

# UI Basics

## Box Model

- Shadow Effects
  - CSS Text-shadow
  - CSS Box-shadow
- CSS Background
  - CSS background-color
  - CSS background-image
  - CSS background-position
  - CSS background-size
  - CSS background-repeat
  - CSS background-origin
  - CSS background-clip
  - CSS background-attachment

### CSS Box-shadow

- **text-shadow**
- box-shadow

```
h1 {  
  text-shadow: 2px 2px red;  
}
```

```
h1 {  
  text-shadow: 2px 2px 5px red;  
}
```

```
h1 {  
  color: white;  
  text-shadow: 2px 2px 4px #000000;  
}
```

**Text shadow effect!**

**Text shadow effect!**

**Text shadow effect!**

### CSS Box-shadow

- **text-shadow**
- box-shadow

```
h1 {  
  color: white;  
  text-shadow: 1px 1px 2px black, 0 0 25px blue, 0 0 5px darkblue;  
}
```

Text shadow effect!

```
h1 {  
  color: yellow;  
  text-shadow: -1px 0 black, 0 1px black, 1px 0 black, 0 -1px black;  
}
```

Border around text!

## CSS Box-shadow

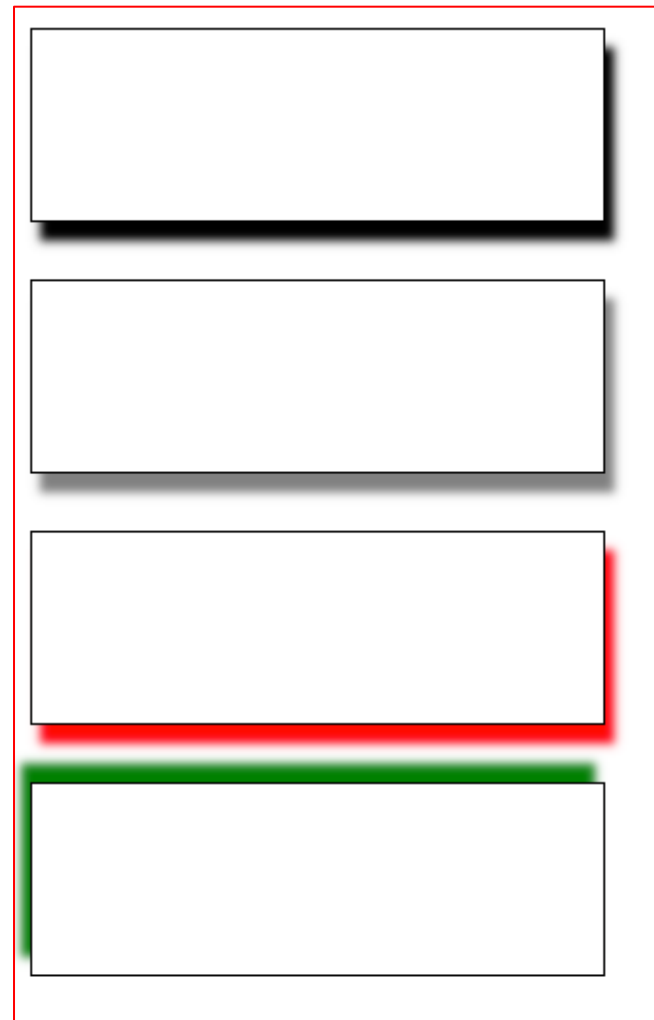
```
box-shadow: h-offset v-offset blur spread color | inset;
```

<i>none</i>	<b>Default value.</b> No shadow is displayed
<i>h-offset</i>	<b>Required.</b> The <b>horizontal offset</b> of the shadow. A <b>positive value</b> puts the shadow <b>on the right side</b> of the box, a <b>negative value</b> puts the shadow <b>on the left side</b> of the box
<i>v-offset</i>	<b>Required.</b> The <b>vertical offset</b> of the shadow. A <b>positive value</b> puts the shadow <b>below</b> the box, a <b>negative value</b> puts the shadow <b>above</b> the box
<i>blur</i>	<b>Optional.</b> The blur radius. The higher the number, the more blurred the shadow will be.
<i>spread</i>	<b>Optional.</b> The spread radius. A <b>positive value</b> <i>increases the size of the shadow</i> , a <b>negative value</b> <i>decreases the size of the shadow</i>
<i>color</i>	<b>Optional.</b> The color of the shadow.  <b>Note:</b> In Safari (on PC) the color parameter is required. If you do not specify the color, the shadow is not displayed at all.
<i>inset</i>	<b>Optional.</b> Changes the shadow <b>from an outer shadow (outset) to an inner shadow</b>

