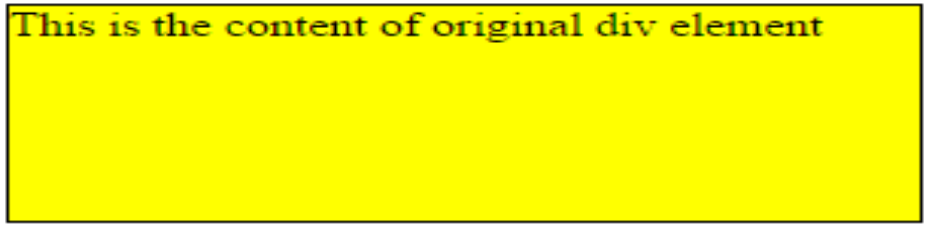
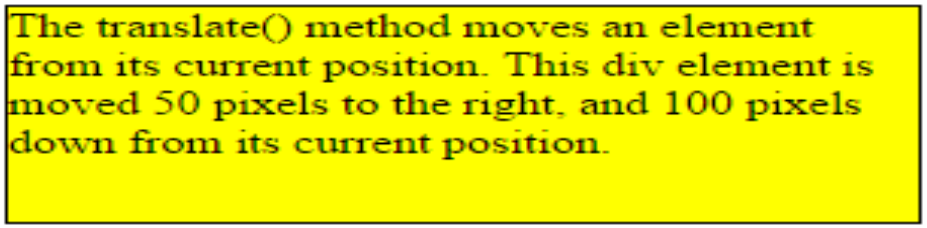
CSS – 2D Transformation

Translation

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

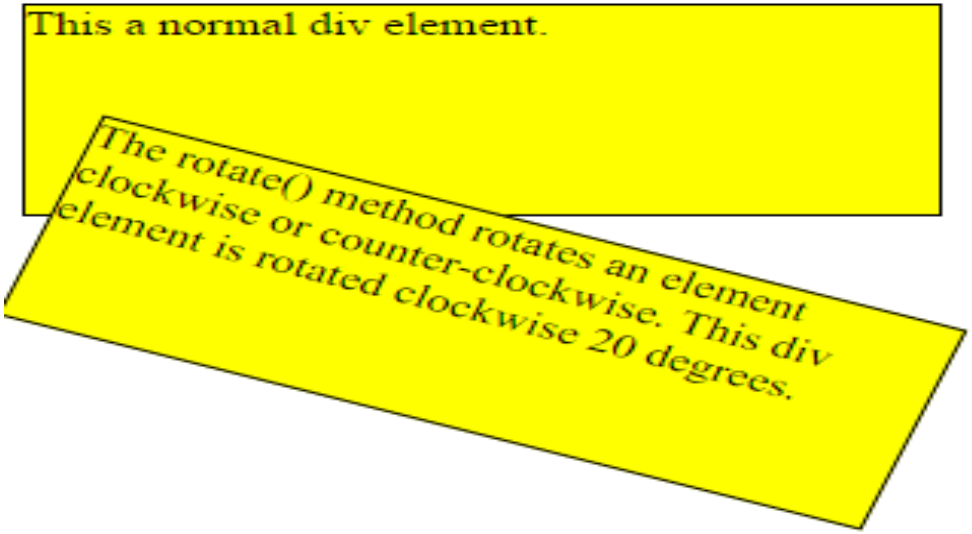




```
<html>
<head>
<style>
.d1 {
   width: 300px;
   height: 100px;
   background-color: yellow;
   border: 1px solid black;
}
.d2 {
   width: 300px;
   height: 100px;
   background-color: yellow;
   border: 1px solid black;
   -ms-transform: translate(50px,100px); /* IE 9
      */
   -webkit-transform: 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 element clockwise with 20 degrees:

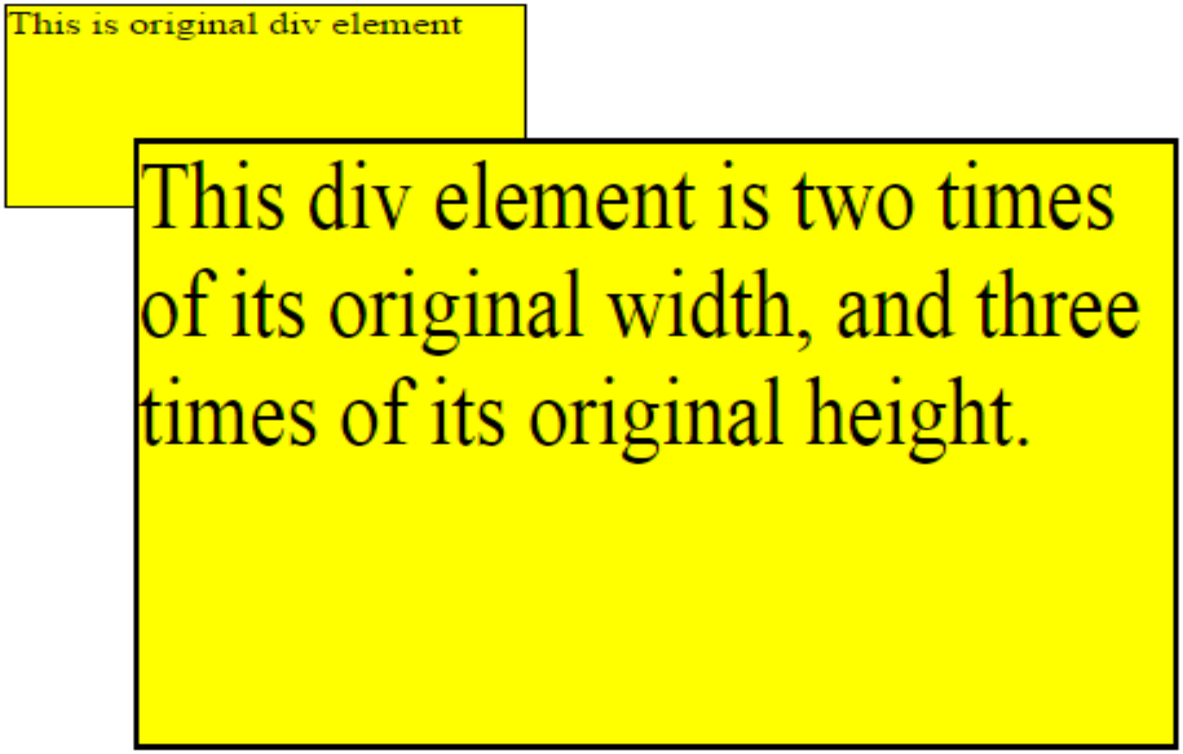


