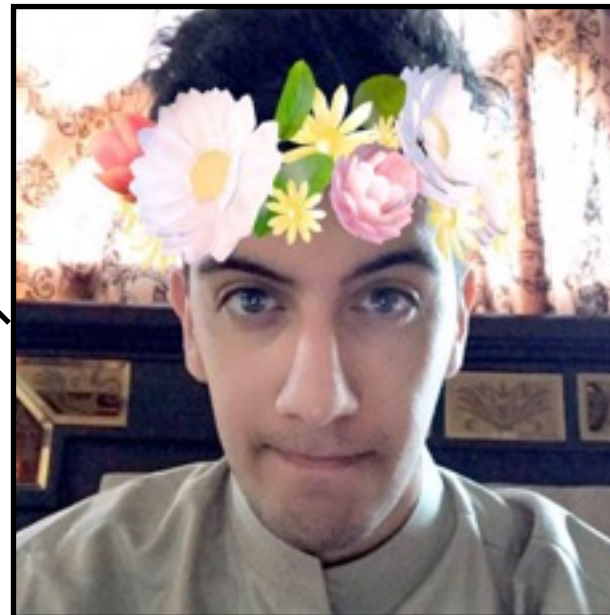


CSS-Animations

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Warm-up

Warm-up #1

CSS Styles

Which selector wins?

```
2  
3 p { color: orange; }  
4  
5 p { color: purple; }  
6  
7 p { color: green; }  
8
```

Line 3?

Line 5?

Line 7?

Warm-up #1

CSS Styles

Which selector wins?

```
2  
3 p { color: orange; }  
4  
5 p { color: purple; }  
6  
7 p { color: green; }  
8
```

Line 3?

Line 5?



Line 7?

Warm-up #2

CSS Styles

```
3
4 p.p.p1.p2.p3 {
5     color: orange;
6 }
7
8 p#my-p.p1 {
9     color: purple;
10 }
11
12 p {
13     color: green !important;
14 }
15
```

Which selector wins?

Line 4?

Line 8?

Line 12?

Warm-up #2

CSS Styles

```
3
4 p.p.p1.p2.p3 {
5     color: orange;
6 }
7
8 p#my-p.p1 {
9     color: purple;
10 }
11
12 p {
13     color: green !important;
14 }
15
```

Which selector wins?

Line 4?

Line 8?



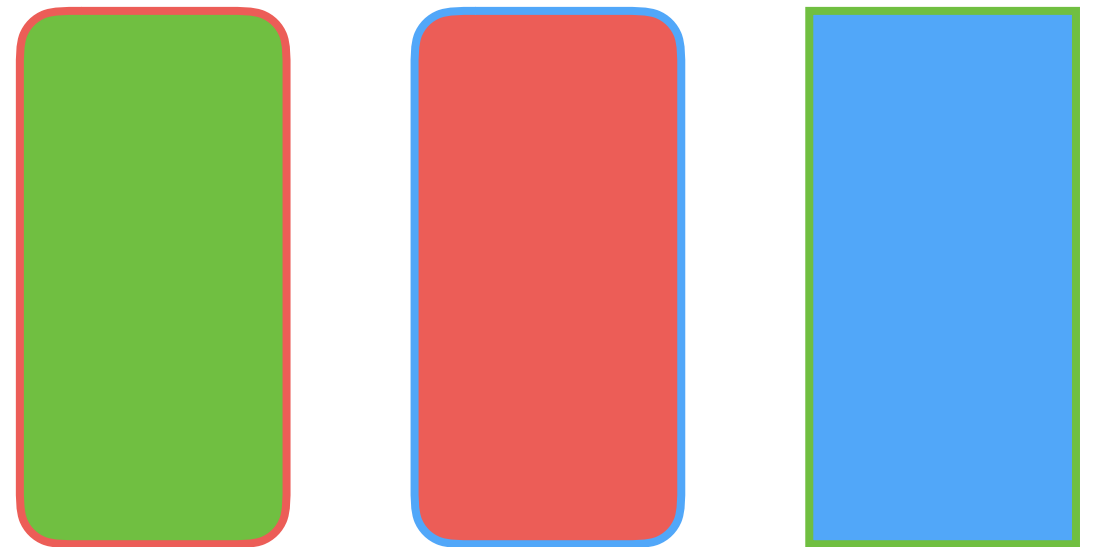
Line 12?