## CSS Box-shadow

```
div {  
  width: 300px;  
  height: 100px;  
  margin: 30px 0;  
}  
  
#example1 {  
  border: 1px solid;  
  box-shadow: 5px 10px 5px;  
}  
  
#example2 {  
  border: 1px solid;  
  box-shadow: 5px 10px 5px gray;  
}  
  
#example3 {  
  border: 1px solid;  
  box-shadow: 5px 10px 5px red;  
}  
  
#example4 {  
  border: 1px solid;  
  box-shadow: -5px -10px 5px green;  
}
```

```
<div id="example1"></div>  
  
<div id="example2"></div>  
  
<div id="example3"></div>  
  
<div id="example4"></div>
```



## CSS Box-shadow

### Fake-Boxes

```
.heading-shadow::before {  
  content: '';  
  width: 20px;  
  height: 20px;  
  display: inline-block;  
  margin: 0 15px;  
  background: lightblue;  
  border: 2px solid blue;  
  box-shadow: 3px 3px 3px gray;  
}  
.heading-shadow::after {  
  content: '';  
  width: 20px;  
  height: 20px;  
  display: inline-block;  
  margin: 0 15px;  
  background: lightgreen;  
  border: 2px solid green;  
  box-shadow: 3px 3px 3px gray;  
}
```

```
<h1 class="heading-shadow">This is a heading</h1>
```



## CSS Background

The **background** property is a **shorthand** property for:

- background-color
- background-image
- background-position
- background-size
- background-repeat
- background-origin
- background-clip
- background-attachment

```
background: bg-color bg-image position/bg-size bg-repeat bg-origin bg-clip bg-attachment;
```

**NOTE :** *If one of the properties in the shorthand declaration is the **bg-size** property, you must use a / (slash) to separate it from the **bg-position** property*, e.g. `background:url(smiley.gif) 10px 20px/50px 50px;` will result in a background image, positioned 10 pixels from the left, 20 pixels from the top, and the size of the image will be 50 pixels wide and 50 pixels high.



## BOX MODEL

### CSS Background – background-color

`background-color: color|transparent;`

<i>color</i>	Specifies the background color.
transparent	Specifies that the background color should be transparent. <b>This is default</b>

```
body {  
  background-color: #92a8d1;  
}
```



```
body {  
  background-color: transparent;  
}
```

transparent- by default



## CSS Background – background-image

```
background-image: url | none;
```

url('URL')	The URL to the image. To specify <i>more than one image, separate the URLs with a comma</i>
none	No background image will be displayed. <b>This is default</b>

```
body {  
  background-image: url("paper.gif");  
  background-color: #red;  
}
```

```
<h1>The background-image Property</h1>  
  
<p>Hello World!</p>
```

**The background-image Property**

Hello World!

**NOTE :** The background image is placed according to the [background-position](#) property. If no background-position is specified, the image is always placed at the element's [top left corner](#).

### CSS Background – background-image

The **background-image** property specifies **an image to use as the background of an element.**

### When to use <img> vs. CSS background-image?

#### Use IMG

- If the image is **part of content** such as a logo or diagram or person.

#### Use CSS background-image

- If the image **is not part of the content.**
- when doing **image-replacement of text** eg. paragraphs/headers.

