CSS TRANSITIONS

Smooth operator…

CSS Transitions

Abstract

CSS Transitions allows property changes in CSS values to occur smoothly over a specified duration.

www.w3.org/TR/css3-transitions/

TL;DR: Animations triggered when you change an element's style.

WITHOUT CSS TRANSITIONS

```css
button {
  margin-top: 5px;
  background: #5295ff;
  color: #fff;
  border-radius: 3px;
}


button:hover {
  margin-top: 0;
  background: #3275ff;
  box-shadow: 0px 17px 10px -10px rgba(0, 0, 0, 0.4);
}
```
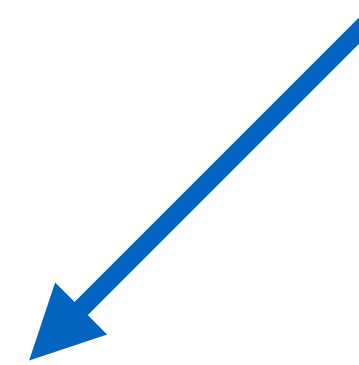
WITH CSS TRANSITIONS

```css
button {
  margin-top: 5px;
  background: #5295ff;
  color: #fff;
  border-radius: 3px;
  transition: all 0.25s ease;
}

button:hover {
  margin-top: 0;
  background: #3275ff;
  box-shadow: 0px 17px 10px -10px rgba(0, 0, 0, 0.4);
}
```

Click Me!