Warm-up #3

CSS Styles

```
2  
3 .box {  
4     width: 100px;  
5     height: 200px;  
6     border-radius: 5px;  
7     background-color: #0F0;  
8     border: 2px solid #F00;  
9 }  
10
```

Output

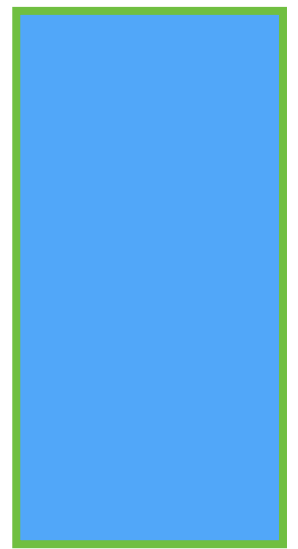
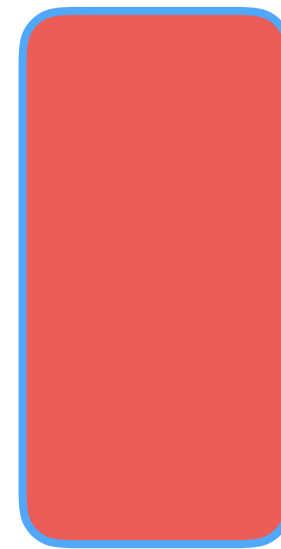


Warm-up #3

CSS Styles

```
2  
3 .box {  
4   width: 100px;  
5   height: 200px;  
6   border-radius: 5px;  
7   background-color: #0F0;  
8   border: 2px solid #F00;  
9 }  
10
```

Output



What will we learn?

- 1 Usage of Transitions
- 2 2D Transform Properties
- 3 Usage of Animations



Transitions

What are transitions?

➔ **animate** **state** changes of an **element**

What are transitions?

 **animate** **state** changes of an **element**

element: h1, p, .selector, #div, ...

states:

1. :hover
2. :focus
3. :active
4. :target

What are transitions?

 **animate** **state** changes of an **element**

element: h1, p, .selector, #div, ...

states:

1. :hover
2. :focus
3. :active
4. :target

example

state 1: p { color: #000; }

state 2: p:hover { color: #F00; }

How to run a transition

using transition properties

known properties

width

height

margin

padding

font-size

How to run a transition

using transition properties

known properties

width

height

margin

padding

font-size

transition properties

transition-property

transition-duration

transition-timing-
function

transition-delay

transition-property

- ➔ specifies the CSS property the transition is for
- ➔ required property (must be numerical)

transition-property

➡ specifies the CSS property the transition is for

➡ required property (must be numerical)

transition-property:

working*

width

height

margin

color

font-size

opacity

position

border-radius

transition-property

➡ specifies the CSS property the transition is for

➡ required property (must be numerical)

transition-property:

working*

width

height

margin

color

font-size

opacity

position

border-radius

not working*

font-family

display

*not a complete list

transition-duration

➡ specifies time to complete the transition

➡ required property

valid examples:

transition-duration: 0.2s

transition-duration: 200ms

transition-timing-function

➡ specifies the speed curve of the transition

➡ optional property (default is “ease”)

valid examples:

transition-timing-function: ease;

transition-timing-function: linear;

transition-timing-function: ease-in-out;