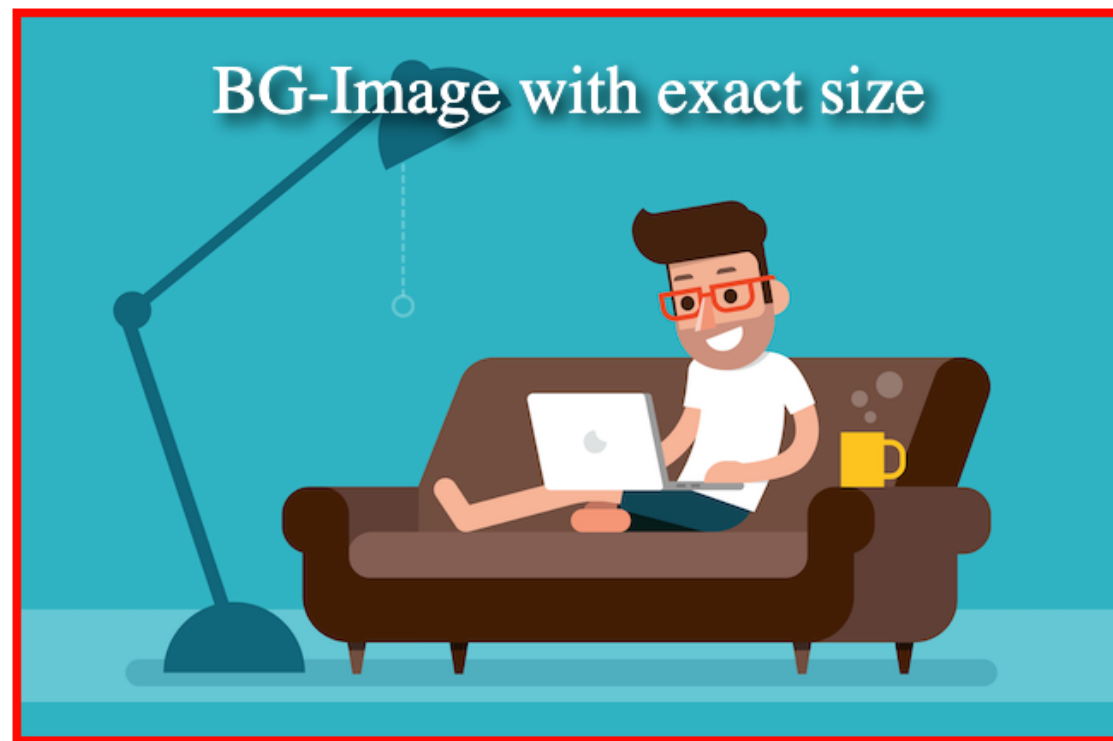
## CSS Background – background-image – **exact size**

container size : 640px x 400px

Image size : 640px x 400px

```
.bg-developer {  
  width: 640px;  
  height: 400px;  
  margin: 30px 0;  
  background: url('developer.png');  
  color: ■white;  
  text-shadow: 5px 5px 10px □black;  
  font-size: 40px;  
  text-align: center;  
  padding: 20px 0 0;  
  border: 5px solid ■red;  
}
```

```
<div class="bg-developer">BG-Image with exact size </div>
```



