

# 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 colour 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 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-


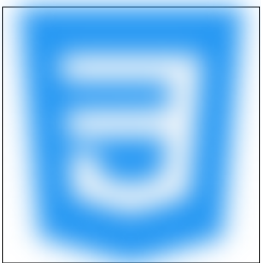
```
filter:blur(radius)
```

### 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:-

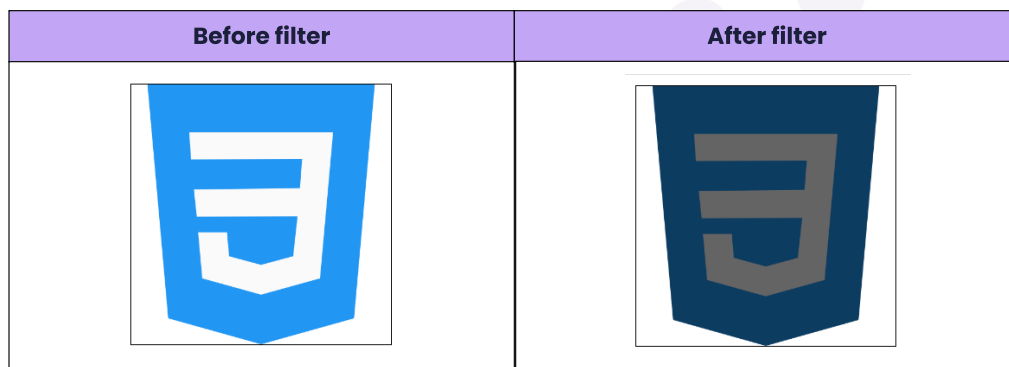
```
<!DOCTYPE html>
<html lang="en">
  <head>
    <title>Filter</title>
  </head>
  <style>
    div {
      border: 1px solid black;
      width: 200px;
```

```

    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;

```

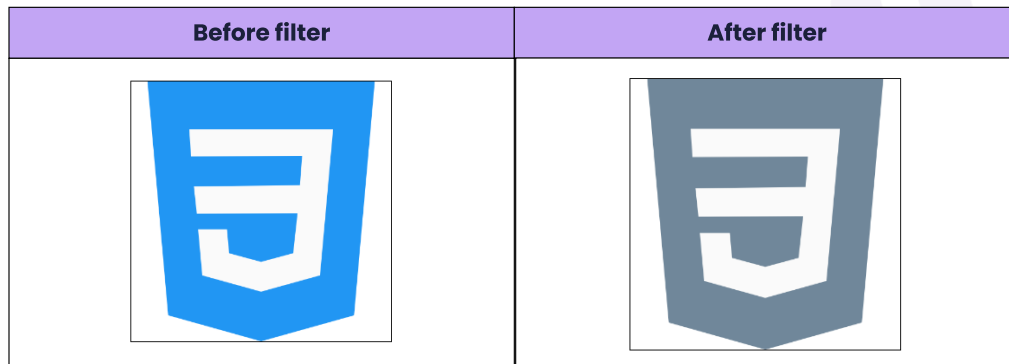
```

width: 200px;
height: 200px;
}

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

```

#### Browser output-



**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>
</html>
```

```

</style>
<body>
  <div>
    
  </div>
</body>
</html>

```

#### Browser output-



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