

CSS – 2D Transformation

Translation

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

This is the content of original div element

The `translate()` method moves an element from its current position. This div element is moved 50 pixels to the right, and 100 pixels down from its current position.

```
<html>
<head>
<style>
.d1 {
  width: 300px;
  height: 100px;
  background-color: yellow;
  border: 1px solid black;
}
.d2 {
  width: 300px;
  height: 100px;
  background-color: yellow;
  border: 1px solid black;
  -ms-transform: translate(50px,100px); /* IE 9
  */
  -webkit-transform: translate(50px,100px); /*
  Safari */
  transform: translate(50px,100px); /* Standard
  syntax */
}
</style>
</head>
```

```
<body>
```

```
<div class="d1">
```

The translate() method moves an element from its current position. This div element is moved 50 pixels to the right, and 100 pixels down from its current position.

```
</div>
```

```
<div class="d2">
```

The translate() method moves an element from its current position. This div element is moved 50 pixels to the right, and 100 pixels down from its current position.

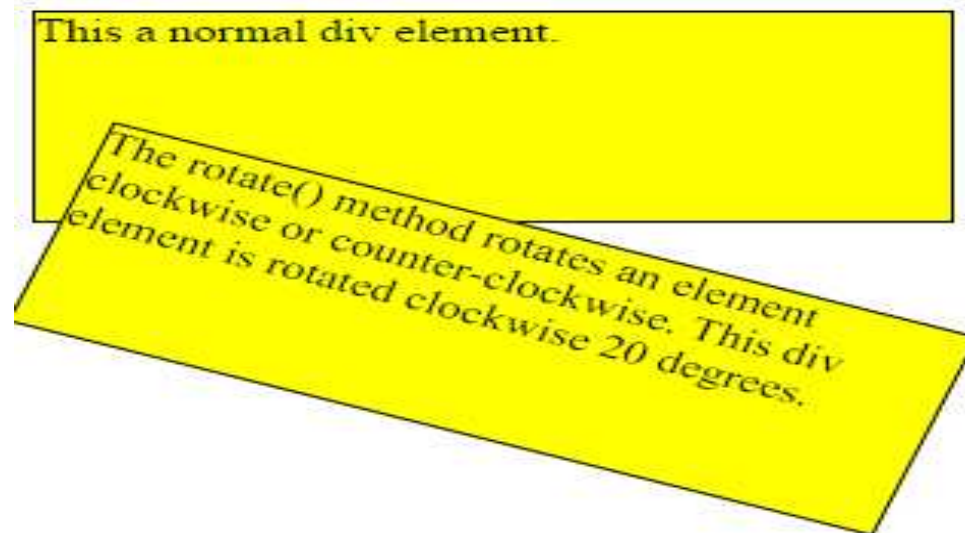
```
</div>
```

```
</body>
```

```
</html>
```

Rotation

- 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:



```
<html>
<head>
<style>
div { width: 300px; height: 100px; background-color: yellow;
      border: 1px solid black; }
div#myDiv {
  -ms-transform: rotate(20deg); /* IE 9 */
  -webkit-transform: rotate(20deg); /* Safari */
  transform: rotate(20deg); //transform: rotate(-20deg); /* Standard
    syntax */}
</style>
</head>
<body> <div> This a normal div element. </div>
<div id="myDiv">
The rotate() method rotates an element clockwise or counter-
clockwise. This div element is rotated clockwise 20 degrees.
</div>
</body>
</html>
```

