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CSS 2D Transforms

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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

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 element 50 pixels to the right, and 100 pixels down from its current position:

Example

```
div {
  transform: translate(50px, 100px);
}
```

Try it Yourself »

The rotate() Method

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

The following example rotates the element clockwise with 20 degrees:

Example

```
div {
  transform: rotate(20deg);
}
```

Try it Yourself »

Using negative values will rotate the element counter-clockwise.

The following example rotates the element counter-clockwise with 20 degrees:

Example

```
div {
  transform: rotate(-20deg);
}
```

Try it Yourself »

The scale() Method

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Example

```
div {
  transform: scale(2, 3);
}
```

Try it Yourself »

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

Example

```
div {
  transform: scale(0.5, 0.5);
}
```

Try it Yourself »

The scaleX() Method

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

The following example increases the element to be two times of its original width:

Example

```
div {
  transform: scaleX(2);
}
```

Try it Yourself »

The following example decreases the element to be half of its original width:

Example

```
div {
  transform: scaleX(0.5);
}
```

Try it Yourself »

The scaleY() Method

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

The following example increases the element to be three times of its original height:

Example

```
div {
  transform: scaleY(3);
}
```

Try it Yourself »

The following example decreases the element to be half of its original height:

Example

```
div {
  transform: scaleY(0.5);
}
```

Try it Yourself »

The skewX() Method

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

The following example skews the element 20 degrees along the X-axis:

Example

```
div {
  transform: skewX(20deg);
}
```

Try it Yourself »

The skewY() Method

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

The following example skews the element 20 degrees along the Y-axis:

Example

```
div {
  transform: skewY(20deg);
}
```

Try it Yourself »

The skew() Method

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

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

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```
  transform: skew(20deg, 10deg);
}
```

Try it Yourself »

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

Example

```
div {
  transform: skew(20deg);
}
```

Try it Yourself »

The matrix() Method

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

The matrix() method take 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())

Example

```
div {
  transform: matrix(1, -0.3, 0, 1, 0, 0);
}
```

Try it Yourself »

Test Yourself With Exercises

Exercise:

With the `transform` property, move the element 100px to the right, and 200px down.

```
<style>
div {
  width: 100px;
  height: 100px;
  background-color: lightblue;
  border: 1px solid black;
  ____: ____________________;
}
</style>

<body>
  <div>This is a div</div>
</body>
```

Submit Answer »

Start the Exercise

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
matrix(*n,n,n,n,n,n*)	Defines a 2D transformation, using a matrix of six values
translate(*x,y*)	Defines a 2D translation, moving the element along the X- and the Y-axis
translateX(*n*)	Defines a 2D translation, moving the element along the X-axis
translateY(*n*)	Defines a 2D translation, moving the element along the Y-axis
scale(*x,y*)	Defines a 2D scale transformation, changing the elements width and height
scaleX(*n*)	Defines a 2D scale transformation, changing the element's width
scaleY(*n*)	Defines a 2D scale transformation, changing the element's height
rotate(*angle*)	Defines a 2D rotation, the angle is specified in the parameter
skew(*x-angle,y-angle*)	Defines a 2D skew transformation along the X- and the Y-axis
skewX(*angle*)	Defines a 2D skew transformation along the X-axis
skewY(*angle*)	Defines a 2D skew transformation along the Y-axis

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