

CSS3 - Animation

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- An animation lets an element gradually change from one style to another.
- You can change as many CSS properties you want, as many times you want.
- To use CSS3 animation, you must first specify some keyframes for the animation.
- Keyframes hold what styles the element will have at certain times.

Example1 – Animation code

```
/* The animation code */
@keyframes example {
  from {background-color: red;}
  to {background-color: yellow;}
}
/* The element to apply the animation to */
div {
  width: 100px;
  height: 100px;
  background-color: red;
  animation-name: example;
  animation-duration: 4s;
}
```

- CSS styles inside the @keyframes rule, the animation will gradually change from the current style to the new style at certain times.
- To get an animation to work, **bind the animation to an element**.
- The animation will last for 4 seconds, and it will gradually change the background-color of the <div> element from "red" to "yellow":

Example2 – Animation code

```
/* The animation code */
@keyframes example {
  0% {background-color: red;}
  25% {background-color: yellow;}
  50% {background-color: blue;}
  100% {background-color: green;}
}

/* The element to apply the animation to */
div {
  width: 100px;
  height: 100px;
  background-color: red;
  animation-name: example;
  animation-duration: 4s;
}
```

Change the background-color of the <div> element when the animation is 25% complete, 50% complete, and again when the animation is 100% complete:

Example3 – Animation code

```
/* The animation code */
@keyframes example {
  0% {background-color: red; left:0px; top:0px;}
  25% {background-color: yellow; left:200px; top:0px;}
  50% {background-color: blue; left:200px; top:200px;}
  75% {background-color: green; left:0px; top:200px;}
  100% {background-color: red; left:0px; top:0px;}
}

/* The element to apply the animation to */
div {
  width: 100px;
  height: 100px;
  position: relative;
  background-color: red;
  animation-name: example;
  animation-duration: 4s;
}
```

Animation delay property

The animation-delay property specifies a delay before the start of an animation.

```
div {  
    width: 100px;  
    height: 100px;  
    position: relative;  
    background-color: red;  
    animation-name: example;  
    animation-duration: 4s;  
    animation-delay: 2s;  
}
```

Rounds of animation

```
div {  
  width: 100px;  
  height: 100px;  
  position: relative;  
  background-color: red;  
  animation-name: example;  
  animation-duration: 4s;  
  animation-iteration-count: 3;  
}
```

Animation – Infinite times

```
div {  
    width: 100px;  
    height: 100px;  
    position: relative;  
    background-color: red;  
    animation-name: example;  
    animation-duration: 4s;  
    animation-iteration-count: infinite;  
}
```


Animation – Reverse Direction

```
div {  
    width: 100px;  
    height: 100px;  
    position: relative;  
    background-color: red;  
    animation-name: example;  
    animation-duration: 4s;  
    animation-iteration-count: 3;  
    animation-direction: reverse;  
}
```

Animation – Alternate Direction

“alternate” to make the animation first run forward, then backward, then forward:

```
div {  
    width: 100px;  
    height: 100px;  
    position: relative;  
    background-color: red;  
    animation-name: example;  
    animation-duration: 4s;  
    animation-iteration-count: 3;  
    animation-direction: alternate;  
}
```

Specify the Speed Curve of the Animation

- animation-timing-function property - speed curve
- Property values can be
 - linear - specifies an animation with the same speed from start to end
 - ease - specifies an animation with a slow start, then fast, then end slowly (this is default)
 - ease-in - specifies an animation with a slow start
 - ease-out - specifies an animation with a slow end
 - ease-in-out - specifies an animation with a slow start and end

Example Animation with Speed Curve

```
div {  
  width: 100px;  
  height: 50px;  
  background-color: red;  
  font-weight: bold;  
  position: relative;  
  -webkit-animation: mymove 5s infinite; /* Chrome, Safari, Opera */  
  animation: mymove 5s infinite;  
}  
  
@keyframes mymove {  
  from {left: 0px;}  
  to {left: 300px;}  
}
```

...Contd

```
#div1 {animation-timing-function: linear;}  
#div2 {animation-timing-function: ease;}  
#div3 {animation-timing-function: ease-in;}  
#div4 {animation-timing-function: ease-out;}  
#div5 {animation-timing-function: ease-in-out;}
```

```
<div id="div1">linear</div>  
<div id="div2">ease</div>  
<div id="div3">ease-in</div>  
<div id="div4">ease-out</div>  
<div id="div5">ease-in-out</div>
```