TRANSITION SYNTAX

Property   **Duration**   **Acceleration curve**

```
transition: opacity 0.5s ease, top 0.3s linear;
```
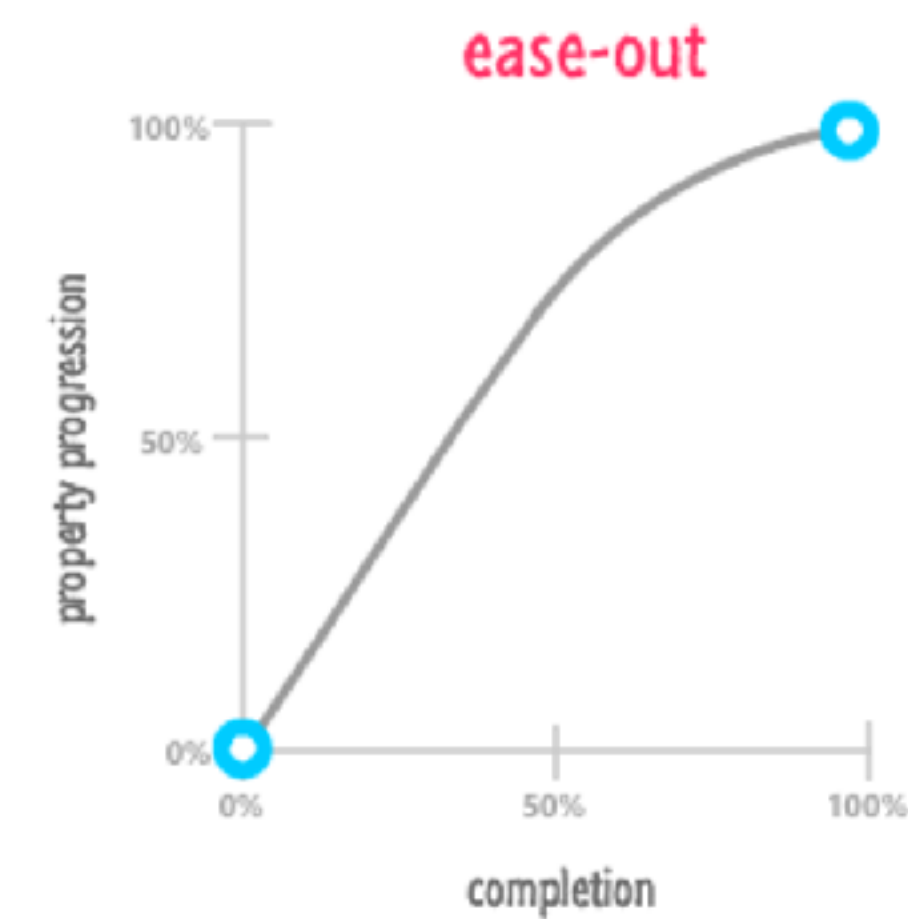