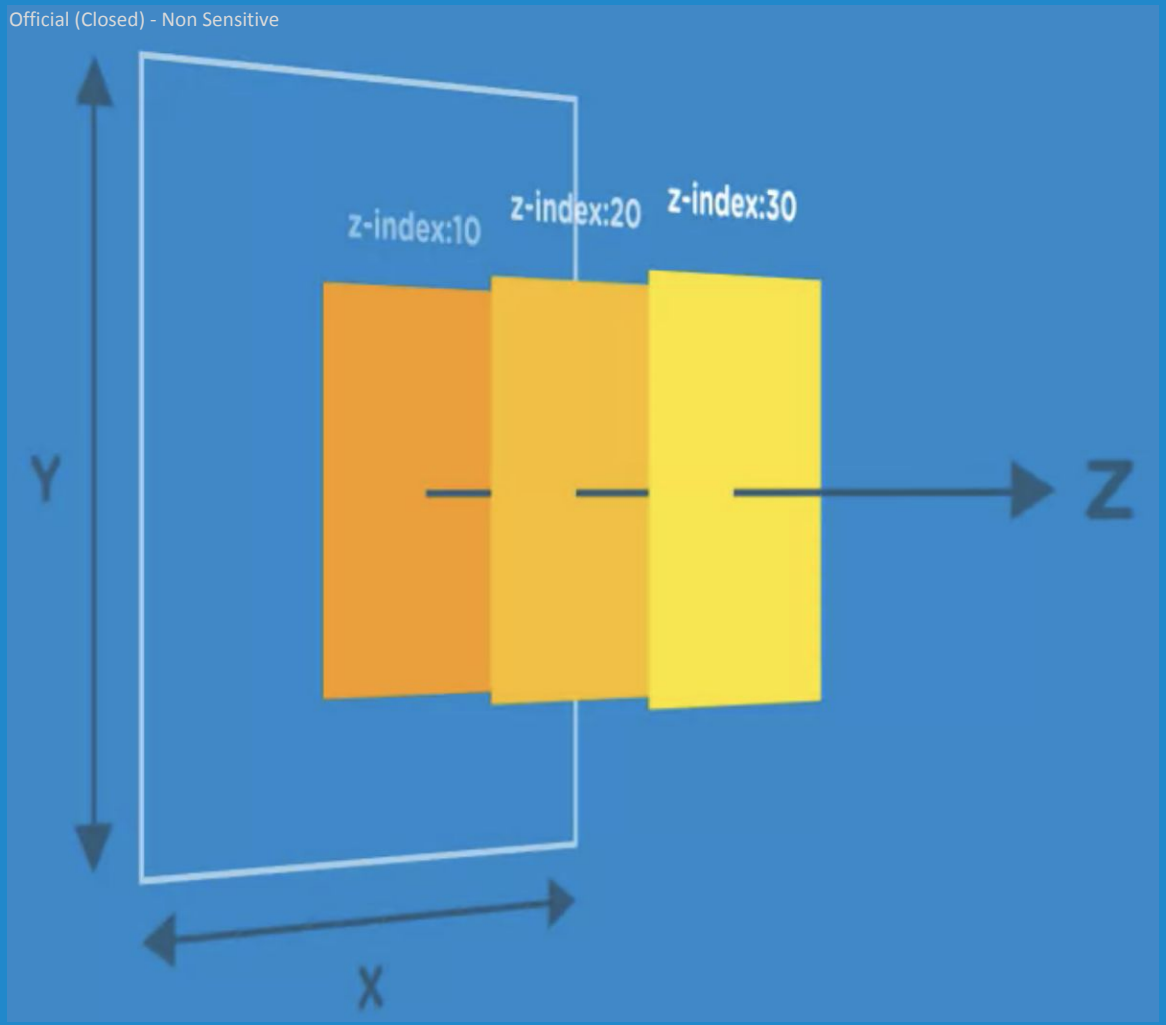

Positioned elements follow a stacking order that determines which elements display above or below other elements.

The z-index property is directly related to stacking order and it's what prevents elements from overlapping other elements.

An element with a higher z-index value overlaps an element with a lower z-index value.

Positioned elements have a z-index of 0 by default.

z-index work ONLY on elements with a position property set to absolute, fixed, or relative. If you set a z-index on an element with no position, it will do nothing.

