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CSS 2D Transforms

5-6 minutes

CSS 2D Transforms

CSS transforms allow you to move, rotate, scale, and skew elements.

Mouse over the element below to see a 2D transformation:

In this chapter you will learn about the following CSS property:

- `transform`

Browser Support

The numbers in the table specify the first browser version that fully supports the property.

Property

transform	36.0	10.0	16.0	9.0	23.0
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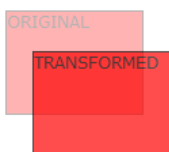
CSS 2D Transforms Methods

With the CSS `transform` property you can use the following 2D transformation methods:

- `translate()`
- `rotate()`
- `scaleX()`
- `scaleY()`
- `scale()`
- `skewX()`
- `skewY()`
- `skew()`
- `matrix()`

Tip: You will learn about 3D transformations in the next chapter.

The `translate()` Method



The `translate()` method moves an element from its current position (according to the parameters given for the X-axis and the Y-axis).

The following example moves the `<div>` element 50 pixels to the right, and 100 pixels down from its current position:

The rotate() Method



The `rotate()` method rotates an element clockwise or counter-clockwise according to a given degree.

The following example rotates the `<div>` element clockwise with 20 degrees:

Using negative values will rotate the element counter-clockwise.

The following example rotates the `<div>` element counter-clockwise with 20 degrees:

The scale() Method



The `scale()` method increases or decreases the size of an element (according to the parameters given for the width and height).

The following example increases the `<div>` element to be two times of its original width, and three times of its original height:

The following example decreases the `<div>` element to be half of its original width and height:

The scaleX() Method

The `scaleX()` method increases or decreases the width of an element.

The following example increases the `<div>` element to be two times of its original width:

The following example decreases the `<div>` element to be half of its original width:

The scaleY() Method

The `scaleY()` method increases or decreases the height of an element.

The following example increases the `<div>` element to be three times of its original height:

The following example decreases the `<div>` element to be half of its original height:

The skewX() Method

The `skewX()` method skews an element along the X-axis by the given angle.

The following example skews the `<div>` element 20 degrees along the X-axis:

The skewY() Method

The `skewY()` method skews an element along the Y-axis by the given angle.

The following example skews the `<div>` element 20 degrees along the Y-axis:

The skew() Method

The `skew()` method skews an element along the X and Y-axis by the given angles.

The following example skews the `<div>` element 20 degrees along the X-axis, and 10 degrees along the Y-axis:

If the second parameter is not specified, it has a zero value. So, the following example skews the `<div>` element 20 degrees along the X-axis:

The matrix() Method



The `matrix()` method combines all the 2D transform methods into one.

The `matrix()` method takes six parameters, containing mathematic functions, which allows you to rotate, scale, move (translate), and skew elements.

The parameters are as follow: `matrix(scaleX(),skewY(),skewX(),scaleY(),translateX(),translateY())`

CSS Transform Properties

The following table lists all the 2D transform properties:

Property	Description
transform	Applies a 2D or 3D transformation to an element
transform-origin	Allows you to change the position on transformed elements

CSS 2D Transform Methods

Function	Description
<code>matrix(n,n,n,n,n,n)</code>	Defines a 2D transformation, using a matrix of six values
<code>translate(x,y)</code>	Defines a 2D translation, moving the element along the X- and the Y-axis
<code>translateX(n)</code>	Defines a 2D translation, moving the element along the X-axis
<code>translateY(n)</code>	Defines a 2D translation, moving the element along the Y-axis
<code>scale(x,y)</code>	Defines a 2D scale transformation, changing the elements width and height
<code>scaleX(n)</code>	Defines a 2D scale transformation, changing the element's width

<code>scaleY(<i>n</i>)</code>	Defines a 2D scale transformation, changing the element's height
<code>rotate(<i>angle</i>)</code>	Defines a 2D rotation, the angle is specified in the parameter
<code>skew(<i>x-angle</i>,<i>y-angle</i>)</code>	Defines a 2D skew transformation along the X- and the Y-axis
<code>skewX(<i>angle</i>)</code>	Defines a 2D skew transformation along the X-axis
<code>skewY(<i>angle</i>)</code>	Defines a 2D skew transformation along the Y-axis