Assignment: Box Shadow

Overview

In this assignment you will use the box-shadow property to create various box shadow effects. The box-shadow property defines one or more shadows as a comma-separated list. It can be applied to most HTML elements. If a border-radius property is also defined on an element, the corners of the box shadow will conform to the border-radius settings. The z-order of multiple box shadows is in order of their definition, with the first defined shadow on top.

See the W3C Specification for complete details:
https://www.w3.org/TR/css3-background/#the-box-shadow

Border Radius Options

inset The inset keyword displays a shadow within the element's frame, producing an engraved look. If inset not specified a default drop shadow is displayed.

<**offset-x**> <**offset-y**> Controls the shadow offset. <offset-x> sets the horizontal distance. Negative values set the shadow to the left of the element. <offset-y> sets the vertical distance. Negative values place the shadow above the element. If both values are set to 0, the shadow is placed behind the element, and can be used to create a blur effect if <blur-radius> and/or <spread-radius> are used.

<**blur-radius**> The larger this value, the bigger the blur, so the shadow becomes bigger and lighter. Negative values are not allowed. If not specified, it will be 0 (the shadow's edge is sharp).

<**spread-radius**> Positive values cause the shadow to expand and grow. Negative values cause the shadow to shrink. If not specified, the spread-radius will be 0, and the shadow will be the same size as the element.

<**color**> If not specified, the browser's default color is used.

Example Syntax

```
/* offset-x | offset-y | color */
.teal-shadow{box-shadow:60px -16px teal;}
/* offset-x | offset-y | blur-radius | color */
.black-shadow{box-shadow:10px 5px 5px black;}
/* offset-x | offset-y | blur-radius | spread-radius | color */
.blury-shadow{2px 2px 2px 1px rgba(0, 0, 0, 0.2);}
/* inset | offset-x | offset-y | color */
.inset-shadow{box-shadow:inset 5em 1em blue;}
```

```
9  /* Multiple shadows (separated by commas) */
10 .multi-shadow{box-shadow:3px 3px green, -1em 0 0.4em gold;}
```

Step 1: Create HTML file

Create an HTML file with the following content:

```
1 <html>
2   <head>
3     <title>Box Shadow Sampler</title>
4   </head>
5   <body>
6   </body>
7 </html>
```
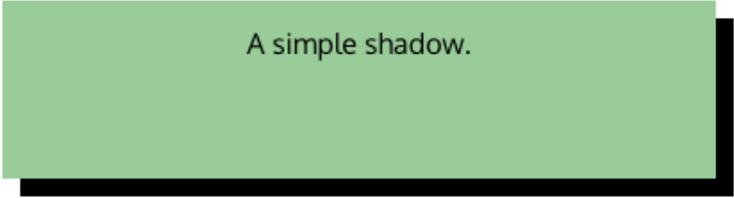
Within the <head> section add the following CSS:

```
1 <style>
2   p {text-align:center; color:black; text-weight:bold;}
3   h1 {text-align:center;}
4   #shadow {
5     background:#99cc99;
6     height:200px;
7     width:400px;
8     /* horizontal offset, vertical ofset, color */
9     box-shadow:10px 10px #000;
10    /* vertical margins are 10px, horizontal margins are auto */
11    margin:10px auto;
12    padding:10px;
13  }
14 </style>
```

Within the <body> section add the following HTML code.

```
1 <h1>Box Shadow Sampler</h1>
2 <div id="shadow">
3   <p>A simple shadow.</p>
4 </div>
```

A simple shadow.

Step 2: Add an element with a blurred shadow

The style in this example is similar to the previous one, with the addition of a blur value.

HTML

```
1  <div id="shadow-blur">
2    <p>A blurred shadow.</p>
3  </div>
```

CSS

```
1  #shadow-blur {
2    background:#99cc99;
3    height:200px;
4    width:400px;
5    box-shadow:10px 10px 30px #000; /* blur value = 30px */
6    margin:50px auto;
7    padding:10px;
8  }
```

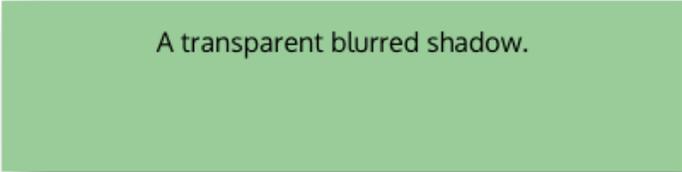## Step 3: Add an element with a transparent blurred shadow

The key concept in this example, is the color of the shadow. In the rgba color model the a (alpha channel) adds transparency. Transparency values can range from .1 to 1.0, with smaller values producing more transparency and large values producing more opacity.

HTML

```
1 <div id="shadow-transparent">
2   <p>A blurred shadow with a transparent color.</p>
3 </div>
```

CSS

```
1 #shadow-transparent {
2   background:#99cc99;
3   height:200px;
4   width:400px;
5   box-shadow:10px 10px 30px rgba(0, 0, 0, .5); /* transparency value = .5
      */
6   margin:50px auto;
7   padding:10px;
8 }
```


A transparent blurred shadow.