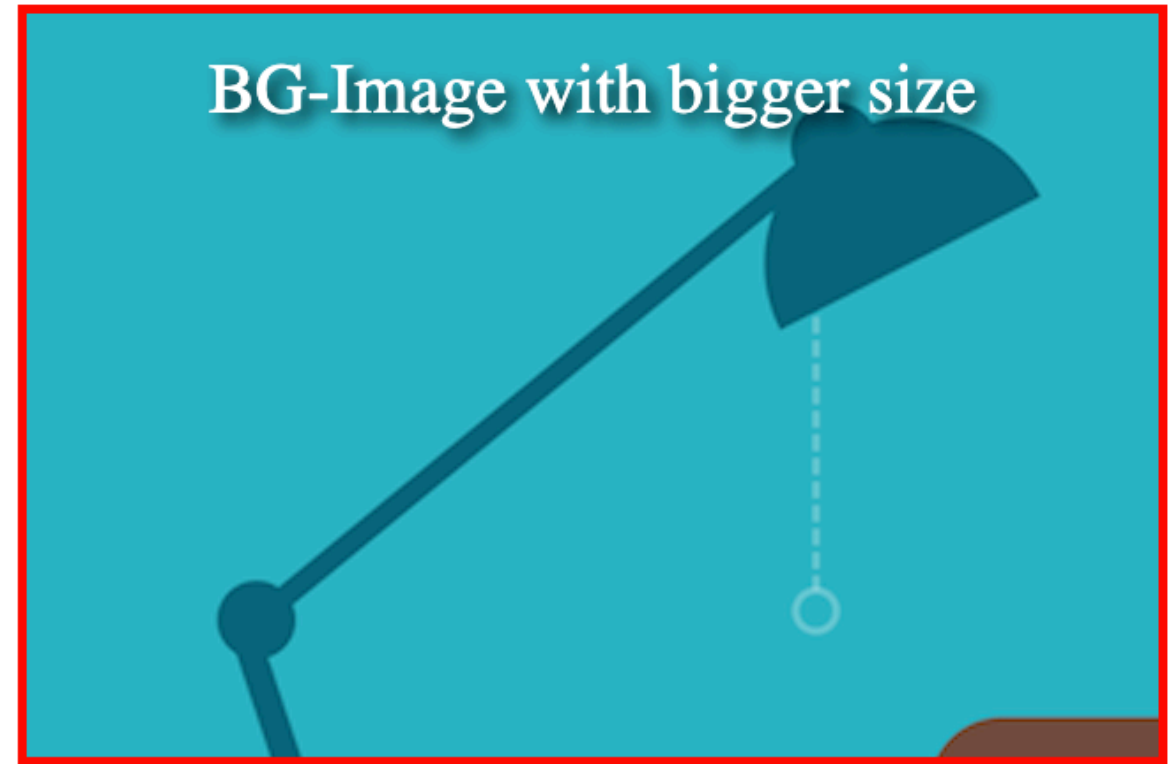
## CSS Background – background-image – **bigger size**

```
.bg-developer-big {  
  width: 640px;  
  height: 400px;  
  margin: 30px 0;  
  background: url('developer-big.png');  
  color: ■white;  
  text-shadow: 5px 5px 10px □black;  
  font-size: 40px;  
  text-align: center;  
  padding: 20px 0 0;  
  border: 5px solid ■red;  
}
```

```
<div class="bg-developer-big">BG-Image with bigger size </div>
```

container size : 640px x 400px

Image size : 1280px x 800px



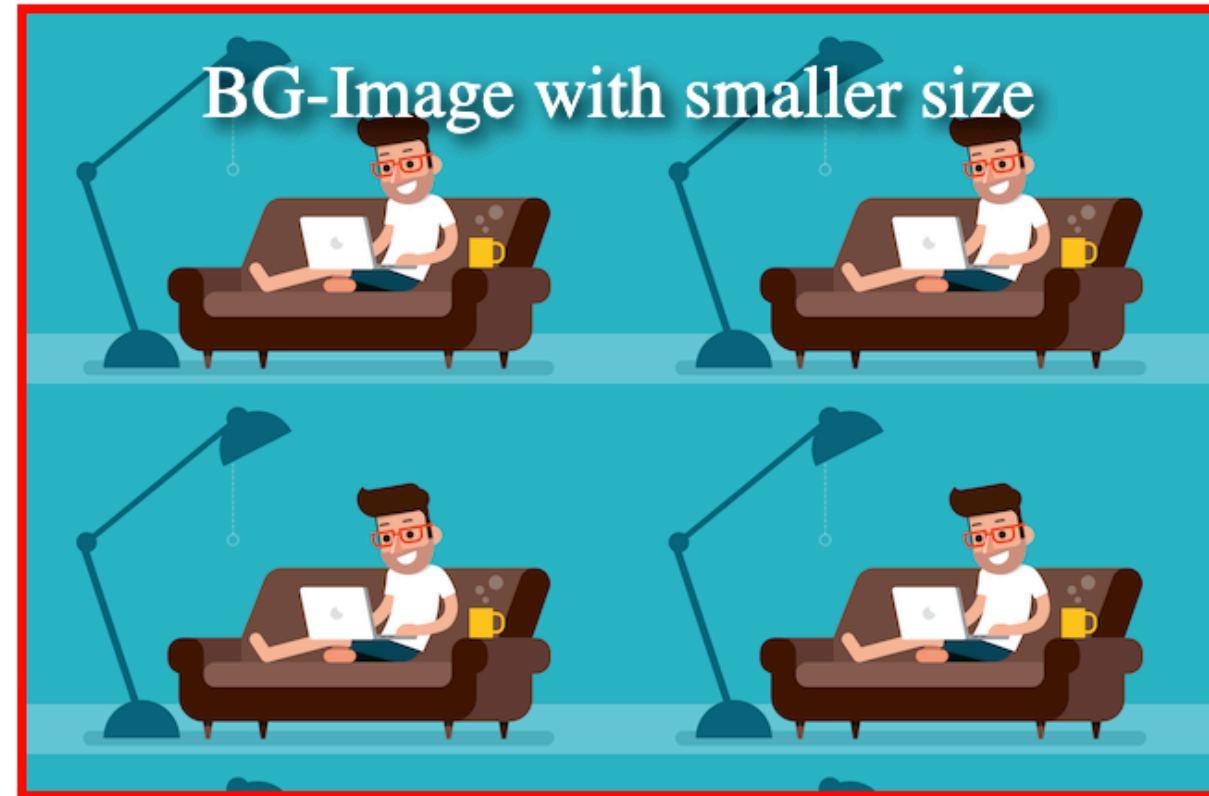
## CSS Background – background-image – **smaller size**

```
.bg-developer-small {  
  width: 640px;  
  height: 400px;  
  margin: 30px 0;  
  background: url('developer-small.png');  
  color: ■white;  
  text-shadow: 5px 5px 10px □black;  
  font-size: 40px;  
  text-align: center;  
  padding: 20px 0 0;  
  border: 5px solid ■red;  
}
```

```
<div class="bg-developer-small">BG-Image with smaller size</div>
```