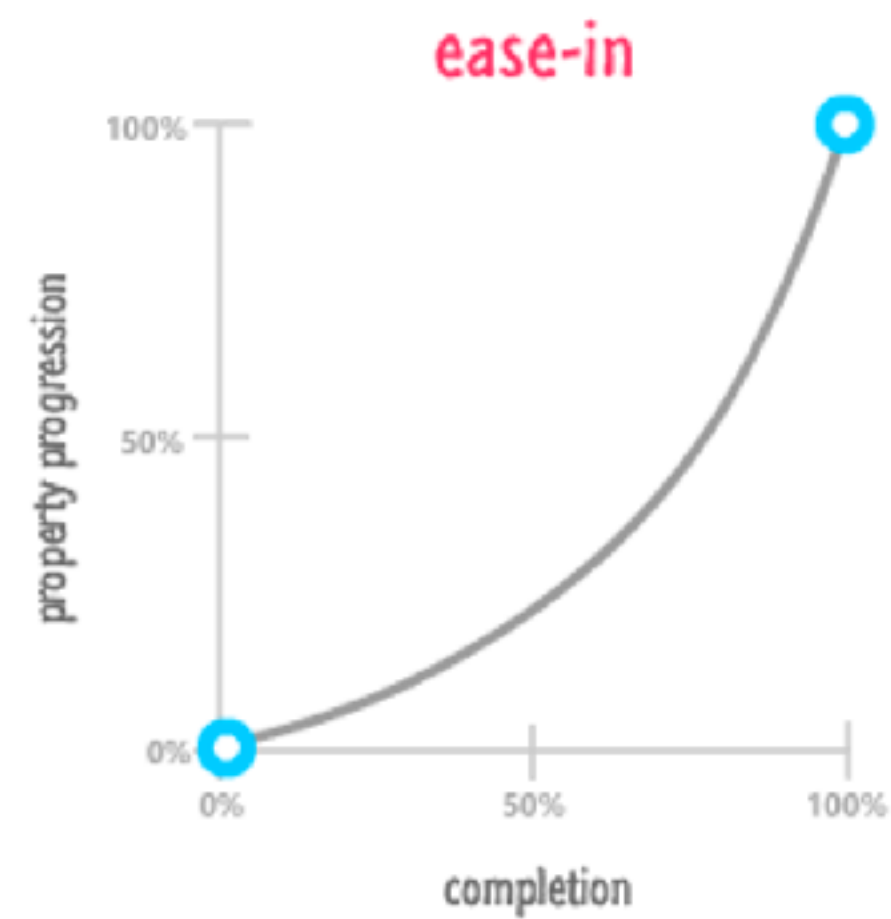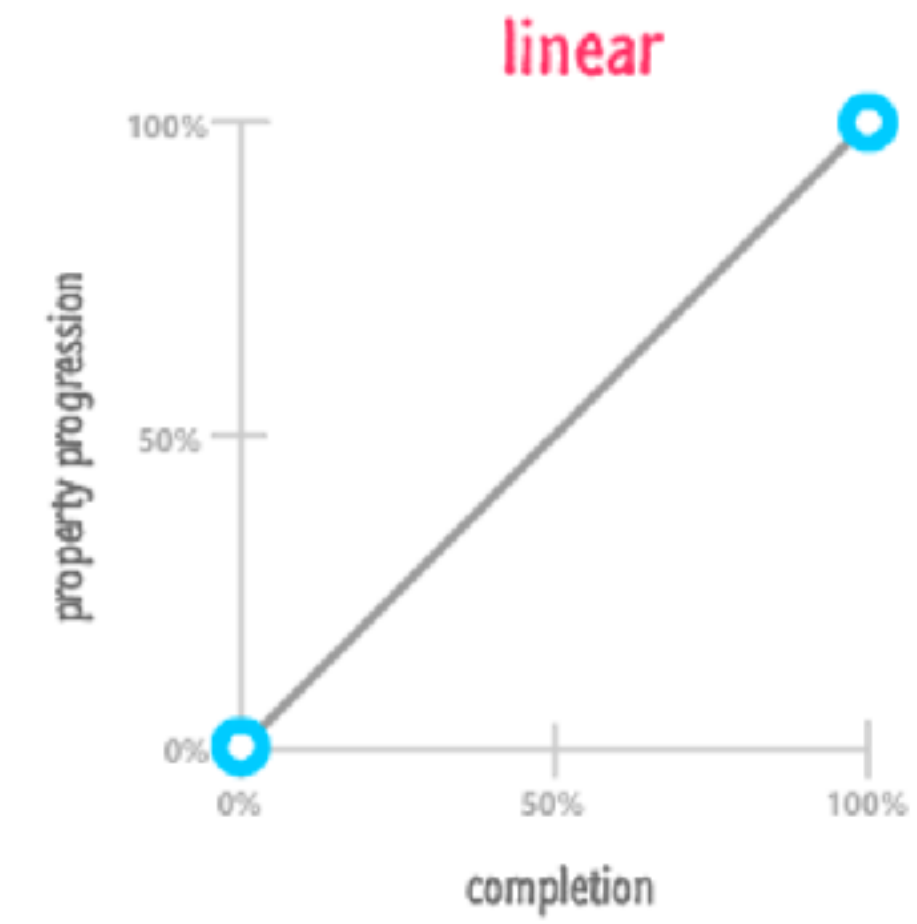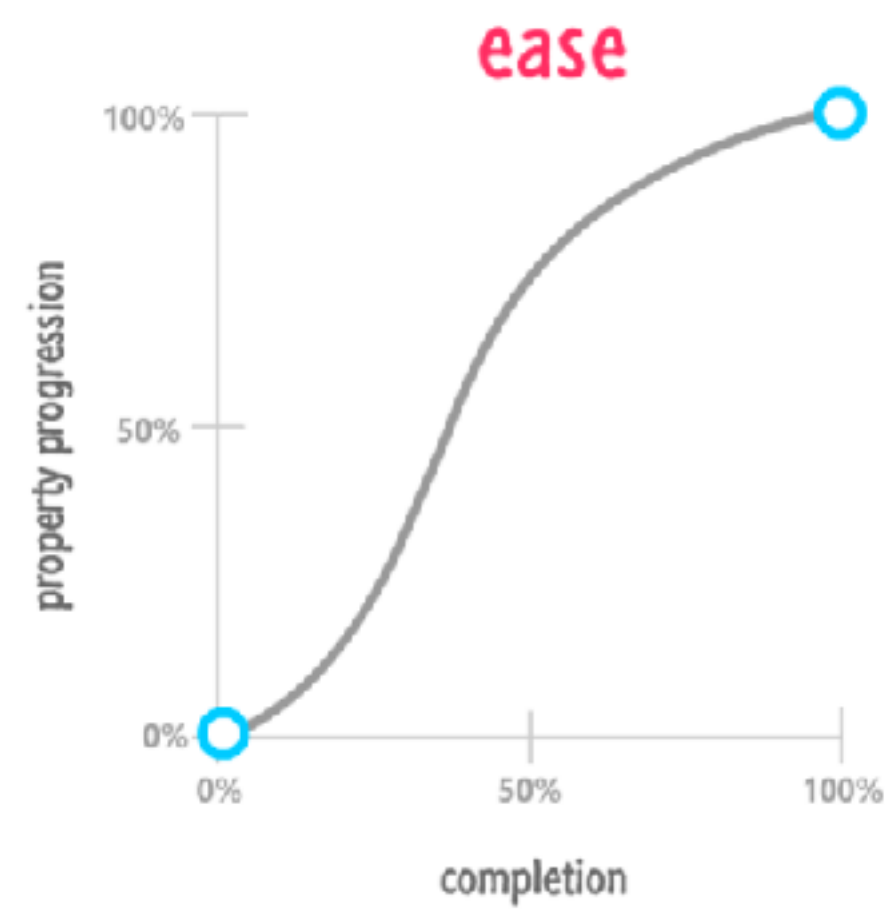
TRANSITION SYNTAX