```
<html>
<head>
<style>
div {    width: 300px;    height: 100px;    background-color: yellow;
    border: 1px solid black; }
div#myDiv {
   -ms-transform: rotate(20deg); /* IE 9 */
   -webkit-transform: rotate(20deg); /* Safari */
   transform: rotate(20deg); //transform: rotate(-20deg); /* Standard
    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

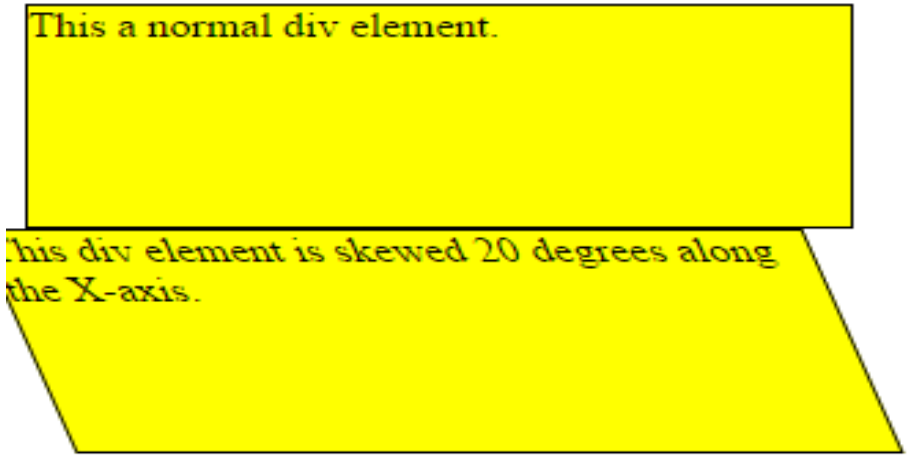
- The scale() method increases or decreases the size of an element (according to the parameters given for the width and height).
- The following example increases the element to be two times of its original width, and three times of its original height:
- The CSS margin properties are used to generate 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

