

Cascading Style Sheets

CSS Image Gallery

Cascading Style Sheet (CSS) can be used to create an image gallery. There are various CSS effects that can create web page look better and more dynamic and attractive. Effects are optical illusions created by animating images and elements in a Web page. These effects can be made to appear in a Web page on various events, such as mouse hover and mouse click. For instance, you can set the transition effect to appear between two images when a mouse is clicked.

Let's start with different types of effects in CSS. As already said, effects are the results of actions that are carried out to change the look and feel of HTML elements. CSS allows you to apply different types of effects on different types of HTML controls, such as buttons, menus, images, and tables. The following are the types of effects that can be applied on a Web page:

- ❖ **Opacity effects**— Modify the opacity of an HTML element. For instance, using these effects, you can make an element transparent so that any other element or background behind that element gets visible. The following code snippet shows an example of using the opacity property:

```
img{ opacity: 0.6; }
```

- ❖ **Transition effects**—Change the states of an element. Transition is a process of passing an act from one state to another. Generally, whenever the value of a CSS property changes, the result is instantly rendered on a Web page. However, when you apply transition effect on an element, it slowly transits from its old state to new. These transition properties are listed as follows:
 - **transition-property**— Specifies the property to which you apply the transition
 - **transition-duration**— Specifies the time duration or the length of a transition
 - **transition-delay**—Delays the transition
 - **transition-timing-function**—Changes the speed of transitioning images

The following is an example of using the transition properties:

```
DIV { transition-property: opacity;  
      transition-duration: 2s ;  
      transition-timing-function: ease-in-out; }
```

In the preceding example, we have applied the transition effect on the opacity property of the DIV element and set the time limit for transition to 2 seconds. The degree of smoothness of the transition effect is defined by the ease-in-out property.

- ❖ **Transformation effects**—Change the position or direction of the content of your Web page. CSS allows you to apply this effect to the Web content with the help of the transform property. The possible values of the transform property are listed as follows:
 - **transform**—Specifies the transform function to apply it on an element. The possible values of this property are matrix, rotate, scale, scaleX, scaleY, skew, skewX, skewY, translate, translateX, and translateY.
 - **transform-origin**—Specifies the origin of the transformation for an element. The possible values of this property are left, right, center, bottom, top, and 50% 50%.
 - **transform-style** - Specifies whether the transformation apply in 2D or 3D on an element. The possible values of this property are flat and perspective-3D.

- **perspective** -Shows an element from different angles and perspectives.
- **perspective-origin**—Specifies the origin of the perspective for an element. The possible values of this property are left, right, center, bottom, top, <percentage>, and 50% 50%.
- **backface-visibility**—Specifies whether or not the back side of an element is visible. The possible values of this property are **visible** and **hidden**.

The following code snippet shows an example of using the transformation properties:

```
P {  
    -webkit-transform: rotate(45deg);  
    -webkit-perspective: 1200px;  
    -webkit-perspective-origin: right; }
```

In the preceding code snippet, we have defined the transform property to rotate the paragraph element. The perspective property has been set to 1200px and the perspective-origin property to right, which enable you to view the element at 1200 points from its right side.

❖ **Animation effects**—Refer to optical illusions, which are created by animating images and elements in a Web page. CSS provides the following properties to enable you to animate different elements of a Web page:

- **animation-name**—Specifies the name of the animation that is to be applied on an element
- **animation-duration**—Specifies the time duration an animation takes to complete one cycle
- **animation-timing-function**—Specifies the progress of an animation
- **animation-iteration-count**—Specifies the number of animation cycles
- **animation-direction**—Specifies whether the animation is played in reverse or alternate direction
- **animation-delay**—Specifies a time period after which an animation starts

In addition to the preceding properties, there is a property, named animation, which can be used as an alternative for all other properties. The following code snippet shows an example of using the animation properties:

```
img {  
    -webkit-animation-name: resize;  
    -webkit-animation-duration: 1s;  
    -webkit-animation-iteration-count: infinite;  
    -webkit-animation-direction: alternate;  
    -webkit-animation-timing-function: ease; }
```

In the preceding code snippet, we have applied the resize animation effect and set the animation duration to 1 second. The iteration count is set to infinite, which means that the animation cycle is repeated infinite times.

Exercise:

- 1: What are Opacity effects? Explain with example.**
- 2: What are Transition effects? Explain with example.**
- 3: What are Transformation effects? Explain with example.**
- 4: What are Animation effects? Explain with example.**