

## CSS Animation

CSS animations are made up of two basic building blocks.

**Keyframes** - define the stages and styles of the animation.

**Animation Properties** - assign the **@keyframes** to a specific CSS element and define how it is animated.

## Building Block #1: Keyframes

Keyframes are the foundation of CSS animations. They define what the animation looks like at each stage of the animation timeline.

Each `@keyframes` is composed of:

**Name of the animation:** A name that describes the animation, for example, `bounceIn`.

**Stages of the animation:** Each stage of the animation is represented as a percentage. `0%` represents the beginning state of the animation. `100%` represents the ending state of the animation. Multiple intermediate states can be added in between.

**CSS Properties:** The CSS properties defined for each stage of the animation timeline.

```
@keyframes bounceIn {
  0% {
    transform: scale(0.1);
    opacity: 0;
  }
  60% {
    transform: scale(1.2);
    opacity: 1;
  }
  100% {
    transform: scale(1);
  }
}
```

## Building Block #2: Animation Properties

Once the `@keyframes` are defined, the animation properties must be added in order for your animation to function.

`Animation properties` do two things:

They assign the `@keyframes` to the elements that you want to animate.

They define how it is animated.

The animation properties are added to the CSS selectors that you want to animate.

You must add the following two animation properties for the animation to take effect:

`animation-name`: The name of the animation, defined in the `@keyframes`.

`animation-duration`: The duration of the animation, in seconds (e.g., 5s)

```
@keyframes bounceIn {
  0% {
    transform: scale(0.1);
    opacity: 0;
  }
  60% {
    transform: scale(1.2);
    opacity: 1;
  }
  100% {
    transform: scale(1);
  }
}
```

```
div {
  animation-duration: 2s;
  animation-name: bounceIn;
}
```

or shorthand:

```
div {
  animation: bounceIn 2s;
}
```

## Additional Properties

The `animation-timing-function`:

defines the speed curve or pace of the animation.

You can specify the timing with the following predefined timing options:

`ease`, `linear`, `ease-in`, `ease-out`, `ease-in-out`, `initial`, `inherit`.

```
animation-timing-function: ease-in-out;
```

or shorthand:

```
animation: bounceIn 2s ease-in-out;
```

## Additional Properties

The `animation-delay`:

allows you to specify when the animation will start.

A positive value (such as 2s) will start the animation 2 seconds after it is triggered. The element will remain unanimated until that time.

A negative value (such as -2s) will start the animation at once, but starts 2 seconds into the animation.

The value is defined in seconds (s) or milliseconds (mil).

```
animation-delay: 5s;
```

or shorthand:

```
animation: bounceIn 2s ease-in-out 3s;
```