

the Master Course

{C0DENATION}

Web Technologies

Transition and Animation

{ CŮDENATION }

Learning Objectives

To be able to use CSS transitions and animations



CSS

CSS Transitions

... have clear **start and end states**.
Moving from one to the other.

CSS Transitions

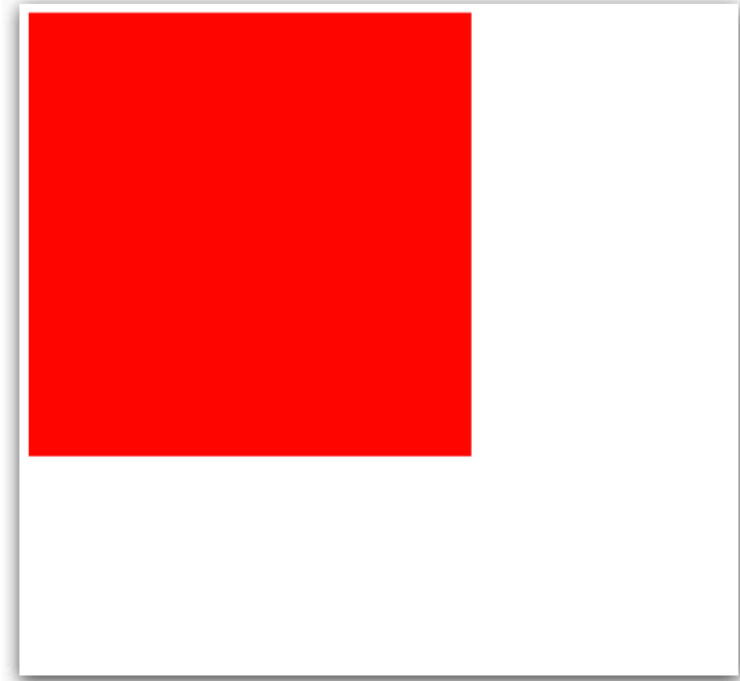
- > Moving elements across the screen
 - > Changing the size of elements
 - > Changing an elements' shape
 - > Combine all of the above

index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <link rel="stylesheet" href="style.css">
  <title>Document</title>
</head>
<body>
  <div class="square"></div>
</body>
</html>
```

style.css

```
.square{
  width: 300px;
  height: 300px;
  background-color: red;
}
```



Here we have a simple div which a square is drawn with background colour red.

Try this!

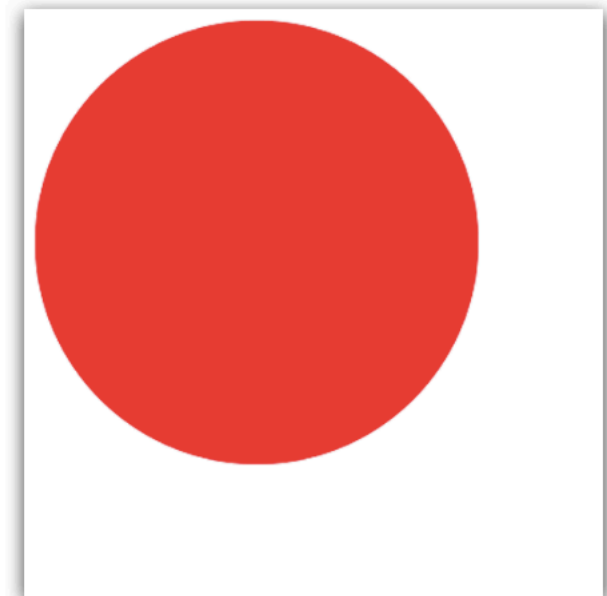
:hover

```
.square{  
  width: 300px;  
  height: 300px;  
  background-color: red;  
}
```