`transition: all 0.5s ease;`

ACCELERATION CURVES

WHICH PROPERTIES CAN BE ANIMATED?

margin

color

font-size

text-shadow

padding

font-weight

box-shadow

border

letter-spacing

line-height

top

left   right

clip

vertical-align

bottom

height

(max-height / min-height)

background-color

background-position

width

opacity

(max-width / min-width)

transform

etc…

WHICH PROPERTIES CAN BE <u>CHEAPLY</u> ANIMATED?

Opacity   `opacity: 0…1;`

Position   transform: translate(npx, npx);

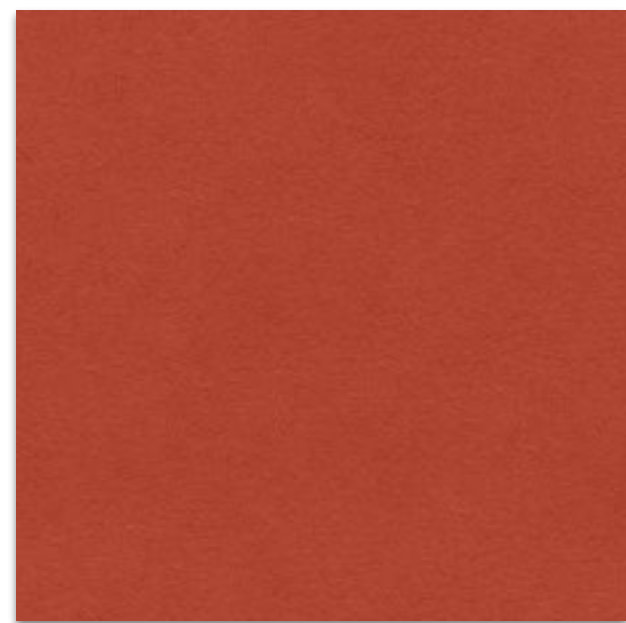**Scale**   transform: scale(n);

Rotation   transform: rotate(ndeg);

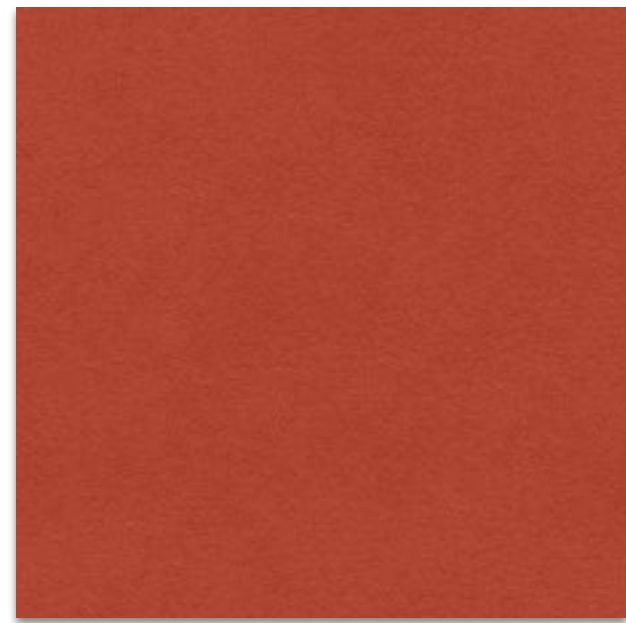# DEFINE DIFFERENT CSS CLASSES WITH DIFFERENT STYLES/TRANSITIONS

```css
.my-div {
  width: 200px;
  height: 200px;
  background-color: #a43;
  transition: transform 1s ease;
}
```

DEFINE DIFFERENT CSS CLASSES WITH DIFFERENT STYLES/TRANSITIONS

```css
.my-div {
  width: 200px;
  height: 200px;
  background-color: #a43;
  transition: transform 1s ease;
}
```