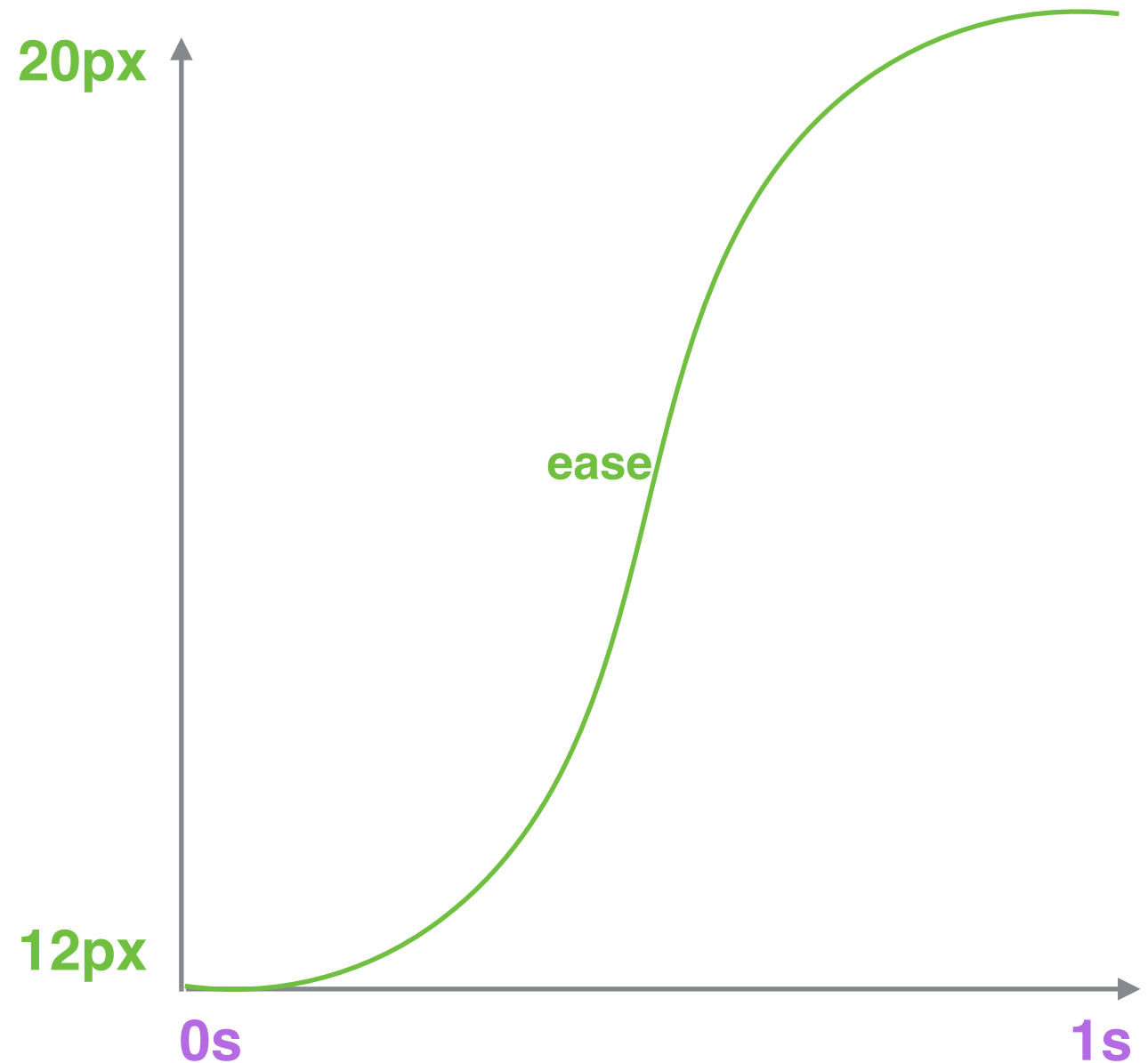
Transition functions

example:

transition-property: font-size

transition-duration: 1 second

transition-timing-function: ease



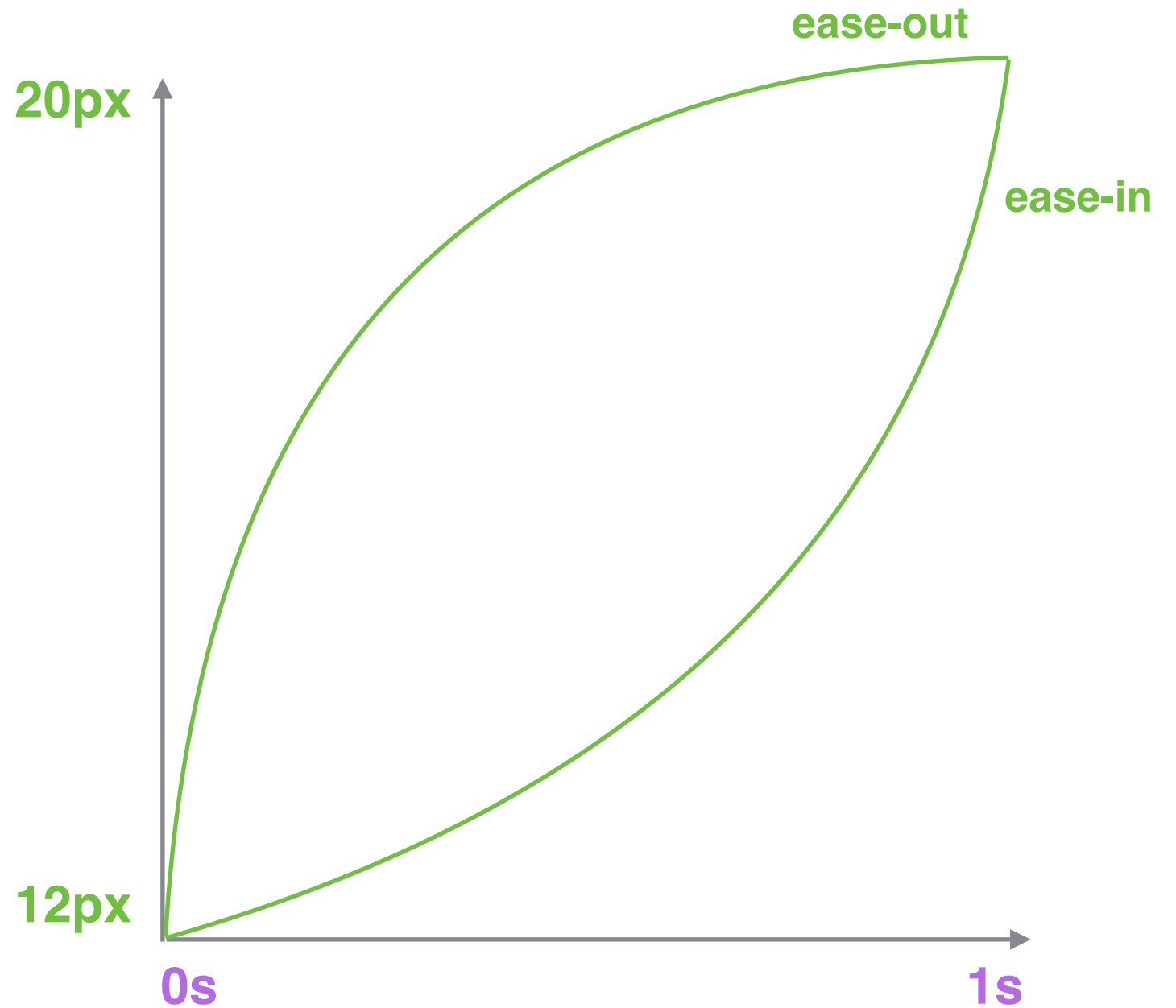
Transition functions

example:

transition-property: font-size

transition-duration: 1s

transition-timing-function: ease-in
ease-out



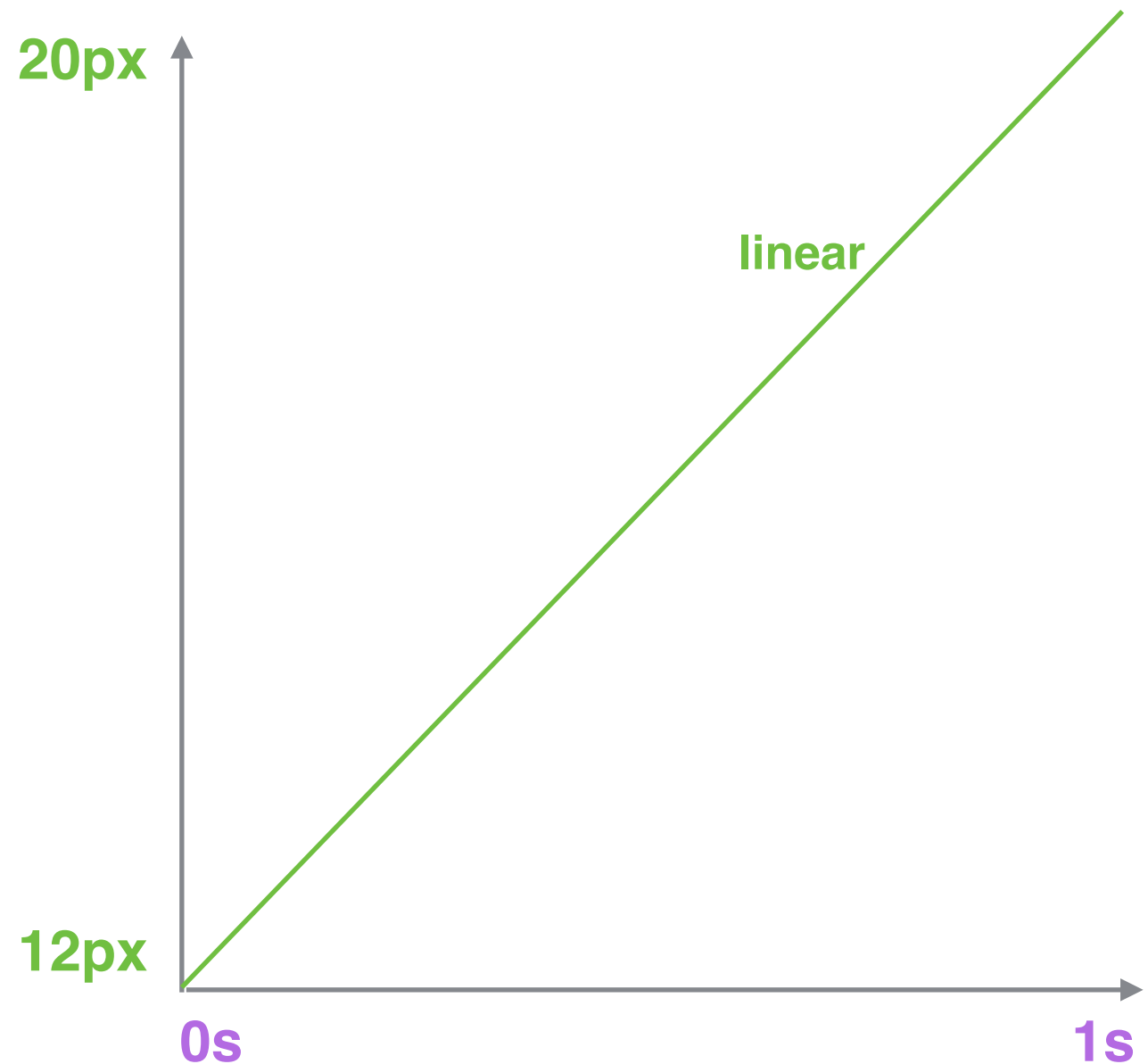
Transition functions

example:

transition-property: font-size

transition-duration: 1s

transition-timing-function: linear



transition-delay

- ➔ **specifies when the transition will start**
- ➔ **optional property (default is “0s”)**