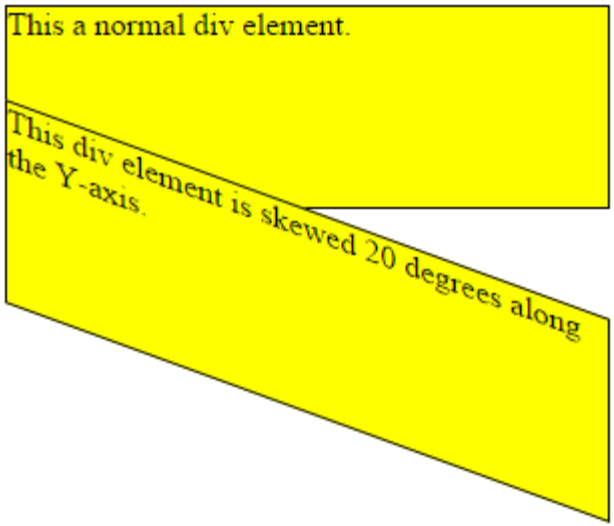
- The skewX() method skews an element along the X-axis by the given angle.
- The following example skews the element 20 degrees along the X-axis:



```
<html>
<head> <style>
div {     width: 300px;     height: 100px;     background-color:
    yellow;
          border: 1px solid black; }
div#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 element 20 degrees along the Y-axis:

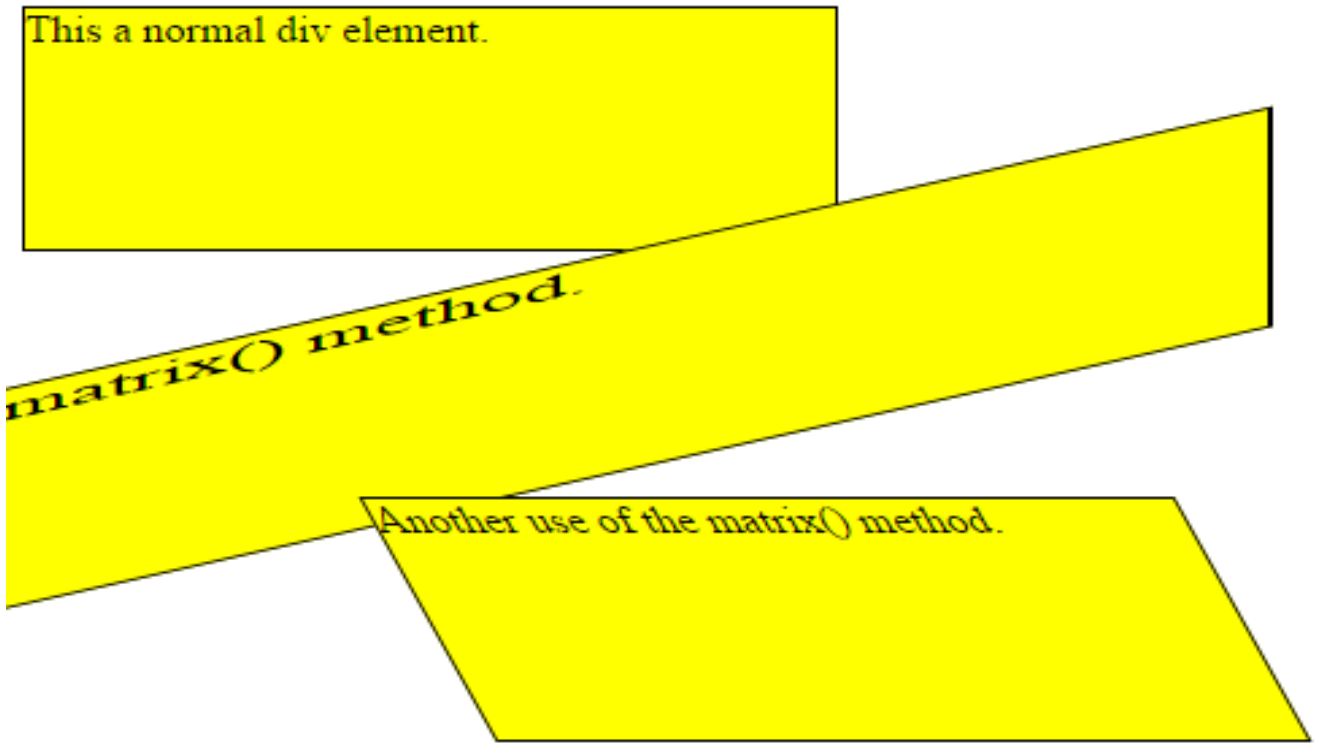


```
<html>
<head> <style>
div {     width: 300px;     height: 100px;     background-color:
    yellow;
          border: 1px solid black; }
div#myDiv {   transform: skewY(20deg);  }
</style>
</head>
<body>
<p>The skewY() method skews an element along the X-axis by
    the given angle.</p>
<div> This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