container size : 640px x 400px

Image size : 320px x 200px



By default repeating

## CSS Background – background-image – multiple Images

```
.bg-two-images {  
  width: 640px;  
  height: 400px;  
  margin: 30px 0;  
  background: url('developer2.png'), url('developer-xsmall.png');  
  background-repeat: no-repeat, no-repeat;  
  color: white;  
  text-shadow: 5px 5px 10px black;  
  font-size: 40px;  
  text-align: center;  
  padding: 20px 0 0;  
  border: 5px solid red;  
}
```

```
<div class="bg-two-images">More than one BG-Image</div>
```

container size : 640px x 400px

big-image size : 640px x 400px

small-image size : 160px x 100px



## CSS Background – background-repeat

- The **background-repeat** property sets if/how a background image **will be repeated**.
- By default, a [background-image](#) is repeated **both vertically and horizontally**.

```
background-repeat: repeat | repeat-x | repeat-y | no-repeat ;
```

repeat	The background image is repeated <b>both vertically and horizontally</b> . The last image will be <b>clipped</b> if it does not fit. <b>This is default.</b>
repeat-x	The background image is repeated <b>only horizontally</b>
repeat-y	The background image is repeated <b>only vertically</b>
no-repeat	The background-image <b>is not repeated</b> . The image will only be shown once
space	The background-image is <b>repeated as much as possible without clipping</b> . The first and last images are pinned to either side of the element, and <i>whitespace is distributed evenly between the images</i> .
round	The background-image is <b>repeated and squished or stretched to fill the space (no gaps)</b>



## CSS Background – background-size

The **background-size** property specifies *the size of the background images*.

```
background-size: auto | length | cover | contain;
```

auto	<b>Default value.</b> The background image is displayed <b>in its original size</b>
<i>length</i>	Sets the <b>width and height</b> of the background image. <ul style="list-style-type: none"><li>- The <i>first value sets the width, the second value sets the height.</i></li><li>- <i>If only one value is given, the <b>second</b> is set to "<b>auto</b>"</i></li></ul>
<i>percentage</i>	Sets the width and height of the background image <b>in percent of the parent element</b> . <ul style="list-style-type: none"><li>- The first value sets the width, the second value sets the height.</li><li>- If only one value is given, the second is set to "auto"</li></ul>
cover	Resize the background image <b>to cover the entire container</b> , <i>even if it has to stretch the image or cut a little bit off one of the edges</i>
contain	Resize the background image to make sure <b>the image is fully visible</b>

## CSS Background – background-position

- The **background-position** property sets the starting position of a background image.
- By default, a [background-image](#) is placed at the top-left corner of an element, and *repeated both vertically and horizontally*.

background-position: *value*;

left top , left center, left bottom  
right top, right center, right bottom  
center top, center center, center  
bottom

If you only specify one keyword, the other value will be "center"

*x% y%*

- The first value is the horizontal position and the second value is the vertical.
- The top left corner is 0% 0%. The right bottom corner is 100% 100%. If you only specify one value, the other value will be 50%.
- Default value is: 0% 0%

*xpos ypos*

- The first value is the horizontal position and the second value is the vertical.
- The top left corner is 0 0.
- If you only specify one value, the other value will be 50%.
- You can mix % and positions.