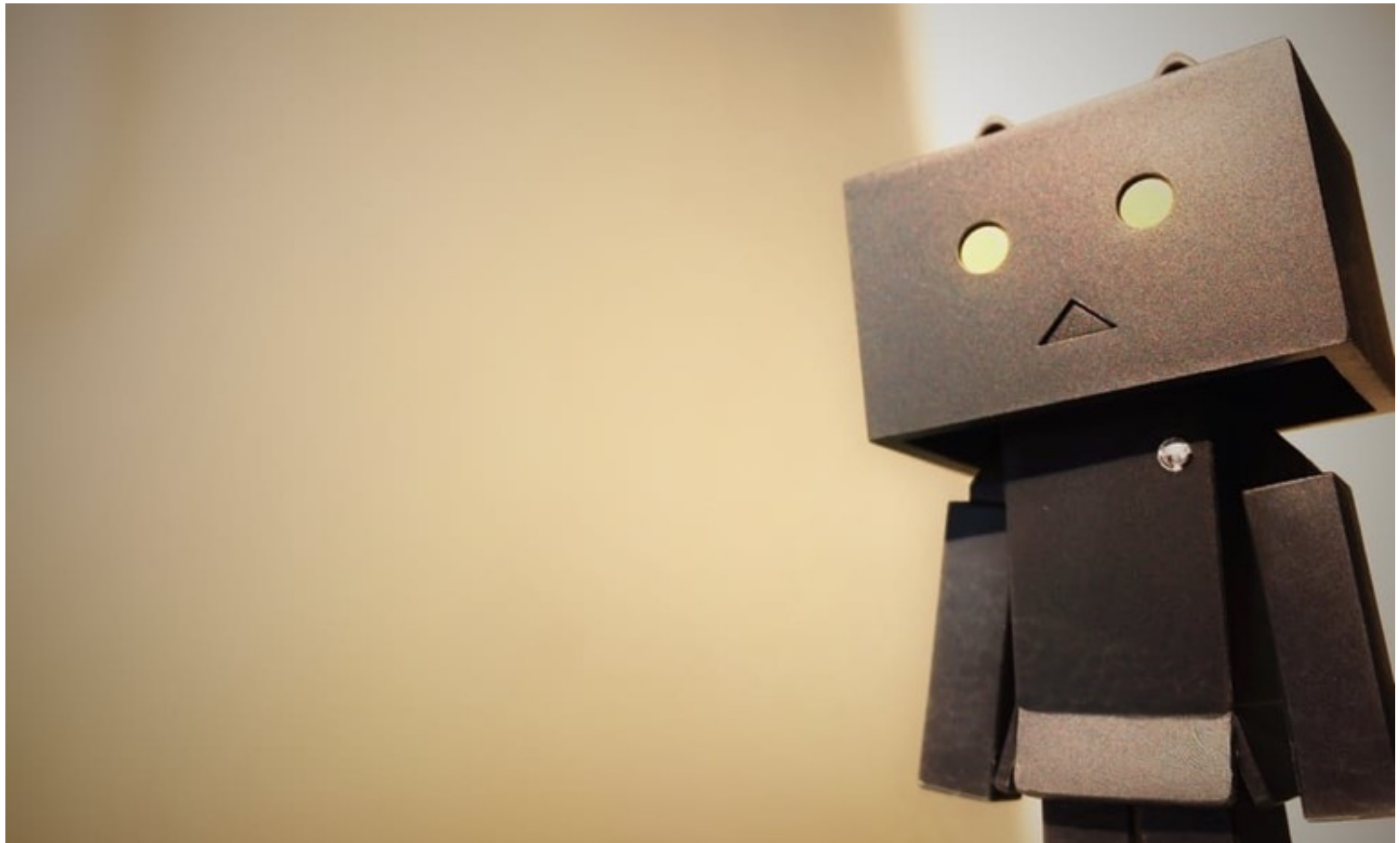
valid examples:

transition-delay: 0.2s

transition-delay: 200ms



Demo + Exercise Time



Transformations

Transform Properties

2D Properties

translateX

translateY

rotate

scale

Transform Properties

2D Properties

translateX

translateY

rotate

scale

3D properties

translateZ

rotateX

rotateY

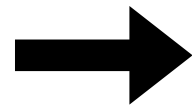
rotateZ

transform-style

perspective

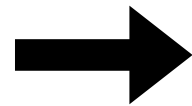
2D Transform Properties

translateX



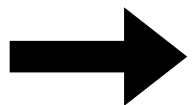
specifies an offset in x-axis

translateY



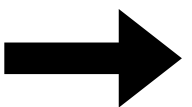
specifies an offset in y-axis

rotate



specifies the rotation angle of an element

scale



specifies by which factor an element should grow/shrink



Demo + Exercise Time



Animations

How to create an animation

using @keyframes

custom name of animation

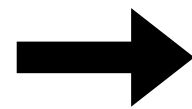
```
@keyframes my-animation {  
  0%    { background: green; }  
  25%   { background: orange; }  
  50%   { background: purple; }  
  75%   { background: blue; }  
  100%  { background: red; }  
}
```

this animation
has 5 keyframes
in total

How to run an animation

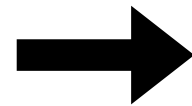
using animation properties

animation-name



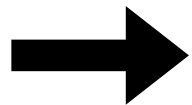
specifies a name for the @keyframes animation

**animation-duration,
animation-timing-function,
animation-delay**



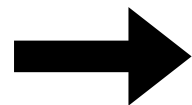
same as its transition counterparts

animation-iteration-count



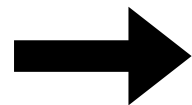
specifies the number of times an animation should be played

animation-direction



specifies whether animation should play normal, alternate or reverse

animation-play-state



specifies whether animation is running or paused



Demo + Exercise Time

Summary

Transition

transition-property

transition-duration

transition-timing-
function

transition-delay

Transform

translate

rotate

scale

Animation

animation-name

animation-duration,
animation-timing-function,
animation-delay

animation-iteration-count

animation-direction

animation-play-state



We are done!