Scaling

- 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 CSS margin properties are used to generate space around elements.
- The margin properties set the size of the white space outside the border.

```
<html>
<head> <style>
.d1 { margin: 150px; width: 200px; height: 100px; background-
      color: yellow;
      border: 1px solid black; }
.d2 { margin: 150px; width: 200px; height: 100px; background-
      color: yellow;
      border: 1px solid black; transform: scale(2,3); }
</style> </head>
<body>
<p>The scale() method increases or decreases the size of an
    element.</p>
<div class="d1"> This is original div element <div>

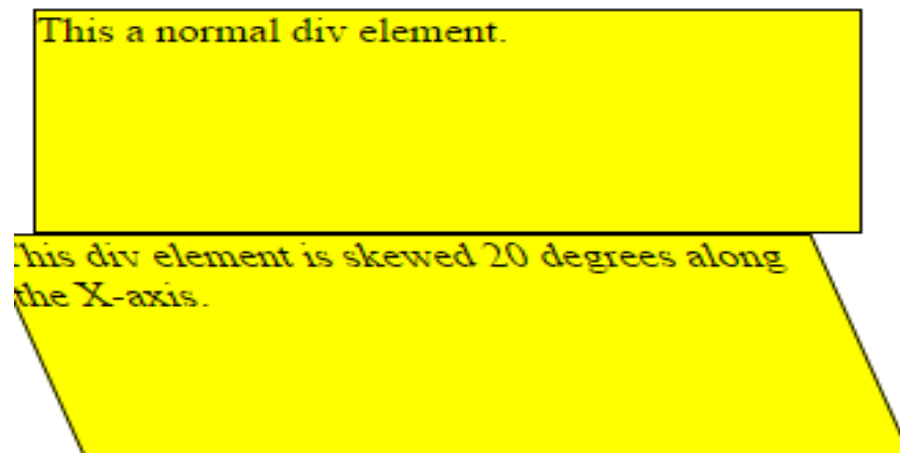
<div class="d2">
This div element is two times of its original width, and three times of
its original height.
</div>
</body>
</html>
```

This is original div element

This div element is two times of its original width, and three times of its original height.

Skew – X Axis

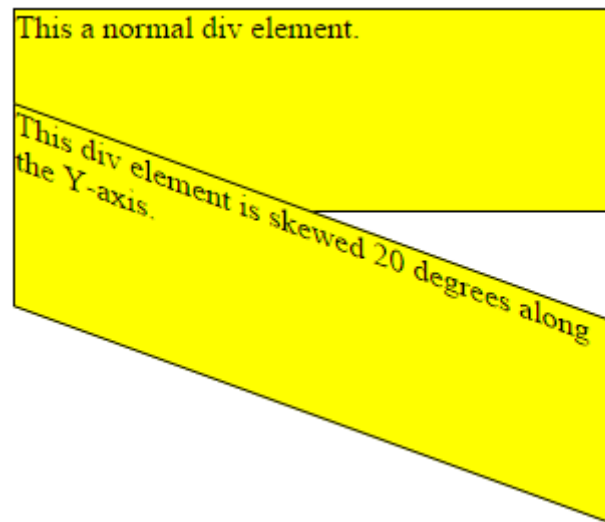
- The skewX() method skews an element along the X-axis by the given angle.
- The following example skews the <div> element 20 degrees along the X-axis:



```
<html>
<head> <style>
div { width: 300px; height: 100px; background-color:
    yellow;
        border: 1px solid black; }
#myDiv { transform: skewX(20deg); }
</style>
</head>
<body>
<p>The skewX() method skews an element along the X-axis by
    the given angle.</p>
<div> This a normal div element. </div>
<div id="myDiv">
This div element is skewed 20 degrees along the X-axis.
</div>
</body>
</html>
```

Skew – Y axis

- 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:



```
<html>
<head> <style>
div { width: 300px; height: 100px; background-color:
    yellow;
        border: 1px solid black; }
#myDiv { transform: skewY(20deg); }
</style>
</head>
<body>
<p>The skewY() method skews an element along the X-axis by
    the given angle.</p>
<div> This a normal div element. </div>
<div id="myDiv">
This div element is skewed 20 degrees along the X-axis.
</div>
</body>
</html>
```

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())`:

Output

This a normal div element.

matrix() method.

Another use of the matrix() method.

```
<html>
<head>
  <style>
    div { width: 300px; height: 100px; background-color: yellow; border:
      1px solid black; }
    div#myDiv1 {transform: matrix(2, -0.5, 0, 0.9, 10, 10); /* Standard syntax */ }
    div#myDiv2 {transform: matrix(1, 0, 0.5, 1, 150, 0); /* Standard syntax */ }
  </style>
</head>
<body>
  <p>The matrix() method combines all the 2D transform methods into one.</p>
  <div> This a normal div element. </div>
  <div id="myDiv1"> Using the matrix() method. </div>
  <div id="myDiv2"> Another use of the matrix() method. </div>
</body>
</html>
```