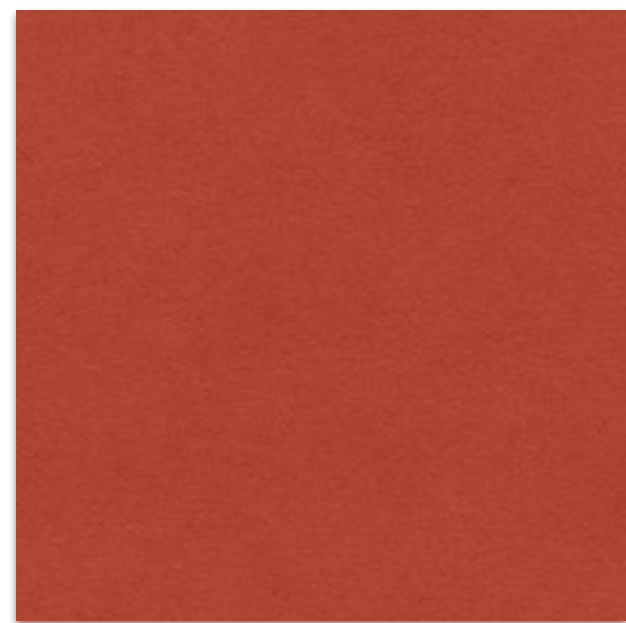# DEFINE DIFFERENT CSS CLASSES WITH DIFFERENT STYLES/TRANSITIONS

```css
.my-div {
  width: 200px;
  height: 200px;
  background-color: #a43;
  transition: transform 1s ease;
}


.my-div:hover {
  transform: scale(2);
}
```
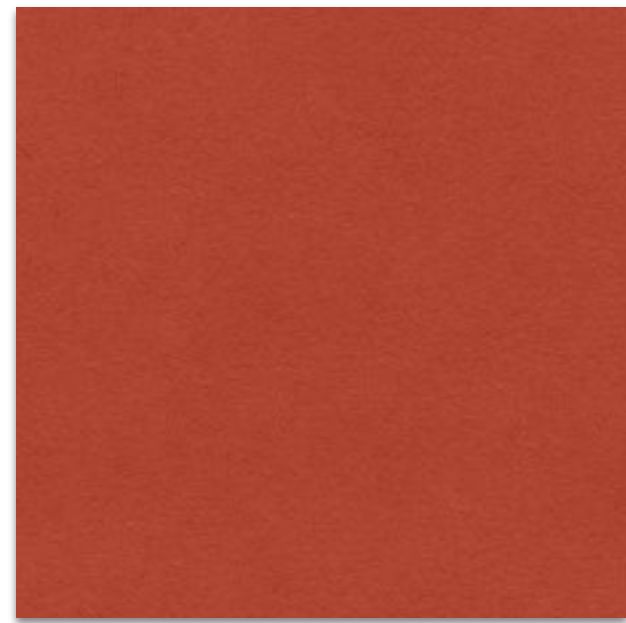
WHAT ABOUT **JS** ?

CSS TRANSITIONS TRIGGERED BY JS

◉ **An approach for programatic animation: Define transitions in CSS and us JavaScript to trigger them:**

- Define different CSS classes with different styles/transitions and use JS to trigger transitions by adding/removing element classes.

DEFINE DIFFERENT CSS CLASSES WITH DIFFERENT STYLES/TRANSITIONS

```css
.my-div {
  width: 200px;
  height: 200px;
  background-color: #a43;
  transition: transform 1s ease;
}
```

