

div {

transition-property: width;

}

div: hover {

width: 300px;

}

## transition

The **transition** property is a shorthand property for:

- \* **transition-property**
- \* **transition-duration**
- \* **transition-timing-function**
- \* **transition-delay**

## CSS Variables

The **var()** function is used to insert the values of a CSS variable.

CSS variables have access to the DOM, which means that you can create variables with local or ~~glob~~ global scope, change the variables with JS, and change the ~~values~~ variables based on media queries.

## Syntax

The `var()` function is used to insert the values of a CSS variables.

`var(--name, value)`

## Ex

```
:root {  
  --blue: #1e90ff;  
  --white: #ffffff;  
}
```

## CSS Math Functions

The CSS math functions allow mathematical expressions to be used as property values.

Here we will explain the `calc()`, `max()` and `min()` functions.

### The `calc()` Function

The `calc()` function performs a calculation to be used as the property value.

## Syntax

`calc(expression)`

## The max() Function

The `max()` function uses the largest value, from a comma-separated list of values, as the property value.

### Syntax

`max(value1, value2, ---)`

## The min() Function

The `min()` function uses the smallest value, from a comma-separated list of values, as the property values.

### Syntax

`min(value1, value2, ---)`

## CSS Animations

CSS allows animation of HTML elements without using Javascript or Flash!



# Properties

- \* @keyframes
- \* animation-name
- \* animation-duration
- \* animation-delay
- \* animation-iteration-count
- \* animation-direction
- \* animation-timing-function
- \* animation-fill-mode
- \* animation

## What are CSS Animations?

An animation lets an element gradually change from one style to another.

You can change as many CSS properties you want, as many times as you want.

To use CSS animation, you must first specify some keyframes for the animation.

# The @keyframe Rule

When you specify CSS styles inside the @keyframe rule, the animation will gradually change from the current style to the new style at certain times.

Ex -

@keyframe example {

0% | from { background-color: red; }

100% | to { background-color: yellow; }

}

div {

width: 100px;

height: 100px;

background-color: red;

animation-name: example;

animation-duration: 4s;

}

**NOTE:** The animation-duration property defines how long an animation should take to complete. If it is not specified, no animation will occur, because default value is 0s.

animation-name

It specifies the name of the @keyframe animation.

Ex -

name  
@keyframes example of

=====

y

Delay an Animation

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

⇒ Negative values are also allowed. If using negative values, the animation will start as if it had already been playing for N seconds

Ex -

div {

=====

animation-delay: 2s;

y



Set number of times an Animation should Run

The **animation-iteration-count** property specifies the number of times an animation should run.

Ex—

**div** {

=====

**animation-iteration-count: 3;**

}

Above example will run animation 3 times.

## Animation Directions


The **animation-direction** property specifies whether an animation should be played forwards, backwards or in alternate cycles.

The animation-direction property can have the following values.

\* **normal** 

\* **reverse** 

\* **alternate** 

\* **alternate-reverse** 

Ex -

div 1

animation-direction: normal | reverse | alternate;

y

## Speed Curve of The Animation

The animation-timing-function property specifies the speed curve of the animation.

This property can have following values:

\* ease

\* linear

\* ease-in

\* ease-out

\* ease-in-out

\* cubic-bezier(n,n,n,n)

Ex -

#div 1

animation-timing-function: linear | ease | ease-in

y

Fill mode in Animation



CSS animations do not affect an element before the first keyframe is played or after the last keyframe is played. The `animation-fill-mode` property can override this behaviour.

The values of this property are:

- \* none
- \* forwards
- \* ~~to~~ backwards
- \* both

Ex -

div {

animation-fill-mode: forwards | backwards | both;

## Animation Shorthand Property

The `animation` property is a shorthand property that is used to put all the properties into a single property.

Ex - div {

animation: example 5s linear 2s infinite alternate;