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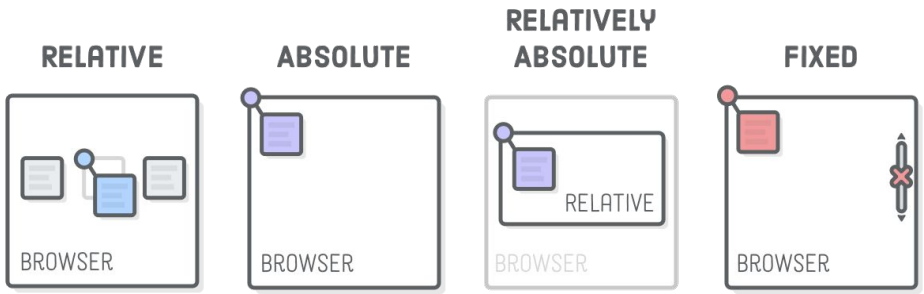

Positioning

Relative
For tweaking the position of an element without affecting its surrounding boxes

Absolute
Take elements out of the static flow of the page and place relative to the browser window

Relative Absolute
Allows us hook back into the static flow of the page

Fixed
Make elements don't scroll with the rest of the page (sticky)

Source:
https://internetingishard.com/html-and-css/advanced-positioning/

FLEXBOX

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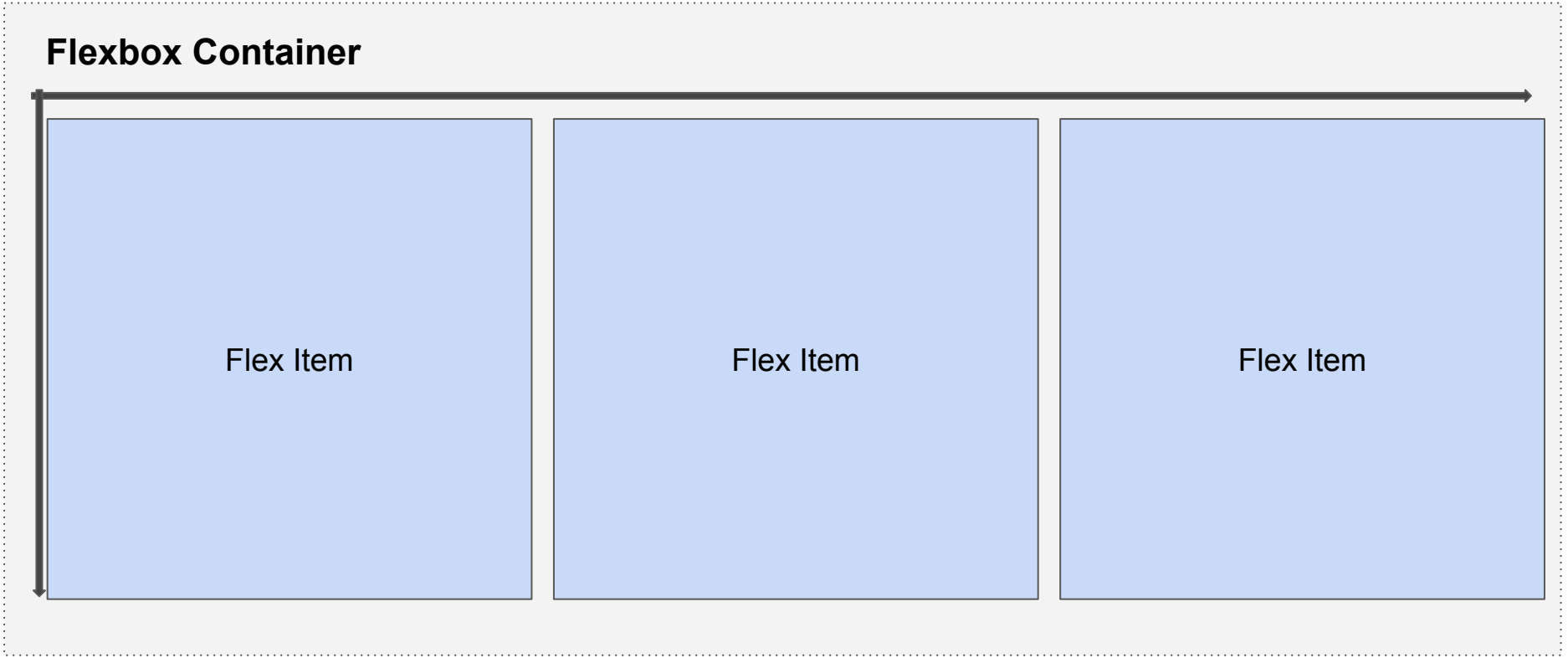
FLEXBOX

