

Lesson:

Filter



Topics Covered

- What is a filter?
- Syntax of filter
- Common Filter functions
- Combining multiple filters

What is a filter?

The CSS property called **filter** is used to apply various graphical effects such as **color shift** or **blur** to an element. Typically, filters are employed to modify how images, backgrounds, and borders are displayed.

Syntax of filter

To apply filters, we use the following syntax,

```
filter: <filter-function>
```

where filter-functions are predefined functions used to apply various visual effects to elements on a web page.

In this lecture, we will study some common filter effects through examples.

Common Filter functions

1. blur(): Applies a Gaussian blur to the input image

Syntax

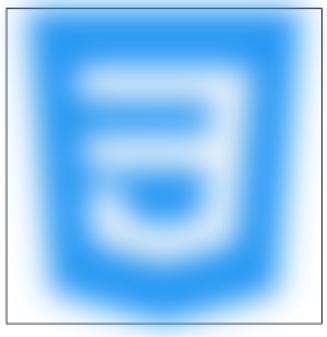
```
filter:blur(radius)
```

Example:-

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <title>Filter</title>
  </head>
  <style>
    div {
      border: 1px solid black;
      width: 200px;
      height: 200px;
    }

    img {
      filter: blur(10px);
    }
  </style>
  <body>
    <div>
      
    </div>
  </body>
</html>
```

Browser Output:-

Before filter	After filter
	

2. brightness(): Making the image appear brighter or darker.

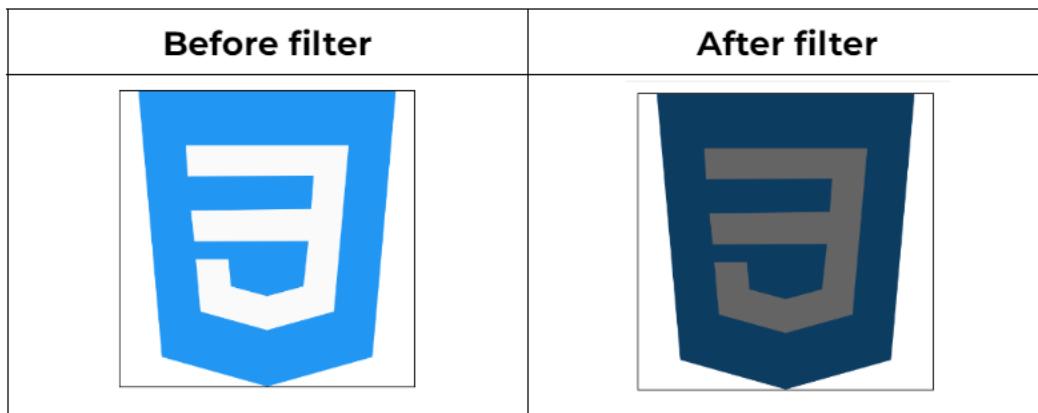
Syntax

```
filter:brightness(amount)
```

Example

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <title>Filter</title>
  </head>
  <style>
    div {
      border: 1px solid black;
      width: 200px;
      height: 200px;
    }
    img {
      filter: brightness(0.4);
    }
  </style>
  <body>
    <div>
      
    </div>
  </body>
</html>
```

Browser Output:-



3. grayscale(): Converts the input image to grayscale

Syntax

```
filter:grayscale(amount)
```

Example

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <title>Filter</title>
  </head>
  <style>
    div {
      border: 1px solid black;
      width: 200px;
      height: 200px;
    }

    img {
      filter: grayscale(0.8);
    }
  </style>
  <body>
    <div>
      
    </div>
  </body>
</html>
```

Browser Output:-

Before filter	After filter
	

4. `hue-rotate()`: Rotates the hue of an element and its contents.

Syntax

```
filter: hue-rotate(angle)
```

Example

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <title>Filter</title>
  </head>
  <style>
    div {
      border: 1px solid black;
      width: 200px;
      height: 200px;
    }

    img {
      filter: hue-rotate(90deg);
    }
  </style>
  <body>
    <div>
      
    </div>
  </body>
</html>
```

Browser Output:-

Before filter	After filter
	

5. drop-shadow(): Applies a drop shadow effect to the input image or text.

Syntax

```
drop-shadow(offset-x offset-y blur-radius color)
```

Example

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <title>Filter</title>
  </head>
  <style>
    h1 {
      color: rgb(71, 76, 167);
      filter: drop-shadow(30px 30px 0 rgb(103, 97, 97));
    }
  </style>
  <body>
    <div>
      <h1>Filter is Easy</h1>
    </div>
  </body>
</html>
```

Browser Output:-

Before filter	After filter
Filter is Easy	Filter is Easy Filter is Easy

Combining Multiple Filters

We can combine multiple filters, to give more visual effects.

Syntax

```
filter: <filter-function-1> <filter-function-2>
```

Example

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <title>Filter</title>
  </head>
  <style>
    img {
      filter: drop-shadow(30px 10px 2px #3fb1e2) hue-rotate(90deg)
              drop-shadow(30px 10px 2px #3fb1e2);
    }
  </style>
  <body>
    <div>
      
    </div>
  </body>
</html>
```

Browser Output:-



If you have noticed, now there are two shadows, with two different colors.