Step 4: Create a multiple transparent shadow

HTML

```
1 <div id="multi-transparent-shadow">
2   <p>A fancy transparent shadow.</p>
3 </div>
```
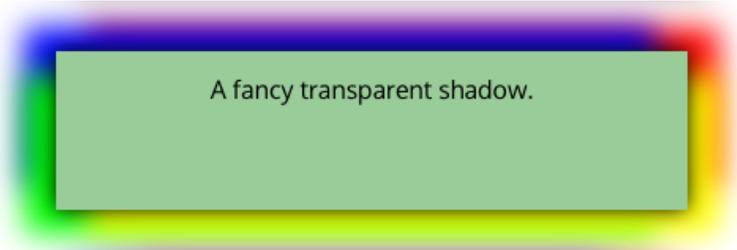
CSS

```
1  #multi-transparent-shadow {
2    height:100px;
3    width:400px;
4    margin:50px auto;
5    padding:10px;
6    background:#99cc99;
7    box-shadow: 0 0 20px black, /* centered */
8      20px 15px 30px yellow, /* lower right */
9      -20px 15px 30px lime, /* lower left */
10     -20px -15px 30px blue, /* upper left */
11     20px -15px 30px red;/* upper right */
12 }
```


A fancy transparent shadow.

Step 5: Create a multiple transparent shadow with a border radius

HTML

```
1  <div id="multi-transparent-border-radius-shadow">
2    <p>A fancy transparent shadow with a border radius.</p>
3  </div>
```
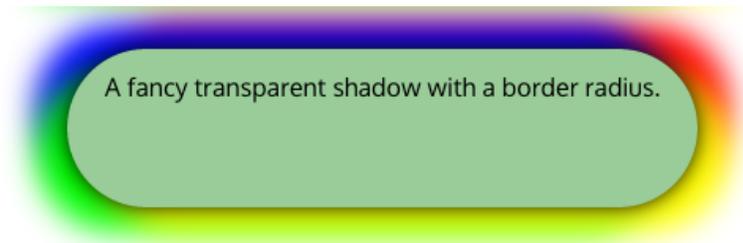
CSS

```
1  #multi-transparent-border-radius-shadow {
2    height:100px;
3    width:400px;
4    margin:50px auto;
5    padding:10px;
6    background:#99cc99;
7    box-shadow: 0 0 20px black, /* centered */
8      20px 15px 30px yellow, /* lower right */
```

```
9        -20px 15px 30px lime, /* lower left */
10       -20px -15px 30px blue, /* upper left */
11        20px -15px 30px red;/* upper right */
12     border-radius: 60px;
13  }
```
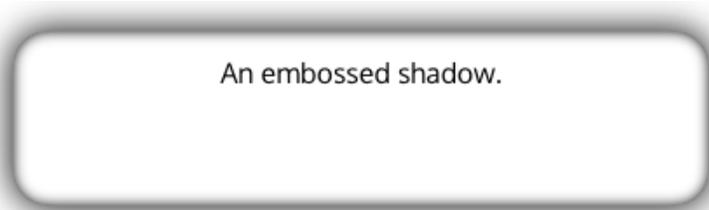
A fancy transparent shadow with a border radius.

Step 6: Create an embossed shadow

HTML

```
1  <div id="embossed-shadow">
2    <p>Your comments here.</p>
3  </div>
```

CSS

```
1  #embossed-shadow {
2    background:#fff;
3    height:100px;
4    width:400px;
5    margin:50px auto;
6    padding:10px;
7    box-shadow: 0 0 30px #000000,  inset 0 0 10px #000000;
8    border-radius: 20px;
9  }
```
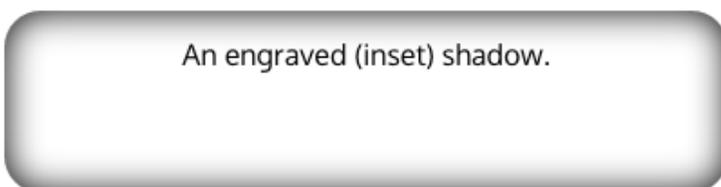
An embossed shadow.

Step 7: Create an engraved shadow

HTML

```
<div id="engraved-shadow">
  <p>Your comments here.</p>
</div>
```

CSS

```
#engraved-shadow {
  background:#fff;
  height:100px;
  width:400px;
  margin:50px auto;
  padding:10px;
  box-shadow: inset 0 0 30px #000000;
  border-radius: 20px;
}
```


An engraved (inset) shadow.

Step 8: Experiment and improve

Be creative. Seek originality. Use these examples as starting points. Modify each element in some way. Add new elements of your own creation. Add an image to your page and apply the shadow of your choice to the image element. Combine box shadow techniques with other CSS tricks you know.