The flexbox container is the parent of the flex item.
The children of the flexbox container can be laid out in horizontal or vertical easily and flex their size when the content grows or shrink accordingly



https://www.w3schools.com/css/css3_flexbox.asp
https://css-tricks.com/snippets/css/a-guide-to-flexbox/

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FLEXBOX

Apply flexbox to get flexible layouts

https://www.w3schools.com/css/css3_flexbox.asp
https://css-tricks.com/snippets/css/a-guide-to-flexbox/

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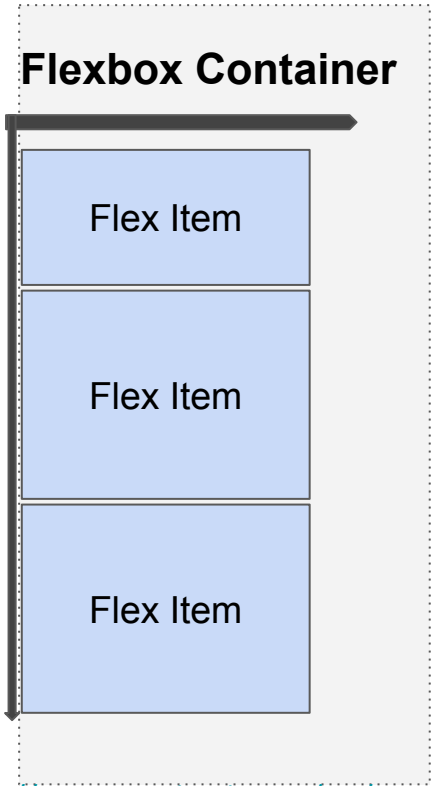
FLEXBOX

Can adapt layout
to suit content



https://www.w3schools.com/css/css3_flexbox.asp
https://css-tricks.com/snippets/css/a-guide-to-flexbox/

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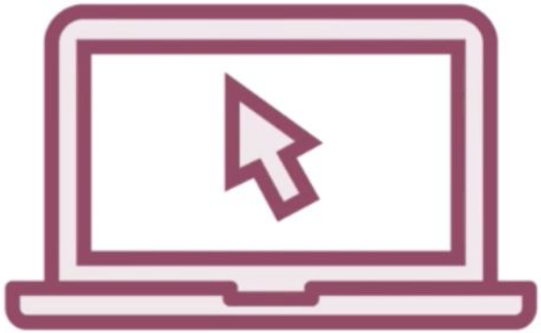
FLEXBOX



https://www.w3schools.com/css/css3_flexbox.asp
https://css-tricks.com/snippets/css/a-guide-to-flexbox/

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FLEXBOX: Breakdown a Design

1. Look at the entire page
2. See how all main children stack
3. Start breaking down each row and column
4. Stop when you can’t break it down to stacks

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

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Heading

Sub heading goes here

01/02/20

Bacon ipsum dolor amet brisket porchetta chislic pig boudin cupim jerky beef bresaola andouille alcatra swine, burgdoggen tri-tip spare ribs. Bresaola jerky rump, doner corned beef alcatra fatback chicken capicola salami turke.

Bacon ipsum dolor amet brisket porchetta chislic pig boudin cupim jerky beef bresaola andouille alcatra swine, burgdoggen tri-tip spare ribs. Bresaola jerky rump, doner corned beef alcatra fatback chicken capicola salami turkey frankfurter short ribs. Strip steak hamburger beef, chicken kevin filet mignon ball tip. Prosciutto beef strip steak drumstick hamburger, t-bone kevin sirloin burgdoggen.