DEFINE DIFFERENT CSS CLASSES WITH DIFFERENT STYLES/TRANSITIONS

```css
.my-div {
  width: 200px;
  height: 200px;
  background-color: #a43;
  transition: transform 1s ease;
}


.my-div.active {
  transform: scale(2);
}
```
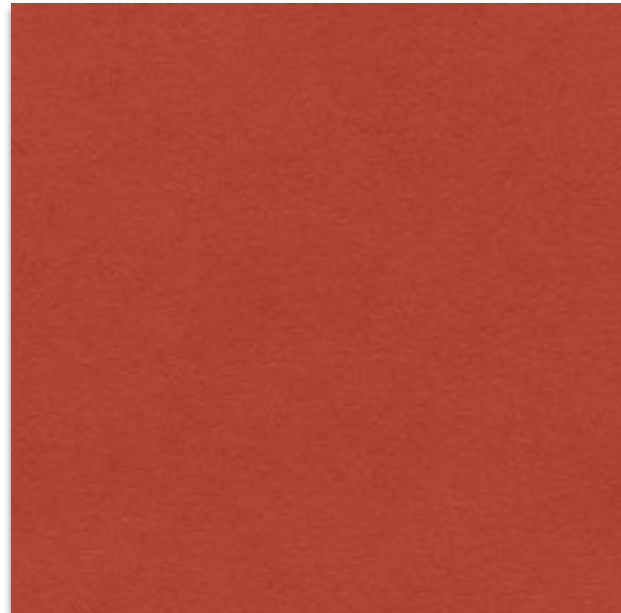
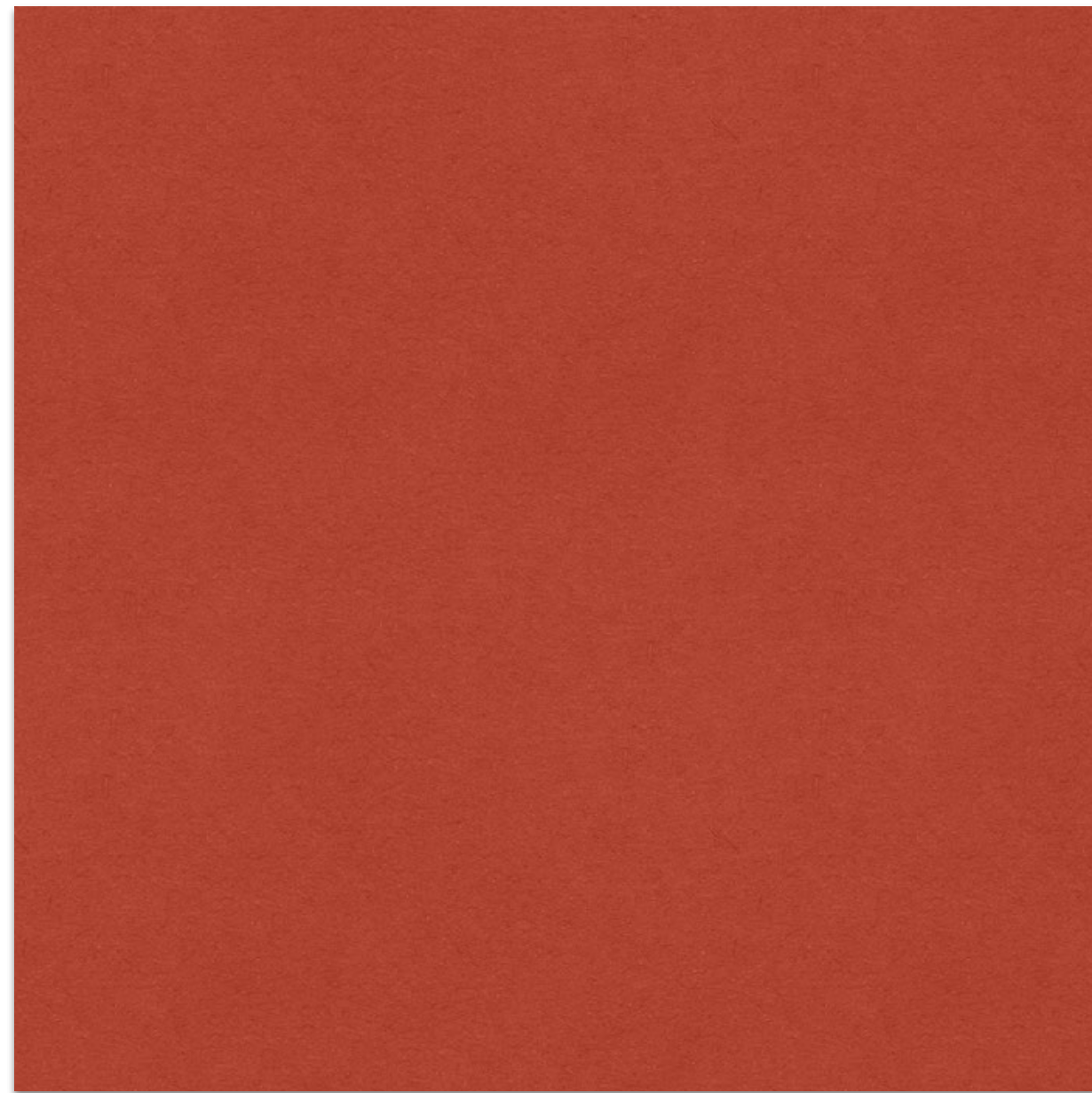# USE JS TO TRIGGER TRANSITIONS BY ADDING/REMOVING ELEMENT CLASSES

element.classList

- a convenient way of accessing an element's list of classes.
- It provides an add method and, conversely, a remove method.

CSS TRANSITIONS TRIGGERED BY JS

```javascript
const el = document.querySelectorAll(".my-div")[0];

el.classList.add("active");
```

CSS TRANSITIONS TRIGGERED BY JS

```js
const el = document.querySelectorAll(".my-div")[0];

el.classList.remove("active");
```

WORKSHOP