```
.square:hover{  
  border-radius: 50%;  
}
```



.square



.square:hover

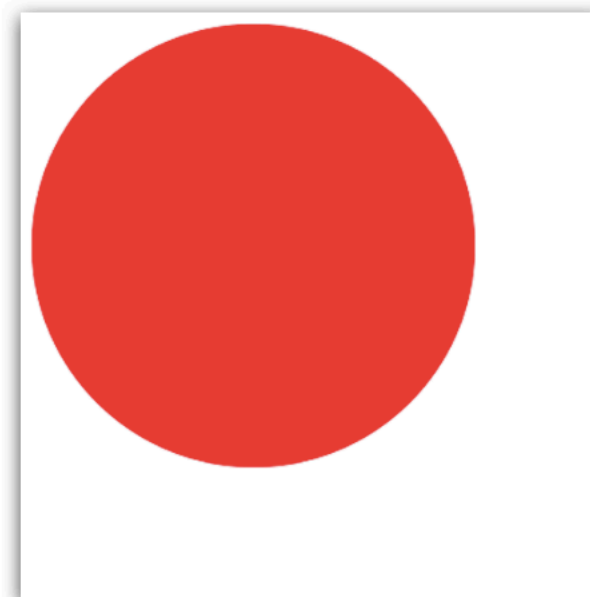
:hover

```
.square{  
  width: 300px;  
  height: 300px;  
  background-color: red;  
  transition: border-radius 2s;  
}
```

```
.square:hover{  
  border-radius: 50%;  
}
```



.square



.square:hover

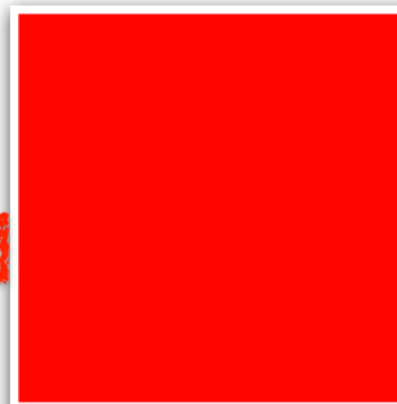
transition: border-radius 2s;

:hover

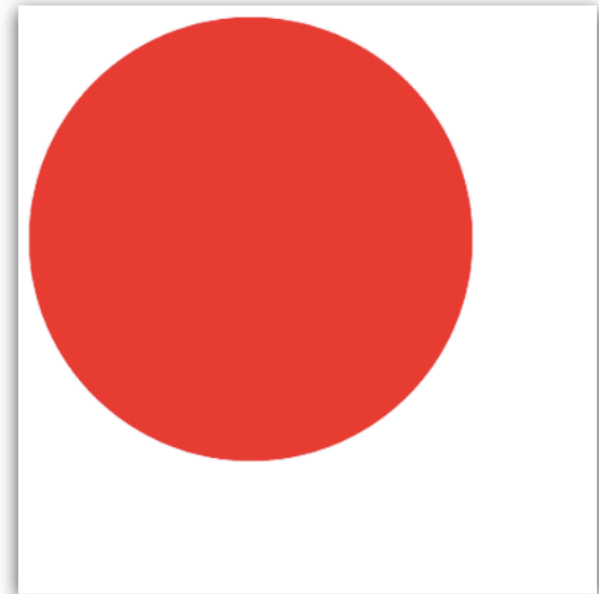
```
.square{  
  width: 300px;  
  height: 300px;  
  background-color: red;  
  transition: border-radius 2s;  
  transition-timing-function: ease;  
}  
  
.square:hover{  
  border-radius: 50%;  
}
```

Other options:

```
transition-timing-function: linear;  
transition-timing-function: ease;  
transition-timing-function: ease-in;  
transition-timing-function: ease-out;  
transition-timing-function: ease-in-out;  
transition-timing-function: cubic-bezier(0.075,  
0.82, 0.165, 1);
```



.square



.square:hover

transition: border-radius 2s;
transition-timing-function: ease;



CSS

More info

[https://www.w3schools.com/css/
css3_transitions.asp](https://www.w3schools.com/css/css3_transitions.asp)



CSS

CSS Animations

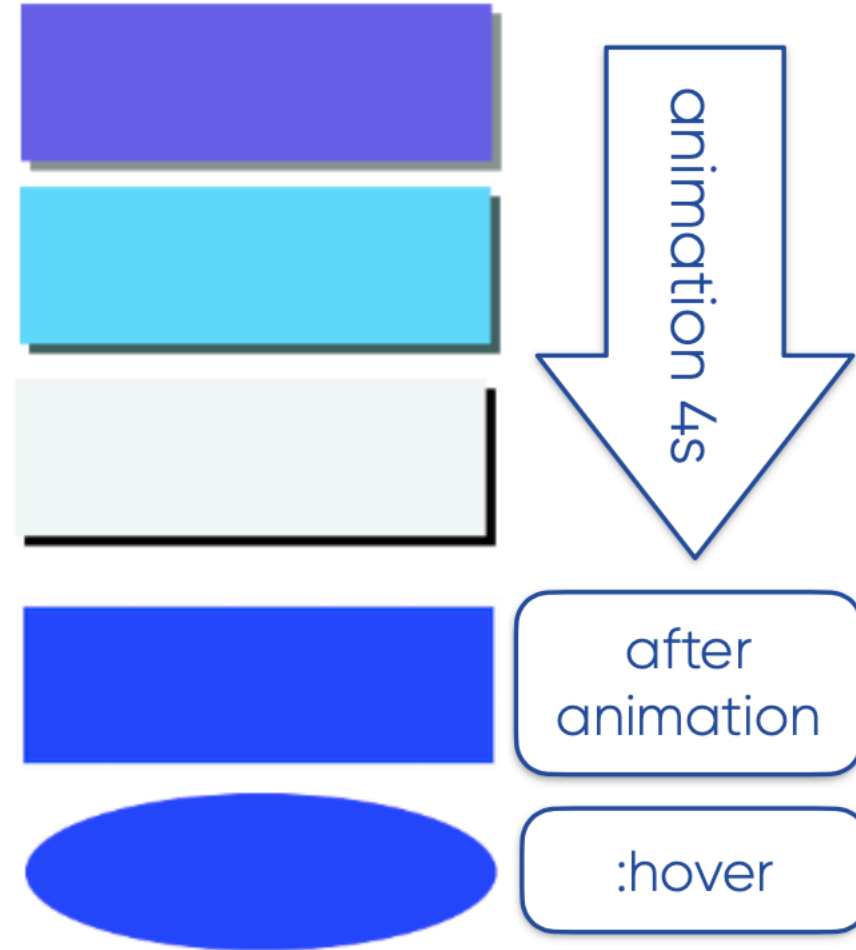
... are similar to transitions. With CSS Animations we can specify lots of different CSS style changes.

CSS Animations

... don't necessarily have a definite start and end point (like a transition). Instead, we can write something called **keyframes**.



```
.square{
  width: 300px;
  height: 100px;
  background-color: blue;
  animation-name: button;
  animation-duration: 4s;
}
.square:hover{
  border-radius: 50%;
}
@keyframes button {
  0% {
    background-color: blueviolet;
    box-shadow: 6px 6px 0 darkgrey;
  }
  50% {
    background-color: aqua;
    box-shadow: 6px 6px 0 darkslategrey;
  }
  100% {
    background-color: whitesmoke;
    box-shadow: 6px 6px 0 black;
  }
}
```





CSS

More info

[https://www.w3schools.com/css/
css3_animations.asp](https://www.w3schools.com/css/css3_animations.asp)

Learning Objectives

To be able to use CSS transitions and animations

Activity

Button Challenge

Create a **HTML page** with buttons of the following:

- Code Nation **Logo** in the centre of the page so you can hover over it.
- **Make this logo spin on hover.**
- 4 buttons around the logo which link to:
 - **Website**
 - **Facebook**
 - **Twitter**
 - **Instagram**
- These buttons to have:
 - 4 **different shapes**
 - Shadows
 - A **different animation** on each one when hover.
 - **Change of color** when clicked.
- Background image with at least **two animations.**

CSS

Tutorials & Links

CSS

CSS animation tutorials:

<https://www.youtube.com/watch?v=jgw82b5Y2MU&list=PL4cUxeGkcC9iGYgmEd2dm3zAKzyCGDtM5>

Cubic Bezier:

<https://cubic-bezier.com/>

Further reading...

... take a look at **JS & The DOM**.

https://developer.mozilla.org/en-US/docs/Web/API/Document_Object_Model

<https://www.youtube.com/watch?v=ipkjfvI40s0>