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30 mins

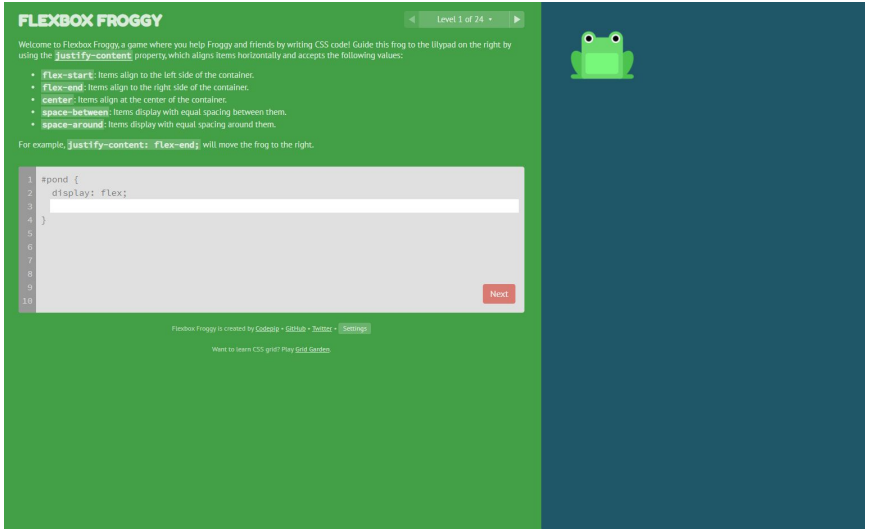
#EXERCISE

Flexbox Froggy

- Expand on your Flex knowledge and learn more through a game!

LET'S DISCUSS

https://flexboxfroggy.com/



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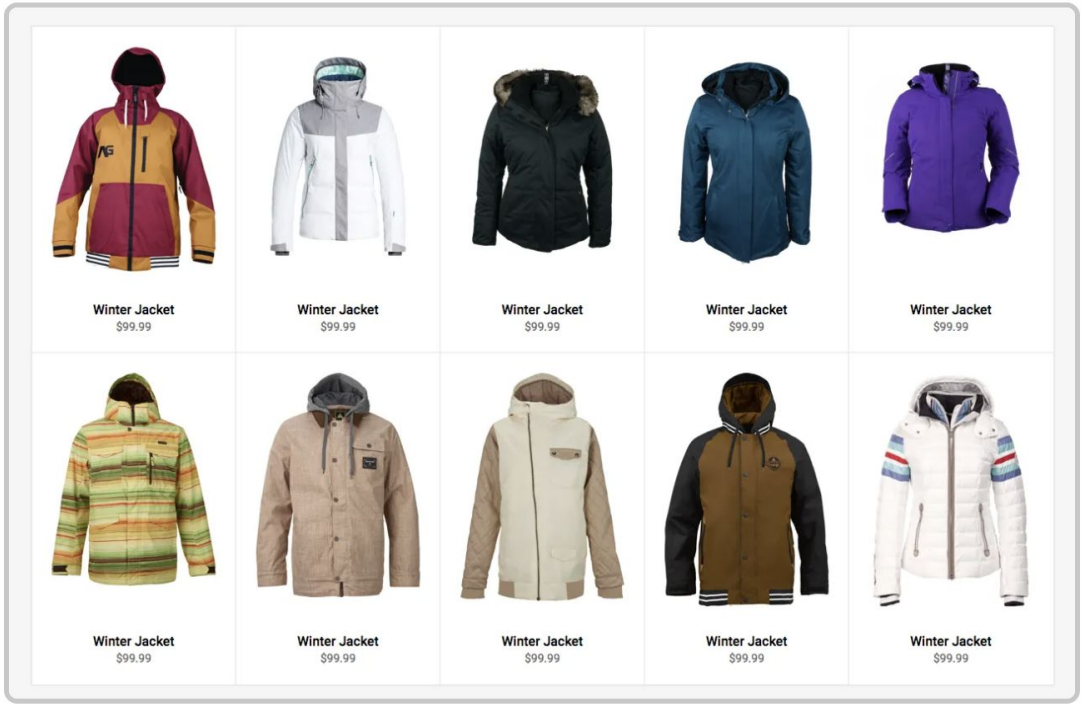
Case study : Product page with Flexbox & @media



https://css-tricks.com/designing-a-product-page-layout-with-flexbox/

Let's Code #EXERCISE

30mins

Power Up your Simple Recipe :P

See repl.it Project :

03 Simple Recipe with Flex