## CSS Background – background-origin

The **background-origin** property specifies the origin position (the background positioning area) of a background image.

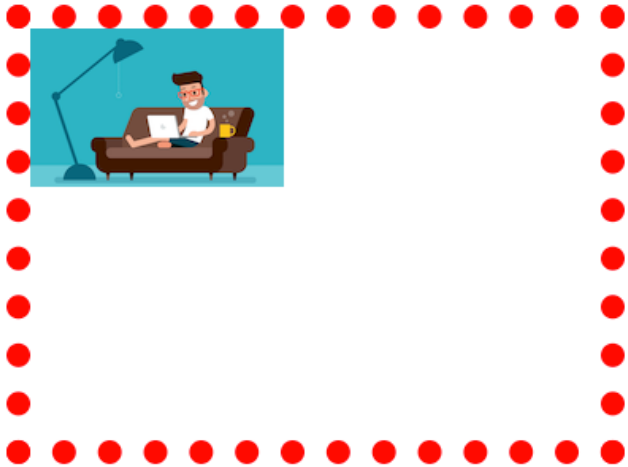
```
background-origin: padding-box | border-box | content-box;
```

padding-box	Default value. The background image starts from the upper left corner of the <u>padding edge</u> .
border-box	The background image starts from the upper left corner of <u>the border</u> .
content-box	The background image starts from the upper left corner of <u>the content</u> .

**NOTE :** This property has no effect if [background-attachment](#) is "fixed".

## CSS Background – background-origin

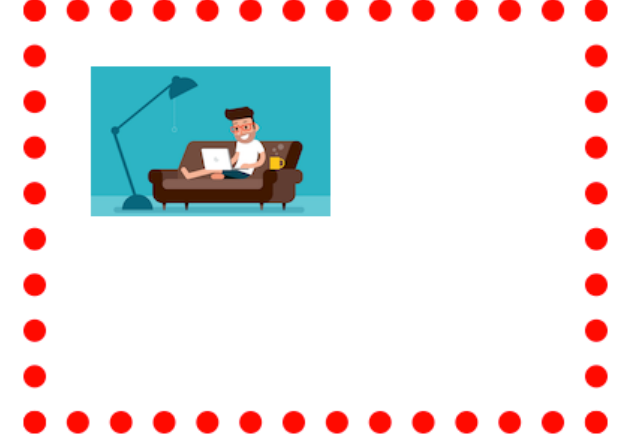
```
background-origin: padding-box;
```



```
background-origin: border-box;
```



```
background-origin: content-box;
```



## CSS Background – background-clip

The **background-clip** property defines **how far the background-color should extend within an element**.

```
background-clip: border-box|padding-box|content-box;
```

border-box	<b>Default value.</b> The background extends <b>behind the border</b>
padding-box	The background extends <b>to the inside edge of the border</b>
content-box	The background extends <b>to the edge of the content box</b>

# BOX MODEL

## CSS Background – background-clip

```
background-clip: border-box;
```



```
background-clip: padding-box;
```



```
background-clip: content-box;
```



## CSS Background – background-attachment

The **background-attachment** property sets **whether a background image scrolls with the rest of the page, or is fixed.**

```
background-attachment: scroll|fixed|local;
```

scroll	The background image <b>will scroll</b> with the page. This is default -- <b>(for body)</b>
fixed	The background image will <b>not scroll</b> with the page -- <b>(for body) / (for any element)</b>
local	The background image <b>will scroll</b> with the element's contents -- <b>(for any element)</b>

# BOX MODEL

## Summary

- background-color
- background-image
- background-position
- background-size
- background-repeat
- background-origin
- background-clip
- background-attachment